Transportation and Roadway Infrastructure Program ("TRIP") Nexus Study

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Prepared for:
City of Chula Vista

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Executive Summary

What is the TRIP?

The Transportation and Roadway Infrastructure Program ("TRIP") is a transportation impact fee (a type of development impact fee) specifically meant to address the impacts of new residents and workers utilizing transportation-related infrastructure, such as roads, intersections, bridges, as well as facilities that serve transit, pedestrians and/or non-motorized vehicles (e.g., bike lanes or sidewalks, etc.). The fee is established such that new development and redevelopment projects will pay their "fair share" towards new and expanded transportation infrastructure and facilities that mitigate the impacts caused by growth.

Who Pays the TRIP?

Impact fees are generally paid by builders and/or developers of private sector buildings (e.g., new or redeveloped office, retail, industrial and/or residential projects).

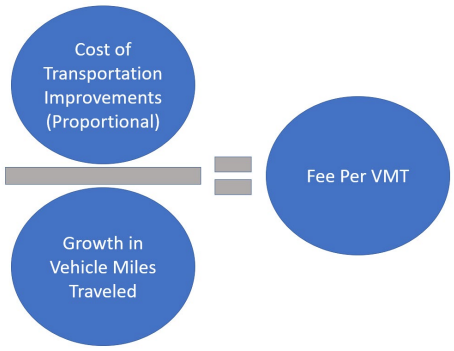
How is the TRIP Calculated?

The maximum fee that could be charged is determined based on this Nexus Study prepared per the requirements of the Mitigation Fee Act. The Mitigation Fee Act (California Government Code Section 66000) provides the legal requirements for developing impact fees ensuring that the nexus study documents and justifies the maximum allowable fee. An agency establishing the fee has the discretion to charge up to the maximum allowable fee. In addition, the fees established herein have an essential nexus, and are roughly proportional, to the impacts they are designed to mitigate. The nexus, or relationship, is established between the impacts of new development and the need for new transportation infrastructure. Chula Vista has established a nexus based on Vehicle Miles Traveled ("VMT"). VMT is the estimated number of vehicle trips generated by a particular use, multiplied by the estimated distance of those trips, and is a measure of roadway use. New development increases VMT and must be accommodated through roadway

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WHAT IS A DEVELOPMENT IMPACT FEE PROGRAM?

A Development Impact Fee ("DIF") is a one-time charge on development imposed by local jurisdictions to pay for new public infrastructure and capital facilities that are needed to provide municipal services (e.g., transportation, public safety, parks, libraries, etc.) to new residents and workers generated by development. DIFs are authorized under the California Mitigation Fee Act (Government Code sections 66000-66008), also known as AB 1600. DIFs ensure that "growth pays for growth," and are not designed to cure existing deficiencies.



Visual Representation how the TRIP is Calculated

improvements such as intersection upgrades, bicycle facilities, and pedestrian facilities. Bicycle and pedestrian facilities help to reduce VMT by offering people the alternative to biking or walk for some of their shorter trips.

The fee is calculated by estimating the cost of new roadway improvements and dividing it by the VMT expected to be generated by new development to arrive at the cost per VMT. See the visual representation of this relationship in the exhibit below.

TRIP West and TRIP East

The TRIP fees vary based on benefit area for Chula Vista. Chula Vista has three benefit areas: Bayfront (BFDIF - which is not included in this update), Western Chula Vista (TRIP West), and Eastern Chula Vista (TRIP East). Utilizing benefit areas to calculate the fees recognizes that different geographic areas impact the City's transportation needs differently, and thus will allocate costs in proportion to the impacts created by new development. This methodology fairly allocates the cost of new infrastructure based on geographic context.

Western Chula Vista is characterized primarily by redevelopment and improvements to existing roadways whereas Eastern Chula Vista is characterized by new development and construction of new roadways (or large-scale widening improvements). These conditions, together with the generally higher VMT per person and per employee on the eastern side of the City, explain the relatively higher fees east of I-805.

What Are the Fees?

TRIP East: $376.10 per VMT

TRIP West: $162.51 per VMT

How Are the Fees Assessed?

As of July 2022, per AB 602, newly adopted impact fees levied on residential development must be calculated to be

proportional to the square footage of the new units, unless such a metric is inappropriate. This is a departure from the more common approach, where the fee is levied per residential unit, often differentiated by building type (e.g., single-family, multifamily/apartment, etc.).

The TRIP Fees are assessed based on development size defined by number of residents or employees. The number of residents is determined based on the type and size of residential units, based on US Census Bureau data and regional parcel data. For example, a 700 square foot apartment is assumed to have fewer residents than a 1,000 square foot apartment. For non-residential uses, the number of employees is estimated based on the type of use and a standard estimate of the number of employees per square foot of that use. The number of residents or employees is used to calculate the project's total VMT for fee assessment purposes. Specifically, the TRIP for a given project is calculated as follows:

TRIP Fee = Number of New Residents or Employees **X** *VMT per Resident or Employee (from the SANDAG regional model)* **X** *Rate per VMT*

Square footage for residential uses is an input to the fee calculation. Square footage is used directly to calculate the estimated number of residents for a residential development. The number of residents assumed for the development is used directly to estimate the VMT produced by the development and the TRIP Fee equation.

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Introduction & Overview

Nexus Study Purpose

This transportation development impact fee nexus study ("Nexus Study") provides the technical documentation necessary to support the City of Chula Vista's ("City") development of the Transportation and Roadway Infrastructure Program ("TRIP" or "fee program"), formerly known as the Transportation Development Impact Fee ("TDIF") program. The TRIP represents a substantive update to the previous TDIF projects and includes updated growth estimates, changes to infrastructure needs, infrastructure costs, and fee basis. The Nexus Study provides the technical basis for the City to collect fees consistent with the California Mitigation Fee Act (AB 1600/Government Code 66000 et seq.). This analysis also implicitly demonstrates that the final calculated fees are roughly proportional and have an essential nexus to the impacts to be mitigated.

Development impact fees are imposed upon new development[1] in a benefit area,[2] containing different properties, property owners, and land use types and used by the City to cover the cost of capital facilities and infrastructure that are required to serve new growth. The fees are typically collected upon issuance of a building permit or call for final inspection prior to certificate of occupancy.

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[1] New development includes any construction activity that requires a building permit and creates additional impacts to on the City's transportation infrastructure once completed (e.g., through additional travel demand or vehicle miles traveled).

[2] A benefit area is the boundary that is covered by the fee program. The infrastructure needs and future growth are defined within the benefit area.

Regulatory Context

The Mitigation Fee Act allows the City to adopt an ordinance that enables the fee and defines the program structure. The fee may be updated periodically when supported by a technical analysis and approved by City Council.

Impact fee revenue is collected and used to defray cost of the public improvements and community amenities required to serve new development and growth in the City or a benefit area within the City. As such, impact fees must be based on a reasonable nexus, or connection, between new growth and the need for a new facility or improvement. Impact fee revenue cannot be used to cover the operation and maintenance costs of these or any other facilities and infrastructure. In addition, impact fee revenue cannot be collected or used to cover the cost of existing needs/deficiencies in the City's transportation network. Therefore, the two primary purposes of the TRIP are to:

1. Fund the construction of transportation facilities needed to accommodate future growth.
2. Spread the costs associated with construction of the facilities equitably among the developing properties within the benefit area. This nexus study addresses growth and transportation infrastructure needs in the eastern and western areas of Chula Vista, as displayed in **Exhibit 1**.

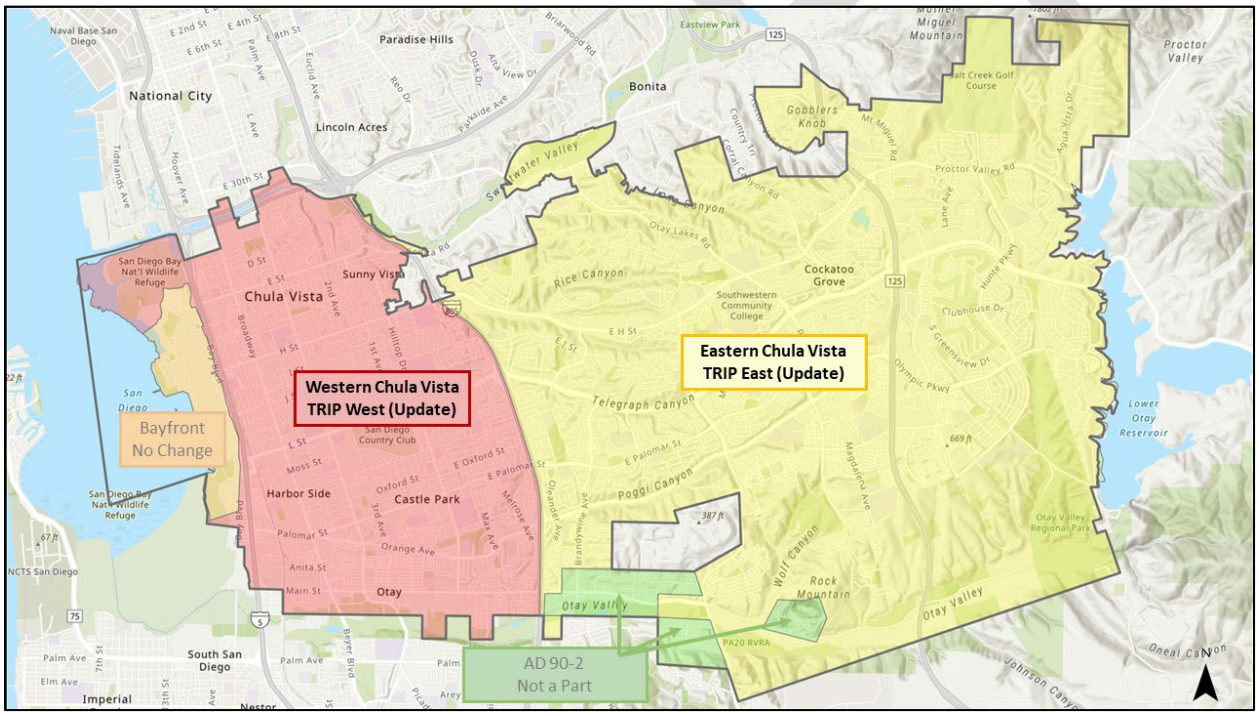


Exhibit 1: TRIP West and TRIP East Benefit Area

In establishing, increasing, or imposing a fee as a condition for the approval of a development project, Government Code 66001(a) and (b) state that the local agency must:

- Identify the purpose of the fee.
- Identify how the fee is to be used.

- Determine how a reasonable relationship exists between the fee use and type of development project for which the fee is being used.
- Determine how the need for the public facility relates to the type of development project for which the fee is imposed.
- Show the relationship between the amount of the fee and the cost of the public facility.

These statutory requirements have been followed in updating this impact fee, as documented in subsequent chapters.

After the TRIP is adopted, this Nexus Study and the technical information it contains will be maintained and reviewed periodically by the City of Chula Vista to ensure impact fee accuracy and to enable the adequate programming of funding sources. To the extent that transportation improvement requirements, costs, and development potential changes over time, the fee program will need to be updated.

The following additional regulations are pertinent to this Nexus Study:

- AB 602: Assembly Bill 602 requires that impact fees levied on residential development must be calculated such that they are proportional to the square footage of the new units.
- AB 3177: The Mitigation Fee Act, requires a local agency that imposes a fee on a housing development for the purpose of mitigating vehicular traffic impacts to set the rate for the fee to reflect a lower rate of automobile trip generation if the housing development satisfies specified characteristics, including that the housing development is located within 1/2 mile of a transit station. The current requirements include a number of characteristics in addition to the project location near transit that must be satisfied to render the lower fee applicable. AB 3177 simplifies the requirements such that if a housing project is in a transit priority area (TPA[3]) the rate for the fee must reflect a lower rate of automobile trip generation than the standard trip generation rate for housing to reflect use of transit.

Historical Background and Context

Eastern TDIF

The Eastern Transportation Development Impact Fee ("ETDIF") program in the City dates to the mid-1980s and has had periodic updates over the last several decades.

In 2005 a major update to the ETDIF was completed. The 2005 update reflected the 2005 Chula Vista General Plan – *Vision 2020*, reviewed all previous infrastructure projects and costs, evaluated actual costs and fee

[3] Transit Priority Area (TPA): Defined in paragraph (7) of subdivision (a) of Section 21099 of the Public Resources Code as, "Transit priority area" means an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program or applicable regional transportation plan." Note that for purposes of AB 3177 the major transit stop, if planned, is programmed to be completed before or within one year from the scheduled completion and occupancy of the housing development.

credits, re-evaluated the average daily trip ("ADT") rates for commercial land uses by considering only trips generated outside the benefit area, and introduced office and mixed-use residential as separate land use designations.

The 2014 update to the ETDIF adjusted the development impact fee based on completed roadway infrastructure construction, revised development projections and new unit costs. Several new arterial projects were added, and other projects received updates to their scope of work.

Western TDIF

On March 18, 2008, City Council adopted the Western Transportation Development Impact Fee ("WTDIF"). This program was intended to be similar to ETDIF. The original benefit area included the area within the city limits west of Interstate 805. In 2014 the WTDIF was updated to revise the benefit area, update the land use assumptions, and update infrastructure costs. Ordinance 3327 was adopted in January 2015 updating the WTDIF to remove the Bayfront area from the benefit area.

Pedestrian Bridges DIFs

The Otay Ranch General Development Plan land use plan envisioned a network of bridges to facilitate pedestrian access among various Otay Ranch Villages, located to the east of I-805. The City has completed nexus studies for pedestrian bridges (also referred to as "multimodal bridges" to recognize that the bridges were designed to also accommodate bicycles and Neighborhood Electric Vehicles) serving Otay Ranch Villages 1, 2, 5, 6, and 11 and the Millenia Sectional Planning Area ("SPA"). To date, the following pedestrian bridges have been constructed:

- North La Media bridge (La Media Road and East Palomar Street): completed in 2002
- West Olympic Parkway bridge (Olympic Parkway and Santa Venetia Street): completed in 2008
- East Olympic Parkway bridge (Olympic Parkway and East Palomar Street): completed in 2008
- Eastlake Parkway bridge (Eastlake Parkway and Element Way): completed in 2020

Pedestrian bridge DIFs have been collected which partially fund the following bridges which have not yet been constructed:

- South La Media (La Media Road and Olympic Parkway): would serve Otay Ranch Villages 2 and 6
- Hunte Parkway (Hunte Parkway near High Tech High): would serve Otay Ranch Village 11 and the University Innovation District

The following pedestrian bridge has been identified in relevant SPA Plans but has not been included in any nexus study:

- State Route 125 (between Main Street and Otay Valley Road): would serve Otay Ranch Villages 8 East and 9

This Nexus Study does not include any proposed changes to any of the pedestrian bridge DIFs. However, this Nexus Study incorporates partial funding of the Hunte Parkway pedestrian bridge and funds the State Route 125 pedestrian bridge in its entirety.

Bayfront TDIF

The Bayfront area was originally included as part of the WTDIF area in the 2008 nexus study. This area included the portion of Chula Vista west of Interstate 805 to the San Diego Bay. In April 2010, the Chula Vista Bayfront Master Plan ("CVBMP") and Final Environmental Impact Report ("EIR") was completed. This document was adopted by the Chula Vista City Council on May 10, 2010. Upon completion of the CVBMP, City staff recommended that a fee program separate from the WTDIF be established since the transportation impacts and infrastructure needs in the Bayfront area are significantly different than the transportation impacts associated with the western area. Ordinance 3327 was adopted in January 2015 updating the WTDIF to remove the Bayfront area from the benefit area and establishing the Bayfront Transportation Development Impact Fee ("BFDIF"). This nexus study does not include any proposed changes to the BFDIF.

Assessment District 90-2

On June 23, 1992, the City Council adopted Resolution 16643, which formed Assessment District 90-2. Assessment District No. 90-2 was formed to finance certain public improvements, including the acquisition of street and other related improvements in connection with the widening of Otay Valley Road. The land lying within the boundaries of Assessment District 90-2, shown in green in Exhibit 1, is outside of the ETDIF benefit area and is not a part of this Nexus Study.

Regional Transportation Congestion Improvement Program ("RTCIP")

In November 2004, San Diego County voters approved local Proposition A extending the TransNet ½ cent sales tax for transportation programs through 2048. Included in Proposition A and the TransNet Extension Ordinance is the Regional Transportation Congestion Improvement Program ("RTCIP"). The purpose of the RTCIP is to ensure that new development directly invests in the region's transportation system to offset the negative impacts of growth on congestion and mobility. As required by the TransNet Extension Ordinance, local agencies are required to collect a minimum fee per dwelling unit, which was originally established by SANDAG in the 2007 RTCIP Impact Fee Nexus Study. The RTCIP originally documented the need to collect a Countywide fee of $2,000 per residential unit for roadways that are determined to be Regional Arterial System ("RAS")[4] facilities. The fee, which is indexed annually, is $2,875.06 per dwelling unit as of fiscal year 2024-2025. Local agencies are required to certify each year that their fee programs collect the RTCIP minimum fee in order to remain eligible for TransNet local street and road funding.

[4] The Regional Arterial System is defined by SANDAG. SANDAG employes a rigorous process to define the RAS. The criteria for defining a road as part of the RAS include: the road's role as a "critical link" (i.e., it provides a direct connection between communities), it links to areas with high concentrations of existing or future population or employment, it links to activity centers, it is forecasted to have high traffic volumes, it is part of the regional vision, and it provides access to intermodal facilities.

The TRIP funds both RAS (through the RTCIP) and non-RAS facilities. The RTCIP is not collected as a separate fee and is not in addition to the TRIP fees. If a local agency is collecting a fee that meets or exceeds the RTCIP fee amount they remain eligible to receive TransNet local street and road funding.

Changes to the ETDIF and WTDIF

As discussed above, the 2024 update presented herein represents a major update to the ETDIF and WTDIF. This update includes the following:

- Incorporating substantial updates to the ETDIF and WTDIF and renaming these fee programs as TRIP East and TRIP West, respectively. This Nexus Study does not change the boundaries of the eastern or western benefit areas. TRIP East covers the benefit area within the City limits generally east of Interstate 805. TRIP West covers the benefit area within the City limits generally located between Interstate 5 on the west, Interstate 805 on the east as well as those areas to the west of Interstate 5 lying outside of the Bayfront Area. See **Exhibit 1** for the benefit areas.
- Incorporating the Hunte Parkway Pedestrian Bridge and the State Route 125 Pedestrian Bridge into TRIP East.
- Accounting for completed infrastructure and for infrastructure projects that have changed in scope.
- Completing a comprehensive update to the land use projections for eastern area and western area buildout for all land use types: single-family residential, multifamily residential, hotels, retail uses, office uses, and industrial uses. The land use update includes accounting for completed land use growth between 2014 and 2024 and estimates future land use growth using the City's General Plan, SPA Plans, Specific Plans, the current version of the SANDAG travel demand model, and assessor's parcel records.
- The ETDIF Nexus Study (2014) and WTDIF Nexus Study Update (2014) provide documentation for the portion of transportation infrastructure allocated to new growth. Unless expressly identified in this Nexus Study, the proportion of infrastructure allocated to new growth remains as documented in the 2014 ETDIF and WTDIF nexus studies. Land use growth from 2014 through June 30, 2024 and remaining growth (through buildout) is considered. The updated fee considers only the remaining growth (July 1, 2024 through buildout).
- Comprehensive update to the infrastructure costs based on current cost information and updated infrastructure scopes.
- Transitioning to VMT as the nexus for charging the fees (instead of average daily trips) to better capture proportionate impacts of new development. While project impacts were previously assessed based on the number of vehicle trips generated by development and level of service ("LOS")—that is, whether or not the project will result in traffic congestion, current state of the practice for transportation analysis is to evaluate vehicle miles traveled (VMT) generated by the new development. The implication of this shift is that infill development projects will be assessed as having lower transportation impacts than new greenfield projects with lower density and homogeneous land-uses. The shift also encourages developers and public agencies to prioritize access to non-automobile modes of transportation. It should be noted that the transportation

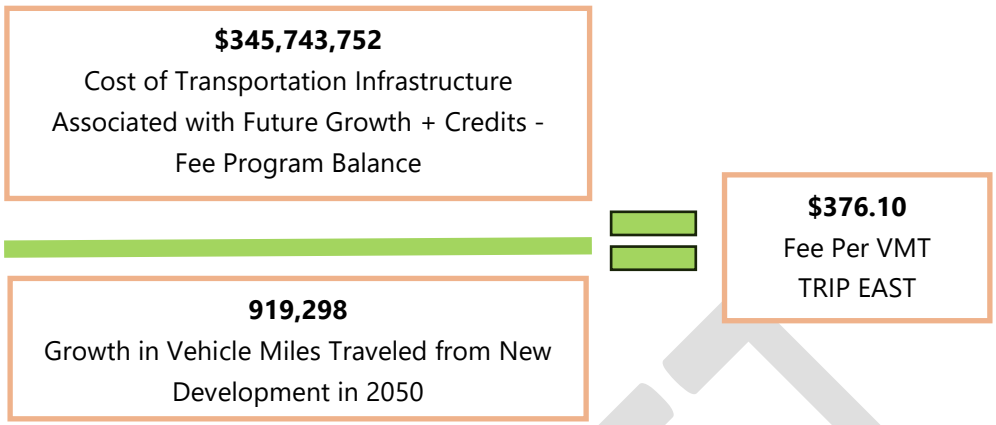
infrastructure needs project list includes vehicle capacity-enhancing and multimodal improvements needed to support future growth.

- It **does not** include changes/updates to or replace nexus studies for the BFDIF, Assessment District 90-2, or the Pedestrian Bridge DIFs.

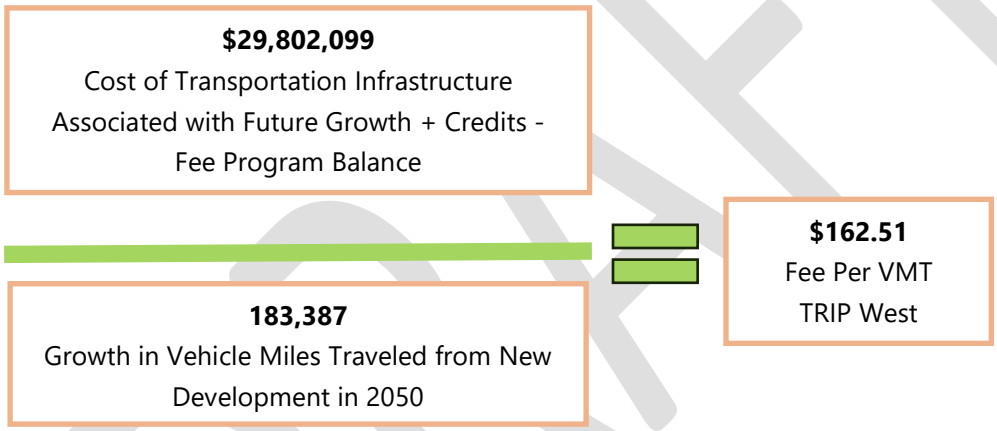
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Summary of the Maximum Allowable Fee

The fee calculation for **TRIP East** is determined through the following equation:



The fee calculation for **TRIP West** is determined through the following equation:



Summary of Required Nexus Study Elements

Table 1 displays a checklist of the required elements of a Nexus Study per Government Code 66001(a) and (b) and AB 602 and where the relevant requirements are addressed by this Nexus Study for the TRIP program.

Table 1: Nexus Study Requirements Checklist

Nexus Study Requirement	Location in Nexus Study	
	TRIP East	TRIP West
Identify purpose and use of the fee.	Page 1; Pages 13-14	Page 1; Pages 27-28
Identify a reasonable relationship between the fee use and the type of development project for which the fee is being used.	Pages 1-3; Pages 22-26	Pages 1-3; Pages 37-41
Identify how the need for the public facility relates to the type of development project for which the fee is imposed.	Pages 1-3; Pages 22-26	Pages 1-3; Pages 37-41
Show the relationship between the amount of the fee and the cost of the public facility.	Pages 13-22	Pages 27-37
Rationale for having fees by geographic area.	Page 2	Page 2
Establish a capital improvement plan	Appendix B	Appendix B
Calculate a fee imposed on a housing development project proportionately to the square footage of proposed units of the development.	Pages 42-44	Pages 42-44
Show that the traffic impacts mitigated through the fees are roughly proportional to the amount of the fees, and that there is an essential nexus to new development.	Pages 22-26	Pages 37-41

Source: Fehr & Peers, 2024



TRIP East

Methodology and Key Issues

The following considerations are included in the TRIP East fee calculations:

- TRIP East is a major update to the ETDIF
- The benefit area for the TRIP East has not changed. It is the same benefit area identified in the 2014 nexus study. The benefit area is displayed on **Exhibit 2**.

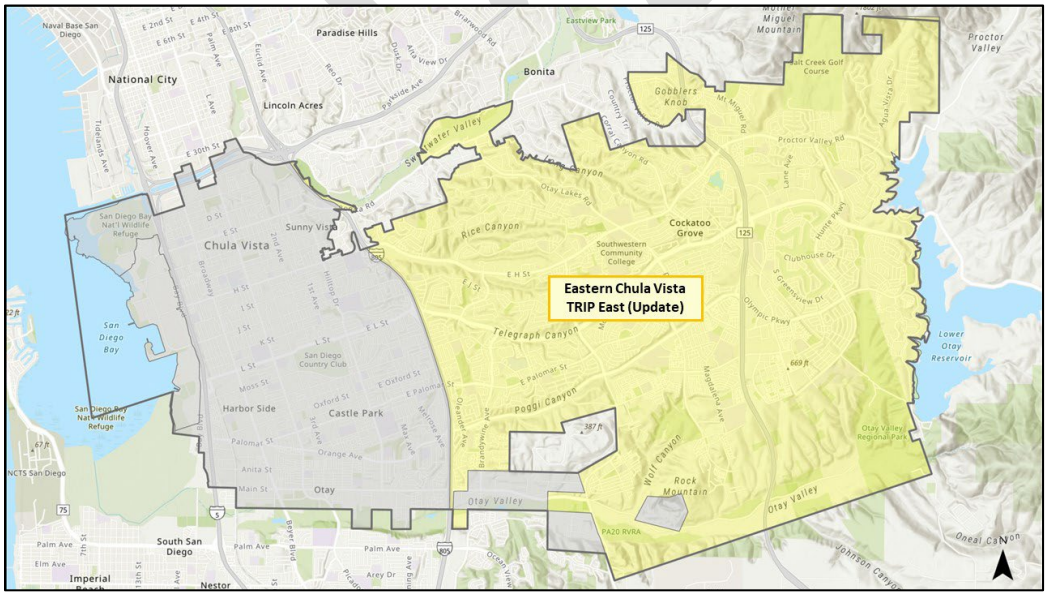


Exhibit 2: TRIP East Benefit Area

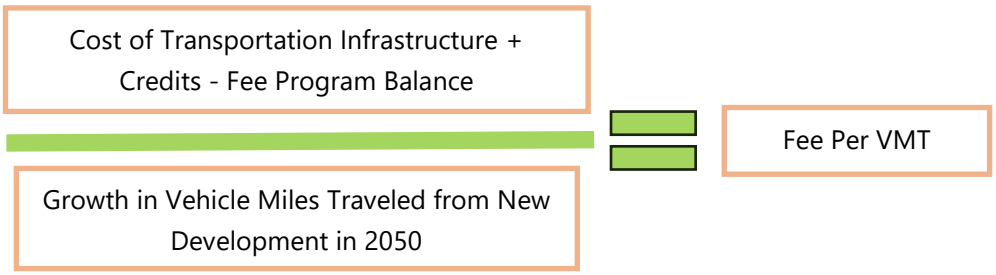
- Land use growth from the 2014 nexus study through 2022 and remaining growth (through buildout) is considered. The updated fee considers only the remaining growth through buildout.
- VMT associated with the remaining growth is calculated by multiplying the TRIP East Benefit area 2050 VMT/resident or VMT/employee[5] by the number of anticipated future residents and employees. The 2050 VMT/resident for the TRIP East Benefit area is 16.99 based on the SANDAG ABM2+ Model[6]. The VMT/employee for the TRIP East benefit area is 9.00 based on the SANDAG ABM2+ Model. Note that the 2050 SANDAG Model is a representation of buildout conditions and provides an estimate of VMT for buildout conditions.
- Transportation infrastructure that has been constructed or projects that have changed in scope since the 2014 nexus study are identified and removed or revised.
- None of the identified improvements are intended to address existing deficiencies. Therefore, for the TRIP East benefit area, future development is fully responsible for the cost of the improvements. Transportation infrastructure needed to accommodate the remaining growth is included in the updated fee. The transportation infrastructure identified in the fee program ensures that the remaining streets in the benefit area are funded for construction, proportionately to the impacts caused by growth. The original fee program for the eastern area of the City was in response to planned development as part of SPA Plans and the Otay Ranch General Development Plan in an area that was at the time generally undeveloped, so all new infrastructure was need to for that new development. Over time development has continued, and transportation infrastructure has been constructed incrementally to keep up with the demand. This is in contrast to the western area, which is largely built-out and infill development often relies on the existing transportation infrastructure, which tends to be at or near capacity or has other existing deficiencies such as sidewalk gaps.
- Outstanding fee program credits are identified and included in the calculations.
- The ETDIF account balance is included in the TRIP East fee calculations.

[5] The TRIP fee is established using the 2050 VMT/capita and VMT/employee. An individual project's fee calculation is performed using the base year VMT/capita and VMT/employee produced by the SANDAG travel demand model and reported on the City's website that is current at the time the project's fee is being assessed. See "Applying the TRIP Fee" section of this nexus study for fee calculation instructions and examples.

[6] SANDAG Regional Travel Demand Model ABM2+/2021RP Scenario ID 459



The fee calculation is determined through the following equation:



Cost of Transportation Infrastructure

Infrastructure Cost Estimating Assumptions

Project cost estimates for the ETDIF were last updated in 2005. The costs included in the 2014 nexus study factored the 2005 costs using data from the Engineering News Construction Cost Index ("CCI") as a means of updating estimates over time. These updates did not account for changes in design and construction standards or regulatory requirements (such as prevailing wage). As such, a comprehensive update to the costs for the transportation infrastructure were completed using 2022 unit prices and updated soft cost assumptions. A separate study was conducted to determine appropriate unit costs: *Transportation Development Impact Fee ("TDIF") Project Cost Estimates Technical Memorandum* (January 31, 2023, produced by Kimley Horn). The technical memorandum is included in **Appendix A.** The resulting cost estimates were factored using the CCI to account for additional inflation between 2023 and 2024 to represent July 1, 2024 cost estimates.

Publicly available unit cost records for previously constructed projects within the County of San Diego were adjusted for inflation and adapted for use in completing individual project cost estimates for projects within the City of Chula Vista.

The County of San Diego Unit Price List was selected as a basis for a majority of the unit prices, as it is widely used in developing project cost estimates and bond estimates by many local agencies in San Diego County, including the City of Chula Vista.

Unit costs for roadway, bridge and traffic signal improvements within Caltrans right-of-way specifically use available Caltrans online cost data.

Utilizing the unit cost data identified in the *Transportation Development Impact Fee ("TDIF") Project Cost Estimates Technical Memorandum*, typical costs for the construction of ¼-mile segments of each classification of roadway identified in the City of Chula Vista Engineering & Capital Projects Standard Drawings was developed for application on roadway projects.

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It was assumed that eligible project costs should only include improvement work within the right-of-way limits of the proposed roadway or bridge. Assumptions for TRIP East facilities include one new traffic signal per one mile of new roadway.

The cost estimates presented in this nexus study are representative of July 1, 2024 costs.

Cost for Program Administration

The cost to administer the TRIP fees was estimated based on an analysis of historical staff charges for this purpose between 2015 and 2022. Average annual staff charges were projected through the year 2050 and the compared to the average cost per year to construct TDIF-funded improvements. The average level of staff support for the life of the program was projected to be 1.7%. An additional 0.30% was added to accommodate occasional consultant support needed for administrative activities (such as the preparation of nexus studies, completion of updated cost estimates, performing audits of developer-constructed improvements, etc.) and supplies and equipment used to administer the program. (As a comparison, the program administration charge for ETDIF was 3% and for WTDIF it was 2%.)

TRIP East Transportation Infrastructure Changes

The transportation infrastructure included in the 2014 ETDIF nexus study and Pedestrian Bridge DIF nexus studies were thoroughly reviewed to identify which projects had been constructed and which projects may have changed in scope. Several projects previously included in the ETDIF and the Pedestrian Bridge DIFs were removed, constructed, consolidated, or added. These changes are reflected in the TRIP East project list. A summary of these changes is presented below in **Table 2**.

Table 2: Summary of Revisions to Fee Program Project List – TRIP East

Proj. #	Project Title	Improvement	Change
Changes to ETDIF Project List			
28a	Otay Lakes Road	Road Widening	Added. This segment was added to the TRIP East nexus study in accordance with Section 3.4 of the executed Project Development Cooperation Agreement between the City and Lakeview I, LLC, approved by the Chula Vista City Council via Resolution 2019-237 on December 10, 2019.
43	Birch Road	South curb area improvements	Completed.
46	Eastlake Parkway	West curb area improvements	Completed.
47a	San Miguel Ranch Road	Proctor Valley Road Interchange	Completed.
52b	La Media Road	New 6LP arterial	Completed.
53a/b	La Media Road Couplet and Main Street Couplet	Couplets on La Media and Main Street	Completed.

56e	Main Street	Widened FY16, 6L So side	Removed. Project was fully funded by ETDIF in the FY 23-24 Capital Improvement Program.
57	Heritage Road	New Arterial	Completed.
58b	Heritage Road Bridge	Replacement Project	Removed. Project was fully funded by ETDIF in the FY 23-24 Capital Improvement Program.
61	Willow Street Bridge	Reconstruct Bridge	Completed.
62	East H Street	Widened arterial and right turn lane	Completed.
63	System Wide	Traffic Signalization	Removed. The traffic signals on eastern area facilities are included in the cost estimate for each individual project.
65	System Wide	Traffic Management Center (TDIF)	Completed.
67/68 A	Main Street and Otay Valley Road SR 125 Interchanges	New SR 125 Interchanges at Main Street and Otay Valley Road	Modified. Split into two projects to isolate the cost of the interchange from the cost of the multimodal bridge. A separate detailed cost estimate is provided for the multi-modal bridge.
67/68 B	SR 125 Multimodal Bridge	Multimodal bridge over SR 125 between the Main Street and Otay Valley Road interchanges	Added. Split into two projects (67/68 A and B) to isolate the cost of the interchange from the cost of the multimodal bridge. A separate detailed cost estimate is provided for the multimodal bridge.
69	Millenia Avenue	New 4LM arterial	Completed.
73	Hunte Parkway Multimodal Bridge	New multimodal bridge connecting across Hunte Parkway from Village 11 to the University and Innovation District east of Eastlake Parkway	Added. This improvement is added to accommodate multimodal travel from new development and to connect to the system of multimodal bridges.

Source: Chula Vista City Staff, Fehr & Peers, 2024

TRIP East Project List with Costs

Table 3 displays the project costs for the facilities included in the TRIP East. The TRIP capital improvement plan ("cip")[7] and project summary exhibits showing the location, description, and cost estimate for Projects 28a-72 are provided in **Appendix B and Appendix C, respectively**.

[7] The Mitigation Fee Act allows the City to adopt an ordinance that enables the fee and defines the program structure. The Nexus Study provides the technical basis for the City to collect fees consistent with the California Mitigation Fee Act (AB 1600/Government Code 66000 et seq.)

Table 3: TRIP East Infrastructure Costs

Proj. #	Project Title/ Location	From	To	Improvement	Cost Estimate	Adjustments*	TRIP East Amount
28a	Otay Lakes Road	Wueste Road	Eastern City Boundary Line	Widen to Boulevard with Intermittent Turn Lanes (COUNTY STANDARD)	$4,872,418	-	$4,872,418
28b	Otay Lakes Road	Lake Crest Drive	Wueste Road	Widen to Boulevard with Intermittent Turn Lanes (COUNTY STANDARD)	$6,207,912	-	$6,207,912
56c	Otay Valley Road	La Media Parkway Couplet South Terminus	SR-125 Right-of-Way	Construct 4-Lane Major Arterial	$17,362,414	25%	$4,340,604
58a	Heritage Road	Entertainment Circle North	Southernly City Boundary	Construct 6-Lane Prime Arterial	$12,632,359	-	$12,632,359
59c	Proctor Valley Road	Agua Vista Drive	Eastern City Limits	Widen to Class II Collector with Contiguous Sidewalk	$5,697,621	-	$5,697,621
60a	Main Street	Heritage Road	Wolf Canyon Bridge West Abutment	Construct 6-Lane Prime Arterial	$19,092,725	-	$19,092,725
60b	Main Street	Wolf Canyon Bridge East Abutment	West Terminus of Main Street Couplet	Construct 6-Lane Prime Arterial	$21,517,898	-	$21,517,898
60c	Main Street	Wolf Canyon Bridge	Wolf Canyon Bridge	Construct 6-Lane Bridge	$112,737,671	-	$112,737,671
60d	Main Street	Main Street Couplet East Terminus	SR-125 Right-of-Way	Construct 6-Lane Bridge	$8,377,870	-	$8,377,870

Proj. #	Project Title/ Location	From	To	Improvement	Cost Estimate	Adjustments*	TRIP East Amount
64	Hunte Parkway	SR-125	Eastlake Parkway	Construct 6-Lane Bridge	$11,905,395	-	$11,905,395
67/68a	Main Street and Otay Valley Road Bridges	SR-125 SB ramps	SR-125 NB ramps	Main Street: New 6LP Bridge & ramps; Otay Valley: New 4LM bridge	$91,517,192	-	$91,517,192
67/68b	SR 125 Multimodal Bridge	Village 8 East	Village 9	Pedestrian bridge crossing SR 125 between Main Street and La Media Road	$16,815,439	-	$16,815,439
70	Discovery Falls	Hunte Parkway Village 9	Street "B"	Construct 4-Lane Collector transitioning to 2-Lane Collector	$13,409,510	-	$13,409,510
71	Street B	Hunte Parkway	Otay Valley Road	Construct 2-Lane Collector	$9,159,270	-	$9,159,270
72	Otay Valley Road	East of SR-125	Subdivision Boundary	Construct 4-Lane Major Arterial	$9,567,044	-	$9,567,044
73	Hunte Parkway Multimodal Bridge	Village 11	University and Innovation District	Multimodal bridge crossing Hunte Parkway.	$15,654,012	$1,961,770.50	$13,692,241.50
						TOTAL TRIP EAST Vehicular Capacity Project Costs)	$361,543,170
						Program Management Fee (2% of Infrastructure Costs)	$7,230,863
						TOTAL TRIP East Project Cost	**$368,774,033**

Notes: *Adjustments represent changes to the total cost estimates to reflect funding available through other sources. Project 56c includes an adjustment to reflect that as of July 1, 2024, the applicant had been issued credits reflecting 75% of the construction costs, with 25% remaining to complete. Project 73 includes an adjustment to reflect the funds available in the Village 11 Ped Bridge DIF. The remainder is funded through TRIP East.
Source: Kimley Horn *Transportation Development Impact Fee ("TDIF") Project Cost Estimates Technical Memorandum,* Chula Vista City Staff, Fehr & Peers, 2024

All planned transportation improvements are necessary to mitigate demand created by future development. The vehicular capacity of the roadway network was evaluated as part of the 2014 Nexus Study; no changes in roadway capacity or project descriptions (i.e., widened roadways, changes in facility needs, etc.) are proposed as part of the TRIP East facilities list. Otay Lakes Road from Wueste Road to the eastern city limits (Project 28a) is incorporated into the ETDIF program project list per Section 3.4 of the Project Development Cooperation Agreement with Otay Ranch Village (ORV)13 (12/10/2019), and is also incorporated into TRIP East. All adjustments made to the cost of improvements are due to outside funding sources that are offsetting the cost; they are not due to existing deficiencies. These adjustments are shown above in **Table 2**.

The SR 125 and Hunte Parkway multimodal bridges will accommodate increased bicycle and pedestrian demand from future growth and are part of the system of multimodal bridges that were originally identified in the Otay Ranch General Development Plan, SPA Plans, and Specific Plans. No additional multimodal bridge facilities are identified to be included in TRIP East. It is necessary in accordance with Mitigation Fee Act section 66001 to determine that there is a reasonable relationship between the need for the public facility and the development project on which the fee is imposed. The multimodal bridges will contribute to reduction in Vehicle Miles Traveled by providing critical connections to the City's non-vehicular circulation network. The City's VMT goal (for CEQA significance threshold purposes) is that new development generate VMT as follows:

- Residential Projects: 15% below the existing regional average VMT/resident
- Employment Projects: 15% below the existing regional average VMT/employee
- Industrial Employment Projects: At or below the existing regional average VMT/employee

The specific amount of VMT reduced by the SR 125 and Hunte Parkway multimodal bridges is speculative; however, the *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerability, and Advancing Health and Equity* (GHG Handbook, California Air Pollution Control Officers Association ("CAPCOA"), 2021) demonstrates that multimodal facilities reduce VMT. The following measures are relevant to the multimodal bridges:

- T-18: Provide Pedestrian Network Improvement – Maximum VMT reduction is 6.4%
- T-19A: Construct or Improve Bike Facility – Maximum VMT reduction is 0.8%
- T-20: Expand Bikeway Network – Maximum VMT reduction is 0.5%

The total daily VMT associated with new residents or employees associated with future growth in the TRIP East benefit area is 919,298 VMT, and the total daily VMT to achieve the City's Goal is 842,637 VMT. The amount of daily VMT reduction in the TRIP East benefit area needed to achieve the City's VMT reduction goal is 85,487 daily VMT or 9%. The GHG Handbook indicates that the maximum VMT reduction associated with expanding the multimodal network is 6.4% for providing pedestrian improvement, 0.8% for providing bicycle facility improvements, and 0.5% for expanding the bikeway network. The exact amount of VMT reduction associated with the multimodal bridges included in TRIP East is speculative; however, at most the reduction would be limited by the maximum amounts presented in the GHG Handbook and is expected to be at the low end of the range given the limited amount of additional bicycle and pedestrian miles added



to the overall network. The multimodal bridges will partially contribute to the reduction needed to achieve the City's VMT goals. Since these projects will contribute to a reduction in VMT associated with future growth that would not achieve the full VMT reduction goal there is a reasonable relationship between the multimodal bridges and future growth.

Fee Credits and Program Balance

Fee Credits

DIF credits are granted to developers if they design and construct all or a portion of DIF facilities required for their development. If they do so, they receive DIF credits equal to the costs of designing and constructing the facilities. These credits are established in trust accounts and developers use these credits to pay their DIF obligation that would otherwise be paid with cash.

City staff completed a thorough review of all fee credit trust accounts. As of June 30, 2024 there are approximately 19 trust accounts associated with fee credits for TRIP East facilities. **Table 4** provides a summary of the credits and liabilities associated with these accounts. Detailed summary of the credit trust accounts is provided in Appendix D.

Table 4: TRIP East Fee Credit Summary

Fee Credits Summary	Value as of 6/30/2024
Eastern Facilities Fee Credits (Cost to Program)	$40,474563
TRIP East Future Revenue (associated with deferred payments)	$(19,649,704)
TOTAL TRIP East Fee Credit Liability	**$20,824,859**

Source: Chula Vista Staff, 2024

The fee credit total is included in the numerator of the fee program calculation.

Fund Balance

The fund balances from the ETDIF are carried over to the TRIP East program. Chula Vista staff identified the current balance as of June 30, 2024. **Table 5** summarizes the current balance.

Table 5: ETDIF Fund Balance

Fund	Fund Balance (as of 6/30/2024)
ETDIF Fund 590920	$38,973,530
ETDIF Admin Fund 590921	$4,881,609
TOTAL ETDIF Fund Balance	**$43,855,139**

Source: Chula Vista Staff, 2024

The ETDIF Fund balance reduces the TRIP East fee requirement.

Total Fee Requirement

Table 6 displays the total fee requirement for the TRIP East (Facility Cost minus fund balance plus fee credit liabilities) program. This represents the numerator of the fee calculation.

Table 6: TRIP East Program Total Fee Requirement

Program Element	Total Cost as of 6/30/2024
TOTAL TRIP East Project Costs	**$368,774,033**
TOTAL ETDIF Credit Liability	**$20,824,859**
TOTAL ETDIF Fund Balance	**-$43,855,139**
TRIP East Program Fee Requirement	**$345,743,752**

Source: Chula Vista Staff and Fehr & Peers, 2024

Land Use Growth and Travel Demand Assumptions

Land use growth/new development creates the need for additional transportation facilities; therefore, it is necessary to estimate the amount of new development within the benefit area and the burden that new development places on the transportation network.

As described in the Methodology and Key Issues section, the remaining growth was calculated through review of the 2014 nexus study, determining land development constructed between 2014-June 30, 2024, and estimating growth through buildout. The basis of the TRIP program is VMT; therefore, the expected growth was presented in terms of new residents and employees based on standard conversions between people per household for residents and employees per square foot for various types of employment uses. The estimated number of residents and number of employees in the benefit area are based on the following assumptions:

- Average people per household: 3.31 people based on the US Census Bureau Quick Facts for the City of Chula Vista from 2017-2021.
- Square Feet Per Employee is based on standard values used by SANDAG for the Regional Travel Demand Model:
    - Retail: 450 square feet per employee based on the Neighborhood Shopping Center land use category
    - Industrial: 1,200 square feet per employee based on the Industrial Park land use category
    - Office: 300 square feet per employee based on the general office land use category
    - Hotel: 1 employee per room
    - Note: These standard values were applied to all retail, industrial, and office uses broadly as they represent an average square footage per employee across all of the more specific land use categories that would fit within these broad retail, industrial, and office categories.

- Future VMT associated with the new growth is estimated based on the average VMT/resident and VMT/employee in the TRIP East benefit area using the SANDAG regional travel demand model using the model's future horizon year: 2050. The 2050 VMT/resident for the TRIP East Benefit area is 16.99 based on the SANDAG ABM2+ Model[8]. The VMT/employee for the TRIP East benefit area is 9.0 based on the SANDAG ABM2+ Model.

Table 7 displays the anticipated future growth in the TRIP East benefit area.

Table 7: TRIP East Benefit Area Future Land Development/Growth

Location	Single-Family Units	Multi-Family Units	Industrial (sf)	Retail (sf)	Office (sf)	Hotel (rooms)	Notes/Source
Village 2	181	1,052	796,277	27,082	-	-	Montecito & Otay Ranch Business Park SPA Plan (May 2020); Enclave Montecito Project Information Form (Jan. 2023); permitting history; applicant interview; review of aerial photos.
Village 3	200	0	20,459	-	-	-	University Villages, Otay Ranch Village 3 and a Portion of Village 4 SPA Plan (June 2021); permitting history; applicant interview; review of aerial photos.
Village 4	73	277	-	-	-	-	Otay Ranch Village 4 SPA Plan (May 2018); review of aerial photos.
Village 8 East	0	3,276	-	88,653	17,000	-	University Villages, Otay Ranch Village 8 East SPA Plan (December 2014); applicant interview; review of aerial photos.
Village 8 West	334	1,004	-	20,000		-	Otay Ranch Village 8 West SPA Plan (July 2022); applicant interview; review of aerial photos.
Village 9	105	3,854	-	100,000	400,000	-	Otay Ranch Village 9 SPA Plan (June 2021); applicant interview; review of aerial photos.
Village 10	695	1,045	-	-	-	-	Otay Ranch Village 10 SPA Plan (December 2014); applicant interview; review of aerial photos.
Millenia	0	326	-	35,100	420,900	265	Eastern Urban Center SPA Plan (July 2018); permitting history; applicant interview; review of aerial photos.

[8] SANDAG Regional Travel Demand Model ABM2+/2021RP Scenario ID 459

Location	Single-Family Units	Multi-Family Units	Industrial (sf)	Retail (sf)	Office (sf)	Hotel (rooms)	Notes/Source
Planning Area 12	0	409	-	15,000	-	156	Promenade at Otay Ranch Town Center, Freeway Commercial SPA Plan June 2019); permitting history; review of aerial photos.
Planning Area 23	0	522	(516,186)	-	-	-	Transportation Impact Analysis, Sunbow II, Phase 3 (1/29/2021)
University Innovation District	-	2,000	2,000,418	200,000	-	-	University Innovation District SPA Plan (November 2018)
TOTAL	**1,588**	**13,765**	**2,300,967**	**485,835**	**837,900**	**421**	

Notes: sf = square feet
The industrial, retail, and office land use categories are broad and intended to include all uses that fit these basic descriptions. The land use designations for each category are defined in the Chula Vista Transportation Study Guidelines, Appendix D.
Source: Chula Vista City Staff, 2024

Table 8 displays the total estimated population and employees and resulting 2050 VMT associated with the anticipated land development/growth in the TRIP East benefit area.

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Table 8: TRIP East Benefit Area Anticipated Future Population and VMT Growth

Land Use	Amount	Conversion to Persons	Residential Population	Employees	VMT/ Resident or VMT/Employee[1]	Total Daily VMT[2] Associated with New Residents or Employees
Single-Family	1,588 units	3.31 res/unit	5,256	-	16.99	89,299
Multi-Family	13,765 units	3.31 res/unit	45,562	-	16.99	774,098
Industrial	2,300,976 sf	1,200 sf/emp	-	1,917	9.0	17,257
Retail	485,835 sf	450 sf/emp	-	1,080	9.0	9,717
Office	837,900 sf	300 sf/emp	-	2,793	9.0	25,137
Hotel	421 rooms	1 emp/room	-	421	9.0	3,789
TOTAL	**-**	**-**	**50,818**	**6,211**	**-**	**919,298**

Notes:
[1]VMT/Resident and VMT/Employee based on the SANDAG Regional Travel Demand Model ABM2+/2021RP Scenario ID 459 for the TRIP East Benefit area. The values represent 2050 average daily VMT/Resident and VMT/Employee for the TRIP East benefit area.
[2]Total VMT refers to the daily tour-based VMT calculated by multiplying the VMT/resident and VMT/employee by the number of residents and employees respectively.
Source: Fehr & Peers, 2024

As displayed in **Table 8**, the TRIP East benefit area is projected to add an additional 50,818 residents and 6,211 employees from July 1, 2024 through buildout. Future residents and employees are anticipated to generate approximately 919,300 daily VMT.

Nexus Analysis and Fee Calculation

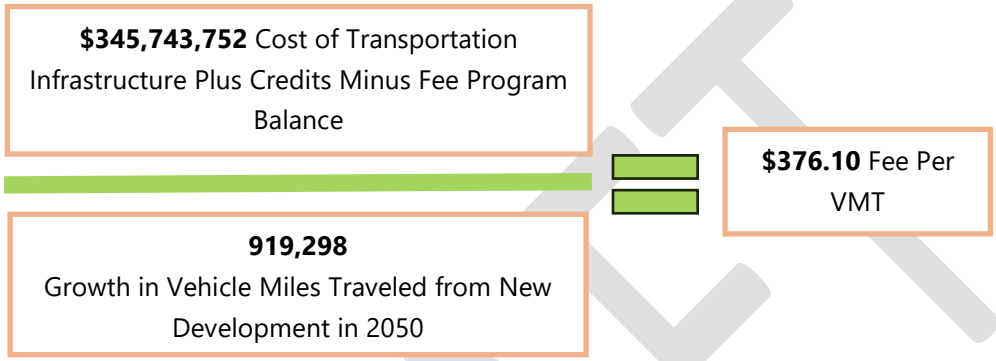
A "nexus" or relationship between new development in the City and transportation improvements and their costs must be established before incorporating transportation improvement costs into a transportation impact fee calculation. To determine the appropriate costs to include in the new transportation fee calculation, it is necessary to conduct a series of steps:

1. **Identify Total Costs of Transportation Improvements.** The total cost of transportation improvements is shown in **Table 3** as $368,774,033.
2. **Account for Known Assets (Funds on Hand) and Liabilities (Fee Credits).** The balance remaining in the current ETDIF fund is a program asset and reduces the TRIP East fee requirement. Outstanding ETDIF fee credits issued are a program liability and increase the TRIP East fee requirement. The summary is shown in **Tables 4 and 5** as $20.8 million in fee credit liability and a $43.6 million fund balance.
3. **Remove Existing Deficiencies.** Existing facilities in the TRIP East benefit area have adequate capacity to support the existing state of development, and any capacity or multimodal improvement that is planned is in response to the demand created by future development. Therefore, for the TRIP East benefit area, future development is fully responsible for the cost of the improvements.

4. **Determine Proportional Allocation to New Development.** It is necessary to determine the process for allocating the remaining infrastructure costs to new development. The fee will be charged based on the amount of VMT generated (calculated using the developments projected number of residents and/or number of employees by the current SANDAG regional model base year average VMT/resident and VMT/employee for the TRIP East benefit area).

Fee Calculation

The fee calculation is determined through the following equation:



Note: Detailed calculation spreadsheets for cost, growth and fee calculations are provided in **Appendix D**.

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TRIP West

Methodology and Key Issues

The following considerations are included in the TRIP West fee calculations:

- TRIP West is a major update to the WTDIF.
- The benefit area for TRIP West has not changed. It is the same benefit area identified in the 2014 nexus study. The benefit area is displayed on **Exhibit 3**.

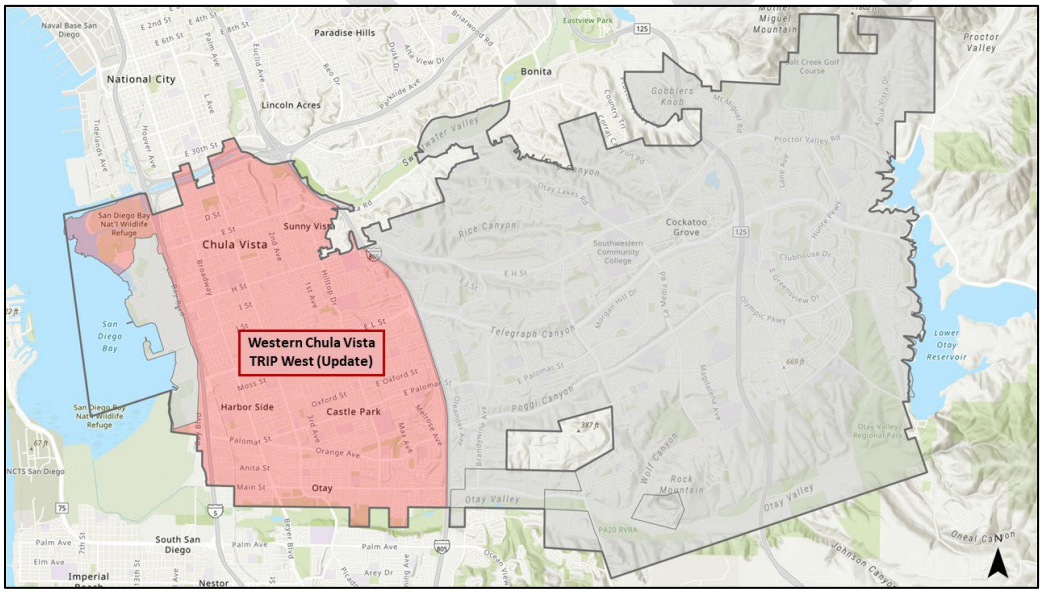
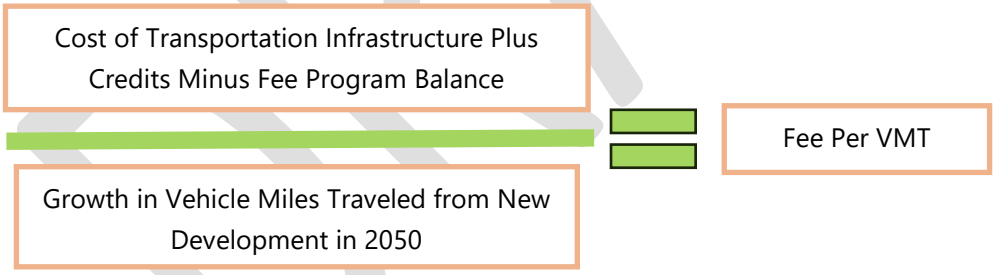


Exhibit 3: TRIP West Benefit Area

- Land use growth from the 2014 nexus study through 2022 and remaining growth (through buildout) is considered. The updated fee considers only the remaining growth through buildout. The remaining growth was developed using data for the City on historical growth trends in the western area and the growth projected by the SANDAG Regional Travel Demand Model[9].
- VMT associated with the remaining growth is calculated by multiplying the TRIP West benefit area 2050 VMT/resident or VMT/employee by the number of anticipated future residents and employees. The 2050 VMT/resident for the TRIP West benefit area is 11.3 based on the SANDAG ABM2+ Model. The VMT/employee for the TRIP West benefit area is 9.6 based on the SANDAG ABM2+ Model.
- Transportation infrastructure that has been constructed or projects that have changed in scope since the 2014 nexus study are identified and removed or revised.
- In the western area of Chula Vista, there are existing facilities that were identified in the 2014 nexus study as having capacity deficiencies. Therefore, there are several projects that have split responsibility between the City and future growth. The assumptions for cost responsibility remain the same as in the 2014 nexus study.
- The TRIP West and BFDIF have some improvements that have shared responsibility (per the 2014 Nexus study). The shared responsibility between the TRIP West and BFDIF remains the same as in the 2014 nexus study.
- Outstanding fee program credits are identified and included in the calculations.
- The WTDIF account balance is used to calculate TRIP West.

The fee calculation is determined through the following equation:



Cost of Transportation Infrastructure

Cost Estimating Assumptions

Project cost estimates for the WTDIF were last updated in 2008. The costs included in the 2014 nexus study were based on the 2008 costs, updated using data from the Engineering News Construction Cost Index ("CCI"). These updates do not account for changes in design and construction standards or regulatory requirements. As such, a comprehensive update to the costs for the transportation infrastructure was

[9] SANDAG Regional Travel Demand Model ABM2+/2021RP Scenario ID 459

completed using 2022-unit prices and updated soft cost assumptions. A separate study was conducted to determine appropriate unit costs: *Transportation Development Impact Fee ("TDIF") Project Cost Estimates Technical Memorandum* (January 31, 2023, produced by Kimley Horn). The technical memorandum is included in **Appendix A.** See TRIP East Cost Estimating Assumptions section for more information.

TRIP West Transportation Infrastructure Changes

The transportation infrastructure included in the 2014 WTDIF nexus study was thoroughly reviewed to identify which projects had been constructed and which projects may have changed in scope. Several projects previously included in the WTDIF were removed, constructed, or consolidated. There are no additional projects added to the TRIP West that were not previously in WTDIF. These changes are reflected in the TRIP West project list. A summary of these changes is presented below in **Table 9**.

Table 9: Summary of Revisions to Fee Program Project List – TRIP West

Proj. #	Project Title	Improvement	Change
BP-8	Broadway	Pedestrian Improvements	Completed.
I-5-1	E Street NB off-ramp	Restriping to add lane	Removed. Project is removed because it is not needed as it will be part of the light rail grade separation at E Street. Light Rail Grade Separation Project is included as part of 2021 Regional Plan (TL12).
I-5-2	E Street/Bay Blvd SB off-ramp	Restriping to add lane	Removed. Project is removed because implementation is infeasible; there is not sufficient right of way to accommodate restriping.
I-5-5	F Street	Bridge widening over I-5 (250' X 20')	Consolidated. Project is part of the I-5-17 project (I-5 mainline improvements) SANDAG Regional Plan Project CC001.
I-5-6	H Street NB off-ramp	Restriping to add lane	Removed. Project is removed because it is not needed as it will be part of the light rail grade separation at H Street. Light Rail Grade Separation Project is included as part of 2021 Regional Plan (TL12).
I-5-7	H Street SB off-ramp	Restriping to add lane	Consolidated. Project is part of the I-5-17 project (I-5 mainline improvements).
I-5-8	H Street	Bridge widening over I-5 (200'X40')	Consolidated. Project is part of the I-5-17 project (I-5 mainline improvements).
I-5-9	J Street NB off-ramp	Restriping add lane	Removed. Project is completely part of the BFDIF and has been removed from the TRIP West.
I-5-16	Main Street	Bridge widening (275lf X 20lf)	Removed. I-5 widening is not planned (see revisions to I-5-17), therefore this improvement is not needed, and Caltrans is evaluating other options to provide pedestrian/bike improvements on the overcrossing.

Proj. #	Project Title	Improvement	Change
I-5-17	I-5 HOV & Managed Lanes	Managed lanes on I-5 from SR-54 to SR-905	Changed. Project that will modify I-5 through Chula Vista to provide managed/HOV lanes. The improvements will affect F and H Streets in Chula Vista and projects at these interchanges are included in this overall project. Project description has changed from freeway widening to adapting the lanes to provide managed/HOV lanes. No widening is proposed.
OR-2	Second Avenue	Install of All Way Stop Control ("AWSC")	Removed Intersection does not meet all-way-stop warrants.
OR-4	City wide	Transportation Demand Management Center	Completed.
RAS-2	Broadway	Restripe of roadway, new pavement marking, new bike sign	Completed.
RAS-3	E Street	Sidewalk Improvement	Removed. Improvement deemed infeasible by City Engineering & Capital Projects staff given the significant costs and the relatively minor benefit provided.
RAS-4	E, F & H Streets	Environmental for Grade Separate LRT. Lower railroad tracks & maintain roadway profile.	Removed. Grade separation projects are incorporated in SANDAG's 2021 Regional Plan Constrained Projects List (Project LRT 510, 2035).
RAS-5	E Street LRT grade separation	Preliminary Engineering/Environmental for underpass LRT Option	Removed. Grade separation projects are incorporated in SANDAG's 2021 Regional Plan Constrained Projects List (Project LRT 510, 2035).
RAS-6	H Street LRT grade separation	Preliminary Engineering/Environmental for underpass LRT Option	Removed. Grade separation projects are incorporated in SANDAG's 2021 Regional Plan Constrained Projects List (Project LRT 510, 2035).
RAS-9	H Street	Widening to 6-Ln	Removed. Improvement deemed infeasible by City Engineering & Capital Projects staff due to right-of-way constraints.
RAS-11	East H Street	North side improvements	Removed. The I-805 Corridor South improvements from Caltrans show that a new interchange will be reconstructed at East H Street with sidewalk on the north side at freeway. The neighborhood (County) to the north does not have sidewalk and is fenced off from East H Street. Future design will be via Caltrans direction.

Proj. #	Project Title	Improvement	Change
RAS-14	Telegraph Canyon Road	Southside sidewalk	Removed. Construction of a pedestrian facility on the south side of Telegraph Canyon Road is not feasible given the location of the wall. Although there are no current plans to improve the interchange, Caltrans will consider providing improvements for nonmotorized access in accordance with their policies should there be future improvements at this interchange.
RAS-15	Orange Avenue	Curb, gutter, sidewalk.	Completed.
RAS-16	Palomar Street	Curb, gutter, sidewalk, bike lanes.	Completed.
RAS-18	H Street	Add WB-NB right turn lane & signal modification for 5th Ave	Removed. Alternative funding identified for this project.
RAS-19	H Street	Add WB-NB & EB-SB right turn lanes	Removed. Alternative funding identified for this project.
TF-358	WTDIF Fee Program	West Side Transportation Development Impact Fee ("WTDIF")	Completed.

Source: Chula Vista City Staff, Fehr & Peers, 2024

TRIP West Project List with Costs

Table 10 displays the project costs for the facilities included in TRIP West. The TRIP capital improvement plan ("cip") and project summary exhibits showing the location, description, and cost estimates for each project are provided in **Appendix B and Appendix C, respectively**. The adjustments shown in **Table 10** are described below (and are the same as presented in the 2014 Nexus Study):

Shared Roadways between the TRIP West and BFDIF

- Certain roadways are shared between the TRIP West and the BFDIF. These roadways are associated with improvements to Interstate-5, certain RAS improvements (such as the grade separation projects), and the Bayshore Bikeway (bike path) parallel to Bay Boulevard. To fairly reflect the shared benefit of these facilities, it is appropriate to allocate project costs to both TRIP West and BFDIF. Projected new average daily traffic that will use the shared facilities were estimated and used to calculate the proportional cost to each fee program. Based on the 2014 Nexus Study, 74,593 projected new ADT in the BFDIF area and 103,649 projected new ADT in the TRIP West area, the TRIP West's share is calculated as follows:

$$\frac{\text{103,649 TRIP West Average Daily Trips}}{\text{74,593 BFDIF +103,649 TRIP West}} = \text{58\% TRIP West Proportion}$$

Existing Deficiencies Calculations

- As discussed above, to fairly reflect the shared benefit of the TRIP West facilities, it is appropriate to allocate costs between the deficiency caused by existing users and new development. The nexus must identify projects that are needed to address an existing deficiency (i.e., upgrade facilities that operate at vehicle level of service D or worse) and to accommodate new growth. The following items are considered in the existing deficiency calculations:
    - The I-5 project costs should consider existing deficiencies and the cost share between TRIP West and BFDIF.
    - The RAS projects should consider existing deficiencies.
- The proportion of the project cost attributable to TRIP West is based on the growth in ADT in the I-5 corridor. These numbers are reported in the 2014 Nexus Study and used directly in this study. The following image is from the 2014 Nexus Study and is used to calculate the TRIP West responsibility for RAS-1, RAS-10, and RAS-13. As shown, the resulting responsibility is 38%.

I-5 Traffic Volume Growth Estimate

	Trips		Change
	2008 Report	**Buildout**	
Volumes (ADT)	546,850	883,500	336,650
Percent of Total			38%

Source: The image above is from the 2014 WTDIF Nexus Study, and provides I-5 traffic volume growth estimates. These estimates are applicable to TRIP West, and as such, TRIP West RAS-1, RAS-10, and RAS-13 total cost estimates are adjusted to reflect 38% of the cost in TRIP West.

- The I-5-17 project will improve I-5 by providing carpool/managed lanes for existing and future traffic. In addition, the project will benefit people outside of Chula Vista. Therefore, TRIP West is responsible only for the proportion of the project needed to serve new residents and employees in the western benefit area. The new growth is 38% and the split between TRIP West and BFDIF growth is 58%/42% respectively. In addition, there is accounting for the trips associated with people outside of Chula Vista. As a result, TRIP West is responsible for 2.38% of the I-5-17 project cost.

