

A photograph of a paved road and sidewalk in Eureka, California. The road is on the left, and the sidewalk is on the right. A street lamp stands on the left side of the road. In the background, there are trees and a building. The sky is blue with some clouds. The image has rounded corners at the top and bottom.

City of Eureka
Waterfront Drive Revitalization

BUILD: FY 2018
National Infrastructure Investments
Department of Transportation

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PROJECT DESCRIPTION:

History:

The City of Eureka is a rural coastal town in Northern California, 270 miles north of San Francisco. Eureka is the largest coastal city between San Francisco and Portland, Oregon, and serves as the Humboldt County seat. Greater Eureka is one of California's major commercial fishing ports, and is the location of the largest deep-water port between San Francisco and Coos Bay, Oregon, a stretch of about 500 miles. In the 1850's, Eureka provided a convenient alternative to the long overland route from Sacramento to supply miners on the Trinity, Klamath, and Salmon rivers where gold had been discovered.

Eureka's pacific coastal location on Humboldt Bay, adjacent to abundant redwood forests, provided the reason for settlement of this 1850's seaport. The area was primarily made up of farmers, miners, fisherman, and loggers. After realizing the difficulty of striking it rich in the mines, the vast resources available for the lumber industry was recognized as a potential source to feed the building of San Francisco. By the time the Charter for Eureka was granted in 1856, over 140 lumber schooners were moving lumber from mills to booming cities on the Pacific Coast and seven out of nine mills processing timber into marketable lumber were in Eureka (Eureka CA Wikipedia).

Salmon fisheries also sprang up along the nearby Eel River around 1851. During this time, tuna, Dungeness crab, and shrimp were harvested in historic totals. After the early 1900s, shipment of products occurred by trucks, trains, and ships from Eureka. Eureka remained the center of this activity for over 120 years.

A bustling commercial district and ornate Victorians rose in proximity to the waterfront, reflecting the great prosperity. During the late 1800s these projects were designed to keep mill workers busy during slow periods in the timber industry. Hundreds of these Victorian homes remain today, many have been restored but few remain in the original elegance. This section of



Old Town

the waterfront is known as Old Town Eureka, the original downtown center of a busy city. The Old Town area was declared a Historic District by the National Register of Historic Places and is made up of over 150 buildings, which represent Eureka's core commercial center. Many of these homes have been transformed into local lodgings, restaurants, and small shops.

By the late 1800s, the railroads wanted in on the bustling industry of moving logs south from Humboldt County.

Initially the Northwestern Pacific Railroad was later bought out by Eureka Southern Railroad. Eventually it sold to the North Coast Rail Authority (NCRA), who leased the line to the Northwestern Pacific Railroad. Though all tried to operate a rail line from Eureka that ran south, the rural rugged mountainous nature of the terrain proved to be problematic and the line was dubbed the most expensive line in the United States. In 1998, the

line had more than 208 damaged sites along 216 miles and became the first and only officially closed line by the Federal Railroad Administration.



Eel River Canyon: Route to Eureka

Although tracks remain in Eureka, the NCRA has no plans to reopen the Eel River Canyon segment which would allow a connection from Eureka to the Bay Area by rail (NCRA History).

In April 2018, the State Senate unanimously passed Senate Bill 1029 - the Great Redwood Trail Act that would effectively dismantle the North Coast Rail Authority and transfer a section of line that travels through Eureka to the Great Redwood Trail

Authority with the goal of building a world class

trail system.

In Eureka, both the timber and commercial fishing industries declined after the Second World War. A surplus in the domestic markets caused the timber market to turn to foreign markets at an increased shipping cost. The local industry never recovered. In 1990, the global market declined and the local small mills declared bankruptcy. In commercial fishing, regulations, economics, and overfishing resulted in local vulnerability to unexpected events and a steep decline in the amount of fish harvested. Oysters and oyster seeds continue to be exported from Humboldt Bay, but seem to never exceed 2004 levels of around 600,000 pounds per year (California's North Coast Fishing Communities Historical Perspective and Recent Trends: Eureka Fishing Community Profile: NOAA California Sea Grant Program pg. 79). Recreational fishing has increased, and by 2000 over fifty percent of recreational fisherman using local boats were tourists from outside the area.

Challenges the project will address:

The waterfront historic district of the Eureka Downtown has economically never recovered. It remains a tourist destination with little resemblance to the bustling origins of timber and fishing. Although in a diminished capacity, timber remains part of the major industries today, along with tourism and healthcare.

With the decline of the downtown waterfront area and Old Town as a port location, the City's economy is primarily supported by the movement of goods that Highway 101 provides to the City. Waterfront Drive represents a ghost of Eureka's past that once was a commercial port with an abundance of natural resources. Although considered a regionally significant roadway in the Regional Transportation Plan, very few vehicles travel the Waterfront Drive in comparison with Highway 101 through Eureka.

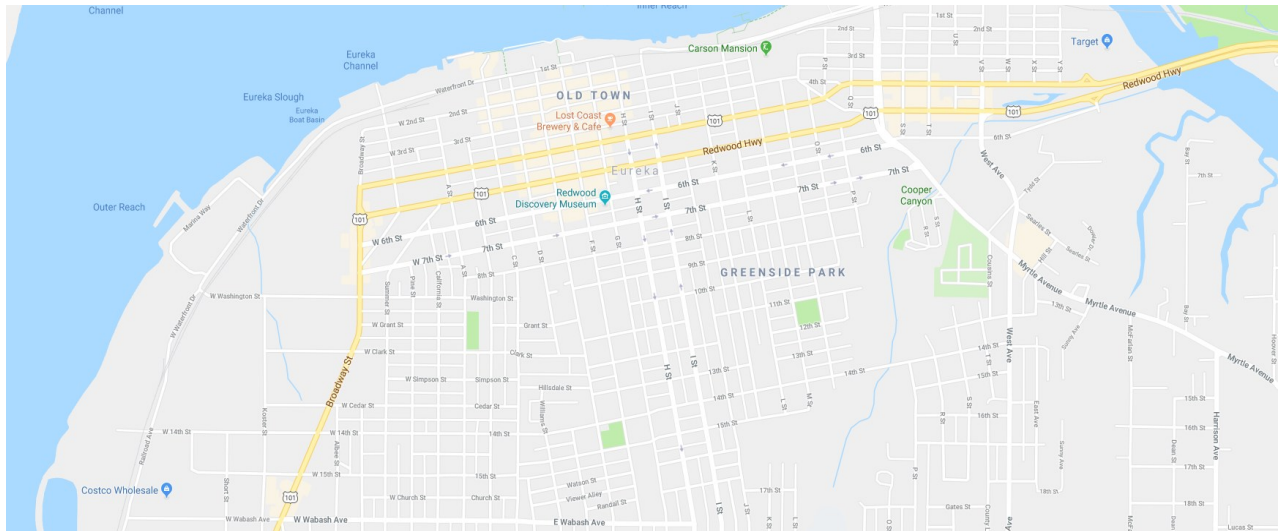


Existing Conditions Waterfront Drive



Existing Conditions Highway 101

U.S. Highway 101 connects to Oregon approximately 100 miles to the north, and to San Francisco roughly 250 miles to the south. Highway 101 travels through the City from North to South, within City limits for over 7 miles. Around five of the seven miles comingle with the highway and a local street.



The map above illustrates how the Highway 101 corridor through Eureka becomes a City street (both 4th and 5th Streets). This corridor of Highway 101 and Eureka city streets remains a deadly nexus of pedestrians and highway traffic. There were 77.9 bicycle fatalities and injuries per 100,000 population over the last five years, which is 2.1 times more than Humboldt County and 2.3 times more than California rates¹.

¹ The rate per population is calculated by summing the number of fatalities and injuries from 2012-2016 divided by five times the population in 2016. Source: US Census Bureau, Population Division (intercensal data for 2016)

<u>Location:</u>	Yearly Population Rate of Fatalities and Injuries per 100,000 Population Calculated Over a 5-year Period	
	Pedestrian	Bicyclist
Eureka	113.1	77.9
Humboldt	44.8	36.4
California	35.9	33.3

Broader Transportation Infrastructure Investments:

Over the last five years, the City has worked to restore and revitalize Old Town in terms of economic opportunities, active transportation, and potential traffic calming options for Highway 101. The City of Eureka’s General Plan Update for 2040 identifies Old Town and Commercial Bayfront as core areas with numerous opportunities for revitalization and to become a primary regional center for tourism, recreation, leisure, and shopping. These core areas would include plans for a dense development pattern consisting of multi-story buildings, upper floor office and residential uses.

