RUBIDOUX COMMUNITY SERV1CES DISTRICT
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RUBIDOUX COMMUNITY SERVICES DISTRICT WATER AND SEWER CAPACITY FEE REPORT

JULY 2025
REVISED OCTOBER 2026

Prepared By

RUBIDOUX COMMUNITY SERVICES DISTRICT
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SECTION 1.0
INTRODUCTION

Overview

The Rubidoux Community Services District (District) provides water and wastewater, services to a population of approximately 39,000 in an area encompassing roughly 7.5 square miles.

Currently, the District's source of water is groundwater, pumped from local Wells. The District's wastewater is collected in a District owned and maintained collection and participates as a partner in the City of Riverside's Wastewater Treatment Facility for treatment and disposal of the District's collected wastewater.

The last time the District adjusted its water and, wastewater, and fire protection fees was in May 2016.

A capacity fee is a one-time charge the District imposes on new customers in order to recover an equitable share of the costs of constructing the system capacity necessary to serve new customers. The charges are levied on new users wishing to connect to the system or a customer in the process of upsizing their water meter or increase their wastewater flow. Note that fees and charges are used interchangeably throughout this report.

In California, State legislation sets certain procedural parameters for charging capacity fees. The legislation is codified as California Government Code Sections 66013, 66016, and 66016.6.

Specifically, California Government Code requires the Purpose, Use, Relationship, Need, and Amount/Cost be included in the report.

In accordance with regulations, this report identifies the purpose to which the fee is to be used and to demonstrate a reasonable relationship between the fee and the purpose for which it is charged. Accordingly, we address the following District develop fees in this report:

Water Capacity Charge

Sewer Capacity Charge

Appendix I − Water and Sewer Master Plan Cost Evaluation

SECTION 2.0
WATER CAPACITY CHARGE

2.1 Purpose of Water Capacity Charge

Municipal Water System

2.2 Use of Water Capacity Charge

Municipal water supply system improvements to accommodate new development.

2.3 Relationship Between Use of Water Capacity Charge and Type of Development

Residential, commercial, industrial, and institutional development require municipal water supply service for public health and fire protection.

2.4 The Water Capacity Charge does not exceed the proportional cost of capacity in the water system.

A. The basis for the proposed Water Capacity Charge is shown in Table 2-1. Estimated cost for build out of the water system are used for the allocation for one equivalent dwelling unit (EDU). The cost estimates on are based on the updated capital costs shown in Appendix I.

B. An Equivalent Dwelling Unit (EDU) is defined as one Medium Density Residential lot. The water demand associated with one EDU is 512.5 gallons per day (gpd). This value was derived from the 2022 Water Master Plan water duty factor of 2,460 gpd per acre, adjusted to remove the 20 percent demand allowance for Accessory Dwelling Units (ADUs), resulting in a primary residential demand of 2,050 gpd per acre. Based on a density of four EDUs per acre, the resulting demand is 512.5 gpd per EDU. Per the 2022 Water Master Plan the anticipated demand is 4,764,960 gpd which equates to approximately 9,302 EDU′s. Additionally, from January 1, 2021 through December 31, 2024, approximately 584 additional EDU′s have come online. This represents a revised total of approximately 8,718 EDU′s associated with future demand.

C. Accessory dwelling units (ADUs) may be subject to capacity fees depending on whether a separate service connection is required or requested, and the extent to which fee assessment and collection are authorized under State law and District policy. Accordingly, ADU related EDUs were excluded in this Capacity Fee Report where fee collection is uncertain, pending adoption of a formal District policy addressing ADU service connections and fee applicability.

D. Table 2-2 shows proposed Water Capacity Charges for the Rubidoux Community Services District for various meter sizes. The charges are based on meter capacity. The capacity of a 3/4” meter has been set as the capacity required to serve one equivalent dwelling unit (one capacity unit or one EDU). As shown in the Table 2-2, the Water Capacity Charges range from $11,020 for a 3/4” meter to $881,600 for a 10” meter. Water Capacity Charges for multi-unit residential developments without individual landscape irrigation meters shall be calculated at 0.67 Equivalent Dwelling Units (EDUs) per residential unit, as no landscape irrigation demand is associated with these

services. Multi-unit residential structures with individual landscape irrigation will be based on 1.0 EDU/residential unit.

E. Because of recent increases in construction costs, the applicable cost estimates were updated by Albert A. Webb Associates using the ENR Construction Cost Index for Los Angeles (ENR CCI LA) September 2024 − 15,374.24.

F. Operations Building costs have been allocated evenly between the water and sewer capacity charges. These costs were further apportioned between new development and existing users based on their respective pro rata share of Equivalent Dwelling Units (EDUs). At ultimate build-out, the service area is projected to include **17,622 EDUs**, of which **8,718 EDUs** are attributable to new development. Accordingly, **49.4 percent** of the Operations Building cost is allocated to new development

G. The cost estimates, unit demand factors, and additional EDU's at build-out (9,302) are presented in the District's Water Facilities Master Plan dated May 2022 prepared by Albert A. Webb Associate. Additionally, from January 1, 2021 through December 31, 2024, approximately 584 additional EDU′s have come online. This represents a revised total of approximately 8,718 EDU′s associated with future demand.

H. The estimated cost for proposed facilities to complete the construction of the District′s water system at the ultimate condition includes both construction and other soft costs, commonly known as Project Cost. Project cost is 1.4 times construction cost and includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Cost Estimates utilized in this report are consistent with the Association for the Advancement of Cost Engineering (AACE) and are provided at a Class 3 Level. Class 3 estimates possess an expected accuracy range of -10% to 30% of the anticipated construction costs only. An additional 10% has been included for projects where Final Plans and Specifications have not yet been developed. Escalation, financing, interest during construction, legal, and R-O-W costs are not included in individual estimates. R-O-W costs where applicable have been included as separate line items.

Based on the costs summarized on Table 2-2, the proposed Water Capacity Charge for one dwelling unit (3/4" meter service), $11,020 is reasonable for 2026.

It is proposed that annual cost adjustments are made to the proposed Water Capacity Charge based on the Engineering News Record Construction Cost Index for the LA region, (ENR-CCI-LA) to keep up with construction costs and inflation. The index that the cost estimates have been based on is 15,374.24 (September 2024).

Table 2-1
RUBIDOUX COMMUNITY SERVICES DISTRICT
ESTIMATED COST TO PROVIDE WATER SERVICE
Jul-25
Revised October-2026

WATER CAPITAL IMPROVEMENTS		PROJECT COST ($)	
WATER TANKS	$	16,797,770	
WATER WELLS, TREATMENT AND INTERTIE	$	65,530,864	
WATER BOOSTER STATIONS	$	3,650,000	
PIPELINES	$	12,581,858	
FACILITIES, Operations Building (49.4%)	$	1,849,528	
WATER CAPITAL COSTS SUB-TOTAL	$	100,410,020	(2)
LESS EXISTING WATER FUND BALANCE	$	(3,832,033)	
LESS GRANT FUNDING FOR WILSON INTERTIE	$	(500,000)	
NET WATER CAPITAL COSTS TOTAL	$	96,077,987	
ESTIMATED WATER CONNECTION FEE	$	11,020.65	(3)
ESTIMATED WATER CONNECTION FEE - ROUNDED	**$**	**11,020**	
Current Connection Fee	$	6,800	(4)

NOTES:
1. All Capital Costs include 40% for construction administration, inspection, engineering and contingency.
   *An additional 10% has been included for projects where Final Plans and Specifications have not yet been developed
2. All Costs based on an ENR-CCI-LA September 2024 of 15,374.24
3. Allocated to anticipated additional 8,718 EDU's at build out.
4. Starting ENR-CCI-LA March 2016 of 11,157.79

Table 2-2
RUBIDOUX COMMUNITY SERVICES DISTRICT
PROPOSED WATER CAPACITY CHARGE BY METER SIZE
Jul-25
Revised October-26

WATER METER SIZE	RATED CONTINOUS METER CAPACITY (GPM)	MAX FIRE FLOW (RES. ONLY) (GPM)	CAPACITY UNITS	CHARGE ($)
3/4"	15	30	1.00	11,020
1"	25	50	1.67	18,403
1 1/2"	50	100	3.33	36,697
2"	80		5.33	58,737
3"	150		10.00	110,200
4"	250		16.67	183,703
6"	500		33.33	367,297
8"	800		53.33	587,697
10"	1,200		80.00	881,600

NOTES:

1. Multi-unit residential development without individual unit landscape irrigation will be assessed Water Capacity Charges based on 0.67 capacity units per residential unit.