Non-Vehicular Improvements

The "BP" projects and I-5-11 are bicycle and pedestrian related projects that are not proportional to average daily traffic. These projects provide access for existing and future residents and employees of the TRIP WEST and BFDIF benefit areas and are a shared responsibility between these programs based on existing population and future population. The existing population in the TRIP West benefit area is estimated at 110,493 people (based on the 2008 and 2014 nexus studies). The 2014 nexus study estimated the buildout population for the TRIP West benefit area at 135,733 (growth of 25,240 people). The following provides the responsibility assigned to the TRIP West for BP projects and I-5-11:



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Table 10: TRIP West Infrastructure Costs

Proj. #	Project Title/ Location	From	To	Improvement	Cost Estimate	Adjustments*	TRIP Amount
I-5-4	E Street Overcrossing	I-5 SB Ramps	I-5 NB Ramps	Bridge Widening	$16,633,653	58%	$9,672,470
I-5-10	J Street Undercrossing Widening	I-5 SB Ramps	I-5 NB Ramps	Undercrossing Widening	$1,516,470	58%	$881,827
I-5-11	L Street Bridge Overcrossing I-5	I-5 SB Ramps	I-5 NB Ramps	Bride Widening	$2,557,258	18%	$462,608
I-5-12	I-5/ Bay Blvd (South Of L Street) SB On/Off Ramps 11-SD-5-6.670 (Lt.)	I-5 SB Ramps	N/A	Traffic Signal Installation	$254,095	58%	$147,756
I-5-13	I-5/ Industrial Blvd NB On/Off Ramps 11-SD-5-6.658 (Rt.)	I-5 NB Ramps	N/A	Traffic Signal Installation	$254,095	58%	$147,756
I-5-14	Palomar Street Overcrossing I-5	I-5 SB Ramps	I-5 NB Ramps	Bridge Widening (Bike Lanes, Sidewalks and Travel Lanes)	$9,567,970	58%	$5,563,775
I-5-17	I-5 HOV & Managed Lanes	SR-905	SR-54	I-5 HOV & Managed Lanes	$181,527,143	2%	$4,320,346
I-805-2	I-805 & Main Street	I-805 SB Ramps	I-805 NB Ramps	Widening Undercrossing For EB-NB Left Turn Lane	$5,957,626	100%	$5,957,626
SR-54-2	SR-54 EB Off-Ramp	N. Fourth Avenue	N/A	Add ramp lane	$295,625	100%	$295,625
BP-1	Bayshore Bikeway	E Street	F Street	Bayshore Bikeway (Bike Path)	$4,297,961	2%	$104,750
BP-2	F Street	Bay Boulevard	Third Avenue	F Street Promenade Phases 1-3, F Street Sidewalk & Bike Lane Improvements	$26,835,184	9%	$2,514,781
BP-3	Industrial Blvd	L Street	Main Street	Industrial Blvd Improvements & Bike Lanes	$914,615	18%	$165,454
BP-4	Main Street	Broadway	I-805	Main Street Bike Lanes	$1,827,624	18%	$330,617
BP-7	H Street	Broadway	Second Avenue	H Street Pedestrian Improvements	$192,789	18%	$34,876

Proj. #	Project Title/ Location	From	To	Improvement	Cost Estimate	Adjustments*	TRIP Amount
BP-9	Bayshore Bikeway	F Street	H Street	Bayshore Bikeway (Bike Path)	$5,795,020	18%	$1,048,319
RAS-1	Bonita Road	First Avenue	I-805	Bonita Road Pedestrian Missing Street Improvements along South Side	$469,614	38%	$178,923
RAS-7	H Street	Broadway	N/A	EB Queue Jumper Lane & Traffic Signal Mods Additional WB Through Lane & Exclusive West-to-North Right Turn Lane.	$906,739	100%	$906,739
RAS-10	H Street	Second Avenue	Hilltop Drive	H Street Pedestrian Improvements	$679,956	38%	$259,063
RAS-13	L Street	South Side West of Industrial Boulevard	N/A	L Street Pedestrian Improvements	$77,403	38%	$29,490
RAS-17	Main Street	I-5	I-805	Main Street Pedestrian Improvements	$1,277,122	15%	$190,419
						TOTAL TRIP West Vehicular Capacity Project Costs)	$33,213,220
						Administrative Fee (2% of Infrastructure Costs)	$664,264
						TOTAL TRIP West Project Cost	**$33,877,485**

Notes: *Adjustments are made to projects to account for shared responsibility with the City (for existing deficiencies) or BFDIF (for shared facilities) as described before this table.
Source: Kimley Horn *Transportation Development Impact Fee ("TDIF") Project Cost Estimates Technical Memorandum,* Chula Vista City Staff, Fehr & Peers, 2024

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Fee Credits and Program Balance

Fee Credits

Fee credits are issued to developers if they opt into designing and constructing all or a portion of their obligation of public facilities required for their development. If they do so, they may receive credit for their costs of designing and constructing the facilities that can be used to pay the fees that would have paid for those facilities. The City may update the DIF calculation as the City deems appropriate prior to any agreement of fee credits.

City staff completed a thorough review of all fee credit trust accounts. As of June 30 ,2024, there are four trust accounts/liabilities associated with fee credits/revenues for TRIP West facilities. **Table 11** provides a summary of the credits and liabilities associated with these accounts. Detailed summary of the credit trust accounts is provided in Appendix D.

Table 11: TRIP West Fee Credit Summary

Fee Credits Summary	Value as of 6/30/2024
Western Facilities Fee Credits (Cost to Program)	$10,742
TRIP West Future Revenue (associated with deferral payments)	-$296,350
TOTAL TRIP West Fee Credit Liability	**-$285,608**

Source: Chula Vista Staff, 2024

The fee credit total is included in the numerator of the fee program calculation.

Fund Balance

The fund balances from the WTDIF are carried over to the TRIP West program. Chula Vista staff identified the current balance as of July 14, 2024, as shown in Table **12**.

Table 12: WTDIF Fund Balance

Account	Account Balance (as of6/30/2024)
WTDIF Account 590922	$3,789,778
TOTAL WTDIF Account Balance	**$3,789,778**

Source: Chula Vista staff, 2024

The WTDIF Fund balance reduces the TRIP West fee requirements.

Total Fee Requirement

Table 13 displays the total fee requirement for the TRIP West (Facility Cost minus fund balance plus fee credit liabilities). This represents the numerator of the fee calculation.

Table 13: TRIP West Program Total Fee Requirement

Program Element	Total Cost as of 6/30/2024
TOTAL TRIP West Project Costs	$33,877,485
TOTAL WTDIF Credit Liability	-285,608
TOTAL WTDIF Fund Balance	-$3,789,778
TRIP West Program Fee Requirement	**$29,802,099**

Source: Chula Vista Staff, 2024

Land Use Growth and Travel Demand Assumptions

Land use growth/new development creates the need for additional transportation facilities; therefore, it is necessary to estimate the amount of new development within the benefit area and the burden that new development places on the transportation network.

As described in the Methodology and Key Issues section, the remaining growth was calculated through review of the 2014 nexus study, determining land development constructed between 2016 (the SANDAG model base year) and 2022, and estimating growth through buildout. The basis of the TRIP program is VMT; therefore, the expected growth was presented in terms of new residents and employees based on standard conversions between people per household for residents and employees per square foot for various types of employment uses. The number of residents and number of employees in the benefit area are based on the following assumptions:

- Average people per household: 3.31 people based on the US Census Bureau Quick Facts for the City of Chula Vista as of June 1, 2023, data from 2017-2021.
- Square Feet Per Employee is based on standard values used by SANDAG for the Regional Travel Demand Model:
    - Retail: 450 square feet per employee based on the Neighborhood Shopping Center land use category
    - Industrial: 1,200 square feet per employee based on the Industrial Park land use category
    - Office: 300 square feet per employee based on the general office land use category
    - Hotel: 1 employee per room
    - Note: These standard values were applied to all retail, industrial, and office uses broadly as they represent an average square footage per employee across all of the more specific land use categories that would fit within these broad retail, industrial, and office categories.

- The SANDAG Regional Travel Demand Model[10] was used as the basis for understanding growth between the base year and the model buildout. Adjustments were made to the SANDAG growth estimates to reflect growth that has occurred between the base year (2016, which roughly equates to the 2014 Nexus Study growth basis) and to account for known projects or development trends in the TRIP West benefit area.
- Future VMT associated with the new growth is calculated based on the average VMT/resident and VMT/employee in the TRIP West benefit area using the SANDAG regional travel demand model using the model's future horizon year: 2050. The 2050 VMT/resident for the TRIP West Benefit area is 11.3 based on the SANDAG ABM2+ Model[11]. The VMT/employee for the TRIP West benefit area is 9.6 based on the SANDAG ABM2+ Model.

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[10] SANDAG Regional Travel Demand Model ABM2+/2021RP Scenario ID 459

[11] SANDAG Regional Travel Demand Model ABM2+/2021RP Scenario ID 459

Table 14 displays the future growth within the TRIP West benefit area.

Table 14: TRIP West Benefit Area Future Land Development/Growth

Land Use[1]	Land Use Growth – SANDAG Model: 2016-2050 (Buildout)		Land Use Growth: 2016-2024[2]		Remaining Land Use Growth: 2022-Buildout		Adjustments	Notes for Adjustments	FINAL TRIP West Growth Assumptions: 2024-Buildout	
Single-Family Units	385		62		323		-323	There is no additional land area for single-family homes in the largely built out TRIP West benefit area.	0 units	
Multi-Family Units	4,579		667		3,912		none	No adjustments necessary.	3,912 units	
Mobile Home Units	22		0		22		-22	No new mobile home developments are expected.	0 units	
Hotel Rooms	321		0		321		-69	The change in rooms reflect an actual planned project at 707 F Street consisting of 252 rooms.	252 rooms	
Industrial	387 emp	464,400 sf	264 emp	317,021 sf	123 emp	147,600 sf	none	No adjustments necessary.	123 emp	147,600 sf
Retail	3,236 emp	1.46 mil sf	125 emp	56,357 sf	3,111 emp	1.4 mil sf	Replace with 496 employees	Replace with a growth of 496 employees total. This represents that actual historical trend for retail growth between 2016-2024 projected through 2050.	496 emp	223,125 sf
Office	3,476 emp	1.04 mil sf	424 emp	127,079 sf	3,052 emp	916,600 sf	none	No adjustments necessary.	3,052 emp	916,600 sf

Notes: sf = square feet, emp = employees
[1]The industrial, retail, and office land use categories are broad and intended to include all uses that fit these basic descriptions. The land use designations for each category are defined in the Chula Vista Transportation Study Guidelines, Appendix D.
[2]The development that occurred between 2016-2024 is from an Accela query of WTDIF payments between 2016-June 30, 2024.
[3]The 2016-2024 retail growth per year equates to approximately 8,050 square feet per year or 18 employees.
Source: Fehr & Peers and Chula Vista City Staff, 2024

Table 15 displays the total population and employees and resulting 2050 VMT associated with the land development/growth in the TRIP West benefit area.

Table 15: TRIP West Benefit Area Future Population and VMT Growth

Land Use	Amount	Conversion to Persons	Residential Population	Employees	VMT/ Resident or VMT/Employee[1]	Total Daily VMT[2] Associated with New Residents or Employees
Single-Family	0 units	3.31 res/unit	0	-	11.3	0
Multi-Family	3,912 units	3.31 res/unit	12,949	-	11.3	145,805
Industrial	147,600 sf	1,200 sf/emp	-	123	9.6	1,178
Retail	225,428 sf	450 sf/emp	-	496	9.6	4,750
Office	916,600 sf	300 sf/emp	-	3,052	9.6	29,238
Hotel	400 rooms	1 emp/room	-	252	9.6	2,414
TOTAL	**-**	**-**	**12,949**	**3,923**	**-**	**183,387**

Notes: sf = square feet
[1]VMT/Resident and VMT/Employee based on the SANDAG Regional Travel Demand Model ABM2+/2021RP Scenario ID 459 for the TRIP West Benefit area. The values represent 2050 average daily VMT/Resident and VMT/Employee for the TRIP West benefit area.
[2]Total VMT refers to the daily tour-based VMT calculated by multiplying the VMT/resident and VMT/employee by the number of residents and employees respectively.
Source: Fehr & Peers, 2024

As displayed in **Table 14**, the TRIP West benefit area is projected to add an additional 12,949 residents and 3,923 employees from July 1, 2024 through buildout. Future residents and employees are anticipated to generate approximately 183,400 daily VMT.

Nexus Analysis and Fee Calculation

A "nexus" or relationship between new development in the City and transportation improvements and their costs must be established before incorporating transportation improvement costs into a transportation impact fee calculation. To determine the appropriate costs to include in the new transportation fee calculation, it is necessary to conduct a series of steps:

1. **Identify Total Costs of Transportation Improvements.** The total cost of transportation improvements is shown in **Table 11** as $33,877,485.
2. **Account for Assets (Funds on Hand) and Liabilities (Fee Credits).** The balance remaining in the WTDIF fund is a program asset and reduces the TRIP West fee requirement. Outstanding WTDIF fee credits issued are a program liability and increase the TRIP West fee requirement. The summary is shown in **Table 12** displays revenues of $285,608 and a 3.8 million account balance.
3. **Remove Existing Deficiencies.** The transportation infrastructure in the TRIP West benefit area will benefit new growth, growth in the BFDIF benefit area, and the existing population. Therefore, the total project costs are adjusted to reflect the fair share responsibility for growth in the TRIP West benefit area.

4. **Determine Proportional Allocation to New Development.** It is necessary to determine the process for allocating the remaining infrastructure costs to new development. For Chula Vista, the fee will be charged based on the amount of VMT generated (calculated using the developments projected number of residents and/or number of employees by the current SANDAG regional model base year average VMT/resident and VMT/employee for the TRIP West benefit area).

Fee Calculation

The fee calculation is determined through the following equation:

$2,9802,099
Cost of Transportation Infrastructure Plus Credits Minus Fee Program Balance

÷

183,387
Growth in Vehicle Miles Traveled from New Development in 2050

=

$162.51 Fee Per VMT

Note: Detailed calculation spreadsheets for cost, growth and fee calculations are provided in **Appendix D**.

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Applying the TRIP Fee

This section provides instructions for applying the fee to development projects and provides a summary of typical costs for average single-family homes and other common uses.

The TRIP fee is applied using a project's total VMT as calculated from VMT/resident or VMT/employee using the base year VMT values from the current version of the SANDAG Regional Travel Demand Model, as reported on the City of Chula Vista Transportation Study Guidelines ("TSG") & SB 743 website[12] for the census tract that the project will be located in.

The total VMT for a development project is calculated by estimating the number of residents or number of employees associated with the land development project. The fee program uses standard definitions to determine the number of residents or employees based on units/type of unit and square footage, respectively. Deviations from the standards are not typical and must be approved by the Development Services Director.

Steps for Applying the TRIP Fee

Step 1: Determine Project Description/Land Use Quantities

To calculate the fee, the project description must include the following items:

[12] The website at the time of this study's publication is: https://www.chulavistaca.gov/departments/development-services/planning/transportation-study-guidelines-copy. The maps displaying VMT/resident and VMT/employee are provided as separate links on this webpage.

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- Land Use Type Category for Each District Land Use: Single-Family, Multifamily, Hotel, Industrial, Retail, or Office. To determine what category a detailed use belongs in, refer to the Chula Vista Transportation Study Guidelines Appendix D. For example, a gas station or restaurant would be categorized as Retail and a medical/dental office would be categorized as office (commercial employment).
- Land Use Quantities: The amount in square feet for each land use type must be identified. Note that residential units must also be identified by square feet per unit.
- Land Use Location: The census tract that the project is located in must be identified.

Step 2: Determine Number of Residents and Employees

Number of Residents

As of July 2022, per Assembly Bill 602, newly adopted impact fees levied on residential development must be calculated such that they are proportional to the square footage of the new units. This is a departure from the more common approach, where the fee is levied per residential unit, often differentiated by building type (e.g., single-family, multi-family/apartment, etc.). The average number of people for residential unit will be determined based on the size of residential unit square footage. The fees take into account square footage as an input to the fee calculation. Specifically, the square footage is used to determine the residential population, which in turn, is used to calculate the project's VMT, as outlined below.

In 2020, a statistical analysis was completed to determine the standard number of people that reside in various sized units in the San Diego County region[13]. The analysis provides an average number of people per unit based on unit size for the entire region, including all of the incorporated cities and the unincorporated county. The study is provided as a reference in **Appendix E**.

The following provides a summary of the City of San Diego's research:

- The study finds that larger residential units have more people. Single-family uses tend to be larger and have more people than multifamily (or senior designated) uses.
- The study uses the American Community Survey 2016 (5 Year Estimate) to understand Average Household Size and Average Number of Bedroom data, for each census block group. This data was used to establish a link between Average Household Size (i.e., people per household) and the average number of bedrooms per household. Using the Statistical Packages of the Social Sciences ("SPSS") software, a regression analysis was performed for the entire San Diego Region (1,187,644 points of data) to determine the statistical relationship between overall household size and the total number of bedrooms within the household. The regression analysis revealed the following equation:

  Average People Per Household = 1.483 + 0.44 x (Number of Bedrooms)

[13] City of San Diego DIF Program - Residential Scaling Methodology

- The study then determined a relationship between the number of bedrooms and unit size in square feet. SANGIS parcel data, throughout the entire San Diego Region, was utilized to determine this relationship between residential unit size and number of bedrooms. The SANGIS parcel data includes information such as land use type, total livable square feet (excluding uses such as garages), number of bedrooms, and year built. This data was utilized to determine the average unit size (SF) based on the total number of bedrooms for both single-family and multifamily units. The analysis revealed the following equations equating assessable space[14] unit size to number of residents per unit:

Single-Family: Projected Household Population in the San Diego region = (Assessable Unit Size (SF) + 1,579.6) / 1,200.7

Multifamily: Projected Household Population in the San Diego region = (Assessable Unit Size (SF) + 838.95) / 808.85

To determine the number of residents for fee calculation purposes, apply the above equations using livable unit size in square feet.

Number of Employees

Square Feet Per Employee is based on standard values used by SANDAG for the Regional Travel Demand Model:

- Retail: 450 square feet per employee based on the Neighborhood Shopping Center land use category
- Industrial: 1,200 square feet per employee based on the Industrial Park land use category
- Office: 300 square feet per employee based on the general office land use category
- Hotel: 1 employee per room

To determine the number of employees for the fee calculation purposes, apply the above relationships to the land development project uses/quantities in Step 1.

Step 3: Determine the Total VMT

The VMT/resident and VMT/employee that shall be applied to the number of residents and number of employees identified in Step 2. The project's total VMT is calculated from VMT/resident or VMT/employee using the base year VMT values from the current version of the SANDAG Regional Travel Demand Model as reported on the City of Chula Vista Transportation Study Guidelines ("TSG") & SB 743 website[15] for the census tract that the project will be located in.

[14] Assessable unit size includes the space in the residential unit for living. It excludes the garage or other external storage areas. Note that closet space inside the unit **is** included in the livable unit size. California Code, GOV 65995

[15] The website at the time of this study's publication is: https://www.chulavistaca.gov/departments/development-services/planning/transportation-study-guidelines-copy. The maps displaying VMT/resident and VMT/employee are provided as separate links on this webpage.



Note that per AB 3177, the transportation impact fee for housing projects located within TPAs is required to reflect a lower rate of automobile trip generation. The TRIP fee is not calculated using trip generation rates, rather VMT generated; however, this requirement is satisfied because the VMT generated in census tracts that include TPAs is lower than census tracts that do not include TPAs, resulting in lower fees in TPAs than other parts of Chula Vista.

One of the factors that affects a project's VMT generation is trip generation, and projects near transit typically have lower VMT because they generate fewer vehicle trips. For TRIP West, the majority of the census tracts in the West Benefit area include TPAs. The existing average VMT/resident for TRIP West census tracts that include TPAs is 13.46, which is approximately 20% lower than the VMT/resident citywide average (16.46). Also, note that the fee per VMT is lower in the West benefit area as compared to the East benefit area. The census tracts in the East benefit area have an average VMT/resident that is higher than citywide average (because of the land use context differences described throughout this study). As such, the census tracts that include TPAs have an average VMT/resident of 18.69. To provide an appropriate comparison, the average VMT/resident for all census tracts in the East benefit area is 18.92. The census tracts in the East Benefit area that include TPAs have a VMT/resident that is 1.2% lower than the benefit area average. Since the VMT/capita is an input to the fee calculation that directly impacts the fee that is assessed, projects located in a census tract with a TPA will have a lower fee burden than projects in neighboring census tracts that do not include TPAs, meeting the intent of AB 3177.

Step 4: Apply the TRIP Fee

The TRIP East or TRIP West fee per VMT is applied to the resulting total VMT from Step 3.

Example Calculation

The following provides a **sample, hypothetical calculation**:

Step 1 Project Description

- 50 multifamily units: 20 are 750 square feet, 20 are 1,000 square feet, and 10 are 1,200 square feet
- 1,500 square foot coffee shop
- Location is in the TRIP West benefit area, census tract 12900

Step 2 Determine Number of Residents and Employees

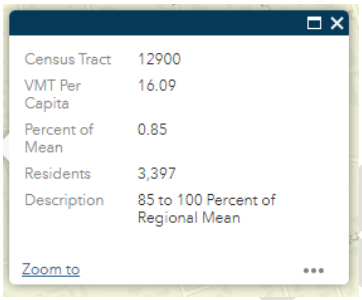
- Residents
    - 20 units*(750 + 838.95) / 808.85 = 39.3 residents
    - 20 units*(1,000 + 838.95) / 808.85 = 45.5 residents
    - 10 units*(1,200 + 838.95) / 808.85 = 25.2 residents
    - TOTAL = 110.0 residents
- Employees

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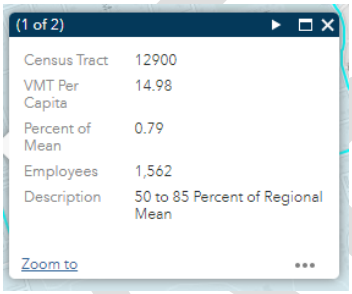
- 1,500 square feet/450 square feet per employee = 3.3

Step 3: Determine the Total VMT

- VMT/resident for census tract 12900: 16.09 x 110.0 residents = 1,769.9 VMT



- VMT/employee for census tract 12900: 14.98 x 3 employees = 49.9 VMT



- TOTAL: 1,819.8 VMT

Step 4: Apply the TRIP Fee

- TRIP West:$162.51 Per VMT
- Fee Calculation: $162.51 x 1,819.8 VMT = $295,735.70

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Program Administration

This section provides the administration of the DIF program including how and when the program should be expanded or updated, annual cost increases and program reporting.

Annual Cost Increases

The amount of the fee shall be adjusted each October 1st, based on the indices specified in Chapter 3 of the Chula Vista Municipal Code.

Fees may also be adjusted based on updated information regarding land use or the type, size, location, or cost of proposed facilities pursuant to City ordinances and policies.

Program Updates

The TRIP should be updated regularly as follows if one or more the following occur:

- Every eight (8) years per AB 602.
- If there are changes/updates to the Mitigation Fee Act.
- If policies/assumptions in the Nexus Study change due to a General Plan Update or other citywide planning effort.
- If impact criteria or infrastructure needs change.
- If the construction costs assumed in the Nexus Study no longer reflect the actual cost to construct and the annual indexed rates to reflect actual cost conditions.

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- If SANDAG completes new VMT modeling, which will provide current base year VMT/resident and VMT/employee values, typically every four years concurrently with the Regional Transportation Plan.

Major updates to TRIP are required to follow the City's planning/approval process, including City Council adoption.

Program Reporting

Section 65940.1 of the Government Code requires that the City maintain the following items (and post on their website):

- A current schedule of fees, exactions, and affordability requirements imposed by the TRIP.
- All zoning ordinances and development standards adopted by the City showing the information, which shall specify the zoning, design, and development standards that apply to each parcel.
- A list that specifies the information that will be required from any applicant for a development project.
- The current and five previous annual fee reports or the current and five previous annual financial reports, fee nexus studies, cost of service studies, or equivalent, conducted by that City, on or after January 1, 2018.

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Appendix A:

(1) Transportation & Roadway Infrastructure Program ("TRIP") Project Cost Estimates Technical Memorandum (Kimley Horn, January 2023)

(2) Transportation & Roadway Infrastructure Program ("TRIP") Pedestrian Bridge Cost Estimates Technical Memo (Kimley Horn, May 2024)

Transportation & Roadway Infrastructure Program (TRIP) Project Cost Estimates Technical Memo

Chula Vista, CA.

January 31TH, 2023

Kimley»Horn

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- ENR Construction Cost Index
- Public Unit Cost Information
- Kimley-Horn, Chula Vista Bridge Costs
- Project Specific City Provided Estimates
- Base Unit Cost List
- ¼ Mile Template for Individual Roadway Classifications

To: Katy Cole, Principal
Fehr & Peers

From: Nicholas Oleskowicz, P.E.

Kimley-Horn and Associates, Inc.

Date: January 31, 2023

Subject: Chula Vista Transportation Development Impact Fees (TDIF)
Project Cost Estimates – Technical Memo

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1. INTRODUCTION & PURPOSE

The City of Chula Vista (City) is currently updating its Citywide Transportation Development Impact Fee (TDIF) program and the City desires to review and revise specific project cost estimates, as necessary, as these have not been updated since 2005. The most recent Citywide TDIF studies have simply escalated the 2005 project costs using the Engineering News Construction Cost Index (CCI) for each year and do not account for changes in design and construction standards and regulatory requirements, such as stormwater treatment and hydromodification requirements.

Instead of continuing to escalate 2005 costs, the City issued a task order for Kimley-Horn (KH) to develop planning level cost estimates for each TDIF project with 2022 unit prices that include all normal costs associated with project delivery. In order to cover all costs associated with the delivery of each project, these estimates include environmental, design, permitting, administration, materials testing and construction costs; right-of-way acquisition costs are not included. An explanation of the process of determining these costs is described in this report.

Table 1, below, describes the TDIF project locations.

Table 1: Project Locations

TDIF ID #	Roadway/Project Name	From	To	Improvements
28b	Otay Lakes Road	Lakecrest Drive	Wueste Road	Boulevard w/ Intermittent Turn Lanes (modified) (County)
NEW	Otay Lakes Road	Wueste Road	E. City Boundary	Boulevard w/ Intermittent Turn Lanes (modified) (County)
59c	Proctor Valley Road	Agua Vista Drive	E. City Boundary	Class II Collector
60b	Main Street	Wolf Canyon Bridge	La Media Road	New 6LP Arterial (Approach to Bridge)
60c	Main Street	Wolf Canyon Bridge		New 6LP Bridge
64	Hunte Parkway/Main Street	SR-125 NB Ramps	Eastlake Parkway	New 6LP Arterial

TDIF ID #	Roadway/Project Name	From	To	Improvements
70	Discovery Falls Drive	Hunte Parkway Village 9	Street "B"	New 4L to 2L Roadway
71	Eastlake Parkway/Street B	Hunte Parkway	Discovery Falls Drive	New 2-LC Village Entry
72	Otay Valley Road	SR-125 R/W NB Ramps	2700 LF east of ramps	New 4LM Arterial
56c	Otay Valley Road	La Media Road		New 4LM Arterial
60a	Main Street	Heritage Road	Wolf Canyon Bridge	New 6LP Arterial (Approach to Bridge)
60d	Main Street	La Media Road		New 6LP arterial
67	Main Street Bridge	SR-125 SB Ramps	SR-125 NB Ramps	New 6LP Bridge & Ramps
68	Otay Valley Road Bridge	SR-125 R/W SB Ramps		New 4LM Bridge
I-5-1	E Street NB Off-ramp	I-5	N/A	Restriping Add Lane
I-5-2	E Street/Bay Blvd SB Off-ramp	I-5	N/A	Restriping Add Lane
I-5-4	E Street	I-5 SB Ramps	I-5 NB Ramps	Bridge Widening Over I-5 (250’ X 20’)
I-5-5	F Street	I-5 SB Ramps	I-5 NB Ramps	Bridge Widening Over I-5 (250’ X 20’)
I-5-6	H Street NB Off-ramp	I-5		Restriping Add Lane
I-5-7	H Street SB Off-ramp	I-5	N/A	Restriping Add Lane
I-5-8	H Street	I-5 SB Ramps	I-5 NB Ramps	Bridge Widening Over I-5 (200’ X 40’)
I-5-9	J Street NB Off-ramp	I-5	N/A	Restriping Add Lane
I-5-10	J Street	I-5 SB Ramps	I-5 NB Ramps	Undercrossing Widening (175’X 20’)
I-5-11	L Street	I-5 SB Ramps	I-5 NB Ramps	Bridge Widening Over I-5 (Sidewalk for Pedestrians 300’ X 12’)
I-5-12	Bay Boulevard	I-5 SB Ramps	N/A	On/Off Ramps Traffic Signal
I-5-13	Industrial Boulevard	I-5 NB Ramps	N/A	On/Off Ramps Traffic Signal
I-5-14	Palomar Street	I-5 SB Ramps	I-5 NB Ramps	Bridge Widening (275’ X 50’)
I-5-16	Main Street	I-5 SB Ramps	I-5 NB Ramps	Bridge Widening (275’ X 20’)
I-5-17	I-5 HOV & Managed Lanes	SR-905	SR-54	HOV & Manage Lanes
I-805-2	Main Street	I-805 SB Ramps	I-805 NB Ramps	EB to NB Left-Turn Lane
OR-2	Second Avenue	D Street	N/A	Install SC
RAS-1	Bonita Road	First Avenue	I-805	Restriping & Signage
RAS-11	East H Street	Hilltop Drive	I-805	North Side Improvements
SR-54-2	SR-54 EB Off-Ramp	N. Fourth Avenue	N/A	Add Ramp Lane
BP-1	Bayshore Bikeway	E Street	F Street	Bikeway
BP-2	F Street	I-5	Fourth Avenue	Sidewalk & Bike Lanes
BP-3	Industrial Blvd	L Street	Main Street	Bike Lanes improvements
BP-4	Main Street	Industrial Boulevard	I-805	Bike Lanes Improvements
BP-7	H Street	Broadway	Second Avenue	Pedestrian Improvements
BP-8	Broadway	D Street	Main Street	Pedestrian Improvements
BP-9	Bayshore Bikeway	F Street	H Street	Bikeway
RAS-10	H Street	Second Avenue	Hilltop Drive	Sidewalk Improvement
RAS-13	L Street	West of Industrial Boulevard	Industrial Boulevard	South Side Improvements
RAS-14	Telegraph Canyon Road	I-805 SB Ramps	I-805 NB Ramps	Southside Sidewalk
RAS-17	Main Street	I-5	Otay Valley Road	Main Street Streetscape Master Plan - Done in Phases with Redevelopment. Curb, Gutter, Sidewalk, Bike Lanes

TDIF ID #	Roadway/Project Name	From	To	Improvements
RAS-3	E Street	First Avenue	Bonita Road/E Flower Street	Sidewalk Improvement
RAS-7	H Street	Broadway	N/A	EB Queue Jumper Lane and Traffic Signal Modification
STM-382	East H Street	N/A	N/A	Bike Lane Along East H Street

2. APPROACH TO INDIVIDUAL PROJECT COST ESTIMATES

The Kimley-Horn team used the following approach for the development of individual project cost estimates for the Chula Vista TDIF program.

Unit Costs

Kimley-Horn researched publicly available unit cost records for previously constructed projects within the County of San Diego. These sources are listed below:

- County of San Diego Unit Price List (Base Year 2020)
- City of San Diego Unit Cost Data (Base Year 2009)
- Caltrans District 11 Cost Data (Base Year Varies)
- Caltrans Comparative Bridge Costs (Base Year 2019)
- Kimley-Horn Unit Cost Data from Recent Public Project Bid Results (Years 2020-2022)

Kimley-Horn determined that the unit costs from the above sources, with inflationary adjustments, are appropriate in completing individual project cost estimates for projects within the City of Chula Vista.

Kimley-Horn selected the County of San Diego Unit Price List for most unit costs as it is widely used in developing project cost estimates and bond estimates by many local agencies in San Diego County, including the City of Chula Vista. For an instance in which an item is not included in the County of San Diego Unit Price List, Kimley-Horn uses either the City of San Diego Unit Cost Data or the Caltrans District 11 Cost Data. Lastly, if an item is not included in any public unit price lists, Kimley-Horn uses recent bid results for projects within San Diego County. The unit price compilation and selection are provided as an appendix to this report.

Unit costs for roadway, bridge, and traffic signal improvements within Caltrans right-of-way specifically use available Caltrans online cost data. The Caltrans District 11 Cost Data and the Caltrans Comparative Bridge Costs are used for these improvements.

The above cost data sources have been adjusted to Base Year 2022, and for prevailing wage as described below.

Unit Cost Adjustments

ENR Construction Cost Index

Project costs associated with the County of San Diego Unit Price List (Base Year 2017), City of San Diego Unit Cost Data (Base Year 2009), and Caltrans Comparative Bridge Costs (Base Year 2019) have been adjusted using the ENR Construction Cost Index (Los Angeles Index) to predict 2022 baseline costs of construction. A copy of the historical ENR Construction Cost Index (Los Angeles Index) is provided as an appendix to this report.

Project costs associated with the Caltrans District 11 Cost Data (base year varies) have been escalated by Caltrans to present dollars (year 2022) utilizing the escalation built-in to their database.

Adjustment for Prevailing Wage

The County of San Diego Unit Price List and City of San Diego Unit Cost Data both do not include prevailing wage rates in their unit price estimates. According to a report completed in 2013 by the City of San Diego titled “Key Issues Related to Require Payment of Prevailing Wages on all City Public Works Projects,” road projects had an increased labor cost of 20-35% when prevailing wage rates are required.

Assuming labor costs comprise 45% of a roadway project and using the higher value of 35% increase in labor costs from the City of San Diego report, 45% of 35% equals a 16% estimated increase in total project costs.

Kimley-Horn escalated all unit costs from the County of San Diego Unit Price List and the City of San Diego Unit Cost Data by 16% to account for prevailing wage requirements.

Roadway Individual Project Quantities

ETDIF Projects

Utilizing the unit cost data identified above, Kimley-Horn has developed a detailed master spreadsheet identifying typical costs for the construction of a ¼-mile segment of each classification of roadway. Kimley-Horn performed quantity take-offs from the City of Chula Vista Engineering & Capital Projects Standard Drawings for 6-Lane Prime Arterial Roadway, 4-Lane Major Roadway, Class I Collector Roadway, and Class II Collector Roadway, and County of San Diego Public Road Standards for Boulevard with Intermittent Turn Lane to establish quantities for each project.

Kimley-Horn assumed that eligible project costs should only include improvement work within the right-of-way limits of the proposed roadway or bridge. This includes the following: grading of the

roadway prism; demolition; city-maintained utilities; surface improvements; permanent storm water BMPs (best management practices); street lighting; landscaping and irrigation; signage and striping; new traffic signals; and, traffic signal modifications.

Projected earthwork quantities assume that rough grading for the roadways in the Eastern TDIF is completed as part of a development's mass grading, as shown on the development's tentative map, and is necessary to balance the earthwork on-site and, therefore, is not reimbursable under the Eastern TDIF program. The earthwork costs show in the Eastern TDIF are based upon a grading prism calculated using the following formula: [(Width of Right-of-Way) x (Length of Right-of-Way) x (Depth of 3-Feet)] divided by 27 Cubic Feet/Cubic Yard. Excavation and export of soils equivalent to the roadway structural section is assumed to be included in the calculated grading prism cost; excess materials are assumed to be spoiled within the development and haul distances are relatively short.

Traffic signal cost estimates for full intersections are based upon intersection geometry – i.e., number of lanes for each leg of the intersection. The assumption of each Eastern TDIF facility is that for one (1) mile of new roadway one (1) new traffic signal will be required. This assumption has been included in the project specific estimates. Kimley-Horn used City provided data for the unit costs of new 4x6 and 6x6 traffic signals. This was based upon the County of San Diego Unit Price List and expanded upon to include additional signal items. A summary of this cost data is provided as an appendix.

WTDIF Projects

Utilizing the previously completed 2008 and 2014 WTDIF detailed cost estimates to determine the scope of work for each project, Kimley-Horn developed project specific cost estimates using the same unit cost data as identified above. Supplemental calculations are shown in the notes portion of each individual cost estimate spreadsheet, while maintaining the same cost estimate item descriptions quantities in the 2008 and 2014 WTDIF documents.

To address the storm water treatment components of these projects and at the direction of the City, Kimley-Horn added a line item for Stormwater BMP to each cost estimate. This cost represents 10% of the base construction cost, but excluded traffic signal, signing, striping and traffic control costs.

I-5 Projects

Similar to the WTDIF projects, Kimley-Horn utilized the previously completed 2008 and 2014 WTDIF cost estimates to determine the scope of work for each I-5 facility. Kimley-Horn then used the same unit cost data as the above to determine the total project cost.

Bridge Individual Project Quantities

Kimley-Horn used previously determined bridge length and width data for each bridge project. This information was taken from previous project reports used as attachments to this scope of work or previously completed TDIF programs for the City of Chula Vista. Kimley-Horn analyzed these widths per the required cross section and codes and determined many of the bridges need to be wider than assumed in previous studies. Kimley-Horn also analyzed the likely type of bridge structure required based upon location and general design and construction constraints. This information is included as an attachment to this memo.

Once square footage and structure type was determined, Kimley-Horn used the Caltrans Comparative Bridge Costs (Base Year 2019 adjusted to 2022 present worth) to determine bridge costs per square foot and ultimately cost per bridge structure.

Soft Costs

Soft costs currently allowed in the most recent TDIF Nexus Study are as follow:

Eastern TDIF (ETDIF) – Soft Costs

Contingency (15% of total hard costs, including right-of-way)
Civil Engineering (7.5% of hard costs, excludes right-of-way)
Soils Engineering (15% of earthwork costs)
Landscape Architecture (10% of landscaping costs)
Surveying (2% of hard costs, excludes right-of-way)
Utility Engineering/Coordination (3% of dry utility costs)
Inspection/Administration (6% of total hard costs including right-of-way)
Developer Administration (1.75% of total hard costs including right-of-way)
City Project Administration (2% of total hard costs including right-of-way)

Typically, Contingency is included as a hard construction cost, not as a soft cost. This is discussed further below.

Western TDIF (WTDIF)

The latest WTDIF Nexus Study differs from the ETDIF Nexus Study in that it states that Contingency should be a hard cost, as well as City Project Administration, and also addresses soft costs differently than the ETDIF; however, the Exhibit 5 of the nexus study does not reflect this approach.

In the ETDIF Nexus Study, the following soft costs are included in the calculation of the WTDIF up to an aggregate of 37.5% of the hard costs:

Civil Engineering
Construction Inspection/Soils Engineering
Landscape Architecture
Surveying
Utility Engineering/Coordination
Environmental Consulting

The nexus study acknowledges that smaller projects tend to have higher percentage design costs.

Although there are few definitive studies relating soft costs to hard project costs (i.e., construction and right-of-way), a June 2015 report by the Alameda County Transportation Commission (ACTC) titled "Cost Estimating Guide," which may be found at the following link, has some applicability to projects of the types and sizes in the City's TDIF program:

(https://www.alamedactc.org/wp-content/uploads/2018/11/AlamedaCTC_Cost_Estimating_Guide.pdf)

The ACTC report suggests Design Engineering Costs could be as much as 12% to 14%, with the higher levels involving coordination with Caltrans. This report also identifies Design Services During Construction (i.e., work performed by the design engineer during actual construction) as a 2% soft cost. Finally, the report suggests a guideline rate of 13% for Construction Management (i.e., Inspection/Administration and soils and materials engineering and testing); the report defines Construction Management as including supervision, inspection, administrative support, and materials testing necessary to ensure the work is being constructed to the appropriate standards. These soft cost rates are consistent with our experience on similar projects.

Based upon the above discussion, Kimley-Horn makes the following recommendations with regard to soft costs:

ETDIF

- Include 15% Contingency as a project hard cost.
- Increase the Civil Engineering allowance to 10% of hard costs to account for design complexities associated with newer regulatory requirements, such as stormwater treatment and volume management, Americans with Disabilities Act standards, and complete street standards for all users.
- Add a category for Design Services During Construction allowance set at 2% of hard costs.
- Increase the allowance for Inspection/Administration to 10% and rename it "Construction Management/Inspection" to be consistent with common usage. Note that Kimley-Horn is not recommending 13% because soils engineering and testing is captured under a separate item.

Based upon the above recommendations, total allowable soft costs would be approximately 35% of the total hard costs. Total hard costs would be defined as the base construction estimate plus contingency.

WTDIF

- Include 15% Contingency in project hard cost, as indicated in the nexus study.
- Show 2% City Project Administration as soft cost, not a hard cost.
- Add a category for Design Services During Construction allowance; this would add about 2% of hard costs to the soft costs.
- For projects within Caltrans right-of-way, add an additional soft cost of 5% to account for increased Caltrans oversight during both design and construction phases.

Based upon the above recommendations, total allowable soft costs would be up to 41.5% of the total hard costs. Total hard costs would be defined as the base construction estimate plus contingency.

3. Cost Estimate Deliverable

Kimley-Horn has compiled the above data and incorporated it into a cost estimate spreadsheet used for determining the overall cost of each TDIF project. The final deliverable includes a cost estimate summary for each individual project and an exhibit outlining the project limits and adjacent impacts.

A draft of this spreadsheet has been attached to this report.



Nicholas Oleskowicz, P.E.
C 89464 Exp. 12/31/24

ATTACHMENTS

ENR Construction Cost Index

ENR
Engineering News-Record

City Cost Index - Los Angeles - As of January 2023

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The building and construction cost indexes for ENR's individual cities use the same components and weighting as those for the 20-city national indexes. The city indexes use local prices for portland cement and 2 X 4 lumber and the national average price for structural steel. The city's BCI uses local union wages, plus fringes, for carpenters, bricklayers and iron workers. The city's CCI uses the same union wages for laborers.

To find more recent cost index data, go to this webpage (link below) and click on the link for the year you need, and then navigate to the week you need. Keep in mind that the city cost index figures are always published in the second weekly issue of the month.

http://www.enr.com/economics/current_costs

Go back to view all City Indexes.

ENR COST INDEXES IN LOS ANGELES (1978-2022)

YEAR	MONTH	BCI	%CHG	CCI	%CHG
2023	January	8287.07	+13.6	13989.79	+7.6
2022	December	7962.07	+10.4	13664.79	+5.8
2022	November	7709.91	+7.9	13412.66	+4.4
2022	October	7575.69	+8.2	13278.44	+4.5
2022	September	7417.59	-1.2	13120.34	-0.7
2022	August	7698.55	0.0	13401.30	0.0
2022	July	7872.42	+7.6	13575.17	+4.3
2022	June	7785.90	+6.3	13488.65	+3.5

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YEAR	MONTH	BCI	%CHG	CCI	%CHG
2022	May	7968.04	+9.3	13670.79	+5.2
2022	April	7995.37	+24.2	13698.12	+12.8
2022	March	7638.66	+19.0	13341.33	+10.1
2022	February	7484.16	+17.1	13186.84	+9.1
2022	January	7293.41	+14.4	12996.09	+7.6
2021	December	7208.99	+13.2	12911.66	+7.0
2021	November	7145.56	+12.2	12848.24	+6.4
2021	October	7001.54	+10.0%	12704.21	+5.3%
2021	September	7509.80	+18.1	13212.48	+9.5
2021	August	7701.02	+21.3	13403.65	+11.2
2021	July	7314.89	+11.3	13017.52	+5.2
2021	June	7326.41	+15.3	13029.04	+8.1
2021	May	7292.66	+14.1	12995.29	+7.8
2021	April	6436.93	+0.8	12139.56	+0.7
2021	March	6416.68	+0.6	12119.31	+0.6
2021	Feb	6388.59	+0.2	12091.22	+0.4
2021	Jan	6376.34	–1.6	12078.97	–0.5
2020	Dec	6365.59	0.0	12068.22	+0.3
2020	Nov	6368.59	0.1%	12071.22	0.4%
2020	Oct	6364.84	+0.1	12067.47	+0.3
2020	Sept	6359.71	+0.1	12062.34	+0.3
2020	Aug	6349.32	–0.3	12051.94	+0.1
2020	July	6353.82	–1.4	12056.44	–0.5
2020	June	6353.05	–1.5	12055.68	–0.5

YEAR	MONTH	BCI	%CHG	CCI	%CHG
2020	May	6389.86	–1.2	12056.03	–0.6
2020	April	6387.36	–0.7	12053.53	–0.4
2020	March	6377.01	+1.6	12043.18	+0.8
2020	Feb	6376.73	+0.2	12042.90	+0.1
2020	Jan	6478.32	+2.1	12144.49	+1.1
2019	Dec	6368.01	+0.3	12034.19	+0.2
2019	Nov	6359.40	+0.3	12025.57	+0.2
2019	Oct	6360.90	+0.3	12027.07	+0.1
2019	Sept	6355.27	+0.3	12021.45	+0.2
2019	Aug	6371.00	+0.6	12037.18	+0.3
2019	July	6446.97	+2.0	12113.16	+1.1
2019	June	6447.02	+2.8	12113.16	+1.4
2019	May	6464.47	+3.1	12130.66	+1.6
2019	April	6453.22	+2.9	12119.41	+1.5
2019	Mar	6277.68	+0.1	11943.60	+0.1
2019	Feb	6361.93	+1.5	12027.85	+0.8
2019	Jan	6345.43	+1.2	12011.35	+0.6
2018	Dec	6345.93	+1.2	12011.85	+0.6
2018	Nov	6340.43	+1.1	12006.35	+0.6
2018	Oct	6343.43	+1.2	12009.59	+0.6
2018	Sept	6336.58	+0.7	12002.50	+0.4
2018	Aug	6334.33	+0.6	12000.25	+0.3
2018	July	6319.58	+2.7	11985.50	+3.0
2018	June	6274.33	+2.1	11940.25	+2.6

YEAR	MONTH	BCI	%CHG	CCI	%CHG
2018	May	6269.90	+2.0	11935.82	+2.6
2018	Apr	6269.90	+1.9	11935.82	+2.5
2018	Mar	6269.90	+3.4	11935.82	+3.3
2018	Feb	6269.90	+3.4	11935.82	+3.3
2018	Jan	6269.90	+3.4	11935.82	+3.3
2017	Dec	6269.90	+3.4	11935.82	+3.3
2017	Nov	6269.90	+3.8	11935.82	+3.6
2017	Oct	6269.90	+3.9	11935.82	+3.6
2017	Sept	6294.40	+6.9	11960.32	+7.0
2017	Aug	6296.40	+7.4	11962.32	+7.2
2017	Jul	6151.01	+4.9	11636.49	–0.0
2017	Jun	6147.89	+5.0	11636.49	+4.4
2017	May	6147.89	+4.9	11636.49	+4.4
2017	Apr	6153.85	+4.9	11642.47	+4.3
2017	Mar	6066.40	+3.4	11555.03	+3.6
2017	Feb	6066.40	+3.6	11555.03	+3.7
2017	Jan	6066.40	+4.2	11555.03	+4.0
2016	Dec	6066.40	+4.1	11555.03	+3.9
2016	Nov	6038.41	+3.7	11527.02	+3.7
2016	Oct	6037.41	+3.6	11526.02	+3.6
2016	Sep	5886.63	+1.0	11178.02	+0.5
2016	Aug	5863.14	+2.50	11154.53	+1.60
2016	Jul	5863.64	+2.60	11155.03	+1.60
2016	Jun	5856.89	+2.40	11148.28	+1.50

YEAR	MONTH	BCI	%CHG	CCI	%CHG
2016	May	5858.89	+2.20	11150.28	+1.40
2016	Apr	5867.64	+02.40	11159.03	+1.50
2016	Mar	5866.39	+2.30	11157.78	+1.50
2016	Feb	5855.40	+2.00	11146.70	+1.30
2016	Jan	5823.91	+1.50	11115.28	+1.10
2015	Dec	5825.91	+2.10	11117.28	+3.40
2015	Nov	5826.71	+2.00	11116.01	+3.30
2015	Oct	5838.19	+2.50	11628.27	+8.20
2015	Sep	5831.47	+2.50	11120.77	+3.60
2015	Aug	5718.09	+0.50	10981.02	+2.30
2015	Jul	5718.09	0.00	10981.02	0.00
2015	Jun	5718.09	–0.25	10981.02	–0.13
2015	May	5732.34	0.00	10995.27	0.00
2015	Apr	5725.59	+0.7	10988.52	+2.4
2015	Mar	5732.34	+0.9	10995.27	+2.5
2015	Feb	5740.6	3.1	11003.54	2.5
2015	Jan	5736.07	3	10999	2.5
2014	Dec	5698.75	2.3	10747.68	0.1
2014	Nov	5710.55	2.1	10759.68	4.3
2014	Oct	5698.75	2.1	10747.68	4.3
2014	Sep	5689.25	2.4	10738.18	4.2
2014	Aug	5688.50	2.4	10737.43	4.2
2014	Jul	5688.50	2.3	10737.43	4.2
2014	Jun	5690.50	2.4	10739.43	4.2

YEAR	MONTH	BCI	%CHG	CCI	%CHG
2014	May	5686.75	2.5	10735.68	4.2
2014	Apr	5685.75	2.6	10734.68	4.3
2014	Mar	5682.75	2.7	10731.68	4.4
2014	Feb	5565.83	0.5	10734.43	4.4
2014	Jan	5567.58	0.7	10736.18	4.5
2013	Dec	5570.08	0.9	10738.68	4.6
2013	Nov	5572.33	0.7	10740.93	4.5
2013	Oct	5580.33	0.8	11320.93	10.1
2013	Sep	5557.48	0.5	10305.43	0.3
2013	Aug	5556.23	0.4	10304.18	0.2
2013	Jul	5558.98	1.8	10306.93	0.1
2013	Jun	5556.73	1.7	10304.68	0.1
2013	May	5550.98	1.6	10298.93	0.0
2013	Apr	5541.23	1.7	10289.18	0.0
2013	Mar	5535.98	1.6	10283.93	0.0
2013	Feb	5536.98	2.3	10284.93	1.9
2013	Jan	5528.73	2.1	10276.68	1.8
2012	Dec	5522.98	2.1	10270.93	1.8
2012	Nov	5534.23	2.3	10282.18	1.9
2012	Oct	5535.23	2.4	10283.18	2.0
2012	Sep	5532.23	2.5	10280.18	2.0
2012	Aug	5532.60	2.5	10280.55	2.0
2012	Jul	5461.22	1.4	10295.55	2.3
2012	Jun	5465.22	1.7	10299.55	2.5

YEAR	MONTH	BCI	%CHG	CCI	%CHG
2012	May	5465.72	1.8	10300.05	2.5
2012	May	5465.72	1.8	10300.05	2.5
2012	Apr	5450.97	1.6	10285.30	2.4
2012	Mar	5449.22	1.7	10283.55	2.5
2012	Feb	5414.62	1.1	10091.80	0.6
2012	Feb	5414.62	1.1	10091.80	0.6
2012	Jan	5414.62	1.7	10091.80	0.9
2011	Dec	5411.62	1.6	10088.80	0.8
2011	Nov	5411.12	1.5	10088.30	0.8
2011	Oct	5406.12	1.6	10083.30	0.8
2011	Sep	5399.62	4.2	10076.80	1.3
2011	Aug	5398.37	3.8	10075.55	1.1
2011	Jul	5385.62	3.5	10062.80	0.9
2011	Jun	5374.12	3.5	10051.30	0.9
2011	May	5368.37	3.7	10045.55	1.0
2011	Apr	5367.37	5.9	10044.55	2.8
2011	Mar	5357.87	5.8	10035.05	2.8
2011	Feb	5354.87	5.8	10032.05	2.8
2011	Jan	5323.12	5.2	10000.3	2.4
2010	Dec	5327.12	5.3	10004.3	2.5
2010	Nov	5330.37	5.4	10007.55	2.5
2010	Oct	5321.87	5.2	9999.05	2.4
2010	Sep	5181.45	2.4	9948.55	1.9
2010	Aug	5202.09	2.8	9969.19	2.1

YEAR	MONTH	BCI	%CHG	CCI	%CHG
2010	Jul	5201.59	2.8	9968.69	2.1
2010	Jun	5195.09	2.4	9962.19	1.9
2010	May	5178.34	1.8	9945.44	1.6
2010	Apr	5068.58	-0.5	9771.69	-0.3
2010	Mar	5066.58	-0.6	9769.69	-0.3
2010	Feb	5060.58	-0.7	9763.69	-0.3
2010	Jan	5058.83	-1	9761.94	-0.5
2009	Dec	5060.58	-1.2	9763.69	-0.6
2009	Nov	5057.83	-2.2	9760.94	-1.2
2009	Oct	5057.58	-2.6	9760.69	-1.4
2009	Sep	5062.33	0.9	9765.44	4
2009	Aug	5063.08	2	9766.19	4.5
2009	Jul	5061.33	2.1	9764.44	4.6
2009	Jun	5074.08	3.8	9777.19	5.5
2009	May	5086.83	5	9789.94	6.1
2009	Apr	5094.33	5.6	9797.44	6.4
2009	Mar	5096.08	5.7	9799.19	6.5
2009	Feb	5093.58	6	9796.69	6.7
2009	Jan	5107.83	6.3	9810.94	6.8
2008	Dec	5120.08	6.6	9823.19	7
2008	Nov	5173.08	7.8	9876.19	7.6
2008	Oct	5191.83	8.4	9894.94	7.4
2008	Sep	5014.96	4.7	9394.19	1.9
2008	Aug	4963.21	5.3	9342.44	5.4

YEAR	MONTH	BCI	%CHG	CCI	%CHG
2008	Jul	4956.46	5.2	9335.69	5.4
2008	Jun	4886.71	3.9	9265.94	4.6
2008	May	4844.71	2.3	9223.94	3.8
2008	Apr	4825.46	2.1	9204.69	3.7
2008	Mar	4820.46	2.1	9199.69	3.7
2008	Feb	4804.19	1.8	9183.42	3.5
2008	Jan	4804.19	1.8	9183.42	3.5
2007	Dec	4802.44	1.6	9181.67	3.4
2007	Nov	4799.94	1.2	9179.17	3.2
2007	Oct	4789.42	1.5	9216.07	3.9
2007	Sep	4788.42	8.3	9215.07	7.5
2007	Aug	4712.65	6.8	8863.27	3.5
2007	Jul	4710.65	6.8	8861.27	3.5
2007	Jun	4704.15	7	8854.77	3.6
2007	May	4738.2	7.6	8888.82	3.9
2007	Apr	4724.2	7.3	8874.82	3.7
2007	Mar	4722.47	7.3	8873.09	3.8
2007	Feb	4719.97	7.1	8870.59	3.6
2007	Jan	4720.47	6.7	8871.09	3.5
2006	Dec	4728.35	7.1	8878.97	3.6
2006	Nov	4742.45	8	8893.07	4.1
2006	Oct	4717.7	8.3	8868.32	4.3
2006	Sep	4421.91	2	8572.47	1
2006	Aug	4419.66	4.1	8570.22	3.5

YEAR	MONTH	BCI	%CHG	CCI	%CHG
2006	Jul	4412.66	3.7	8563.22	3.3
2006	Jun	4396.16	3.1	8546.72	3
2006	May	4402.99	4	8553.55	3.5
2006	Apr	4404.74	4.1	8555.3	3.5
2006	Mar	4401.74	4.8	8552.3	3.9
2006	Feb	4407.74	4.9	8558.3	3.9
2006	Jan	4422.86	6.4	8573.42	4.6
2005	Dec	4416.86	6.3	8567.42	4.6
2005	Nov	4389.61	5.9	8540.17	4.4
2005	Oct	4355.29	5.4	8505.85	4.1
2005	Sep	4334.64	4.9	8485.2	3.9
2005	Aug	4244.74	4.5	8277.95	5.4
2005	Jul	4256.74	5.1	8289.95	5.7
2005	Jun	4266.07	5.3	8299.28	5.8
2005	May	4233.98	5.6	8267.19	5.9
2005	Apr	4233.42	6.3	8266.63	6.3
2005	Mar	4200.5	6.6	8233.71	6.5
2005	Feb	4202.5	7.9	8235.71	7.1
2005	Jan	4156.27	8.1	8193.21	8.8
2004	Dec	4155.2	8	8192.14	8.8
2003	Dec	3847.3	1.6	7531.77	1.7
2002	Dec	3787.76	2.5	7402.75	2.4
2001	Dec	3694.24	0.4	7226.92	2.3
2000	Dec	3680.26	2.5	7068.04	3.6

YEAR	MONTH	BCI	%CHG	CCI	%CHG
1999	Dec	3591.01	-0.7	6825.97	-0.4
1998	Dec	3617	1.6	6851.95	2.8
1997	Dec	3560.53	3.9	6663.55	1.6
1996	Dec	3426.7	0	6558.44	0.5
1995	Dec	3427.26	0.2	6526.22	-0.1
1994	Dec	3420.42	2.6	6532.95	0.9
1993	Dec	3334.43	4.2	6477.84	2
1992	Dec	3198.66	3.3	6348.55	4.2
1991	Dec	3097.83	2.6	6090.12	1.6
1990	Dec	3020.51	5.8	5994.55	3.5
1989	Dec	2855.26	0.1	5789.77	0.3
1988	Dec	2851.67	1.2	5770.84	5.4
1987	Dec	2816.48	1.9	5474.14	0.4
1986	Dec	2762.63	3.7	5452.2	0.1
1985	Dec	2664.58	-2.3	5446.69	3.6
1984	Dec	2726.44	5.4	5259.93	3.9
1983	Dec	2586.58	1.8	5063.89	2.6
1982	Dec	2540.67	5.6	4934.14	8.9
1981	Dec	2405.22	5.9	4530.96	10.4
1980	Dec	2272.26	10	4102.37	12.7
1979	Dec	2065.79	4.9	3638.81	6.4
1978	Dec	1969.77	8.9	3421.25	8.2

Public Unit Cost Information



CITY OF SAN DIEGO

DEVELOPMENT SERVICES DEPARTMENT

UNIT PRICE LIST

January 2009

INTRODUCTION

The purpose of the Unit Price List is to provide a resource for the preparation of cost estimates for subdivisions and permit projects and should be used only for bonding and permitting purposes. This price list does not reflect the actual project costs. The Unit Price List contains eleven separate sections, which include Private and/or Public items for Earthwork, Drainage, Surface Improvements, Traffic, Water/Wastewater Utilities, Landscaping, and Miscellaneous items.

All bond estimates for land development and public improvement must follow the format and requirements of the current City of San Diego Land Development and Public Improvement Preparation Manual. Please note that a 10% contingency factor must be applied for all public improvements and private encroachments within the public R.O.W.

The unit price information contained in this publication has been complied from various sources. These sources include private consultants and developers, other city sections and departments, other public agencies and previous City project bid items.

If a project proposes improvements that are not included in this Unit Price List, it is the engineer's responsibility to assess the value of the improvements (including labor and mobilization and restoration as applicable) and include the unit cost with respective quantities in the cost estimate. Provisions have been made for adding items to the City's Construction Cost Estimate template within rows labeled "ADDITIONAL ITEM".

This Unit Price Listing will be updated periodically as needed. If you have any suggestions or comments please contact the Land Development Review Division, plan check section.

For those with internet access, a Microsoft® Office Excel 2003 spreadsheet has been provided for the industry's use on the City of San Diego website (within the Construction Cost Estimate and Bond Template) Development Services/Guidelines and Template links. This spreadsheet has been prepared as part of a continuing effort to enhance the timely completion of the review and permit process for grading and public improvements within the City of San Diego. The intent is to provide a tool to foster consistency, minimize the duplication of effort by the industry and standardize the policy for preparation and review of cost estimates to be used in the determination of bonding costs and permitting and inspection fees for grading and public improvement permits.

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SECTION 1-EARTHWORK

GRADING

CLEAR AND GRUB		SF	$0.72
CONTAMINATED SOIL REMOVAL AND DISPOSAL		CY	$169.05
EXCAVATE AND EXPORT		CY	**GRADED**
	0-1,000	CY	$44.28
	1,001-20,000	CY	$35.42
	20,001-100,000	CY	$26.57
	100,001-350,000	CY	$17.71
	>350,000	CY	$11.51
EXCAVATE AND FILL		CY	**GRADED**
	0-1,000	CY	$32.20
	1,001-20,000	CY	$18.52
	>20,000	CY	$10.47
IMPORT AND FILL		CY	**GRADED**
	0-1,000	CY	$45.08
	1,001-20,000	CY	$35.42
	>20,000 CY $ 12.00	LF	$19.32
SUB DRAIN (4" DIAMETER)		LF	$45.08
SUB DRAIN (6" DIAMETER)		LF	$48.30
SUB DRAIN (8" DIAMETER)		LF	$56.35
SUB DRAIN HEADWALL		EA	$4,025.00
SHORING (SUBSURFACE STRUCTURE)		SF	$40.25

BEST MANAGEMENT PRACTICES (BMP"S)

GRAVEL BAG	EA	$1.82
JUTE MAT	SF	$0.66
STRAW MAT	SF	$0.46
STRAW BALES	EA	$8.25
SILT FENCE	LF	$2.64
FIBER ROLLS	LF	$3.71
FIBER MATT	SF	$0.66
HYDRO-SEED	SF	$0.33
HYDRAULIC MULCH	SF	$0.50
STABILIZED CONSTRUCTION ENTRANCE	SF	$8.66
CONCRETE WASHOUT	EA	$825.00
INLET PROTECTION (SEDIMENT)	EA	$247.50
INLET MARKER	EA	$165.00

SECTION 2- DRAINAGE

RCP CULVERTS

18" RCP STORM DRAIN	LF	$123.50

24" RCP STORM DRAIN	LF	$143.00
30" RCP STORM DRAIN	LF	$156.00
36" RCP STORM DRAIN	LF	$188.50
42" RCP STORM DRAIN	LF	$214.50
48" RCP STORM DRAIN	LF	$227.50
54" RCP STORM DRAIN	LF	$260.00
60" RCP STORM DRAIN	LF	$331.50
72" RCP STORM DRAIN	LF	$370.50

RCP CULVERTS (WITH WATER TIGHT JOINTS)

18" RCP STORM DRAIN (WATER TIGHT JOINTS)	LF	$129.68
24" RCP STORM DRAIN (WATER TIGHT JOINTS)	LF	$150.15
30" RCP STORM DRAIN (WATER TIGHT JOINTS)	LF	$163.80
36" RCP STORM DRAIN (WATER TIGHT JOINTS)	LF	$197.93
42" RCP STORM DRAIN (WATER TIGHT JOINTS)	LF	$225.23
48" RCP STORM DRAIN (WATER TIGHT JOINTS)	LF	$238.88
54" RCP STORM DRAIN (WATER TIGHT JOINTS)	LF	$273.00
60" RCP STORM DRAIN (WATER TIGHT JOINTS)	LF	$348.08
72" RCP STORM DRAIN (WATER TIGHT JOINTS)	LF	$389.03

MISCELLANEOUS DRAINAGE

AC SPILLWAY (D-22)	EA	$512.00
PCC BOX CULVERT	CY	$1,760.00
CATCH BASIN, PER D-7 (TYPE F)	EA	$5,680.00
~~CATCH BASIN, PER D-8 (TYPE G)~~	EA	$6,240.00
'CLEAN OUT, PER D-9 (TYPE A)	EA	$6,368.00
'CLEAN OUT, PER D-10 (TYPE B)	EA	$7,200.00
~~CATCH BASIN, PER D-29 (TYPE L)~~	EA	$6,160.00
CONCRETE (STRUCTURAL)	CY	$880.00
CONCRETE ENERGY DISSIPATER, PER D-41	EA	$13,120.00
CONCRETE LUG, PER D-63	EA	$1,920.00
CONCRETE PIPE COLLAR, PER D-62	EA	$4,000.00
CURB INLET, PER D-1 (TYPE A)	EA	$6,160.00
CURB INLET, PER D-2 (TYPE B)	EA	$6,160.00
CURB INLET, PER D-3 (TYPE C)	EA	$7,200.00
CURB INLET, PER D-45 (TYPE J)	EA	$5,680.00
CURB OUTLET, PER D-25 (TYPE A)	EA	$4,000.00
CURB OUTLET-SIDEWALK UNDER DRAIN, PER D-27 EA	EA	$800.00
CURTAIN WALL, PER D-38	EA	$960.00
CUTOFF WALL , PER D-72	EA	$760.00
PCC DRAINAGE CHANNEL, PER D-70 & 71	LF	$1,040.00
DRAINAGE DITCH, PER D-75	LF	$24.00
HEC-2 STUDY & FEMA REVISION	LS	$48,000.00
STRAIGHT HEAD WALL PER D-30&31 (TYPE A)	EA	$4,800.00
STRAIGHT HEAD WALL PER D-32&33 (TYPE A-GRAVITY) EA	EA	$4,320.00
WING/U TYPE HEAD WALL PER D-34/35A&B (18" TO 36"/36" TO 60")	EA	$6,880.00
WING/U TYPE HEAD WALL PER D-35A&B (60" TO 84") EA	EA	$7,360.00

L TYPE HEADWALL PER D-36 & 37	EA	$6,560.00
INLET APRON, PER D-39	EA	$2,560.00
CONCRETE ENERGY DISSIPATER, PER D-41	EA	$13,120.00
RIP RAP , PER D-40 (2 TON)	EA	$4,000.00
RIP RAP , PER D-40 (0.25 -1.0 TON)	EA	$3,360.00
RIP RAP , PER D-40 (NO. 2 BACKING)	EA	$2,800.00
CONNECT TO EXISTING S.D.	EA	$320.00

SECTION 3- SURFACE IMPROVEMENTS

CURB AND GUTTER

CURB & GUTTER REMOVAL AND DISPOSAL	LF	$3.30
MEDIAN CURB & GUTTER, PER G-6 (TYPE B-1)	LF	$13.20
MEDIAN CURB & GUTTER, PER G-6 (TYPE B-2)	LF	$22.00
6" CURB & GUTTER PER G-2 (TYPE G)	LF	$22.00
8" CURB & GUTTER PER G-2 (TYPE G)	LF	$26.40
6" CURB & GUTTER, PER G-2 (TYPE H)	LF	$27.50
8" CURB & GUTTER, PER G-2 (TYPE H)	LF	$33.00
ROLLED CURB, PER G-4	LF	$28.60
4" AC BERM, PER G-5	LF	$8.80
6" AC BERM, PER G-5	LF	$10.45
8" AC BERM, PER G-5	LF	$12.10

PAVEMENT

PAVEMENT DESIGN, PER SDG-113 (SCHEDULE J)	SF	$8.40
AC PAVING (1" SURFACE)	SF	$1.26
AC PAVING (2" SURFACE)	SF	$1.68
AC PAVING (3" SURFACE)	SF	$2.18
AC PAVING (4" SURFACE)	SF	$2.94
AC PAVING (5" SURFACE)	SF	$3.61
CTB PAVING (4" SURFACE)	SF	$1.68
CTB PAVING (6" SURFACE)	SF	$1.76
CTB PAVING (8" SURFACE)	SF	$2.10
CTB PAVING (12" SURFACE)	SF	$2.69
CTB PAVING (14" SURFACE)	SF	$2.77
CTB PAVING (16" SURFACE)	SF	$2.94
CTB PAVING (18+" SURFACE)	SF	$3.11
PCC PAVING (5" THICK)	SF	$8.40
PCC PAVING (5.5" THICK)	SF	$9.24
PCC PAVING (6" THICK)	SF	$10.08
PCC PAVING (8" THICK)	SF	$10.92
PCC PAVING (9" THICK)	SF	$12.60
PAVING SUBGRADE PREPARATION	SF	$0.84
AC PAVEMENT REMOVAL	SF	$3.36

CURB RAMPS & SIDEWALK

CURB RAMPS, PER SDG132 (TYPE A & B, NEW CONSTRUCTION)	EA	$1,876.00
CURB RAMPS, PER SDG134-135 (TYPE C1, C2 & A-EXIST SIDEWALK)	EA	$2,948.00
CURB RAMPS, ALLEY, PER SDG-136 (TYPE D)	EA	$2,144.00
SIDEWALK REMOVAL AND DISPOSAL	SF	$2.01
4" PCC SIDEWALK, PER G-7	SF	**GRADED**
0-5000	SF	$8.00
>5000	SF	$6.40
RELOCATE CONTRACTOS/HISTORIC STAMP	EA	$300

MISCELLANEOUS SURFACE IMPROVEMENTS

CUT-OFF WALL @ END OF PAVEMENT, PER G-22 & 23	EA	$1,650.00
CROSS-GUTTER, PER G-12 & 13	SF	$13.20
DRIVEWAY, PER G-14A,B,C, & SDG-114	SF	$11.55
MEDIAN, PER SDG-112 (STAMPED CONCRETE)	SF	$8.25
MEDIAN, PER SDG-112 (DECORATIVE CONCRETE)	SF	$10.73
MEDIAN, PER SDG-112 (PAVERS)	SF	$17.33
TRENCH RESURFACING, PER SDG-107&108	LF	$41.25
NARROW TRENCHING, PER G-33-35	LF	$18.98
4" AC BERM, PER G-5	LF	$12.46
6" AC BERM, PER G-5	LF	$13.53
8" AC BERM, PER G-5	LF	$15.43
AC OVERLAY (1"-2")	SF	$0.74
AC SLURRY SEAL	SF	$0.99
ALLEY APRON, PER G-17	SF	$11.55
ADJUST TO GRADE	EA	$1,650.00
AGGREGATE BASE (AB)	SF	$1.65
MEDIAN PCC, PER SDG-112 (DECORATIVE)	SF	$18.15
MEDIAN PCC, PER SDG-112 (STAMPED CONCRETE)	SF	$13.20
MEDIAN PCC, PER SDG-112 (INTERLOCKING PAVERS)	SF	$19.80
GRIND & OVERLAY	SF	$4.13
COLD MILLING AC PAVEMENT (SDG 139)	LF	$2.38
PAVEMENT FABRIC FOR ASPHALT	SF	$2.60
AC PATCHING	TON	$150.00
CRACK SEALING	LF	$2.50