Figure LU-1: Pedestrian-Oriented Shopping District



SOURCE: City of Eureka, 2017; ESA, 2018

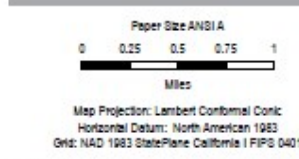
Pedestrian Oriented Shopping District

The 2040 General Plan Update added a newly created “Pedestrian-Oriented Shopping District” to expedite the City’s commercial development goals on the waterfront. Under the direction from City’s Economic Development Commission and Eureka City Council, Eureka is working towards creating a premiere tourism destination on the City’s entire commercial waterfront. The City of Eureka’s Department of Economic and Community Development have completed a number of economic development feasibility studies, development design charrettes, and economic analysis that support the economic development of waterfront parcels in Old Town for the economic competitiveness of the City. Planning, economic feasibility, and preliminary environmental reviews have been completed for projects that include but are not limited to, hotel, mixed retail/commercial/residential buildings,

public dock renovation, and a cold storage facility. The City Development Services Department has also overhauled local zoning designations to support mixed development zones along Waterfront Drive in Old Town.

The City's Public Works department is also working to revitalize the waterfront by streamlining access and infrastructure to the waterfront. Current transportation projects include: closing road gaps, undergrounding utilities, and multimodal corridor management plan options for the waterfront to be the relief valve for the highway section in the congested corridor segment of the City. The City's "G Street to J Street" project is especially important in the revitalization of Waterfront Drive. This project will close the gap on Waterfront Drive, linking a section of road that was without a direct connection. Although only two blocks of roadway in total, this project requires undergrounding utilities and the purchase of right-of-way by the City. This project has been a collaboration with Caltrans and a leverage of resources that have included Caltrans' Eureka Non-Freeway funds, Highway Safety Improvement Funds, and the City's discretionary funds. The total project cost is \$3.3 million and expected completion is 2019-2020. The "G Street to J Street" connection will also start the "complete streets" initiative on Waterfront Drive by installing bike lanes, parking, and widened sidewalks. The "G Street to J Street" section is part of the overall project to revitalize Waterfront Drive as a safe option for active transportation and a first step in the overall economic investment in Eureka's waterfront.

The City, Humboldt County Association of Governments (HCAOG), and Caltrans are also collaborating as a strategic partnership to determine the feasibility of Waterfront Drive expansion providing additional congestion relief measures for the Highway 101/Broadway section, located south of the current Waterfront Drive project. The intention would be to determine the viability of Waterfront Drive as an alternative to Highway 101 through the entire City.



City of Eureka
BUILD Application
**Planned Development
and Current
Construction Projects**

Project No. 11125185
Revision No. D
Date 7/18/2018

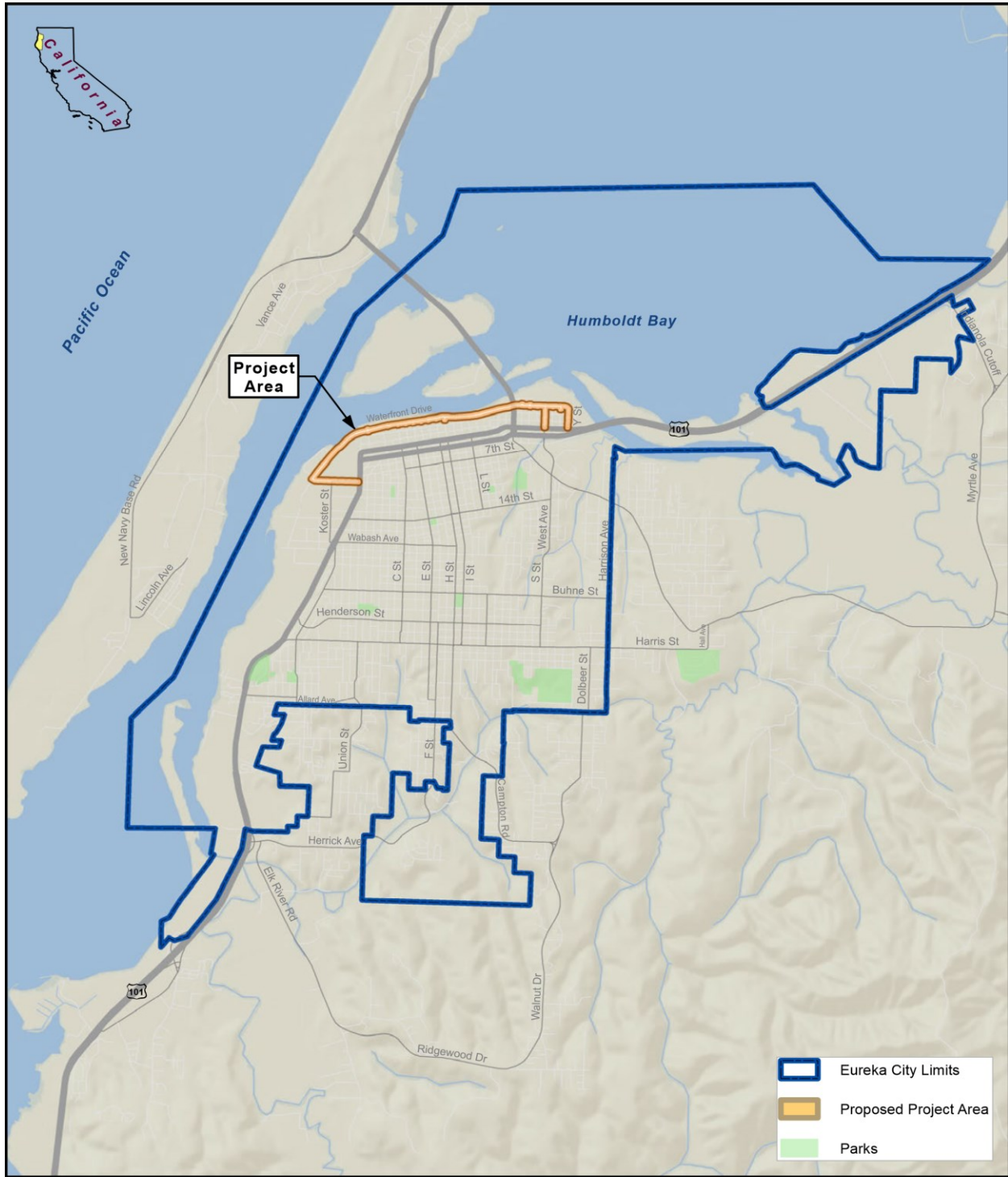
FIGURE 2

G:\1111125185\Eureka GIS Support\GIS\Map\Deliverables\Waterfront
Draw\11125185_02_PlannedDev_CurrentProj_RWG.mxd
Print date: 15 Jul 2018 - 15:19
Data source: Copyright © 2014 Esri, Getty Images, Google Street view, City of Eureka 2040 GPU, Archtype PA. Created by: gldesdon

Broader Infrastructure Investments: Current Construction Projects and Planned Development

Current Construction	Cost	Date of Completion
“G to J”: Connecting a gap in Waterfront Drive: 1 st Waterfront Drive Revitalization Section	\$3.3 million	2019-2020
12 Blocks of Underground Power	\$3.5 million	Spring 2020
Humboldt Bay Dredging	\$1.1 million	2018
Re-visioning Broadway Corridor to provide alternatives (Strategic Partnership Grant)	\$365,000	2018-2020
Samoa Boat Launch Rehabilitation	\$1.3 million	2019
BUILD Transportation Infrastructure	\$11 million	2023
Planned Development	Stage	Forecasted Completion
Public Dock Renovation	Feasibility Study, Cost Estimate, Preliminary Designs	2025
Hotel/Residential Units/Commercial Development	Feasibility Study, Cost Estimate, Preliminary Designs	2020
RV Park and Mixed Use Facility	Cost estimate, Designs, Permitting, Environmental Review	2019
Cold Storage Facility	Architectural Designs, Cost Estimate	2023
Eureka Transit Authority Micro Grid	Feasibility Study, Plans, Specifications, Cost Estimate, Local Permitting	2025
Eureka Food Innovation Center	Market and Financial Feasibility Analysis	2023

PROJECT LOCATION:



Waterfront Drive Revitalization: “Complete Streets”

For the 2018 BUILD Discretionary Grant Program, the City of Eureka proposes a project that will lead to the complete revitalization of transportation infrastructure on Waterfront Drive. The project will construct two (2) miles of “complete streets” to include road realignment, Class II bike lanes, eliminate sidewalk gaps with a minimum six feet sidewalks, curb extensions/bulbouts to shorten crossing distances, water quality features such as bioswales and flow through planters to intercept pollutants prior to entering the bay.