2. Multi-unit residentail development with individual unit landscape irrigation will be assessed Water Capacity Charges based on 1.0 capacity unit per residential unit.

3. Water Capacity Charges for landscape irrigation meters will be based on actual meter size per Table 2-2 above. This applies to common area landscaping for multi-unit residential development and all separate landscape irrigation meters for all non-residential development.

SECTION 3.0
SEWER CAPACITY CHARGE

3.1 Purpose of Sewer Capacity Charge

Municipal Sewer System

3.2 Use of Sewer Capacity Charge

Design and construct new wastewater/sewer system improvements to accommodate new development, including treatment plant capacity.

3.3 Relationship Between Use of Sewer Capacity Charge and Type of Development

Residential, commercial, industrial, and institutional development require municipal wastewater service for public health purposes, protection of water quality, and protection of the environment.

3.4 Relationship Between Amount of Sewer Capacity Charge and Facilities and Equipment Required to Accommodate New Development

A. The basis for the proposed Sewer Capacity Charge is shown in Table 3-1. Estimated cost for build out of the sewer system are used for the allocation for one equivalent dwelling unit (EDU). The cost estimates on are based on the updated capital costs shown in Appendix I.

B. An Equivalent Dwelling Unit (EDU) is defined as one Medium Density Residential lot. The wastewater generation associated with one EDU is 210 gallons per day (gpd). This value was derived from the 2022 Wastewater Master Plan wastewater generation factor of 1,008 gpd per acre, adjusted to remove the 20 percent wastewater generation allowance for Accessory Dwelling Units (ADUs), resulting in a primary residential wastewater generation rate of 840 gpd per acre. Based on an assumed density of four EDUs per acre, the resulting wastewater generation rate is 210 gpd per EDU.

C. Accessory dwelling units (ADUs) may be subject to capacity fees depending on whether a separate service connection is required or requested, and the extent to which fee assessment and collection are authorized under State law and District policy. Accordingly, ADU related EDUs were excluded in this Capacity Fee Report where fee collection is uncertain, pending adoption of a formal District policy addressing ADU service connections and fee applicability.

D. Per the 2022 Wastewater Master Plan the anticipated wastewater generation is gpd which equated to approximately 9,532 EDU′s. Additionally, from January 1, 2021 through December 31, 2024, approximately 584 additional EDU′s have come online. This represents a revised total of approximately 8,948 EDU′s associated with future demand.

E. The proposed Sewer Capacity Charges for the Rubidoux Community Services District will serve one equivalent dwelling unit (one capacity unit or one EDU). Sewer Capacity Charges for a residential multi-unit structure will be based on a 1.0 EDU/residential unit basis regardless of landscape irrigation.

F. Because of recent increases in construction costs, the applicable cost estimates were updated by Albert A. Webb Associates using the ENR Construction Cost Index for Los Angeles (ENR CCI LA) September 2024 - 15,374.24.

G. Operations Building costs have been allocated evenly between the water and sewer capacity charges. These costs were further apportioned between new development and existing users based on their respective pro rata share of Equivalent Dwelling Units (EDUs). At ultimate build-out, the service area is projected to include **18,103 EDUs**, of which **8,948 EDUs** are attributable to new development. Accordingly, **49.4 percent** of the Operations Building cost is allocated to new development

H. The cost estimates, unit sewer generation factors, and additional EDU′s at build-out (9,532) are presented in the District′s Wastewater Facilities Master Plan dated May 2022 prepared by Albert A. Webb Associates. Additionally, from January 1, 2021 through December 31, 2024, approximately 584 additional EDU′s have come online. This represents a revised total of approximately 8,948 EDU′s associated with future demand.

I. The estimated cost for proposed facilities to complete the construction of the District′s wastewater system at the ultimate condition includes both construction and other soft costs, commonly known as Project Cost. Project cost is 1.4 times construction cost and includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Cost Estimates utilized in this report are consistent with the Association for the Advancement of Cost Engineering (AACE) and are provided at a Class 3 Level. Class 3 estimates possess an expected accuracy range of -10% to 30% of the anticipated construction costs only. An additional 10% has been included for projects where Final Plans and Specifications have not yet been developed. Escalation, financing, interest during construction, legal, and R-O-W costs are not included in individual estimates. R-O-W costs where applicable have been included as separate line items.

J. The cost for the District to construct additional wastewater tertiary level treatment capacity is estimated at $20,750,000 per 1MGD. The additional capacity needed for build-out is 0.986MGD inclusive of 0.25MGD buffer capacity.

K. The District paid $13,055,000 for the currently owned capacity of 3.055 MGD in three different transactions. The average purchase price is $4,270,000 per 1MGD. The available treatment capacity already owned by the District and available for future growth to build out is 1.132 MGD.

Accordingly, based on the cost estimates shown in Table 3-1, the proposed Sewer Capacity Charge of $8,670 per equivalent dwelling unit is reasonable for 2026.

It is proposed that annual cost adjustments are made to the proposed Sewer Capacity Charge based on the Engineering News Record Construction Cost Index for the LA region, (ENR-CCI-LA). The index that the cost estimates have been based on is 15,374.24 (September 2024).

Table 3-1
RUBIDOUX COMMUNITY SERVICES DISTRICT
ESTIMATED COST TO PROVIDE WASTEWATER CAPACITY
Oct-25
Revised October-26

SEWER MAIN CAPITAL IMPROVEMENTS	PROJECT COST ($) (1)	$/EDU (2)
Avalon S-1.1 - 12 inch	$ 128,219	$ 14.33
Avalon S-1.2 - 12 inch	$ 223,973	$ 25.03
Mission S-2 - 15 inch	$ 4,360,000	$ 487.26
Avalon S-3.1 - 12-inch	$ 449,548	$ 50.24
Avalon S-3.2 - 12-inch	$ 375,994	$ 42.02
Rustic S-4 - 12-inch	$ 4,130,000	$ 461.56
Limonite S-5 - 12-inch	$ 340,000	$ 38.00
Rubidoux Blvd RCFC S-6 - 30-inch	$ 3,780,000	$ 422.44
Agua Mansa S-7 - 12-inch	$ 2,400,000	$ 268.22
RO Facility Treatment	$ 26,265,520	$ 2,935.35
Inland Empire Brine Line Capacity	$ 12,027,000	$ 1,344.10
FACILITIES, Operations Building (49.4%)	$ 1,849,528	$ 206.70
SEWER MAIN SUB-TOTAL	$ 56,329,782	$ 6,295
EXISTING SEWER FUND BALANCE CREDIT	$ (4,120,150)	$ (460)

TREATMENT CAPACITY REQUIRED	MGD	$/1MGD	
CAPACITY TO BE PURCHASED FOR BUILD OUT	0.986 (3)	$ 20,750,000 (4)	$ 2,286 (5)
UNUSED CAPACITY ALREADY OWNED AND NEEDED FOR BUILD OUT	1.132 (6)	$ 4,270,000 (7)	$ 540 (5)
TREATMENT CAPACITY SUB-TOTAL			$ 2,826
GRAND TOTAL			$ 8,661
GRAND TOTAL - ROUNDED			**$ 8,670**
Current Connection Fee			$ 5,200 (8)

NOTES:

1. All Pipeline Capital Costs include 40% for construction administration, inspection, engineering and contingency.
   *An additional 10% has been included for projects where Final Plans and Specifications have not yet been developed
2. $/EDU based on an estimated average use per equivalent dwelling unit of 210 gpd.
3. Additional treatment capacity needed above RCSD owned capacity of 3.055MGD allocated to all future EDU's.
4. Cost for for treatment capacity needed to be purchased is an escalated cost at ENR-CCI-LA Sept 2024 of 15,374.24.
5. Allocated to anticipated additional 8,948 EDU's at build out.
6. Unused Treatment Capacity (RCSD owned capacity less current RCSD usage).
7. Cost for owned treatment capacity at actual average cost incurred by RCSD to purchase.
8. ENR-CCI-LA March 2016 of 11,157.78 when current fee was adopted.