SECTION 4- TRAFFIC

TRAFFIC CONTROLS

DETECTOR LOOPS	EA	$ 544.50
PULL BOX, PER SDI-105 (ALL TYPES)	EA	$ 314.60
PULL BOX RELOCATION	EA	$ 484.00
REMOVE STRIPING	LF	$ 3.63
STREET LIGHT, PER SDE-101, E-2 L.P. SODIUM	EA	$ 7,260.00
STREET LIGHT, PER SDE-101, E-2 H.P. SODIUM	EA	$ 7,260.00
STREET NAME SIGN, PER SDM-102	EA	$ 484.00
STREET STRIPING (More than 4000 L.F)	LF	$ 0.61
STREET STRIPING	LF	$ 0.79
TRAFFIC SIGNAL (2X2 INTERSECTION)	LS	$ 127,050

TRAFFIC SIGNAL (4X2 INTERSECTION)	LS	$ 139,150
TRAFFIC SIGNAL (4X4 INTERSECTION)	LS	$ 145,200
TRAFFIC SIGNAL (4X6 INTERSECTION)	LS	$ 157,300
TRAFFIC SIGNAL (6X6 INTERSECTION)	LS	$ 169,400
TRAFFIC SIGNAL (8X6 INTERSECTION)	LS	$ 278,300
TRAFFIC SIGNAL INTERCONNECTION	LF	$ 18.15
BIKE LANE SIGNING AND STRIPING	MI	$ 2,420.00
FLASHING ARROW BOARD/ELECTRIC MESSAGE SIGN	LS	$ 2,000.00

SECTION 5- WATER/WASTEWATER UTILITIES

WASTEWATER

CONCRETE ANCHOR, PER S-9	LF	$ 1,691.08
CONCRETE CRADLE, PER S-6 (8" SWR MAIN)	LF	$ 18.69
CONCRETE CRADLE, PER S-6 (10" SWR MAIN)	LF	$ 20.64
CONCRETE CRADLE, PER S-6 (12" SWR MAIN)	LF	$ 23.58
CONCRETE CRADLE, PER S-6 (15" SWR MAIN)	LF	$ 27.27
CONCRETE CRADLE, PER S-6 (18" SWR MAIN)	LF	$ 33.30
CONCRETE CRADLE, PER S-6 (21" SWR MAIN)	LF	$ 38.86
CONCRETE CRADLE, PER S-6 (24" SWR MAIN)	LF	$ 26.80
CONCRETE CRADLE, PER S-6 (27" SWR MAIN)	LF	$ 46.10
CONCRETE CRADLE, PER S-6 (30" SWR MAIN)	LF	$ 55.21
CONCRETE CRADLE, PER S-6 (36" SWR MAIN)	LF	$ 70.95
CONCRETE CRADLE, PER S-6 (42" SWR MAIN)	LF	$ 92.06
CONCRETE CRADLE, PER S-6 (48" SWR MAIN)	LF	$ 104.86
CONCRETE ENCASEMENT, PER S-7 (8" SWR MAIN)	LF	$ 29.41
CONCRETE ENCASEMENT, PER S-7 (10" SWR MAIN)	LF	$ 34.30
CONCRETE ENCASEMENT, PER S-7 (12" SWR MAIN)	LF	$ 39.13
CONCRETE ENCASEMENT, PER S-7 (15" SWR MAIN)	LF	$ 46.03
CONCRETE ENCASEMENT, PER S-7 (18" SWR MAIN)	LF	$ 53.87
CONCRETE ENCASEMENT, PER S-7 (21" SWR MAIN)	LF	$ 60.43
CONCRETE ENCASEMENT, PER S-7 (24" SWR MAIN)	LF	$ 67.54
CONCRETE ENCASEMENT, PER S-7 (27" SWR MAIN)	LF	$ 79.86
CONCRETE ENCASEMENT, PER S-7 (30" SWR MAIN)	LF	$ 98.22
CONCRETE ENCASEMENT, PER S-7 (36" SWR MAIN)	LF	$ 112.83
CONCRETE ENCASEMENT, PER S-7 (42" SWR MAIN)	LF	$ 128.10
CONCRETE ENCASEMENT, PER S-7 (48" SWR MAIN)	LF	$ 156.04
CUTOFF WALL, PER S-10 (TYPE B)	EA	$ 1,975.16
SEWER MANHOLE, PER S-2 (3'x5')	EA	$ 4,803.90
SEWER MANHOLE, PER S-2 (3'x5' W/LOCKING COVER)	EA	$ 5,905.38
SEWER MANHOLE, PER S-2 (3'x5' PVC-LINER)	EA	$ 7,403.50
SEWER MANHOLE, PER S-2 (3'x5' W/PVC-LINER & LOCKING COVER)	EA	$ 8,504.98
SEWER MANHOLE, PER S-17 (3'x4')	EA	$ 4,254.50
SEWER MANHOLE, PER S-17 (3'x4' W/LOCKING COVER)	EA	$ 6,030.00
SEWER MANHOLE, PER S-17 (3'x4' PVC-LINER)	EA	$ 5,355.98
SEWER MANHOLE, PER S-17 (3'x4' W/PVC-LINER & LOCKING COVER)	EA	$ 7,131.48
SEWER MANHOLE LOCKING COVER, PER M-4	EA	$ 1,101.68
4" PRESSURE PVC SEWER	LF	$ 70.62
6" PRESSURE PVC SEWER	LF	$ 96.15
SEWER ACCESS ROAD (4" DECOMPOSED GRANITE)	SF	$ 7.04

SEWER ACCESS ROAD, PER SDG-113 (AC)	SF	$ 15.14
SEWER ACCESS ROAD, PER SDG-113 (CONCRETE)	SF	$ 60.30
STREET SEWER LATERAL, PER S-13 (4", 40' LONG)	EA	$ 1,788.90
STREET SEWER LATERAL, PER S-13 (6" - 40' LONG)	EA	$ 3,363.40
STREET SEWER LATERAL, PER S-13 (8" - 40' LONG)	EA	$ 4,937.90
ALLEY SEWER LATERAL, PER S-13 (4" - 40' LONG)	EA	$ 1,496.78
ALLEY SEWER LATERAL, PER S-13 (6" - 40' LONG)	EA	$ 2,278.00
6" PVC SEWER MAIN, PER S-4	LF	$ 82.88
8" PVC SEWER MAIN, PER S-4	LF	$ 96.75
10" PVC SEWER MAIN, PER S-4	LF	$ 107.07
12" PVC SEWER MAIN, PER S-4	LF	$ 118.79
15" PVC SEWER MAIN, PER S-4	LF	$ 131.19
18" PVC SEWER MAIN, PER S-4	LF	$ 144.79
21" PVC SEWER MAIN, PER S-4	LF	$ 157.12
24" PVC SEWER MAIN, PER S-4	LF	$ 167.37
27" PVC SEWER MAIN, PER S-4	LF	$ 178.35
30" PVC SEWER MAIN, PER S-4	LF	$ 188.61
36" PVC SEWER MAIN, PER S-4	LF	$ 209.04
8" ESVC SEWER MAIN, PER S-4	LF	$ 100.50
10" ESVC SEWER MAIN, PER S-4	LF	$ 113.90
12" ESVC SEWER MAIN, PER S-4	LF	$ 120.60
15" ESVC SEWER MAIN, PER S-4	LF	$ 127.30
18" ESVC SEWER MAIN, PER S-4	LF	$ 147.40
21" ESVC SEWER MAIN, PER S-4	LF	$ 160.80
24" ESVC SEWER MAIN, PER S-4	LF	$ 174.20
27" ESVC SEWER MAIN, PER S-4	LF	$ 180.90
30" ESVC SEWER MAIN, PER S-4	LF	$ 187.60
42" ESVC SEWER MAIN, PER S-4	LF	$ 207.70
48" ESVC SEWER MAIN, PER S-4	LF	$ 254.60
16" STEEL CASING	LF	$ 130.65
19" STEEL CASING	LF	$ 167.50
21" STEEL CASING	LF	$ 190.28
24" STEEL CASING	LF	$ 215.74
30" STEEL CASING	LF	$ 250.58
33" STEEL CASING	LF	$ 265.32
36" STEEL CASING	LF	$ 284.08
39" STEEL CASING	LF	$ 301.50
42" STEEL CASING	LF	$ 347.06
48" STEEL CASING	LF	$ 383.24
52" STEEL CASING	LF	$ 419.42
60" STEEL CASING	LF	$ 482.40
SEWER PUMP STATION	EA	$ 335,000
ADJUST MANHOLE FRAME & COVER TO GRADE	EA	$450
6" SEWER MAIN CLEANOUT	EA	$633
CONNECT TO EXISTING MANHOLE AND RECHANNEL IF NEEDED	EA	$1,883
ABANDON EXISTING MANHOLE (OUTSIDE TRENCH)	EA	$1,616

WATER

AIR & VACUUM VALVE, PER W-4 (1")	EA	$ 2,247.50
AIR & VACUUM VALVE, PER W-4 (2")	EA	$ 3,190.00
BLOW-OFF ASSEMBLY, PER W-6 (2" TYPE A)	EA	$ 1,254.25
BLOW-OFF ASSEMBLY, PER SDW-106 (3" TYPE A)	EA	$ 2,320.00
BLOW-OFF ASSEMBLY PER W-7 (2" TYPE B, C & D)	EA	$2,718.75
RELOCATE FIRE HYDRANT	EA	$3,190.00
BACKFLOW PREVENTION ASSEMBLY (W/ENCLOSURE)	EA	$2,392.50
FIRE HYDRANT ASSY PER W-10 (2-WAY)	EA	$5,075.00
FIRE HYDRANT ASSY PER W-10 (3-WAY)	EA	$5,800.00
MULTIPLE SERVICE PER W-23	EA	$797.50
THRUST BLOCK, PER W-17	SF	$253.75
WATER METER BOX	EA	$406
TRHUST ANCHOR	EA	$447
DUAL ABOVE GROUND METER & B.F PREVENTER (SDW119)	EA	$5,000
ADJUST VALVE COVER TO GRADE	EA	$300
4" FIRE SERVICE	EA	$800
WATER SERVICE CONNECTION	EA	$1,000

WATER VALVES

4" GATE VALVE	EA	$550.00
6" GATE VALVE	EA	$1,000.00
8" GATE VALVE	EA	$1,800.00
10" GATE VALVE	EA	$2,850.00
12" GATE VALVE	EA	$3,700.00
16" GATE VALVE	EA	$4,650.00
20" GATE VALVE	EA	$5,900.00
8" PRESSURE REDUCER W/BOX	EA	$9,820.00

PVC WATER MAINS (ALL MATERIALS)

4" PVC WATER MAIN PER W-21	LF	$48.64
6" PVC WATER MAIN PER W-21	LF	$4.00
8" PVC WATER MAIN PER W-21	LF	$74.24
10" PVC WATER MAIN PER W-21	LF	$80.64
12" PVC WATER MAIN PER W-21	LF	$89.60
16" PVC WATER MAIN PER W-21	LF	$113.92
20" PVC WATER MAIN PER W-21	LF	$128.00

WATER SERVICE

WTR SERV. PER W-1 (1" W/1"X 0.75" METER)	EA	$2,389.00
WTR SERV. PER W-1 (1" W/1"X 1" METER)	EA	$ 2,478.00
WTR SERV. PER W-2 (2" W/1.5" METER)	EA	$ 2,782.00
WTR SERV. PER W-2 (2" W/2" METER)	EA	$2,866.00
WTR SERV. PER W-2 (2-2" W/2-2" METER, MANIFOLD)	EA	$4,561.00
WTR SERV. PER W-1 (1" W/O METER)	EA	$2,267.00
WTR SERV. PER W-2 (1" W/O METER)	EA	$2,453.00

WTR SERV. PER W-2 (2-2" W/O METER)	EA	$3,183.00
RELOCATE WATER SERVICE (k093345a)	EA	$2,400
WATER SERVICE ABANDONMENT	EA	$500

SECTION 6-MISCELLANEOUS IMPROVEMENTS

MISCELLANEOUS ITEMS

VEHICULAR BRIDGE	SF	$ 352.00
PEDESTRIAN BRIDGE	SF	$ 320.00
CRASH CUSHION (G.R.E.A.T.)	EA	$ 47,104
EXCAVATION (FOR STRUCTURES)	CY	$ 39.68
FENCE, PER M-6 (4' HIGH CHAIN LINK)	LF	$ 16.00
FENCE, PER M-6 (5' HIGH CHAIN LINK)	LF	$ 17.92
FENCE, PER M-6 (6' HIGH CHAIN LINK)	LF	$ 20.48
GUARD RAIL METAL BEAM, PER M-30-38	LF	$ 38.40
GUARD RAIL POST, PER M-9	EA	$ 307.20
GUARD BARRICADE, PER M-9	EA	$ 576.00
PCC MEDIAN BARRIER (TYPE 50)	EA	$ 70.40
SAW CUT EXISTING (AC/PCC)	LF	$ 5.12
TRENCH SHORING (5'-10' DEEP)	LF	$ 14.34
TRENCH SHORING (11'-15' DEEP)	LF	$ 22.27
TRENCH SHORING (16'-20' DEEP)	LF	$ 32.00
SURVEY MONUMENT, PER M-10	EA	$ 1,024.00
MASONRY RETAINING WALL	SF	$ 37.95
CAST IN PLACE RETAINING WALL	CY	$ 864.00
GRAVITY RETAINING WALL	SF	$ 28.16
CRIB-BLOCK RETAINING WALL	SF	$ 32.00
PEDESTRIAN BARRICADE, PER SDE 103	EA	$ 192.00
CONSTRUCTION FENCING	LF	$4.00

SECTION 7-LANDSCAPE & IRRIGATION

LANDSCAPE PLANTING

SHRUBS (1 GALLON)	EA	$6.00
SHRUBS (5 GALLON)	EA	$20.00
SLOPE PLANTING (GROUND COVER)	SF	$ 0.48
SLOPE PLANTING (GROUND COVER + TREES)	SF	$ 0.79
SLOPE PLANTING (HYDRO-SEEDING)	SF	$ 0.20
TREE (5 GALLON)	EA	$ 15.00
TREE (15 GALLON)	EA	$ 85.00
TREE (24" BOX)	EA	$250.00
TREE (36" BOX)	EA	$350.00
TREE (48" BOX)	EA	$650.00
TREE GRATE (W/2FRAME)	EA	$480.00
TREE MAINTENANCE (TREES/YEAR)	TREE/YR	$200.00
TREE RELOCATION	EA	$1,666.00
TREE REMOVAL AND DISPOSAL	EA	$500.00

LANDSCAPE IRRIGATION

IRRIGATION BACKFLOW PREVENTION ASSEMBLY (W/ENCLOSURE)	EA	$1,650.00
SLOPE IRRIGATION	SF	$0.59



County of San Diego

DEPARTMENT OF PUBLIC WORKS
Land Development Division
Unit Price List

July 2020

Note: Unit Price list will increase annually using the May Engineering and News Report (ENR) CCI Index

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The following list of unit prices is approved for use by the County of San Diego, Department of Public Works in providing general cost estimates for the work normally associated with land development activity.



APPROVED BY: Jeff Moneda, Director

EFFECTIVE DATE: July 2020
REVISION DATE: June 2020
SUNSET DATE: June 2021

NOTE: This list of “pre-approved” unit costs is intended as a tool in creating engineer estimates and improvement agreements. Those wishing to use different costs must provide supporting evidence

justifying those costs. The department will consider the use of other unit costs based upon evidence provided and make a final ruling.

EARTHWORK

ITEM	DESCRIPTION	UNIT	PRICE
Grading	Embankment/ Excavation		
	0-1000	C.Y.	24.83
	1000-20,000	C.Y.	13.54
	20,001	C.Y.	8.07
	Export or Import		
	0-1,000	C.Y.	31.59
	1,001 +	C.Y.	24.83
	> 20,000	C.Y.	13.54
Clearing and Grubbing		S.F.	0.50
Erosion Control	Sand/Gravel bag	EA.	3.38
	Jute Mat (not as independent BMP)	S.F.	0.45
	Straw Mat	S.F.	0.31
	Straw bales	EA.	5.65
	Silt Fence	L.F.	1.80
	Fiber rolls	L.F.	3.38
	Wood Fiber Mat	S.F.	0.28
	Coconut Fiber Mat	S.F.	0.45
	Hydro-Seed	S.F.	0.36
	Bonded Fiber Matrix	S.F.	0.09
	Guar binder	S.F.	0.03
Sub drain	4-6”	L.F.	33.85
	8”	L.F.	39.50
Subdrain headwall		EA.	2,820.94

LANDSCAPING

ITEM	DESCRIPTION	UNIT	PRICE
PLANTING			
Shrubs	1 Gallon	EA.	6.78
	5 Gallon	EA.	22.57
Slope Planting (Ground Cover)		S.F.	0.54
Slope Planting (Ground Cover + Trees and Shrubs)		S.F.	0.89
Slope Planting (Hydro-seeding)		S.F.	0.14
Tree	5 Gallon	EA.	16.94
	15 Gallon	EA.	95.91

	24” Box	EA.	282.10
	36” Box	EA.	394.93
	48” Box	EA.	733.44
Tree Grate	W/2 frame	EA.	541.62
Tree Maintenance		Tree/ year	225.67
IRRIGATION			
Backflow prevention Assembly	W/Enclosure	EA.	3,554.40
Slope irrigation		S.F.	0.68

STORM DRAIN SYSTEMS

ITEM	DESCRIPTION	UNIT	PRICE
AC Spillway	D-22	EA.	361.08
Box Culvert	P.C.C.	C.Y.	1,241.22
Catch Basin	Type G (D-8)	EA.	5,416.22
	Type F (D-7)	EA.	5,077.70
	Type I (D-29)	EA.	5,416.22
Catch Basin 18”x18”	Brooks Box (PVT)	EA.	282.10
Catch Basin 24”x24”	Brooks (PVT)	EA.	451.35
Cleanouts	Type A (D-9)	EA.	5,077.70
(Storm Drain)	Type B (D-10)	EA.	5,641.89
Concrete	Structural	C.Y.	733.44
Concrete Energy Dissipater	D-41	EA.	9,252.69
Concrete Lug	D-63	EA.	1,241.22
Concrete Pipe Collar	D-62	EA.	2,820.94
Culvert, (Reinforced Concrete Pipe, RCP)	12”	L.F.	62.07
	18”	L.F.	107.20
	24”	L.F.	124.12
	30”	L.F.	135.41
	36”	L.F.	163.62
	42”	L.F.	186.20
	48”	L.F.	197.47
	54”	L.F.	225.67
	60”	L.F.	287.74
	72”	L.F.	327.23
Culvert (PVC Pipe)	4”-6”	L.F.	22.57
	8”-12”	L.F.	39.50
	18”	L.F.	73.35
	24”	L.F.	90.27
	30”	L.F.	101.56
	36”	L.F.	157.98
	42”	L.F.	180.54
Culvert (HDPE Pipe)	12”	L.F.	22.57

	18”	L.F.	73.35
	24”	L.F.	90.27
	30”	L.F.	101.56
	36”	L.F.	157.98
	42”	L.F.	180.54
	48”	L.F.	203.10
Culvert (CMP Pipe)	12”	L.F.	22.57
	18”	L.F.	39.50
	24”	L.F.	73.35
	30”	L.F.	90.27
	36”	L.F.	101.56
	42”	L.F.	112.84
	48”	L.F.	136.23
Curb Inlet	Type A (D-1)	EA.	6,203.81
	Type B (D-2)	EA.	6,203.81
	Type C (D-3)	EA.	6,824.43
Curb Outlet	Type A (D-25)	EA.	2,820.94
Curb outlet, Sidewalk			
Underdrain Pipe	D-27	EA.	564.18
Curtain Wall	D-38	EA.	677.03
	D-72	EA.	732.74
Drainage Channel	P.C.C (D-70 & D-71)	L.F.	1,156.60
Drainage Ditch	D-75	L.F.	28.22
HEC-2 Study and FEMA revision		L.S.	33,851.32
Headwalls	Gravity Type (<60”)	EA.	4,231.41
	Gravity Type (>60”)	EA.	8,067.90
	Wing Type (<60”)	EA.	6,093.24
	Wing Type (>60”)	EA.	9,027.02
Inlet Apron	D-39	EA.	2,200.33
Pipe Collar	D-62	EA.	2,820.94
Rip Rap (Energy Dissipater)	D-40 (.25 Ton)	C.Y.	169.26
	(.50 Ton)	C.Y.	180.54
	(1.0 Ton)	C.Y.	191.82
	(2.0 Ton)	C.Y.	203.10
	(4.0 Ton)	C.Y	225.67

TREATMENT CONTROL BMPS

ITEM	DESCRIPTION	UNIT	PRICE
Filter Insert	Enviro-safe High Capacity	EA.	1,354.05
Bio-Swale		L.F.	5.65
Infiltration trench	Rock Lined	L.F.	5.65
Detention Basin	Small (single lot)	S.F.	3.38
Detention Basin	Large (subdivision)	S.F.	9.03
Hydro-Dynamic separator	CDS or Equal	EA.	9,027.02

SURFACE IMPROVEMENT

ITEM	DESCRIPTION	UNIT	PRICE
A.C Berm (G-5)	4” A.C.	L.F.	9.03
	6” A.C.	L.F.	10.74
	8” A.C.	L.F.	12.42
A.C. Overlay	1”-2”	S.F.	1.13
Alley Apron	G-17	S.F.	9.03
Curb+Gutter	Removal	L.F.	3.38
	Type B-2 (G-6)	L.F.	23.69
	6” Type G (G-2)	L.F.	25.95
	8” Type G (G-2)	L.F.	29.33
	6” Type H (G-2)	L.F.	30.47
	8” Type H (G-2)	L.F.	37.25
	Rolled Curb (G-4)	L.F.	32.17
Curb (G-1)	6”	L.F.	18.05
Cutoff Wall @ End of Pvmt.	G-22,23	EA.	1,128.39
Gutter (Cross-Gutter)	G-12, G-13	S.F.	9.03
Driveway	G-14 A, B, C	S.F.	7.90
Median,	Stamped concrete	S.F.	5.63
(SDG-112)	Decorative concrete	S.F.	7.33
	Interlocking Pavers	S.F.	11.84
Pavement Design	Schedule J	S.F.	5.65
AC Pavement	Removal	S.F.	3.38
Paving, AC	1” Surface	S.F.	0.92
	2” Surface	S.F.	1.24
	3” Surface	S.F.	1.87
	4” Surface	S.F.	2.47
	5” Surface	S.F.	3.11
Base, (CTB)	4” Surface	S.F.	1.24
	5” Surface	S.F.	1.29
	6” Surface	S.F.	1.55
	8” Surface	S.F.	1.99
	10” Surface	S.F.	2.04
Base, (Class Two)	4” Surface	S.F.	0.79
	5” Surface	S.F.	0.95
	6” Surface	S.F.	1.13
	8” Surface	S.F.	1.29
	10” Surface	S.F.	1.47
Paving P.C.C.	5”	S.F.	5.63
	5.5”	S.F.	6.20
	6”	S.F.	6.78
	8”	S.F.	7.33
	9”	S.F.	8.46

Paving Preparation of Sub grade	-	S.F.	0.45
Ped Ramp	G-27 thru G-30		
	(1-4)	EA.	1,579.72
	4+	EA.	1,354.05
Ped Ramp	Alley (G-31)	EA.	1,805.42
Driveway Ramps	DS-07	S.F.	5.65
	G-14	S.F.	10.15
Sidewalk	Removal	S.F.	1.69
Sidewalk	1-5000	S.F.	6.20
(G-7)	5000+	S.F.	4.96
Trench Resurfacing	G-22, G-24, & G-25	L.F.	28.22

TRAFFIC

ITEM	DESCRIPTION	UNIT	PRICE
Detector Loops		EA.	507.77
Video Detection		Per approach	9,027.02
Pull Box	Type 3	EA.	270.82
	Type 5	EA.	299.03
	Type 6	EA.	310.31
Signal Ahead Flasher		EA.	5,077.70
Remove Striping		L.F.	2.26
Relocate Pull Box		EA.	451.35
Street Light	L.P. Sodium (E-1)	EA.	6,770.27
	H.P. Sodium	EA.	6,770.27
Street Name Sign	SDM-102, DS-13	EA.	451.35
Street Striping	0 – 4000’	L.F.	1.13
	4000’ +	L.F.	0.69
Traffic Signal (based on number of lanes at Intersections	2 x 2 Tee	L.S.	112,837.72
	2 x 2	L.S.	135,405.25
	4 x 2	L.S.	152,330.91
	4 x 4	L.S.	169,256.57
	4 x 6	L.S.	186,182.23
	6 x 6	L.S.	197,466.00
	8 x 6	L.S.	259,526.75
Traffic Control	Estimated improvement	0 – 1,000,000	5%
	Estimated improvement	1,000,000+	3%
Traffic Signal Interconnect		L.F.	22.57

UTILITIES

ITEM	DESCRIPTION	UNIT	PRICE
A- *SEWER*			
Concrete Anchor	S–9	EA.	1,424.02
Concrete Cradle	8” Sewer	L.F.	15.73
(S-6)	12” Sewer	L.F.	19.85
	15” Sewer	L.F.	22.96
	24” Sewer	L.F.	33.85
	48” Sewer	L.F.	88.30
Concrete Encasement (SP-07)	8” Sewer	L.F.	32.95
	10” Sewer	L.F.	32.95
	12” Sewer	L.F.	32.95
(S-7)	15” Sewer	L.F.	38.76
	24” Sewer	L.F.	56.87
	48” Sewer	L.F.	131.41
Cutoff Wall	Type B, SP-07	EA.	1,663.23
Manhole	SM-01	EA.	3,836.47
	SM-02	EA.	3,949.31
	4 x 3 w/plastic liner	EA.	4,045.24
	5 x 3 w/plastic liner	EA.	6,234.28
	Locking cover (M-4)	EA.	927.69
Sewer Clean-out (SC-01)		EA.	733.48
Pressure Sewer Pipe	4” PVC Pipe	L.F.	59.47
	6” PVC Pipe	L.F.	80.67
Sewer Access Rd.	4” Decomposed Granite	S.F.	5.93
	Concrete Surface	S.F.	50.79
Sewer Lateral (house connection,SS-09)	4”, 30’ Long	EA.	1,506.38
	6”, 30’ Long	EA.	2,832.23
Sewer Main (S-4) * (All materials)	6”	L.F.	78.98
	8”	L.F.	81.46
	10”	L.F.	90.16
	12”	L.F.	100.03
	15”	L.F.	110.46
	18”	L.F.	122.43
* Add 2% for every foot of cover over 5 feet			
B – WATER			
Air & Vacuum valve (WA-02)	1”	EA.	2,031.08
(W-4)	2”	EA.	2,482.42
Blow-off Assembly	2” Type A (WB-01)	EA.	1,073.65

	3” Type A	EA.	1,985.94
Blow-off Assembly	(SDW-106) 2” Type B,C,D(W-7)	EA.	2,327.27
	4” Type B,C,D	EA.	3,469.77
	6” Type B,C,D	EA.	6,420.46
Backflow Prevention Valve		EA.	2,820.94
Fire Hydrant	Relocate	EA.	2,730.67
Fire Hydrant (WF-01)	New, 2-way	EA.	4,344.24
Fire Hydrant	New, 3-way	EA.	4,964.86
Multiple Service	W-23	EA.	682.69
Valves	4”	EA.	682.69
	6”	EA.	1,241.22
	8”	EA.	2,234.18
	10”	EA.	3,537.47
	12”	EA.	4,592.49
	16”	EA.	5,246.96
	8” Pressure, Reducing w/ box	EA.	12,188.73
Water Main (all materials)	WP-02, 4”	L.F.	47.16
	WP-02, 6”	L.F.	62.07
	WP-02, 8”	L.F.	72.00
	WP-02, 10”	L.F.	78.20
	WP-02, 12”	L.F.	86.88
	WP-02, 16”	L.F.	110.46
	WP-02, 20” (CL-150)	L.F.	124.12
Water Service w/ meter	1” w/1 x .75” meter (W-1) (WS-01)	EA.	2,695.70
	1” w/1” meter (W-1) (WS-01)	EA.	2,796.11
	2” w/1.5” meter (W-2) (WS-02)	EA.	3,139.15
	2” w/2” meter (W-2) (WS-02)	EA.	3,233.92
	2-2” w/2-2” meter, manifold	EA.	5,146.54
Water Service w/o Meter	1”, WS-01	EA.	2,558.04
	2”, WS-02	EA.	2,767.91
	2-2”, WS-02	EA.	3,591.62

MISCELLANEOUS

ITEM	DESCRIPTION	UNIT	PRICE
Bridge (Vehicular)		S.F.	310.01
Bridge (Pedestrian)		S.F.	281.82
Crash Cushion	G.R.E.A.T.	EA.	41,484.50
Excavation	For Structures	C.Y.	34.95
Fence	Chain Link, 4’	L.F.	14.09
(M-6)	Chain Link, 5’	L.F.	15.78
	Chain Link, 6’	L.F.	18.04
Guard Rail	Metal Beam		
	(M-30-38)	L.F.	33.85
Guard Post	M-9	EA.	270.82
Guard Barricade	M-9	EA.	507.77
Median Barrier	Type 50, PCC	EA.	61.41
Saw Cut	AC/PCC Pvt.	L.F.	4.51
Shoring	5-10’ deep	L.F.	12.62
	11-15’ deep	L.F.	19.63
	16-20’ deep	L.F.	28.22
Survey Monument	M-10	EA.	902.70
Wall, Retaining	Masonry	S.F.	50.79
	Cast-in-place	C.Y.	761.66
	Gravity	S.F.	33.85
	Crib	S.F.	45.14

City of Chula Vista Traffic Signal Unit Prices

4x6	Unit	Qty	Unit Price	Extension	Quantity Basis
Traffic Signal	LS	1	$ 191,946.43	$ 191,946.43	See assumption 1
Detector Loops	EA	6	$ 575.84	$ 3,455.04	3 advance loops on 6-lane prime approaches
Video Detection	Approach	4	$ 10,237.15	$ 40,948.60	4 approaches
CCTV Camera	EA	1	$ 10,237.15	$ 10,237.15	City standard one per arterial signal. Using video detection price
Pull Box Type 6	EA	8	$ 351.91	$ 2,815.28	One double stacked type 6 per corner
Pull Box Type 5	EA	2	$ 339.12	$ 678.24	2 for advance loops, 2/mile so fiber pulls less than 2000' between pull boxes
Interconnect	LF	5280	$ 25.60	$ 135,168.00	One mile since assumed signal per mile
Total				$ 385,248.74	
Inflated Total		116%		$ 446,888.54	

6x6	Unit	Qty	Unit Price	Extension	Quantity Basis
Traffic Signal	LS	1	$ 223,937.50	$ 223,937.50	See assumption 1
Detector Loops	EA	12	$ 575.84	$ 6,910.08	Loops on 6lane prime approaches 4/LT, 3/thru (2 at line, 1 advance), 1 bike
Video Detection	Approach	4	$ 10,237.15	$ 40,948.60	
CCTV Camera	EA	1	$ 10,237.15	$ 10,237.15	City standard 1/arterial signal. Using video detection price
Pull Box Type 6	EA	8	$ 351.91	$ 2,815.28	Double stacked type 6 per corner
Pull Box Type 5	EA	4	$ 339.12	$ 1,356.48	2 for advance loops, 2/mile so fiber pulls less than 2000' between pull boxes
Interconnect	LF	5280	$ 25.60	$ 135,168.00	One mile since assumed signal per mile
Total				$ 421,373.09	
Inflated Total		116%		$ 488,792.78	

Assumptions

1. "Traffic Signal" includes Type 332 cabinet fully loaded including controller, necessary traffic signal poles, basic push buttons, cables/conduits, and indications.
2. "CCTV Camera" item also accounts for interconnect communications hardware in the cabinet.
3. Interconnect is assumed to be fiber optic.

Caltrans uses and escalation rate between 3% to 5% per year. For this task assume an escalation rate of 4% per year.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN - OFFICE OF STRUCTURE OFFICE ENGINEER

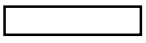
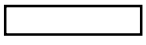
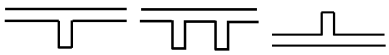
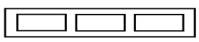
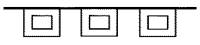
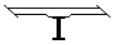
COMPARATIVE BRIDGE COSTS

JANUARY 2019

The following tabular data provides some **general guidelines** for structure type selection and its relative cost. These costs should be used only for **preliminary estimates** until more detailed information is developed. The following factors must be taken into account when determining a price within the cost range:

Factors for Lower End of Cost Range	Factors for Higher End of Cost Range
Short Spans, Low Structure Height, No Environmental Constraints, Large Project, No Aesthetic Issues, Dry Conditions, No Bridge Skew	Long Spans, High Structure Height, Environmental Constraints, Small Project, Aesthetic Issues, Wet Conditions (cofferdams required), Skewed Bridges
Urban Location	Remote Location
Seat Abutment	Cantilever Abutment
Spread Footing	Pile Footing (Large Diameter Piling)
No Stage Construction	2-Stage Construction

Factors that will increase the price from 25% - 150% over the high end of the cost range

Structures with more than 2 construction stages	Unique substructure construction		
Widenings less than 15 Ft.			
STRUCTURAL SECTION	COMMON SPAN RANGE (feet)	* COST RANGE (price/sqft)	REMARKS
RC SLAB 	16 - 44	150-450	CAST-IN -PLACE CONCRETE BRIDGES ACCOUNT FOR APPROXIMATELY 65% OF BRIDGES BUILT ON CALIFORNIA STATE HIGHWAYS
RC T-BEAM GIRDER 	40 - 60	175-500	
RC BOX GIRDER 	50 - 120	150-400	
CIP/PS SLAB 	40 - 65	No Current Cost Data	
CIP/PS BOX GIRDER 	100 - 250	150-400	
PC/PS SLAB 	20 - 50	200-550	NO FALSE WORK REQUIRED
PC/PS T GIRDER 	30 - 120	No Current Cost Data	
BULB TEE GIRDER 	90 - 145	150-375	
WIDE FLANGE GIRDER 	90 - 180	300-450	
PC/PS I GIRDER 	50 - 120	210-475	
ADJACENT PC/PS GIRDER 	50 - 110	400-500	
PC/PS BOX GIRDER 	120 - 200	No Current Cost Data	
STRUCTURAL STEEL I GIRDER 	60 - 300	325 - 700	

NOTE: Removal of a box girder structure costs from $10 - $20 per square foot.

* "Price/SQFT" is calculated using "Bridge Costs Only" as defined by the Federal Highway Administration. The "Bridge Cost Only" is the sum of the "Superstructure" and "Substructure" bridge items, listed in Chapter 11 of the Bridge Design Aids Manual, multiplied by the bid item price. The "Superstructure" and "Substructure" bridge items do not include items such as: time related overhead, mobilization, bridge removal, approach slabs, slope paving, soundwalls, or retaining walls.

Kimley-Horn, Chula Vista Bridge Costs

Chula Vista Bridge Costs

Main Street Bridge Over Wolf Canyon

Length = 1225

Width = 121.5-ft (Identified)

Area = 148,838 SQFT

Discussion:

Main Street in this area is classified as a 6-Lane Prime. Based on Chula Vista Subdivision Manual Section 3-400 this Street classification has a design speed of 55 mph. Newer codes require that for design speeds of 45 mph or greater, the sidewalk needs to be protected by an inside concrete barrier that is TL-4 crash rated.

Additionally, minimum sidewalk widths of 6-ft are required on structures.

From the TDIF Facility Exhibit Facility No. 60C the travel-way width between the curbs is 104-ft. Applying the code requirements above require an over all bridge width of. 121.5-ft.

This structure is expected to be a 3-Frame, 9 span, cast-in-place, prestressed box girder structure. Due to the terrain, it is expected that isolation casings will be necessary at several of the columns and that each bent will have 5 columns per bent. At this time foundations are not known. This bridge will be classified as complicated, resulting in the cost/SQFT at the high end of the range.

The 2019 Caltrans Comparative Bridge Costs identifies a range for this type of structure between $150 -$400. Applying the 4% escalation per year results in a range of approximately $170 - $450.

It is assumed that this structure will require $450/SF if it were to be constructed in 2022, resulting in a Cost of **$66,977,100.00**

Main Street/Hunte Parkway Bridge Overcrossing

Length = 450-ft

Width = 121.5-ft (Identified)

Area = 54,675 SQFT

Discussion:

Main Street/Hunte Parkway Bridge Overcrossing SR-125 in this area is classified as a 6-Lane Prime. Based on Chula Vista Subdivision Manual Section 3-400 this Street classification has a design speed of 55 mph. Newer codes require that for design speeds of 45 mph or greater, the sidewalk needs to be protected by an inside concrete barrier that is TL-4 rated.

Additionally, minimum sidewalk widths of 6-ft are required on structures.

From the TDIF Facility Exhibit Facility No. 67 the travel-way width between the curbs is 104-ft. Applying the code requirements above require an overall bridge width of. 121.5-ft.

This structure is expected to be a 4 span, cast-in-place, prestressed box girder structure, with 5 columns per bent. At this time foundations are not known. This bridge will be classified as mildly complicated due to having to construct over 125, resulting in the cost/SQFT at the middle of the range.

The 2019 Caltrans Comparative Bridge Costs identifies a range for this type of structure between $150 -$400. Applying the 4% escalation per year results in a range of approximately $170 - $450.

It is assumed that this structure will require $325/SF if it were to be constructed in 2022, resulting in a Cost of **$17,770,000**

Otay Valley Road Bridge Overcrossing SR-125

Length = 450-ft

Width = 97.5-ft (Identified)

Area = 43,875 SQFT

Discussion:

Otay Valley Road Bridge Overcrossing SR-125 in this area is classified as a 4-Lane Major. Based on Chula Vista Subdivision Manual Section 3-400 this Street classification has a design speed of 45 mph. Newer codes require that for design speeds of 45 mph or greater, the sidewalk needs to be protected by an inside concrete barrier that is TL-4 rated.

Additionally, minimum sidewalk widths of 6-ft are required on structures.

From the TDIF Facility Exhibit Facility No. 68 the travel-way width between the curbs is 80-ft. Applying the code requirements above require an overall bridge width of. 97.5-ft.

This structure is expected to be a 4 span, cast-in-place, prestressed box girder structure, with 4 columns per bent. At this time foundations are not known. This bridge will be classified as mildly complicated due to having to construct over 125, resulting in the cost/SQFT at the middle of the range.

The 2019 Caltrans Comparative Bridge Costs identifies a range for this type of structure between $150 -$400. Applying the 4% escalation per year results in a range of approximately $170 - $450.

It is assumed that this structure will require $325/SF if it were to be constructed in 2022, resulting in a Cost of **$14,259,400**

E Street Bridge Widening over I-5 (250'x20')

Length = 250-ft

Width = 20-ft Widening, Assumes all to one side of the structure

Area = 5,000 SQFT (For Widening)

Discussion:

The E Street Bridge over I-5 is an existing 2 span Structure constructed out of Precast prestresses tub-girders, with a maximum span of approximately 125-ft. This structure has a substandard minimum vertical clearance of 15'-0" in both the NB and SB directions. Because the vertical clearance is at the minimum allowed by Caltrans it is expected that any widening of this structure will not be allowed.

Additionally, the surrounding elements that will affect the geometry of any improvements includes I-5 and the interchange ramps, and two railroad tracks immediately to the east of the structure.

Due to the existing and proposed geometries it is anticipated that this structure will have to be replaced if an increase in width is necessary. It is expected that the replacement of this structure would be completed utilizing precast prestressed California Wide Flange Girders. This structure type is recommended because it does not require falsework that would further restrict vertical clearance during construction

The 2019 Caltrans Comparative Bridge Costs identifies a range for this type of structure between $300 -$450. Applying the 4% escalation per year results in a range of approximately $340 - $510.

Since this is to be a replacement structure the SQFT for the replacement is anticipated to be the area of the existing plus the proposed widening which is 26,560 SQFT

It is assumed that this structure will require $360/SF if it were to be constructed in 2022, resulting in a Cost of **$9,562,000.** This cost does not include demolition cost of the existing bridge.

F Street Bridge Widening over I-5 (250'x20')

Length = 250-ft

Width = 20-ft Widening, Assumes all to one side of the structure

Area = 5,000 SQFT (For Widening)

Discussion:

The F Street Bridge over I-5 is an existing 2 span Structure constructed out of cast-in-place prestressed box girder bridge, with a maximum span of approximately 125-ft. This structure has a substandard minimum vertical clearance of 15'-6" in the NB

direction, the SB direction is protected by an adjacent structure that has a signed vertical clearance of 15'-2". Because the vertical clearance is less than the minimum allowed by Caltrans it is expected that any widening of this structure will be questioned by Caltrans. Due to the location of the adjacent railroad bridge to the north it is assumed that the proposed widening will be to the south. The profile of I-5 is increasing as it goes to the south which will complicate the proposed widening.

The surrounding elements that will affect the geometry of any improvements includes I-5 and the interchange ramps, and two railroad tracks immediately to the east of the structure.

Due to the existing and proposed geometries it is anticipated that this structure may have to be replaced if an increase in width is necessary. It is expected that the replacement of this structure would be completed utilizing precast prestressed California Wide Flange Girders. This structure type is recommended because it does not require falsework that would further restrict vertical clearance during construction

The 2019 Caltrans Comparative Bridge Costs identifies a range for this type of structure between $300 -$450. Applying the 4% escalation per year results in a range of approximately $340 - $510.

Since this is to be a replacement structure the SQFT for the replacement is anticipated to be the area of the existing plus the proposed widening which is 26,560 SQFT

It is assumed that this structure will require $360/SF if it were to be constructed in 2022, resulting in a Cost of **$9,562,000.** This cost does not include demolition cost of the existing bridge.

H Street Bridge Widening over I-5 (200'x40')

Length = 200-ft

Width = 40-ft Widening, Assumes 20 ft to each side

Area = 8,000 SQFT (For Widening)

Discussion:

The F Street Bridge over I-5 is an existing 2 span structure constructed out of precast prestressed tub-girders, with a maximum span of approximately 100-ft. This structure has a substandard minimum vertical clearance of 16'-2". It is expected that a 20-ft widening to each side can be performed without reducing the vertical clearance significantly. The profile of I-5 at the bridge location dips down below the surrounding grades.

The surrounding elements that will affect the geometry of any improvements includes I-5 and the interchange ramps, and two railroad tracks immediately to the east of the structure.

It is expected that the widening of this structure would be completed utilizing precast prestressed California Wide Flange Girders. This structure type is recommended because it does not require falsework that would further restrict vertical clearance during construction

The 2019 Caltrans Comparative Bridge Costs identifies a range for this type of structure between $300 -$450. Applying the 4% escalation per year results in a range of approximately $340 - $510.

Since this widening is expected to be located on each side of the existing bridge the cost/SF will be higher than if it were done all to one side.

It is assumed that this structure will require $400/SF if it were to be constructed in 2022, resulting in a Cost of **$3,200,000.**

J Street Undercrossing (with 2 ground anchor walls)

Length = 200-ft at each abutment (Total 400)

Height = An overall height of 8'-6" is assumed

Area = 8,000 SQFT (For Ground Anchor Wall 2x200x8.667 = 3470 SQFT)

Discussion:

The J Street undercrossing carries I-5 over J Street. I-5 is an existing single span structure constructed out of a cast-in-place prestressed box girder. Widening J street in this area will require the installation of ground anchor walls adjacent to the abutments of the J Street undercrossing so that the abutments will be supported.

The surrounding elements that will affect the construction of the ground anchor walls is the type of foundations being used for the J Street undercrossing. Assuming that there is not conflict between the propose anchors and deep piling this wall would be expected to have a maximum exposed height of approximately 6'-8" with an overall height of 8'-8".

The 2019 Caltrans Comparative Bridge Costs does not identify ground anchor walls, however based on experience it is expected that a cost of $250/SF should be used.

It is assumed that these walls will require $250/SF if it were to be constructed in 2022, resulting in a Total Cost of **$868,000.**

L Street Bridge Widening over I-5 (245'x12')

Length = 245-ft

Width = 12-ft Widening,

Area = 2,940 SQFT (For Widening)

Discussion:

The L Street Bridge over I-5 is an existing 2 span structure constructed out of cast-in-place prestressed superstructure, with a maximum span of approximately 135-ft. This structure has a substandard minimum vertical clearance of 16'-1". It is expected that a 12-ft widening to one side can be performed without reducing the vertical clearance significantly. The profile of I-5 appears to increase at it moves to the south therefore the widening would be recommended to be on the north side of the existing bridge.

The surrounding elements that will affect the geometry of any improvements includes I-5 the interchange ramps, and two railroad tracks immediately to the east of the structure.

It is expected that the widening of this structure would be completed utilizing precast prestressed California Wide Flange Girders. This structure type is recommended because it does not require falsework that would further restrict vertical clearance during construction

The 2019 Caltrans Comparative Bridge Costs identifies a range for this type of structure between $300 -$450. Applying the 4% escalation per year results in a range of approximately $340 - $510.

Since this is a narrow widening the cost/SF will be higher than if it were a larger widening.

It is assumed that this structure will require $500/SF if it were to be constructed in 2022, resulting in a Cost of **$1,470,000.**

Palomar Street Bridge Widening over I-5 (215'x50')

Length = 215-ft

Width = 50-ft Widening,

Area = 10,750 SQFT (For Widening)

Discussion:

The Palomar Street Bridge over I-5 is an existing 2 span structure constructed out of cast-in-place prestressed box girder superstructure, with a maximum span of approximately 108-ft. This structure has a vertical clearance of 16'-9". It is expected that the 50 ft widening would be split with 25-ft on each side of the existing bridge. This widening can be performed wGithout reducing the vertical clearance significantly. The profile of I-5 appears to decrease at it moves to the south.

The surrounding elements that will affect the geometry of any improvements includes I-5, and the Palomar entrance and exit ramps.

It is expected that the widening of this structure would be completed utilizing precast prestressed California Wide Flange Girders. This structure type is recommended

because it does not require falsework that would further restrict vertical clearance during construction

The 2019 Caltrans Comparative Bridge Costs identifies a range for this type of structure between $300 -$450. Applying the 4% escalation per year results in a range of approximately $340 - $510.

Since this widening is assumed to split on each side the cost/SF will be marginally higher than if it were a widening to one side.

It is assumed that this structure will require $400/SF if it were to be constructed in 2022, resulting in a Cost of **$4,300,000.**

Main Street Bridge Widening over I-5 (275'x20')

Length = 275-ft

Width = 20-ft Widening,

Area = 5,500 SQFT (For Widening)

Discussion:

The Main Street Bridge over I-5 is an existing 2 span structure constructed out of cast-in-place prestressed box girder superstructure, with a maximum span of approximately 150-ft. This structure has a vertical clearance of 16'-11". It is expected that the 20 ft widening would be constructed on one side of the existing bridge. This widening can be performed without reducing the vertical clearance significantly. The profile of I-5 appears to decrease at it moves to the south.

The surrounding elements that will affect the geometry of any improvements includes I-5, and the looping ramps at this interchange. It is recommended that the widening take place on the south side of the bridge to avoid conflicts with these ramps.

It is expected that the widening of this structure would be completed utilizing precast prestressed California Wide Flange Girders. This structure type is recommended because it does not require falsework that would further restrict vertical clearance during construction

The 2019 Caltrans Comparative Bridge Costs identifies a range for this type of structure between $300 -$450. Applying the 4% escalation per year results in a range of approximately $340 - $510.

Since this widening is assumed to take place on one side of the existing structure the cost/SF will be slightly less than if it were split on both sides.

It is assumed that this structure will require $380/SF if it were to be constructed in 2022, resulting in a Cost of **$2,090,000.**

Project Specific City Provided Estimates

Project Study Report – Project Development Support
Capital Outlay Project Estimate

Dist - Co - Rte 11-SD-125

PM 0.0/2.3

Program Code 2020400911

Project Number 11-21000025

Month/Year March 2022

PROJECT DESCRIPTION:

Limits: In San Diego County in Chula Vista on State Route 125 from 2.15 Mile South the Birch Road Overcrossing

Proposed Improvement (Scope): Construction one or two new connections to SR 125 at Main Street and Otay Valley Road

Alternate: C – Tew-Quadrant Cloverleaf Interchanges at Main Street and Otay Valley Road

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$ 31,075,000
TOTAL STRUCTURE ITEMS	$ 39,500,000
TOTAL ENVIRONMENTAL MITIGATION ITEMS	$ 7,057,500
SUBTOTAL CONSTRUCTION COSTS	$ 77,632,500
TOTAL RIGHT-OF-WAY ITEMS	$ 1,000,000
TOTAL PROJECT CAPITAL OUTLAY COSTS	$ 78,632,500

I. ROADWAY ITEMS

Average Cost per Lane Mile		Number of Lane Miles		Total Cost
Total Cost $ 2,071,666.67	X	15.00	=	$31,075,000

Explanation:

Roadway items include costs associated with earthwork, pavement, drainage, traffic, electrical work, landscaping, and other minor items. The cost estimate includes a 30% contingency factor applied to the base cost. The cost estimate has been escalated to the fiscal year 2025 using an annual escalation factor of 3%. The fiscal year 2025 is the anticipated year for construction. Roadway items exclude costs associated with structures, environmental mitigation, and right-of-way. It also excludes costs associated with owner administration, professional engineering, environmental planning, and construction administration.

TOTAL ROADWAY ITEMS $ 31,075,000

II. STRUCTURES ITEMS

Bridge Name	Structure (1) Main Street OC	Structure (2) Otay Valley OC	Structure (3) Bob Pletcher Way UC Widening	Structure (4) NEV/Ped OC	Structure (5) Retaining Walls
Total Cost for Structure	**$ 15,300,000**	**$11,400,000**	**$ 1,300,000**	**$4,000,000**	**$7,500,000**

Explanation:

Structures items include costs associated with widening the Bob Pletcher Way UC and new overcrossing structures at Main Street and Otay Valley Road. Additionally, the structures cost includes various miscellaneous structures such as retaining walls. Structures items include costs associated with retaining walls. The cost estimate includes a 30% contingency factor applied to the base cost. The cost estimate has been escalated to the fiscal year 2025 using an annual escalation factor of 3%. The fiscal year 2025 is the anticipated year for construction.

TOTAL STRUCTURE ITEMS **$ 39,500,000**

III. ENVIRONMENTAL MITIGATION

	Quantity	Unit		Unit Price	Item Cost
Environmental Mitigation	LS	1	X	$7,057,500	=$7,057,500

Explanation:

Environmental mitigation includes costs associated with environmental surveys and monitoring, temporary erosion control, and storm water best management practices required during construction. This is estimated at 10% of the Roadway and Structure costs.

TOTAL ENVIRONMENTAL MITIGATION ITEMS $7,057,500

IV. RIGHT-OF-WAY ITEMS

	Escalated Value
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$1,000,000
B. Utility Relocation (State share)	$0.00

Anticipated Date of Right-of-Way Certification 2025
(Date to which values are escalated)

Explanation:

Right-of-way items include costs associated with acquiring right-of-way, temporary construction easements, and anticipated utility relocations.

TOTAL RIGHT-OF-WAY ITEMS $1,000,000.00

Detailed Project Estimate and Total Project Costs- Cycle 6

Important: Read the Instructions in the first sheet (tab) before entering data. Do not enter data in shaded fields (with formulas).

Project Information:

Agency: City of Chula Vista **Date:** 6/6/2022

Project Description: Construct 12-foot wide multi-use path for pedestrians and bicycles, high visibility crosswalks and mid-block crossings, lighting, trees, bu

Project Location: East of San Diego Bay in northwestern Chula Vista. On F St from Bay Bl to Broadway in the City's Urban Core District.

Licensed Engineer in responsible charge of preparing or reviewing this PSR-Equivalent Cost Estimate: Francisco X. Rivera **License #:** C54540

Project Estimate and Cost Breakdown:

Project Estimate (for Construction Items Only)						Cost Breakdown					
						ATP Eligible Costs/Items		ATP Ineligible Costs/Items		Corps/CCC to construct	
Item No.	Item	Quantity	Units	Unit Cost	Total Item Cost	%	$	%	$	%	$
General Overhead-Related Construction Items											
1	Mobilization	1	LS	$40,000.00	$40,000	100%	$40,000				
2	Traffic Control System	1	LS	$40,000.00	$40,000	100%	$40,000				
3	Demolition Paving, Site Features, Utility	1	LS	$481,600.00	$481,600	100%	$481,600				
4						100%					
5			LS			100%					
6	20A SDG&E Undergrounding	1	LS	$5,949,260.00	$5,949,260			100%	$5,949,260		
7	Railroad Tie Removal and AC Repair	1	LS					100%			
8			LS					100%			
9			LS					100%			
10			LS					100%			
General Construction Items											
11	Clearing and Grubbing (Earthwork)	1	LS	$388,990.00	$388,990	100%	$388,990				
12	Hardscape	1	LS	$3,187,404.00	$3,187,404	100%	$3,187,404				
13	Erosion Control	1	LS	$27,300.00	$27,300	100%	$27,300				
14	Landscape	1	LS	$819,700.00	$819,700	100%	$819,700				
15	Amenities including bike racks, signs etc.	1	LS	$736,000.00	$736,000	100%	$736,000				
16	Site Utilities	1	LS	$358,100.00	$358,100	100%	$358,100				
17	Prepare SWPPP/Soil Treatment	1	LS	$315,000.00	$315,000	100%	$315,000				
18								100%			
19								100%			
20								100%			
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49								100%			
50								100%			
51								100%			
52								100%			
				Subtotal of Construction Items:	**$12,343,354**		**$6,394,094**		**$5,949,260**		
	Construction Item Contingencies (% of Construction Items):			**15.00%**	$1,851,503		$959,114		$892,389		
	Total (Construction Items & Contingencies) cost:				**$14,194,857**		**$7,353,208**		**$6,841,649**		

Project Delivery Costs:

Type of Project Cost	Cost $		
Preliminary Engineering (PE)		ATP Eligible Costs	Non-participating Costs

Detailed Project Estimate and Total Project Costs- Cycle 6

Important: Read the Instructions in the first sheet (tab) before entering data. Do not enter data in shaded fields (with formulas).

Project Information:

Agency:	City of Chula Vista	**Date:**	6/6/2022
Project Description:	Construct 12-foot wide multi-use path for pedestrians and bicycles, high visibility crosswalks and mid-block crossings, lighting, trees, bu		
Project Location:	East of San Diego Bay in northwestern Chula Vista. On F St from Bay Bl to Broadway in the City's Urban Core District.		
Licensed Engineer in responsible charge of preparing or reviewing this PSR-Equivalent Cost Estimate:	Francisco X. Rivera	**License #:**	C54540

Environmental Studies and Permits(PA&ED):	$ 150,000	$77,703	$72,297		
Plans, Specifications and Estimates (PS&E):	$ 2,500,000	$1,295,048	$1,204,952	"PE" costs / "CON" costs	
Total PE:	**$ 2,650,000**	**$1,372,751**	**$1,277,249**	**19%**	**25% Max**
	Right of Way (RW)				
Right of Way Engineering:					
Acquisitions and Utilities:					
Total RW:	**$ -**				
Total Pre-Construction Costs (PE+RW):	**$2,650,000**	**$1,372,751**	**$1,277,249**		
	Construction Engineering (CE)			"CE" costs / "CON" costs	
Construction Engineering (CE):	$ 2,000,000	$1,036,038	$963,962	**14%**	**15% Max**
Total Construction Costs:	**$16,194,857**	**$8,389,246**	**$7,805,611**		
		ATP Eligible Costs	Non-participating Costs		
Total Project Cost:	**$18,844,857**	**$9,761,997**	**$9,082,860**		

Documentation of Ineligible (Non-Participating) Costs:

The Engineer's logic and/or calculations for splitting costs between ATP-Eligible and Non-participating costs must be documented in this section of the Estimate form.

Separate logic is required for each item which is partly ineligible for ATP funding or is required for the construction of an ineligible item/element of the project.

Item #:	Description of Engineer's Logic: (See examples shown in the Instructions)
6	Utility Undergrounding District UUD#141, 20A San Diego and Electric contract to be paid by City's 20A funds. Funds proposed as leverage funds to the project.
7	Approximately 1,550LF of track, ballast and railroad tie removal and replacement with base and asphalt by MTS ($600k). Information only.

F STREET PROMENADE STREETSCAPE MASTER PLAN
BAY BOULEVARD TO THIRD AVENUE
(PHASE 1 - BAY BLVD TO BROADWAY)

PRELIMINARY COST ESTIMATE

NO.	DESCRIPTION	OVERALL QUANT.	PHASE 1 QUANT.	UNIT	UNIT COST	OVERALL COSTS	PHASE 1 COSTS
	GENERAL						
1	Mobilization	1	40%	LS	$100,000.00	$100,000	$40,000
2	Safety Barriers & Protection	1	40%	LS	$100,000.00	$100,000	$40,000
					SUBTOTAL	**$200,000**	**$80,000**
	DEMOLITION						
	Paving						
3	Sidewalk Removal	98,300	17,500	SF	$4.00	$393,200	$70,000
4	Street Removal (includes 5' beyond)	99,990	25,000	SF	$5.00	$499,950	$125,000
5	Curb and Gutter Removal	17,030	3,500	LF	$5.00	$85,150	$17,500
6	Sawcut AC Paving	15,036	3,500	LF	$6.00	$90,216	$21,000
7	Remove Signage with Pole & Footing	46	20	Mhr	$80.00	$3,680	$1,600
8	Sandblasting (pavement marking removal)	5,394	2,300	SF	$4.00	$21,576	$9,200
9	Sandblasting (12" striping removal)	14,096	4,600	LF	$3.00	$42,288	$13,800
10	Driveway removal	16,312	5,740	SF	$5.00	$81,560	$28,700
	Site Features						
11	Existing Fencing	705	-	LF	$5.00	$3,525	$0
12	Existing Concrete Wall	100	-	LF	$35.00	$3,500	$0
13	Pull Box Relocation	56	18	EA	$600.00	$33,600	$10,800
14	Relocate Light with New Pole (With New Pole Required Per Undergrounding Utilities)	8	8	EA	$8,000.00	$64,000	$64,000
15	Relocate Underground Utility Vault	2	-	EA	$10,000.00	$20,000	$0
16	Relocation of Private Infrastructure (Backflow Preventer, Valves,	1	30%	LS	$150,000.00	$150,000	$45,000
17	Landscape Clearing and Grubbing	46,500	15,000	SF	$1.00	$46,500	$15,000
18	Tree Removal	20	2	EA	$750.00	$15,000	$1,500
	Additional Demolition of Small Structures, Furnishings, Parking Meters,	1	35%	LS	$150,000.00	$150,000	$52,500
	Utilities						
20	Demolish Existing Storm Drain Curb Inlet	2	2	EA	$3,000.00	$6,000	$6,000
					SUBTOTAL	**$1,709,745**	**$481,600**
	EARTHWORK						
21	Grading (+/-6")	99,990	33,330	SF	$3.00	$299,970	$99,990
22	Excavation and Hauling for Structural Soil 36" dp (West of	900	900	CY	$35.00	$31,500	$31,500
23	Structural Soil 36" dp (West of Broadway)	900	900	CY	$100.00	$90,000	$90,000
24	Excavation and Export of Unusable Soil for Planter Areas (36"	5,500	2,000	CY	$6.00	$33,000	$12,000
25	Import Topsoil for Planter Areas (36" dp)	5,500	2,000	CY	$50.00	$275,000	$100,000
26	Export Unusable Road Base	1,850	1,850	CY	$30.00	$55,500	$55,500
					SUBTOTAL	**$784,970**	**$388,990**
	WATER QUALITY						
27	**SWPPP/Soil Treatment/Green Streets Treatment**	535,000	180,000	SF	$1.75	$936,250	$315,000
					SUBTOTAL	**$936,250**	**$315,000**
	HARDSCAPE						
28	Sidewalk, Scored (Pedestrian)	75,000	20,000	SF	$15.00	$1,125,000	$300,000
29	Sidewalk, Scored (Bicycle)	48,000	20,000	SF	$15.00	$720,000	$300,000
30	Sidewalk, Pavers (Plazas)	18,500	6,000	SF	$22.00	$407,000	$132,000
31	Vehicular-Rated Pavers (Enhanced Intersection)	14,000	5,000	SF	$32.00	$448,000	$160,000
32	Enhanced Concrete (1' Bands in Sidewalk)	19,500	4,600	SF	$16.00	$312,000	$73,600
33	New AC Paving (Patching)	36,399	36,399	SF	$50.00	$1,819,950	$1,819,950
34	Street Resurface (Seal coat)	262,600	-	SF	$0.00	$0	$0
35	Street Striping	6,600	6,600	SF	$4.50	$29,700	$29,700
36	Crosswalk Striping (Thermoplastic)	4,586	2,000	SF	$10.00	$45,860	$20,000
37	Pavement Marking (Paint)	5,394	5,394	SF	$7.00	$37,758	$37,758
38	Concrete Curb - 6" W (at Edge Island Planters)	693	200	LF	$22.00	$15,246	$4,400
39	6" Curb & Gutter	15,255	5,000	LF	$27.00	$411,885	$135,000
40	Curb Ramp (Pedestrian Ramp)	54	10	EA	$6,000.00	$324,000	$60,000
41	Rolled Curb & Gutter (East of Fire Station No. 1)	1,050	-	LF	$35.00	$36,750	$0
42	Roundabout	6,362	6,362	SF	$8.00	$50,896	$50,896
43	Driveway and Apron	4,683	3,740	SF	$15.00	$70,245	$56,100
44	Driveway Reconstruction	16,500	-	EA	$10.00	$165,000	$0
45	Cross Gutter	6,370	-	SF	$20.00	$127,400	$0
46	Curb Repainting (Where Curb is Reconstructed)	1	1	LS	$8,000.00	$8,000	$8,000
					SUBTOTAL	**$6,154,690**	**$3,187,404**
	EROSION CONTROL						
47	Silt Fence	1	35%	LS	$8,000.00	$8,000	$2,800
48	Gravel bags	1	35%	LS	$70,000.00	$70,000	$24,500
					SUBTOTAL	**$78,000**	**$27,300**
	LANDSCAPE						
49	Soil Preparation	46,500	40,000	SF	$3.50	$162,750	$140,000
50	1/5/15 Gallon Shrubs and Groundcover Planting	46,500	40,000	SF	$7.50	$348,750	$300,000
51	Trees, 24" box	134	60	EA	$550.00	$73,700	$33,000
52	Trees, 36" Box	29	20	EA	$1000.00	$29,000	$20,000
53	Tree Relocation	27		EA	$700.00	$18,900	$0
54	Tree Grate (6' Round with Frame)	10	10	EA	$4,500.00	$45,000	$45,000
55	Root Barrier	5,500	3,500	LF	$9.00	$49,500	$31,500
56	Irrigation	46,500	30,000	SF	$5.00	$232,500	$150,000
57	Irrigation Meter	1	1	EA	$2,200.00	$2,200	$2,200
58	Backflow Prevention	1	1	EA	$2,000.00	$2,000	$2,000
59	Mulch	46,500	30,000	SF	$2.00	$0	$60,000
60	Landscape Maintenance (90-Day Period)	1	60%	LS	$60,000.00	$0	$36,000
					SUBTOTAL	**$964,300**	**$819,700**

F STREET PROMENADE STREETSCAPE MASTER PLAN
BAY BOULEVARD TO THIRD AVENUE
(PHASE 1 - BAY BLVD TO BROADWAY)

PRELIMINARY COST ESTIMATE

NO.	DESCRIPTION	OVERALL QUANT.	PHASE 1 QUANT.	UNIT	UNIT COST	OVERALL COSTS	PHASE 1 COSTS
	AMENITIES						
61	Monument - Large with Light and Art (Gateway Column)	6	4	EA	$20,000.00	$120,000	$80,000
62	Monument - Medium with Art (Landmark Beacon)	4	4	EA	$14,000.00	$56,000	$56,000
63	Monument - Small with Art	6	4	EA	$12,000.00	$72,000	$48,000
64	Banner Poles	7	0	EA	$3,000.00	$21,000	$0
65	Banners	14	0	EA	$700.00	$9,800	$0
66	Interpretive Signage and Art (At Designated Plazas)	6	6	EA	$7,000.00	$42,000	$42,000
67	Directional Signage	4	2	EA	$5,000.00	$20,000	$10,000
68	Signage - General Roadway (Allowance)	20	8	EA	$500.00	$10,000	$4,000
69	Benches	52	20	EA	$3,000.00	$156,000	$60,000
70	Bicycle Racks	16	6	EA	$2,000.00	$32,000	$12,000
71	Dual Recycle/Litter Receptacles	52	20	EA	$2,500.00	$130,000	$50,000
72	New Pedestrian Lighting	76	25	EA	$13,000.00	$988,000	$325,000
73	Nature and Historical Interpretive Panels (At Landscape Areas)	7	7	EA	$7,000.00	$49,000	$49,000
					SUBTOTAL	**$1,705,800**	**$736,000**
	SITE UTILITIES						
74	Lighting Relocation (Pedestrian Lighting East of Fourth Avenue)	29	0	EA	$1000.00	$29,000	$0
75	Relocate Water Service	1	1	LS	$60,000.00	$60,000	$60,000
76	Sewer Manhole - Adjust to Grade	4	4	EA	$500.00	$2,000	$2,000
77	Storm Drain Curb Inlet	7	4	EA	$7,500.00	$52,500	$30,000
78	Storm Drain Inlet - Adjust to Grade	1	0	EA	$2,000.00	$2,000	$0
79	Storm Drain Cleanout - Adjust to Grade	4	2	EA	$2,000.00	$8,000	$4,000
80	Storm Drain Curb Inlet Reconstruction	2	0	EA	$7,000.00	$14,000	$0
81	Storm Drain Curb Inlet Modified to Cleanout	5	0	EA	$7,000.00	$35,000	$0
82	Relocate Existing Storm Drain Headwall (west of Fire Station No. 1)	1		EA	$5,000.00	$5,000	$0
83	24" RCP Storm Drain	100	40	lf	$200.00	$20,000	$8,000
84	BMP Stormwater Planter	2,570	1,000	sf	$20.00	$51,400	$20,000
85	Curb Outlet	2	0	ea	$1000.00	$2,000	$0
86	Connect to Existing Storm Drain	7	4	ea	$500.00	$3,500	$2,000
87	Relocate Existing Fire Hydrant	3	2	ea	$5,000.00	$15,000	$10,000
88	Gas Meter Relocation	1	1	ea	$12,000.00	$12,000	$12,000
89	Sidewalk Underdrain	6	3	ea	$700.00	$4,200	$2,100
90	Electrical Service	1	1	ls	$300,000.00	$300,000	$300,000
					SUBTOTAL	**$615,600**	**$358,100**
					SUBTOTAL IMPROVEMENTS	**$13,149,355**	**$6,394,094**

City of Chula Vista
PUBLIC WORKS | ENGINEERING DEPARTMENT
Infrastructure Planning

Date	16-Nov-22
Prepared By:	M. Malong
Checked By:	F.X. Rivera

Project Number: WTDIF BP-3

Project Title: Industrial Blvd. Corridor Bike & Pedestrian Gap Improvements.

Description:

Design & construct CL2 bike lanes, PCC sidewalk (s/w), curb & crossgutter (eastside) on Industrial Blvd. from Moss St.-L St. & Ada St.-Main St. Replace west side AC to PCC s/w between Ada St. to Main St. Extend east s/w from Ada St. to Dorothy St. Close west PCC s/w gaps from Dorothy St. to Main St.