The goal of the City’s Waterfront Drive Revitalization Project is to continue the City of Eureka’s economic re-visioning to revitalize the Eureka waterfront as well as direct pedestrians, bicycles, and local traffic away from US Highway 101 to increase safety and ease movement of goods and services through the City.

GRANT FUNDS: (Non-federal, BUILD, and Total (including other transportation infrastructure investments))

Project Components	Non-Federal	BUILD	TOTAL
Project Study Report	N/A	N/A	N/A
Environmental Review	\$ -	\$ 300,357.15	\$ 300,357.15
Permitting	\$ -	\$ 3,003.57	\$ 3,003.57
Design (PS&E)	\$ -	\$ 480,571.44	\$ 480,571.44
Right-of-Way	\$ -	\$ -	-
Construction	\$ -	\$ 7,759,137.24	\$ 7,759,137.24
Project Management	\$ 105,300.00	\$ -	\$ 105,300.00
Contingency	\$ -	\$ 366,239.68	\$ 366,239.68
Other Transportation Infrastructure Investments: Waterfront Drive G to J ST.	\$ 3,314,830.13	\$ -	\$ 3,314,830.13
Total:	\$ 3,420,130.13	\$ 8,909,309.08	\$ 12,329,439.21

Detailed Project Budget:

Non-Federal:

Project Management: The following project responsibilities will be included in the “Project Management” line item:

Project Study Report/Project Initiation: A Project Study Report is a document that initiates the project with an overview of the project scope, cost, and schedule. This document also looks at the approach to reducing the traffic deficiencies as well as the need for the project. The Project Study Report also provides the basis of the project description for environmental review. The City is responsible for the Project Study Report for Project Initiation and this has been completed.

Right-of-Way: Right-of-way forms will be completed by City staff. The City has a right-of-way agent and Project Managers that will assist with any right-of-way requirements. The majority of the project (all but two parcels) are located within the City's street right-of-way area. The two remaining parcels are within the right-of-way of the North Coast Rail Authority, with which the City has negotiated a protocol for easements in the rail right-of-way. This document will be revisited with the rail authority to ensure proper approval for the easement area.

Procurement of Consultants and Contractors: The Project Manager will ensure Federal and City procurement policies are followed, which include but are not limited to: reviewing construction documents, rating and ranking bid documents, preparing award document, negotiating contract, issuing notice to proceed, and submitting invoices.

Quarterly Reports and Drawdown Requests: The Project Manager will also ensure costs are allowable and reports are completed on schedule. Drawdown requests will be prepared by the Engineering Department and submitted by the Project Manager.

BUILD:

Environmental Document: NEPA: The NEPA document will be completed to Caltrans standards as it is the lead agency for FHWA in California. The City will procure a consultant for completion of the technical studies in preparation of submission. The City will prepare the corresponding findings and record the decision for submission to Caltrans. The City will act as the lead agency for the CEQA review and City staff will be responsible for any technical studies and determination. The finding will be filed with Humboldt County after thirty days' public notice of intent to file. The City of Eureka staff have over fifteen years of CEQA preparation experience.

Permitting: Local permits include: Coastal Development Permit, California Department of Fish and Game Code 1602, and Caltrans Encroachment Permit. The Coastal Development permit will be completed by City staff. The Fish and Game 1602 permit will be completed by City staff. The Caltrans encroachment permit will be initiated by City staff and approved with a rider for the contractor before construction begins. Permitting costs are the actual costs to file the permits. Staff time will be included in project management.

Design: The project design is in compliance with Caltrans Highway Design Manual. The City Engineer and Engineers in Training have completed the preliminary designs. Once the environmental review is complete, the design phase will include plans, specifications, and engineering. A consultant will be procured according to City procurement policies that meet or exceed 2 CFR Part 200 for federal procurement. The City and the consultant will also prepare construction bid documents for the project.

Construction: The project construction will be completed by a Class A licensed contractor. The contractor will be procured according to the City's procurement policies which meet or exceed the 2 CFR 200 Federal Procurement Guidelines.

Construction Inspection Services: The City will procure a consultant for construction inspection. This will ensure the project is built to Caltrans standards and in compliance with the environmental documents, permitting, and City ordinances.

MERIT CRITERIA

Safety:

Highway 101 traverses through the City of Eureka for approximately seven miles. For five of these seven miles, the highway doubles as a city street. There are traffic signals along the route, with a mix of local traffic and highway traffic speeds. This corridor is marked by a significant number of businesses, vehicles, pedestrians and is one of the most frequently traveled corridors

in Caltrans District 1 (38,100 Average Annual Daily Traffic AADT).

The California Highway Patrol’s Statewide Integrated Traffic Records System (SWITRS) illustrates maps of accident data in the City of Eureka, which has a higher

HANK SIMS / WEDNESDAY, JUNE 20 @ 2:35 P.M. / TRAFFIC

Another Car on its Roof in Downtown Eureka, This Time in Front of the Courthouse



Photos: Andrew Goff.

Another rollover accident has stopped up traffic on Eureka’s Fifth Street, just a little under two hours after and two blocks away from the last time and place that a car flipped onto its roof downtown.

The driver of the currently upside-down rig appears to have hit a parked car before going whoopsy-daisy, according to the *Outpost’s* Andrew Goff, who is once again on scene. No one was injured in the crash.

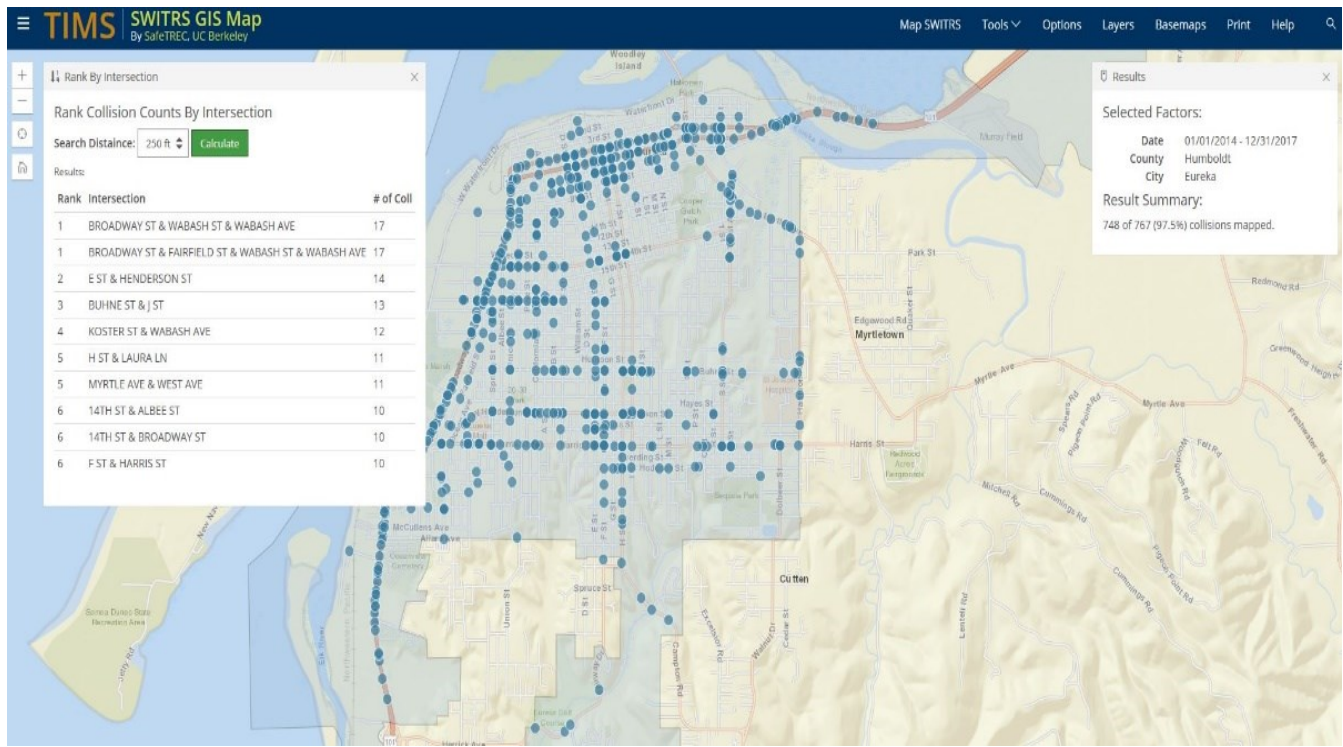
Only one lane of Fifth Street is open and traffic is backed up while first responders deal with the latest manifestation of this remarkable phenomenon.