Table 3-2
RUBIDOUX COMMUNITY SERVICES DISTRICT
PROPOSED SEWER CAPACITY CHARGE BY CAPACITY UNITS
Jul-25
Revised October-26

EQUIVALENT WATER METER SIZE	COST PER CAPACITY UNITS (EDU)	CAPACITY UNITS [1]	CHARGE ($)
3/4"	8,670	1.00	8,670
1"	8,670	1.67	14,479
1 1/2"	8,670	3.33	28,871
2"	8,670	5.33	46,211
3"	8,670	10.00	86,700
4"	8,670	16.67	144,529
6"	8,670	33.33	288,971
8"	8,670	53.33	462,371
10"	8,670	80.00	693,600

NOTES:

1. Sewer Capacity Charges for a residential multi-unit structure will be based on a 1.0 EDU/residential unit basis regardless of landscape irrigation.

APPENDIX I

Water and Sewer Master Plan CIP Cost Evaluation Summary
Technical Memorandum
Updated August 2026

ALBERT A. WEBB ASSOCIATES

Technical Memorandum

To: Jaclyn Makarzec, RCSD

From: Jeff Hart, WEBB

Date: July 1, 2025
Revised August 2026

Subject: Rubidoux Community Services District
Water and Sewer Master Plan CIP Cost Evaluation Summary

COST ESTIMATES

Albert A Webb Associates has re-evaluated the Capital Improvement Plan Costs in the Water and Sewer Master Plans specifically related to new Development for ultimate District buildout. Our findings are summarized in the following memoranda. These can be found in the Attachments:

RCSD Water Tank CIP Cost Evaluation dated October 4, 2024, updated May 23, 2025, revised August 2026

RCSD Water Wells & Intertie CIP Cost Evaluation dated February 12, 2025, updated May 23, 2025, revised August 2026

RCSD Water Booster CIP Cost Evaluation dated October 4, 2024, updated May 23, 2025, revised August 2026

RCSD Water Pipelines CIP Cost Evaluation dated October 4, 2024, updated May 23, 2025, revised August 2026

RCSD Sewer CIP Cost Evaluation dated October 4, 2024, updated August 2026

RCSD Operations Building CIP Cost Evaluation dated March 16, 2026

Sewer Treatment Capacity

RCSD currently owns 3.055 MGD capacity in the Regional Water Quality Control Plant (RWQCP) operated by the City of Riverside. Based on the master plan, RCSD currently uses 1.923 MGD capacity, leaving 1.132 MGD available for future development. At buildout, as shown in the sewer master plan, RCSD anticipates needing an additional 0.932 MGD treatment capacity inclusive of 0.25 MGD buffer capacity.

The most recently known purchase of capacity in the RWQCP is by JCSD in 2015 of $15,000,000 for 1 MGD. If costs are indexed up using the ENR-CCI-LA index, the current cost is $20,750,000 using 15,374.24 for September 2024 and 11,111.28 for December 2015.

RCSD paid $13,055,000 for the currently owned capacity of 3.055 MGD in three different transactions. The average purchase price is $4,270,000 per 1 MGD.

Water Facilities

Table 1 summarizes the CIP proposed improvements specifically related to new Development for ultimate District buildout with their associated cost estimates based on RCSD's May 2022 Water Master Plan along with a separate cost analysis for the planned Operations Building needed support the ultimate expansion of the District to full build out, allocated 50% to the water facilities cost.

Table 1 – CIP Summary Table of Water Master Planned Facilities

Water Capital Improvement Plan	Project Costs - Current Water Master Plan		Project Costs – Recommended Escalation	
	CIP	Developer Funded	CIP	Developer Funded
Water Tanks	$11,629,000	$3,788,000	$16,797,770[1]	$6,710,000
Water Wells & Intertie	$18,190,000	n/a	$65,530,864	n/a
Water Booster	$2,806,000	$5,989,200	$3,650,000	$8,810,000
Pipelines	$9,466,480	n/a	$12,581,858[2]	n/a
Facilities / Operations Bldg	n/a	n/a	$1,849,528	n/a
Total Project Cost	**$42,091,480**	**$9,777,200**	**$100,410,020**	**$15,520,000**

[1] Total project costs reduced to account for existing storage shortfall (See Water Master Plan Tank Evaluation CIP Cost Evaluation
[2] Project Costs have been updated based on existing Developer Reimbursement Agreements (see Water Master Plan Waterlines CIP Cost Evaluation).

Sewer Facilities

Table 2 summarizes the CIP proposed improvements with their associated cost estimates based on RCSD's May 2022 Sewer Master Plan along with a separate cost analysis for the planned Operations Building needed support the ultimate expansion of the District to full build out, allocated 50% to sewer facilities cost.

Table 2 – CIP Summary of Sewer Master Planned Facilities

Sewer Capital Improvement Plan	Project Costs - Current Sewer Master Plan CIP	Project Costs – Recommended Escalation CIP
Pipelines/Treatment	$11,540,000	$54,480,254[1]
Facilities / Operations Bldg	n/a	$1,849,528
Total Project Cost	**$11,540,000**	**$56,329,782**

[1] Project Costs have been updated based on existing Developer Reimbursement Agreements (see Wastewater Master Plan CIP Cost Evaluation).

Operations Building

Tables 1 and 2 above include costs for a proposed Operations Building (Vehicle/Apparatus Storage) to meet RCSD's needs for ultimate build-out. A conceptual design and associated cost estimate were prepared on behalf of the District by SVA Architects and Sierra West Group, see attachments. The costs have been split equally between the water and sewer planned facilities.

Operations Building costs have been allocated evenly between the water and sewer capacity charges. These costs were further apportioned between new development and existing users based on their respective pro rata share of Equivalent Dwelling Units (EDUs). For the water capacity charge, at ultimate build-out, the service area is projected to include 17,622 EDUs, of which 8,718 EDUs are attributable to new development. Accordingly, 49.4 percent of the Operations Building cost is allocated to new development. For the sewer capacity charge, at ultimate build-out, the service area is projected to include 18,103 EDUs, of which 8,948 EDUs are attributable to new development. Accordingly, 49.4 percent of the Operations Building cost is allocated to new development.

ESTIMATED FUTURE POTENTIAL EDU'S

Based on the current and ultimate water demands and sewer generation, the current and ultimate Equivalent Dwelling Units (EDU's) can be estimated. Discounting any EDU's for the estimated Accessory Dwelling Units (ADU's) because water and sewer fees are typically not collectable for these facilities, estimated future EDU's that can be collected can be estimated at 8,718 EDU's for water connections and 8,948 EDU's for sewer connections.