	Item	Quantity	Unit	Unit Price	TOTAL COST
1	Clearing, grubbing, grading, removal/disposal exist. Imp (0.32 Ac.)	1	LS	$25,000.00	$25,000.00
2	Shoulder grading east edge of pavement 3:1 or flatter (0.32 Ac.).	1	LS	$20,000.00	$20,000.00
3	AC pavement (~6inches) @Moss St (1250 SF);@Main St (1000SF)	334	TON	$200.00	$66,800.00
4	Crushed aggregate base (~12 inches)	169	TON	$100.00	$16,880.00
5	PCC monolithic sidewalk, C/G. Contiguous SDRSD G-3, L=800ft	932	LF	$70.00	$65,240.00
6	PCC sidewalk, non-contiguous SDRSD G-7, L=500ft	500	SF	$12.00	$6,000.00
7	PCC curb & gutter, SDRSD G-2 along WCL & ECL (Rolled curb L to NB ramps)	3635	LF	$40.00	$145,400.00
8	ADA ped ramps (1 SW Ind/L; 1 ECL Dorothy St.; 2 @ WCL Belvia Ln.)	4	EA	$5,000.00	$20,000.00
9	Sandblasting striping	3000	LF	$4.00	$12,000.00
10	Sandblasting thermoplastic legends & markings	1500	SF	$5.00	$7,500.00
11	Pavement markings & legends (Bike) 8 EA (56 sf) Thermoplastic	1	LS	$2,000.00	$2,000.00
12	Pavement striping bike lane & edge stripe	5330	LF	$1.00	$5,330.00
13	Regulatory signs NPAT/BL	17	EA	$600.00	$10,200.00
14	Install pedestrian barricade with double face (X2) signs	3	EA	$750.00	$2,250.00
15	Modify WCL curb inlet for bulb out gutter transition,dwy and drainage	1	LS	$15,000.00	$15,000.00
16	Construct driveways (2X30-feet width; 2X16-feet width) PCC	2008	SF	$15.00	$30,120.00
17	Road construction signs	2	EA	$1,000.00	$2,000.00
18	Public convenience & safety (Traffic control)	1	LS	$25,000.00	$25,000.00
19	Caltrans I-5 northbound ramp coordination & permit	1	LS	$25,000.00	$25,000.00
20	SWPP compliance	1	LS	$5,000.00	$5,000.00
21	Removal and Disposal of Existing Improvements	5000	SF	$2.00	$10,000.00
	Cold Planing (5330ftx5ft)	26650	SF	$1.00	$26,650.00

Subtotal				$ 543,370.00
Contingencies	30	%		$ 163,011.00
Construction & Contingencies				**$ 706,381.00**
Engineering Design & Inspection	30.0	%		$ 211,914.30
Survey	4.0	%		$ 28,255.24
Other Costs (Environmental, soils, etc.)	0.5	%		$ 3,531.91
TOTAL COST OF PROJECT	$ 950,082.45		**SAY:**	**$ 950,100.00**

Detailed Engineer's Estimate and Total Project Costs- Cycle 5 v1.3

Important: Read the Instructions in the first sheet (tab) before entering data. Do not enter data in shaded fields (with formulas).

Project Information:

Agency:	City of Chula Vista	**Date:**	9/8/2020
Project Description:	Construction of Class I bikeway, installation of high-visibility ped/bike crossing, new ped/bike HAWK beacon.		
Project Location:	Bay Boulevard from Gunpowder Point Drive/E Street to Lagoon Drive/F Street, City of Chula Vista.		
Licensed Engineer in responsible charge of preparing or reviewing this PSR-Equivalent Cost Estimate:	Matthew Capuzzi	**License #:**	C69815

Engineer's Estimate and Cost Breakdown:

Engineer's Estimate (for Construction Items Only)						**Cost Breakdown**					
						ATP Eligible Costs/Items		**ATP Ineligible Costs/Items**		**Corps/CCC to construct**	
Item No.	**Item**	**Quantity**	**Units**	**Unit Cost**	**Total Item Cost**	**%**	**$**	**%**	**$**	**%**	**$**
	General Overhead-Related Construction Items										
1	Mobilization	1	LS	$150,000.00	$150,000	100%	$150,000				
2	Construction Schedule	1	LS	$30,000.00	$30,000	100%	$30,000				
3	Construction Staking	1	LS	$35,000.00	$35,000	100%	$35,000				
4	Erosion Control	1	LS	$45,000.00	$45,000	100%	$45,000				
5	Traffic Control	1	LS	$15,000.00	$15,000	100%	$15,000				
6	Utility Adjustments and Relocations	1	LS	$40,000.00	$40,000	100%	$40,000				
7	Unclassified Excavation	1	LS	$60,000.00	$60,000	100%	$60,000				
8						100%					
9						100%					
10						100%					
	General Construction Items										
11	Perform Clearing and Grubbing	1	LS	$110,000.00	$110,000	100%	$110,000			100%	$110,000
12	Construct AC Pavement (Class 1)	400	TON	$220.00	$88,000	100%	$88,000				
13	Construct Aggregate Base (Class 1)	400	CY	$160.00	$64,000	100%	$64,000				
14	Construct Curb / Curb & Gutter	30	LF	$35.00	$1,050	100%	$1,050				
15	Construct Sidewalk	170	SF	$12.00	$2,040	100%	$2,040				
16	Construct Ramp (ADA, Bike, Shared-Use)	4	EA	$5,000.00	$20,000	100%	$20,000				
17	Construct Bridge for Class 1 Path	200	LF	$1,400.00	$280,000	100%	$280,000				
18	Traffic Signal Installation at Lagoon Dr (HAWK)	1	EA	$150,000.00	$150,000	100%	$150,000				
19	Traffic Signal Electrical System at Lagoon Dr (HAWK)	1	LS	$20,000.00	$20,000	100%	$20,000				
20	Install Signing, Striping, Pavement Markings	1	LS	$25,000.00	$25,000	100%	$25,000				
21	Linear Landscaping & Irrigation	7500	SF	$13.00	$97,500	100%	$97,500				
22	Fencing	2000	LF	$100.00	$200,000	100%	$200,000				
23								100%			
24								100%			
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51								100%			
52								100%			
				Subtotal of Construction Items:	**$1,432,590**		**$1,432,590**				**$110,000**
			Construction Item Contingencies (% of Construction Items):	**20.00%**	$286,518		$286,518				
				Total (Construction Items & Contingencies) cost:	**$1,719,108**		**$1,719,108**				

Project Delivery Costs:

Type of Project Cost	**Cost $**	ATP Eligible Costs	Non-participating Costs		
	Preliminary Engineering (PE)				
Environmental Studies and Permits(PA&ED):	$ 170,000	$170,000			
Plans, Specifications and Estimates (PS&E):	$ 250,000	$250,000		"PE" costs / "CON" costs	
Total PE:	**$ 420,000**	**$420,000**		**24%**	**25% Max**

Detailed Engineer's Estimate and Total Project Costs- Cycle 5 v1.3

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Project Information:

Agency:	City of Chula Vista	**Date:**	9/8/2020
Project Description:	Construction of Class I bikeway, installation of high-visibility ped/bike crossing, new ped/bike HAWK beacon.		
Project Location:	Bay Boulevard from Gunpowder Point Drive/E Street to Lagoon Drive/F Street, City of Chula Vista.		
Licensed Engineer in responsible charge of preparing or reviewing this PSR-Equivalent Cost Estimate:	Matthew Capuzzi	**License #:**	C69815

Right of Way (RW)					
Right of Way Engineering:	$ -				
Acquisitions and Utilities:	$ -				
Total RW:	**$ -**				
Construction Engineering (CE)				"CE" costs / "CON" costs	
Construction Engineering (CE):	$ 200,000	$200,000		12%	15% Max
(PE+RW+CE) Total Project Delivery:	**$620,000**	**$620,000**			
Total Construction Costs:	**$1,719,108**	**$1,719,108**			
		ATP Eligible Costs	Non-participating Costs		
Total Project Cost:	**$2,339,108**	**$2,339,108**			

Documentation of Ineligible (Non-Participating) Costs:

The Engineer's logic and/or calculations for splitting costs between ATP-Eligible and Non-participating costs must be documented in this section of the Estimate form.

Separate logic is required for each item which is partly ineligible for ATP funding or is required for the construction of an ineligible item/element of the project.

Item #:	Description of Engineer's Logic: (See examples shown in the Instructions)

Otay Ranch Village 13 - EIR Alternative H
Otay Lakes Road Bring Up Summary (Lake Crest to Wueste)
Opinion of Cost - Site Development Budget
J.T. Kruer & Company

8/28/2019

Earthwork	**$**	**163,464.79**
Erosion Control	**$**	**50,911.37**
Storm Drain	**$**	**87,003.75**
Sewer	**$**	**265,853.75**
Force Main Sewer & Lift Station	**$**	**156,930.00**
Water - Potable	**$**	**434,710.00**
Dry Utilities	**$**	**455,705.00**
Traffic Control Allowance	**$**	**43,453.00**
Surface Improvements	**$**	**1,010,684.91**
Walls / Fencing	**$**	**5,300.00**
Landscaping & Amenities	**$**	**519,874.94**

Total Cost without Contingencies	**$**	**3,193,891.50**
Total Cost with 10% Contingency	**$**	**3,513,280.65**

Otay Ranch Village 13 - EIR Alternative H
Otay Lakes Road Bring Up (Lake Crest to Wueste)
Opinion of Cost - Site Development Budget

J.T. Kruer & Company

8/28/2019

J.T. KRUER & COMPANY
License No. 777345

Earthwork

Item	Quantity	Unit	Unit Price	Extension
Mobilization	1	LS	$ -	incl
Site Prep., Clear & Grub	4.5	AC	$ 945.00	$ 4,252.50
Construction Water (1 unit = 748 Gallons)	445.9	Units	$ 8.82	$ 3,932.92
Orange Protection Fence	2,961	LF	$ 2.50	$ 7,402.50
Remedial Grading	4,294	CY	$ 4.19	$ 17,991.86
Mass Excavation	6,229	CY	$ 3.14	$ 19,559.06
Screening & Handling Oversize (Allowance)	1	LS	$ 1,966.00	$ 1,966.00
Sizing / Handling of Rock	60	CY	$ 1.58	$ 94.01
Slope Stabilization (Allowance)	1	LS	$ 18,995.00	$ 18,995.00
Rock Excavation	595	CY	$ 5.11	$ 3,040.45
Pre-Blast Inspection	1	LS	$ 9,175.00	$ 9,175.00
Drill & Shoot	595	CY	$ 4.79	$ 2,850.05
8" Sub drain	186	LF	$ 32.00	$ 5,952.00
PCC Brow Ditch	1,206	LF	$ 27.65	$ 33,345.90
Finish Grade Slopes	56,887	SF	$ 0.20	$ 11,377.40
Finish Streets	130,723	SF	$ 0.18	$ 23,530.14
Total w/out Contingency:				**$ 163,464.79**

Erosion Control

Item	Quantity	Unit	Unit Price	Extension
Bonded Fiber Matrix (Slopes)	56,887	SF	$ 0.11	$ 6,257.57
BMP Allocation	4.5	AC	$ 5,700.00	$ 25,650.00
Fiber Roll	1,147	LF	$ 2.35	$ 2,695.45
Silt Fence	2,961	LF	$ 2.80	$ 8,290.80
Gravel Bags	301	EA	$ 2.55	$ 767.55
Stabilized Construction Entrance	1	EA	$ 7,250.00	$ 7,250.00
Total w/out Contingency:				**$ 50,911.37**

Otay Ranch Village 13 - EIR Alternative H
Otay Lakes Road Bring Up (Lake Crest to Wueste)
Opinion of Cost - Site Development Budget

J.T. Kruer & Company

8/28/2019

J.T. KRUER & COMPANY
License No. 777345

Storm Drain

Item	Quantity	Unit	Unit Price	Extension
Misc. Pipe Removal & Re - Filling (Allowance)	1	LS	$ 2,900.00	$ 2,900.00
24" RCP - Tongue & Groove	351	LF	$ 110.00	$ 38,610.00
36" RCP - Tongue & Groove	53	LF	$ 201.50	$ 10,679.50
Type B-1 Inlet - (15')	1	EA	$ 6,870.00	$ 6,870.00
Type A-4 Clean Out	2	EA	$ 5,185.00	$ 10,370.00
Outlet Headwall - 36" Pipe	1	EA	$ 4,700.00	$ 4,700.00
Inlet Headwall - 24" Pipe	1	EA	$ 3,320.00	$ 3,320.00
Rip Rap Pad with Sill - 36" Pipe	1	EA	$ 4,600.00	$ 4,600.00
Inlet Filters - 15' B-1	1	EA	$ 2,100.00	$ 2,100.00
Adjust Cleanout to Grade	2	EA	$ 1,120.00	$ 2,240.00
Video Inspection 30" or Smaller	351	LF	$ 1.75	$ 614.25
Total w/out Contingency:				**$ 87,003.75**

Sewer

Item	Quantity	Unit	Unit Price	Extension
15" PVC Gravity Sewer	2,165	LF	$ 82.00	$ 177,530.00
48" Sewer Manhole - In Existing AC	6	EA	$ 8,850.00	$ 53,100.00
Tie In Manhole - Force Main to Gravity Main	1	EA	$ 9,900.00	$ 9,900.00
Tie In to Salt Creek Outfall Manhole	1	EA	$ 7,575.00	$ 7,575.00
Adjust Manhole to Grade - 2 Times	8	EA	$ 995.00	$ 7,960.00
Traffic Control	1	LS	$ 6,000.00	$ 6,000.00
Video Inspection	2,165	LF	$ 1.75	$ 3,788.75
Total w/out Contingency:				**$ 265,853.75**

Force Main Sewer & Lift Station.

Item	Quantity	Unit	Unit Price	Extension
Dual 10" Force Main Sewer	990.00	LF	$ 106.00	$ 104,940.00
Dual 10" Force Main Sewer in Traffic	150.00	LF	$ 155.00	$ 23,250.00
2" Air Vacuum Release Allowance	1.00	EA	$ 5,300.00	$ 5,300.00
2" Blow Offs Allowance	1.00	EA	$ 4,450.00	$ 4,450.00
Trench Patch	600	SF	$ 22.00	$ 13,200.00
Traffic Control	1	LS	$ 1,800.00	$ 1,800.00
Video Inspection	2,280.00	LF	$ 1.75	$ 3,990.00
Total w/out Contingency:				**$ 156,930.00**

Otay Ranch Village 13 - EIR Alternative H
Otay Lakes Road Bring Up (Lake Crest to Wueste)
Opinion of Cost - Site Development Budget

J.T. Kruer & Company

8/28/2019

J.T. KRUER & COMPANY
License No. 777345

Water - Potable

Item	Quantity	Unit	Unit Price	Extension
24" CML&C Steel Water	1,280	LF	$ 269.00	$ 344,320.00
24" CML&C Steel - Misc. Cathodic	1,280	LF	$ 14.50	$ 18,560.00
Cathodic Protection Test Stations	3	EA	$ 2,140.00	$ 6,420.00
8" PVC (C-900) - Water	50	LF	$ 56.00	$ 2,800.00
24" Butterfly Valve	1	EA	$ 11,200.00	$ 11,200.00
8" Gate Valves	1	EA	$ 2,800.00	$ 2,800.00
4" AV / AR	1	EA	$ 10,400.00	$ 10,400.00
4" Blow Offs	1	EA	$ 7,450.00	$ 7,450.00
2" AV / AR	1	EA	$ 6,375.00	$ 6,375.00
2" Blow Offs	1	EA	$ 4,455.00	$ 4,455.00
8" End Cap	1	EA	$ 450.00	$ 450.00
Adjust Gate Valves - 2 Times	2	EA	$ 875.00	$ 1,750.00
Connection to Existing - OLR	1	LS	$ 9,230.00	$ 9,230.00
Traffic Control Allowance	1	LS	$ 3,500.00	$ 3,500.00
Trench Patch Allowance	1	LS	$ 5,000.00	$ 5,000.00
Total w/out Contingency:				**$ 434,710.00**

Dry Utilities

Item	Quantity	Unit	Unit Price	Extension
Joint Trench Conduit - Offsite Backbone	1,692	LF	$ 110.00	$ 186,120.00
Street Lights	3	EA	$ 6,700.00	$ 20,100.00
Meter Pedestals - Parkway Landscape	1	EA	$ 3,785.00	$ 3,785.00
Traffic Signal @ Lake Crest (Allowance)	1	LS	$ 245,700.00	$ 245,700.00
Total w/out Contingency:				**$ 455,705.00**

Otay Ranch Village 13 - EIR Alternative H
Otay Lakes Road Bring Up (Lake Crest to Wueste)
Opinion of Cost - Site Development Budget

J.T. Kruer & Company

8/28/2019

J.T. KRUER & COMPANY
License No. 777345

Traffic Control Allowance

Item	Quantity	Unit	Unit Price	Extension
Traffic Control Plan & Permit	1	LS	$ 1,100.00	$ 1,100.00
Construction Signs - (Buy Signs & Barricades)	10	EA	$ 150.00	$ 1,500.00
Delineators	10	EA	$ 45.00	$ 450.00
Rent Arrow Board - 4 Each	1	Mo	$ 1,350.00	$ 1,350.00
Traffic Control Set Up & Maintenance	6	Day	$ 325.00	$ 1,950.00
Flagging Crew Allowance	3	Day	$ 1,091.00	$ 3,273.00
K - Rail Allowance	250	LF	$ 46.00	$ 11,500.00
Temp. 4" AC Detour Paving	6,500	SF	$ 2.75	$ 17,875.00
Remove Temporary AC	6,500	SF	$ 0.55	$ 3,575.00
Temporary Striping	1,600	LF	$ 0.55	$ 880.00
Total w/out Contingency:				**$ 43,453.00**

Surface Improvements

Item	Quantity	Unit	Unit Price	Extension
Sawcutting Misc. Demo at Tie Ins	1	LS	$ 1,500.00	$ 1,500.00
Balance Streets	130,723	SF	$ 0.46	$ 60,132.58
Fine Grade & Compact incl. Curb Grade	105,294	SF	$ 0.31	$ 32,640.99
Backfill Curbs & Berm	4,633	SF	$ 2.75	$ 12,740.75
6" Curb & Gutter - Type G	2,342	LF	$ 17.25	$ 40,399.50
6" G-1 Curb Standard & Zero Face- Median	2,291	LF	$ 12.85	$ 29,439.35
6" Base Under Curb & Gutter & Rolled Curb	2,342	LF	$ 7.55	$ 17,682.10
12" Base Under Curb Only	2,291	LF	$ 4.74	$ 10,859.34
19" Crushed Aggregate Base	78,926	SF	$ 3.88	$ 306,232.88
4.5" AC Base Course - Arterial Road	78,926	SF	$ 3.89	$ 307,022.14
1.5" AC Cap	78,926	SF	$ 1.16	$ 91,554.16
Seal / Sand / Sweep	78,926	SF	$ 0.12	$ 9,471.12
Type "D" Trail incl. Subgrade	14,185	SF	$ 5.40	$ 76,599.00
Miscellaneous Trail / Driveway Connections	840	SF	$ 5.40	$ 4,536.00
Survey Monument Allowance	1	EA	$ 575.00	$ 575.00
Intersection Street Name Signs	1	EA	$ 750.00	$ 750.00
Striping & Signage (Allowance)	1	LS	$ 8,550.00	$ 8,550.00
Total w/out Contingency:				**$ 1,010,684.91**

Otay Ranch Village 13 - EIR Alternative H
Otay Lakes Road Bring Up (Lake Crest to Wueste)
Opinion of Cost - Site Development Budget

J.T. Kruer & Company

8/28/2019

J.T. KRUER & COMPANY
License No. 777345

Walls / Fencing

Item	Quantity	Unit	Unit Price	Extension
Trail Furniture Allowance	1	LS	$ 5,300.00	$ 5,300.00
Total w/out Contingency:				**$ 5,300.00**

Landscaping & Amenities

Item	Quantity	Unit	Unit Price	Extension
Slope Irrigation	56,887	SF	$ 2.50	$ 142,217.50
Slope Planting	56,887	SF	$ 1.98	$ 112,636.26
Slope Maintenance (90 Day)	56,887	SF	$ 0.32	$ 18,203.84
Rocky Slope Premium (Allowance)	3,969	SF	$ 0.58	$ 2,302.02
Fine Grade Median	18,196	SF	$ 0.21	$ 3,821.16
Median Irrigation	18,196	SF	$ 2.50	$ 45,490.00
Median Landscaping	18,196	SF	$ 3.20	$ 58,227.20
Median Landcape Maintenance (90 Day)	18,196	SF	$ 0.32	$ 5,822.72
Fine Grade Parkways	19,488	SF	$ 0.26	$ 5,066.88
Otay Lakes Rd. Parkway Irrigation	19,488	SF	$ 2.95	$ 57,489.60
Otay Lakes Rd. Road Parkway Planting	19,488	SF	$ 3.20	$ 62,361.60
Otay Lakes Rd. Parkway Maintenance	19,488	SF	$ 0.32	$ 6,236.16
Total w/out Contingency:				**$ 519,874.94**

Otay Lakes Road Bring Up Improvements Hard Cost Total

Hard Cost Total :	**$ 3,193,891.50**

Otay Ranch Village 13 - EIR Alternative H
Otay Lakes Road (Wueste to Chula Vista East Border)
Opinion of Cost - Site Development Budget
J.T. Kruer & Company

8/28/2019

Earthwork	**$**	**367,148.34**
Erosion Control	**$**	**41,806.18**
Storm Drain	**$**	**114,294.75**
Force Main Sewer & Lift Station	**$**	**118,590.92**
Water - Potable	**$**	**316,026.50**
Dry Utilities	**$**	**166,115.00**
Traffic Control Allowance	**$**	**38,043.00**
Surface Improvements	**$**	**928,137.89**
Walls / Fencing	**$**	**5,000.00**
Landscaping & Amenities	**$**	**411,634.75**

Total Cost without Contingencies	**$**	**2,506,797.33**
Total Cost with 10% Contingency	**$**	**2,757,477.07**

Otay Ranch Village 13 - EIR Alternative H
Otay Lakes Road (Wueste to Chula Vista East Border)
Opinion of Cost - Site Development Budget
J.T. Kruer & Company
8/28/2019

J.T. KRUER & COMPANY
License No. 777345

Earthwork				
Item	**Quantity**	**Unit**	**Unit Price**	**Extension**
Mobilization	1	LS	$ -	incl
Site Prep., Clear & Grub	3.4	AC	$ 945.00	$ 3,213.00
Construction Water (1 unit = 748 Gallons)	1,721.0	Units	$ 8.82	$ 15,179.13
Orange Protection Fence	2,435	LF	$ 2.50	$ 6,087.50
Remedial Grading	1,517	CY	$ 4.19	$ 6,356.23
Mass Excavation	25,507	CY	$ 3.14	$ 80,091.98
Screening & Handling Oversize (Allowance)	1	LS	$ 1,966.00	$ 1,966.00
Sizing / Handling of Rock	1,589	CY	$ 1.58	$ 2,509.99
Slope Stabilization (Allowance)	1	LS	$ 16,122.00	$ 16,122.00
Rock Excavation	15,886	CY	$ 5.11	$ 81,177.46
Pre-Blast Inspection	1	LS	$ 9,175.00	$ 9,175.00
Drill & Shoot	15,886	CY	$ 4.79	$ 76,093.94
8" Sub drain	197	LF	$ 32.00	$ 6,304.00
PCC Brow Ditch	1,238	LF	$ 27.65	$ 34,230.70
Finish Grade Slopes	46,503	SF	$ 0.20	$ 9,300.60
Finish Streets	107,449	SF	$ 0.18	$ 19,340.82
Total w/out Contingency:				**$ 367,148.34**

Erosion Control				
Item	**Quantity**	**Unit**	**Unit Price**	**Extension**
Bonded Fiber Matrix (Slopes)	46,503	SF	$ 0.11	$ 5,115.33
BMP Allocation	3.4	AC	$ 5,700.00	$ 19,380.00
Fiber Roll	1,011	LF	$ 2.35	$ 2,375.85
Silt Fence	2,435	LF	$ 2.80	$ 6,818.00
Gravel Bags	340	EA	$ 2.55	$ 867.00
Stabilized Construction Entrance	1	EA	$ 7,250.00	$ 7,250.00
Total w/out Contingency:				**$ 41,806.18**

Otay Ranch Village 13 - EIR Alternative H
Otay Lakes Road (Wueste to Chula Vista East Border)
Opinion of Cost - Site Development Budget
J.T. Kruer & Company
8/28/2019

J.T. KRUER & COMPANY
License No. 777345

Storm Drain				
Item	**Quantity**	**Unit**	**Unit Price**	**Extension**
Misc. Pipe Removal & Re - Filling (Allowance)	1	LS	$ 1,750.00	$ 1,750.00
18" RCP - Tongue & Groove	185	LF	$ 91.00	$ 16,835.00
24" RCP - Tongue & Groove	316	LF	$ 108.00	$ 34,128.00
Type B-1 Inlet - (15')	2	EA	$ 6,870.00	$ 13,740.00
Type A-4 Clean Out	5	EA	$ 5,185.00	$ 25,925.00
Outlet Headwall - 24" Pipe	1	EA	$ 3,320.00	$ 3,320.00
Inlet Headwall - 24" Pipe	1	EA	$ 3,320.00	$ 3,320.00
Rip Rap Pad with Sill - 24" Pipe	1	EA	$ 4,600.00	$ 4,600.00
Inlet Filters - 15' B-1	2	EA	$ 2,100.00	$ 4,200.00
Adjust Cleanout to Grade	5	EA	$ 1,120.00	$ 5,600.00
Video Inspection 30" or Smaller	501	LF	$ 1.75	$ 876.75
Total w/out Contingency:				**$ 114,294.75**

Force Main Sewer				
Item	**Quantity**	**Unit**	**Unit Price**	**Extension**
Dual 10" Force Main Sewer	1,071.00	LF	$ 106.00	$ 113,526.00
Traffic Control	1	LS	$ 1,295.00	$ 1,295.00
Video Inspection	2,142.00	LF	$ 1.76	$ 3,769.92
Total w/out Contingency:				**$ 118,590.92**

Water - Potable				
Item	**Quantity**	**Unit**	**Unit Price**	**Extension**
24" CML&C Steel Water	1,079	LF	$ 269.00	$ 290,251.00
24" CML&C Steel - Misc. Cathodic	1,079	LF	$ 14.50	$ 15,645.50
Cathodic Protection Test Stations	2	EA	$ 2,140.00	$ 4,280.00
Traffic Control Allowance	1	LS	$ 2,350.00	$ 2,350.00
Trench Patch Allowance	1	LS	$ 3,500.00	$ 3,500.00
Total w/out Contingency:				**$ 316,026.50**

Dry Utilities				
Item	**Quantity**	**Unit**	**Unit Price**	**Extension**
Joint Trench Conduit - Offsite Backbone	1,293	LF	$ 110.00	$ 142,230.00
Street Lights	3	EA	$ 6,700.00	$ 20,100.00
Meter Pedestals - Parkway Landscape	1	EA	$ 3,785.00	$ 3,785.00
Total w/out Contingency:				**$ 166,115.00**

Otay Ranch Village 13 - EIR Alternative H
Otay Lakes Road (Wueste to Chula Vista East Border)
Opinion of Cost - Site Development Budget
J.T. Kruer & Company
8/28/2019

J.T. KRUER & COMPANY
License No. 777345

Traffic Control Allowance

Item	Quantity	Unit	Unit Price	Extension
Traffic Control Plan & Permit	1	LS	$ 500.00	$ 500.00
Construction Signs - (Buy Signs & Barricades)	7	EA	$ 150.00	$ 1,050.00
Delineators	7	EA	$ 45.00	$ 315.00
Rent Arrow Board - 4 Each	1	Mo	$ 1,350.00	$ 1,350.00
Traffic Control Set Up & Maintenance	6	Day	$ 325.00	$ 1,950.00
Flagging Crew Allowance	3	Day	$ 1,091.00	$ 3,273.00
K - Rail Allowance	200	LF	$ 46.00	$ 9,200.00
Temp. 4" AC Detour Paving	6,000	SF	$ 2.75	$ 16,500.00
Remove Temporary AC	6,000	SF	$ 0.55	$ 3,300.00
Temporary Striping	1,100	LF	$ 0.55	$ 605.00
Total w/out Contingency:				**$ 38,043.00**

Surface Improvements

Item	Quantity	Unit	Unit Price	Extension
Sawcutting Misc. Demo at Tie Ins	1	LS	$ 1,310.00	$ 1,310.00
Balance Streets	129,605	SF	$ 0.46	$ 59,618.30
Fine Grade & Compact incl. Curb Grade	91,686	SF	$ 0.31	$ 28,422.66
Backfill Curbs & Berm	4,082	SF	$ 2.75	$ 11,225.50
6" Curb & Gutter - Type G	2,350	LF	$ 17.25	$ 40,537.50
6" G-1 Curb Standard & Zero Face- Median	1,732	LF	$ 12.85	$ 22,256.20
6" Base Under Curb & Gutter & Rolled Curb	2,350	LF	$ 7.55	$ 17,742.50
12" Base Under Curb Only	1,732	LF	$ 4.74	$ 8,209.68
19" Crushed Aggregate Base	74,271	SF	$ 3.88	$ 288,171.48
4.5" AC Base Course - Arterial Road	74,271	SF	$ 3.89	$ 288,914.19
1.5" AC Cap	74,271	SF	$ 1.16	$ 86,154.36
Seal / Sand / Sweep	74,271	SF	$ 0.12	$ 8,912.52
Type "D" Trail incl. Subgrade	11,220	SF	$ 5.40	$ 60,588.00
Survey Monument Allowance	1	EA	$ 575.00	$ 575.00
Striping & Signage (Allowance)	1	LS	$ 5,500.00	$ 5,500.00
Total w/out Contingency:				**$ 928,137.89**

Walls / Fencing

Item	Quantity	Unit	Unit Price	Extension
Trail Furniture Allowance	1	LS	$ 5,000.00	$ 5,000.00
Total w/out Contingency:				**$ 5,000.00**

Otay Ranch Village 13 - EIR Alternative H
Otay Lakes Road (Wueste to Chula Vista East Border)
Opinion of Cost - Site Development Budget
J.T. Kruer & Company
8/28/2019

J.T. KRUER & COMPANY
License No. 777345

Landscaping & Amenities				
Item	**Quantity**	**Unit**	**Unit Price**	**Extension**
Slope Irrigation	46,503	SF	$ 2.50	$ 116,257.50
Slope Planting	46,503	SF	$ 1.98	$ 92,075.94
Slope Maintenance (90 Day)	46,503	SF	$ 0.32	$ 14,880.96
Rocky Slope Premium (Allowance)	23,251	SF	$ 0.58	$ 13,485.58
Fine Grade Median	9,499	SF	$ 0.21	$ 1,994.79
Median Irrigation	9,499	SF	$ 2.50	$ 23,747.50
Median Landscaping	9,499	SF	$ 3.20	$ 30,396.80
Median Landcape Maintenance (90 Day)	9,499	SF	$ 0.32	$ 3,039.68
Fine Grade Parkways	17,200	SF	$ 0.26	$ 4,472.00
Otay Lakes Rd. Parkway Irrigation	17,200	SF	$ 2.95	$ 50,740.00
Otay Lakes Rd. Road Parkway Planting	17,200	SF	$ 3.20	$ 55,040.00
Otay Lakes Rd. Parkway Maintenance	17,200	SF	$ 0.32	$ 5,504.00
Total w/out Contingency:				**$ 411,634.75**

Otay Lakes Road Bring Up Improvements Hard Cost Total		
Hard Cost Total :	**$**	**2,506,797.33**

Base Unit Cost List

Base Unit Cost List (Includes ENR and Prevailing Wage Adjustments)

YEAR 2022

Purpose: Unit Cost List for Streets in the City of Chula Vista, CA

Unit Cost Adjustments:

Engineering News-Record Construction Cost Index:

2/1/2009 --- 9796.69	**ENR CCI 2009**	**9796.69**	(Base Year for City of San Diego Cost Data)
2/1/2019 --- 12027.85	**ENR CCI 2019**	**12027.9**	(Base Year for Caltrans Bridge Cost Data)
2/1/2020 --- 12042.9	**ENR CCI 2020**	**12042.9**	(Base Year for County of San Diego Cost Data)
2/1/2022 --- 13186.84	**ENR CCI 2022**	**13186.8**	(Base Year for estimates from previous KHA projects)
7/1/2022 --- 13575.17	**ENR CCI 2022**	**13575.2**	

ENR Adjustment Factor (2009 Base Year)	1.3857
ENR Adjustment Factor (2019 Base Year)	1.1286
ENR Adjustment Factor (2020 Base Year)	1.1272
ENR Adjustment Factor (2022 Base Year)	1.0294

Adjustment for Prevailing Wage: 16%

Basis of Unit Costs (Legend)	Source
	City of San Diego Unit Cost Data 2009
	Caltrans District 11 Cost Data, Year 2019 (Adjusted per ENR above)
	Estimated from Previous Bid Results from San Diego County KHA projects (in 2022 dollars)
	County of San Diego Unit Price List (2020)
	Indicates selected unit cost

I. ROADWAY ITEMS

Section 1 Earthwork

				YEAR					
				City of SD		Co of SD		Caltrans	KHA
				2009	2022	2020	2022	N/A	N/A
Item	*Unit*	*Quantity*		*Price*		*Price*		*Price*	*Price*
Roadway Excavation/Export	CY		x	$ 26.57	$ 42.71	$ 13.54	$ 21.76	$ 13.93	$ -
Grading/Import	CY		x	$ -	$ -	$ 24.83	$ 32.47	$ 18.72	$ -
Clearing and Grubbing	SF		x	$ -	$ -	$ 0.50	$ 0.65	$ -	$ -

Section 2 Surface Improvements

Item	*Unit*	*Quantity*		*Price*		*Price*		*Price*	*Price*
3" Asphalt Concrete	SF		x	$ 2.18	$ 3.50	$ 1.87	$ 2.45	$ -	$ -
4" Asphalt Concrete	SF		x	$ 2.94	$ 4.73	$ 2.47	$ 3.23	$ -	$ -
5" Asphalt Concrete	SF		x	$ 3.61	$ 5.80	$ 3.11	$ 4.07	$ -	$ -
Asphalt Concrete	CY		x	$ -	$ -	$ -	$ -	$ 198.42	$ -
Crushed Aggregate Base	CY		x	$ -	$ -	$ -	$ -	$ 90.04	$ 85.00
Curb and Gutter	LF		x	$ 22.00	$ 35.36	$ 25.95	$ 33.93	$ -	$ 45.00
Sidewalk	SF		x	$ 6.40	$ 10.29	$ 4.96	$ 6.49	$ -	$ 10.00
Raised Concrete Median	SF		x	$ 8.25	$ 13.26	$ 11.84	$ 15.48	$ -	$ 9.00
Raised Curb & Gutter Median	LF		x	$ 22.00	$ 35.36	$ 25.95	$ 33.93	$ -	$ -
Survey Monument	EA		x	$ 1,024.00	$ 1,645.98	$ 902.70	$ 1,180.36	$ -	$ -
Curb Ramp	EA		x	$ 1,876.00	$ 3,015.48	$ 1,354.05	$ 1,770.54	$ -	$ 4,500.00
Traffic Stripe	LF		x	$ 0.61	$ 0.98	$ 1.13	$ 1.48	$ 0.60	$ 0.85
Raised Pavement Markers	EA		x	$ -	$ -	$ -	$ -	$ -	$ 2.50
Pavement Marking	SF		x	$ -	$ -	$ -	$ -	$ 3.64	$ -
Roadside Sign	EA		x	$ 484.00	$ 777.98	$ 451.35	$ 590.18	$ -	
Roadside Sign on Exist Post	EA		x	$ -	$ -	$ -	$ -	$ 198.36	$ 250.00
Retaining Wall	SF		x	$ 20.00	$ 32.15	$ 20.00	$ 26.15	$ -	$ -
Driveway Ramp	SF			$ -	$ -	$ 5.65	$ 7.39	$ -	$ -
Remove Striping	LF			$ -	$ -	$ 2.26	$ 2.96	$ -	$ -
Detectable Warning Surface	SF		x	$ -	$ -	$ -	$ -	$ 32.52	$ -
Remove Guardrail	LF		x	$ -	$ -	$ -	$ -	$ 12.70	$ -
Midwest Guardrail System	LF		x	$ -	$ -	$ -	$ -	$ 33.65	$ -
Remove Fence	LF		x	$ -	$ -	$ -	$ -	$ 19.20	$ -
Remove Marking	SF		x	$ -	$ -	$ -	$ -	$ 2.61	$ -
Pedestrian Railing	LF		x	$ -	$ -	$ -	$ -	$ 238.36	$ -

Section 3 Drainage Items

Item	Unit	Quantity		Price		Price		Price	Price
Curb Inlet	EA		x	$ 6,160.00	$ 9,901.58	$ 6,203.81	$ 8,112.05	$ -	$ -
Manhole	EA		x	$ 6,368.00	$10,235.92	$ 4,877.00	$ 6,377.13	$ -	$ -
Storm Drain RCP Pipe 24"	LF		x	$ 150.15	$ 241.35	$ 124.12	$ 162.30	$ 173.64	$ -
Water Quality BMPs	EA		x	$ -	$ -	$ -	$ -	$ -	$ 50,000.00
Headwall	EA		x	$ -	$ -	$ 6,093.24	$ 7,967.47	$ -	$ -
Cleanouts	EA		x	$ -	$ -	$ 5,077.70	$ 6,639.56	$ -	$ -
Storm Drain PVC Pipe 6"	LF		x	$ -	$ -	$ 22.57	$ 29.51	$ -	$ -
Adjustment of Utility Covers	EA			$ -	$ -	$ -	$ -	$ 919.86	$ -
Riprap Energy Dissapator	EA		x	$ -	$ -	$ 225.67	$ 295.08	$ -	$ -

Section 4 Landscape & Irrigation

Item	Unit	Quantity		Price		Price		Price	Price
Irrigation	SF		x	$ 0.59	$ 0.95	$ 0.68	$ 0.89	$ -	$ 10.00
Irrigation Meter (Assume 2")	EA		x	$ 2,866.00	$ 4,606.81	$ 3,233.92	$ 4,228.65	$ -	$ 32,000.00
Backflow Preventer	EA		x	$ 1,650.00	$ 2,652.21	$ 3,554.40	$ 4,647.70	$ -	$ 600.00
Irrigation Controller	LS		x	$ -	$ -	$ -	$ -	$ -	$ 5,000.00
Landscaping	SF		x	$ 0.79	$ 1.27	$ 0.89	$ 1.16	$ -	$ 10.00
12' Chain Link Gate	EA			$ -	$ -	$ -	$ -	$ 4,715.36	$ -
Chain Link Fence	LF			$ -	$ -	$ -	$ -	$ 58.19	$ -

Section 5 Lighting and Electrical

Item	Unit	Quantity		Price		Price		Price	Price
Street Light Pole	EA		x	$ 7,260.00	$ 11,670	$ 6,770.27	$ 8,852.75	$ -	$ 5,000.00
Street Light Pole Foundation	EA		x	$ -	$ -	$ -	$ -	$ -	$ 2,500.00
Electrical Meter	EA		x	$ -	$ -	$ -	$ -	$ -	$ 25,000.00
Electrical Meter Pedestal	EA		x	$ -	$ -	$ -	$ -	$ -	$ 1,500.00
Conduit	LF		x	$ -	$ -	$ -	$ -	$ 11.31	$ 50.00
Conductor	LF		x	$ -	$ -	$ -	$ -	$ -	$ 5.00
Pull Box	EA		x	$ 314.60	$ 505.69	$ 299.03	$ 391.01	$ -	$ 1,500.00
Electric Service Point	EA		x	$ -	$ -	$ -	$ -	$ -	$ 3,500.00

Section 6 Traffic Signals

Item	Unit	Quantity		Price		Price		Price	Price
Traffic Signal 2-Lane x 2-Lane Tee	LS		x	$ -	$ -	$ 112,838	$ 147,546	$ -	$ -
Traffic Signal 2-Lane x 2-Lane	LS		x	$ -	$ -	$ 135,405	$ 177,055	$ -	$ -
Traffic Signal 4-Lane x 2-Lane	LS		x	$ -	$ -	$ 152,330	$ 199,185	$ -	$ -
Traffic Signal 4-Lane x 4-Lane	LS		x	$ -	$ -	$ 169,257	$ 221,319	$ -	$ -
Traffic Signal 4-Lane x 6-Lane	LS		x	$ -	$ -	$ 186,182	$ 215,971	$ -	$ 446,888.54
Traffic Signal 6-Lane x 6-Lane	LS		x	$ -	$ -	$ 197,466	$ 229,061	$ -	$ 488,792.78
Traffic Signal 8-Lane x 6-Lane			x	$ -	$ -	$ 259,527	$ 339,355	$ -	$ -
Traffic Signal Interconnect	LF		x	$ -	$ -	$ 22.57	$ 29.51	$ -	$ -
Traffic Control	EA		x	$ -	$ -	$ 50,000	$ 65,380	$ -	$ -
Countdown Signal Heads	EA		x	$ -	$ -	$ -	$ -	$ -	$ 800.00

¼ Mile Template for Individual Roadway Classifications

Blvd w Intermittent Turn Lanes

TIF Summary **1/4 mile =** 1320 ft

Purpose: 1/4 Mile Template for Blvd w Intermittent Turn Lanes (4-lane) Streets in the City of Chula Vista, CA

I. ROADWAY ITEMS

Section 1 Earthwork

Item	Unit	Quantity		Price			Amount
Roadway Excavation/Export	CY	15,253	x	$41.49	=	$	632,813
					Total:	**$**	**632,813**

Section 2 Surface Improvements

Item	Unit	Quantity		Price			Amount
4" Asphalt Concrete (AC)	SF	96,360	x	$3.14	=	$	302,316
Aggregate Base (AB)	CY	4,923	x	$90.04	=	$	443,226
Curb and Gutter	LF	2,640	x	$32.96	=	$	87,018
Sidewalk	SF	13,200	x	$6.30	=	$	83,162
Raised Concrete Median (40% HS)	SF	0	x	$15.04	=	$	-
Raised Curb & Gutter Median	LF	0	x	$32.96	=	$	-
			x		=	$	-
Survey Monument	EA	4.00	x	$1,146.60	=	$	4,586
Curb Ramp	EA	8.00	x	$4,500.00	=	$	36,000
					Total:	**$**	**956,308**

Section 3 Drainage

Item	Unit	Quantity		Price			Amount
Curb Inlet	EA	5	x	$9,618.34	=	$	50,785
Manhole	EA	3	x	$9,943.11	=	$	26,250
Storm Drain Pipe	LF	1,320	x	$157.66	=	$	208,105
Water Quality BMPs	EA	3	x	$50,000.00	=	$	157,576
Headwall	EA	3	x	$7,739.55	=	$	20,432
					Total:	**$**	**463,148**

Section 4 Landscape & Irrigation

Item	Unit	Quantity		Price			Amount
Irrigation	SQFT	23,760	x	$0.86	=	$	20,522
Irrigation Meter	EA	0.5	x	$32,000.00	=	$	16,000
Backflow Preventer	EA	0.5	x	$4,514.75	=	$	2,257
Irrigation Controller	LS	0.5	x	$5,000.00	=	$	2,500
Landscaping	SF	23,760	x	$5.00	=	$	118,800
Median Landscaping	SF	0	x	$5.00	=	$	-
					Total:	**$**	**160,080**

Section 5 Lighting and Electrical

Item	Unit	Quantity		Price			Amount
Street Light Pole	EA	14	x	$8,599.51	=	$	119,488
Street Light Pole Foundation	EA	14	x	$2,500.00	=	$	34,737
Electrical Meter	EA	0.50	x	$25,000.00	=	$	12,500
Electrical Meter Pedestal	EA	0.50	x	$1,500.00	=	$	750
Conduit	LF	2,640	x	$50.00	=	$	132,000
Conductor	LF	2,640	x	$5.00	=	$	13,200
Pull Box	EA	15	x	$491.22	=	$	7,317
Electric Service Point	EA	0.25	x	$3,500.00	=	$	875
Delineator	LF		x	$0.00	=	$	-
Traffic Stripe	LF	10,560	x	$1.44	=	$	15,157
Raised Pavement Markers	EA	193	x	$2.50	=	$	481
Thermoplastic Pavement Marking	SF	600	x	$3.47	=	$	2,082
Roadside Sign	EA	18	x	$250.00	=	$	4,500
					Total:	**$**	**343,087**

Section 6 Traffic Signals

Item	Unit	Quantity		Price			Amount
Traffic Signal 2-Lane x 2-Lane Tee	LS	0.00	x	$143,325.00	=	$	-
Traffic Signal 2-Lane x 2-Lane	LS	0.25	x	$171,989.98	=	$	42,997
Traffic Signal 4-Lane x 2-Lane	LS	0.00	x	$193,487.58	=	$	-
Traffic Signal 4-Lane x 4-Lane	LS	0.00	x	$214,987.49	=	$	-
Traffic Signal 4-Lane x 6-Lane	LS	0.00	x	$236,486.24	=	$	-
Traffic Signal 6-Lane x 6-Lane	LS	0.00	x	$250,818.74	=	$	-
Traffic Signal 8-Lane x 6-Lane		0.00	x	$329,647.49	=	$	-
Traffic Signal Interconnect	LF	1320.00	x	$28.67	=	$	37,842
Traffic Control	EA	0.00	x	$63,509.35	=	$	-
Countdown Signal Heads	EA	0.00	x	$800.00	=	$	-
					Total:	**$**	**80,839**

Total: **$ 2,636,276** per 1/4 mile of roadway

Assumptions:

I. ROADWAY ITEMS

Section 1 Earthwork

Depth of pavement and base multiplied by 1320' and cross section width

Section 2 Surface Improvements

Roadway Ex Width	104 ft	Roadway Ex Depth (Assumed Prism)			3 ft
Min depth required by City	4 in	TI=	9	R=	20
Depth Based on Hveem Method	16 in	GE=	2.304 ft	Gf AB = 1.1	& Gf AC = 2.54
Gutter Width	1.5 ft				
Curbline to Curbline Widtl	76 ft				
Median Width	0 ft				
HS %	0.4				

Roughly four (4) every quarter mile
Roughly two (2) intersections per 1/4 mile

Section 3 Drainage

# of systems	2.64	systems
system every	500	ft
1 BMP per acre	3.15	

Two (2) for every system
One (1) for every system
Cross system for storm drain system
One (1) for every system
One (1) for every system

Section 4 Landscape & Irrigation

Width	9	ft

One for every 0.5 mile
One for every 0.5 mile
One for every 0.5 mile
Width 9 ft
Width 15.5 ft

Section 5 Lighting and Electrical

Light pole located every 190 ft
For streets w median, one pole, 2 lights in center of median
One (1) for every half mile

One (1) for every light pole and an extra for the meter (linked to light pole quantity)

General estimate based on cross section
General estimate based on striping
General estimate roadway classification
General estimate roadway classification

Section 6 Traffic Signals (Site Specifc, apply to roadway segments)

One (1) for every 1 mile of roadway

Abbreviations:

AB	Aggregate Base
AC	Asphalt Concrete
BMP	Best Management Practices
CY	Cubic Yards
EA	Each
EX	Excavation
GE	Gravel Equivalent
HS	Hardscape
LF	Linear Feet
LS	Lump Sum
SF	Square Feet
TI	Traffic Index

NOTE: Represents Quantity from Standard Drawing Cross Section

CL I Collector TIF Summary **1/4 mile =** 1320 ft

Purpose: 1/4 Mile Template for CL 1 Collector (4-lane) Streets in the City of Chula Vista, CA

I. ROADWAY ITEMS

Section 1 Earthwork

Item	Unit	Quantity		Price			Amount
Roadway Excavation/Export	CY	16,867	x	$41.49	=	$	699,746
					Total:	**$**	**699,746**

Section 2 Surface Improvements

Item	Unit	Quantity		Price			Amount
4" Asphalt Concrete (AC)	SF	80,520	x	$3.14	=	$	252,620
Aggregate Base (AB)	CY	3,781	x	$90.04	=	$	340,461
Curb and Gutter	LF	2,640	x	$32.96	=	$	87,018
Sidewalk	SF	13,200	x	$6.30	=	$	83,162
Raised Concrete Median (40% HS)	SF	5,280	x	$15.04	=	$	79,406
Raised Curb & Gutter Median	LF	2,640	x	$32.96	=	$	87,018
			x		=	$	-
Survey Monument	EA	4.00	x	$1,146.60	=	$	4,586
Curb Ramp	EA	8.00	x	$4,500.00	=	$	36,000
					Total:	**$**	**970,271**

Section 3 Drainage

Item	Unit	Quantity		Price			Amount
Curb Inlet	EA	5	x	$9,618.34	=	$	50,785
Manhole	EA	3	x	$9,943.11	=	$	26,250
Storm Drain Pipe	LF	1,320	x	$157.66	=	$	208,105
Water Quality BMPs	EA	3	x	$50,000.00	=	$	174,242
Headwall	EA	3	x	$7,739.55	=	$	20,432
					Total:	**$**	**479,815**

Section 4 Landscape & Irrigation

Item	Unit	Quantity		Price			Amount
Irrigation	SF	40,920	x	$0.86	=	$	35,344
Irrigation Meter	EA	0.5	x	$32,000.00	=	$	16,000
Backflow Converter	EA	0.5	x	$4,514.75	=	$	2,257
Irrigation Controller	LS	0.5	x	$5,000.00	=	$	2,500
Landscaping	SF	40,920	x	$5.00	=	$	204,600
Median Landscaping	SF	7,128	x	$5.00	=	$	35,640
					Total:	**$**	**296,341**

Section 5 Lighting and Electrical

Item	Unit	Quantity		Price			Amount
Street Light Pole	EA	7	x	$8,599.51	=	$	59,744
Street Light Pole Foundation	EA	7	x	$2,500.00	=	$	17,368
Electrical Meter	EA	0.50	x	$25,000.00	=	$	12,500
Electrical Meter Pedestal	EA	0.50	x	$1,500.00	=	$	750
Conduit	LF	1,320	x	$50.00	=	$	66,000
Conductor	LF	1,320	x	$5.00	=	$	6,600
Pull Box	EA	8	x	$491.22	=	$	3,904
Electric Service Point	EA	0.25	x	$3,500.00	=	$	875
Traffic Stripe	LF	7,920	x	$1.44	=	$	11,368
Raised Pavement Markers	EA	193	x	$2.50	=	$	481
Thermoplastic Pavement Marking	SF	600	x	$3.47	=	$	2,082
Roadside Sign	EA	18	x	$250.00	=	$	4,500
					Total:	**$**	**186,172**

Section 6 Traffic Signals

Item	Unit	Quantity		Price			Amount
Traffic Signal 2-Lane x 2-Lane Tee	LS	0.00	x	$143,325.00	=	$	-
Traffic Signal 2-Lane x 2-Lane	LS	0.00	x	$171,989.98	=	$	-
Traffic Signal 4-Lane x 2-Lane	LS	0.00	x	$193,487.58	=	$	-
Traffic Signal 4-Lane x 4-Lane	LS	0.25	x	$214,987.49	=	$	53,747
Traffic Signal 4-Lane x 6-Lane	LS	0.00	x	$236,486.24	=	$	-
Traffic Signal 6-Lane x 6-Lane	LS	0.00	x	$250,818.74	=	$	-
Traffic Signal 8-Lane x 6-Lane		0.00	x	$329,647.49	=	$	-
Traffic Signal Interconnect	LF	1320.00	x	$28.67	=	$	37,842
Traffic Control	EA	0.00	x	$63,509.35	=	$	-
Countdown Signal Heads	EA	0.00	x	$800.00	=	$	-
					Total:	**$**	**91,589**

Total: **$ 2,723,934** per 1/4 mile of roadway

Abbreviations:

AB	Aggregate Base
AC	Asphalt Concrete
BMP	Best Management Practices
CY	Cubic Yards
EA	Each
EX	Excavation
GE	Gravel Equivalent
HS	Hardscape
LF	Linear Feet
LS	Lump Sum
SF	Square Feet
TI	Traffic Index

NOTE: Represents Quantity from Standard Drawing Cross Section

Assumptions:

I. ROADWAY ITEMS

Section 1 Earthwork

Depth of pavement and base multiplied by 1320' and cross section width

Section 2 Surface Improvements

Roadway Ex Width	115 ft	Roadway Ex Depth (Assumed Prism)			3 ft
Min depth required by City	4 in	TI=	8.5	R=	20
Depth Based on Hveem Method	14.5 in	GE=	2.176 ft	Gf AB = 1.1 & Gf AC = 2.54	
Gutter Width	1.5 ft				
Curbline to Curbline Widt	74 ft				
Median Width	10 ft				
HS %	0.4				

Roughly four (4) every quarter mile
Roughly two (2) intersections per 1/4 mile

Section 3 Drainage

# of systems	2.64	systems	Two (2) for every system
system every	500	ft	One (1) for every system
1 BMP per acre	3.48		Cross system for storm drain system
			One (1) for every system
			One (1) for every system

Section 4 Landscape & Irrigation

Width	15.5 ft	
		One for every 0.5 mile
		One for every 0.5 mile
		One for every 0.5 mile
Width	15.5 ft	
Width	15.5 ft	

Section 5 Lighting and Electrical

Light pole located every	190 ft	
		For streets w median, one pole, 2 lights in center of median
		One (1) for every half mile
		One (1) for every light pole and an extra for the meter (linked to light pole quantity)
		General estimate based on cross section
		General estimate based on striping
		General estimate roadway classification
		General estimate roadway classification

Section 6 Traffic Signals (Site Specifc, apply to roadway segments)

One (1) for every 1 mile of roadway

CL II Collector TIF Summary **1/4 mile =** 1320 ft

Purpose: 1/4 Mile Template for CL 2 Collector (2-lane) Streets in the City of Chula Vista, CA

I. ROADWAY ITEMS

Section 1 Earthwork

Item	Unit	Quantity		Price			Amount
Roadway Excavation/Export	CY	10,560	x	$41.49	=	$	438,102
					Total:	**$**	**438,102**

Section 2 Surface Improvements

Item	Unit	Quantity		Price			Amount
4" Asphalt Concrete (AC)	SF	64,680	x	$3.14	=	$	202,925
Aggregate Base (AB)	CY	2,776	x	$90.04	=	$	249,988
Curb and Gutter	LF	2,640	x	$32.96	=	$	87,018
Sidewalk	SF	13,200	x	$6.30	=	$	83,162
Raised Concrete Median (40% HS)	SF	0	x	$15.04	=	$	-
Raised Curb & Gutter Median	LF	0	x	$32.96	=	$	-
			x		=	$	-
Survey Monument	EA	4.00	x	$1,146.60	=	$	4,586
Curb Ramp	EA	8.00	x	$4,500.00	=	$	36,000
					Total:	**$**	**663,679**

Section 3 Drainage

Item	Unit	Quantity		Price			Amount
Curb Inlet	EA	6	x	$9,618.34	=	$	57,710
Manhole	EA	3	x	$9,943.11	=	$	29,829
Storm Drain Pipe	LF	1,320	x	$157.66	=	$	208,105
Water Quality BMPs	EA	2	x	$50,000.00	=	$	109,091
Headwall	EA	3	x	$7,739.55	=	$	23,219
					Total:	**$**	**427,954**

Section 4 Landscape & Irrigation

Item	Unit	Quantity		Price			Amount
Irrigation	SF	27,720	x	$0.86	=	$	23,943
Irrigation Meter	EA	0.5	x	$32,000.00	=	$	16,000
Backflow Preventer	EA	0.5	x	$4,514.75	=	$	2,257
Irrigation Controller	LS	0.5	x	$5,000.00	=	$	2,500
Landscaping	SF	27,720	x	$5.00	=	$	138,600
Median Landscaping	SF	0	x	$5.00	=	$	-
					Total:	**$**	**183,300**

Section 5 Lighting and Electrical

Item	Unit	Quantity		Price			Amount
Street Light Pole	EA	14	x	$8,599.51	=	$	119,488
Street Light Pole Foundation	EA	14	x	$2,500.00	=	$	34,737
Electrical Meter	EA	0.50	x	$25,000.00	=	$	12,500
Electrical Meter Pedestal	EA	0.50	x	$1,500.00	=	$	750
Conduit	LF	2,640	x	$50.00	=	$	132,000
Conductor	LF	2,640	x	$5.00	=	$	13,200
Pull Box	EA	15	x	$491.22	=	$	7,317
Electric Service Point	EA	0.25	x	$3,500.00	=	$	875
Delineator	LF		x	$0.00	=	$	-
Traffic Stripe	LF	5,280	x	$1.44	=	$	7,578
Raised Pavement Markers	EA	138	x	$2.50	=	$	344
Thermoplastic Pavement Marking	SF	300	x	$3.47	=	$	1,041
Roadside Sign	EA	18	x	$250.00	=	$	4,500
					Total:	**$**	**334,330**

Section 6 Traffic Signals

Item	Unit	Quantity		Price			Amount
Traffic Signal 2-Lane x 2-Lane Tee	LS	0.00	x	$143,325.00	=	$	-
Traffic Signal 2-Lane x 2-Lane	LS	0.25	x	$171,989.98	=	$	42,997
Traffic Signal 4-Lane x 2-Lane	LS	0.00	x	$193,487.58	=	$	-
Traffic Signal 4-Lane x 4-Lane	LS	0.00	x	$214,987.49	=	$	-
Traffic Signal 4-Lane x 6-Lane	LS	0.00	x	$236,486.24	=	$	-
Traffic Signal 6-Lane x 6-Lane	LS	0.00	x	$250,818.74	=	$	-
Traffic Signal 8-Lane x 6-Lane		0.00	x	$329,647.49	=	$	-
Traffic Signal Interconnect	LF	1320.00	x	$28.67	=	$	37,842
Traffic Control	EA	0.00	x	$63,509.35	=	$	-
Countdown Signal Heads	EA	0.00	x	$800.00	=	$	-
					Total:	**$**	**80,839**

Total: **$ 2,128,204** per 1/4 mile of roadway

Abbreviations:

AB	Aggregate Base
AC	Asphalt Concrete
BMP	Best Management Practices
CY	Cubic Yards
EA	Each
EX	Excavation
GE	Gravel Equivalent
HS	Hardscape
LF	Linear Feet
LS	Lump Sum
SF	Square Feet
TI	Traffic Index

NOTE: Represents Quantity from Standard Drawing Cross Section

Assumptions:

I. ROADWAY ITEMS

Section 1 Earthwork

Depth of pavement and base multiplied by 1320' and cross section width

Section 2 Surface Improvements

Roadway Ex Width	72 ft	Roadway Ex Depth (Assumed Prism)			3 ft
Min depth required by City	4 in	TI=	8	R=	20
Depth Based on Hveem Method	13 in	GE=	2.048 ft	Gf AB = 1.1 & Gf AC = 2.54	
Gutter Width	1.5 ft				
Curbline to Curbline Widt	52 ft				
Median Width	0 ft				
HS %	0.4				

Roughly four (4) every quarter mile
Roughly two (2) intersections per 1/4 mile

Section 3 Drainage

# of systems	3	systems
system every	500	ft
1 BMP per acre	2.18	

Two (2) for every system
One (1) for every system
Cross system for storm drain system
One (1) for every system
One (1) for every system

Section 4 Landscape & Irrigation

Width	10.5	ft

One for every 0.5 mile
One for every 0.5 mile
One for every 0.5 mile

Width	10.5	ft
Width	0	ft

Section 5 Lighting and Electrical

Light pole located every 190 ft
For streets w median, one pole, 2 lights in center of median
One (1) for every half mile

One (1) for every light pole and an extra for the meter (linked to light pole quantity)

General estimate based on cross section
General estimate based on striping
General estimate roadway classification
General estimate roadway classification

Section 6 Specialty Items (Site Specifc, apply to roadway segments)

One (1) for every 1 mile of roadway

2 LN Village Entry

TIF Summary **1/4 mile =** 1320 ft

Purpose: 1/4 Mile Template for 2 LN Village Entry (2-lane) Streets in the City of Chula Vista, CA

I. ROADWAY ITEMS

Section 1 Earthwork

Item	Unit	Quantity		Price			Amount
Roadway Excavation/Export	CY	8,947	x	$41.49	=	$	371,169
					Total:	**$**	**371,169**

Section 2 Surface Improvements

Item	Unit	Quantity		Price			Amount
4" Asphalt Concrete (AC)	SF	40,920	x	$3.14	=	$	128,381
Aggregate Base (AB)	CY	2,009	x	$90.04	=	$	180,870
Curb and Gutter	LF	2,640	x	$32.96	=	$	87,018
Sidewalk	SF	15,840	x	$6.30	=	$	99,794
Raised Concrete Median (40% HS)	SF	0	x	$15.04	=	$	-
Raised Curb & Gutter Median	LF	0	x	$32.96	=	$	-
			x		=	$	-
Survey Monument	EA	4.00	x	$1,146.60	=	$	4,586
Curb Ramp	EA	8.00	x	$4,500.00	=	$	36,000
					Total:	**$**	**536,649**

Section 3 Drainage

Item	Unit	Quantity		Price			Amount
Curb Inlet	EA	6	x	$9,618.34	=	$	57,710
Manhole	EA	3	x	$9,943.11	=	$	29,829
Storm Drain Pipe	LF	1,320	x	$157.66	=	$	208,105
Water Quality BMPs	EA	2	x	$50,000.00	=	$	92,424
Headwall	EA	3	x	$7,739.55	=	$	23,219
					Total:	**$**	**411,288**

Section 4 Landscape & Irrigation

Item	Unit	Quantity		Price			Amount
Irrigation	SF	40,920	x	$0.86	=	$	35,344
Irrigation Meter	EA	0.5	x	$32,000.00	=	$	16,000
Backflow Preventer	EA	0.5	x	$4,514.75	=	$	2,257
Irrigation Controller	LS	0.5	x	$5,000.00	=	$	2,500
Landscaping	SF	40,920	x	$5.00	=	$	204,600
Median Landscaping	SF	0	x	$5.00	=	$	-
					Total:	**$**	**260,701**

Section 5 Lighting and Electrical

Item	Unit	Quantity		Price			Amount
Street Light Pole	EA	14	x	$8,599.51	=	$	119,488
Street Light Pole Foundation	EA	14	x	$2,500.00	=	$	34,737
Electrical Meter	EA	0.50	x	$25,000.00	=	$	12,500
Electrical Meter Pedestal	EA	0.50	x	$1,500.00	=	$	750
Conduit	LF	2,640	x	$50.00	=	$	132,000
Conductor	LF	1,320	x	$5.00	=	$	6,600
Pull Box	EA	15	x	$491.22	=	$	7,317
Electric Service Point	EA	0.25	x	$3,500.00	=	$	875
Delineator	LF		x	$0.00	=	$	-
Traffic Stripe	LF	3,960	x	$1.44	=	$	5,684
Raised Pavement Markers	EA	110	x	$2.50	=	$	275
Thermoplastic Pavement Marking	SF	300	x	$3.47	=	$	1,041
Roadside Sign	EA	18	x	$250.00	=	$	4,500
					Total:	**$**	**325,766**

Section 6 Traffic Signals

Item	Unit	Quantity		Price			Amount
Traffic Signal 2-Lane x 2-Lane Tee	LS	0.00	x	$143,325.00	=	$	-
Traffic Signal 2-Lane x 2-Lane	LS	0.25	x	$171,989.98	=	$	42,997
Traffic Signal 4-Lane x 2-Lane	LS	0.00	x	$193,487.58	=	$	-
Traffic Signal 4-Lane x 4-Lane	LS	0.00	x	$214,987.49	=	$	-
Traffic Signal 4-Lane x 6-Lane	LS	0.00	x	$236,486.24	=	$	-
Traffic Signal 6-Lane x 6-Lane	LS	0.00	x	$250,818.74	=	$	-
Traffic Signal 8-Lane x 6-Lane		0.00	x	$329,647.49	=	$	-
Traffic Signal Interconnect	LF	1320.00	x	$28.67	=	$	37,842
Traffic Control	EA	0.00	x	$63,509.35	=	$	-
Countdown Signal Heads	EA	0.00	x	$800.00	=	$	-
					Total:	**$**	**80,839**

Total: **$ 1,986,413** per 1/4 mile of roadway

Abbreviations:

AB	Aggregate Base
AC	Asphalt Concrete
BMP	Best Management Practices
CY	Cubic Yards
EA	Each
EX	Excavation
GE	Gravel Equivalent
HS	Hardscape
LF	Linear Feet
LS	Lump Sum
SF	Square Feet
TI	Traffic Index

NOTE: Represents Quantity from Standard Drawing Cross Section

Assumptions:

I. ROADWAY ITEMS

Section 1 Earthwork

Depth of pavement and base multiplied by 1320' and cross section width

Section 2 Surface Improvements

Roadway Ex Width	61 ft	Roadway Ex Depth (Assumed Prism)			3 ft
Min depth required by City	4 in	TI=	8.5	R=	20
Depth Based on Hveem Method	14.5 in	GE=	2.176 ft	Gf AB = 1.1 & Gf AC = 2.54	
Gutter Width	1.5 ft				
Curbline to Curbline Widt	34 ft				
Median Width	0 ft				
HS %	0.4				

Roughly four (4) every quarter mile
Roughly two (2) intersections per 1/4 mile

Section 3 Drainage

# of systems	3	systems
system every	500	ft
1 BMP per acre	1.85	

Two (2) for every system
One (1) for every system
Cross system for storm drain system
One (1) for every system
One (1) for every system

Section 4 Landscape & Irrigation

Width	15.5	ft

One for every 0.5 mile
One for every 0.5 mile
One for every 0.5 mile

Width	15.5	ft
Width	0	ft

Section 5 Lighting and Electrical

Light pole located every 190 ft
For streets w median, one pole, 2 lights in center of median
One (1) for every half mile

One (1) for every light pole and an extra for the meter (linked to light pole quantity)

General estimate based on cross section
General estimate based on striping
General estimate roadway classification
General estimate roadway classification

Section 6 Specialty Items (Site Specifc, apply to roadway segments)

One (1) for every 1 mile of roadway

4LM Arterial TIF Summary **1/4 mile =** 1320 ft

Purpose: 1/4 Mile Template for 4 LM Arterial (4-lane) Streets in the City of Chula Vista, CA

I. ROADWAY ITEMS

Section 1 Earthwork

Item	Unit	Quantity		Price			Amount
Roadway Excavation/Export	CY	15,253	x	$42.71	=	$	651,449
					Total:	**$**	**651,449**

Section 2 Surface Improvements

Item	Unit	Quantity		Price			Amount
4" Asphalt Concrete (AC)	SF	80,520	x	$3.23	=	$	260,060
Aggregate Base (AB)	CY	4,145	x	$90.04	=	$	373,243
Curb and Gutter	LF	2,640	x	$33.93	=	$	89,580
Sidewalk	SF	13,200	x	$6.49	=	$	85,611
Raised Concrete Median (40% HS)	SF	8,448	x	$15.48	=	$	130,791
Raised Curb & Gutter Median	LF	2,640	x	$33.93	=	$	89,580
			x		=	$	-
Survey Monument	EA	4.00	x	$1,180.36	=	$	4,721
Curb Ramp	EA	8.00	x	$4,500.00	=	$	36,000
					Total:	**$**	**1,069,587**

Section 3 Drainage

Item	Unit	Quantity		Price			Amount
Curb Inlet	EA	6	x	$9,901.58	=	$	59,409
Manhole	EA	3	x	$10,235.92	=	$	30,708
Storm Drain Pipe	LF	1,320	x	$162.30	=	$	214,234
Water Quality BMPs	EA	3	x	$50,000.00	=	$	157,576
Headwall	EA	3	x	$7,967.47	=	$	23,902
					Total:	**$**	**485,829**

Section 4 Landscape & Irrigation

Item	Unit	Quantity		Price			Amount
Irrigation	SF	71,280	x	$0.89	=	$	63,379
Irrigation Meter	EA	0.5	x	$32,000.00	=	$	16,000
Backflow Preventer	EA	0.5	x	$4,647.70	=	$	2,324
Irrigation Controller	LS	0.5	x	$5,000.00	=	$	2,500
Landscaping	SF	71,280	x	$1.27	=	$	90,515
Median Landscaping	SF	11,880	x	$1.27	=	$	15,086
					Total:	**$**	**189,804**

Section 5 Lighting and Electrical

Item	Unit	Quantity		Price			Amount
Street Light Pole	EA	7	x	$8,852.75	=	$	61,503
Street Light Pole Foundation	EA	7	x	$2,573.62	=	$	17,880
Electrical Meter	EA	0.50	x	$25,736.21	=	$	12,868
Electrical Meter Pedestal	EA	0.50	x	$1,544.17	=	$	772
Conduit	LF	1,320	x	$51.47	=	$	67,944
Conductor	LF	1,320	x	$5.15	=	$	6,794
Pull Box	EA	8	x	$505.69	=	$	4,019
Electric Service Point	EA	0.25	x	$3,500.00	=	$	875
Delineator	LF		x	$0.00	=	$	-
Traffic Stripe	LF	7,920	x	$1.48	=	$	11,702
Raised Pavement Markers	EA	55	x	$2.50	=	$	138
Thermoplastic Pavement Marking	SF	600	x	$3.64	=	$	2,184
Roadside Sign	EA	18	x	$250.00	=	$	4,500
					Total:	**$**	**191,179**

Section 6 Traffic Signals

Item	Unit	Quantity		Price			Amount
Traffic Signal 2-Lane x 2-Lane Tee	LS	0.00	x	$147,545.68	=	$	-
Traffic Signal 2-Lane x 2-Lane	LS	0.00	x	$177,054.79	=	$	-
Traffic Signal 4-Lane x 2-Lane	LS	0.00	x	$199,185.46	=	$	-
Traffic Signal 4-Lane x 4-Lane	LS	0.00	x	$221,318.50	=	$	-
Traffic Signal 4-Lane x 6-Lane	LS	0.25	x	$446,888.54	=	$	111,722
Traffic Signal 6-Lane x 6-Lane	LS	0.00	x	$488,792.78	=	$	-
Traffic Signal 8-Lane x 6-Lane		0.00	x	$339,355.05	=	$	-
Traffic Signal Interconnect	LF	1320.00	x	$29.51	=	$	38,956
Traffic Control	EA	0.00	x	$65,379.59	=	$	-
Countdown Signal Heads	EA	0.00	x	$800.00	=	$	-
					Total:	**$**	**150,678**

Total: **$ 2,738,526** per 1/4 mile of roadway

Abbreviations:

AB	Aggregate Base
AC	Asphalt Concrete
BMP	Best Management Practices
CY	Cubic Yards
EA	Each
EX	Excavation
GE	Gravel Equivalent
HS	Hardscape
LF	Linear Feet
LS	Lump Sum
SF	Square Feet
TI	Traffic Index

NOTE: Represents Quantity from Standard Drawing Cross Section

Assumptions:

I. ROADWAY ITEMS

Section 1 Earthwork

Depth of pavement and base multiplied by 1320' and cross section width

Section 2 Surface Improvements

Roadway Ex Width	104 ft	Roadway Ex Depth (Assumed Prism)			3 ft
Min depth required by City	4 in	TI=	9	R=	20
Depth Based on Hveem Method	16 in	GE=	2.304 ft	Gf AB = 1.1	& Gf AC = 2.54
Gutter Width	1.5 ft				
Curbline to Curbline Widt	80 ft				
Median Width	16 ft				
HS %	0.4				

Roughly four (4) every quarter mile
Roughly two (2) intersections per 1/4 mile

Section 3 Drainage

# of systems	3	systems
system every	500	ft
1 BMP per acre	3.15	

Two (2) for every system
One (1) for every system
Cross system for storm drain system
One (1) for every system
One (1) for every system

Section 4 Landscape & Irrigation

Width	27	ft
One for every 0.5 mile		
One for every 0.5 mile		
One for every 0.5 mile		
Width	27	ft
Width	15.5	ft

Section 5 Lighting and Electrical

Light pole located every 190 ft
For streets w median, one pole, 2 lights in center of median
One (1) for every half mile

One (1) for every light pole and an extra for the meter (linked to light pole quantity)

General estimate based on cross section
General estimate based on striping
General estimate roadway classification
General estimate roadway classification

Section 6 Specialty Items (Site Specifc, apply to roadway segments)

One (1) for every 1 mile of roadway

6 LP Arterial

TIF Summary **1/4 mile =** 1320 ft

Purpose: 1/4 Mile Template for 6 LP Arterial (6-lane) Streets in the City of Chula Vista, CA

I. ROADWAY ITEMS

Section 1 Earthwork

Item	Unit	Quantity		Price			Amount
Roadway Excavation/Export	CY	18,773	x	$42.71	=	$	801,783
					Total:	**$**	**801,783**

Section 2 Surface Improvements

Item	Unit	Quantity		Price			Amount
5" Asphalt Concrete (AC)	SF	112,200	x	$4.07	=	$	456,274
Aggregate Base (AB)	CY	6,200	x	$90.04	=	$	558,285
Curb and Gutter	LF	2,640	x	$33.93	=	$	89,580
Sidewalk	SF	13,200	x	$6.49	=	$	85,611
Raised Concrete Median (40% HS)	SF	8,448	x	$15.48	=	$	130,791
Raised Curb & Gutter Median	LF	2,640	x	$33.93	=	$	89,580
Survey Monument	EA	4.00	x	$1,180.36	=	$	4,721
Curb Ramp	EA	8.00	x	$4,500.00	=	$	36,000
Delineator	LF		x	$0.00	=	$	-
Traffic Stripe	LF	10,560	x	$1.48	=	$	15,603
Raised Pavement Markers	EA	110	x	$2.50	=	$	275
Thermoplastic Pavement Marking	SF	900	x	$3.64	=	$	3,276
Roadside Sign	EA	18	x	$250.00	=	$	4,500
					Total:	**$**	**1,474,497**

Section 3 Drainage

Item	Unit	Quantity		Price			Amount
Curb Inlet	EA	10	x	$9,901.58	=	$	99,016
Manhole	EA	5	x	$10,235.92	=	$	51,180
Storm Drain Pipe	LF	1,320	x	$162.30	=	$	214,234
Water Quality BMPs	EA	4	x	$50,000.00	=	$	193,939
Headwall	EA	5	x	$7,967.47	=	$	39,837
					Total:	**$**	**598,206**

Section 4 Landscape & Irrigation

Item	Unit	Quantity		Price			Amount
Irrigation	SF	71,280	x	$0.89	=	$	63,379
Irrigation Meter	EA	0.5	x	$32,000.00	=	$	16,000
Backflow Preventer	EA	0.5	x	$4,647.70	=	$	2,324
Irrigation Controller	LS	0.5	x	$5,000.00	=	$	2,500
Landscaping	SF	71,280	x	$1.27	=	$	90,515
Median Landscaping	SF	11,880	x	$1.27	=	$	15,086
					Total:	**$**	**189,804**

Section 5 Lighting and Electrical

Item	Unit	Quantity		Price			Amount
Street Light Pole	EA	7	x	$8,852.75	=	$	61,503
Street Light Pole Foundation	EA	7	x	$2,573.62	=	$	17,880
Electrical Meter	EA	1.00	x	$25,736.21	=	$	25,736
Electrical Meter Pedestal	EA	1.00	x	$1,544.17	=	$	1,544
Conduit	LF	1,320	x	$51.47	=	$	67,944
Conductor	LF	1,320	x	$5.15	=	$	6,794
Pull Box	EA	8	x	$505.69	=	$	4,019
Electric Service Point	EA	0.25	x	$3,500.00	=	$	875
					Total:	**$**	**186,295**

Section 6 Traffic Signals

Item	Unit	Quantity		Price			Amount
Traffic Signal 2-Lane x 2-Lane Tee	LS	0.00	x	$147,545.68	=	$	-
Traffic Signal 2-Lane x 2-Lane	LS	0.00	x	$177,054.79	=	$	-
Traffic Signal 4-Lane x 2-Lane	LS	0.00	x	$199,185.46	=	$	-
Traffic Signal 4-Lane x 4-Lane	LS	0.00	x	$221,318.50	=	$	-
Traffic Signal 4-Lane x 6-Lane	LS	0.00	x	$446,888.54	=	$	-
Traffic Signal 6-Lane x 6-Lane	LS	0.25	x	$488,792.78	=	$	122,198
Traffic Signal 8-Lane x 6-Lane		0.00	x	$339,355.05	=	$	-
Traffic Signal Interconnect	LF	1320.00	x	$29.51	=	$	38,956
Traffic Control	EA	0.00	x	$65,379.59	=	$	-
Countdown Signal Heads	EA	0.00	x	$800.00	=	$	-
					Total:	**$**	**161,154**

Total: **$ 3,411,740** per 1/4 mile of roadway

Abbreviations:

AB	Aggregate Base
AC	Asphalt Concrete
BMP	Best Management Practices
CY	Cubic Yards
EA	Each
EX	Excavation
GE	Gravel Equivalent
HS	Hardscape
LF	Linear Feet
LS	Lump Sum
SF	Square Feet
TI	Traffic Index

NOTE: Represents Quantity from Standard Drawing Cross Section

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Assumptions:

I. ROADWAY ITEMS

Section 1 Earthwork

Depth of pavement and base multiplied by 1320' and cross section width

Section 2 Surface Improvements

Roadway Ex Width	128 ft	Roadway Ex Depth (Assumed Prism)	3 ft
Min depth required by City	5 in	TI= 9.5	R= 20
Depth Based on Hveem Method	17 in	GE= 2.432 ft	Gf AB = 1.1 & Gf AC = 2.54
Gutter Width	1.5 ft		
Curbline to Curbline Widt	104 ft		
Median Width	16 ft		
HS %	0.4		

Roughly four (4) every quarter mile
Roughly two (2) intersections per 1/4 mile

General estimate based on cross section
General estimate based on striping
General estimate roadway classification
General estimate roadway classification

Section 3 Drainage

# of systems	5	systems
system every	300	ft
1 BMP per acre	3.88	

Two (2) for every system
One (1) for every system
Cross system for storm drain system
One (1) every acre
One (1) for every system

Section 4 Landscape & Irrigation

Width	27	ft

One for every 0.5 mile
One for every 0.5 mile
One for every 0.5 mile
Width 27 ft
Width 15.5 ft

Section 5 Lighting and Electrical

Light pole located every 190 ft
For streets w median, one pole, 2 lights in center of median
One (1) for every quarter mile

One (1) for every light pole and an extra for the meter (linked to light pole quantity)
One (1) for every quarter mile

Section 6 Specialty Items (Site Specifc, apply to roadway segments)

One (1) for every 1 mile of roadway

Transportation & Roadway Infrastructure Program (TRIP) Pedestrian Bridge Cost Estimates Technical Memo

Chula Vista, CA.

