Appendix A: *Transportation Development Impact Fee Project Cost Estimates Technical Memorandum* (Kimley Horn, January 2023)

Transportation Development Impact Fee (TDIF) Project Cost Estimates Technical Memo

Chula Vista, CA.

January 31TH, 2023

Kimley»Horn

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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

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

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.

UNIT PRICE LIST-2009

SECTION 1-EARTHWORK

SECTION 2- DRAINAGE

SECTION 3- SURFACE IMPROVEMENTS

SECTION 4- TRAFFIC

SECTION 5- WATER/WASTEWATER UTILITIES

SECTION 6-MISCELLANEOUS IMPROVEMENTS

SECTION 7-LANDSCAPE & IRRIGATION

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

Table of Contents

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

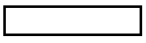
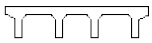
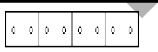
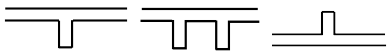
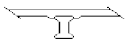
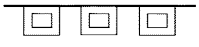
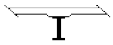
COMPARATIVE BRIDGE COSTS

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)

Item No.	Item	Quantity	Units	Unit Cost	Total Item Cost	Cost Breakdown: ATP Eligible Costs/Items %	ATP Eligible Costs/Items $	ATP Ineligible Costs/Items %	ATP Ineligible Costs/Items $	Corps/CCC to construct %	Corps/CCC to construct $
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%			
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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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49								100%			
50								100%			
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

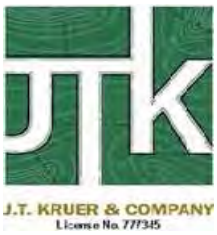
Earthwork	$	163,464.79
Erosion Control	$	50,911.37
Storm Drain	$	87,003.75
Sewer	$	265,853.75
Force Main Sewer & Lift Station	$	156,930.00
Water - Potable	$	434,710.00
Dry Utilities	$	455,705.00
Traffic Control Allowance	$	43,453.00
Surface Improvements	$	1,010,684.91
Walls / Fencing	$	5,300.00
Landscaping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



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. 77315

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	=	$	491
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	$171,989.96	=	$	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 Width	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
system every	500	ft
1 BMP per acre	3.48	

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 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**

Assumptions:

I. ROADWAY ITEMS

Section 1 Earthwork

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

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 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

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 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

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 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

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 5 Lighting and Electrical

Light pole located every	190	ft

Per 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

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**

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

One (1) for every 1 mile of roadway

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

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**

Assumptions:

I. ROADWAY ITEMS

Section 1 Earthwork

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

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 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

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 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

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 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

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 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

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**

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

One (1) for every 1 mile of roadway

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

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

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