CURRENT CAPACITY FEES

The current water and sewer capacity fees for RCSD are:

Water	$6,800/EDU
Sewer	$5,200/EDU

It is recommended that this Rubidoux Community Services District Water and Sewer Capacity Fee Report based on updated cost estimates included herein be used for updating Water and Sewer Capacity Fees.

FUTURE COST ESCALATION

Future cost escalation will significantly impact RCSD's ability to completely fund its capital program with future capacity fees unless the capacity fees are escalated to match inflation on a routine basis. It is recommended that RCSD Board consider an automatic annual escalation based on the Engineering News-Record Construction Cost Index – Los Angeles. The index for September 2024 is 15,374.24 and was used as the basis of all cost escalation calculations.

SUMMARY

Construction costs for the proposed Water and Sewer Capital Improvement Plan have risen significantly since the 2022 Water and Wastewater Master Plans were adopted. The existing Water and Sewer Capacity Fees should be increased to cover the proposed CIP budget. The Rubidoux Community Services District Water and Sewer Capacity Fee Report herein demonstrates the need to increase water and sewer capacity fees.

The Water and Sewer Capacity Fees should be linked to an index such as the Engineering News-Record Construction Cost Index – Los Angeles on an annual basis to avoid future shortfalls in funding due to the inevitable future cost escalation.

RCSD WATER TANK CIP COST EVALUATION DATED OCTOBER 4, 2024 UPDATED JULY 1, 2025, REVISED AUGUST, 2026

ALBERT A. WEBB ASSOCIATES

Technical Memorandum

To: Jaclyn Makarzec, RCSD

From: Sinnaro Yos, WEBB
Checked by: Jeff Hart, WEBB

Date: October 4, 2024 (August 2026)

Subject: Rubidoux Community Services District
Water Master Plan Water Tank CIP Cost Evaluation

BACKGROUND

The Rubidoux Community Services District (RCSD) Water Master Plan (WMP), completed in May 2022, identifies future capital improvements to provide water service under ultimate development. The WMP provides RCSD with a planning document to develop and implement a Capital Improvement Program (CIP). The population of RCSD's service area is approximately 36,827 people for 2020. The mid-range density buildout population is estimated at 65,100 people, and the maximum-density buildout scenario is projected at 82,400 people. As RCSD's buildout is estimated to be reached by about 2049, it is important to understand and budget for cost escalation in implementing these projects.

Prioritization of water facility improvements were determined based on hydraulic modeling results and were split into two categories. Near-term projects incorporate essential developments that require immediate attention and are recommended to be addressed within 1-5 years. Long-term projects, on the other hand, were given a 6- to 25-year recommended timeline.

The CIP includes cost estimates based on capital, construction costs, project costs, construction contingencies, cost index and price escalation, engineering costs, and legal and administrative costs.

The following summarizes the criteria in developing the CIP costs for the 2022 WMP:

- Estimated Construction Cost – Based upon the average cost of recent bids of actual projects.
- Project Cost – Additional 40-percent (1.4 times) the Estimated Construction Cost:
    - Assumes Hunter and Goldenwest Tank sites are owned by RCSD and a 2 acre site for the 20th Street Tank site needs to be acquired
    - 20-percent for contingencies
    - 10-percent for engineering fees
    - 10-percent for other costs

    - An additional 10% has been included for projects where Final Plans and Specifications have not yet been developed
- Engineering News-Record Construction Cost Index
    - March 2022
    - Los Angeles ENR Index 13,341.33

Table 1 summarizes the CIP proposed improvements specifically related to new Development for ultimate District buildout with their associated cost estimates based on RCSD's May 2022 Water Master Plan.

Table 1 – CIP Summary Table of Proposed Water Tanks[1]

Water Tank Capital Improvement Project	Tank Capacity	Project Cost Water Master Plan
(WT-3) 20th Street Water Tank and Pipeline (Near-Term)	3.65 MG	$4,746,000
(WT-5) Hunter 2 Water Tank Replacement (Long-Term)	0.5 MG	$1,242,000
(WT-6) Golden West Water Tank (Long-Term)	5.0 MG	$5,641,000
Total CIP Project Cost		**$11,629,000**

Table 2 summarizes the developer funded proposed improvements with their associated cost estimates based on RCSD's May 2022 Water Master Plan.

Table 2 – Developer Funded Summary Table of Proposed Water Tanks[1]

Water Tank Developer Funded Improvement Project	Tank Capacity	Project Cost Water Master Plan
(WT-1) Rio Vista 1360 Water Tank (Near-Term)	1.9 MG	$2,794,000
(WT-4) Rio Vista 1440 Water Tank (Mid-Term)	0.3 MG	$994,000
Total CIP Project Cost		**$3,788,000**

[1] Tables 7-1 to 7-3 CIP Summary Table of Proposed Improvements, RCSD May 2022 WMP.

COST ESCALATION

As previously stated, understanding cost escalation is important to planning and development of RCSD's CIPs. The planning level cost estimates do not include a detailed breakdown of costs associated with water tank construction; therefore, engineering estimate level detail was applied for each project to better understand the cost associated. Additionally, the project costs from the May 2022 WMP were indexed to March 2022 ENR LA CCI of 13,341.33 and then escalated utilizing the current September 2024 ENR LA CCI of 15,374.24. Contingencies have been added to the estimates due to volatility in labor and material costs and potential changes in project scope as no specific project plans have been prepared. The following Table 3 summarizes the CIP project costs and Table 4 summarizes the Developer-funded project costs (see Attachment A for detailed breakdowns).

ALLOCATION FOR EXISTING STORAGE SHORTFALL VERSUS NEW DEVELOPMENT

The May 2022 WMP identified that the existing storage capacity shortfall is 1.81 MG. The total proposed tank capacity in Table 3 is 9.15 MG which addresses both the existing storage shortfall and the storage required by new development. Therefore, new development should fund only the future storage shortfall of 7.34 MG. The prorated cost for new development is:

$16,797,770 ($20,940,000 x 7.34 / 9.15)

Table 3 – Proposed Water Tank Cost Escalation

RCSD Water Tank Capital Improvement Project	Tank Capacity (MG)	Project Cost Master Water Plan, Mar 2022 ENR LA CCI of 13,341.33	Project Cost Master Water Plan, escalated to Sept 2024 ENR LA CCI of 15,374.24	Construction Cost by Engineer Estimate, Sept 2024 ENR LA CCI of 15,374.24	Project Cost by Engineer Estimate, Sept 2024 ENR LA CCI of 15,374.24
CIP No. WT-3 20th Street Water Tank and Pipeline	3.65	$4,746,000	$5,469,181	$5,691,600	$7,968,000
CIP No. WT-5 Hunter 2 Water Tank	0.5	$1,242,000	$1,431,252	$1,321,800	$1,851,000
CIP No. WT-6 Golden West Water Tank	5.0	$5,641,000	$6,500,558	$7,324,800	$10,250,000
Land Acquisition for 20th Street Tank	n/a	n/a	n/a	$871,000	$871,000
Total CIP Project Cost		**$11,629,000**	**$13,400,991**	**$15,209,200**	**$20,940,000** [1]

[1] Total project cost has been reduced to account for existing storage shortfall (See "Allocation for Existing Storage Shortfall Versus New Development")

Table 4 – Proposed Developer Water Tank Cost Escalation

Water Tank Developer Funded Project	Tank Capacity	May 2022 Water Master Plan		Preliminary Engineer's Estimate Method (Sept 2024 ENR LA CCI 15,374.24)	
		Project Cost (Mar 2022 ENR LA CCI 13,341.33)	Project Cost (Sept 2024 ENR LA CCI 15,374.24)	Construction Cost	Project Cost
(WT-1) Rio Vista 1360 Water Tank (Near-Term)	1.9 MG	$2,794,000	$3,219,741	$3,321,500	$4,650,000
(WT-4) Rio Vista 1440 Water Tank (Mid-Term)	0.3 MG	$994,000	$1,145,463	$1,472,800	$2,060,000
Total CIP Project Cost		**$3,788,000**	**$4,365,204**	**$4,794,300**	**$6,710,000**

SUMMARY

Cost escalation is significant and can be attributed to outside factors such as overall inflationary pressures and labor and material impacts. Construction costs have been adjusted using the Engineering News-Record Construction Cost Index for the period between March 2022 and September 2024.