May 28TH, 2024

Kimley»Horn

Chula Vista Pedestrian Bridge Costs

Hunte Parkway Pedestrian Bridge

Length = 541 feet of Elevated Structure, and 265 feet of Ramp Structure supported on retaining walls

Width = 19 feet

Area = 10,300 SQFT (square feet) Elevated Structure, and 5,035 SQFT Ramp Structure

Discussion:

The proposed Hunte Parkway Pedestrian Bridge crosses Hunte Parkway and will connect Village 11 to the University and Innovation District and provide access to High Tech Middle School. The alignment of the bridge crosses Hunte Parkway perpendicular to the roadway alignment just northeast of the eastern most driveway to High Tech Middle School. After crossing Hunte Parkway the bridge would continue southeast, parallel to the school driveway, for approximately 300 feet, resulting in an overall elevated bridge structure of 541 feet. At this point the alignment will double back towards Hunte Parkway and be supported by retaining walls for approximately 265 feet. The ramp will end at the existing pedestrian trail that runs along the south side of Hunte Parkway. This structure geometry is similar to the geometry used for the pedestrian bridge that crosses Olympic Parkway at Otay Ranch High School

The north side of the bridge will connect with a path segment that would have to be constructed adjacent to, and connect to, the existing pedestrian path leading down from Village 11. The structure will be required to have a minimum vertical clearance of 18'-6" above Hunte Parkway per Caltrans Highway Design Manual, Section 309.2, which required pedestrian structures to have a minimum vertical clearance 2 feet greater than the standard for major structures.

This proposed alignment will result in a 5-span structure supported on concrete columns and seat abutments founded on deep foundations. The structure is expected to have a maximum span length of 125 feet, resulting in a uniform maximum structure depth of approximately 5-feet. A column is proposed to be located in the existing median of Hunte Parkway.

This alignment would facilitate access to the Middle School, which is intended to encourage student use of the bridge.

Since geotechnical data is not currently available for this location, it is assumed that deep foundations consisting of large diameter Cast-in-Drilled-Hole (CIDH) concrete piles will be used to support the structure, while shallow spread footings are assumed for the retaining walls supporting the ramp structure.

The structure itself is expected to be a prestressed box girder superstructure. Aesthetic features that include concrete staining and rock façade on the abutments and columns are assumed to be included as part of this structure.

To determine a high-level planning, estimated construction cost associated with the Hunte Parkway Pedestrian Bridge, it is not appropriate to use the Caltrans Comparative Bridge Costs as these are based on vehicular bridges that generally have a lower $/SQFT cost. Instead, a comparison of recent costs for similar Pedestrian Overcrossings (POC's) was performed, with these costs escalated to the end of the 2022 year. The Millenia Eastlake Parkway POC completed construction in Chula Vista in 2020. The Millenia Eastlake Parkway POC structure is similar to the proposed Hunte Parkway POC but is not as wide or as long; however, it will utilize similar construction materials and methods. The Millenia Eastlake Parkway POC structure had a cost of $2,185,491 with a horizontal surface area of 3,132 SQFT, resulting in a $/SQFT cost of $697.79, and was completed in July of 2020.

The Los Angeles ENR Construction Cost Index (CCI) for July of 2020 was 12056.44, while the CCI for July of 2022 was 13575.17.

Los Angeles ENR CCI

YEAR	MONTH	CCI
2022	July	13575.17
2020	July	12056.44

Using these two CCI and the 2020 Cost/SF for the Millenia Eastlake Parkway POC we generate an expected Cost /SF for July 2022 of: $785.69/SF.

This equates to an average annual increase of approximately 6.130% per year. This average annual increase is slightly higher than the values that Caltrans is currently using on their Highway Bridge Program at 4.89% per year.

As stated above, the Millenia bridge is not as long or as wide as the proposed Hunte Parkway bridge; the Hunte Parkway bridge also has approximately 265 feet of ramp structure supported by retaining walls, which will be less expensive to construct than an elevated bridge. To capture the savings related to the increase in width of the structure while still utilizing a single column bent (Hunte Parkway is 7ft wider than Millenia) and reduced cost for the ramp, the following cost reductions are proposed:

1. Reduce the 2022 $/foot cost for the elevated structure by 10%. The Hunte Parkway Bridge is approximately 60% wider than the Millenia bridge, but a large part of the overall cost of the bridge will be in the foundations and falsework. The costs of these items will not be 60% greater than those of a narrower bridge.

2. The cost of constructing the ramp portion that is supported by retaining walls is estimated at half of the Cost/SF of the elevated structure.

Based on the recommendation above, the following costs are recommended:

Elevated Structure: Use $710.00/SQFT

Retaining Wall Ramp: Use $393.00/SQFT

Utilizing the costs above results in an estimated construction cost of **$9,300,000** for the Hunte Parkway POC.

SR-125 Pedestrian Bridge

Length = 740 feet

Width = 19 feet

Area = 14,060 SQFT

Discussion:

The proposed SR-125 Pedestrian Bridge will cross over SR-125 approximately 1-mile south of the Birch Road Interchange. This structure will connect Village 8 East and Village 9. The bridge is anticipated to be approximately 740 feet long, and 19 feet wide.

The structure will be required to have a minimum vertical clearance of 18'-6" above SR-125 per Caltrans Highway Design Manual, Section 309.2, which required pedestrian structures to have a minimum vertical clearance 2 feet greater than the standard for major structures.

Based on information provided by the City of Chula Vista, the bridge is expected to be a 6-Span prestressed cast-in-place box girder superstructure supported on concrete columns and seat abutments and founded on deep foundations. Due to the geometry of the site, a column is expected to be necessary in the median of SR-125, resulting in a maximum span length of 125 feet, which will require an approximate uniform structure depth of 5'-0".

Since geotechnical data is not currently available for this location, it is assumed that deep foundations consisting of large diameter Cast-In-Drilled-Hole (CIDH) concrete piles will be used to support the structure.

Aesthetic features that include concrete staining and rock façade on the abutments and columns are assumed to be included as part of this structure.

To determine a high-level planning estimated construction cost associated with the SR-125 Pedestrian Bridge, it is not appropriate to use the Caltrans Comparative Bridge Costs as these are based on vehicular bridges that generally have a lower $/SQFT cost.

Instead, a comparison of recent costs for similar Pedestrian Overcrossings (POC's) was performed, with these costs escalated to the end of the 2022 year. The Millenia Eastlake Parkway POC completed construction in Chula Vista in 2020. The Millenia Eastlake Parkway POC structure is similar to the proposed SR-125 POC but is not as wide or as long; however, it will utilize similar construction materials and methods. The Millenia Eastlake Parkway POC structure had a cost of $2,185,491 with a horizontal surface area of 3,132 SQFT, resulting in a $/SQFT cost of $697.79, and was completed in July of 2020.

The Los Angeles ENR Construction Cost Index (CCI) for July of 2020 was 12056.44, while the CCI for July of 2022 was 13575.17.

Los Angeles ENR CCI

YEAR	MONTH	CCI
2022	July	13575.17
2020	July	12056.44

Using these two CCI and the 2020 Cost/SF for the Millenia Eastlake Parkway POC we generate an expected Cost /SF for July 2022 of: $785.69/SF.

This equates to an average annual increase of approximately 6.13% per year. This average annual increase is slightly higher than the values that Caltrans is currently using on their Highway Bridge Program at 4.89% per year.

Applying the 6.13% annual escalation rate to the $/SQFT cost for the Millenia bridge results in a $/SQFT cost of $785.69 for the 2022 year.

As stated above the Millenia bridge is not as long or wide as the proposed SR-125 bridge. To capture the savings related to the increased width of the structure while still utilizing a single column bent (SR-125 Pedestrian Bridge is 7 feet wider than Millenia), the following cost reductions are proposed:

1. Reduce the $/foot for the elevated structure by 10%. The SR-125 Bridge is approximately 60% wider than the Millenia bridge but a large part of the overall cost of the bridge will be in the foundations and falsework. The costs of these items will not be 60% greater than those of a narrower bridge.

Based on the evaluation above the following cost is recommended:

Elevated Structure: Use $710.00/SQFT

Utilizing the cost above results in an estimated construction cost of **$9,990,000** for the SR-125 Pedestrian Bridge.

Appendix B: TRIP capital improvement plan (“cip”)

City of Chula Vista Transportation Infrastructure Fee Program Update
Fee Program capital improvement plan (cip)

Category	Project Number	Roadway Name / Project Name	From	To	Improvement	Fee Program Cost	Timing
Eastern Facilities	28a	Otay Lakes Road	Wueste Road	City Limits	Widen 2L to 6LP arterial	$4,872,418	10-20 Years
	28b	Otay Lakes Road	Lakecrest Drive	Wueste Road	Widen 2L to 6LP arterial	$6,207,911.95	10-20 Years
	56c	Otay Valley Road	La Media Road	SR-125 R/W SB ramps	New 4LM arterial	$4,340,603.50	0-5 Years
	58a	Heritage Road	Entertainment Ci North	Southerly City Boundary	Widening FY2015/16	$12,632,358.80	10-20 Years
	59c	Proctor Valley Road	Agua Vista Drive	Easterly City Boundary	Widen to Class II Collector	$5,697,621.00	10-20 Years
	60a	Main Street	Heritage Road	Wolf Canyon Bridge	New 6LP arterial (approach to bridge)	$19,092,724.65	10-20 Years
	60b	Main Street	Wolf Canyon Bridge	La Media Road	New 6LP arterial (approach to bridge)	$21,517,898.31	10-20 Years
	60c	Main Street	Wolf Canyon Bridge	Wolf Canyon Bridge	New 6LP bridge	$112,737,670.68	10-20 Years
	60d	Main Street	La Media Road	SR-125 R/W SB ramps	New 6LP arterial	$8,377,870.20	5-10 Years
	64	Hunte Parkway/Main St	SR-125 NB ramps	Eastlake Parkway	New 6LP arterial	$11,905,395.33	0-5 Years
	67/68 A	Main Street and Otay Valley Road Bridges	SR-125 SB ramps	SR-125 NB ramps	Main Street: New 6LP Bridge & ramps; Otay Valley: New 4LM bridge	$91,517,192.41	0-5 Years
	67/68 B	SR 125 Multimodal Bridge	Village 8 East	Village 9	Pedestrian bridge crossing SR 125 between Main Street and La Media Road	$16,815,439.00	5-10 Years
	70	Discovery Falls Drive	Hunte Parkway Village 9	Street "B"	New 4L to 2L roadway	$13,409,510.27	0-5 Years
	71	Eastlake Parkway/St B	Hunte Parkway	Discovery Falls Drive	New 2-LC Village Entry	$9,159,270.00	0-5 Years
	72	Otay Valley Road	SR-125 R/W NB ramps	2700 LF east of ramps	New 4LM arterial	$9,567,043.86	0-5 Years
	73	Hunte Parkway Multimodal Bridge	Village 11	University and Innovation District	Multimodal bridge crossing Hunte Parkway.	$13,692,241.50	5-10 Years
					TOTALS Eastern Facilities	**$361,543,170**	
Western Facilities	I-5-4	E Street	I-5 SB Ramps	I-5 NB Ramps	bridge widening over I-5 (250' X 20')	$9,672,469.50	10-20 Years
	I-5-10	J Street	I-5 SB Ramps	I-5 NB Ramps	Undercrossing Widening, 175 linear ft by 20 ft	$881,827.08	10-20 Years
	I-5-11	L Street	I-5 SB Ramps	I-5 NB Ramps	bridge widening over I-5 (S/W for peds 300' X 12')(38%)(58%)	$462,607.89	10-20 Years
	I-5-12	Bay Boulevard	I-5 SB Ramps	N/A	on/off ramps traffic signal	$147,756.38	5-10 Years
	I-5-13	Industrial Boulevard	I-5 NB Ramps	N/A	on/off ramps traffic signal	$147,756.38	5-10 Years
	I-5-14	Palomar Street	I-5 SB Ramps	I-5 NB Ramps	bridge widening (275lf X 50lf)	$5,563,774.56	10-20 Years
	I-5-17	I-5 HOV & Managed Lanes	SR-905	SR-54	HOV & Manage Lanes	$4,320,346.00	10-20 Years
	I-805-2	Main Street	I-805 SB Ramps	I-805 NB Ramps	EB to NB left turn lane	$5,957,626.22	5-10 Years
	SR-54-2	SR-54 EB Off-Ramp	N. Fourth Avenue	N/A	Add ramp lane	$295,625.28	5-10 Years
	BP-1	Bayshore Bikeway	E Street	F Street	bikeway	$104,750.00	0-5 Years
	BP-2	F Street	I-5	Fourth Avenue	Sidewalk & Bike Lanes	$2,514,781.35	0-5 Years
	BP-3	Industrial Blvd	L Street	Main Street	Bike Lanes improvements	$165,453.88	0-5 Years
	BP-4	Main Street	Industrial Boulevard	I-805	Bike Lanes improvements	$330,617.17	0-5 Years
	BP-7	H Street	Broadway	Second Avenue	Pedestrian Improvements	$34,875.52	0-5 Years
	BP-9	Bayshore Bikeway	F Street	H Street	bikeway	$1,048,319.12	5-10 Years
	RAS-1	Bonita Road	First Avenue	I-805	Restriping & Signage	$178,922.83	0-5 Years
	RAS-7	H Street	Broadway	N/A	EB Queue Jumper Lane and Traffic signal mod	$906,738.95	0-5 Years
	RAS-10	H Street	Second Avenue	Hilltop Drive	Sidewalk Improvement	$259,063.05	0-5 Years
	RAS-13	L Street	West of Industrial Boulevard	Industrial Boulevard	South side improvements	$29,490.46	0-5 Years
	RAS-17	Main Street	I-5	I-805	Main Street Streetscape Master plan - done in phases with redevelopment. Curb Gutter Sidewalk Bike lanes	$190,418.84	0-10 Years
					TOTAL WESTERN FACILITIES	**$33,213,220**	

Appendix C: Project Summary Exhibits

Appendix C: Project Summary Exhibits Linked Table of Contents

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Facility28b Otay Lakes Road....3

Facility 56c Otay Valley Road....5

Facility58a Heritage Road....7

Facility 59c Proctor Valley Road....9

Facility 60a Main Street....11

Facility 60b Main Street....13

Facility 60c Main Street Bridge....15

Facility 60d Main Street....17

Facility 64 Hunte Parkway....19

Facility 67/68a Main Street and Otay Valley Road SR 125 Bridge and Ramps....21

Facility 67/68b Main Street and Otay Valley Road Pedestrian Bridge....23

Facility 70 Discovery Falls....25

Facility 71 Street "B"....27

Facility 72 Otay Valley Road....29

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Facility I-5-4 E Street Bridge....33

Facility I-5-10 J Street Undercrossing....35

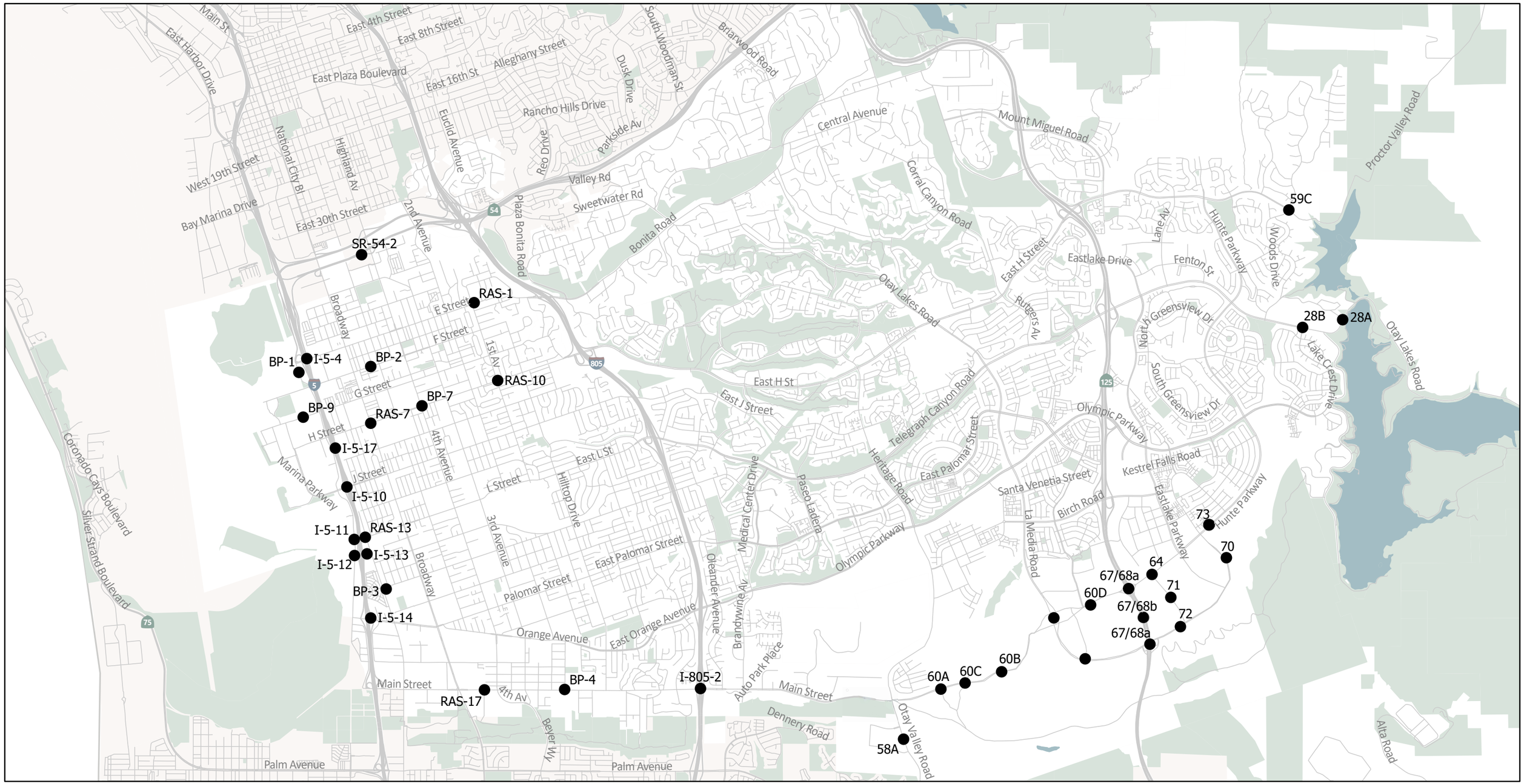
Facility I-5-11 L Street Bridge....37

Facility I-5-12 I-5/Bay Blvd SB Ramps....39

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Trip Project Summary

*Click on Facility number to view the project description and summary

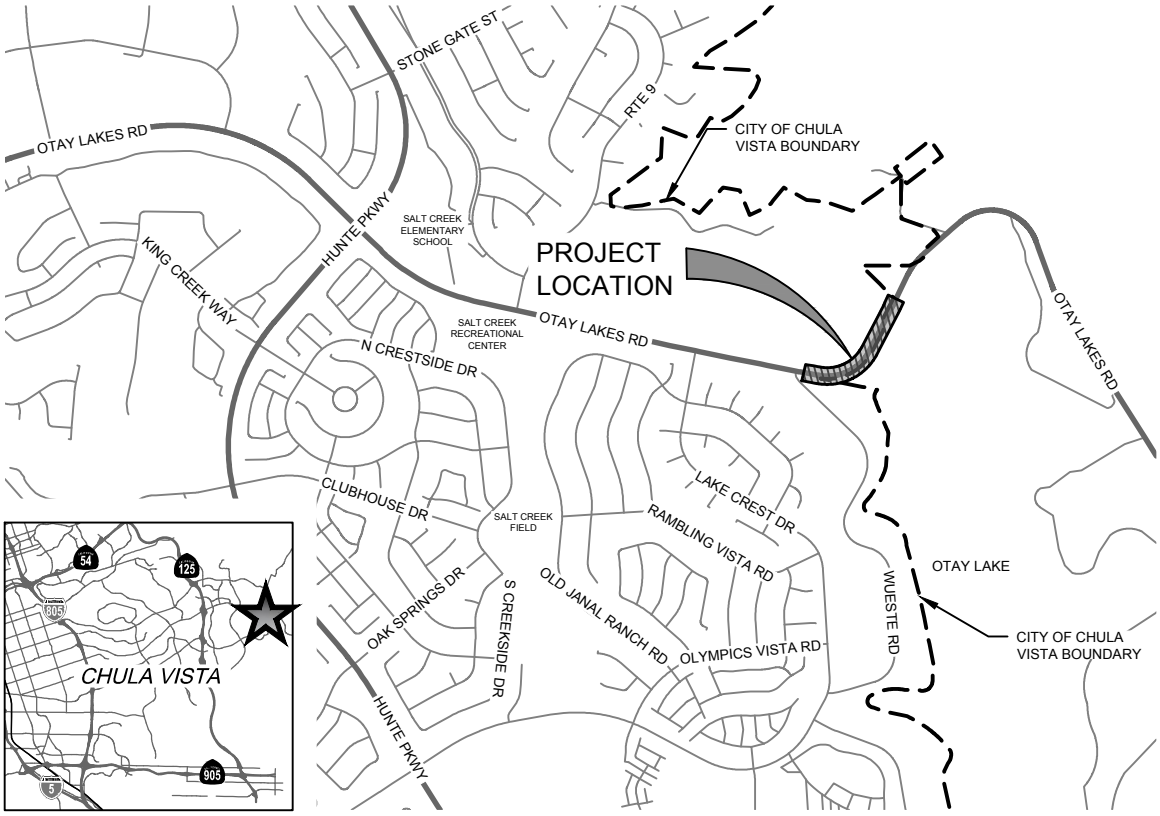


TRIP FACILITY NO. 28A

LIMIT: OTAY LAKES ROAD FROM WUESTE ROAD TO EASTERLY CITY BOUNDARY

DESCRIPTION: WIDEN TO BOULEVARD WITH INTERMITTENT TURN LANES

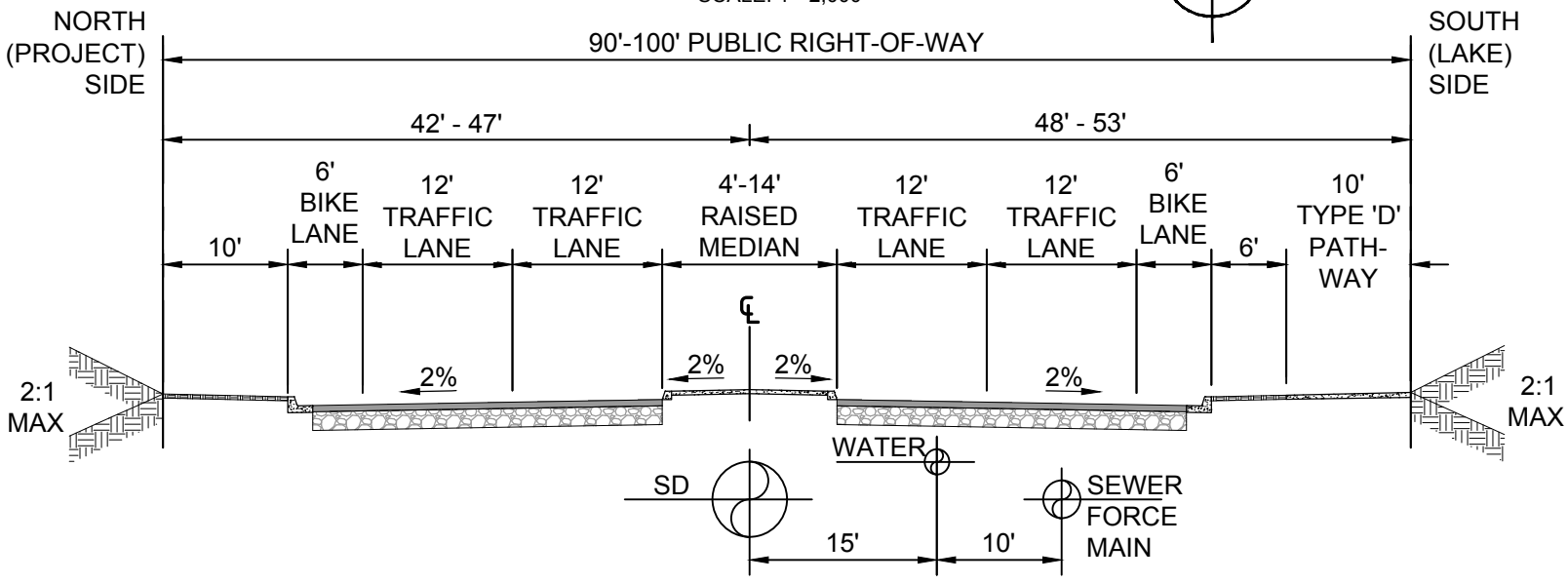
LENGTH: 1,398 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=2,000'

NORTH



BOULEVARD WITH INTERMITTENT TURN LANES
NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 28A

LIMIT: Otay Lakes Road from Wueste Road to Easterly City Boundary Line

DESCRIPTION: Widen to Boulevard with Intermittent Turn Lanes (COUNTY STANDARD)

LENGTH (LF): 1,398

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Otay Lakes Road (Wueste to Chula Vista East Border)	LS	1	$ 2,829,272	$ 2,829,272
				BASE CONSTRUCTION ESTIMATE	$ 2,829,272
				15% CONSTRUCTION CONTINGENCY	$ 424,391
				TOTAL HARD COST	**$ 3,253,663**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 325,366
Soils Engineering (2% of total hard costs)	$ 65,073
Landscape Architecture (2% of total hard costs)	$ 65,073
Surveying (2% of total hard costs)	$ 65,073
Utility Engineering/Coordination (1% of total hard costs)	$ 32,537
Inspection/Construction Management (10% of total hard cost)	$ 325,366
Developer Administration (1.75% of total hard costs)	$ 56,939
Design Services During Construction (2% of total hard costs)	$ 65,073
City Project Administration (2% of total hard costs)	$ 65,073
TOTAL SOFT COSTS	$ 1,065,575
SUBTOTAL PROJECT COST	$ 4,319,237
TOTAL PROJECT COST (see Note 2)	**$ 4,872,418**
FEE PROGRAM LIABILITY	**$ 4,872,418**

Notes:

(1) Base Construction Estimate per 2019 J.T. Kruer & Company Site Development Budget, indexed to July 2022 using the Construction Cost Index (CCI) Data.

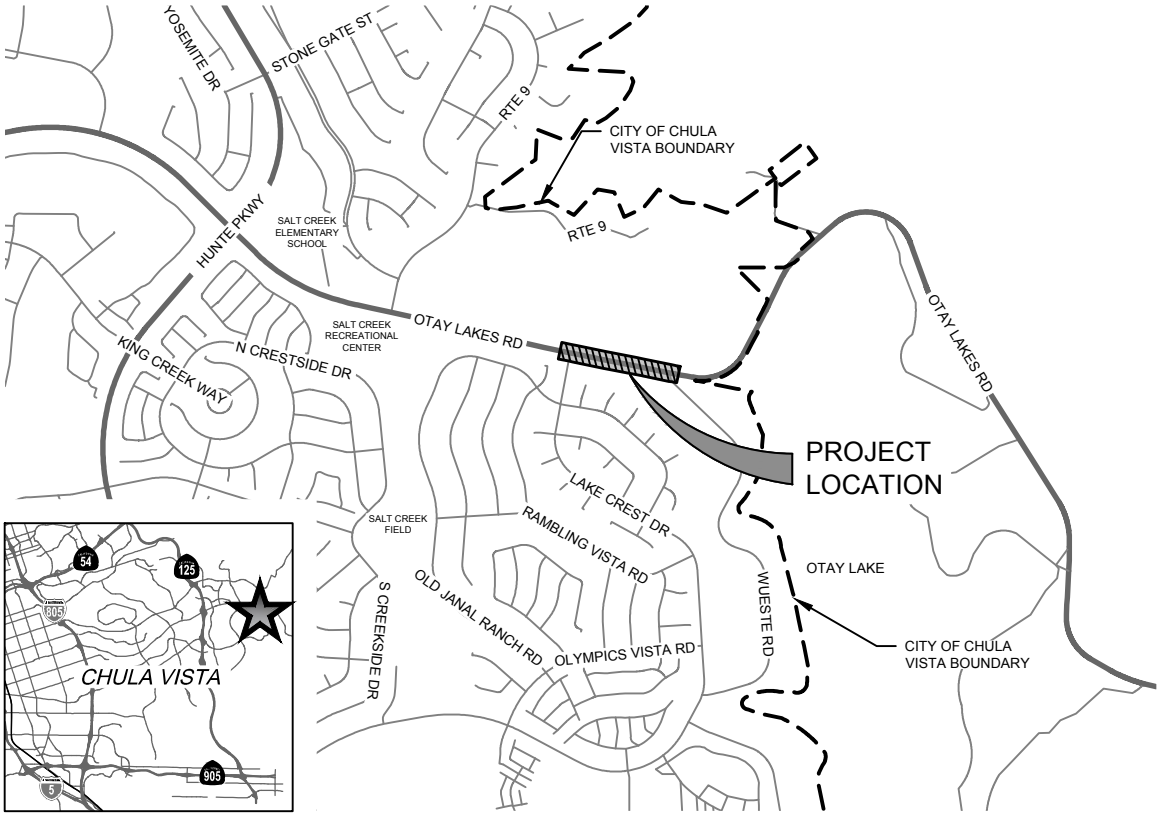
(2) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. 28B

LIMIT: OTAY LAKES ROAD FROM LAKE CREST DRIVE TO WUESTE ROAD

DESCRIPTION: WIDEN TO BOULEVARD WITH INTERMITTENT TURN LANES

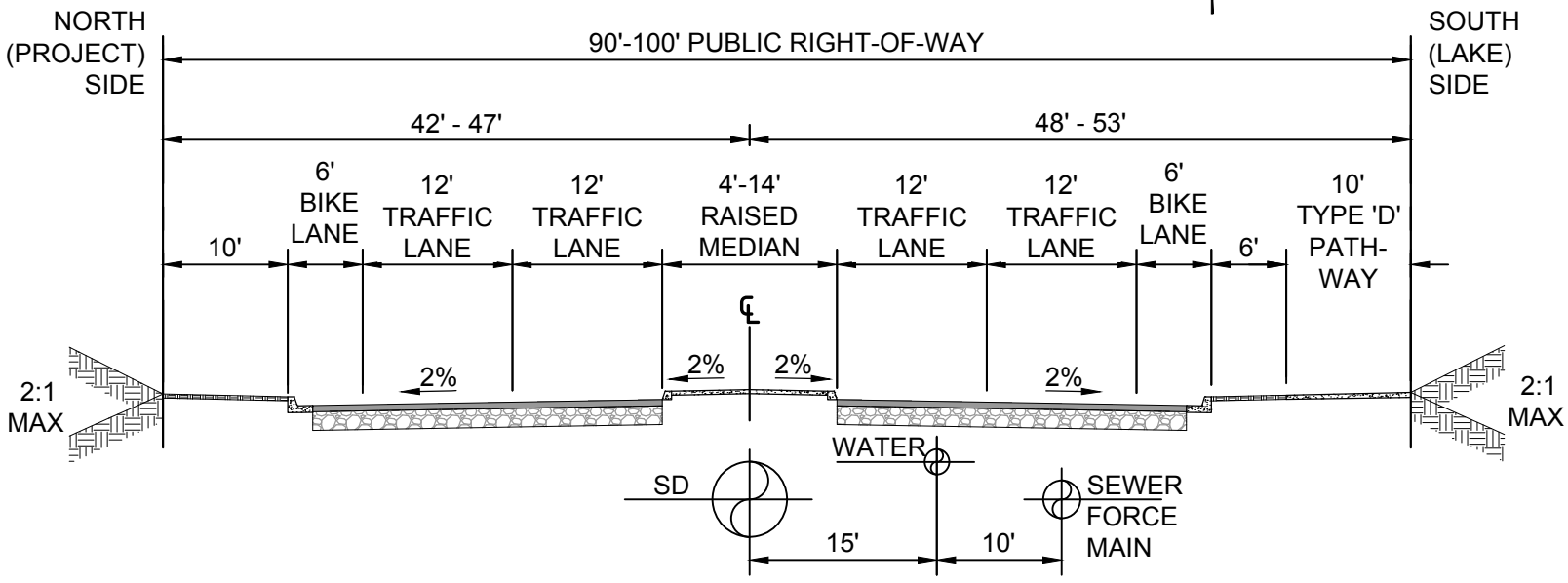
LENGTH: 1,082 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=2,000'

NORTH



BOULEVARD WITH INTERMITTENT TURN LANES

NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 28B

LIMIT: Otay Lakes Road from Lake Crest Drive to Wueste Road

DESCRIPTION: Widen to Boulevard with Intermittent Turn Lanes (COUNTY STANDARD)

LENGTH (LF): 1,082

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Otay Lakes Road (Lake Crest Drive to Wueste Road)	LS	1	$ 3,604,754	$ 3,604,754

BASE CONSTRUCTION ESTIMATE	$	3,604,754
15% CONSTRUCTION CONTINGENCY	$	540,713
TOTAL HARD COST	**$**	**4,145,467**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	414,547
Soils Engineering (2% of total hard costs)	$	82,909
Landscape Architecture (2% of total hard costs)	$	82,909
Surveying (2% of total hard costs)	$	82,909
Utility Engineering/Coordination (1% of total hard costs)	$	41,455
Inspection/Construction Management (10% of total hard cost)	$	414,547
Developer Administration (1.75% of total hard costs)	$	72,546
Design Services During Construction (2% of total hard costs)	$	82,909
City Project Administration (2% of total hard costs)	$	82,909
TOTAL SOFT COSTS	$	1,357,640
SUBTOTAL PROJECT COST	$	5,503,108
TOTAL PROJECT COST (see Note 2)	**$**	**6,207,911**
FEE PROGRAM LIABILITY	**$**	**6,207,912**

Notes:

(1) Base Construction Estimate per 2019 J.T. Kruer & Company Site Development Budget, indexed to July 2022 using the Construction Cost Index (CCI) Data.

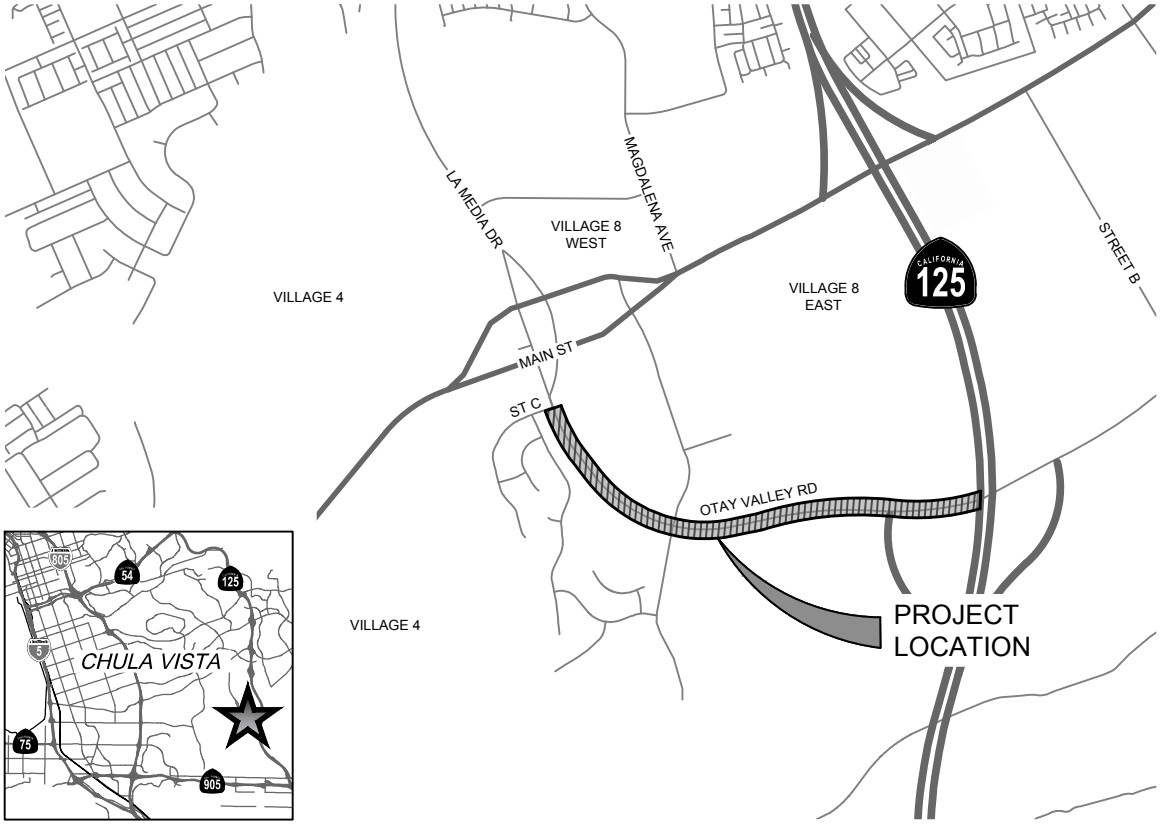
(2) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. 56C

LIMIT: OTAY VALLEY ROAD FROM LA MEDIA PARKWAY COUPLET SOUTH TERMINUS TO SR-125 RIGHT OF WAY

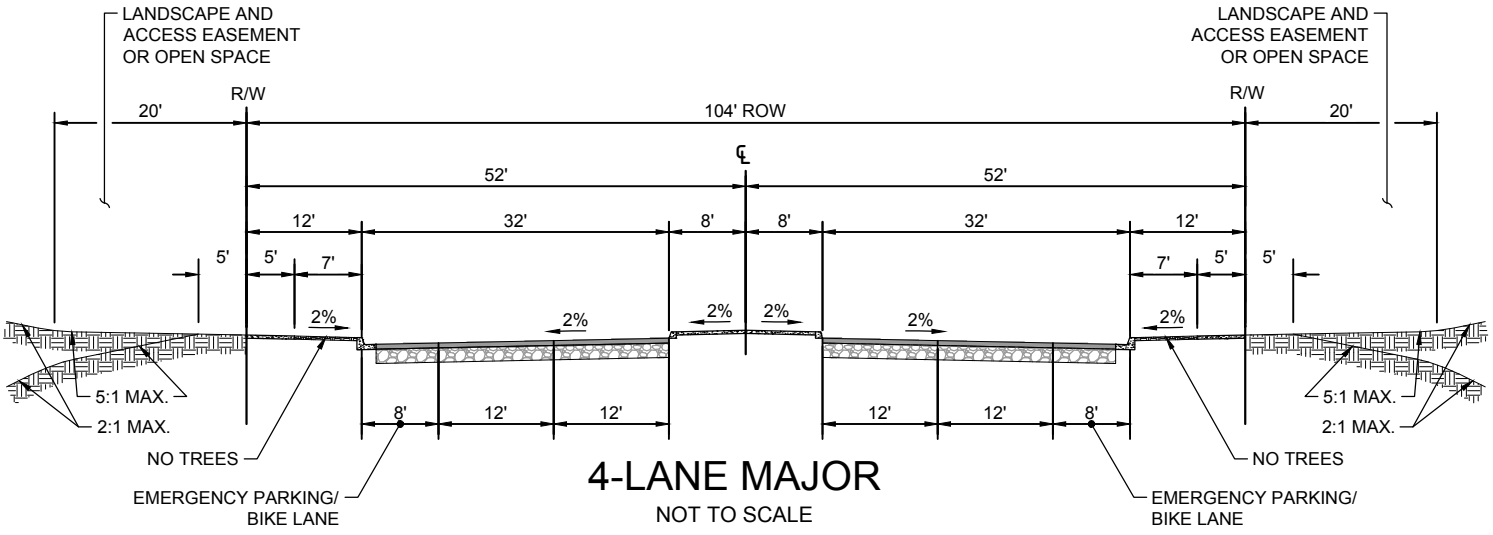
DESCRIPTION: CONSTRUCT 4-LANE MAJOR ARTERIAL

LENGTH: 4,900 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=2,000'



4-LANE MAJOR
NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 56C

LIMIT: Otay Valley Road from La Media Parkway Couplet South Terminus to SR-125 Right-of-Way

DESCRIPTION: Construct 4-Lane Major Arterial

LENGTH (LF): 4,900

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Earthwork	LF	4,900	$ 494.00	$ 2,420,600
2	Surface Improvements	LF	4,900	$ 811.00	$ 3,973,900
3	Drainage Items	LF	4,900	$ 369.00	$ 1,808,100
4	Landscape & Irrigation	LF	4,900	$ 144.00	$ 705,600
5	Lighting and Electrical	LF	4,900	$ 145.00	$ 710,500
6	Traffic Signals	EA	1	$ 559,337.00	$ 559,337

BASE CONSTRUCTION ESTIMATE	$ 10,178,037
15% CONSTRUCTION CONTINGENCY	$ 1,526,706
TOTAL HARD COST	**$ 11,704,743**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 1,170,474
Soils Engineering (15% of earthwork costs)	$ 363,090
Landscape Architecture (10% of landscaping costs)	$ 70,560
Surveying (2% of total hard costs)	$ 234,095
Utility Engineering/Coordination (3% of eligible dry utilities)	$ 4,745
Inspection/Construction Management (10% of total hard cost)	$ 1,170,474
Developer Administration (1.75% of total hard costs)	$ 204,833
Design Services During Construction (2% of total hard costs)	$ 234,095
City Project Administration (2% of total hard costs)	$ 234,095

TOTAL SOFT COSTS	$ 3,686,461
SUBTOTAL PROJECT COST	$ 15,391,204
TOTAL PROJECT COST (see Note 4)	**$ 17,362,414**
FEE PROGRAM LIABILITY	**$ 4,340,603**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) The above costs are based on the 1/4 mile cost of a new 4-Lane Major Arterial facility, factored to the length of this facility shown above.

(3) For specific unit costs, see Base Unit Cost List.

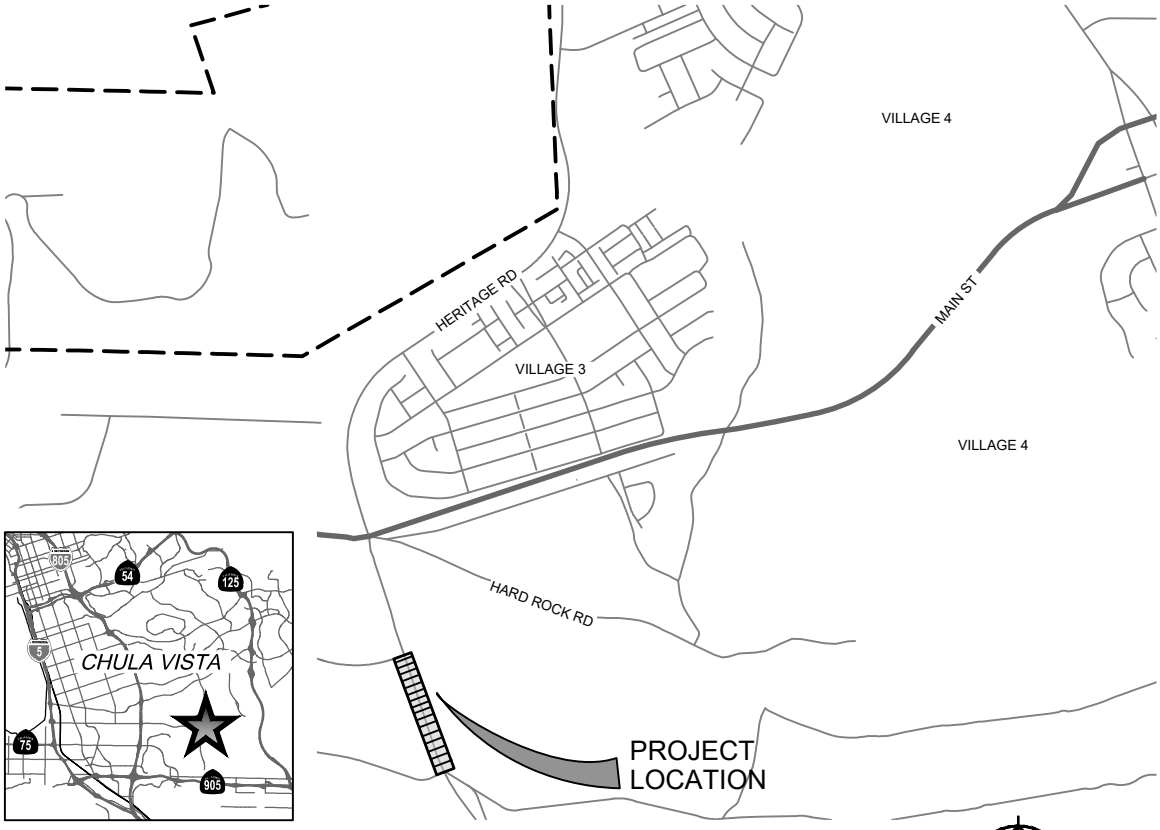
(4) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. 58A

LIMIT: HERITAGE ROAD FROM ENTERTAINMENT CIRCLE TO SOUTHERLY CITY BOUNDARY

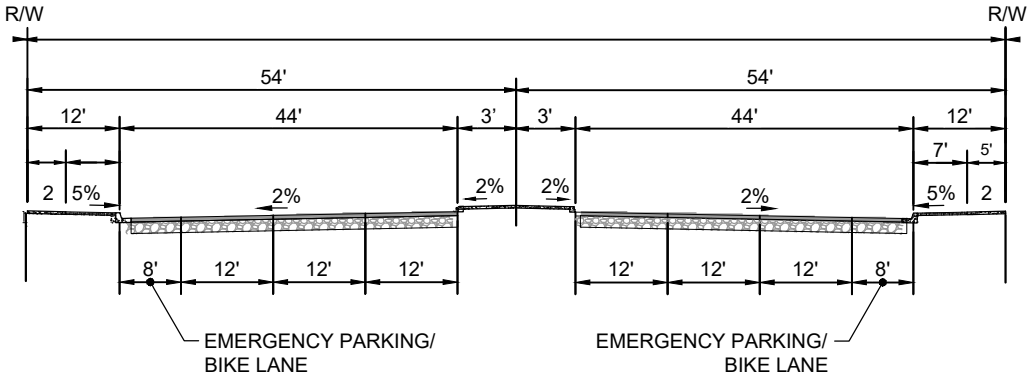
DESCRIPTION: CONSTRUCT 6-LANE PRIME ARTERIAL

LENGTH: 3,000 ft.



LOCATION MAP

SCALE: 1"=3,000'



6-LANE PRIME

NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 58A

LIMIT: Entertainment Circle North to Southerly City Boundary

DESCRIPTION: Construct 6-Lane Prime Arterial

LENGTH (LF): 3,000

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Earthwork	LF	3,000	$ 608.00	$ 1,824,000
2	Drainage	LF	3,000	$ 454.00	$ 1,362,000
3	Surface Improvements	LF	3,000	$ 1,118.00	$ 3,354,000
4	Lighting and Electrical	LF	3,000	$ 142.00	$ 426,000
5	Landscape & Irrigation	LF	3,000	$ 144.00	$ 432,000

BASE CONSTRUCTION ESTIMATE	$ 7,398,000
15% CONSTRUCTION CONTINGENCY	$ 1,109,700
TOTAL HARD COST	**$ 8,507,700**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 850,770
Soils Engineering (15% of earthwork costs)	$ 273,600
Landscape Architecture (10% of landscaping costs)	$ 43,200
Surveying (2% of total hard costs)	$ 170,154
Utility Engineering/Coordination (3% of eligible dry utilities)	$ 12,780
Inspection/Construction Management (10% of total hard cost)	$ 850,770
Developer Administration (1.75% of total hard costs)	$ 148,885
Design Services During Construction (2% of total hard costs)	$ 170,154
City Project Administration (2% of total hard costs)	$ 170,154
TOTAL SOFT COSTS	$ 2,690,467
SUBTOTAL PROJECT COST	$ 11,198,167
TOTAL PROJECT COST (see Note 4)	**$ 12,632,359**
FEE PROGRAM LIABILITY	**$ 4,340,603**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) The above costs are based on the 1/4 mile cost of a new 6-Lane Prime Arterial facility, factored to the length of this facility shown above.

(3) For specific unit costs, see Base Unit Cost List.

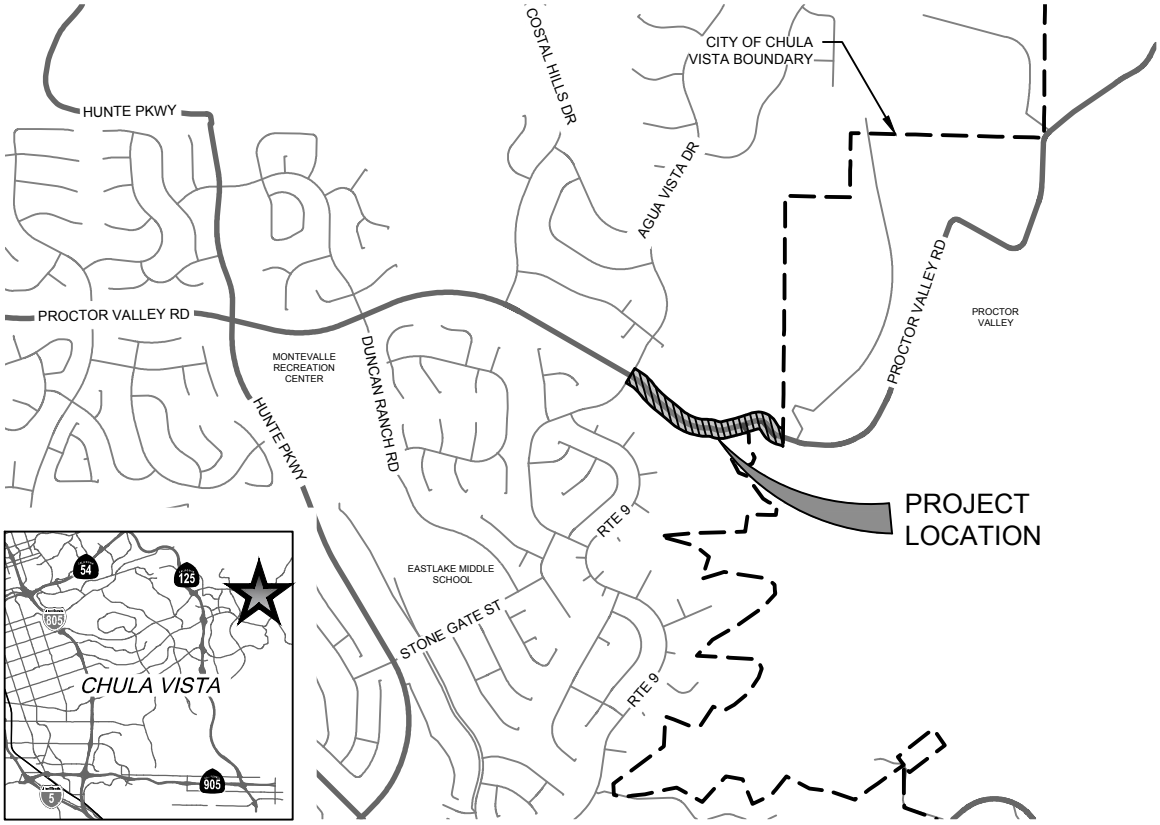
(4) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. 59C

LIMIT: PROCTOR VALLEY RD FROM AGUA VISTA DR TO E CITY BOUNDARY

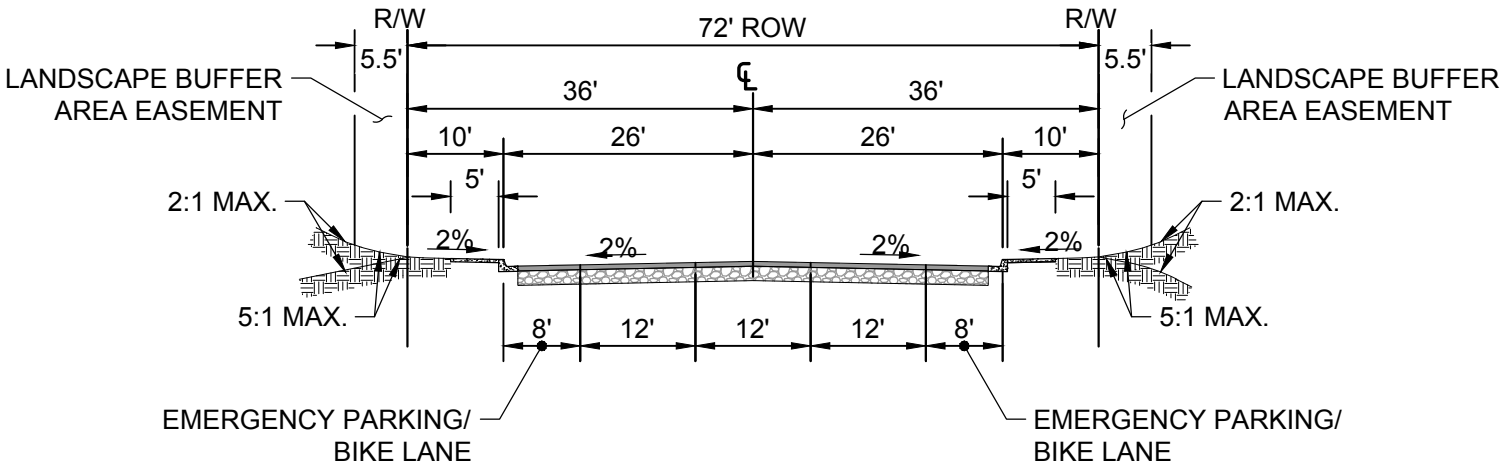
DESCRIPTION: WIDEN TO CLASS II COLLECTOR W/ CONTIGUOUS SIDEWALK

LENGTH: 1,750 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=2,000'



CLASS II COLLECTOR W/ CONTIGUOUS SIDEWALK
NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 59C

LIMIT: Proctor Valley Rd from Agua Vista Dr to Easterly City Boundary
DESCRIPTION: Widen to Class II Collector with Contiguous Sidewalk
LENGTH (LF): 1,750

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Earthwork	LF	1,750	$ 546.00	$ 955,500
2	Surface Improvements	LF	1,750	$ 749.00	$ 1,310,750
3	Drainage Items	LF	1,750	$ 371.00	$ 649,250
4	Landscape & Irrigation	LF	1,750	$ 90.00	$ 157,500
5	Lighting and Electrical	LF	1,750	$ 146.00	$ 255,500
6	Traffic Signals	EA	0	$ -	$ -

BASE CONSTRUCTION ESTIMATE	$	3,328,500
15% CONSTRUCTION CONTINGENCY	$	499,275
TOTAL HARD COST	**$**	**3,827,775**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	382,778
Soils Engineering (15% of earthwork costs)	$	143,325
Landscape Architecture (10% of landscaping costs)	$	15,750
Surveying (2% of total hard costs)	$	76,556
Utility Engineering/Coordination (3% of eligible dry utilities)	$	1,695
Inspection/Construction Management (10% of total hard cost)	$	382,778
Developer Administration (1.75% of total hard costs)	$	66,986
Design Services During Construction (2% of total hard costs)	$	76,556
City Project Administration (2% of total hard costs)	$	76,556

TOTAL SOFT COSTS	$	1,222,977
SUBTOTAL PROJECT COST	$	5,050,752
TOTAL PROJECT COST (see Note 4)	**$**	**5,697,621**
FEE PROGRAM LIABILITY	**$**	**5,697,621**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) The above costs are based on the 1/4 mile cost of widening the existing facility to a Class II Collector with Contiguous Sidewalk, factored to the length of this facility shown above.

(3) For specific unit costs, see Base Unit Cost List.

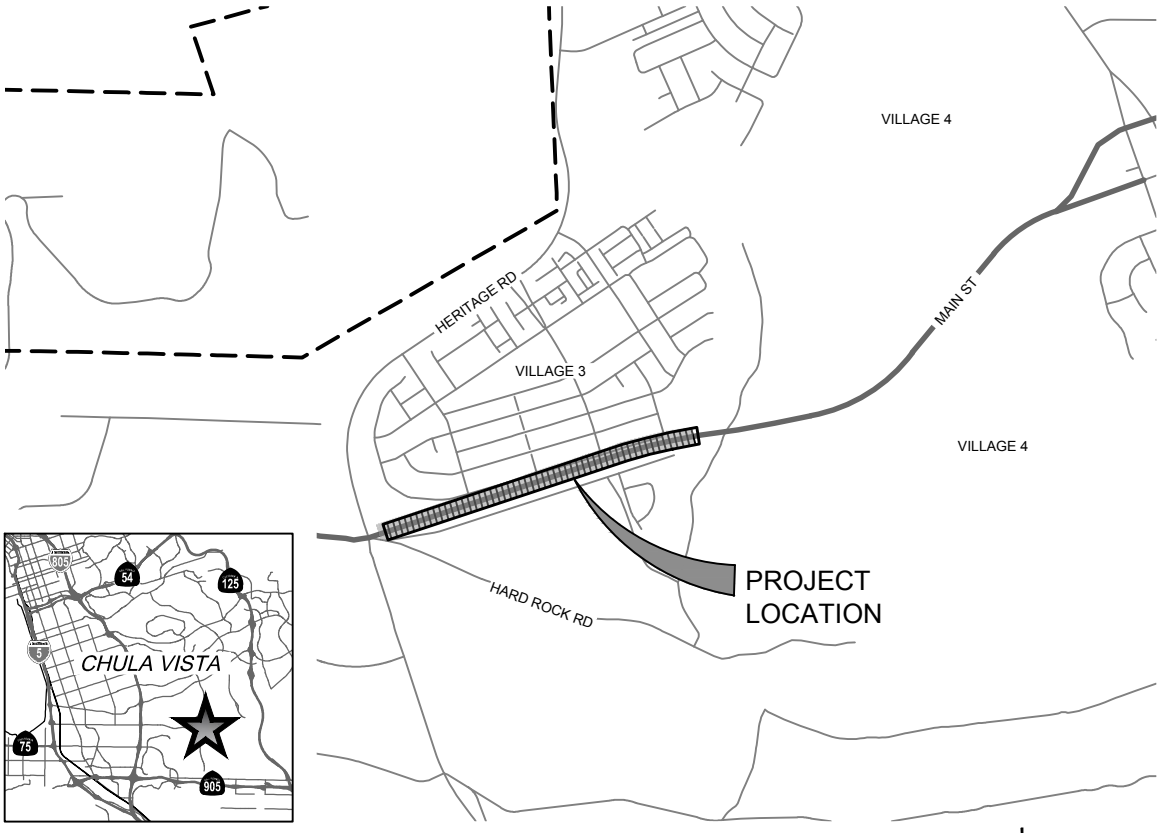
(4) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. 60A

LIMIT: MAIN STREET FROM HERITAGE ROAD TO WOLF CANYON BRIDGE WEST ABUTMENT

DESCRIPTION: CONSTRUCT 6-LANE PRIME ARTERIAL

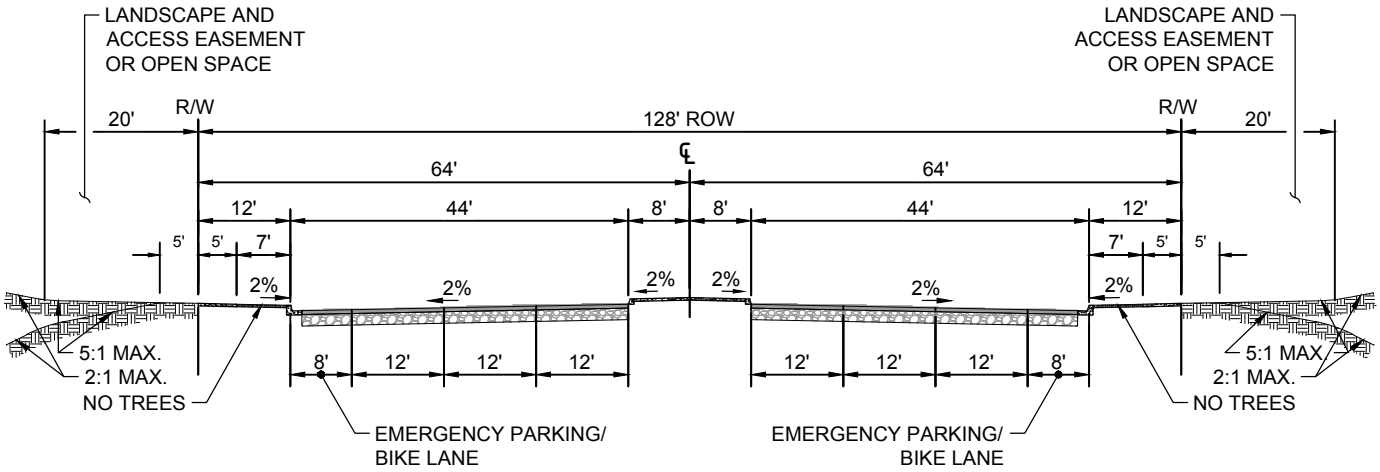
LENGTH: 4,330 ft.