than average collision rate for similar facilities. This area also lacks consistent shoulder widths (0-10 ft.) and essential non-motorized facilities, including ADA accessible sidewalks and bike lanes.

SWITRS data indicates that a vast majority of accidents reported in Eureka are located on Highway 101 where it overlaps with the city streets of Eureka. The following SWITRS GIS map illustrates the high volume of accidents on Highway 101 through the City of Eureka.

The SWITRS GIS map also ranks collisions by intersections as compared with the rest of the City. The intersections with the highest counts are on the Highway 101/Broadway corridor.



Currently, Waterfront Drive and Highway 101 have basic crossings for pedestrians and lack any facilities for bicyclists. Multimodal traffic is not directed or encouraged at 4th Street (Southbound Highway 101) or 5th Street (Northbound Highway 101).

HANK SIMS / TODAY @ 1:53 P.M. / TRAFFIC

Bicyclist Struck by Semi in Front of Broadway Cinema, Suffers Severe Injuries; Northbound 101 Closed



The City of Eureka Police Department uses a system known as RIMS (Road Inventory Management System) as the City’s collision database system. The City Geographic Information System staff and the Traffic Project Manager put the collision information database into a system known as “Crossroads”, where specific search parameters can be queried. This system is similar to the California Highway Patrol SWITRS system but is more frequently updated to illustrate the number of local accidents and injuries. In relation to the section of Highway 101, parallel the section of the proposed project, the City “Crossroads” system has the following

information:

Year 2013-2017	Other Visible Injury	Severe Injury	Fatal	Total
Pedestrians and Bicyclist	11	5	3	31
All	40	11	3	374

Caltrans District 1 has offered their support for the project as they are aware of the limitations this section of roadway presents for active modes of transportation (Caltrans District 1 Letter of Support). Together, Caltrans and the City of Eureka will ensure enhanced safety features that attract pedestrians and bicyclists as well as local traffic as an alternative to highway speeds and crossings. The Waterfront Drive Revitalization Project is a great opportunity to showcase this collaboration.

Waterfront Drive is a regionally significant roadway in that it offers a significant alternative to regional highway travel (23 CFR 450.140). To date, the quality of the road and lack of pedestrian or bicycle facilities have prevented Waterfront Drive from serving as a local alternative to vehicles, pedestrians, and bicyclists. Waterfront Drive also lacks a physical connection or roadway gap, for two blocks and a logical connection to 4th Street (Highway 101) on the north end of town. Additionally, the existing street lights are considered unsafe for the community. In the last 10 years, Pacific Gas & Electric engineers have received five complaints from the Old Town Business Association and the City of Eureka Engineers Association that the existing lights are unsafe due to lack of light projection. These existing lights will have the heads replaced with new bright white LED acorn-shaped lights which also have a cut off top to prevent light pollution.

The Waterfront Drive Revitalization Project will connect two sections of road to Waterfront Drive to complete the alternate route parallel to Highway 101 with pedestrian and bicycle facilities. Overall, the proposed project is a properly networked transportation grid with safe routes for bicyclists and pedestrians, reduces Highway 101 congestion and interaction between vehicles and active transportation, and improves safety lighting. Ultimately the goal of completing the project will increase economic opportunities for the City of Eureka while also reducing the number of transportation related accidents, injuries, and fatalities.

State of Good Repair

The Waterfront Drive Revitalization Project will improve the road's current conditions by closing the gaps in community destination connections, constructing new streets, and a new asphalt overlay where the existing road is intact. These roadway improvements combined with innovative storm water capture bioswales will extend the life of the transportation road network for 15-20 years. Currently, the City completes asphalt overlays in sections based on age and condition. Waterfront Drive has a transportation system age of approximately 18-35 years over the two-mile project area.

The City uses an advanced pavement management system to optimize the decision making process for paving maintenance and larger transportation capital improvement projects. The pavement management software analyzes the pavement inventory and results in a Pavement Condition Index (PCI) and determination factor (rating and ranking) for roads in the worst condition. From the pavement software, the roads in the worst condition are listed in the annual Capital Improvement Plan and once approved, annual maintenance projects are developed that primarily seal and coat city streets in a piecemeal fashion. The two sections of proposed

realigned roadway are listed in the City’s proposed Capital Improvement Plan (CIP). The majority of Waterfront Drive is not currently planned for repaving due to the present limited use of the corridor and inadequate road rehabilitation funding. If left in the current poor condition, Waterfront Drive will continue to lack the ability to provide an effective transportation system, limiting the mobility of goods and services as well as future economic growth.

The condition of Waterfront Drive varies from section to section. The totality of the road varies from poor to fair. Below are some photos taken along the route of the proposed “complete streets”.



**Existing Conditions Waterfront Drive:
No room for bike lanes**



Existing Conditions Waterfront Drive: No room for bike lanes.



**Existing Conditions: Realignment Section:
Poor intersection lay out**



Existing Conditions Waterfront Drive: No sidewalk facilities/sidewalk gaps

Economic Competitiveness

The City of Eureka’s approach to the waterfront revitalization is that by completing the corridor and improving the transportation infrastructure, the City will enhance economic productivity of land, capital, and labor. As such, the result will be long-term job creation and other economic opportunities.

The economic vitality on Waterfront Drive is by way of planned economic development that will provide new visitors to the area with enhanced pedestrian and bicycle routes and bring increased foot traffic to Old Town and surrounding downtown areas. In effect, this will support the local and regional economy by improving the movement of goods and transportation access, efficiency, and cost-effectiveness.

The proposed “complete streets” will also enhance economic attractors in the areas. The City of Eureka is home to the only deep-water port between San Francisco and northern Oregon. The City Council has identified the port as one of the most important economic assets for the City. In the Strategic Visioning for 2018, the City identified three areas of strategic importance. One of the three areas is Economic

Development and Housing. In this area, the City Council and staff emphasized the port development and degrading infrastructure as a primary area of focus for economic development. In the past year, the City has spent discretionary funding of approximately \$1.1 million for dredging the harbor to maintain boat access, and pursued a feasibility study to renovate Dock B, the public dock on the waterfront. The main factor limiting this industrial/commercial growth for the port is the lack of access for STAA trucks to the waterfront. The road network to the waterfront fails to meet the turning radius required by STAA vehicles. The Schneider Dock Industrial Park LLC, the owner of the largest industrial facility on the waterfront, relies on Waterfront Drive as the lifeline of the Eureka Bay Waterfront District as it provides direct access. Improving Waterfront Drive will directly increase the movement of goods and services for industrial businesses on the waterfront and increase efficiency for future growth².



2018 Strategic Planning Session

² Schneider Dock Industrial Park LLC Letter of Support: Eureka Waterfront Drive Revitalization Project. Attached.

Waterfront investment and development is a strong economic asset for the City. The 2040 General Plan Update evaluated the estimated development potential for the Old Town Commercial and Bayfront Commercial as well as Coastal Development Industrial land uses, which collectively have the potential to create approximately 900 jobs in anticipated growth. Also, in an Economic Analysis of Options for Waterfront Development in Eureka, completed in 2018 by BEA Urban Economics, three potential development options and their economic impacts were evaluated³. The report concluded estimated development potential forecasted 85 residential units, 114,000 square feet of retail, and a 100 room hotel. These three developments alone would provide an additional 387 jobs in the City.