- March 2022 Los Angeles ENR Index: 13,341.33
- September 2024 Los Angeles ENR Index: 15,374.24

Evaluating each project based on the development of an engineer's estimate for each project provides a more detailed breakdown of assumptions and project components. The following summarizes typical project components.

- Onsite and Offsite Pipeline and Bedding
- Potholing and Shoring
- Trench Excavation, Backfill, and Compaction
- Grading, Over Excavation, SWPPP
- Paving and Site Improvements
- SCE Service
- Permits

The unit cost for each item was based on the average cost of recent bids of actual projects.

Attachment A - Detailed Engineer's Estimate Cost Breakdown

CONSTRUCTION AND PROJECT COST ESTIMATE

RCSD Water Tank Capital Improvement Project - Cost Escalation Analysis

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/4/2024, Revised 8/26/25

Plan Title: Conceptual Scope from Master Plan Estimate Checked By: Brad Sackett

Purpose of Estimate: Capital Improvement / Developer Funded Date Checked: 10/4/2024

RCSD Water Tank Capital Improvement Project	Tank Capacity (MG)	Project Cost Master Water Plan, Mar 2022 ENR LA CCI of 13,341.33	Project Cost Master Water Plan, escalated to Sept 2024 ENR LA CCI of 15,374.24	Construction Cost by Engineer Estimate, Sept 2024 ENR LA CCI of 15,374.24	Project Cost by Engineer Estimate, Sept 2024 ENR LA CCI of 15,374.24
CIP No. WT-3 20th Street Water Tank and Pipeline	3.65	$4,746,000	$5,469,181	$5,691,600	$7,968,000
CIP No. WT-5 Hunter 2 Water Tank Replacement	0.5	$1,242,000	$1,431,252	$1,321,800	$1,851,000
CIP No. WT-6 Golden West Water Tank	5.0	$5,641,000	$6,500,558	$7,324,800	$10,250,000
Land Acquisition for 20th Street Tank	n/a	n/a	n/a	$871,000	$871,000
Total CIP Project Cost		**$11,629,000**	**$13,400,991**	**$15,209,200**	**$20,940,000**

RCSD Water Tank Developer Funded Improvement Project	Tank Capacity (MG)	Project Cost Master Water Plan, Mar 2022 ENR LA CCI of 13,341.33	Project Cost Master Water Plan, escalated to Sept 2024 ENR LA CCI of 15,374.24	Construction Cost by Engineer Estimate, Sept 2024 ENR LA CCI of 15,374.24	Project Cost by Engineer Estimate, Sept 2024 ENR LA CCI of 15,374.24
CIP No. WT-1 Rio Vista 1360 Water Tank	1.9	$2,794,000	$3,219,741	$3,321,500	$4,650,000
CIP No. WT-4 Rio Vista 1440 Water Tank	0.3	$994,000	$1,145,463	$1,472,800	$2,060,000
Total CIP Project Cost		**$3,788,000**	**$4,365,204**	**$4,794,300**	**$6,710,000**

Project Title: 20th Street Tank

Facility Type	Impacted Zone(s)	Improvement Phase
Storage Tank	1066 PZ	Near-Term

2024 Cost Estimate $7,968,000

Project Location: West end of 20th St approximately 3,500 feet west of Rubidoux Blvd

Purpose: Increase storage capacity for 1066 Pressure Zone

Project Type: New Development/Demand

Required When: Near-Term - Required to provide suction for the 1360 BPS and additional development in 1066 PZ

Project Description:

This project will provide an additional 3.65 MG of storage within the Atkinson Zone (1066) to help meet ultimate demand requirements. Including 560 LF of 16-inch diameter waterline to connect to system.

Project Details

- Pad elevation 1,024 ft
- Sized to store proposed Atkinson Zone fire flow requirements
- 145 ft diameter

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. WT-3 20th Street Water Tank and Pipeline

W.O.: 2023-3361.00 | Estimate Prepared By: Sinnaro Yos

Client: RCSD | Date Prepared: 10/04/24

Plan Title: Conceptual Scope from Master Plan | Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement | Date Checked: 4/1/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - 20TH STREET WATER TANK AND PIPELINE				
101	Mob / Demob / Insurance	1	LS	$190,000	$190,000
102	Clearing, grading, and earthwork, SWPPP	1	LS	$738,000	$738,000
103	3.65 MG welded steel tank, coating, foundation, tank appurtenances, disinfection	1	LS	$2,970,600	$2,970,600
104	Tank site and access road paving, concrete surfaces, drainage	1	LS	$301,000	$301,000
105	Onsite piping and fittings, valves, seismic controller, flex and expasion joints	1	LS	$383,000	$383,000
106	16-inch dia. waterline and bedding (trenching, backfill, compaction, paving cost in in other cost items)	560	LF	$320	$179,200
107	Cathodic system, vaults, storm drain inlets, overflow basin, guard posts	1	LS	$293,000	$293,000
108	Electrical, controls, sensors, transducers, alarm, SCADA, panels, pull boxes	1	LS	$39,500	$39,500
109	SCE service, disinfection, testing, start-up	1	LS	$80,300	$80,300
110	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$517,000	$517,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 110)				**$5,691,600**
	TOTAL PROJECT COST (ROUNDED)[4]				**$7,968,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Hunter 2 Tank

Facility Type	Impacted Zone(s)	Improvement Phase
Storage Tank	1238 PZ	Long-Term

2024 Cost Estimate $1,851,000

Project Location: Northeast of Skyloft Drive and Quartz Hill Drive intersection
Purpose: Replace existing Hunter 2 Tank (low elevation)
Project Type: New Development/Demand
Required When: Increase in ADU demand for 1238 PZ

Project Description:

This project will provide 0.5 MG of storage within the Hunter Zone (1238) and replace the existing Hunter 2 tank which is currently offline due to low elevation and ineffectiveness.

Project Details

- Pad elevation 1,188 ft
- Located on Hunter 1 site
- 52 ft diameter

Project Map



ALBERT A. WEBB ASSOCIATES

ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. WT-5 Hunter 2 Water Tank Replacement

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/24

Plan Title: Conceptual Scope from Master Plan Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement Date Checked: 4/1/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - HUNTER 2 WATER TANK REPLACEMENT				
101	Site cost per 10/03/23 Hunter Tank Tech Memo for Hunter 2 Tank (minimum cost, see attached for details)[5]	1	LS	$500,400	$500,400
102	0.5 MG welded steel tank, coating, foundation, tank appurtenances, disinfection	1	LS	$701,400	$701,400
103	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$120,000	$120,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 103)				**$1,321,800**
	TOTAL PROJECT COST (ROUNDED)[4]				**$1,851,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

[5] Cost updated from site cost for Hunter Tank Tech Memo Hunter 1 Tank from September 2023 (ENR = 15,298.94) to September 2024 (ENR = 15,374.24)

Project Title: Goldenwest Tank

Project Type	Impacted Zone(s)	Improvement Phase
Storage Tank	1066 PZ	Long-Term

2024 Cost Estimate $10,250,000

Project Location: Northeast of Sedona Drive and Pheasant Run Circle intersection
Purpose: Increase storage capacity for 1066 Pressure Zone
Project Type: New Development/Demand
Required When: Long-Term to support ultimate buildout in 1066 PZ

Project Description:

This project will provide an additional 5.0 MG of storage within the Atkinson Zone (1066) to help meet ultimate demand requirements.