LOCATION MAP

SCALE: 1"=2,000'

NORTH



6-LANE PRIME

NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 60A

LIMIT: Main Street from Heritage Road of Wolf Canyon Bridge West Abutment

DESCRIPTION: Construct 6-Lane Prime Arterial

LENGTH (LF): 4,330

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Earthwork	LF	4,330	$ 608.00	$ 2,632,640
2	Surface Improvements	LF	4,330	$ 1,118.00	$ 4,840,940
3	Drainage Items	LF	4,330	$ 454.00	$ 1,965,820
4	Landscape & Irrigation	LF	4,330	$ 144.00	$ 623,520
5	Lighting and Electrical	LF	4,330	$ 142.00	$ 614,860
6	Traffic Signals	EA	1	$ 528,636.00	$ 528,636

BASE CONSTRUCTION ESTIMATE	$ 11,206,416
15% CONSTRUCTION CONTINGENCY	$ 1,680,962
TOTAL HARD COST	**$ 12,887,378**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 1,288,738
Soils Engineering (15% of earthwork costs)	$ 394,896
Landscape Architecture (10% of landscaping costs)	$ 62,352
Surveying (2% of total hard costs)	$ 257,748
Utility Engineering/Coordination (3% of eligible dry utilities)	$ 4,193
Inspection/Construction Management (10% of total hard cost)	$ 1,288,738
Developer Administration (1.75% of total hard costs)	$ 225,529
Design Services During Construction (2% of total hard costs)	$ 257,748
City Project Administration (2% of total hard costs)	$ 257,748
TOTAL SOFT COSTS	$ 4,037,689
SUBTOTAL PROJECT COST	$ 16,925,067
TOTAL PROJECT COST (see Note 4)	**$ 19,092,725**
FEE PROGRAM LIABILITY	**$ 19,092,725**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) The above costs are based on the 1/4 mile cost of a new 6-Lane Prime Arterial facility, factored to the length of this facility shown above.

(3) For specific unit costs, see Base Unit Cost List.

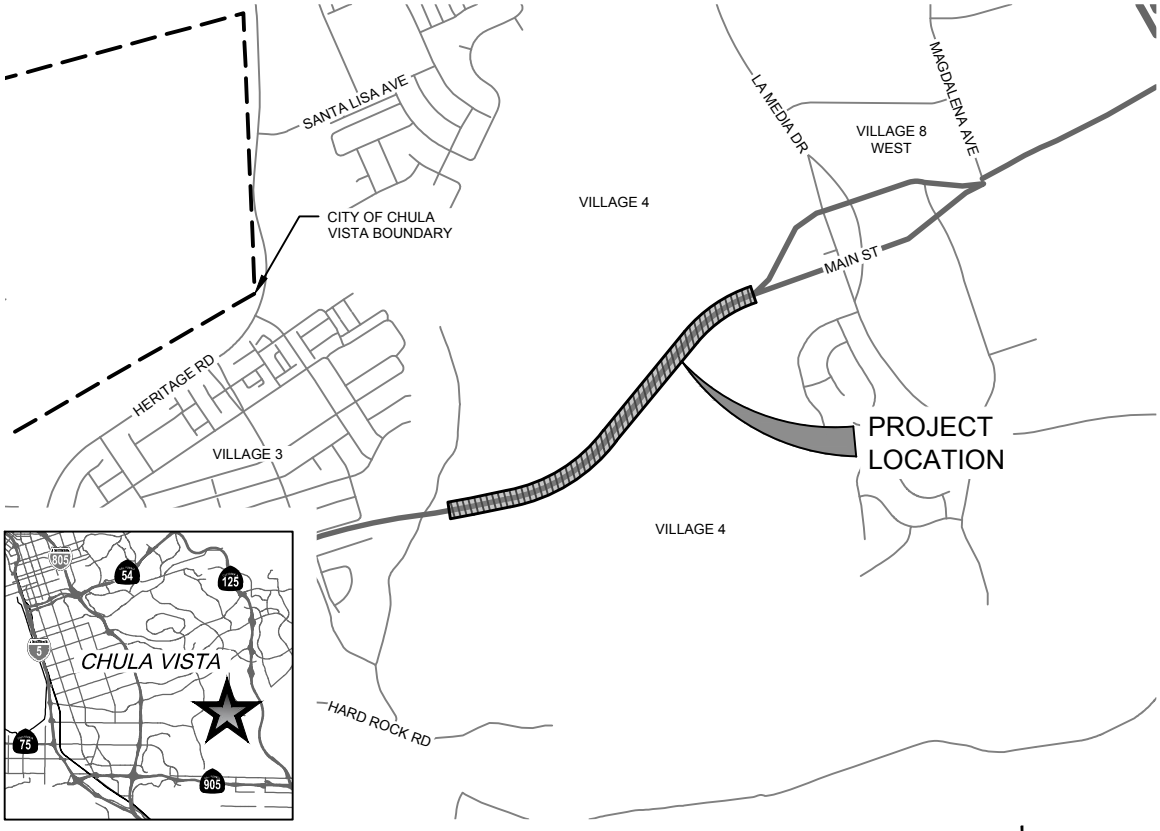
(4) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. 60B

LIMIT: MAIN STREET FROM WOLF CANYON BRIDGE EAST ABUTMENT TO WEST TERMINUS OF MAIN STREET COUPLET

DESCRIPTION: CONSTRUCT 6-LANE PRIME ARTERIAL

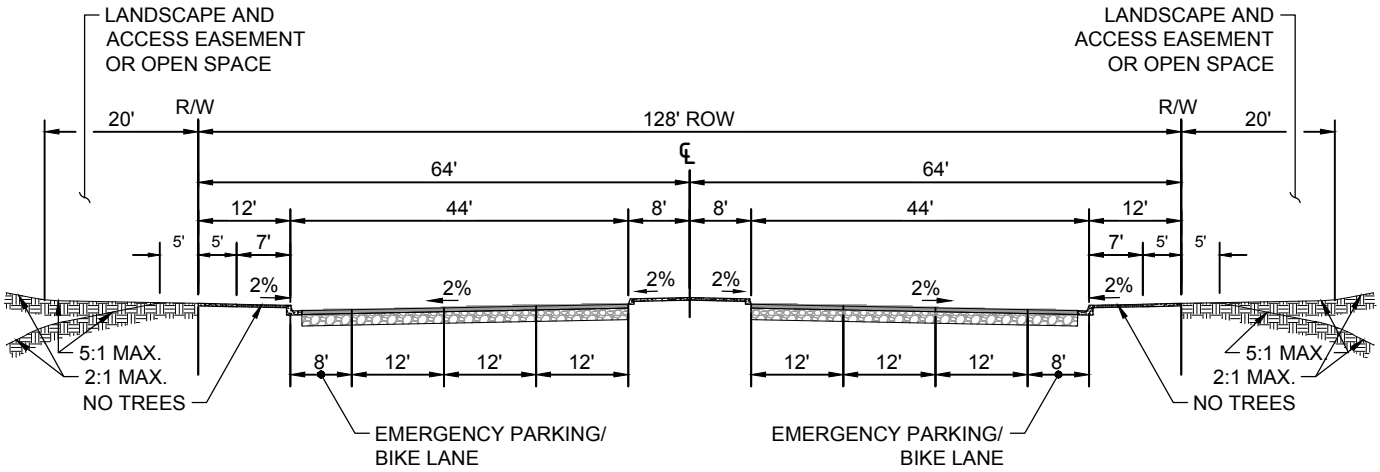
LENGTH: 4,880 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=2,000'

NORTH



6-LANE PRIME
NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 60B

LIMIT: Main Street from Wolf Canyon Bridge East Abutment to West Terminus of Main Street Couplet

DESCRIPTION: Construct 6-Lane Prime Arterial

LENGTH (LF): 4,880

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Earthwork	LF	4,880	$ 608.00	$ 2,967,040
2	Surface Improvements	LF	4,880	$ 1,118.00	$ 5,455,840
3	Drainage Items	LF	4,880	$ 454.00	$ 2,215,520
4	Landscape & Irrigation	LF	4,880	$ 144.00	$ 702,720
5	Lighting and Electrical	LF	4,880	$ 142.00	$ 692,960
6	Traffic Signals	EA	1	$ 595,784.00	$ 595,784

BASE CONSTRUCTION ESTIMATE	$ 12,629,864
15% CONSTRUCTION CONTINGENCY	$ 1,894,480
TOTAL HARD COST	**$ 14,524,344**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 1,452,434
Soils Engineering (15% of earthwork costs)	$ 445,056
Landscape Architecture (10% of landscaping costs)	$ 70,272
Surveying (2% of total hard costs)	$ 290,487
Utility Engineering/Coordination (3% of eligible dry utilities)	$ 4,726
Inspection/Construction Management (10% of total hard cost)	$ 1,452,434
Developer Administration (1.75% of total hard costs)	$ 254,176
Design Services During Construction (2% of total hard costs)	$ 290,487
City Project Administration (2% of total hard costs)	$ 290,487

TOTAL SOFT COSTS	$ 4,550,559
SUBTOTAL PROJECT COST	$ 19,074,903
TOTAL PROJECT COST (see Note 4)	**$ 21,517,898**
FEE PROGRAM LIABILITY	**$ 21,517,898**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) The above costs are based on the 1/4 mile cost of a new 6-Lane Prime Arterial facility, factored to the length of this facility shown above.

(3) For specific unit costs, see Base Unit Cost List.

(4) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

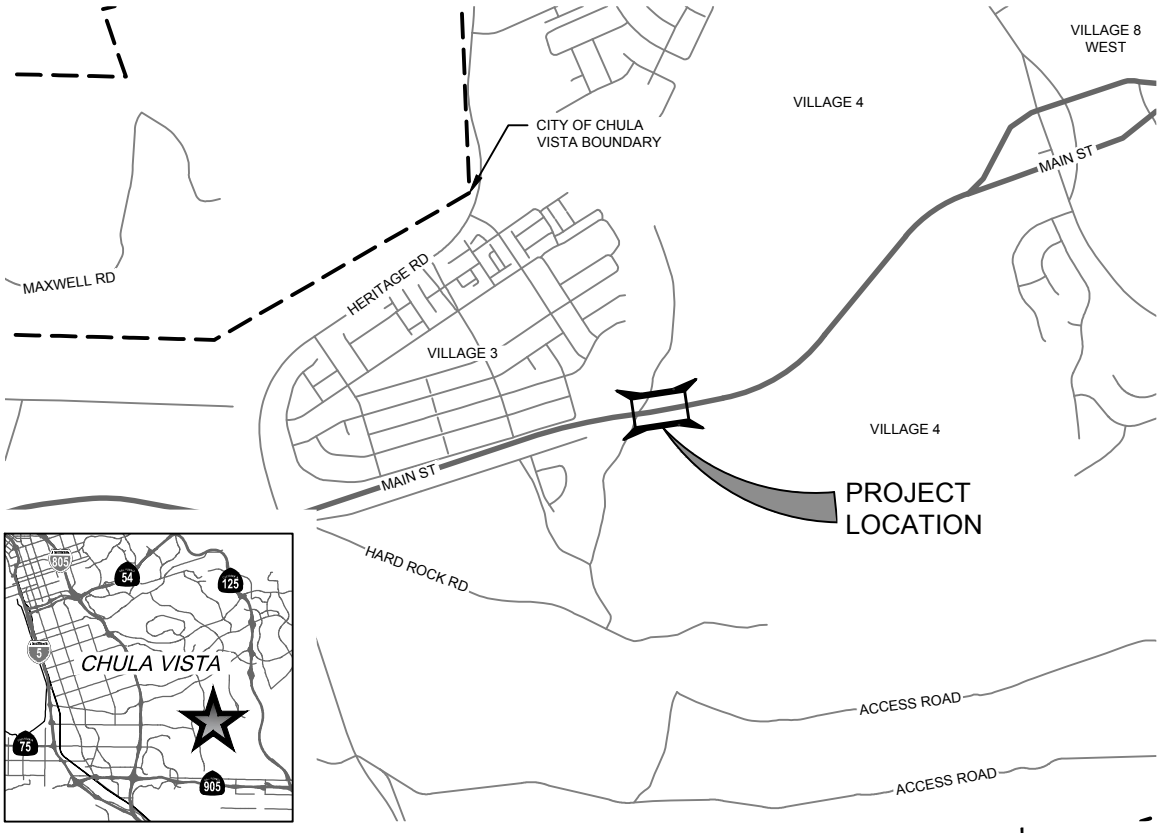
TRIP FACILITY NO. 60C

LIMIT: MAIN STREET BRIDGE OVERCROSSING WOLF CANYON

DESCRIPTION: CONSTRUCT 6-LANE BRIDGE

LENGTH: 1,225 ft.

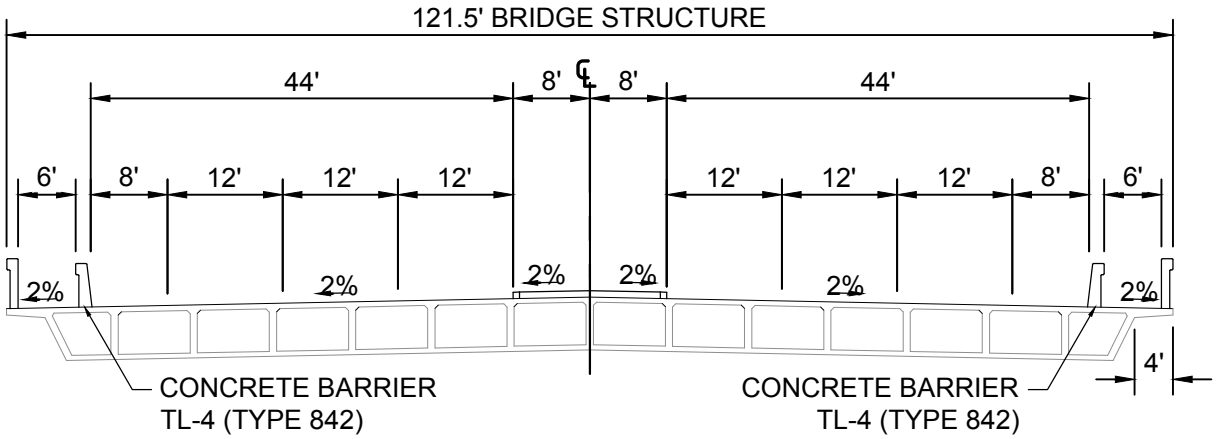
WIDTH: 121.5 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=2,000'

NORTH



6-LANE BRIDGE
NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 60C

LIMIT: Main Street Bridge Overcrossing Wolf Canyon
DESCRIPTION: Construct 6-Lane Bridge
LENGTH (LF): 1,225
WIDTH (LF): 121.5

CITY OF CHULA VISTA

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Cast-in-Place Prestressed Concrete Box Girder Bridge	SF	148,838	$ 450.00	$ 66,977,100

BASE CONSTRUCTION ESTIMATE	$ 66,977,100
15% CONSTRUCTION CONTINGENCY	$ 10,046,565
TOTAL HARD COST	**$ 77,023,665**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 7,702,367
Soils Engineering (2% of total hard costs)	$ 1,540,473
Surveying (2% of total hard costs)	$ 1,540,473
Inspection/Construction Management (10% of total hard cost)	$ 7,702,367
Developer Administration (1.75% of total hard costs)	$ 1,347,914
Design Services During Construction (2% of total hard costs)	$ 1,540,473
City Project Administration (2% of total hard costs)	$ 1,540,473
TOTAL SOFT COSTS	$ 22,914,540
SUBTOTAL PROJECT COST	$ 99,938,205
TOTAL PROJECT COST (see Note 3)	**$ 112,737,671**
FEE PROGRAM LIABILITY	**$ 112,737,671**

Notes:

(1) The source of this estimate is the Kimley-Horn, Chula Vista Bridge Costs dated May 17, 2022.

(2) 2019 Caltrans Comparative Bridge Costs were escalated by 4% to obtain a 2022 square foot unit cost.

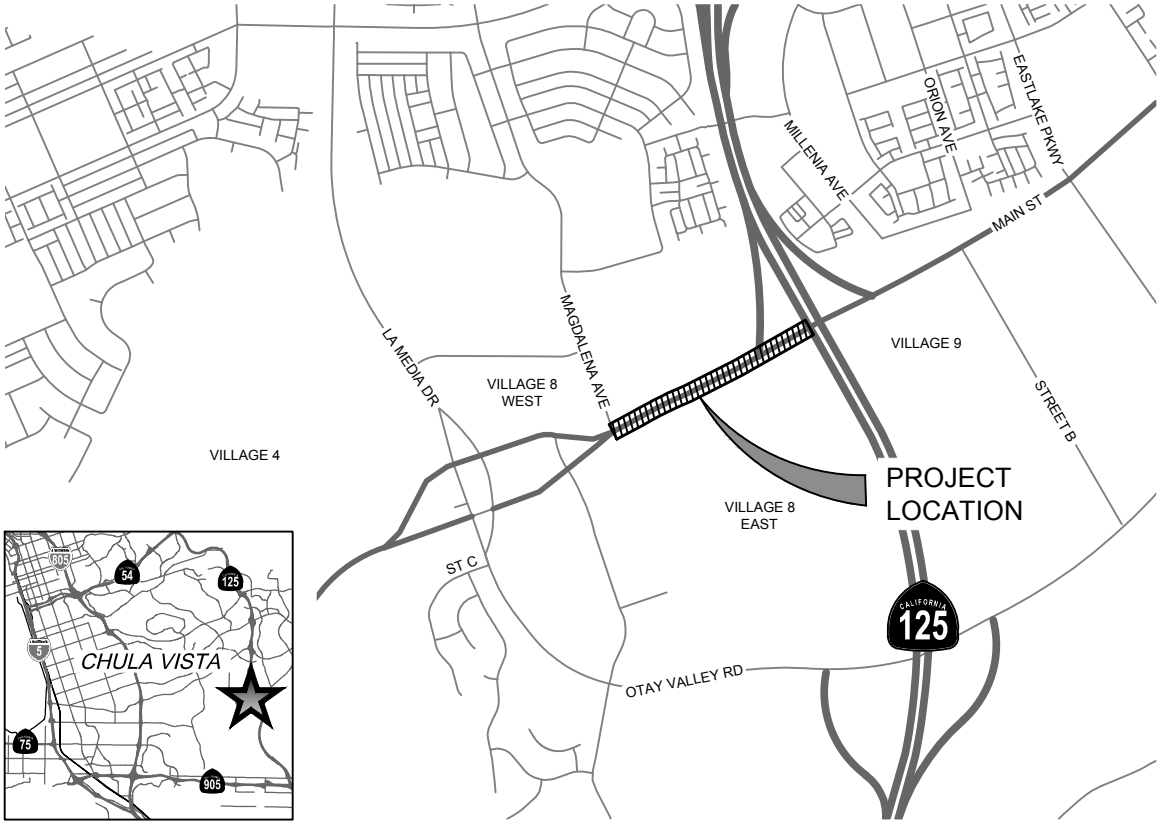
(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. 60D

LIMIT: MAIN STREET FROM MAIN STREET COUPLET EAST TERMINUS TO SR-125 RIGHT OF WAY

DESCRIPTION: CONSTRUCT 6-LANE PRIME ARTERIAL

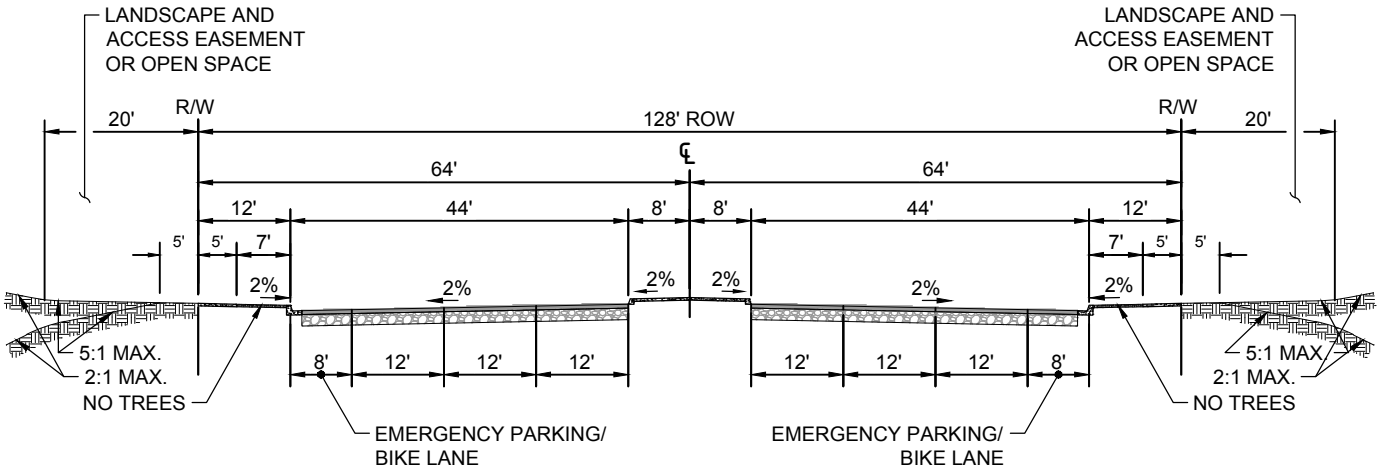
LENGTH: 1,900 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=2,000'

NORTH



6-LANE PRIME
NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 60D

LIMIT: Main Street from Main Street Couplet East Terminus to SR-125 Right-of-Way

DESCRIPTION: Construct 6-Lane Prime Arterial

LENGTH (LF): 1,900

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Earthwork	LF	1,900	$ 608.00	$ 1,155,200
2	Surface Improvements	LF	1,900	$ 1,118.00	$ 2,124,200
3	Drainage Items	LF	1,900	$ 454.00	$ 862,600
4	Landscape & Irrigation	LF	1,900	$ 144.00	$ 273,600
5	Lighting and Electrical	LF	1,900	$ 142.00	$ 269,800
6	Traffic Signals	EA	1	$ 231,965.00	$ 231,965

BASE CONSTRUCTION ESTIMATE	$	4,917,365
15% CONSTRUCTION CONTINGENCY	$	737,605
TOTAL HARD COST	**$**	**5,654,970**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	565,497
Soils Engineering (15% of earthwork costs)	$	173,280
Landscape Architecture (10% of landscaping costs)	$	27,360
Surveying (2% of total hard costs)	$	113,099
Utility Engineering/Coordination (3% of eligible dry utilities)	$	1,840
Inspection/Construction Management (10% of total hard cost)	$	565,497
Developer Administration (1.75% of total hard costs)	$	98,962
Design Services During Construction (2% of total hard costs)	$	113,099
City Project Administration (2% of total hard costs)	$	113,099
TOTAL SOFT COSTS	$	1,771,734
SUBTOTAL PROJECT COST	$	7,426,704
TOTAL PROJECT COST (see Note 4)	**$**	**8,377,870**
FEE PROGRAM LIABILITY	**$**	**8,377,870**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) The above costs are based on the 1/4 mile cost of a new 6-Lane Prime Arterial facility, factored to the length of this facility shown above.

(3) For specific unit costs, see Base Unit Cost List.

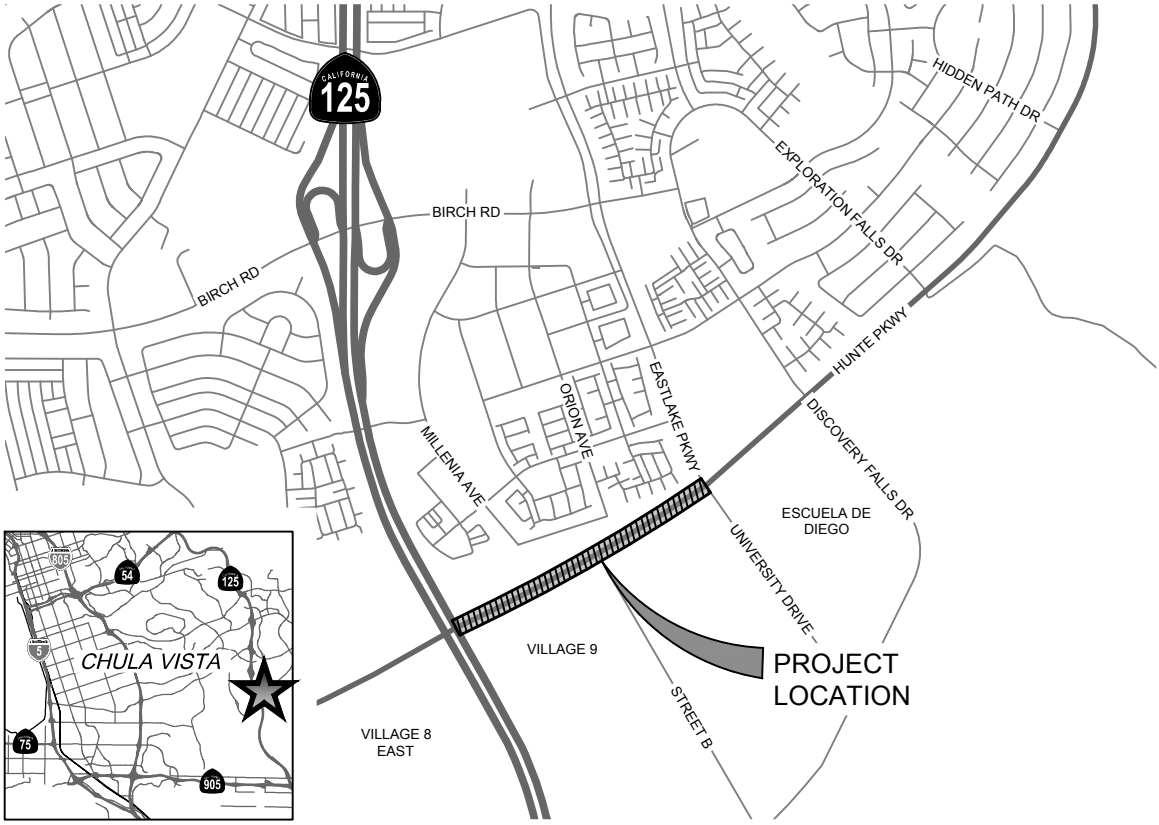
(4) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. 64

LIMIT: HUNTE PARKWAY FROM SR-125 TO EASTLAKE PARKWAY

DESCRIPTION: CONSTRUCT 6-LANE PRIME ARTERIAL

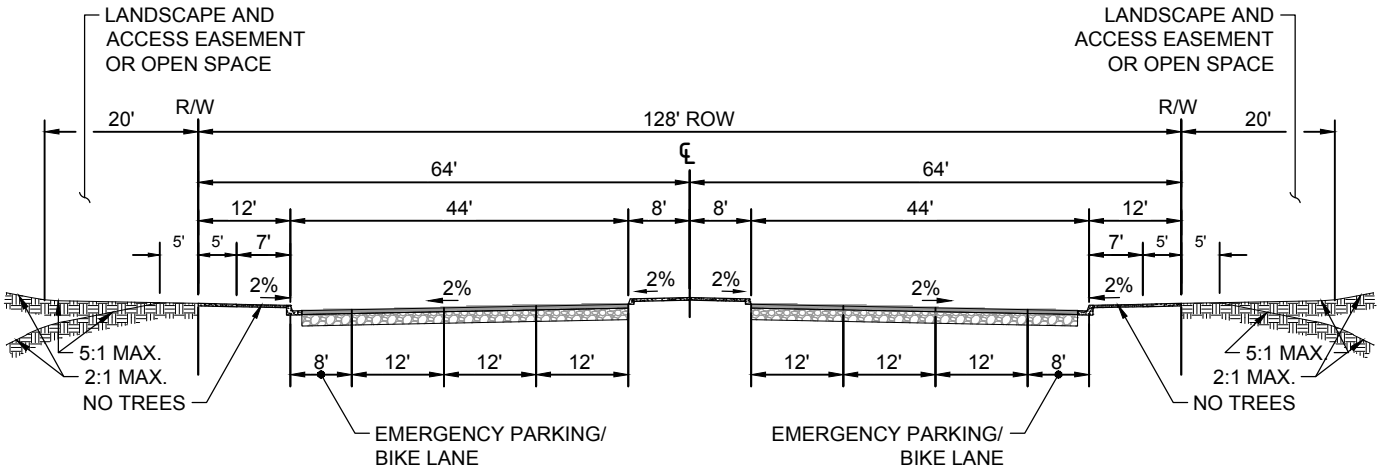
LENGTH: 2,700 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=2,000'

NORTH



6-LANE PRIME
NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 64

LIMIT: Hunte Parkway from SR-125 to Eastlake Parkway
DESCRIPTION: Construct 6-Lane Prime Arterial
LENGTH (LF): 2,700

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Earthwork	LF	2,700	$ 608.00	$ 1,641,600
2	Surface Improvements	LF	2,700	$ 1,118.00	$ 3,018,600
3	Drainage Items	LF	2,700	$ 454.00	$ 1,225,800
4	Landscape & Irrigation	LF	2,700	$ 144.00	$ 388,800
5	Lighting and Electrical	LF	2,700	$ 142.00	$ 383,400
6	Traffic Signals	EA	1	$ 329,635.00	$ 329,635

BASE CONSTRUCTION ESTIMATE	$ 6,987,835
15% CONSTRUCTION CONTINGENCY	$ 1,048,175
TOTAL HARD COST	**$ 8,036,010**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 803,601
Soils Engineering (15% of earthwork costs)	$ 246,240
Landscape Architecture (10% of landscaping costs)	$ 38,880
Surveying (2% of total hard costs)	$ 160,720
Utility Engineering/Coordination (3% of eligible dry utilities)	$ 2,615
Inspection/Construction Management (10% of total hard cost)	$ 803,601
Developer Administration (1.75% of total hard costs)	$ 140,630
Design Services During Construction (2% of total hard costs)	$ 160,720
City Project Administration (2% of total hard costs)	$ 160,720

TOTAL SOFT COSTS	$ 2,517,728
SUBTOTAL PROJECT COST	$ 10,553,738
TOTAL PROJECT COST (see Note 4)	**$ 11,905,395**
FEE PROGRAM LIABILITY	**$ 11,905,395**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) The above costs are based on the 1/4 mile cost of a new 6-Lane Prime Arterial facility, factored to the length of this facility shown above.

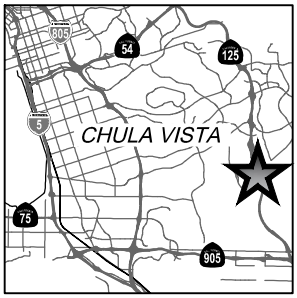
(3) For specific unit costs, see Base Unit Cost List.

(4) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. 67 & 68a

LIMIT: MAIN STREET AND OTAY VALLEY ROAD BRIDGE OVERCROSSING SR-125

DESCRIPTION: CONSTRUCT 4-LANE BRIDGE & 6-LANE BRIDGES W/ NB & SB RAMPS

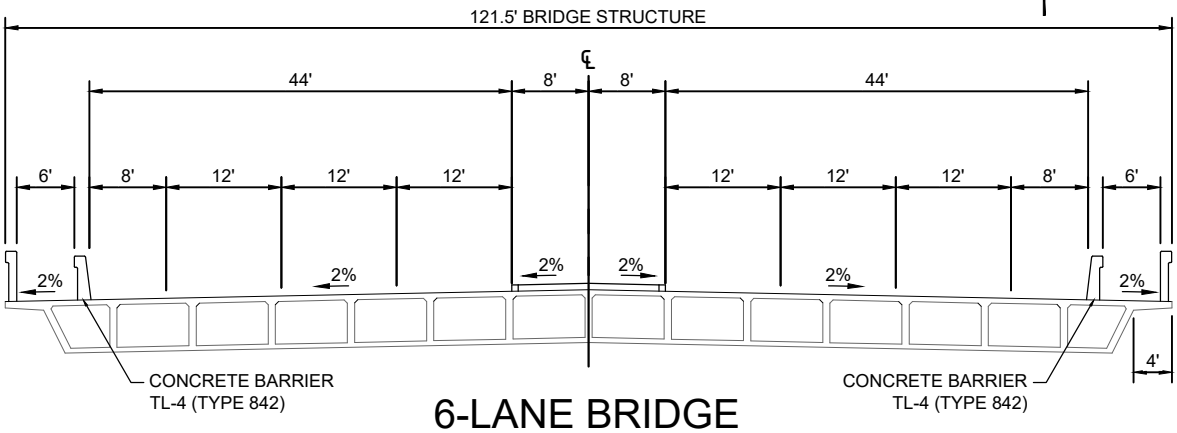


VICINITY MAP

SCALE: 1"=35,000'

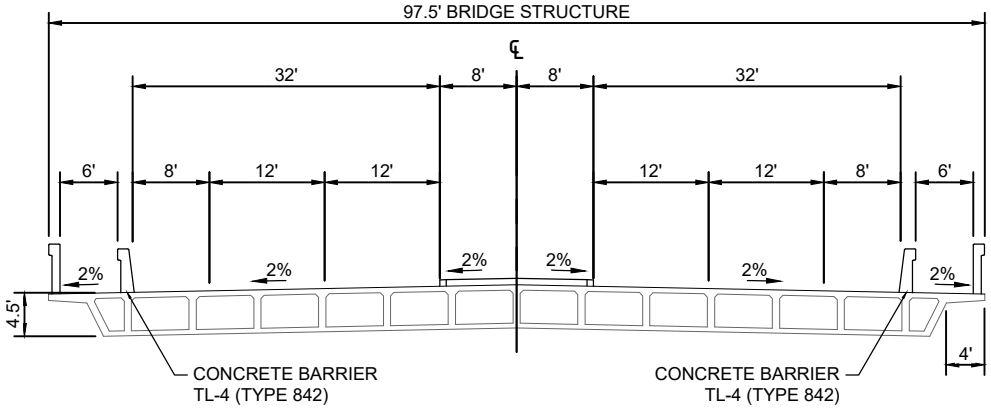
LOCATION MAP

SCALE: 1"=3,000'



6-LANE BRIDGE

NOT TO SCALE



4-LANE BRIDGE

NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 67 & 68a

LIMIT: Main Street and Otay Valley Road Bridge Overcrossing SR-125 & Ramps

DESCRIPTION: Construct 4-Lane & 6-Lane Bridges with NB & SB Ramps

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Couplet/Parallel Street System Interchange	LS	1	$ 61,112,584	$ 61,112,584

BASE CONSTRUCTION ESTIMATE $ 61,112,584

TOTAL HARD COST **$ 61,112,584**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 6,111,258
Soils Engineering (2% of total hard costs)	$ 1,222,252
Landscape Architecture (2% of total hard costs)	$ 1,222,252
Surveying (2% of total hard costs)	$ 1,222,252
Utility Engineering/Coordination (1% of total hard costs)	$ 611,126
Inspection/Construction Management (10% of total hard cost)	$ 6,111,258
Developer Administration (1.75% of total hard costs)	$ 1,069,470
Design Services During Construction (2% of total hard costs)	$ 1,222,252
City Project Administration (2% of total hard costs)	$ 1,222,252

TOTAL SOFT COSTS $ 20,014,371

SUBTOTAL PROJECT COST $ 81,126,955

TOTAL PROJECT COST (see Note 3) $ 91,517,193

FEE PROGRAM LIABILITY $ 91,517,192

(1) Caltrans PSR March 2022, Alternate B Number 11-21000025, referenced for cost of NB & SB interchange ramps.

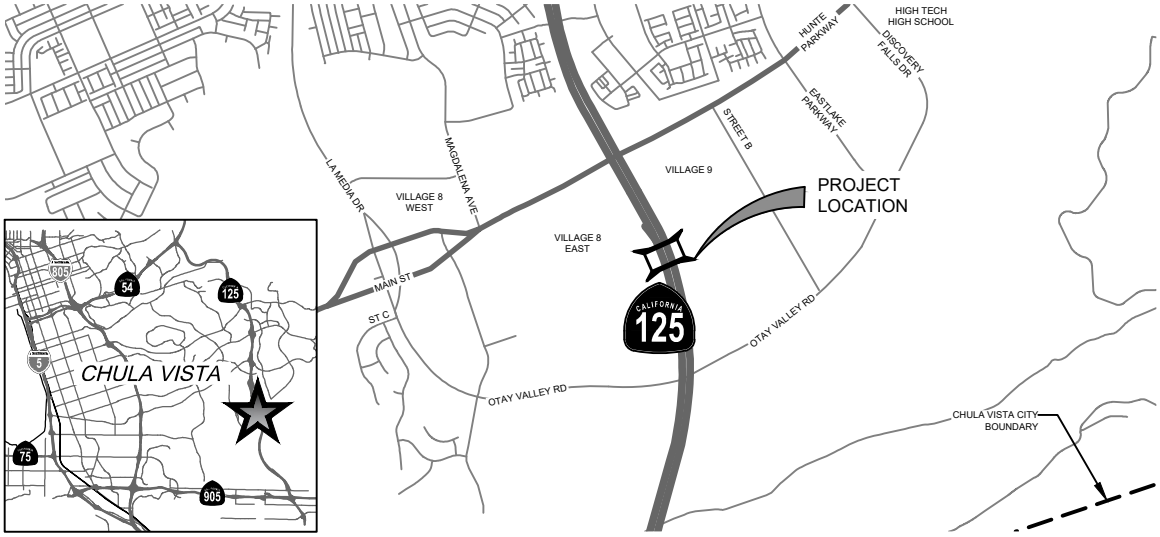
(2) Project study report assumes a 3% annual escalation for construction in year 2025, this estimate provides a construction cost for year 2022.

(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. 67 & 68 B

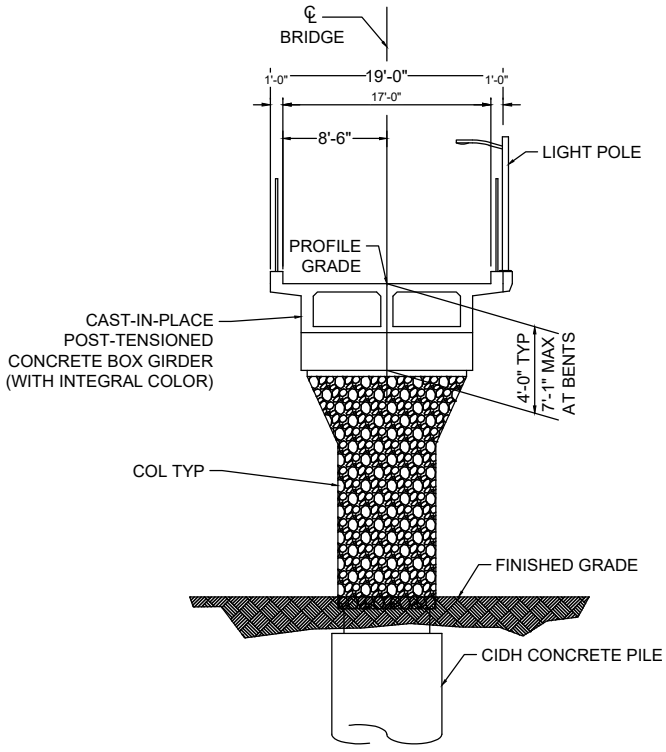
LIMIT: MAIN STREET AND OTAY VALLEY ROAD BRIDGE OVERCROSSING SR-125 WITH ADJACENT PEDESTRIAN BRIDGE

DESCRIPTION: CONSTRUCT PEDESTRIAN BRIDGE



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=3,000'



PEDESTRIAN BRIDGE
NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 67 & 68 B

LIMIT: Connects Village 8 East and Village 9

DESCRIPTION: Construct Pedestrian Bridge
Length (LF): 740
Width (LF): 19

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Cast-in-Place Post-Tensioned Concrete Box Grider Bridge	SF	14,060	$ 710.00	$ 9,982,600
				BASE CONSTRUCTION ESTIMATE	$ 9,990,000
				15% CONSTRUCTION CONTINGENCY	$ 1,498,500
				TOTAL HARD COST	**$ 11,488,500**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 1,148,850
Soils Engineering (2% of total hard costs)	$ 229,770
Surveying (2% of total hard costs)	$ 229,770
Inspection/Construction Management (10% of total hard cost)	$ 1,148,850
Developer Administration (1.75% of total hard costs)	$ 201,049
Design Services During Construction (2% of total hard costs)	$ 229,770
City Project Administration (2% of total hard costs)	$ 229,770
TOTAL SOFT COSTS	$ 3,417,829
SUBTOTAL PROJECT COST	$ 14,906,329
TOTAL PROJECT COST (see Note 3)	**$ 16,815,439**
FEE PROGRAM LIABILITY	**$ 16,815,439**

(1) The source of this estimate is the Kimley-Horn, Chula Vista Bridge Costs dated May 6, 2024.

(2) The unit costs per square foot are adjusted to July 2022 using the Los Angeles ENR Cosntruction Cost Index (CCI).

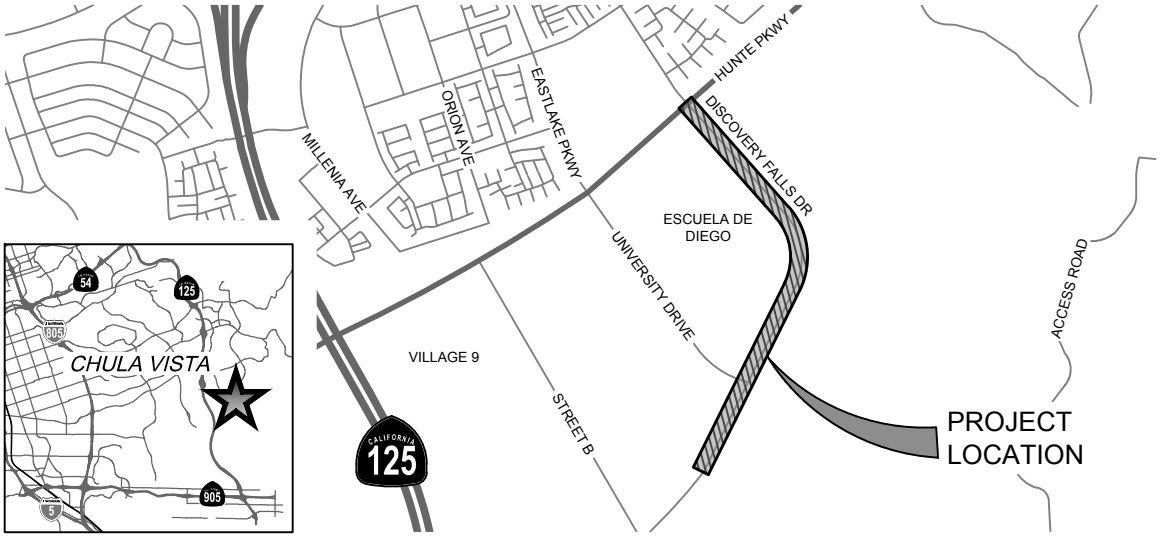
(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. 70

LIMIT: DISCOVERY FALLS FROM HUNTE PARKWAY TO VILLAGE 9/ STREET "B"

DESCRIPTION: CONSTRUCT 4-LANE COLLECTOR TRANSITIONING TO 2-LANE COLLECTOR

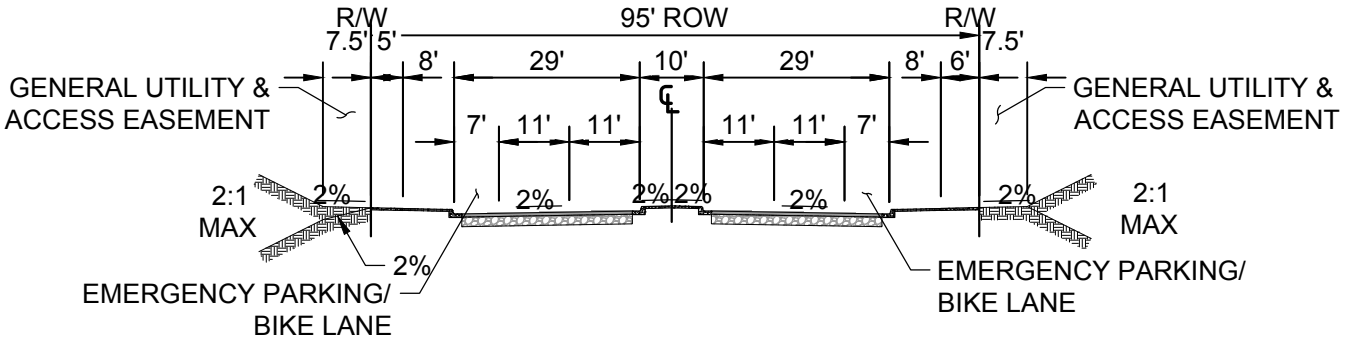
LENGTH: 5,340 ft.



VICINITY MAP
SCALE: 1"=35,000'

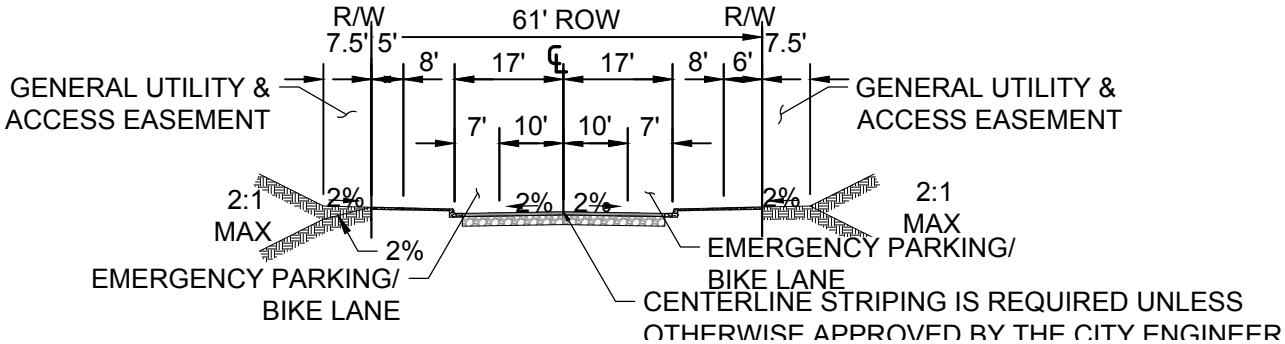
LOCATION MAP
SCALE: 1"=2,000'

NORTH



4-LANE COLLECTOR/ SECONDARY VILLAGE ENTRY W/ MEDIAN

NOT TO SCALE



2-LANE COLLECTOR/ SECONDARY VILLAGE ENTRY

NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 70

LIMIT: Discovery Falls from Hunte Parkway to Village 9/ Street "B"
DESCRIPTION: Construct 4-Lane Collector transitioning to 2-Lane Collector
LENGTH (LF): 5,340

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Earthwork	LF	5,340	$ 290.00	$ 1,548,600
2	Surface Improvements	LF	5,340	$ 414.00	$ 2,210,760
3	Drainage Items	LF	5,340	$ 319.00	$ 1,703,460
4	Landscape & Irrigation	LF	5,340	$ 83.00	$ 443,220
5	Lighting and Electrical	LF	5,340	$ 145.00	$ 774,300
6	Traffic Signals	EA	2	$ 609,563.00	$ 1,219,126

BASE CONSTRUCTION ESTIMATE	$ 7,899,466
15% CONSTRUCTION CONTINGENCY	$ 1,184,920
TOTAL HARD COST	**$ 9,084,386**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 908,439
Soils Engineering (15% of earthwork costs)	$ 232,290
Landscape Architecture (10% of landscaping costs)	$ 44,322
Surveying (2% of total hard costs)	$ 181,688
Utility Engineering/Coordination (3% of eligible dry utilities)	$ 5,171
Inspection/Construction Management (10% of total hard cost)	$ 908,439
Developer Administration (1.75% of total hard costs)	$ 158,977
Design Services During Construction (2% of total hard costs)	$ 181,688
City Project Administration (2% of total hard costs)	$ 181,688

TOTAL SOFT COSTS	$ 2,802,701
SUBTOTAL PROJECT COST	$ 11,887,086
TOTAL PROJECT COST (see Note 4)	**$ 13,409,511**
FEE PROGRAM LIABILITY	**$ 13,409,510**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) The above costs are based on the 1/4 mile cost of a new 4-Lane Collector transitioning to a 2-Lane Collector facility, factored to the length of this facility shown above.

(3) For specific unit costs, see Base Unit Cost List.

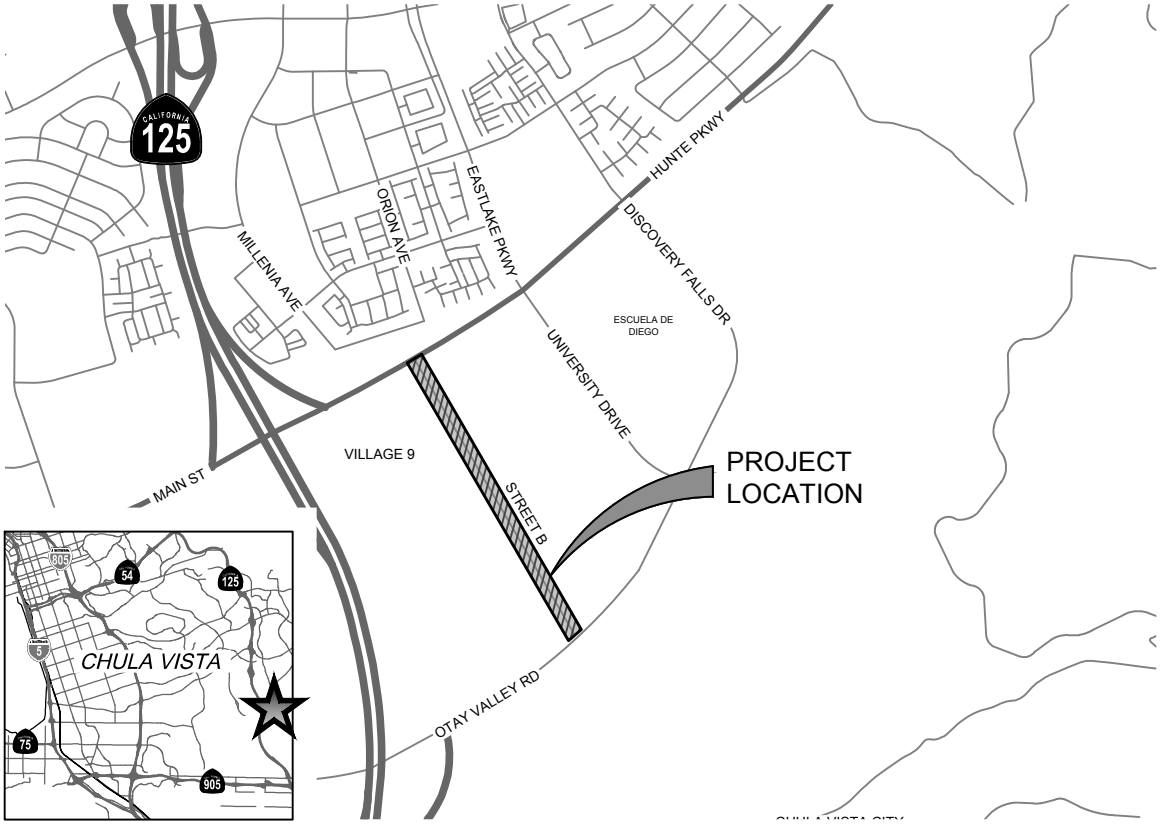
(4) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. 71

LIMIT: STREET "B" FROM HUNTE PARKWAY TO OTAY VALLEY ROAD

DESCRIPTION: CONSTRUCT 2-LANE COLLECTOR

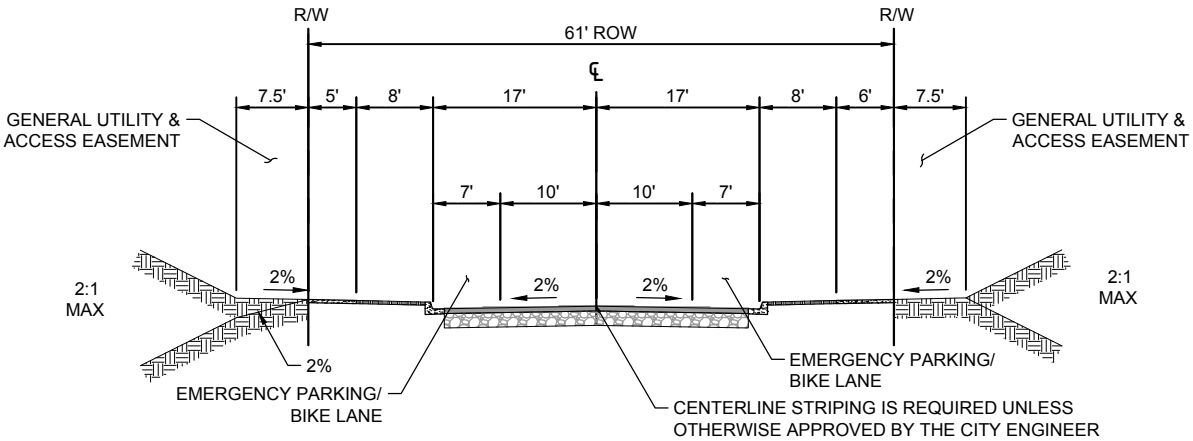
LENGTH: 3,770 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=2,000'

NORTH



SECONDARY VILLAGE ENTRY
NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 71

LIMIT: Street "B" from Hunte Parkway to Otay Valley Road
DESCRIPTION: Construct 2-Lane Collector
LENGTH (LF): 3,770

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Earthwork	LF	3,770	$ 290.00	$ 1,093,300
2	Surface Improvements	LF	3,770	$ 414.00	$ 1,560,780
3	Drainage Items	LF	3,770	$ 319.00	$ 1,202,630
4	Landscape & Irrigation	LF	3,770	$ 83.00	$ 312,910
5	Lighting and Electrical	LF	3,770	$ 261.00	$ 983,970
6	Traffic Signals	EA	1	$ 237,682.00	$ 237,682

BASE CONSTRUCTION ESTIMATE	$	5,391,272
15% CONSTRUCTION CONTINGENCY	$	808,691
TOTAL HARD COST	**$**	**6,199,963**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	619,996
Soils Engineering (15% of earthwork costs)	$	163,995
Landscape Architecture (10% of landscaping costs)	$	31,291
Surveying (2% of total hard costs)	$	123,999
Utility Engineering/Coordination (3% of eligible dry utilities)	$	3,651
Inspection/Construction Management (10% of total hard cost)	$	619,996
Developer Administration (1.75% of total hard costs)	$	108,499
Design Services During Construction (2% of total hard costs)	$	123,999
City Project Administration (2% of total hard costs)	$	123,999

TOTAL SOFT COSTS	$	1,919,427
SUBTOTAL PROJECT COST	$	8,119,389
TOTAL PROJECT COST (see Note 4)	**$**	**9,159,271**
FEE PROGRAM LIABILITY	**$**	**9,159,270**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) The above costs are based on the 1/4 mile cost of a new 2-Lane Collector facility, factored to the length of this facility shown above.

(3) For specific unit costs, see Base Unit Cost List.

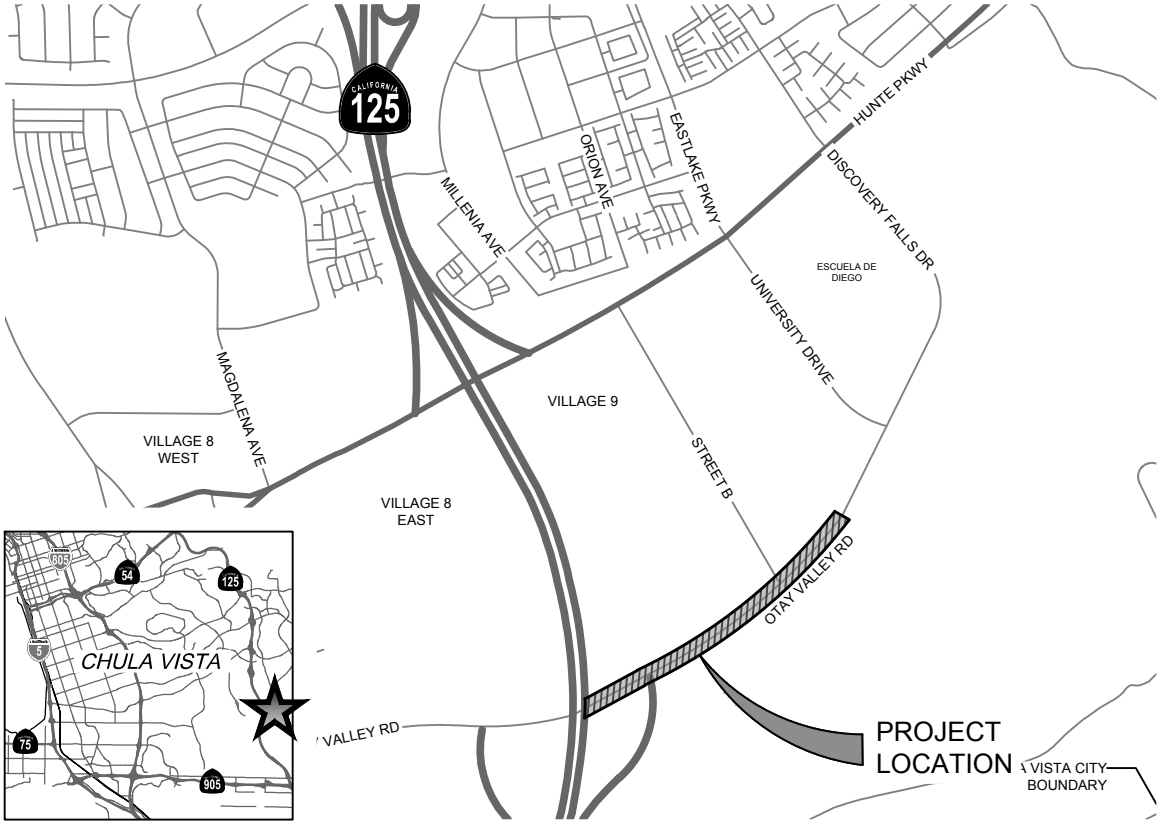
(4) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. 72

LIMIT: OTAY VALLEY RD FROM EAST OF SR-125 TO SUBDIVISION BOUNDARY

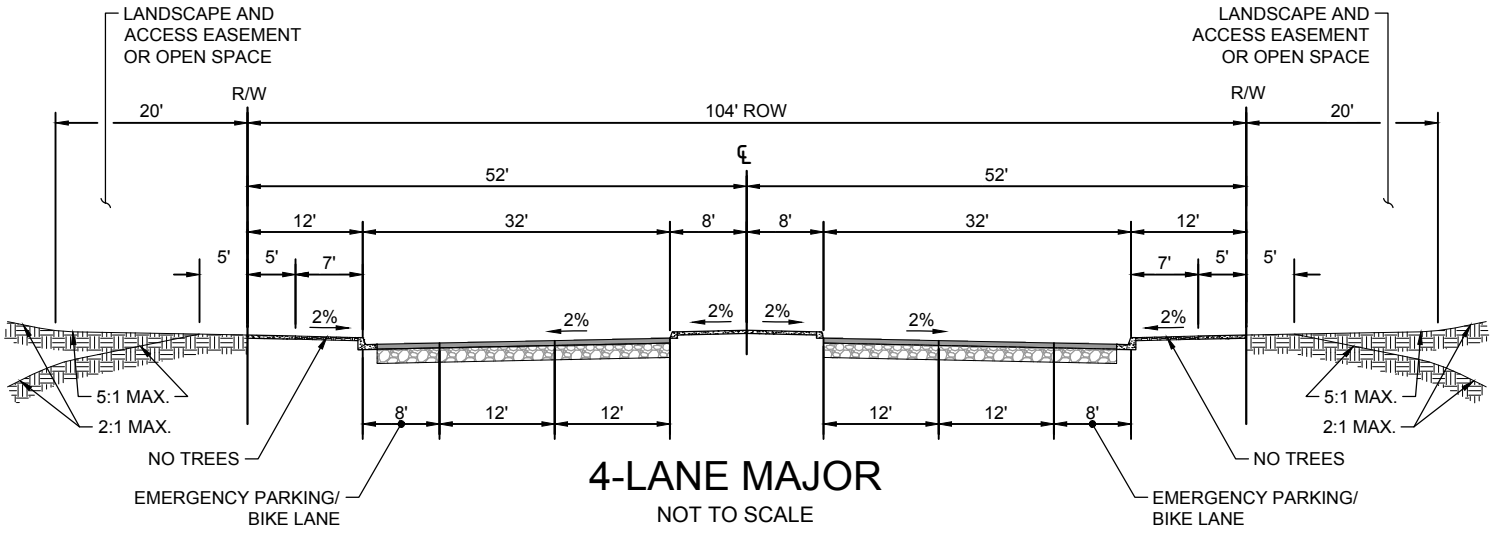
DESCRIPTION: CONSTRUCT 4-LANE MAJOR ARTERIAL ROAD

LENGTH: 2,700 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=2,000'



4-LANE MAJOR
NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY 72

LIMIT: Otay Valley Road from East of SR-125 to Subdivision Boundary
DESCRIPTION: Construct 4-Lane Major Arterial
LENGTH (LF): 2,700

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Earthwork	LF	2,700	$ 494.00	$ 1,333,800
2	Surface Improvements	LF	2,700	$ 811.00	$ 2,189,700
3	Drainage Items	LF	2,700	$ 369.00	$ 996,300
4	Landscape & Irrigation	LF	2,700	$ 144.00	$ 388,800
5	Lighting and Electrical	LF	2,700	$ 145.00	$ 391,500
6	Traffic Signals	EA	1	$ 308,206.00	$ 308,206

BASE CONSTRUCTION ESTIMATE	$ 5,608,306
15% CONSTRUCTION CONTINGENCY	$ 841,246
TOTAL HARD COST	**$ 6,449,552**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 644,955
Soils Engineering (15% of earthwork costs)	$ 200,070
Landscape Architecture (10% of landscaping costs)	$ 38,880
Surveying (2% of total hard costs)	$ 128,991
Utility Engineering/Coordination (3% of eligible dry utilities)	$ 2,615
Inspection/Construction Management (10% of total hard cost)	$ 644,955
Developer Administration (1.75% of total hard costs)	$ 112,867
Design Services During Construction (2% of total hard costs)	$ 128,991
City Project Administration (2% of total hard costs)	$ 128,991

TOTAL SOFT COSTS	$ 2,031,315
SUBTOTAL PROJECT COST	$ 8,480,867
TOTAL PROJECT COST (see Note 4)	**$ 9,567,044**
FEE PROGRAM LIABILITY	**$ 9,567,044**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) The above costs are based on the 1/4 mile cost of a new 4-Lane Major Arterial facility, factored to the length of this facility shown above.

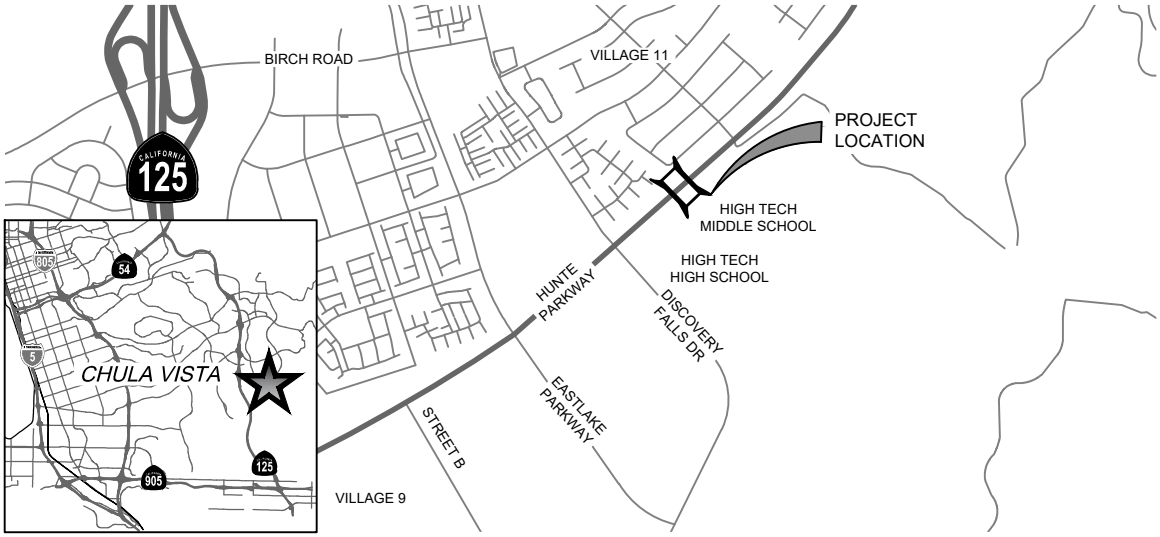
(3) For specific unit costs, see Base Unit Cost List.