Table 2-1: Eureka General Plan Estimated Development Potential

Land Use	Gross Acres	Density/Intensity		Maximum Allowed Incremental Growth ¹	Anticipated Incremental Growth ²	Existing + Anticipated Incremental Growth ³	Estimated Increase in Residents/Jobs
		Allowed Range	Assumed Average				
Residential							
Estate Residential (ER)	46	4.0 or less du/ac	2.0 du/ac	164 du	9 du	9 du	21 residents
Low Density Residential (LDR)	2,005	1 primary unit and 1 accessory dwelling unit per lot	8.0 du/ac	2,872 du	314 du	8,905 du	722 residents
Medium Density Residential (MDR)	340	22.0 or less du/ac	14.0 du/ac	4,884 du	119 du	3,346 du	224 residents
High Density Residential (HDR)	359	44.0 or less du/ac	24.0 du/ac	9,636 du	130 du	273 du	244 residents
Agricultural (A)	450	2 or less du/lot	1 du/lot	142 du	2 du	2 du	5 residents
Commercial, Office, and Mixed Use Units	NA	NA	18.0 du/ac	NA	1,290 du	1,290 du	2,425 residents
Industrial Use Units	NA	NA	-	NA	20 du	20 du	37 residents
Public/Quasi Public (PQP) Units	NA	NA	-	NA	2 du	2 du	5 residents
Total Residential	3,200	NA	NA	17,698 du	1,886 du	13,847 du	3,683 residents
Non-Residential⁴							
Downtown Commercial (DC)	151	6.0 FAR	0.45 FAR	20,124,720 sf	283,894 sf	283,894 sf	1,136 employees
Old Town Commercial (OC)	34	5.0 FAR	0.35 FAR	3,484,800 sf	88,665 sf	88,665 sf	355 employees
Bayfront Commercial (BC)	69	4.0 FAR	0.40 FAR	8,189,280 sf	260,373 sf	260,373 sf	521 employees
Professional Office (PO)	143	2.5 FAR	0.60 FAR	10,781,100 sf	122,499 sf	807,135 sf	245 employees
Light Industrial (LI)	50	2.0 FAR	0.30 FAR	3,397,680 sf	89,385 sf	1,680,643 sf	89 employees
Coastal Dependent Industrial (CDI)	72	2.0 FAR	0.30 FAR	18,730,800 sf	230,679 sf	1,520,678 sf	231 employees
Public and Quasi-Public (PQP)	840	NA	NA	NA	NA	NA	NA
Natural Resources (NR)	776	Intensity Based on Zoning District	NA	NA	NA	NA	NA
Water-Development (WD)	959	NA	NA	NA	NA	NA	NA
Water-Conservation (WC)	3,201	NA	NA	NA	NA	NA	NA
Total Non-Residential⁴	7,160	NA	NA	NA	1,603,894 sf	13,353,248 sf	3,595 employees

The Waterfront Drive Revitalization Project, to construct approximately two miles of “complete streets” and revitalize the port connection, will support port access by STAA trucks directly to the public dock. This access is currently without a direct path and difficult to navigate through narrow roadways. With that in mind, the “complete streets” initiative will facilitate the safe and efficient movement of freight through the City.

³ 2017 General Plan Update 2040. Land Use Plan Pg.38.

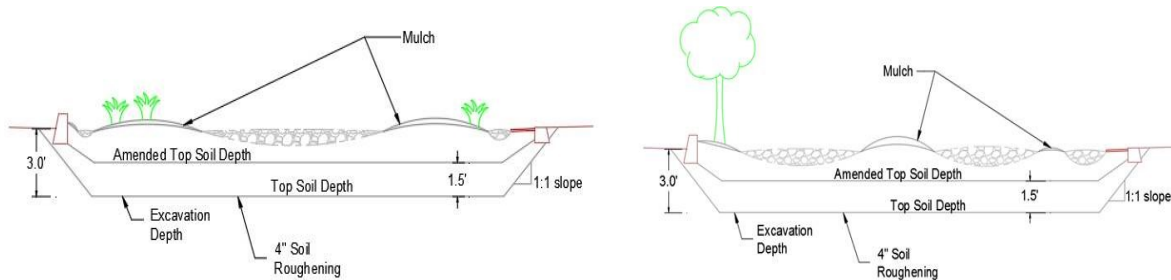
Environmental Protection

As a coastal community, the City of Eureka is dedicated to environmental protection and as such, has developed a Local Coastal Plan (LCP) to ensure coastal development consistency and environmental protection. The proposed project is located in the Coastal Zone and is consistent with coastal development regulations. Reduced stormwater runoff is especially important to this project since storm drains empty directly into Humboldt Bay and reduction in runoff will help with the overall water quality of the bay. During the project design, it was extremely important to mitigate increased stormwater runoff.

Within the two-mile project area, there are approximately fourteen water quality enhancement features, or bioswales, that filter runoff from streets in a series of planters to protect the water quality of Humboldt Bay.

WATER QUALITY ENHANCEMENT FEATURES	SIZE	QUANTITY
Flow Through Planters	40' x 20'	1
Flow Through Planters	70' x 20'	1
Drain Inlet Planters	40' x 20'	4
Drain Inlet Planters	70' x 20'	4
Drain Inlets	30' x 20'	3
Drain Inlets	60' x 20'	1

Below is a cross-section of two bioswales features from the project designs.



Additionally, there are approximately thirty solar powered LED street lights on Waterfront Drive that will be installed. The solar powered lights will reduce reliance on electricity from the grid and improve energy efficiency.

Overall, the proposed project will reduce greenhouse gases by providing a less congested option for local vehicle traffic on a parallel route to Highway 101. Diverting motorized traffic will result in less start-and-stop traffic and congestion on the current motorized route (Highway 101), through the City of Eureka.

NEPA/CEQA (discussed in “REQUIRED APPROVALS”). The project will complete all technical studies to comply with NEPA and CEQA. Pending the completion of the technical studies, it is anticipated that the project will have minimal environmental impacts.

Quality of Life

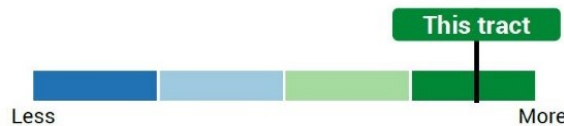
The City of Eureka is a disadvantaged community as defined by the median household income from the 2012-2016 American Community Survey (ACS) of less than \$51,026. According to the US Department of Transportation’s “Relationship to Public Health”, “Households in low-income areas typically own fewer vehicles, have longer commutes, and have higher transportation costs⁴”. The California Healthy Places Index below combines twenty-five community characteristics into a single indexed HPI score correlated to life expectancy at birth⁵. The HPI for the northern most section of the project area is 8.7% for the data years 2011-2015, which is extremely low. As seen in the figure, 88.1% of the population commute to work by transit, walking, or cycling in the project census tract, and only 4.43% have access to an automobile.



HPI SCORE: 8.7 Percentile **Tract: 06023000500**

Active Commuting
Percentage of workers (16 years and older) who commute to work by transit, walking, or cycling

Value	Percentile	Data Year
20	88.1	2011-2015



How does this connect to health?

Everybody should have safe, accessible and convenient transportation options to get to work and other destinations. Active commuting by foot, bike and transit creates opportunities for physical activity, provides transportation options for those without a car, encourages social cohesion, and reduces contributions to climate change and air pollution.

Connectivity and closing the gap in access to transportation routes for multimodal users is especially important in Eureka where many lower income residents rely on active transportation as the leading mode of transportation. The following is a list of community services within one mile of the proposed project.

⁴ www.transportation.gov/mission/health/equity.