Project Details

- Pad elevation 1,024 ft
- Sized to store original Atkinson Zone fire flow requirements
- 169 ft diameter

Project Map



ALBERT A. WEBB ASSOCIATES

ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. WT-6 Golden West Water Tank

W.O.: 2023-3361.00 | Estimate Prepared By: Sinnaro Yos

Client: RCSD | Date Prepared: 10/04/24

Plan Title: Preliminary Design | Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement | Date Checked: 4/1/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - GOLDEN WEST WATER TANK				
101	Mob / Demob / Insurance	1	LS	$210,000	$210,000
102	Clearing, grading, and earthwork, SWPPP	1	LS	$812,300	$812,300
103	5.0 MG welded steel tank, coating, foundation, tank appurtenances, disinfection	1	LS	$4,463,300	$4,463,300
104	Tank site and access road paving, concrete surfaces, drainage	1	LS	$327,700	$327,700
105	Onsite piping and fittings, valves, seismic controller, flex and expasion joints	1	LS	$420,800	$420,800
106	Cathodic system, vaults, storm drain inlets, overflow basin, guard posts	1	LS	$298,400	$298,400
107	Electrical, controls, sensors, transducers, alarm, SCADA, panels, pull boxes	1	LS	$43,400	$43,400
108	SCE service, disinfection, testing, start-up	1	LS	$82,900	$82,900
109	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$666,000	$666,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 109)				**$7,324,800**
	TOTAL PROJECT COST (ROUNDED)[3]				**$10,250,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Rio Vista 1360 Tank

Facility Type	Impacted Zone(s)	Improvement Phase
Storage Tank	1360 PZ	Near-Term

2024 Cost Estimate $4,650,000

Project Location: Northwest corner of service area near Crestmore Heights
Purpose: Provide 1.9 MG of storage to the 1360 PZ
Project Type: Developer Funded
Required When: Near-Term to support future Rio Vista development

Project Description:

This project will provide 1.9 MG of storage to the 1360 pressure zone in the future Rio Vista development.

Project Details

- Pad elevation 1,330 ft
- 96 ft diameter

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. WT-1 Rio Vista 1360 Water Tank

W.O.: 2023-3361.00

Client: RCSD

Plan Title: Conceptual Scope from Master Plan

Purpose of Estimate: Capital Improvement

Estimate Prepared By: Sinnaro Yos

Date Prepared: 10/04/24

Estimate Checked By: Jeff Hart

Date Checked: 4/1/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - RIO VISTA 1360 WATER TANK				
101	Mob / Demob / Insurance	1	LS	$140,000	$140,000
102	Clearing, grading, and earthwork, SWPPP	1	LS	$586,600	$586,600
103	1.9 MG welded steel tank, coating, foundation, tank appurtenances, disinfection	1	LS	$1,466,500	$1,466,500
104	Tank site and access road paving, concrete surfaces, drainage	1	LS	$216,800	$216,800
105	Onsite piping and fittings, valves, seismic controller, flex and expasion joints	1	LS	$293,300	$293,300
106	Cathodic system, vaults, storm drain inlets, overflow basin, guard posts	1	LS	$216,800	$216,800
107	Electrical, controls, sensors, transducers, alarm, SCADA, panels, pull boxes	1	LS	$35,700	$35,700
108	SCE service, disinfection, testing, start-up	1	LS	$63,800	$63,800
109	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$302,000	$302,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 109)				**$3,321,500**
	TOTAL PROJECT COST (ROUNDED)[4]				**$4,650,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Rio Vista 1440 Tank

Facility Type	Impacted Zone(s)	Improvement Phase
Storage Tank	1440 PZ	Mid-Term

2024 Cost Estimate $2,060,000

Project Location: Northwest corner of service area near Crestmore Heights
Purpose: Provide 0.3 MG of storage to the 1440 PZ
Project Type: Developer Funded
Requied When: Mid-Term to support future Rio Vista development

Project Description:

This project will provide 0.3 MG of storage to the 1440 pressure zone in the future Rio Vista development.

Project Details

- Pad elevation 1,410 ft
- 40 ft diameter

Project Map



ALBERT A. WEBB ASSOCIATES

ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. WT-4 Rio Vista 1440 Water Tank

W.O.: 2023-3361.00 | Estimate Prepared By: Sinnaro Yos

Client: RCSD | Date Prepared: 10/04/24

Plan Title: Conceptual Scope from Master Plan | Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement | Date Checked: 4/1/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - RIO VISTA 1440 WATER TANK				
101	Mob / Demob / Insurance	1	LS	$61,000	$61,000
102	Clearing, grading, and earthwork, SWPPP	1	LS	$293,300	$293,300
103	0.3 MG welded steel tank, coating, foundation, tank appurtenances, disinfection	1	LS	$510,100	$510,100
104	Tank site and access road paving, concrete surfaces, drainage	1	LS	$102,000	$102,000
105	Onsite piping and fittings, valves, seismic controller, flex and expasion joints	1	LS	$165,800	$165,800
106	Cathodic system, vaults, storm drain inlets, overflow basin, guard posts	1	LS	$125,000	$125,000
107	Electrical, controls, sensors, transducers, alarm, SCADA, panels, pull boxes	1	LS	$26,800	$26,800
108	SCE service, disinfection, testing, start-up	1	LS	$54,800	$54,800
109	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$134,000	$134,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 109)				**$1,472,800**
	TOTAL PROJECT COST (ROUNDED)[4]				**$2,060,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

RCSD WATER WELLS & INTERTIE CIP COST EVALUATION
DATED FEBRUARY 12, 2025, UPDATED JULY 1, 2025, REVISED AUGUST, 2026

ALBERT A. WEBB ASSOCIATES

Technical Memorandum

To: Jaclyn Makarzec, RCSD

From: Sinnaro Yos, WEBB
Checked by: Jeff Hart, WEBB

Date: February 12, 2025 (August 2026)

Subject: Rubidoux Community Services District
Water Master Plan Wells and Intertie CIP Cost Evaluation

BACKGROUND

The Rubidoux Community Services District (RCSD) Water Master Plan (WMP), completed in May 2022, identifies future capital improvements to provide water service under ultimate development. The WMP provides RCSD with a planning document to develop and implement a Capital Improvement Program (CIP). The population of RCSD's service area is approximately 36,827 people for 2020. The mid-range density buildout population is estimated at 65,100 people, and the maximum-density buildout scenario is projected at 82,400 people. As RCSD's buildout is estimated to be reached by about 2049 it is important to understand and budget for cost escalation in implementing these projects.

Prioritization of water facility improvements were determined based on hydraulic modeling results and were split into two categories. Near-term projects incorporate essential developments that require immediate attention and are recommended to be addressed within 1-5 years. Long-term projects, on the other hand, were given a 6- to 25-year recommended timeline.

The CIP includes cost estimates based on capital, construction costs, project costs, construction contingencies, cost index and price escalation, engineering costs, and legal and administrative costs.

The following summarizes the criteria in developing the CIP costs for the 2022 WMP:

- Estimated Construction Cost – Based upon the average cost of recent bids of actual projects.
- Project Cost – Additional 40-percent (1.4 times) the Estimated Construction Cost:
    - Assumes land for 5 well sites and the Thompson Plant Expansion must be acquired and included as a separate line item
    - 20-percent for contingencies
    - 10-percent for engineering fees
    - 10-percent for other costs

  - An additional 10% has been included for projects where Final Plans and Specifications have not yet been developed
- Engineering News-Record Construction Cost Index
  - March 2022
  - Los Angeles ENR Index 13,341.33

Table 1 summarizes the CIP proposed improvements specifically related to new Development for ultimate District buildout with their associated cost estimates based on RCSD's May 2022 Water Master Plan.