(4) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. 73

LIMIT: OTAY RANCH VILLAGE 11 PATHWAY TO UNIVERSITY AND INNOVATION DISTRICT

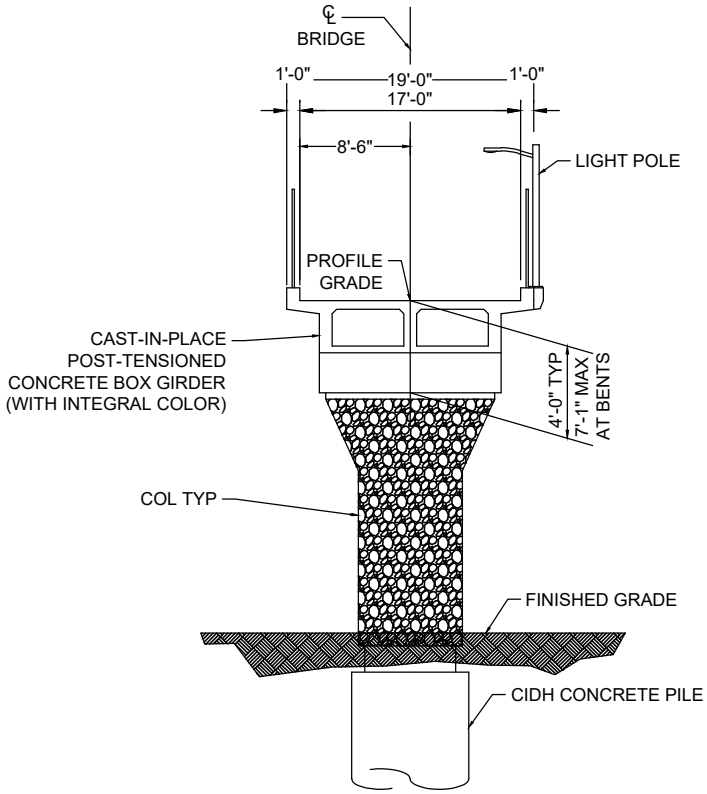
DESCRIPTION: CONSTRUCT PEDESTRIAN BRIDGE WITH RAMP STRUCTURE



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=2,000'

NORTH



PEDESTRIAN BRIDGE
NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

Facility 73

LIMIT: Otay Ranch Village 11 Pathway to University and Innovation District

DESCRIPTION: Construct Pedestrian Bridge
Length (LF): 541 (elevated structure); 265 (ramp structure)
Width (LF): 19

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Cast-in-Place Post-Tensioned Concrete Box Grider Bridge	SF	10,300	$ 710.00	$ 7,313,000
2	Ramp supported by Retaining Walls	SF	5,035	$ 393.00	$ 1,978,755

BASE CONSTRUCTION ESTIMATE	$ 9,300,000
15% CONSTRUCTION CONTINGENCY	$ 1,395,000
TOTAL HARD COST	**$ 10,695,000**

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 1,069,500
Soils Engineering (2% of total hard costs)	$ 213,900
Surveying (2% of total hard costs)	$ 213,900
Inspection/Construction Management (10% of total hard cost)	$ 1,069,500
Developer Administration (1.75% of total hard costs)	$ 187,163
Design Services During Construction (2% of total hard costs)	$ 213,900
City Project Administration (2% of total hard costs)	$ 213,900
TOTAL SOFT COSTS	$ 3,181,763
SUBTOTAL PROJECT COST	$ 13,876,763
TOTAL PROJECT COST (see Note 3)	**$ 15,654,012**
FEE PROGRAM LIABILITY	**$ 13,692,242**

(1) The source of this estimate is the Kimley-Horn, Chula Vista Bridge Costs dated May 6, 2024.

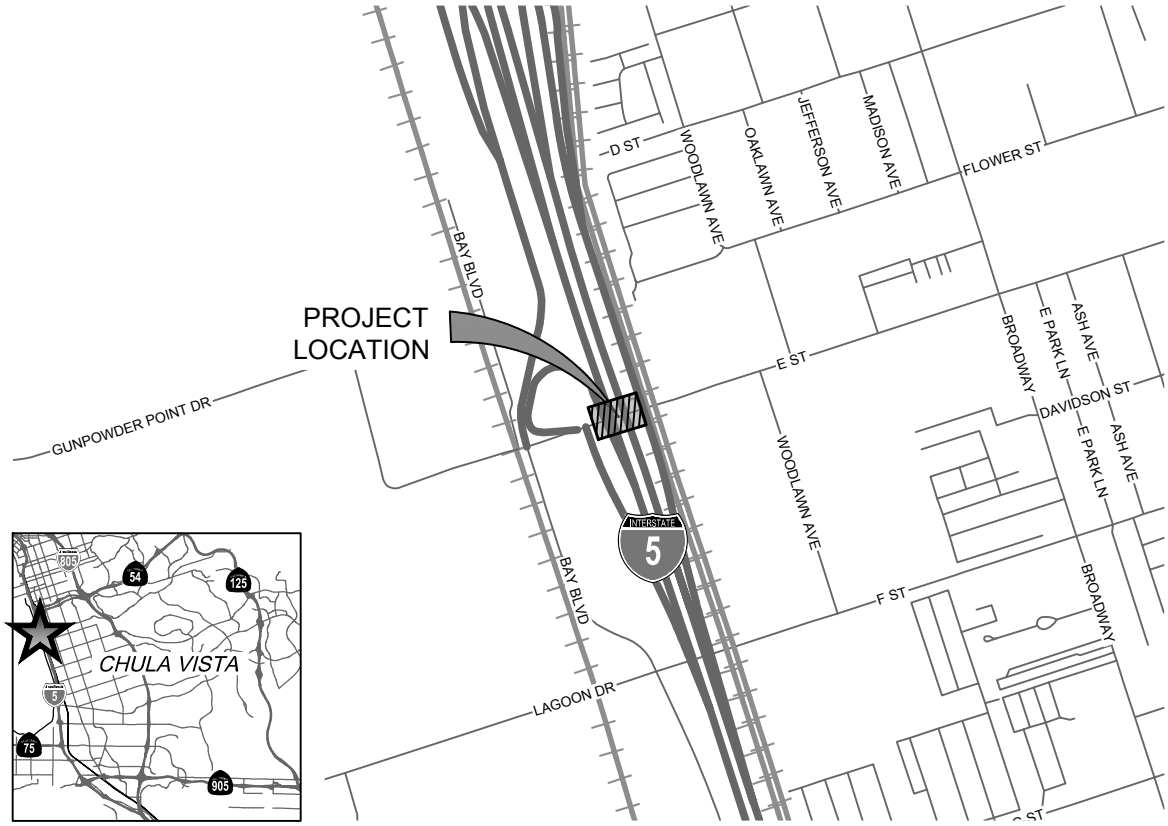
(2) The unit costs per square foot are adjusted to July 2022 using the Los Angeles ENR Cosntruction Cost Index (CCI).

(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. I-5-4

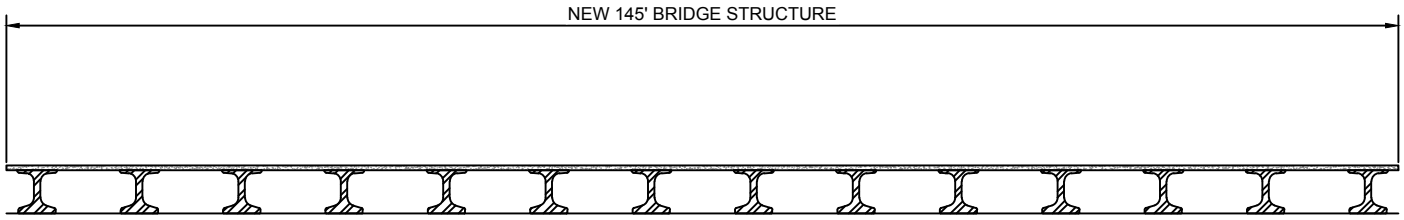
LIMIT: E STREET BRIDGE OVERCROSSING

DESCRIPTION: NEW BRIDGE



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=1,000'



PRECAST PRESTRESSED CALIFORNIA WIDE FLANGE GIRDERS 145 FT WIDE.

BRIDGE WIDENING

NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY I-5-4

LIMITS: E Street Overcrossing I-5

DESCRIPTION: New Bridge

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	
1	NEW Bridge (Wide Flange Girder)	SF	26,560	$ 360.00	$ 9,561,600
				BASE CONSTRUCTION ESTIMATE	$ 9,561,600
				15% CONSTRUCTION CONTINGENCY	$ 1,434,240
				TOTAL HARD COST	$ 10,995,840

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 1,099,584
Soils Engineering (2% of total hard costs)	$ 219,917
Surveying (2% of total hard costs)	$ 219,917
Inspection/Construction Management (10% of total hard cost)	$ 1,099,584
Developer Administration (1.75% of total hard costs)	$ 192,427
Design Services During Construction (2% of total hard costs)	$ 219,917
City Project Administration (2% of total hard costs)	$ 219,917
Additional Engineering and Construction Management Costs with Caltrans Oversight (5% of total hard costs)	$ 478,080
TOTAL SOFT COSTS	$ 3,749,342
SUB TOTAL PROJECT COST	$ 14,745,182
TOTAL PROJECT COST (see Note 3)	**$ 16,633,654**
FEE PROGRAM LIABILITY	**$ 9,672,470**

Notes:

(1) The source of this estimate is Kimley-Horn Chula Vista Bridge Costs dated May 17, 2022.

(2) 2019 Caltrans Comparative Bridge Costs were escalated by 4% to obtain a 2022 square foot unit cost.

(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

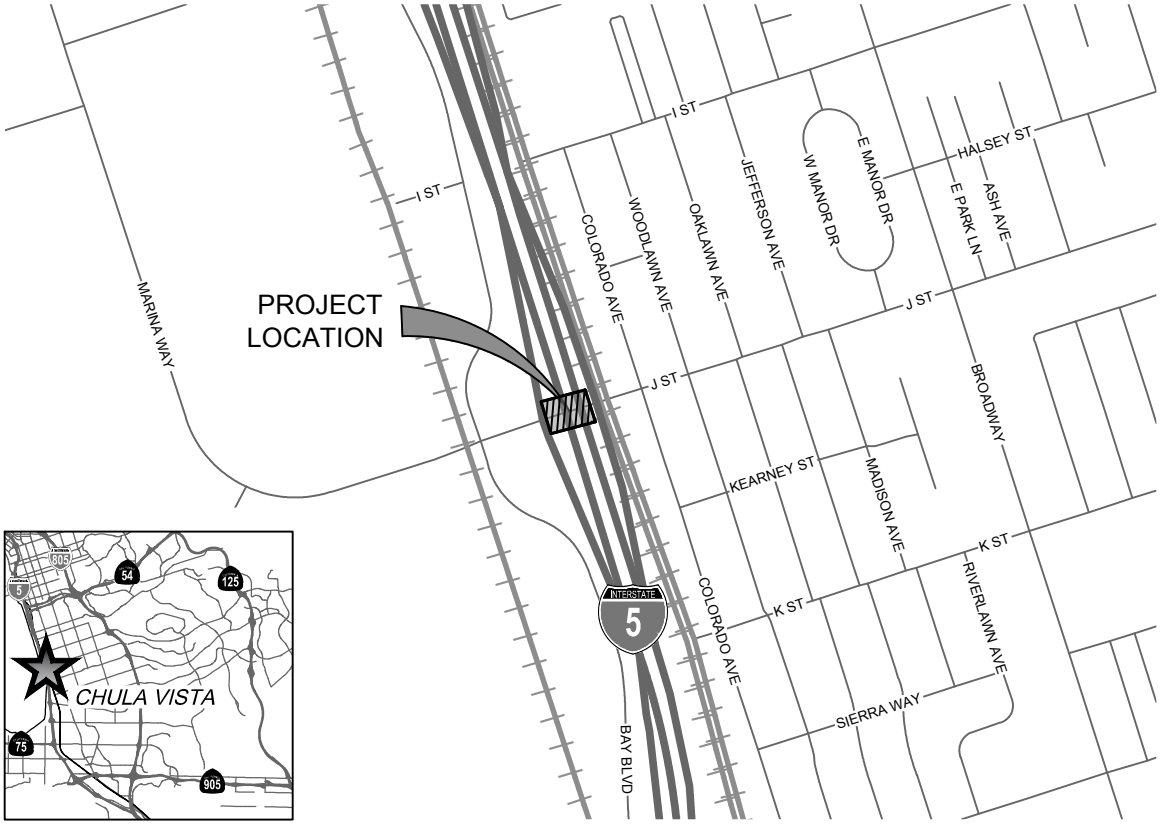
TRIP FACILITY NO. I-5-10

LIMIT: J STREET UNDERCROSSING WIDENING I-5

DESCRIPTION: UNDERCROSSING WIDENING

LENGTH: 175 ft.

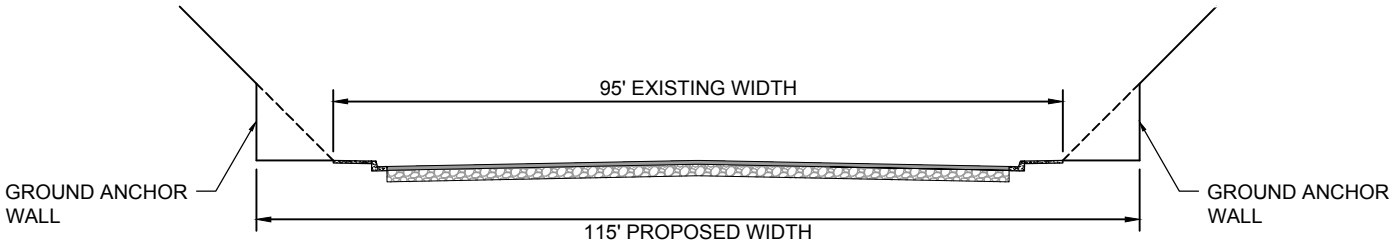
WIDTH: 20 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=1,000'

NORTH



UNDERCROSSING WIDENING

NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY I-5-10

LIMITS: J Street Undercrossing I-5
DESCRIPTION: Undercrossing Widening
LENGTH (LF): 175
WIDTH (LF): 20

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Ground Anchor Walls	SF	3,470	$ 250.00	$ 867,500

BASE CONSTRUCTION ESTIMATE	$	867,500
15% CONSTRUCTION CONTINGENCY	$	130,125
TOTAL HARD COST	$	997,625

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	99,763
Soils Engineering (2% of total hard costs)	$	19,953
Landscape Architecture (10% of landscaping costs)	$	-
Surveying (2% of total hard costs)	$	19,953
Utility Engineering/Coordination (3% of eligible dry utilities)	$	-
Inspection/Construction Management (10% of total hard cost)	$	99,763
Developer Administration (1.75% of total hard costs)	$	17,458
Design Services During Construction (2% of total hard costs)	$	19,953
City Project Administration (2% of total hard costs)	$	19,953
Additional Engineering and Construction Management Costs with Caltrans Oversight (5% of total hard costs)	$	49,881
TOTAL SOFT COSTS	$	346,675
SUB TOTAL PROJECT COST	$	1,344,300
TOTAL PROJECT COST (see Note 3)	**$**	**1,516,469**
FEE PROGRAM LIABILITY	**$**	**881,827**

Notes:

(1) The source of this estimate is Kimley-Horn Chula Vista Bridge Costs dated May 17, 2022.

(2) 2019 Caltrans Comparative Bridge Costs were escalated by 4% to obtain a 2022 square foot unit cost.

(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

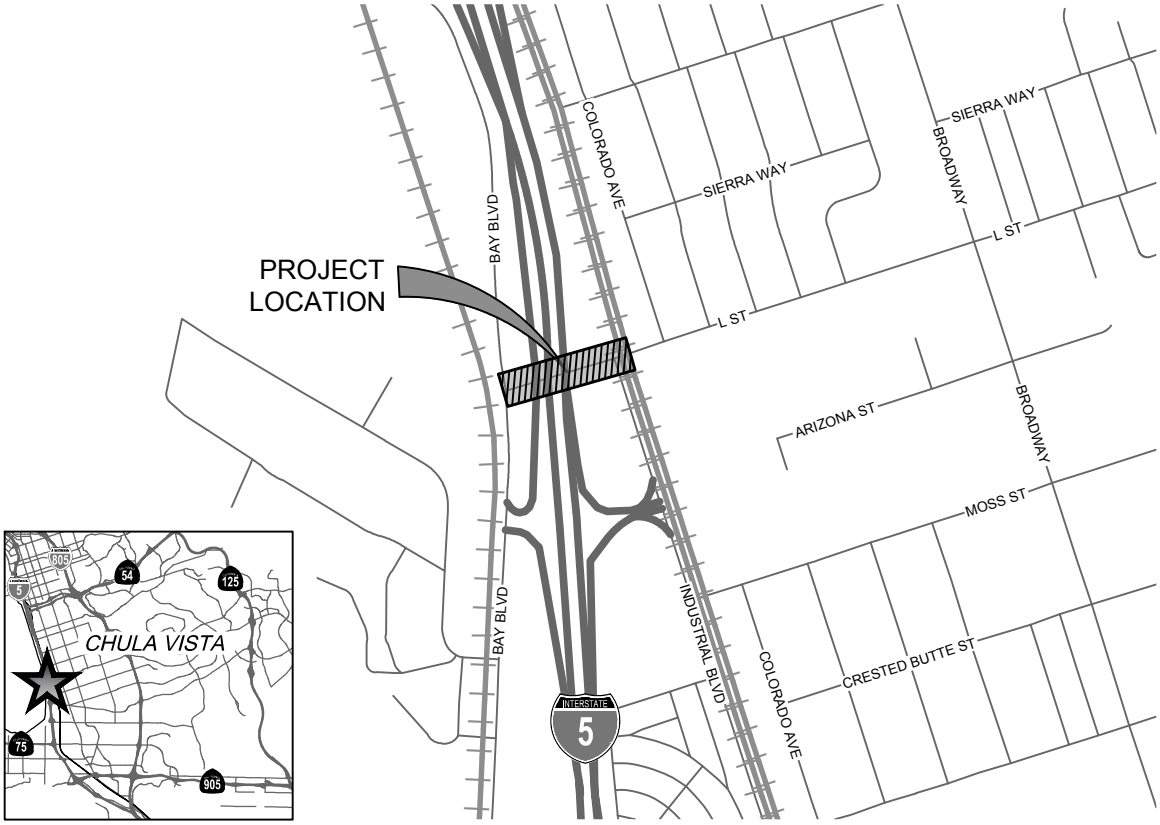
TRIP FACILITY NO. I-5-11

LIMIT: L STREET BRIDGE OVERCROSSING I-5

DESCRIPTION: BRIDGE WIDENING

LENGTH: 245 ft.

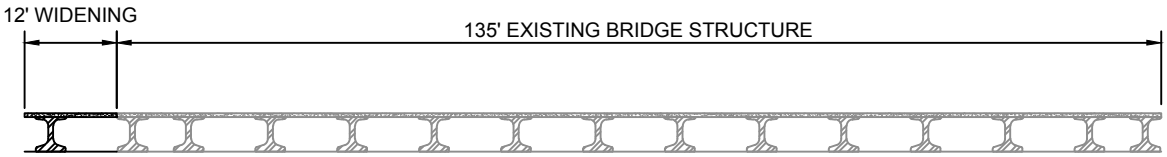
WIDTH: 12 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=1,000'

NORTH



12' ON ONE SIDE, PRECAST PRESTRESSED CALIFORNIA WIDE FLANGE GIRDER.

BRIDGE WIDENING

NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY I-5-11

LIMITS: L Street Overcrossing I-5
DESCRIPTION: Bridge Widening
LENGTH (LF): 245
WIDTH (LF): 12

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	NEW Bridge (Wide Flange Girder)	SF	2,940	$ 500.00	$ 1,470,000

BASE CONSTRUCTION ESTIMATE	$	1,470,000
15% CONSTRUCTION CONTINGENCY	$	220,500
TOTAL HARD COST	$	1,690,500

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	169,050
Soils Engineering (2% of total hard costs)	$	33,810
Surveying (2% of total hard costs)	$	33,810
Inspection/Construction Management (10% of total hard cost)	$	169,050
Developer Administration (1.75% of total hard costs)	$	29,584
Design Services During Construction (2% of total hard costs)	$	33,810
City Project Administration (2% of total hard costs)	$	33,810
Additional Engineering and Construction Management Costs with Caltrans Oversight (5% of total hard costs)	$	73,500
TOTAL SOFT COSTS	$	576,424
SUBTOTAL PROJECT COST	$	2,266,924
TOTAL PROJECT COST (see Note 3)	**$**	**2,557,257**
FEE PROGRAM LIABILITY	**$**	**462,608**

Notes:

(1) The source of this estimate is Kimley-Horn Chula Vista Bridge Costs dated May 17, 2022.

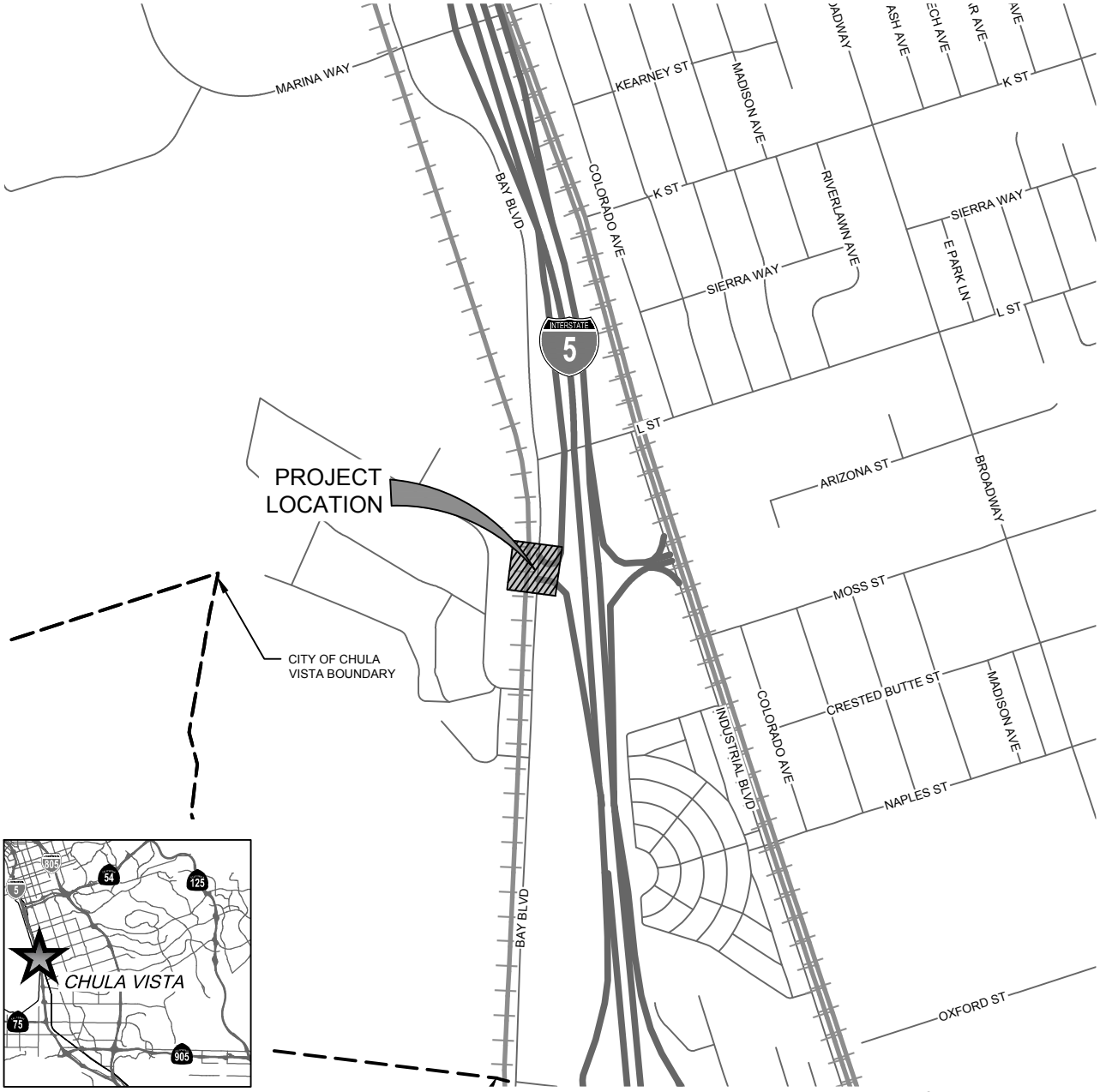
(2) 2019 Caltrans Comparative Bridge Costs were escalated by 4% to obtain a 2022 square foot unit cost.

(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. I-5-12

LIMIT: I-5/ BAY BLVD (SOUTH OF L ST) SB ON/OFF RAMPS

DESCRIPTION: TRAFFIC SIGNAL INSTALLATION



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=1,000'

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY I-5-12

LIMITS: I-5/ Bay Blvd (South Of L Street) SB On/Off Ramps 11-SD-5-6.670 (Lt.)

DESCRIPTION: Traffic Signal Installation

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Traffic Signal	EA	1	$ 147,546	$ 147,546

BASE CONSTRUCTION ESTIMATE	$	147,546
15% CONSTRUCTION CONTINGENCY	$	22,132
TOTAL HARD COST	$	169,678

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	16,968
Soils Engineering (15% of earthwork costs)	$	-
Landscape Architecture (10% of landscaping costs)	$	-
Surveying (2% of total hard costs)	$	3,394
Utility Engineering/Coordination (3% of eligible dry utilities)	$	-
Inspection/Construction Management (10% of total hard cost)	$	16,968
Developer Administration (1.75% of total hard costs)	$	2,969
Design Services During Construction (2% of total hard costs)	$	3,394
City Project Administration (2% of total hard costs)	$	3,394
Additional Engineering and Construction Management Costs with Caltrans Oversight (5% of total hard costs)	$	8,484
TOTAL SOFT COSTS	$	55,569
SUBTOTAL PROJECT COST	$	225,247
TOTAL PROJECT COST (see Note 3)	**$**	**254,095**
FEE PROGRAM LIABILITY	**$**	**147,756**

Notes:

(1) The source of this estimate is Kimley-Horn Chula Vista Bridge Costs dated May 17, 2022.

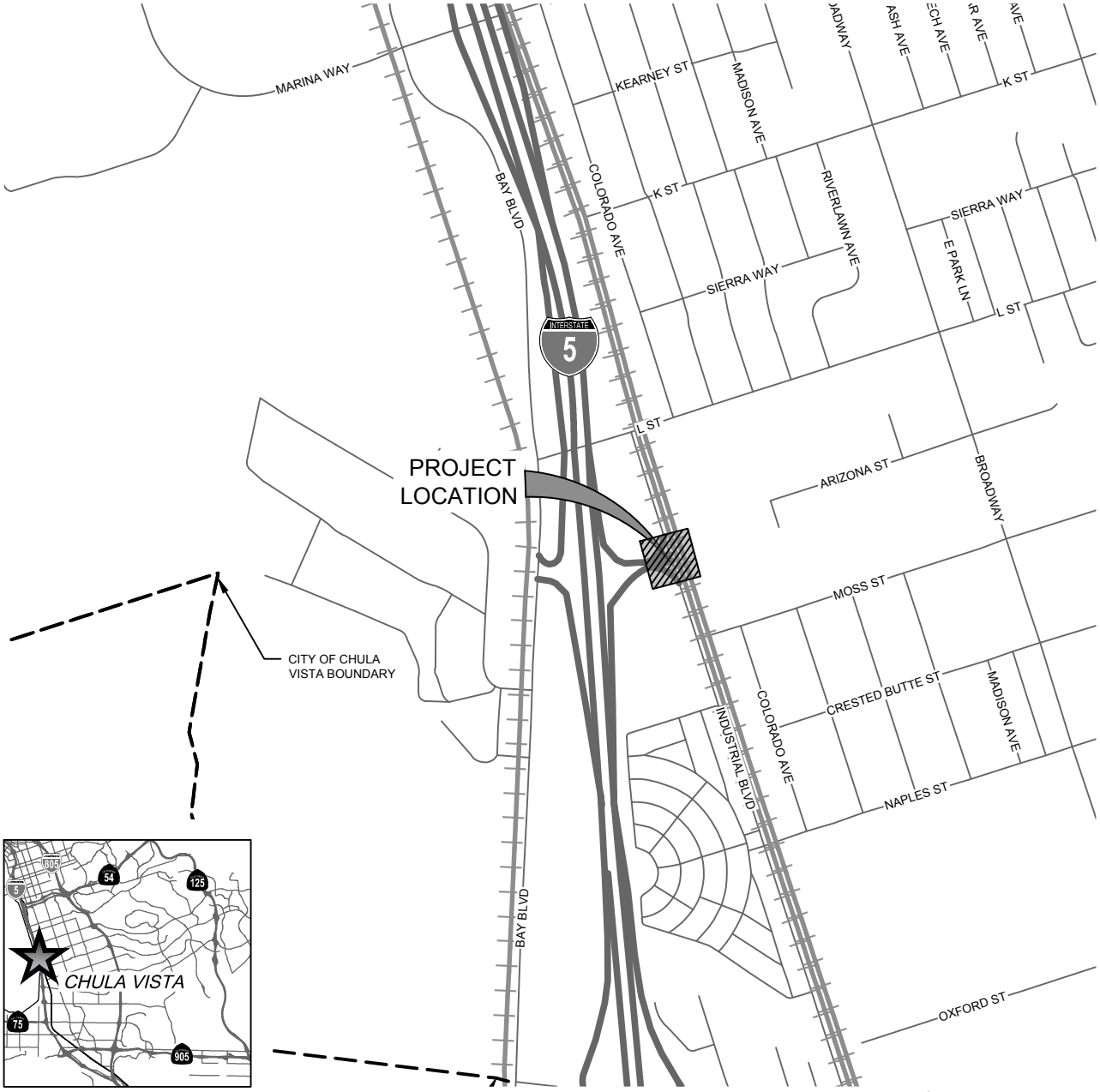
(2) For specific unit costs, see Base Unit Cost List

(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. I-5-13

LIMIT: I-5/ INDUSTIRAL BLVD NB ON/OFF RAMPS

DESCRIPTION: RAMPS TRAFFIC SIGNAL INSTALLATION



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=1,000'

NORTH

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY I-5-13

LIMITS: I-5/ Industrial Blvd NB On/Off Ramps 11-SD-5-6.658 (Rt.)

DESCRIPTION: Traffic Signal Installation

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Traffic Signal	EA	1	$ 147,546	$ 147,546

BASE CONSTRUCTION ESTIMATE	$	147,546
15% CONSTRUCTION CONTINGENCY	$	22,132
TOTAL HARD COST	$	169,678

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	16,968
Soils Engineering (15% of earthwork costs)	$	-
Landscape Architecture (10% of landscaping costs)	$	-
Surveying (2% of total hard costs)	$	3,394
Utility Engineering/Coordination (3% of eligible dry utilities)	$	-
Inspection/Construction Management (10% of total hard cost)	$	16,968
Developer Administration (1.75% of total hard costs)	$	2,969
Design Services During Construction (2% of total hard costs)	$	3,394
City Project Administration (2% of total hard costs)	$	3,394
Additional Engineering and Construction Management Costs with Caltrans Oversight (5% of total hard costs)	$	8,484
TOTAL SOFT COSTS	$	55,569
SUBTOTAL PROJECT COST	$	225,247
TOTAL PROJECT COST (see Note 3)	**$**	**254,095**
FEE PROGRAM LIABILITY	**$**	**147,756**

Notes:

(1) The source of this estimate is Kimley-Horn Chula Vista Bridge Costs dated May 17, 2022.

(2) For specific unit costs, see Base Unit Cost List

(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

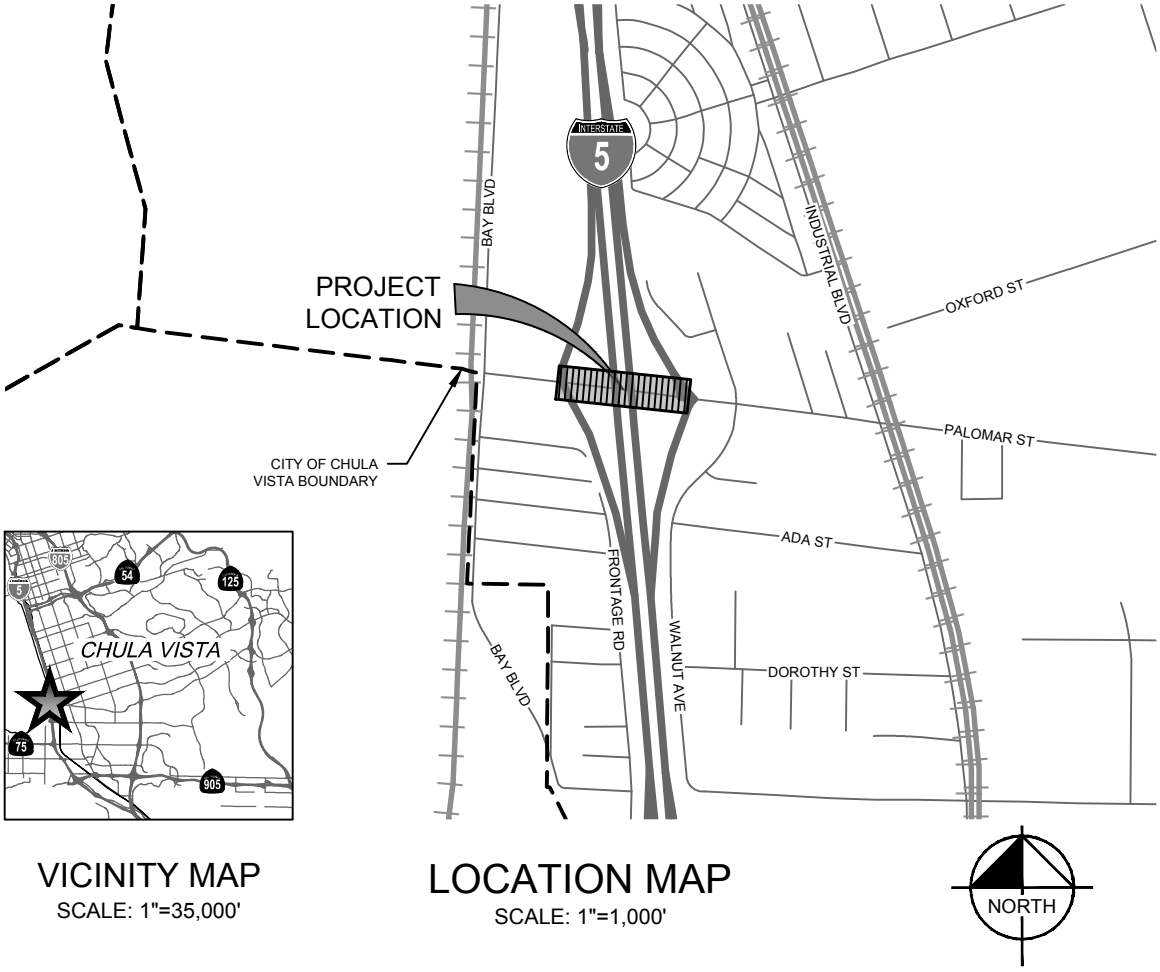
TRIP FACILITY NO. I-5-14

LIMIT: PALOMAR STREET OVERCROSSING I-5

DESCRIPTION: BRIDGE WIDENING

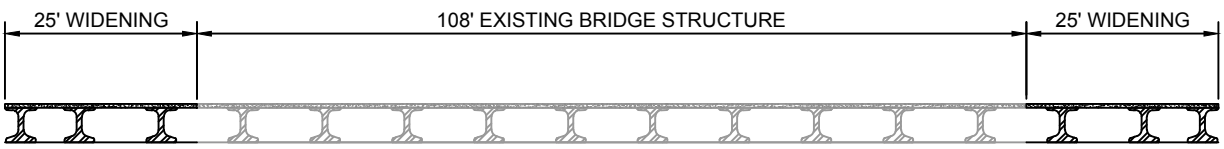
LENGTH: 215 ft.

WIDTH: 50 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=1,000'



25' ON EITHER SIDE, PRECAST PRESTRESSED CALIFORNIA WIDE FLANGE GIRDERS.

BRIDGE WIDENING

NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY I-5-14

LIMITS: Palomar Street Overcrossing I-5
DESCRIPTION: Bridge Widening (Bike Lanes, Sidewalks and Travel Lanes)
LENGTH (LF): 215
WIDTH (LF): 50

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Bridge Widening (Wide Flange Girder)	SF	13,750	$ 400.00	$ 5,500,000
				BASE CONSTRUCTION ESTIMATE	$ 5,500,000
				15% CONSTRUCTION CONTINGENCY	$ 825,000
				TOTAL HARD COST	$ 6,325,000

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 632,500
Soils Engineering (2% of total hard costs)	$ 126,500
Surveying (2% of total hard costs)	$ 126,500
Inspection/Construction Management (10% of total hard cost)	$ 632,500
Developer Administration (1.75% of total hard costs)	$ 110,688
Design Services During Construction (2% of total hard costs)	$ 126,500
City Project Administration (2% of total hard costs)	$ 126,500
Additional Engineering and Construction Management Costs with Caltrans Oversight (5% of total hard costs)	$ 275,000
TOTAL SOFT COSTS	$ 2,156,688
SUBTOTAL PROJECT COST	$ 8,481,688
TOTAL PROJECT COST (see Note 3)	**$ 9,567,969**
FEE PROGRAM LIABILITY	**$ 5,563,775**

Notes:

(1) The source of this estimate is Kimley-Horn Chula Vista Bridge Costs dated May 17, 2022.

(2) 2019 Caltrans Comparative Bridge Costs were escalated by 4% to obtain a 2022 square foot unit cost.

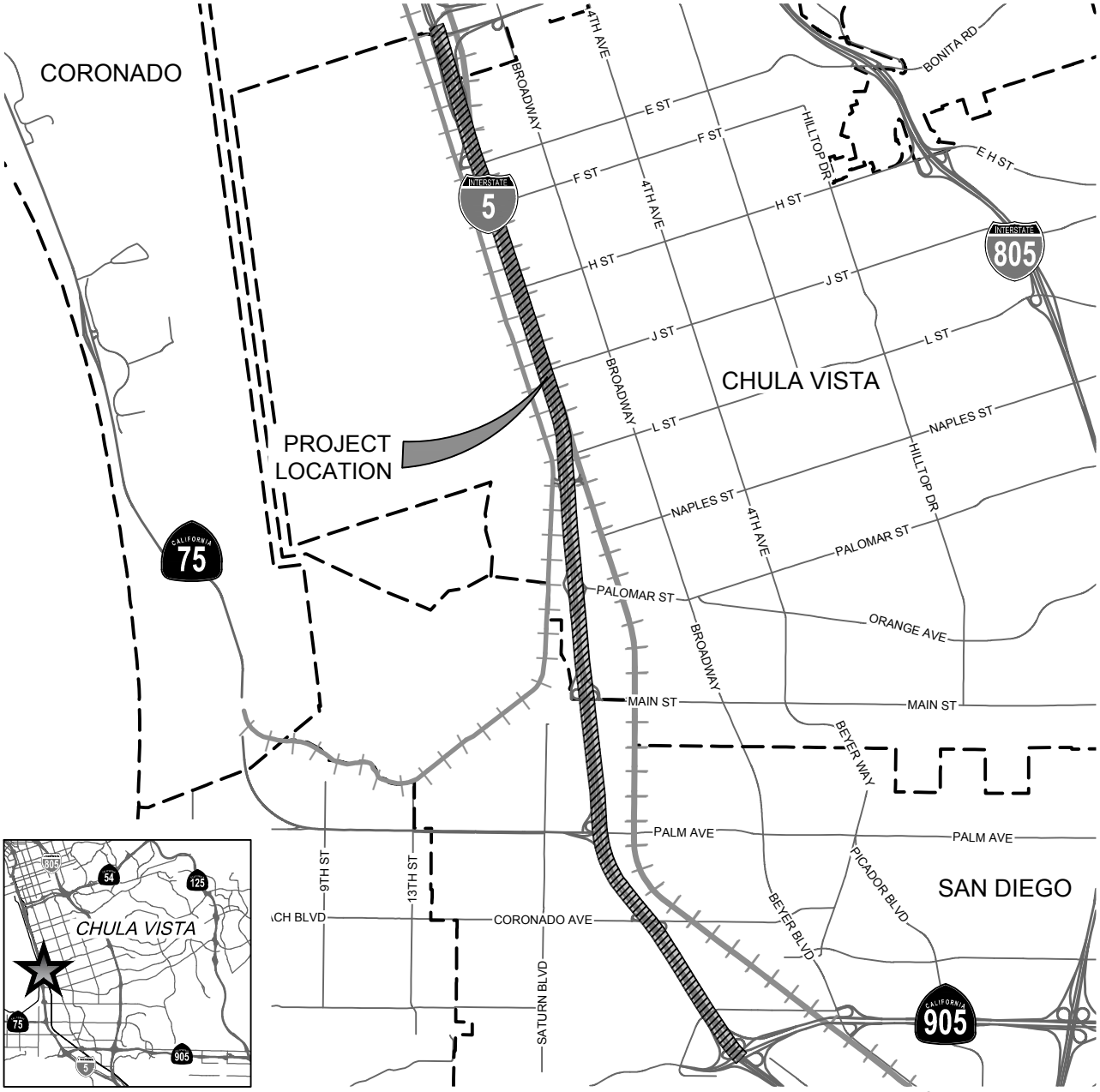
(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. I-5-17

LIMIT: FROM SR-905 TO SR-54

DESCRIPTION: I-5 HOV MANAGED LANES

LENGTH: 6.37mi.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=5,000'

NORTH

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY I-5-17

LIMITS: From SR-905 to SR-54
DESCRIPTION: I-5 HOV & Managed Lanes
LENGTH (MI): 3.98

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	TOTAL
1	I-5 HOV & Managed Lanes	$ 100,849,379
	BASE CONSTRUCTION ESTIMATE	$ 100,849,379
	15% CONSTRUCTION CONTINGENCY	$ 15,127,407
	TOTAL HARD COST	$ 115,976,786
	SOFT COSTS	
	Civil Engineering (10% of total hard cost)	$ 11,597,679
	Soils Engineering (2% of total hard cost)	$ 2,319,536
	Landscape Architecture (2% of total hard costs)	$ 2,319,536
	Surveying (2% of total hard costs)	$ 2,319,536
	Utility Engineering/Coordination (1% of total hard costs)	$ 1,159,768
	Inspection/Construction Management (11% of total hard cost)	$ 12,757,446
	Developer Administration (1.75% of total hard costs)	$ 2,029,594
	Design Services During Construction (2% of total hard costs)	$ 2,319,536
	City Project Administration (2% of total hard costs)	$ 2,319,536
	Additional Engineering and Construction Management Costs with Caltrans Oversight (5% of total hard costs)	$ 5,798,839
	TOTAL SOFT COSTS	$ 44,941,004
	SUBTOTAL PROJECT COST	$ 160,917,790
	TOTAL PROJECT COST (see Note 2)	**$ 181,527,143**
	FEE PROGRAM LIABILITY	**$ 4,320,346**

Notes:

(1) The source of this estimate is Kimley-Horn Chula Vista Bridge Costs dated May 17, 2022.

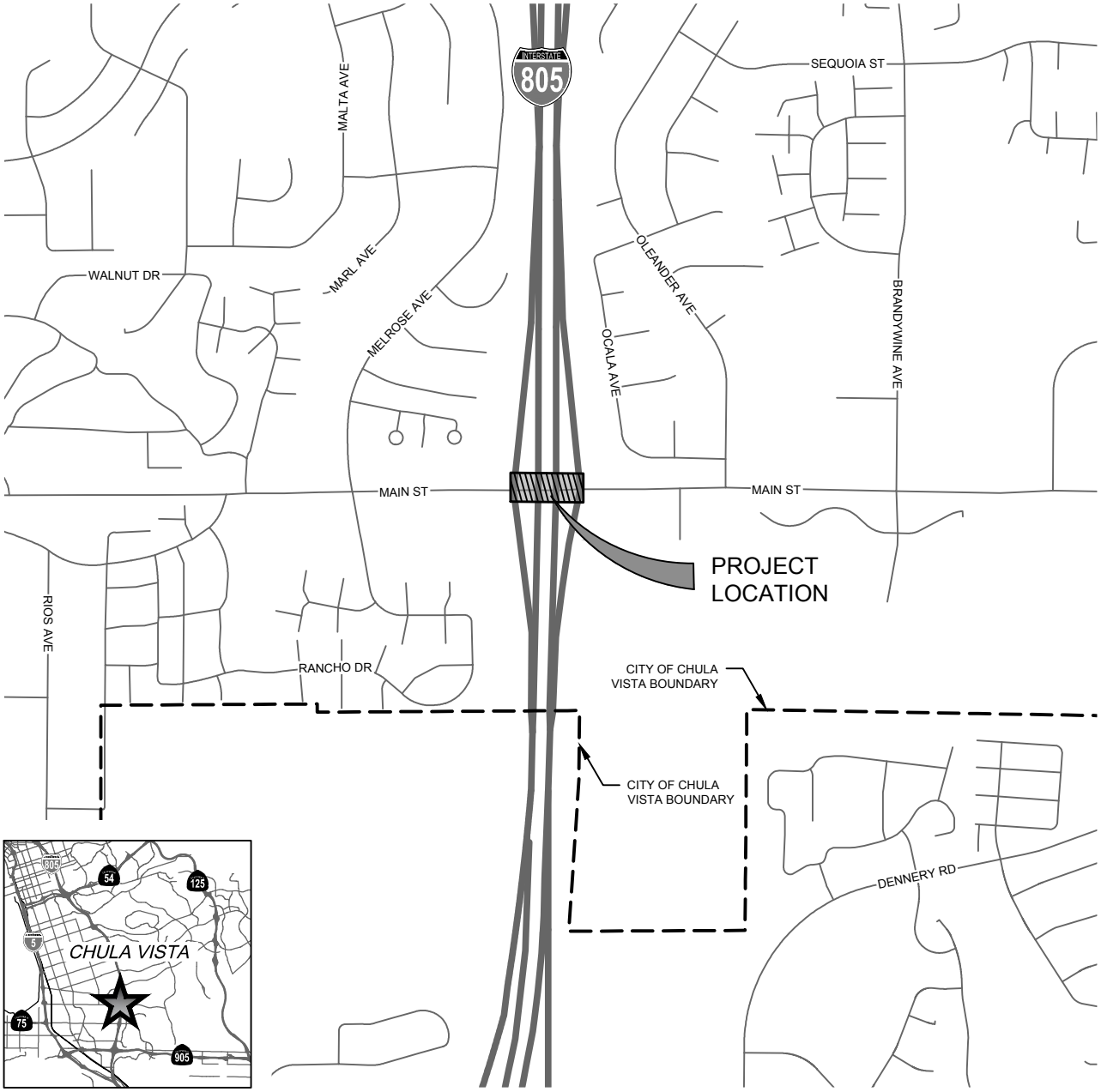
(2) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. I-805-2

LIMIT: MAIN ST UNDERCROSSING

DESCRIPTION: WIDENING FOR EASTBOUND LEFT TURN LANE

LENGTH: 390 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=1,000'

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY I-805-2

LIMITS: I-805 & Main Street
DESCRIPTION: Widening Undercrossing For EB-NB Left Turn Lane
LENGTH (LF): 390
WIDTH (LF): 128

CITY OF CHULA VISTA

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	I-805/Main Street Undercrossing Widening	LS	1	$ 3,349,711	$ 3,349,711

BASE CONSTRUCTION ESTIMATE	$	3,349,711
15% CONSTRUCTION CONTINGENCY	$	502,457
TOTAL HARD COST	$	3,852,168

SOFT COSTS

Civil Engineering (10% of total hard costs)	$	385,217
Soils Engineering (2% of total hard costs)	$	77,043
Landscape Architecture (2% of total hard costs)	$	77,043
Surveying (2% of total hard costs)	$	77,043
Utility Engineering/Coordination (1% of total hard costs)	$	38,522
Inspection/Construction Management (10% of total hard costs)	$	385,217
Developer Administration (1.75% of total hard costs)	$	67,413
Design Services During Construction (2% of total hard costs)	$	77,043
City Project Administration (2% of total hard costs)	$	77,043
Additional Engineering and Construction Management Costs with Caltrans Oversight (5% of total hard costs)	$	167,486
TOTAL SOFT COSTS	$	1,429,070
SUBTOTAL PROJECT COST	$	5,281,238
TOTAL PROJECT COST (see Note 2)	**$**	**5,957,626**
FEE PROGRAM LIABILITY	**$**	**5,957,626**

Notes:

(1) The source of this estimate is the I-805 / Main Street Interchange Improvements Summary Report Alternative 5 escalated by the ENR Adjustment Factor to Base Year 2022.

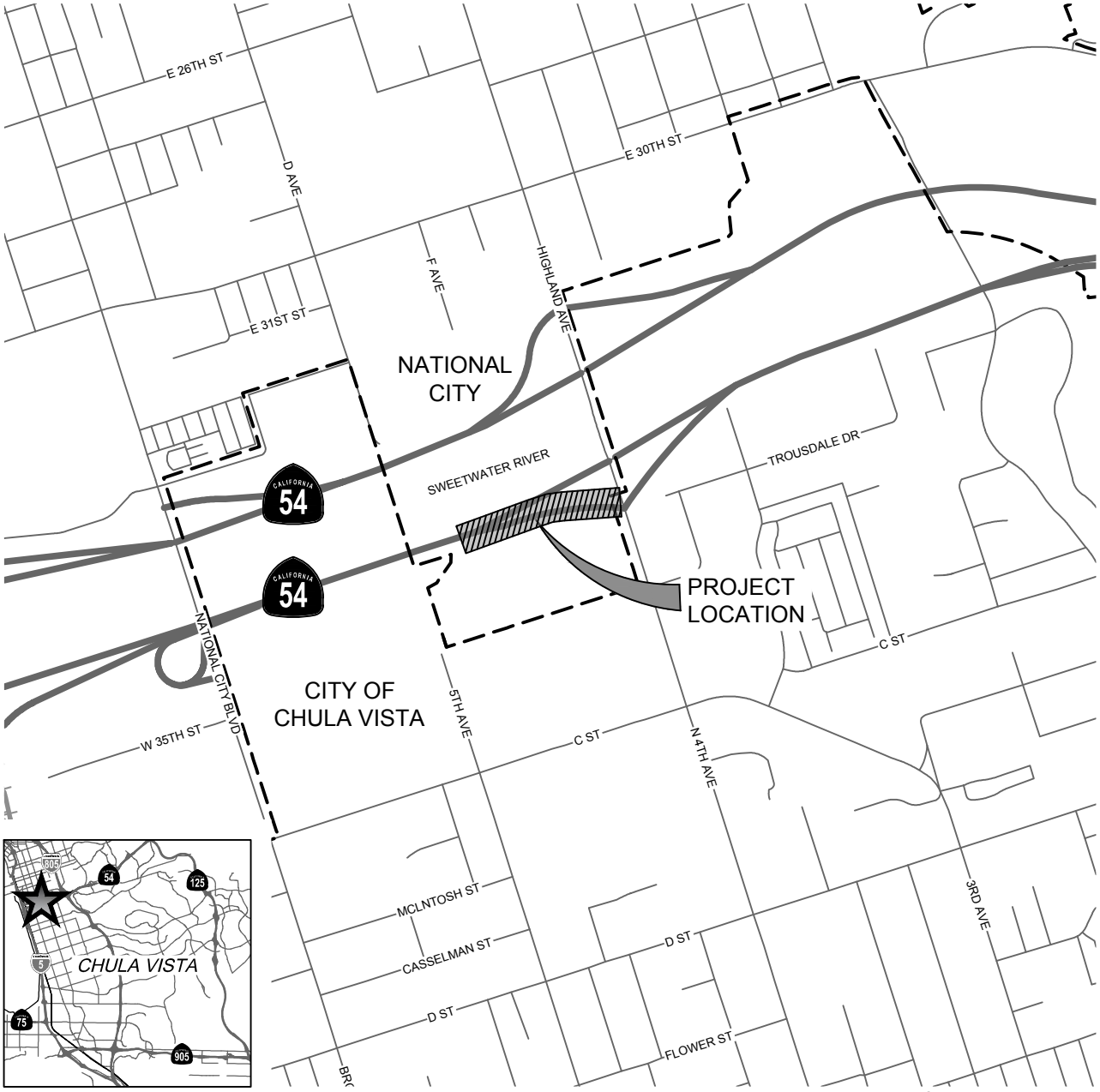
(2) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. SR-54-2

LIMIT: SR-54 EB OFF-RAMP AT N FOURTH AVENUE.

DESCRIPTION: ADD RAMP LANE.

LENGTH: 1,000 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=1,000'

NORTH

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY SR-54-2

LIMITS: SR-54 EB Off-Ramp at N Fourth Avenue

DESCRIPTION: Add Ramp Lane

CITY OF CHULA VISTA

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Roadway Excavation/Export	CY	580	$ 42.71	$ 24,758
2	Clearing and Grubbing	SF	14,850	$ 0.65	$ 9,709
3	Crushed Aggregate Base	CY	440	$ 90.04	$ 39,618
4	Sidewalk	SF	326	$ 6.49	$ 2,114
5	Curb and Gutter	LF	50	$ 33.93	$ 1,697
6	6" Asphalt Concrete	SF	6,600	$ 4.74	$ 31,286
7	Curb Ramp	EA	1	$ 4,500.00	$ 4,500
8	Signing & Striping *	MI	0.10	$ 25,000.00	$ 2,600
9	Remove Striping	LF	550	$ 2.87	$ 1,579
10	Signal Relocation	EA	1	$ 40,000.00	$ 40,000
11	Stormwater BMP	LS	1	$ 11,368.13	$ 11,368

BASE CONSTRUCTION ESTIMATE	$	169,228
15% CONSTRUCTION CONTINGENCY	$	25,384
TOTAL HARD COST	$	194,612

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	19,461
Soils Engineering (15% of earthwork costs)	$	3,714
Landscape Architecture (10% of landscaping costs)	$	-
Surveying (2% of total hard costs)	$	3,892
Utility Engineering/Coordination (3% of eligible dry utilities)	$	-
Inspection/Construction Management (10% of total hard cost)	$	19,461
Developer Administration (1.75% of total hard costs)	$	3,406
Design Services During Construction (2% of total hard costs)	$	3,892
City Project Administration (2% of total hard costs)	$	3,892
Additional Engineering and Construction Management Costs with Caltrans Oversight (5% of total hard costs)	$	9,731
TOTAL SOFT COSTS	$	67,449
SUBTOTAL PROJECT COST	$	262,062
TOTAL PROJECT COST (see Note 3)	**$**	**295,625**
FEE PROGRAM LIABILITY	**$**	**295,625**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) For specific unit costs, see Base Unit Cost List.

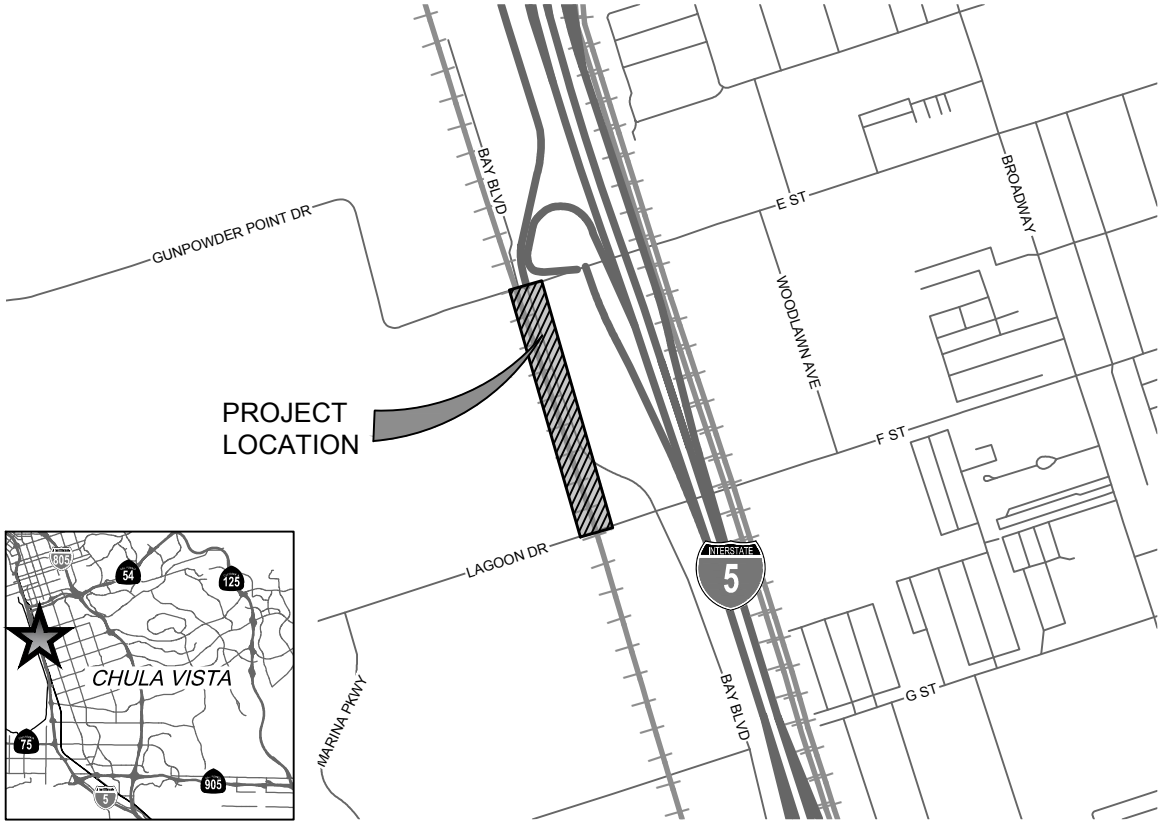
(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. BP-1

LIMIT: FROM E STREET TO F STREET

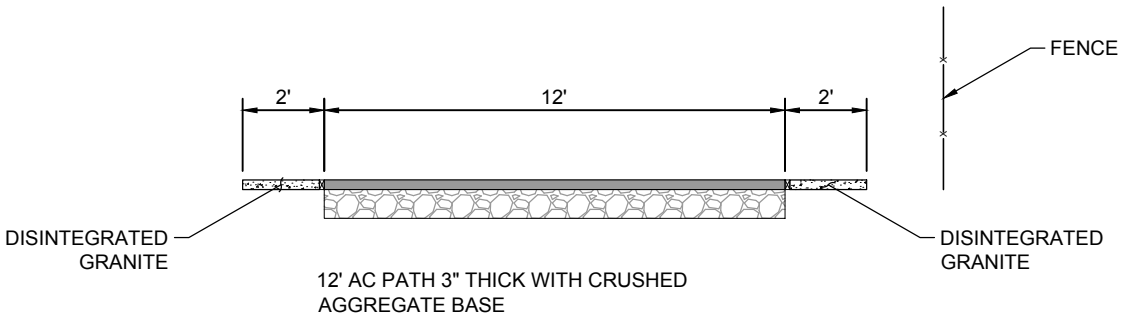
DESCRIPTION: BAYSHORE BIKEWAY (BIKE PATH)

LENGTH: 1,320 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=1,000'



BIKE PATH
NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY BP-1

LIMITS: From E Street to F Street
DESCRIPTION Bayshore Bikeway (Bike Path)
LENGTH (LF): 1,320

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Bayshore Bikeway (Bike Path)	LS	1.00	$ 3,810,000	$ 3,810,000

BASE CONSTRUCTION ESTIMATE	$ 3,810,000
TOTAL HARD COST	$ 3,810,000
SUBTOTAL PROJECT COST	$ 3,810,000
TOTAL PROJECT COST (see Note 2)	**$ 4,297,961**
FEE PROGRAM LIABILITY	**$ 104,750**

Notes:

(1) Base Construction Estimate per 2020 City of Chula Vista Bayshore Bikeway Cost Estimate, indexed to July 2022 using the Construction Cost Index (CCI) Data.

(2) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. BP-2

LIMIT: FROM BAY BOULEVARD THIRD AVENUE

DESCRIPTION: F STREET PROMENADE PHASES 1-3



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=1,000'

NORTH

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY BP-2

LIMITS: From I-5 to Fourth Avenue

DESCRIPTION: F Street Sidewalk & Bike Lane Improvements

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	F Street Sidewalk/Bike Lane Improvements I-5 to Fourth Avenue	LS	1	$ 23,788,500	$ 23,788,500

BASE CONSTRUCTION ESTIMATE	$ 23,788,500
15% CONSTRUCTION CONTINGENCY	$ 3,568,275
TOTAL HARD COST	$ 23,788,500

SUBTOTAL PROJECT COST	$ 23,788,500
TOTAL PROJECT COST (see Note 2)	**$ 26,835,184**
FEE PROGRAM LIABILITY	**$ 2,514,781**

Notes:

(1) Base Construction Estimate per City of Chula Vista F Street Promenade Preliminary Cost Estimate Feasibility.

(2) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. BP-3

LIMIT: INDUSTRIAL BLVD BIKE LANE IMPROVEMENTS.

DESCRIPTION: FROM L ST. TO MAIN ST.

LENGTH: 7,760 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=1,500'

NORTH

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY BP-3

LIMITS: From L Street to Main Street

DESCRIPTION: Industrial Blvd Improvements & Bike Lanes

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Industrial Blvd. Corridor Bike and Pedestrian Gap Improvements	LS	1	$ 543,370	$ 543,370
				BASE CONSTRUCTION ESTIMATE	$ 543,370
				15% CONSTRUCTION CONTINGENCY	$ 81,506
				TOTAL HARD COST	$ 624,876

SOFT COSTS

Civil Engineering (10% of total hard cost)	$ 62,488
Soils Engineering (2% of total hard costs)	$ 12,498
Landscape Architecture (2% of total hard costs)	$ -
Surveying (2% of total hard costs)	$ 12,498
Utility Engineering/Coordination (1% of total hard costs)	$ -
Inspection/Construction Management (10% of total hard cost)	$ 62,488
Developer Administration (1.75% of total hard costs)	$ 10,935
Design Services During Construction (2% of total hard costs)	$ 12,498
City Project Administration (2% of total hard costs)	$ 12,498
TOTAL SOFT COSTS	$ 185,900
SUBTOTAL PROJECT COST	$ 810,776
TOTAL PROJECT COST (see Note 2)	**$ 914,615**
FEE PROGRAM LIABILITY	**$ 165,454**

Notes:

(1) Base Construction Estimate per 2022 City of Chula Vista Industrial Blvd. Corridor Bike & Pedestrian Gap Improvements Cost Estimate.

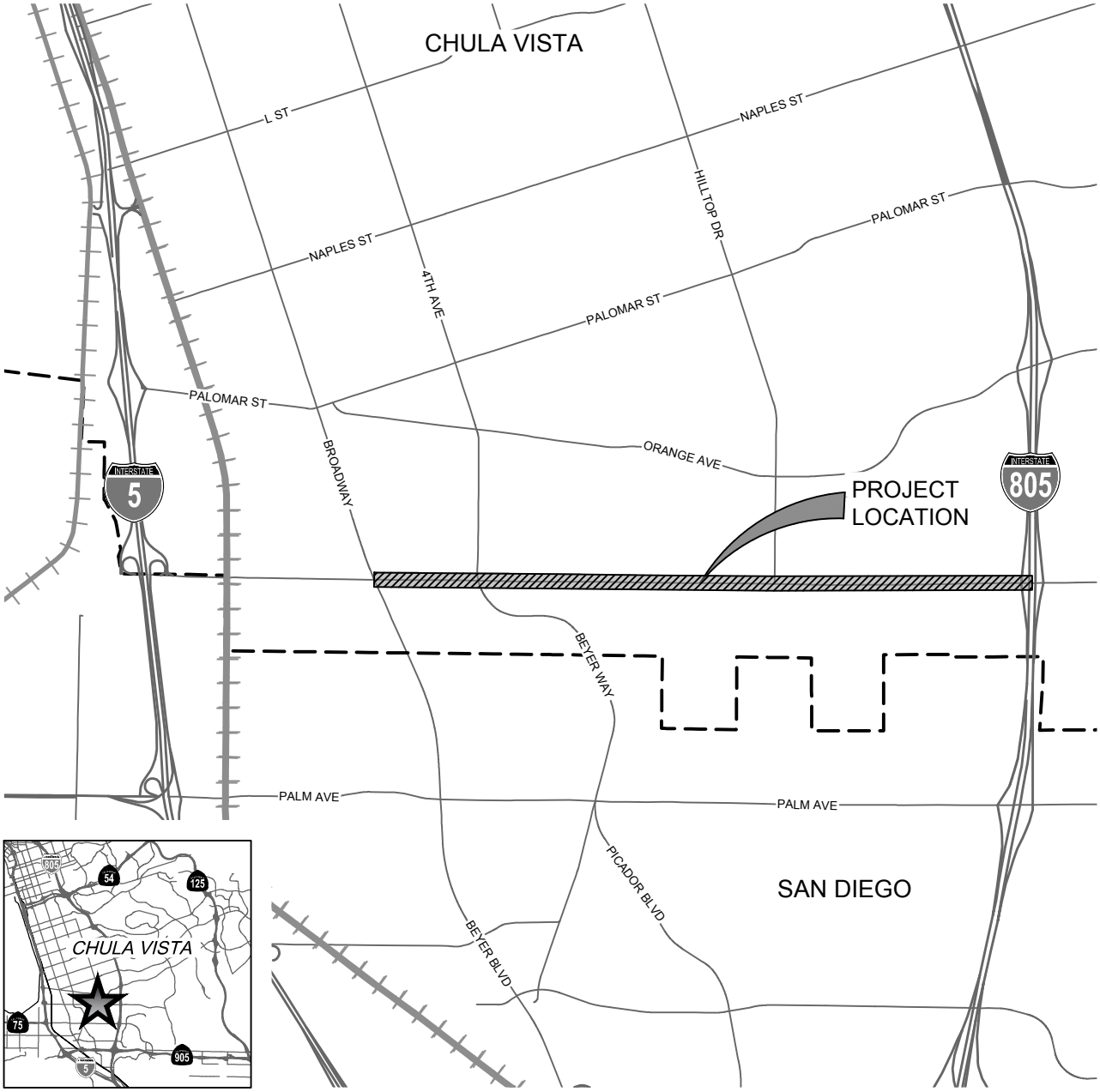
(2) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. BP-4

LIMIT: FROM BROADWAY TO I-805

DESCRIPTION: MAIN STREET BIKE LANE IMPROVEMENTS

LENGTH: 12,800 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=3,000'

NORTH

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY BP-4

LIMITS: From Broadway to I-805
DESCRIPTION: Main Street Bike Lanes
LENGTH (LF): 12,800

CITY OF CHULA VISTA

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Signing & Striping *	MI	2.42	$ 188,000.00	$ 455,758
2	Remove Striping	LF	50,400	$ 2.96	$ 148,940
3	Pavement Markings (12 SF Each)	EA	82	$ 612.00	$ 50,184
4	Raised Curb & Gutter Median	LF	12,000	$ 33.93	$ 407,184
5	Stormwater BMP	LS	1	$ 40,718.41	$ 40,718

BASE CONSTRUCTION ESTIMATE	$	1,102,784
15% CONSTRUCTION CONTINGENCY	$	165,418
TOTAL HARD COST	$	1,268,202

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	126,820
Soils Engineering (15% of earthwork costs)	$	-
Landscape Architecture (10% of landscaping costs)	$	-
Surveying (2% of total hard costs)	$	25,364
Utility Engineering/Coordination (3% of eligible dry utilities)	$	-
Inspection/Construction Management (10% of total hard cost)	$	126,820
Developer Administration (1.75% of total hard costs)	$	22,194
Design Services During Construction (2% of total hard costs)	$	25,364
City Project Administration (2% of total hard costs)	$	25,364

TOTAL SOFT COSTS	$	351,926
SUBTOTAL PROJECT COST	$	1,620,128
TOTAL PROJECT COST (see Note 3)	**$**	**1,827,623**
FEE PROGRAM LIABILITY	**$**	**330,617**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) For specific unit costs, see Base Unit Cost List.