⁵ <https://map.healthyplacesindex.org>

<i>Community Resources, Commercial Businesses, and Points of Interest < 1 mile from Waterfront Drive</i>		
Community Resources	Commercial Businesses	Points of Interest
Open Door Community Health Center	Bayshore Mall	Humboldt County Convention and Visitor's Bureau
Adorni Recreation Center	CVS Pharmacy	Fort Humboldt Historic Landmark
Redwood Community Action Agency	Pacific Outfitters of Eureka	Carson Mansion
Employment Development Department	Target	Clarke Historical Museum
Humboldt County Office of Education	Pepsi Bottling Group	California Department of Fish and Game
Alder Bay Assisted Living	Shred Tec	Myrtle Grove Memorial
Humboldt County Recycling	Old Town Shopping Center	Madakat Plaza Boat Tours
Mistwood Montessori School	Old Town Coffee and Chocolates	Eureka Visitor Center
Eureka Community School	Quality Inn Eureka	
The Salvation Army	Carter House Inns	
Eureka Chamber of Commerce	Los Bagels	
Eureka Skate Park	Red Lion Hotel	
DMV Eureka Office	Booklegger	
Unity Church of the Redwoods	Eureka Books	
Food for People	Old Town Auto	
Calvary Chapel Eureka	The Works Music Store	
St. Bernard's Catholic School	Shamus T-Bones	
Six Rivers National Forest Headquarters	Mazzotti's Italian Restaurant	
Humboldt Bay Aquatic Center	Ramones Café	

The expected benefits from the proposed two miles of “complete streets” on Waterfront Drive are increased connectivity and equity, quality of life, and transportation accessibility among the residents of Eureka. The California Center for Rural Policy (CCRP) states that “Transportation is an important determinant of health affecting all spheres of community life”. Results from the Rural Health Information Survey, 2006, indicate that transportation is a problem in meeting health needs for many residents in the Redwood Coast region⁶. Being poor, non-white or living in an area with low population density significantly increases the chance of transportation problems. The leading cause of death prior to 75 years of age is cardiovascular disease, alcohol, and other drugs, and suicide⁷. For the past six years, Humboldt County has suffered from the highest rate of suicide in California.

Investing in pedestrian and other non-motorized facilities creates safe active transportation opportunities for people to exercise. This helps reduce obesity and risks for developing costly chronic conditions such as diabetes and cardiovascular disease. As a low income community, the Waterfront Drive project is particularly important to the City of Eureka and will create a more balanced mode share with increased access and options for people to reach the goods, services, and activities they need. The City of Eureka Waterfront Drive Revitalization Project will increase the quality of life for all residents by improving community resource connectivity and by increasing safe multimodal transportation options.

Innovation:

Innovative Technologies

In the City of Eureka, Highway 101 drops down in size from a freeway to an arterial with access points for local businesses. The Waterfront Drive “complete streets” will serve as a collector road for the excess Highway 101 traffic and multimodal users. The types of innovative safety technologies that could be integrated into a larger arterial or freeway are not applicable. This proposed project will not be installing new traffic signals, broadband, etc. That being said, it was the City’s goal to mitigate any environmental impacts, i.e., increased runoff, decreased water quality, and reliance on electricity for crossing signals or lighting. There are three design techniques that were incorporated into the plans that serve to integrate “complete streets” and alternatives that will reduce the need for hard infrastructure: 1) green infrastructure bioswales; 2) solar/LED lighting; 3) automated pedestrian crossing signals.

1) Green infrastructure bioswales or Low Impact Development will provide concentrated pollutant removal and stormwater run-off volume reduction.

⁶ Humboldt County Department of Health and Human Services: 2013 Community Health Assessment pg. 24.

⁷ Humboldt County Vital Statistics (Automated Vital Statistics System (AVSS), California Electronic Death Registration System (CA-EDRS).

2) Solar LED street lighting that run entirely on green electricity generated by integrated solar panels and completely carbon neutral. The solar street lighting also adapts to local conditions in order to minimize light pollution.

3) Automated pedestrian activated crossing signals will be installed at three locations to provide increased pedestrian safety while reducing the amount of delay for vehicles in a location where traffic may vary considerably.

Innovative Project Delivery

The City has worked with Caltrans, the California Coastal Commission, local utilities, and the Humboldt County Association of Governments (HCAOG, the regional transportation authority) over the past five years to ensure review and approval of local permitting is completed in a timely manner and consistent with project timelines. As a critical piece of the partnership between HCAOG and City staff, staff will work directly with HCAOG to ensure expedited submission of CEQA review and approval to the California Transportation Commission.

The local Caltrans Office (District 1) has met with the City to specifically discuss the project, and provide input and discuss hurdles that may be present. Caltrans staff expressed complete support for the project and has also reviewed the project impact area and plans to expedite any environmental and permitting processes. To ensure a timely project delivery, Caltrans has worked with the City through an expedited government-to-government process. Through this process, the Caltrans Planning team works with City staff through each phase of the project to ensure that when permits are needed they are processed in a timely manner.

As a partnership, the City and Caltrans are continuing to work together on similar issues on the Highway 101 corridor to make sure design/plan review comments and permitting moves forward in a timely manner.

Innovative Financing

The City Public Works Director has been meeting with local private partners that specialize in sustainable business and community development to determine if there is a potential partnership that could bring innovative financing to the project in terms of solar lighting and EV charging stations. But there is also a broader movement of innovative financing to leverage funds for the City. Under direction of the City's Economic Development Commission and City Council, the Development Services Department, which includes both Economic and Community Development, is in the process of stimulating a series of private investor



developments on the waterfront. As such, the Development Services Department is in the process of pursuing the feasibility of a partnership for a speeder rail car in the Old Town District. The speeder car would use the existing old North Coast Rail Authority tracks that remain in Eureka. Other such innovative financing options include the City's Economic and Community Development Department providing completed feasibility studies and environmental reviews for specific development sites to attract investors.

Partnership

The local regional transit authority, known as the Humboldt County Association of Governments (HCAOG), has committed to provide a partnership for the Waterfront Drive Revitalization Project. HCAOG is instrumental in the development of the North Coast’s Regional Transportation Plan and shaping the direction of projects with stakeholders such as Caltrans, the County of Humboldt, and the Coastal Commission. As a partner, HCAOG will ensure support for the Waterfront Drive Revitalization Project and “complete streets” initiative in the Regional Transportation Improvement Plan and the consistency with the Interregional Transportation Improvement Plan and the California Transportation Commission.

The City of Eureka’s Public Works Department, Development Services Department, and the Eureka Chamber of Commerce have also formed a partnership to revitalize the Eureka Waterfront and strategically attract economic opportunities by collaborating on the necessary infrastructure improvements that will serve to improve investor outlook and potential in the area. The Department of Economic and Community Development Director pushed for the last couple of years to meet with private investors in hopes of attracting a hotel franchise to the downtown Eureka Waterfront. As previously mentioned, the Development Services Department rezoned areas for consistency with development goals and provided the initial environmental review of the parcels to entice private developers. The Chamber of Commerce has participated and supports efforts by the Development Services Department to revitalize the waterfront’s economic/business opportunities. More recently, the Development Services Department, the Chamber of Commerce, and the Public Works Department have worked together to facilitate infrastructure goals on the Eureka Waterfront as part of a package to attract outside investors to the area. The Waterfront Drive Revitalization Project is a result of the strategic partnership between the Department of Economic and Community Development, Chamber of Commerce, and Public Works to ultimately provide increased economic opportunities, increased safety, and strengthen the public-private partnership⁸.

Non-Federal Revenue for Transportation Infrastructure Investment

In 2016, the City of Eureka partnered with HCAOG, the County of Humboldt, and other nearby municipalities to pass a Humboldt County-wide sales tax measure (Measure U) as a self-help measure to increase non-federal revenue for transportation infrastructure. Measure U was put forth to authorize and adopt an additional half-cent sales tax for twenty years to supplement funding for maintenance, rehabilitation, and reconstruction of existing transportation infrastructure. Revenue from the tax could have generated \$10,000,000 annually, and could only be used on transportation infrastructure projects if approved by a two-thirds vote of the electorate as required by California Constitution Article XIII, Section 2(d). The ballot measure was defeated at 51.17% to 48.83%. There was substantial support from the voters in the City of Eureka for a transportation tax.

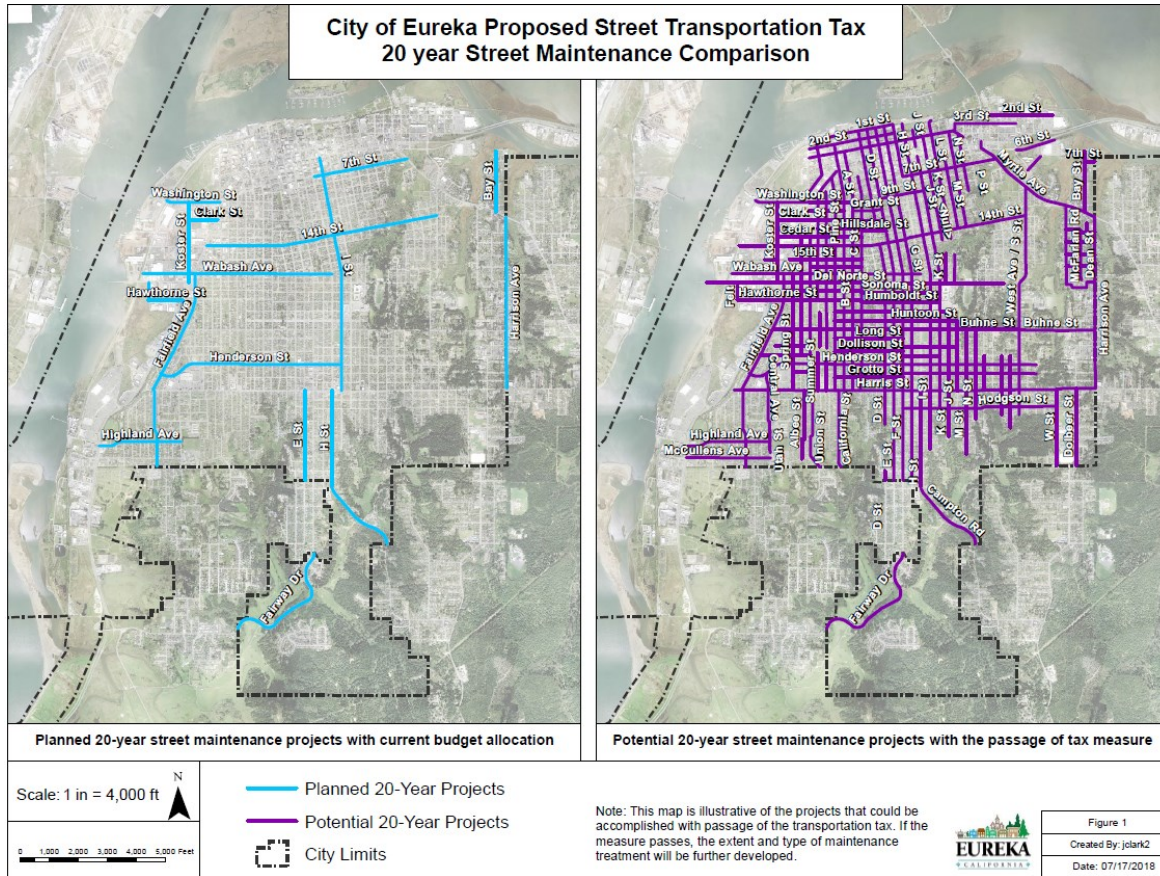
⁸ Chamber of Commerce Letter of Support: City of Eureka Waterfront Drive Revitalization Project. Attached.

In light of the overwhelming public support within the City of Eureka, the City has revisited the sales tax increase as ballot Measure I, which will go to vote in the fall of 2018 as a City of Eureka only tax. This new Measure I will authorize and adopt a one-fourth cent sales tax specifically for the maintenance, rehabilitation, and reconstruction of Eureka’s transportation infrastructure.

Additionally, California State Senate Bill 1 (SB1): The Road Repair and Accountability Act of 2017, invests more than \$5 billion annually directly for maintenance, repair, and safety improvements on highways, local streets, and roads, bridges, tunnels, and overpasses. SB1 has specifically dedicated \$200 million of total funds towards the Local Partnership Program to match locally generated transportation funds. If passed, the City intends to leverage the one-fourth cent sales tax funds with the SB1 Local Partnership Program matching funds. As a projection of potential transportation infrastructure funds, the City has calculated the amount of funds currently available for transportation infrastructure in comparison with the amount of funds anticipated with Measure I and SB1 matching funds.

2018 Measure I Transportation Sales Tax Increase (one-fourth cent) 10 Year Projections					
Funding	2019	2020	2021	2022	2023
Current	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000
Proposed (Measure I)	\$3,059,974	\$7,180,987	\$2,936,953	\$3,492,600	\$3,018,403
Funding	2024	2025	2026	2027	2028
Current	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000
Proposed (Measure I)	\$3,175,107	\$2,782,757	\$3,221,930	\$2,968,007	\$956,465
Ten Year Total with Current Transportation Funding					\$6,000,000
Ten Year Total with Proposed Transportation Funding					\$32,793,183

Furthermore, the number of transportation infrastructure projects that can be completed in the next twenty years with current funding in comparison with the significantly larger volume of projects that can be realized with Measure I and SB1 funds are shown in the following maps.



The anticipated timeline for Measure I is as follows: August; Measure Arguments and Public Inspection, September; Rebuttals and Analysis and Public Inspection, October-November; Vote-by-mail applications. With the past support for Measure U from the residents of Eureka, the City is anticipating a positive outcome for Measure I. As a City priority, the City staff will continue to work towards growing the City’s non-federal revenue for infrastructure investment to improve Eureka’s transportation network.

PROJECT READINESS

Technical Feasibility

The City of Eureka’s Public Works staff completed the preliminary engineering and designs for the project. Design standards are based on Caltrans Highway Design Manual. These designs include the overall road schematics for each section of roadway and layout of features included in the “complete streets” design. The schematic designs for the project are attached.

Required Approvals

The City of Eureka has designed the project schedule to ensure the completion of all required activities necessary to obligate funds before September 2020 and furthermore anticipate completion of all the required approvals by July 2020. To ensure the environmental review and determination is completed on schedule, the City is moving forward with the NEPA/CEQA set to begin in January 2019. The following topics highlight the areas of required approvals to ensure a structured and timely compliance of activities necessary to obligate funds:

Environmental Permits and Reviews

NEPA: SEE Right-of-Way Map Attachment:

The City of Eureka is proposing to reconstruct a two-mile portion of Waterfront Drive to include two lanes for vehicles, Class II bicycle lanes, sidewalks and transit stops. The roadway will include 12-foot wide travel lanes and 5.5-foot wide bike lanes in each direction. A minimum of 6-foot wide sidewalks will be provided along the roadway. Additionally, the gap between X Street and Y Street will be brought to the same standards. Utility infrastructure to be installed as part of this project includes stormwater collection, fire suppression, and utility (water/wastewater) realignment with the road. In discussions with Federal Highway Administration (FHWA) California Division staff, it was relayed that Caltrans has assumed NEPA lead responsibilities on behalf of FHWA. Upon review of the plan set by Caltrans Environmental staff, it was determined that the project will require a Preliminary Environmental Study (PES) form since Caltrans is the lead agency with oversight responsibility. The PES will require the following technical studies:

- Traffic Study
- Noise Technical Memo
- Hazardous Waste Initial Site Assessment (ISA)
- Water Quality Technical memo (can be part of NES)
- Coastal Consistency Determination
- Floodplain Assessment Report (only if your project falls within the 100-year floodplain, which it probably doesn't)
- Natural Environment Study (NES)
- Wetlands Assessment (part of the NES and needs to cover 1 parameter wetland delineation since project occurs within the coastal zone)
- Minor Visual Impact Assessment and Community Impact Assessment (this is worst case scenario based on the location, this may be covered via a memo to file)
- Area of Potential Effects (APE) Map, Archaeological Survey Report (ASR) and Historic Property Survey Report (HPSR).

After the technical studies are completed, Caltrans anticipates that the NEPA document will be a Categorical Exclusion (CE) pending the findings of the technical studies. As the project focuses on rehabilitating the roadway, it is included in Category 23 CFR 771.117 (c) (26). During these conversations, Caltrans staff verified that according to the footprint it appears that the only additional permit that will be triggered is a Coastal Development Permit (CDP).