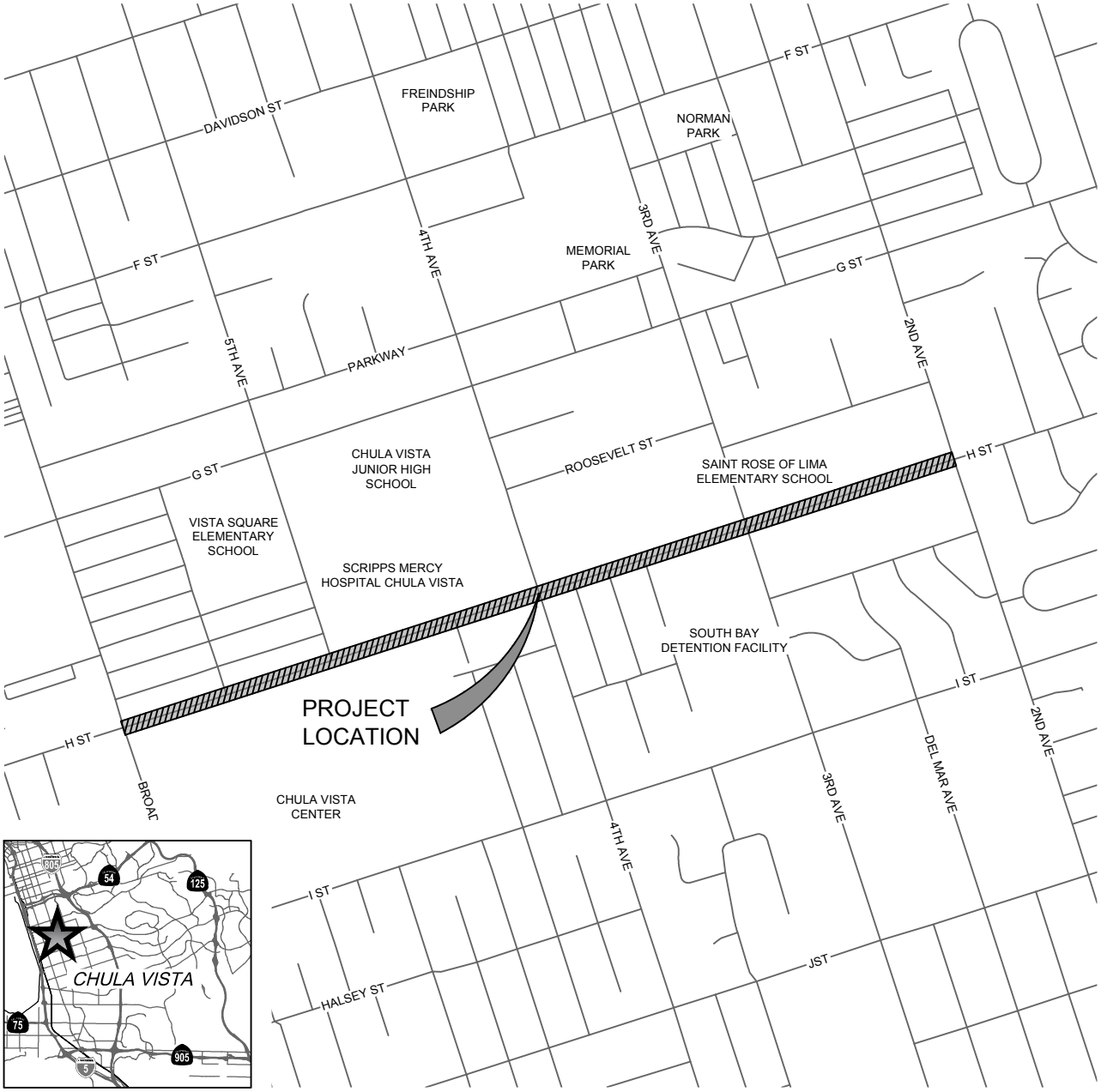
* Unit price determined by assuming a build composition of 10 - Bike Path Signs, 2 - Center Line Stripes, 2 - Lane Stripes, and 2 - Bike Lane Stripes.

(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. BP-7

LIMIT: H STREET FROM BROADWAY TO 2ND AVE

DESCRIPTION: PEDESTRIAN IMPROVEMENTS



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=1,000'

NORTH

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY BP-7

LIMITS: Broadway to Second Ave

DESCRIPTION: H Street Pedestrian Improvements

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Traffic Control	LS	1.00	$ 65,379.59	$ 65,380
2	Countdown Signal Heads	EA	8	$ 800.00	$ 6,400
3	Crosswalk - High Visibility (425 SF) *	EA	1,700	$ 3.64	$ 6,188
4	Crosswalk - Traverse (340 SF) *	EA	4,080	$ 3.64	$ 14,851
5	Curb and Gutter	LF	30	$ 33.93	$ 1,018
6	Curb Ramp	EA	2	$ 4,500.00	$ 9,000
7	Sidewalk	SF	1,500	$ 6.49	$ 9,728
8	Detectable Warning Surface	SF	50	$ 32.52	$ 1,626
9	Stormwater BMP	LS	1	$ 2,137.24	$ 2,137

BASE CONSTRUCTION ESTIMATE	$	116,328
15% CONSTRUCTION CONTINGENCY	$	17,449
TOTAL HARD COST	$	133,778

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	13,378
Soils Engineering (15% of earthwork costs)	$	-
Landscape Architecture (10% of landscaping costs)	$	-
Surveying (2% of total hard costs)	$	2,676
Utility Engineering/Coordination (3% of eligible dry utilities)	$	-
Inspection/Construction Management (10% of total hard cost)	$	13,378
Developer Administration (1.75% of total hard costs)	$	2,341
Design Services During Construction (2% of total hard costs)	$	2,676
City Project Administration (2% of total hard costs)	$	2,676
TOTAL SOFT COSTS	$	37,123
SUBTOTAL PROJECT COST	$	170,901
TOTAL PROJECT COST (see Note 3)	**$**	**192,789**
FEE PROGRAM LIABILITY	**$**	**34,876**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) For specific unit costs, see Base Unit Cost List.

* Reference Caltrans Standard Plan A24F. See Base Unit Cost List (Pavement Marking, SQFT) for unit pricing.

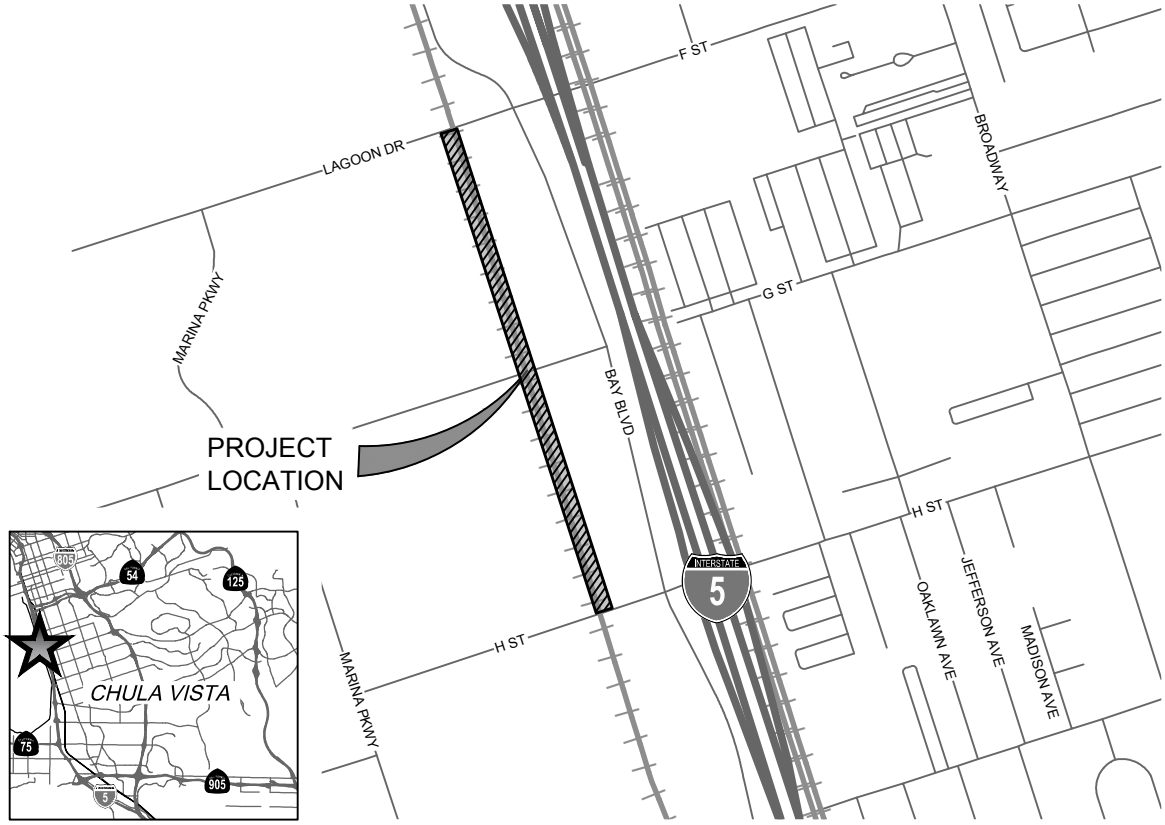
(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. BP-9

LIMIT: BETWEEN F STREET & H STREET

DESCRIPTION: BAYSHORE BIKEWAY (BIKE PATH)

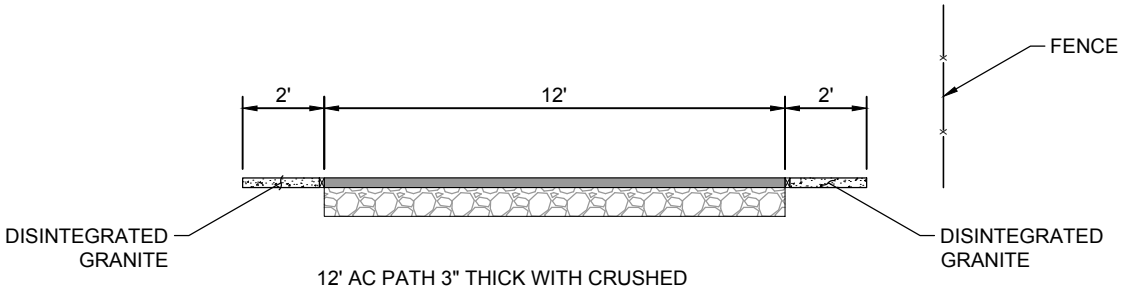
LENGTH: 2,693 ft.



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=1,000'

NORTH



BIKE PATH
NOT TO SCALE

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY BP-9

LIMITS: Between F Street & H Street
DESCRIPTION: Bayshore Bikeway (Bike Path)
LENGTH (LF): 2,693

CITY OF CHULA VISTA

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Bayshore Bikeway (Bike Path)	LS	1	$ 3,365,000	$ 3,365,000

BASE CONSTRUCTION ESTIMATE	$	3,365,000
15% CONSTRUCTION CONTINGENCY	$	504,750
TOTAL HARD COST	$	3,869,750

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	386,975
Soils Engineering (2% of total hard costs)	$	77,395
Landscape Architecture (2% of total hard costs)	$	77,395
Surveying (2% of total hard costs)	$	77,395
Utility Engineering/Coordination (1% total hard costs)	$	38,698
Inspection/Construction Management (10% of total hard cost)	$	386,975
Developer Administration (1.75% of total hard costs)	$	67,721
Design Services During Construction (2% of total hard costs)	$	77,395
City Project Administration (2% of total hard costs)	$	77,395
TOTAL SOFT COSTS	$	1,267,343
SUBTOTAL PROJECT COST	$	5,137,093
TOTAL PROJECT COST (see Note 2)	**$**	**5,795,020**
FEE PROGRAM LIABILITY	**$**	**1,048,319**

Notes:

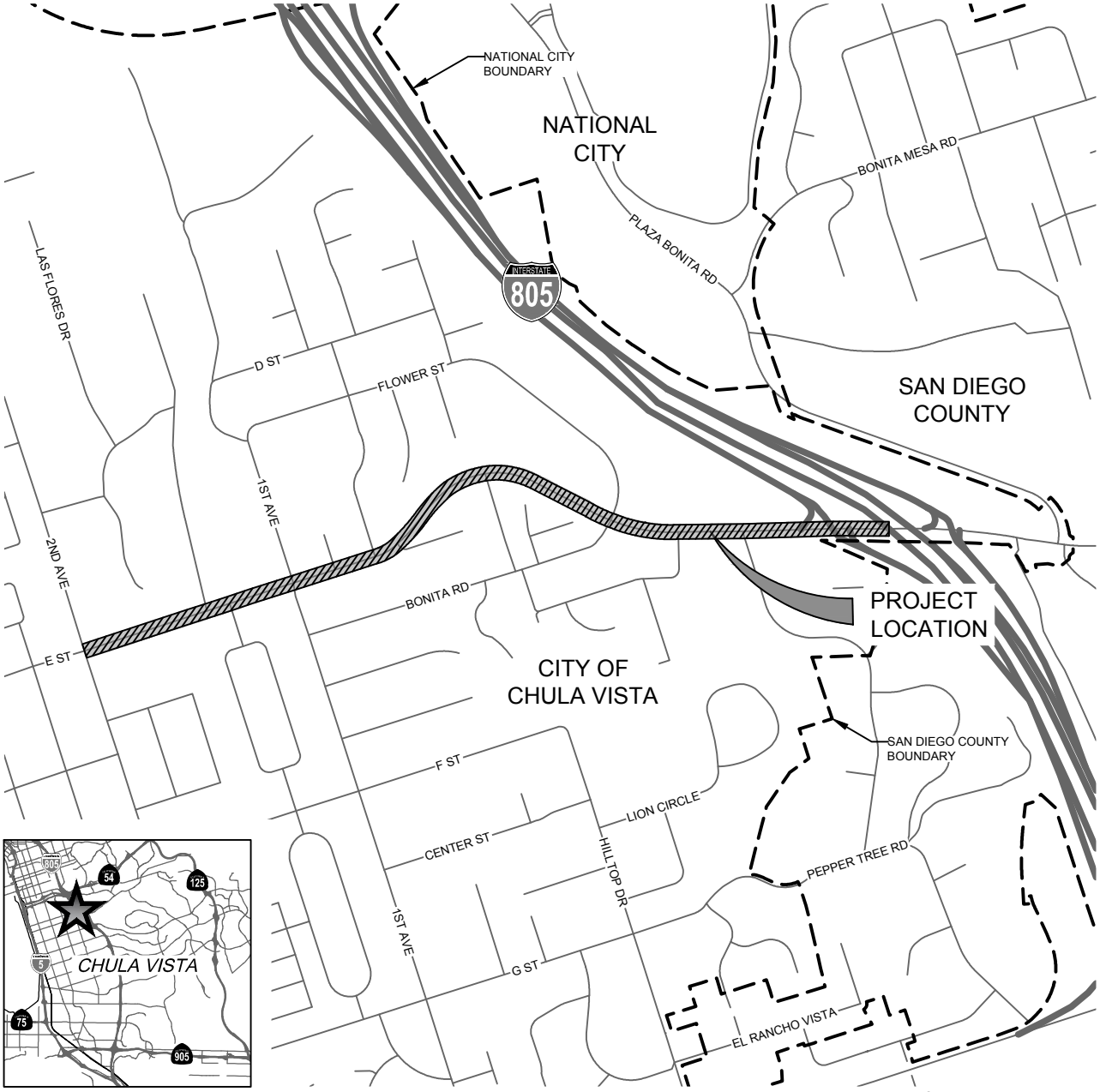
(1) Base Construction Estimate per 2022 City of Chula Vista Bayshore Bikeway Cost Estimate.

(2) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. RAS-1

LIMIT: FROM FIRST AVE TO I-805

DESCRIPTION: BONITA ROAD PEDESTRIAN MISSING STREET IMPROVEMENTS ALONG SOUTH SIDE



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=1,000'

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY RAS-1

LIMITS: From First Avenue to I-805

DESCRIPTION: Bonita Road Pedestrian Missing Street Improvements along South Side

CITY OF CHULA VISTA

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Roadway Excavation/Export	CY	215	$ 42.71	$ 9,185
2	Clearing and Grubbing	SF	1,560	$ 0.65	$ 1,020
3	Crushed Aggregate Base	CY	52	$ 90.04	$ 4,647
4	Sidewalk	SF	2,600	$ 6.49	$ 16,863
5	Curb and Gutter	LF	520	$ 33.93	$ 17,645
6	Asphalt Concrete	CY	1,040	$ 198.42	$ 206,357
7	Driveway Ramp	SF	140	$ 7.39	$ 1,034
8	Stormwater BMP	LS	1	$ 25,675.08	$ 25,675

BASE CONSTRUCTION ESTIMATE	$	282,426
15% CONSTRUCTION CONTINGENCY	$	42,364
TOTAL HARD COST	$	324,790

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	32,479
Soils Engineering (15% of earthwork costs)	$	1,378
Landscape Architecture (10% of landscaping costs)	$	-
Surveying (2% of total hard costs)	$	6,496
Utility Engineering/Coordination (3% of eligible dry utilities)	$	-
Inspection/Construction Management (10% of total hard cost)	$	32,479
Developer Administration (1.75% of total hard costs)	$	5,684
Design Services During Construction (2% of total hard costs)	$	6,496
City Project Administration (2% of total hard costs)	$	6,496
TOTAL SOFT COSTS	$	91,507
SUBTOTAL PROJECT COST	$	416,297
TOTAL PROJECT COST (see Note 3)	**$**	**469,613**
FEE PROGRAM LIABILITY	**$**	**178,923**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) For specific unit costs, see Base Unit Cost List.

(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. RAS-7

LIMIT: H STREET AT BROADWAY

DESCRIPTION: EB QUEUE JUMPER LANE & TURN SIGNAL MODS
ADDITIONAL WB THROUGH LANE & EXCLUSIVE WEST-TO-NORTH RIGHT TURN LANE



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=500'

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY RAS-7

LIMITS: H Street at Broadway

DESCRIPTION: EB Queue Jumper Lane & Traffic Signal Mods
Additional WB Through Lane & Exclusive West-to-North Right Turn Lane

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Queue Jumper Signal Mod.	LS	1	$ 75,000.00	$ 75,000
2	Traffic Signal Modification	LS	1	$ 300,000.00	$ 300,000
3	Street Light Pole	EA	1	$ 8,852.75	$ 8,853
4	Clearing and Grubbing	SF	23,750	$ 0.65	$ 15,528
5	Roadway Excavation/Export	CY	586	$ 42.71	$ 25,045
6	Sidewalk	SF	1,750	$ 6.49	$ 11,350
7	Curb and Gutter	LF	350	$ 33.93	$ 11,876
8	Asphalt Concrete	CY	68	$ 198.42	$ 13,473
9	Concrete Pavement	CY	33	$ 600.00	$ 20,000
10	Crushed Aggregate Base	CY	191	$ 90.04	$ 17,230
11	Driveway Ramp	SF	1,000	$ 7.39	$ 7,388
12	Curb Ramp	EA	2	$ 4,500.00	$ 9,000
13	Curb Inlet	EA	1	$ 9,901.58	$ 9,902
14	Storm Drain RCP Pipe 24"	LF	25	$ 162.30	$ 4,057
15	Traffic Stripe	LF	550	$ 1.48	$ 813
16	Pavement Marking	SF	156	$ 3.64	$ 568
17	Stormwater BMP	LS	1	$ 14,484.87	$ 14,485

BASE CONSTRUCTION ESTIMATE	$	544,567
15% CONSTRUCTION CONTINGENCY	$	81,685
TOTAL HARD COST	$	626,252

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	62,625
Soils Engineering (15% of earthwork costs)	$	3,757
Landscape Architecture (10% of landscaping costs)	$	-
Surveying (2% of total hard costs)	$	12,525
Utility Engineering/Coordination (3% of eligible dry utilities)	$	-
Inspection/Construction Management (10% of total hard cost)	$	62,625
Developer Administration (1.75% of total hard costs)	$	10,959
Design Services During Construction (2% of total hard costs)	$	12,525
City Project Administration (2% of total hard costs)	$	12,525
TOTAL SOFT COSTS	$	177,542
SUBTOTAL PROJECT COST	$	803,794
TOTAL PROJECT COST (see Note 4)	**$**	**906,738**
FEE PROGRAM LIABILITY	**$**	**906,739**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) For specific unit costs, see Base Unit Cost List.

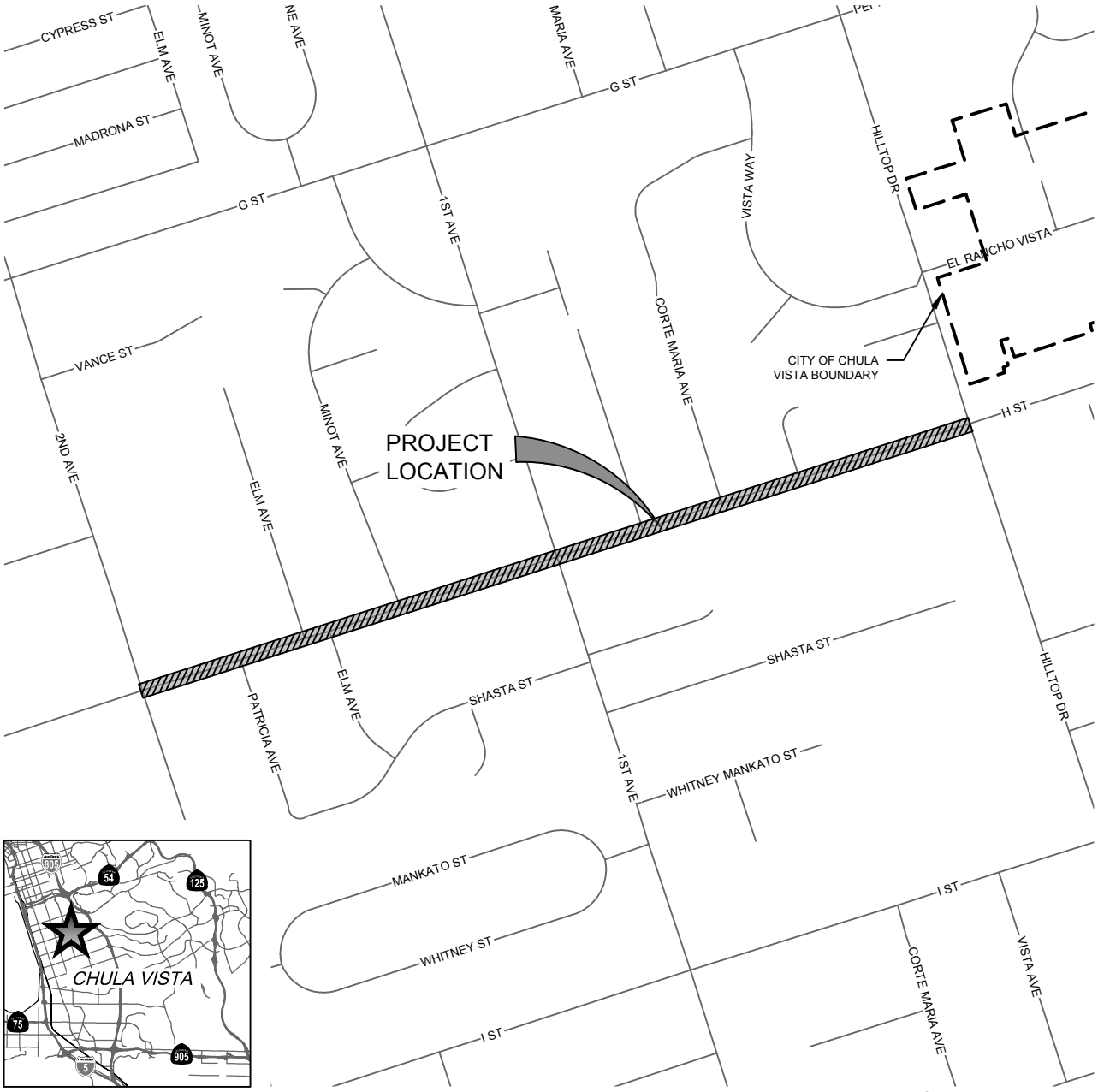
(3) Right-of-way acquisition will be required and is not included in this estimate.

(4) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. RAS-10

LIMIT: FROM SECOND AVE TO HILLTOP DRIVE

DESCRIPTION: H STREET PEDESTRIAN IMPROVEMENTS



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=500'

NORTH

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY RAS-10

LIMITS: From Second Ave to Hilltop Drive

DESCRIPTION: H Street Pedestrian Improvements

CITY OF CHULA VISTA

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Sidewalk	SF	1,000	$ 6.30	$ 6,300
2	Crushed Aggregate Base	CY	21	$ 90.04	$ 1,856
3	Pedestrian Railing	LF	250	$ 238.36	$ 59,590
4	Curb Ramp	EA	1	$ 4,500.00	$ 4,500
5	Curb and Gutter	LF	15	$ 32.96	$ 494
6	4" Asphalt Concrete	SF	30	$ 3.14	$ 94
7	Crosswalk - High Visibility (425 SF) *	EA	425	$ 3.64	$ 1,547
8	Roadside Sign	EA	2	$ 651.49	$ 1,303
9	Grading/Import	CY	56	$ 55.88	$ 3,104
10	Retaining Wall	SF	750	$ 26.92	$ 20,191
11	Traffic Signal Modification	LS	1	$ 300,000.00	$ 300,000
12	Stormwater BMP	LS	1	$ 9,612.96	$ 9,613

BASE CONSTRUCTION ESTIMATE	$	408,593
15% CONSTRUCTION CONTINGENCY	$	61,289
TOTAL HARD COST	$	469,881

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	46,988
Soils Engineering (15% of earthwork costs)	$	466
Landscape Architecture (10% of landscaping costs)	$	2,019
Surveying (2% of total hard costs)	$	9,398
Utility Engineering/Coordination (3% of eligible dry utilities)	$	-
Inspection/Construction Management (10% of total hard cost)	$	46,988
Developer Administration (1.75% of total hard costs)	$	8,223
Design Services During Construction (2% of total hard costs)	$	9,398
City Project Administration (2% of total hard costs)	$	9,398
TOTAL SOFT COSTS	$	132,877
SUBTOTAL PROJECT COST	$	602,758
TOTAL PROJECT COST (see Note 3)	**$**	**259,063**
FEE PROGRAM LIABILITY	**$**	**259,063**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) For specific unit costs, see Base Unit Cost List.

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TRIP FACILITY NO. RAS-13

LIMIT: SOUTH SIDE WEST OF INDUSTRIAL BLVD

DESCRIPTION: L STREET PEDESTRIAN IMPROVEMENTS



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=500'

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY RAS-13

LIMITS: South Side West of Industrial Blvd

DESCRIPTION: L Street Pedestrian Improvements

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Roadway Excavation/Export	CY	44	$ 42.71	$ 1,872
2	Grading/Import	CY	222	$ 18.72	$ 4,160
2	Clearing and Grubbing	SF	1,000	$ 0.65	$ 654
3	Crushed Aggregate Base	CY	20	$ 90.04	$ 1,787
4	Sidewalk	SF	1,000	$ 6.49	$ 6,486
5	Curb and Gutter	LF	200	$ 33.93	$ 6,786
6	5" Asphalt Concrete	SF	3,000	$ 4.07	$ 12,200
7	Curb Ramp	EA	1	$ 4,500.00	$ 4,500
8	Remove Fence	LF	200	$ 19.20	$ 3,840
9	Stormwater BMP	LS	1	$ 4,228.49	$ 4,228

BASE CONSTRUCTION ESTIMATE	$	46,513
15% CONSTRUCTION CONTINGENCY	$	6,977
TOTAL HARD COST	$	53,490

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	5,349
Soils Engineering (15% of earthwork costs)	$	281
Landscape Architecture (10% of landscaping costs)	$	-
Surveying (2% of total hard costs)	$	1,070
Utility Engineering/Coordination (3% of eligible dry utilities)	$	-
Inspection/Construction Management (10% of total hard cost)	$	5,349
Developer Administration (1.75% of total hard costs)	$	936
Design Services During Construction (2% of total hard costs)	$	1,070
City Project Administration (2% of total hard costs)	$	1,070

TOTAL SOFT COSTS	$	15,124
SUBTOTAL PROJECT COST	$	68,615
TOTAL PROJECT COST (see Note 3)	**$**	**77,403**
FEE PROGRAM LIABILITY	**$**	**29,490**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

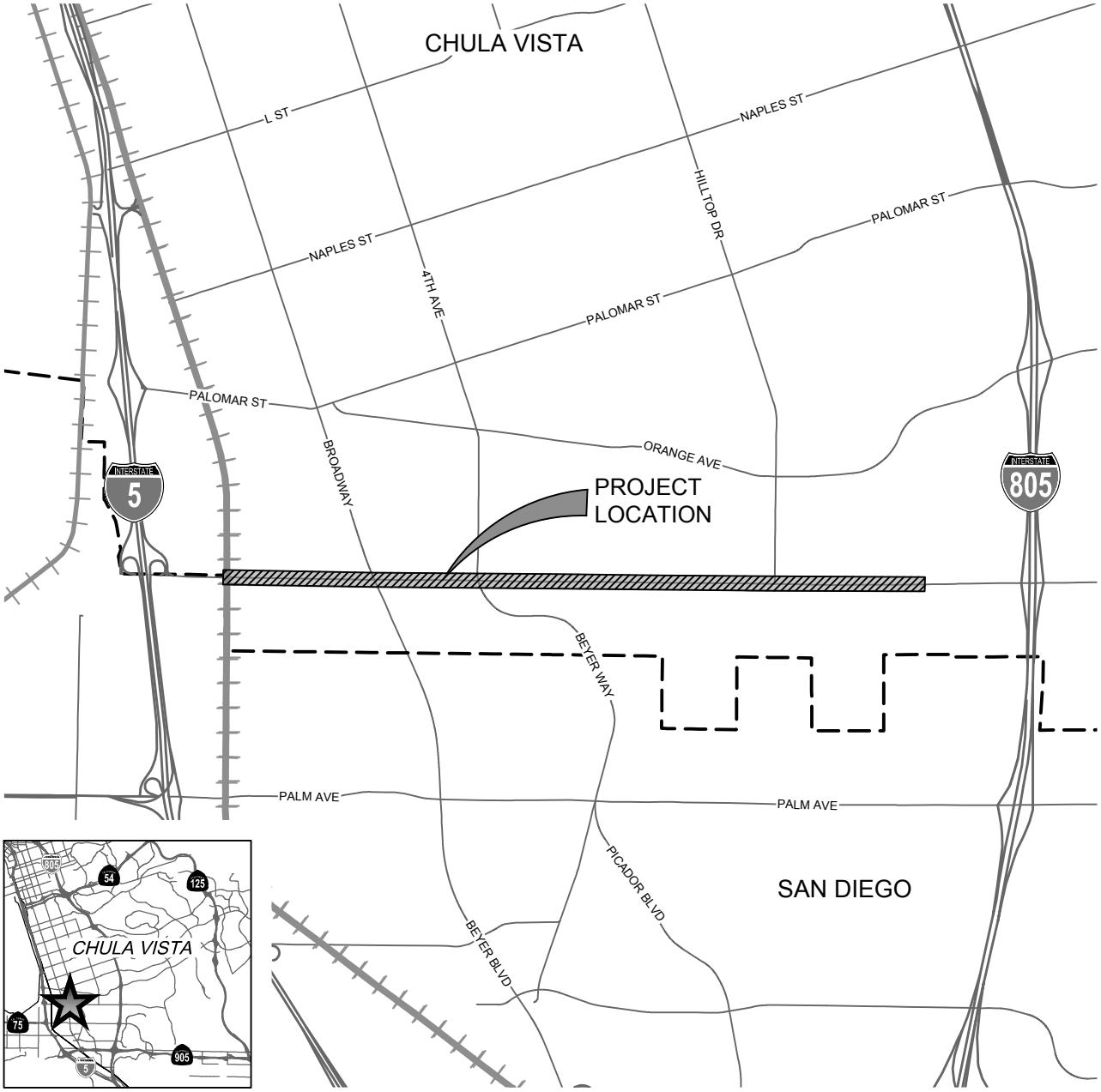
(2) For specific unit costs, see Base Unit Cost List.

(3) Subtotal project costs reflect costs as of June 30, 2023. Subtotal project cost is escalated by 11.58% to reflect July 2023 to July 2024 index and 1.1% to reflect July 2024 to July 2025 index based on based on the one-year change (July to July) in the Engineering News Record, Construction Cost Index for the Los Angeles Region.

TRIP FACILITY NO. RAS-17

LIMIT: FROM I-5 TO I-805

DESCRIPTION: MAIN STREET PEDESTRIAN IMPROVEMENTS



VICINITY MAP
SCALE: 1"=35,000'

LOCATION MAP
SCALE: 1"=3,000'

Kimley»Horn

CITY OF CHULA VISTA

COST ESTIMATE

FACILITY RAS-17

LIMITS: From I-5 to I-805

DESCRIPTION: Main Street Pedestrian Improvements

CITY OF CHULA VISTA®

ITEM	DESCRIPTION	UNITS	QTY.	UNIT COST	TOTAL
1	Sidewalk	SF	21,100	$ 6.30	$ 132,933
2	Curb and Gutter	LF	6,800	$ 32.96	$ 224,137
3	4" Asphalt Concrete	SF	13,600	$ 3.14	$ 42,668
4	Crushed Aggregate Base	CY	475	$ 90.04	$ 42,754
5	Driveway Ramp	SF	24,576	$ 7.39	$ 181,565
6	Curb Ramp	EA	16	$ 4,500.00	$ 72,000
7	Crosswalk - Traverse (340 SF) *	EA	1,360	$ 3.64	$ 4,950
8	Stormwater BMP	LS	1	$ 69,605.66	$ 69,606

BASE CONSTRUCTION ESTIMATE	$	770,613
15% CONSTRUCTION CONTINGENCY	$	115,592
TOTAL HARD COST	$	886,205

SOFT COSTS

Civil Engineering (10% of total hard cost)	$	88,620
Soils Engineering (15% of earthwork costs)	$	-
Landscape Architecture (10% of landscaping costs)	$	-
Surveying (2% of total hard costs)	$	17,724
Utility Engineering/Coordination (3% of eligible dry utilities)	$	-
Inspection/Construction Management (10% of total hard cost)	$	88,620
Developer Administration (1.75% of total hard costs)	$	15,509
Design Services During Construction (2% of total hard costs)	$	17,724
City Project Administration (2% of total hard costs)	$	17,724
TOTAL SOFT COSTS	$	245,922
SUBTOTAL PROJECT COST	$	1,132,126
TOTAL PROJECT COST (see Note 4)	**$**	**1,277,122**
FEE PROGRAM LIABILITY	**$**	**190,419**

Notes:

(1) The sources used for this estimate are the County of San Diego's Unit Price List for the year 2020, the City of San Diego's Unit Cost Data for the year 2009, Caltrans' District 11 Cost Data for the year 2010, and recent bids from Kimley-Horn projects within San Diego County for the year 2022. (Unit costs are adjusted to July 2022 unit costs).

(2) For specific unit costs, see Base Unit Cost List.

(3) Right-of-way acquisition will be required and is not included in this estimate.

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Appendix D: Cost, Growth, and Fee Calculation Spreadsheets

Chula Vista TDIF Program Update
Draft Fee Alternatives - With VMT Improvements

4/25/2025

Fee Alternative	TDIF Program		Notes
	West	East	
Per EDU	$4,724.49	$20,247.35	For Comparison with current program only - Not consistent with AB602
Per ADT	$472.43	$2,024.78	Need to find a resource that scales ADT based on unit size (Potential WRCOG Report)
Per VMT (Dynamic 2050)	$162.51	$376.10	

Fee Alternative	Typical Single Family Unit Cost	
	West	East
EDU	$4,724.49	$20,247.35
ADT	$4,724.29	$20,247.82
VMT (Dynamic 2050)	$6,056.84	$21,150.44

Assumes 3.31 People Per HH (City Average)

Summary of Data For Fee Calculations

Metric	West	East	Total
Infrastructure Cost	$33,213,220	$361,543,170	$402,651,518
Admin Fee	$664,264	$7,230,863	$7,895,128
Infrastructure Cost + Admin	$33,877,485	$368,774,033	$402,651,518
Outstanding Credits	-$285,608	$20,824,858	$20,539,251
Account Balance - Transportation DIFs (see table below)	$3,789,778	$43,855,139	$47,644,917
Program Amount	$29,802,099	$345,743,752	$375,545,851
ADT	63,083	170,756	233,839
VMT	438,698	1,306,053	1,744,751
Units	3,912	15,353	19,265
EDUs	6,308	17,076	23,384
Population	12,949	50,818	63,767
Employee	3,923	6,211	10,134
Service Popuation	16,872	57,029	73,901
VMT/Capita 2050	11.26	16.99	13.80
VMT/Employee 2050	9.58	9.00	9.31
VMT (Dynamic 2050)	183,386.46	919,297.77	1,102,684.23

Fund	Claim on Cash (6/30/2024)
580941 – ORV11 PB	$1,961,770.15
590920 - TDIF	$38,973530.25
590921 – TDIF Admin	$4,881,608.79
590922 - WTDIF	$3,789,778.20

Growth in TRIP West Benefit Area

Land Use	Growth 2023-2050	Development 01/01/23-06/30/24	Growth 2024-2050	Assumeed People Per HH	
Single Family (DUs)	0	0	0	3.31	
Multi-Family (DUs)	4,135	223	3912		
Mobile Home (DUs)	0	0	0		
Total DU's	**4,135**	**223**	**3,912**	**12,949**	<= Total Residents
Hotel (Rooms) * Assumes 1 employee per room	252	0	252		
Industrial (Employees)	123	0	123		
Retail (Employees)	501	5	496		
Office (Employees - sum of office/civic/medical)	3052	0	3052		
Total Employees	**3,928**	**5**	**3,923**		

Note: development between 04/01/2024 (date of previous approved growth projections) and 06/30/2024 were obtained from an Accela query of WTDIF payments.

Land Use	Amount	Conversion to Persons	Residential Populatic	Employees	VMT/ Resident	Total Daily V
Single-Family	0	3.31	0	-	11.26	0
Multi-Family	3,912	3.31	12,949	-	11.26	145,806
Industrial		1,200	-	123	9.58	1,178
Retail		450	-	496	9.58	4,750
Office		300	-	3,052	9.58	29,238
Hotel		1	-	252	9.58	2,414
TOTAL	-	-	**12,949**	**3,923**	-	**183,387**

Land Use	Units/SF West	Trip Rate	ADT West	Trip Length	VMT West
Single Family	0	10	0	7.9	0
Multi-Family	3,912	6	23,472	7.9	185,429
Mobile Home	0	5	0	7.9	0
Total Residential	**3,912**		**23,472**		**185,429**
Hotel	252	9	2,268	7.6	17,237
Industrial	147,600	8	1,181	9.0	10,627
Retail	223,124	80	17,850	3.6	64,260
Office	915,600	20	18,312	8.8	161,146
Total Non-Res	**1,286,324**		**39,611**		**253,269**
Total	**1,290,236**		**63,083**		**438,698**

land use	SF/EMP	Detailed use
Retail	450	Neighborhood Shopping Center (30000 SF or more)
Industrial	1200	Industrial Park
Office	300	Office (Low-Rise - less or equal to 100000 SF)

Growth in TRIP East Benefit Area

Location	SPA / Project	Single Family	MFDUs	Employment Land Uses Square Footage (Acres converted to SF using average FARs from the SANDAG not so brief guide, see below); no additional development 04/01/2023-06/30/2024 Industrial	Retail	Office	Hotel
Village 2 (a)	**Village 2**	**181**	**1052**	796,277	27,082	-	
Village 3 (b)	**Village 3**	**200**	**0**	20,459		-	
Village 4 (c)	**Village 4**	**73**	**277**	-	-	-	
Village 8 East (d)	**Village 8W**	**334**	**1004**	-	20,000	-	
Village 8 West (e)	**Village 8E**	**0**	**3276**	-	88,653	17,000	
Village 9 (f)	**Village 9**	**105**	**3854**	-	100,000	400,000	
Village 10 (g)	**Village 10**	**695**	**1045**	-	-	-	
Millenia (h)	**Eastern Urban Center/Millenia**	**0**	**326**	-	35,100	420,900	265
PA 12 (i)	**Planning Area 12**	**0**	**409**	-	15,000	-	156
Planning Area 23 (j)	**Planning Area 23**	**0**	**522**	(516,186)			
University Innovation District (k)	**University Innovation District**	**0**	**2000**	2,000,418	200,000		
East Lake Buiness Center (l)							-
		1,588	13,765	2,300,967	485,835	837,900	421

(a) Montecito & Otay Ranch Business Park SPA Plan (May 2020); Enclave Montecito Project Information Form (Jan. 2023); permitting history; applicant interview; review of aerial photos.

(b) University Villages, Otay Ranch Village 3 and a Portion of Village 4 SPA Plan (June 20

(c) Otay Ranch Village 4 SPA Plan (May 2018); review of aerial photos.

(d) University Villages, Otay Ranch Village 8 East SPA Plan (December 2014); applicant interview; review of aerial photos.

(e) Otay Ranch Village 8 West SPA Plan (July 2022); applicant interview; review of aerial photos.

(f) Otay Ranch Village 9 SPA Plan (June 2021); applicant interview; review of aerial photos.

(g) Otay Ranch Village 10 SPA Plan (December 2014); applicant interview; review of aeria

(h) Eastern Urban Center SPA Plan (July 2018); permitting history; applicant interview; rev

(i) Promenade at Otay Ranch Town Center, Freeway Commercial SPA Plan June 2019); pe

(j) Transportation Impact Analysis, Sunbow II, Phase 3 (1/29/2021)

(k) University Innovation District SPA Plan (November 2018)

(l) City staff research.

Total DUs:	15,353	**Employees**	1,917	1,080	2,793	421
Population:	50,818	**Total Employees**	6,211			
	5,256	45,562				
	sf pop	mf pop				

VMT USING VMT/Resident and VMT/Employee

Land Use	Amount	Conversion t	Residential Popul	Employees	VMT/ Resident or VMT/Employee[1]	Total Daily VMT Associated with New Residents or Employees
Single-Family	1,588	3.31	5,256	-	16.99	89,299
Multi-Family	13,765	3.31	45,562	-	16.99	774,098
Industrial	2,300,967	1,200	-	1,917	9	17,257
Retail	485,835	450	-	1,080	9	9,717
Office	837,900	300	-	2,793	9	25,137
Hotel	421	1	-	421	9	3,789
TOTAL	-	-	**50,818**	**6,211**	-	**919,298**

City of Chula Vista Transportation Infrastructure Fee Program Update
Facilities List (after Removing Constructed/Under Construction/Not Feasible Projects) With Cost Estimate Summary (Corresponding to July 1, 2024)

Category	Project Number	Roadway Name / Project Name	Project Cost Sheet Included?	Cost (2022 Draft Estimates from KHA in December 2022) NEV Estimates, F&P July 2022	Updated Costs to reflect Indexing for July 2023 and July 2024	Liability Remaining (Due to Credit Issued)	%	Adjusted Amount	Notes
Eastern Facilities	28a	Otay Lakes Road	Yes	$4,319,237	$4,872,418			$4,872,418	This is a new segment, the previous program had a project 28b which included the full segment, this breaking the segment into two pieces (28 and 28b). Village 13 Baldwin
	28b	Otay Lakes Road	Yes	$5,503,108	$6,207,912			$6,207,912	
	56c	Otay Valley Road	Yes	$15,391,204	$17,362,414	25%		$4,340,603.50	
	58a	Heritage Road	No	$11,198,167	$12,632,359			$12,632,358.80	Updated cost using typical unit costs for 6-lane prime arterial and quanities from 2014 Nexus study. This facility is not included in FY24 CIP with 56e or 58b.
	59c	Proctor Valley Road	Yes	$5,050,752	$5,697,621			$5,697,621.00	
	60a	Main Street	Yes	$16,925,067	$19,092,725			$19,092,724.65	
	60b	Main Street	Yes	$19,074,903	$21,517,898			$21,517,898.31	
	60c	Main Street	Yes	$99,938,205	$112,737,671			$112,737,670.68	
	60d	Main Street	Yes	$7,426,704	$8,377,870			$8,377,870.20	
	64	Hunte Parkway/Main St	Yes	$10,553,738	$11,905,395			$11,905,395.33	
	67/68 A	Main Street and Otay Valley Road Bridges	Yes	$81,126,955	$91,517,192			$91,517,192.41	Caltrans Alternative B with ped bridge removed.
	67/68 B	SR 125 Multimodal Bridge	Yes	$14,906,329	$16,815,439			$16,815,439.00	
	70	Discovery Falls Drive	Yes	$11,887,086	$13,409,510			$13,409,510.27	
	71	Eastlake Parkway/St B	Yes	$8,119,389	$9,159,270			$9,159,270.00	
	72	Otay Valley Road	Yes	$8,480,867	$9,567,044			$9,567,043.86	
	73	Hunte Parkway Multimodal Bridge	Yes	$13,876,763	$15,654,012		$ 1,961,770.50	$13,692,241.50	
		TOTALS Eastern Facilities		$333,778,474	$376,526,751			$361,543,170	
Western Facilities	I-5-4	E Street	Yes	$14,745,182	$16,633,653		58%	$9,672,470	
	I-5-10	J Street	Yes	$1,344,300	$1,516,470		58%	$881,827	
	I-5-11	L Street	Yes	$2,266,924	$2,557,258		18%	$462,608	
	I-5-12	Bay Boulevard	Yes	$225,247	$254,095		58%	$147,756	
	I-5-13	Industrial Boulevard	Yes	$225,247	$254,095		58%	$147,756	
	I-5-14	Palomar Street	Yes	$8,481,688	$9,567,970		58%	$5,563,775	
	I-5-17	I-5 HOV & Managed Lanes	Yes	$160,917,790	$181,527,143		2%	$4,320,346	
	I-805-2	Main Street	Yes	$5,281,238	$5,957,626		100%	$5,957,626	
	SR-54-2	SR-54 EB Off-Ramp	Yes	$262,062	$295,625		100%	$295,625	
	BP-1	Bayshore Bikeway	Yes	$3,810,000	$4,297,961		2%	$104,750	Chula Vista CIP FY 23-24, project STL0451. WTDIF share is $104,750.
	BP-2	F Street	Yes	$23,788,500	$26,835,184		9%	$2,514,781	Chula Vista CIP FY 23-24, project STL0464; Active Transportation Grant Application; email from P. Moneda, Eng. & CP 6/5/2023. Project Phase 1 is covered in FY 23-24 CIP with WTDIF contribution of $0.00. Phases 2 and 3 have an estimated cost of $13,901,500. (Total cost confirmed by P. Moneda 06/05/2023.) WTDIF share per 2014 nexus study is 18.09%. TRIP West responsibility is $2,514,781.35
	BP-3	Industrial Blvd	Yes	$810,776	$914,615		18%	$165,454	Bike improvements have been completed on a portion of Industrial Boulevard, between Moss and Ada. The scope of work for the remaining segments (between L and Moss and between Ada and Main) has been substantially changed based on the Palomar Grade Separation project and recent input from the California Public Utilities Commission about ped facilities on the west side of Industrial Boulevard. Frank and Maria Malong are working to specify this scope and we will provide when complete. City will provide estimate.
	BP-4	Main Street	Yes	$1,620,128	$1,827,624		18%	$330,617	This project coincides with the Mainstreet Streetscape MP Priority Project #2 ($1.77M).
	BP-7	H Street	Yes	$170,901	$192,789		18%	$34,876	
	BP-9	Bayshore Bikeway	Yes	$5,137,093	$5,795,020		18%	$1,048,319	
	RAS-1	Bonita Road	Yes	$416,297	$469,614		38%	$178,923	
	RAS-7	H Street	Yes	$803,794	$906,739		100%	$906,739	
	RAS-10	H Street	Yes	$602,758	$679,956		38%	$259,063	
	RAS-13	L Street	Yes	$68,615	$77,403		38%	$29,490	
	RAS-17	Main Street	Yes	$1,132,126	$1,277,122		15%	$190,419	Reflects new scope that Frank provided. Updated project description led to smaller projectr scope. This projectr corresponds to the Main Street Streetscape MP Improvements.
		TOTAL WESTERN FACILITIES		$232,110,666	$261,837,961			$33,213,220	

TRIP Fee Credits and Program Balance (Values as of 6/30/2024)

Trust Account	Description	Developer/Project	TRIP Account Balance Liability / (Future Revenue)	
			TRIP West	TRIP East
TDIF AD972	TDIF for Otay Ranch AD97-2	Otay Ranch Company		$ 36,554.52
TDIF EL	Eastlake TDIF Cash Credit	Eastlake (Woods, Vistas, land swap)		$ 409,038.37
TDIF ELBC2	TDIF cash credit for Eastlake Bus. Ctr. II	Eastlake Co./EL Business Center II		$ 1,912,026.39
TDIF ELVCN	Village Center North TDIF Credit	Eastlake Company		$ 3,538,603.80
TDIF RDR 2	TDIF CREDIT FOR RDR SPA 2	Rancho del Rey		$ 57,851.77
TDIF VCE	TDIF FOR EL VILLAGE CTR. EAST	Eastlake Village Center East		$ 9,986.97
TDIF011B	TDIF CREDIT VIA CFD 2001-1 B(S	Trimark Pacific Homes/San Miguel Ranch		$ 58,752.90
TDIF17IURB	CFD 17-I Annexation 2017-01 - Urbana	PGS Partners, LLC	$ (296,350.10)	
TDIF2001-1	TDIF Credit for SMR CFD 2001-1	San Miguel Ranch		$ 42.85
TDIFDBLDWN	TDIF deferral for Baldwin	Baldwin/ORV2/PA-12		$ (8,265,766.40)
TDIFCSPHIL	Springhill Suites Hotel Deferral	Eastlake Hospitality Ventures LLC		$ (1,763,417.79)
TDIFCFD06I	TDIF Credit via Eastlake CFD 06I	The Eastlake Company		$ 3,849,475.24
TDIFCFD12I	Initial TDIF Cash credit of $6,525,645.90	McMillin Otay Ranch LLC		$ 2,502.60
TDIFCFD13I	TDIF credit via CFD 13-I	Otay Ranch Company		$41,494.60
TDIFCHMFED	TDIF Credits for Homefed	HomeFed		$ 2,356,296.94
TDIFMLCASH	TDIF Credits for Millenia	Meridian		$ 127,387.55
TDIFRHRVD	Transfer requested by Sunwood RHR to	RHR Neighborhood 9A - 30 lots		$ 8,560.25
INCENTTDIF	Economic incentive credit/HBP grant offset	N/A		$ 28,000,000.00
N/A	DIF update consultant services	Eastern and Western TDIFs	$ 10,742.21	$65,987.86
N/A	Interfund Loan from Eastern TDIF	N/A		-$9,620,519.93
TOTALS:			$ (285,607.89)	$ 20,824,858.50
		Total Fee Credits	$ 10,742.21	$ 40,474,562.62
		Total Future Revenue (deferred payments)	$ (296,350.10)	$ (19,649,704.12)

Appendix E: City of San Diego DIF Program – Residential Scaling Methodology (CR Associates, July 2020)

CHEN RYAN

MEMORANDUM

TO: Tom Tomlinson, City of San Diego
Marco Camacho, City of San Diego

FROM: Stephen Cook, PE, Chen Ryan Associates

DATE: May 21, 2019

RE: City of San Diego DIF Program – Residential Scaling Methodology

The City of San Diego (City) is currently investigating the potential for changing the residential fee structure within their Developer Impact Fee (DIF) program. The fee structure would be changed from a flat fee, by unit type, to a scaled fee based on the unit type and size. The purpose of this memo is to document the sources, assumptions and methodologies utilized to develop a recommended fee scaling structure for residential units within the DIF program.

1. Current DIF Program

The City currently maintains a DIF program which provides funding for public facilities projects throughout the City, including transportation, fire services, libraries and parks. DIF fees are currently calculated, collected and spent within each Community Planning Area. The dollar amount of the DIF is based upon the collective cost of remaining public facilities projects, divided by total community development allowed by the respective currently adopted Community Plan (buildout of the adopted Land Use Element). At time of building permit issuance, the owner/developer of any parcel being developed must pay a DIF based on the DIF Rate Schedule in effect at the time of building permit issuance, and as determined by the type of development. Currently, the fee program has a flat rate for residential units based on type (Single Family or Multifamily), while the fees for commercial uses (such as retail, office, etc.) are based on the type and size of the development.

2. Potential Changes to the Current DIF Program

As noted previously, the City of San Diego is currently investigating the potential for changing the residential fee structure from a flat fee, by unit type, to a scaled fee based on the unit type and size. To make this change, and still maintain the nexus analyses that were developed for each community for the DIF Program, the new fee structure must do two things 1) the new fee structure cannot exceed the maximum residential fee values that were established for the current DIF program; 2) a connection has to be made relating to the fee's magnitude and the unit's impact on the improvements or four asset classes included in the program (transportation improvements, fire services, libraries and parks).

Based on the two nexus compliance objectives outlined above, the development of the scaled fee structure (based on unit size) should be developed using the following guidelines:

1. Develop a fee structure that is scaled as a percentage of the maximum residential fee, by community, that was authorized by the current DIF program.

2. Identify a metric, in which the fee can be scaled to, which relates to both the size of a residential unit and the impact the unit will have on the four asset classes.

3. Relating Unit Size to the Impacts on Asset Classes

As noted previously, to maintain the nexus established for the current DIF program, any cost scaling that is applied to residential fees must also reflect their associated impacts on the asset classes covered by the program. Therefore, the fee scaling must be based on a metric that relates both to the size of the unit and its impact to the asset classes.

One key metric that potentially relates to the size of a unit as well as the magnitude of impact on the four asset classes is the population. For example, larger units have the potential to attract a larger household population, thereby placing an additional burden on the asset classes included in the DIF program due to more people from that household using the associated facilities and services. Therefore, it can be argued that these larger units should pay a higher fair-share contribution towards the services, facilities and improvements included in the City's DIF program. **Table 1** outlines how an increased population can relate to each asset class included in the current DIF program.

Table 1: Relationships Between Population and the Asset Classes Included in the DIF Program

Asset Class	Relation to Population
Fire Services	The City of San Diego General Plan (2008) established the following policy regardingthe development and funding of fire stations within the City: PF-D.2. Determine fire station needs, location, crew size and timing of implementation as the community grows. a) Use the fire unit development performance measures (based on population density per square mile) shown in Table PF-D.1 to plan for needed facilities. Where more than one square mile is not populated at similar densities, and/or a contiguous area with different density types aggregates into a population cluster area, use the measures provided in Table PF-D.2. b) Reflected needed fire-rescue facilities in community plans and associated facilities financing plans as a part of community plan updates and amendments. As noted in the policies listed above, fire station needs and implementation are to be determined as a community grows. The performance measures used to determine these improvements are based on population density. Therefore, the higher and denser the population is, the higher the demand for fire needs.
Library	The City of San Diego General Plan (2008) established the following policy regarding the development and funding of libraries within the City: PF-J.6. Design libraries to provide consistent and equitable services as communities grow in order to maintain service levels which consider operational costs and are based on established guidelines. As noted in the policy listed above, libraries need to be maintained and developed to provide consistent and equitable services as communities grow. Community growth and needs are typically directly related population growth. Therefore, this policy creates a direct link to the impact that new/additional population may have on the library asset class.

Table 1: Relationships Between Population and the Asset Classes Included in the DIF Program

Asset Class	Relation to Population
Parks	The City of San Diego General Plan (2008) established standards for the development of population-based parks and recreation facilities, including Recreation Centers and Aquatic Complexes *(For additional detail about population-based park categories and guidelines, see the General Plan, Table RE-2).* The City's General Plan establishes a minimum standard of 2.8 acres of community park space for every 1,000 people. This standard creates a direct link to the impact of population to the impacts on the park asset class.
Transportation	The transportation related facilities included in the DIF program are generally developed based on the overall travel demand. Therefore, the higher the population within an area, the higher the demand for transportation facilities within the area across all modes of travel. This asset class can be directly related to household population size since the transportation related trip demands are directly correlated on a per person basis (2009 National Household Travel Survey found that each person generally generates 3.79 trips per day).

4. Link between Residential Unit Size and Household Population

In theory, the larger a residential unit (based on total SF), the more people it could house. Unfortunately, based on initial research there was no readily available data confirming this theory. However, it was found that American Community Survey 2016 (5 Year Estimate) does provide both Average Household Size (AvgHHSize) and Average Number of Bedroom data, for each census block group. Therefore, using this data could establish a link between Average Household Size (i.e. people per household) and the average number of bedrooms per household. Using the Statistical Packages of the Social Sciences (SPSS) software, a regression analysis was performed for the entire San Diego Region (1,187,644 points of data) to determine the statistical relationship between overall household size and the total number of bedrooms within the household. **Figure 1** below displays the results of the statistical analysis.

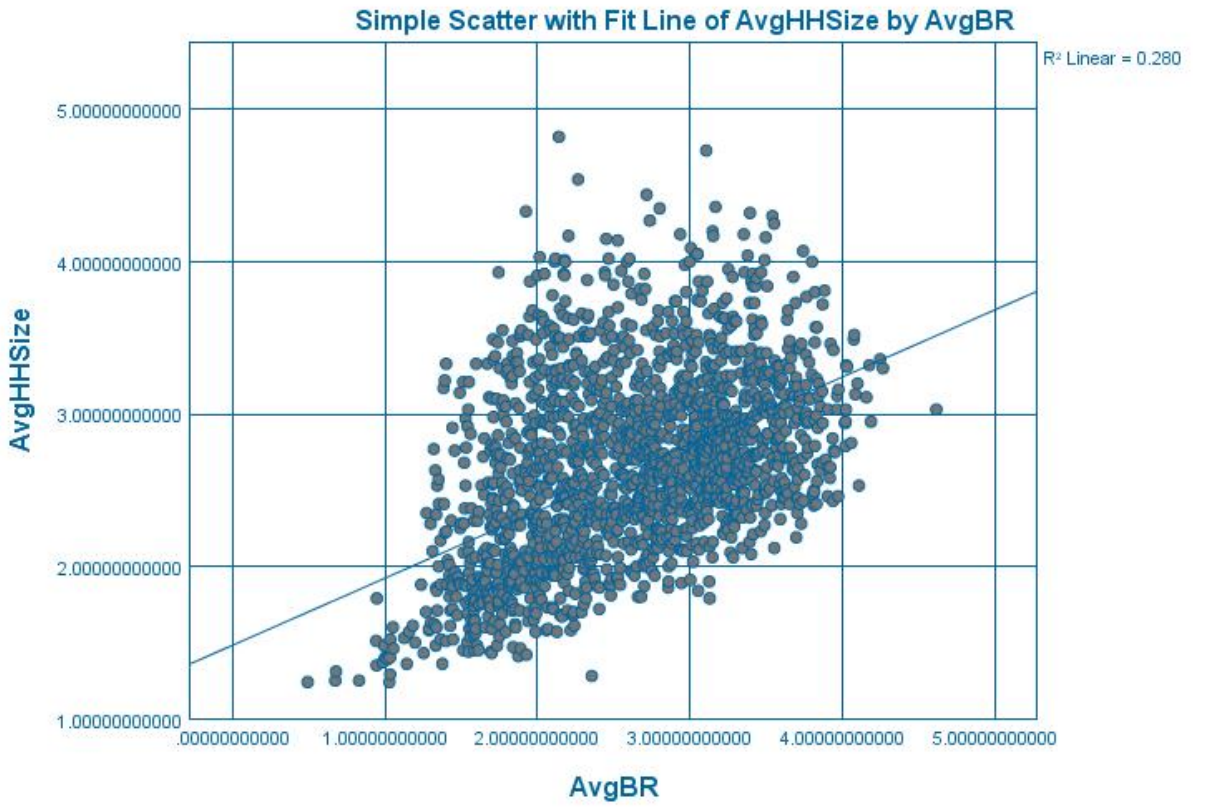


Figure 1: Relationship between Average Household Size and Number of Bedrooms

This statistical analysis found the relationship between Average Household Population and Average Number of Bedrooms within the household is as follows:

Average Household Population = 1.483+0.440(The Average Number of Bedrooms)

Using this formula, the average household population per number of bedrooms was calculated for households with one to five bedrooms, which is the general number of bedrooms range found within the Region. **Table 2** displays the average household population by number of bedrooms, as determined by the statistical analysis.

Table 2: Household Population by Bedroom - City of San Diego

Number of Bedrooms	Average Household Population
1	1.9
2	2.4
3	2.8
4	3.2
5	3.7

Source: US Census – 2016 American Community Survey 5-Year Estimate

Note
Average number of people per household, based on total number of bedrooms

Once the relationship between average household population and average number of bedrooms was established, a relationship between number of bedrooms and residential unit size (sf) was needed. Once this relationship was established, the size of the residential unit is correlated back to the average population size using the number of bedrooms as the common link.

SANGIS parcel data, throughout the entire San Diego Region, was utilized to determine this relationship between residential unit size and number of bedrooms (over 785,000 data points). The SANGIS parcel data includes information such as land use type, total livable square feet (unit SF excluding uses such as garages), number of bedrooms and year built. This data was utilized to determine the average unit size (SF) based on the total number of bedrooms for both single family and multifamily units, as displayed in **Table 3**.

Table 3: Household Population by Unit Size

Bedrooms	Average Population[1]	Size (SF) Single Family	Size (SF) Multifamily
1	1.9	870	706
2	2.4	1,188	1,084
3	2.8	1,630	1,436
4	3.2	2,228	N/A
5	3.7	2,996	N/A

Source: Chen Ryan Associates, November 2018

Note
[1] Based on information provided in Table 2

5. Scaling Based on Unit Size

As noted in Section 2, one of the guidelines for developing a scaled fee structure for residential units is to develop a structure that can be scaled as a percentage of the maximum residential fee authorized within the current DIF program. Therefore, the maximum authorized fee for residential units should be used as the high point of the scale (i.e. 100%) in which only the largest units pay, while the remaining smaller units would pay a percentage of the maximum fee. The percentage of the fee, in which smaller units would pay, should be based on the proportional burden they place on the different asset classes. As shown in in Table 1, household population size can be related to the burden placed on the DIF program asset classes; therefore, using household population size would be an equitable way in allocating the fee scale.

Using the trends set in Table 3, the household population can be calculated for any unit size. **Figure 2** displays the identified relationship between unit size and household population, as well as the equations for the plotted data points' trendlines. These equations, both for single family and multifamily units, can be used to derive the household population based on unit size.

Single Family: Projected Household Population = (Unit Size (SF) + 1579.6) / 1200.7
Multifamily: Projected Household Population = (Unit Size (SF) + 838.95) / 808.85

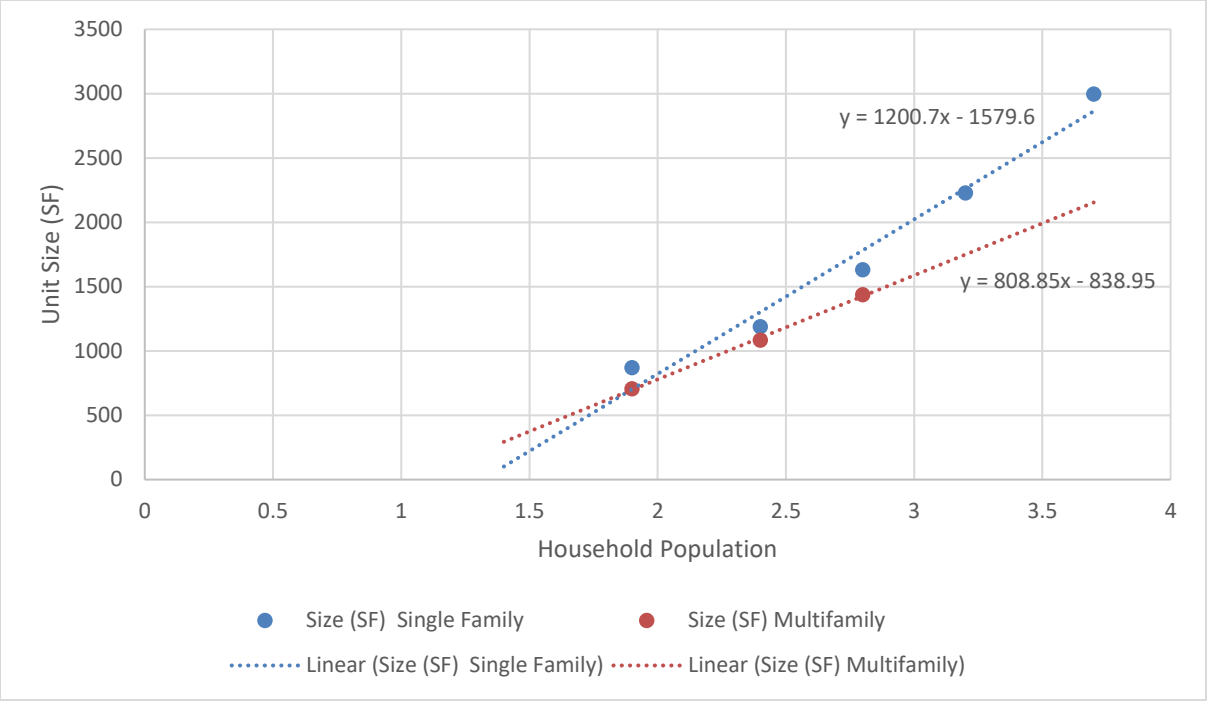


Figure 2: Relationship between Unit Size and Household Population

The units that would pay the maximum fee (i.e. those within the highpoint of the scale) was determined based on units that fall above the 80th percentile in size (SF) within the San Diego Region. This value was established for both single family and multifamily units utilizing the data in the SANGIS Parcel Database, the results of this analysis are displayed below:

Single Family Units 80th Percentile: 2,485 SF
Multifamily Units 80th Percentile: 1,336 SF

Based on the findings outlined above, it is recommended that single family units constructed larger than 2,500 SF would pay the maximum fee established for single family units by the current DIF program. Additionally, multifamily units constructed larger than 1,300 SF would pay the maximum fee established for multifamily units by the current DIF program. Using the equations derived above:

Single Family Units 80th Percentile: 2,500 SF = 3.4 People Per Household
Multifamily Units 80th Percentile: 1,300 SF = 2.6 People Per Household

Since unit sizes outlined above were identified as the highpoint of the scale, their associated household population values will be used as the highpoint value in which the fee structure will be scaled against for smaller units; meaning, the highpoint values listed above will be used as the denominator in calculating the percent of the maximum fee that the unit would pay (Projected Household Population / Highpoint People Per Household). Therefore, the percent of the maximum residential fee the unit would be calculated as follows:

Single Family: Percent of Maximum Fee = [(Unit Size (SF) + 1579.6) / 1200.7]/3.4
Multifamily: Percent of Maximum Fee = [(Unit Size (SF) + 838.95)/ 808.85]/2.6

6. Recommendation

Based on the research and information presented in the previous sections, it is recommended that, if the City of San Diego decides to implement a scaled fee structure for residential uses in their DIF program, that the following methodology is used to develop the structure:

- The maximum residential fee allowable within each Community Planning Area (for both single family and multifamily units) should be used as the highpoint in which the fee scale is based on.
- The fee scale would have a cap at 2,500 SF for single family units and 1,300 SF for multifamily units. Units at or above this size would pay their respective maximum fee rate.
- For units below the cap, the fee rates would be calculated as follows:
    - Single Family: Maximum Fee X [(Unit Size (SF) + 1579.6) / 1200.7]/3.4
    - Multifamily: Maximum Fee X [(Unit Size (SF) + 838.95) / 808.85]/2.6

Table 4 displays the scaled fee rate for single family units, in 50 square foot increments, based on the formula outlined above. The scaled fee rate should be applied to the total residential DIF fee rate for each respective CPA.

Table 4: Scaled Fee Rate – Single Family

Unit Size (SF)	Scaled Fee Rate
2,501 <	Full Fee
2,401 - 2,450	99%
2,351 - 2,400	97%
2,301 - 2,350	96%
2,251 - 2,300	95%
2,201 - 2,250	94%
2,151 - 2,200	93%
2,101 - 2,150	91%
2,051 - 2,100	90%
2,001 - 2,050	89%
1,951 - 2,000	88%
1,901 - 1,950	86%
1,851 - 1,900	85%
1,801 - 1,850	84%
1,751 - 1,800	83%
1,701 - 1,750	82%
1,651 - 1,700	80%
1,601 - 1,650	79%
1,551 - 1,600	78%

Table 4: Scaled Fee Rate – Single Family

Unit Size (SF)	Scaled Fee Rate
1,501 - 1,550	77%
1,451 - 1,500	75%
1,401 - 1,450	74%
1,351 - 1,400	73%
1,301 - 1,350	72%
1,251 - 1,300	71%
1,201 - 1,250	69%
1,151 - 1,200	68%
1,101 - 1,150	67%
1,051 - 1,100	66%
1,001 - 1,050	64%
> 1,000	63%

Table 5 displays the scaled fee rate for multifamily units, in 50 square foot increments, based on the formula outlined above. The scaled fee rate should be applied to the total residential DIF fee rate for each respective CPA.

Table 5: Scaled Fee Rate – Multifamily

Unit Size (SF)	Scaled Fee Rate
1,251 <	Full Fee
1,201 - 1,250	99%
1,151 - 1,200	97%
1,101 - 1,150	95%
1,051 - 1,100	92%
1,001 - 1,050	90%
951 - 1,000	87%
901 - 950	85%
851 - 900	83%
801 - 850	80%
751 - 800	78%
701 - 750	76%
651 - 700	73%
601 - 650	71%
551 - 600	68%
501 - 550	66%
< 500	64%