The timeline for the Preliminary Environmental Study, completion of technical studies, and subsequent categorical exclusion determination will be approximately six to eight months. With the intention of moving forward with the environmental review process, the City hired a consultant to complete CEQA/NEPA documents. This task is set to begin early 2019 and will be completed by the end of 2019.

CEQA: Similar to the NEPA review, the proposed roadway rehabilitation and pedestrian improvements are anticipated to have a minimal impact to the environment. The City will prepare an initial study checklist to include any additional studies, and pending the results of the studies, will prepare a negative declaration pursuant to the provisions of CEQA.

State and Local Approvals: The Complete Streets Act of 2008 requires California cities and counties to adopt transportation plans that accommodate all users of roadway, including pedestrians, transit, bicyclists, the elderly, children, motorists, and the disabled (AB 1358). The Act calls for RTPA to integrate “complete streets” policies into their RTPs and consider accelerating programming for projects that retrofit existing roads to provide safe and convenient travel by all users⁹. The local Regional Transportation Authority, (HCAOG), explicitly and consistently upholds “complete streets” policies in the Regional Transportation Plan. As a partner in the proposed project, HCAOG will facilitate the amendment of the RTP in December 2018 to include the remaining 2 miles of “complete streets” on Waterfront Drive.

Public Engagement: In May 2018, the City of Eureka completed a General Plan Update, a twenty-year outlook, to establish a roadmap for the long-term physical, social, and economic future of Eureka. In the City’s General Plan Update, Old Town is considered a “Core Area” and in the coming 20 years, the City envisions the Core Area expanding its influence as the business and cultural center of the City, with increased opportunities for tourism and expanded upper floor residential uses. The key components of the public outreach and engagement for the General Plan Update included stakeholder interviews, community workshops, web-based virtual town halls; economic development and homelessness focus groups, landowner requests; City, County and Planning Commission check-in sessions, and EIR scoping meetings, a General Plan Update website, flyers, media releases, and public hearings. The identification of Old Town as a Core Area envisioned with a dense development pattern, sidewalks, bike lanes, and a primary center for tourism, recreation, leisure activities, and professional services originated from these discussions. The Eureka City Council directly approved the project and submission of the grant application in City Council public meeting minutes from June 5, 2018.

Coastal Commission’s Coastal Development Permit (CDP): A Coastal Development Permit will be required for the proposed project since it is located in the Coastal Zone. Under the California Coastal Act, each local jurisdiction within the coastal zone is required to prepare a Local Coastal Program. The Waterfront Drive Revitalization Project is consistent with the Local Coastal Plan and the project will be subject to a standard Coastal Development Permit Process, which generally takes about four months.

⁹ Complete Streets Implementation Action Plan 2.0, California Department of Transportation, 2014.

California Department of Fish and Wildlife 1602 Streambed Alteration Permit: During the course of the Environmental Review it may be determined that a CDFW Fish and Game Code 1602 is not required, but in order to prepare for any project impediments, the 1602 permit has been included in the project schedule and the permitting requirements. The project area which includes new road has been identified in a previous wetland delineation map and therefore could require the review and approval of CA Fish and Wildlife. The permit will be completed by City staff and is a standard process in rural areas where a watercourse may be impacted. The permit is expected to take approximately three months.

Caltrans Encroachment Permit: In order to facilitate traffic calming on the section of Highway 101 that runs through the City, the proposed project will connect to Highway 101 at two locations. These two intersections will require an approved encroachment permit from Caltrans District 1. This is a standard process and usually takes about two to three months. The City of Eureka owns utilities located on Highway 101 and has a Memorandum of Understanding to maintain those utilities. As such, the City has worked closely with Caltrans staff and will ensure that encroachment permits are in place for the Waterfront Drive Revitalization Project.

Pacific Gas and Electric (PG&E) Utility Relocation of two power poles: The City of Eureka is currently working on Waterfront Drive to complete a utility relocation to close a gap on Waterfront Drive from G Street to J Street. During this time, the City has created an underground utility district to relocate utilities underground. In discussions about the Waterfront Drive Revitalization Project, Pacific Gas and Electric has agreed that the two poles on the new road section will not need to be undergrounded and can be relocated nearby.

Railroad Authority Programmatic Agreement: Although no longer operating any facilities in the area, North Coast Rail Authority continues to hold a number of properties along Humboldt Bay adjacent to and under the North Coast Rail Authority tracks. Over the past 15 years, Union Pacific has approached the City about purchasing property and/or right-of-way along the Waterfront Drive route. At this time, the City has an approved Corridor Management Plan with North Coast Rail Authority for management of the rail corridor in the City of Eureka with regards to maintenance, access, right-of-way, roadway crossing designs and landscaping. Although the State Senate has passed SB 1029, the bill to dissolve the North Coast Rail Authority, design work for Waterfront Drive has assumed resumption of heavy rail operation in the corridor and the City has accommodated set-backs to account for rail banking. The City's Waterfront Drive Revitalization Project will primarily fall within the purview of the existing Lease Agreement with the North Coast Rail Authority. Any concerns that may arise will be handled through an amendment to the existing agreement as needed.

Demonstrated Project Readiness:

The proposed project is straightforward in its approach with no project impediments. The project has been designed to be located in the City's streets right-of-way and a short section in the North Coast Rail Authority right-of-way. As previously mentioned, the City has a negotiated Corridor Management Plan approved by the North Coast Rail Authority for City projects in the rail right-of-way and will seek to amend that agreement specifically to address this project.

The project anticipates the standard permitting process for the Coastal Development Permit, CA Fish and Wildlife 1602 Permit, and Pacific Gas and Electric approval. Being located on Humboldt Bay, the City has worked with the Coastal Commission and Fish and Wildlife on a number of projects in the Coastal Zone. The project is consistent with the Local Coastal Plan so there are no anticipated issues with the Coastal Development Permit.

To ensure consistency with the Regional Transportation Plan, the City has partnered with the Regional Transportation Authority, HCAOG, to ensure project support. As a risk mitigation strategy, the City has met with Caltrans and HCAOG as partners in the design review and permitting process to ensure project support at every level.

The City of Eureka's Public Works Department has extensive experience managing projects of this magnitude to include environmental reviews, budget management, construction oversight, and agency reporting requirements. The Public Works Department manages capital improvement projects for the wastewater treatment plant, water reservoir, streets, and stormwater and water distribution systems. The City has a proven track record of delivery of large projects, on schedule and within budget. Specific to transportation infrastructure, the Traffic Project Manager has successfully completed Caltrans Highway Safety Improvement Projects for over five years and continues to complete road improvements and maintenance. These projects include but are not limited to pedestrian safety improvements, paving, and continued coordination with Caltrans on planning multimodal options for the Highway 101 corridor.

The Finance Department with the City of Eureka ensures compliance with 2 CFR 400, and recent procurement policy updates meet or exceed the standards of the federal guidelines. In addition, the City completes an annual financial audit.

Benefit Cost Analysis (BCA)

The 4th Street and 5th Street corridor in the City is known for vehicular congestion and inadequate accommodation for bicyclists and pedestrians. This segment of roadway is often congested and delayed. Although the benefits of the Waterfront Drive Revitalization Project are numerous to the economic competitiveness and quality of life for the residents of Eureka, the BCA is calculated based on the safety countermeasures that will be provided on Waterfront Drive as the only route that parallels the 4th Street and 5th Street corridor.

The basis for the benefit cost analysis is the "no-build" alternative. The baseline crash data was gathered from the "Crossroads" database maintained by the City of Eureka Police Department.

The Highway Safety Improvement Program (HSIP) provides an analysis tool for crash countermeasures and crash reduction factors to determine a total benefit costs analysis. When the crash data is input into the HSIP Analyzer, a monetary value is calculated for accident data. The crash data for pedestrians and bicyclists accidents on the 4th Street and 5th Street corridor, parallel the project, is totaled: \$49,490,261.

The countermeasures and corresponding crash reduction factors include: 1. Installed raised medians/refuge/islands (.45). 2. Installed/upgrade larger or additional stop signs or other intersection warning/regulatory signs (.15). 3. Installed bike lanes (.35).

The total costs of the project to include environmental review, engineering, project management, and construction, is \$9,014,500.00.

When compared with the monetary total for the accident data, the benefit/cost ratio is \$49,490,261/\$9,014,500 or 5.5.