Table 1 – CIP Summary Table of Proposed Water Wells, Treatment, and Intertie[1]

Water Wells Capital Improvement Project	Capacity	Project Cost 2022 Water Master Plan
Well No. 21 (Near-Term)	1,500 gpm	$2,915,000
Well No. 22 (Near-Term)	1,500 gpm	$2,915,000
Well No. 23 (Mid-Term)	1,500 gpm	$2,915,000
Well No. 24 (Mid-Term)	1,500 gpm	$2,915,000
Well No. 26 (Long-Term)	1,500 gpm	$2,915,000
Well No. 28 (Long -Term)	1,500 gpm	$2,915,000
Wilson Intertie with WVWD (Near-Term)	2,500 gpm	$700,000
Total CIP Project Cost		**$18,190,000**

COST ESCALATION

As previously stated, understanding cost escalation is important to the planning and development of RCSD's CIPs. The planning level cost estimates do not include a detailed breakdown of costs associated with water well and interconnection construction; therefore, engineering estimate level detail was applied for each project to better understand the cost associated. The recent Well 25 project was used as a cost model for the wells. Additionally, the project costs from the May 2022 WMP were indexed to March 2022 ENR LA CCI of 13,341.33 and then escalated utilizing the current September 2024 ENR LA CCI of 15,374.24. The following Table 2 summarizes the CIP project costs (see Attachment A for detailed breakdowns).

[1] Tables 7-1 to 7-3 CIP Summary Table of Proposed Improvements, RCSD May 2022 WMP.

Table 2 – Proposed Water Wells & Intertie Cost Escalation

Water Tank and Intertie Capital Improvement Project	Capacity	May 2022 Water Master Plan		Preliminary Engineer's Estimate Method (Sept 2024 ENR LA CCI 15,374.24)	
		Project Cost (Mar. 2022 ENR LA CCI 13,341.33)	Project Cost (Sept 2024 ENR LA CCI 15,374.24)	Construction Cost	Project Cost
Well No. 21 (Near-Term) [1]	1500 gpm	$2,915,000	$3,359,180	$4,034,600	$5,650,000
Well No. 22 (Mid-Term) [1]	1500 gpm	$2,915,000	$3,359,180	$4,034,600	$5,650,000
Well No. 23 (Mid-Term) [1]	1500 gpm	$2,915,000	$3,359,180	$4,034,600	$5,650,000
Well No. 24 (Mid-Term) [1]	1500 gpm	$2,915,000	$3,359,180	$4,034,600	$5,650,000
Well No. 26 (Long-Term) [1]	1500 gpm	$2,915,000	$3,359,180	$4,034,600	$5,650,000
Well No. 28 (Long-Term) [1]	1500 gpm	$2,915,000	$3,359,180	$4,034,600	$5,650,000
Wilson Intertie with WVWD (Near-Term)	2500 gpm	$700,000	$806,670	$1,038,000	$1,453,200
Treatment Costs – Thompson Plant Expansion	8,500 gpm	n/a	n/a	$18,305,000	$25,630,000
Land Costs – 5 new wells & plant expansions	n/a	n/a	n/a	$4,547,664	$4,547,664
Total CIP Project Cost		**$18,190,000**	**$20,961,750**	**$48,098,264**	**$65,530,864**

[1] The precise alignment of the Well projects has not yet been determined; however, the ultimate locations are anticipated to be similar in extent and overall scope to the estimate provided herein.

SUMMARY

Cost escalation is significant and can be attributed to outside factors such as overall inflationary pressures and labor and material impacts. Construction costs have been adjusted using the Engineering News-Record Construction Cost Index for the period between March 2022 and September 2024.

- March 2022 Los Angeles ENR Index: 13,341.33
- September 2024 Los Angeles ENR Index: 15,374.24

Evaluating each project based on the development of an engineer's estimate for each project provides for a more detailed breakdown of assumptions and project components. The following summarizes typical project components.

- Onsite and Offsite Pipeline and Bedding
- Potholing and Shoring
- Trench Excavation, Backfill, and Compaction
- Paving and Site Improvements
- Generators and SCE Service
- Permits

The unit cost for each item was based on the average cost of recent bids of actual projects.

Attachment A - Detailed Engineer's Estimate Cost Breakdown

CONSTRUCTION AND PROJECT COST ESTIMATE

RCSD Water Well and Interconnection Capital Improvement Project - Cost Escalation Analysis

W.O.: 2023-3361.00

Client: RCSD

Plan Title: Conceptual Scope from Master Plan

Purpose of Estimate: Capital Improvement

Estimate Prepared By: Sinnaro Yos

Date Prepared: 10/04/24

Estimate Checked By: Jeff Hart

Date Checked: 8/15/2026

RCSD Water Well and Interconnection Capital Improvement Project	Capacity (gpm)	Project Cost Master Water Plan, Mar 2022 ENR LA CCI of 13,341.33	Project Cost Master Water Plan, escalated to Sept 2024 ENR LA CCI of 15,374.24	Construction Cost by Engineer Estimate, Sept 2024 ENR LA CCI of 15,374.24	Project Cost by Engineer Estimate, Sept 2024 ENR LA CCI of 15,374.24
Well No. 21	1,500	$2,915,000	$3,359,180	$4,034,600	$5,650,000
Well No. 22	1,500	$2,915,000	$3,359,180	$4,034,600	$5,650,000
Well No. 23	1,500	$2,915,000	$3,359,180	$4,034,600	$5,650,000
Well No. 24	1,500	$2,915,000	$3,359,180	$4,034,600	$5,650,000
Well No. 26	1,500	$2,915,000	$3,359,180	$4,034,600	$5,650,000
Well No. 28	1,500	$2,915,000	$3,359,180	$4,034,600	$5,650,000
Wilson Intertie with WVWD	2,500	$700,000	$806,670	$1,038,000	$1,453,200
Treatment Costs - Thompson Plant Expansion	8,500	n/a	n/a	$18,305,000	$25,630,000
Land Costs based on 5 new well sites and Thompson & Smith Plant Expansions	n/a	n/a	n/a	$4,547,664	$4,547,664
Total CIP Project Cost		**$18,190,000**	**$20,961,750**	**$48,098,264**	**$65,530,864**

Project Cost in Master Plan included a $1.745M allocation for treatment costs above the well costs.
Wilson Intertie Construction Costs updated per final design by K&S and escalated to current date.
Well Cost based on recent Well 25 drilling and equipping cost estimates.
Treatment Costs based on Thompson Plant Expansion BOD report draft.

ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. WW-21, WW-22, WW-23, WW-24, WW-26 and WW-28 Water Wells

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/04

Plan Title: Conceptual Scope from Master Plan Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement Date Checked: 4/1/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - WATER WELLS (TYPICAL)				
101	Mob / Demob / Insurance	1	LS	$80,000	$80,000
102	Well drilling and development	1	LS	$1,250,000	$1,250,000
103	Trench sheeting, shoring, and bracing	1	LS	$13,500	$13,500
104	Pre-construction survey and construction staking	1	LS	$5,000	$5,000
105	On-site and off-site below grade pipe, fittings, valves, thrust restraints, connections, air gap structure	1	LS	$135,800	$135,800
106	Deep well pump & motor	1	LS	$308,400	$308,400
107	Above grade manifold piping, fittings, flanges, pipe supports, air valves, pump control valves, flow meters, relief valve, gate valves, gauges	1	LS	$120,000	$120,000
108	Site electrical, lighting, security, conduits, junction boxes, duct banks, control panels for pumps, SCADA, RTU, breakers, outdoor panels, etc.	1	LS	$580,000	$580,000
109	SCE service, transformer, primary and secondary, pull boxes, conduits, meter main panel, site work, paving, backfill and compaction	1	LS	$80,800	$80,800
110	Emergency standby generator and concrete pad	1	LS	$229,100	$229,100
111	Site grading, improvements, paving, fence and gates, driveway, access road	1	LS	$550,000	$550,000
112	Building - reinforced masonry block	1	LS	$290,000	$290,000
113	Inspection, flushing, testing, disinfection, testing and startup, BMPs	1	LS	$25,000	$25,000
114	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$367,000	$367,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 114)				**$4,034,600**
	TOTAL PROJECT COST (ROUNDED)[4]				**$5,650,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Well 21

Facility Type	Impacted Zone(s)	Improvement Phase
Supply Well	1066 PZ	Near-Term

2024 Cost Estimate **$5,650,000**

Project Location: Intersection of 34th Street and Crestmore Road
Purpose: Add 1,500 gpm of water supply to system
Project Type: New Development/Demand
Required When: Existing MDD reaches 5,960 gpm (20 % excess capacity)

Project Description:

This project will provide an additional 1,500 gpm of water to the Atkinson Zone (1066) to help meet ultimate demands. All well numbering and locations subject to change based on detailed well siting studies.

Project Details

- Total flow rate of 1,500 gpm
- 1 operating pump
- 200 HP

Project Map



Project Title: Well 22

Facility Type	Impacted Zone(s)	Improvement Phase
Supply Well	1066 PZ	Near-Term

2024 Cost Estimate	**$5,650,000**
Project Location:	Northeast of 34th Street and Crestmore Road intersection
Purpose:	Add 1,500 gpm of water supply to system
Project Type:	New Development/Demand
Required When:	Existing MDD reaches 7,200 gpm (20 % excess capacity)

Project Description:

This project will provide an additional 1,500 gpm of water to the Atkinson Zone (1066) to help meet ultimate demands. All well numbering and locations subject to change based on detailed well siting studies.

Project Details

- Total flow rate of 1,500 gpm
- 1 operating pump
- 200 HP

Project Map



Project Title: Well 23

Facility Type	Impacted Zone(s)	Improvement Phase
Supply Well	1066 PZ	Mid-Term

2024 Cost Estimate **$5,650,000**

Project Location: Within The District @ JV development
Purpose: Add 1,500 gpm of water supply to system
Project Type: New Development/Demand
Required When: Existing MDD reaches 8,450 gpm (20 % excess capacity)

Project Description:

This project will provide an additional 1,500 gpm of water to the Atkinson Zone (1066) to help meet ultimate demands. All well numbering and locations subject to change based on detailed well siting studies.

Project Details

- Total flow rate of 1,500 gpm
- 1 operating pump
- 200 HP

Project Map



Project Title: Well 24

Facility Type	Impacted Zone(s)	Improvement Phase
Supply Well	1066 PZ	Mid-Term

2024 Cost Estimate $5,650,000

Project Location: Within The District @ JV development
Purpose: Add 1,500 gpm of water supply to system
Project Type: New Development/Demand
Required When: Existing MDD reaches 9,700 gpm (20 % excess capacity)

Project Description:

This project will provide an additional 1,500 gpm of water to the Atkinson Zone (1066) to help meet ultimate demands. All well numbering and locations subject to change based on detailed well siting studies.

Project Details

- Total flow rate of 1,500 gpm
- 1 operating pump
- 200 HP

Project Map



Project Title: Well 26

Project Type	Impacted Zone(s)	Improvement Phase
Supply Well	1066 PZ	Long-Term

2024 Cost Estimate **$5,650,000**

Project Location: East of 37th Street and Crestmore Rd intersection
Purpose: Add 1,500 gpm of water supply to system
Project Type: New Development/Demand
Required When: Existing MDD reaches 10,950 gpm (20 % excess capacity)

Project Description:

This project will provide an additional 1,500 gpm of water to the Atkinson Zone (1066) to help meet ultimate demands. All well numbering and locations subject to change based on detailed well siting studies.

Project Details

- Total flow rate of 1,500 gpm
- 1 operating pump
- 200 HP

Project Map



Project Title: Well 28

Project Type	Impacted Zone(s)	Improvement Phase
Supply Well	1066 PZ	Long-Term

2024 Cost Estimate **$5,650,000**

Project Location: Northeast of Crestmore Road and Capary Road intersection
Purpose: Add 1,500 gpm of water supply to system
Project Type: New Development/Demand
Required When: Existing MDD reaches 12,200 gpm (20 % excess capacity)

Project Description:

This project will provide an additional 1,500 gpm of water to the Atkinson Zone (1066) to help meet ultimate demands. All well numbering and locations subject to change based on detailed well siting studies.

Project Details

- Total flow rate of 1,500 gpm
- 1 operating pump
- 200 HP

Project Map



Project Title: Wilson Intertie

Facility Type	Impacted Zone(s)	Improvement Phase
Interconnection	1066 PZ	Near-Term

2024 Cost Estimate $1,453,200

Project Location: Intersection of Wilson Street and Fleetwood Drive
Purpose: Provide additional future supply to the District
Project Type: New Development/Demand
Required When: Near-Term to address water quality issues

Project Description:

This project will provide an interconnection between West Valley Water District (WVWD) and RCSD, capable of conveying 2,500 gpm to the District.

Project Details

- Located near Wilson St. and Fleetwood Dr. intersection in public ROW
- Design includes flow control valve, meter, and SCADA system
- Deliver additional 2,500 gpm to District

Project Map



RUBIDOUX COMMUNITY SERVICES DISTRICT
WILSON STREET INTERCONNECTION
TO WEST VALLEY WATER DISTRICT

ENGINEER'S CONSTRUCTION COST ESTIMATE
(FINAL DRAFT)

Item No.	Description	Estimated Quantity	Unit of Measure	Unit Price	Line Item Cost
1.	Mobilization, Demobilization, Bonds, Insurance (@ 6%)	1	LS	N/A	$60,000
2.	Encroachment Permit, Traffic Control Plans, and Traffic Control	1	LS	N/A	$35,000
3.	Trench Protection	1	LS	N/A	$10,000
4.	Furnish and Install 12" CML&C Welded Steel Pipe with Fully Welded Joints	240	LF	$1,000	$240,000
5.	Furnish and Install 12" Fittings (Tees, bends, etc.)	1	LS	N/A	$25,000
6.	Furnish and Install 12" Butterfly Valve	8	EA	$13,000	$104,000
7.	Furnish and Install Connection to WVWD System	1	EA	$15,000	$15,000
8.	Furnish and Install Connection to RCSD System	1	EA	$15,000	$15,000
9.	Furnish and Install Meter Vault, Including 12" Ultra Mag Meter	1	EA	$140,000	$140,000
10.	Furnish and Install PRV Vault, Including 8" PRV	1	EA	$150,000	$150,000
11.	Furnish and Install 6" Fire Hydrant	1	EA	$12,000	$12,000
12.	Furnish and Install 1" Water Service, Including Connection to 12" WVWD Pipeline and Tie-In to Existing Water Meter	1	EA	$10,000	$10,000
13.	Furnish and Install AC Base Pavement	230	LF	$50	$11,500
14.	Furnish and Install AC Overlay	230	SF	$45	$10,350
15.	Furnish and install 1" conduit and CAT 5E and #14 wires, as shown on Sheet 4 of the Construction Drawings, including pavement restoration.	1	LS	N/A	$125,000
16.	Allowance for Unforeseen Conditions	1	LS	N/A	$75,000
				Subtotal:	$1,037,850
				~~Construction Contingency (10%):~~	~~$103,785~~
				Construction Total:	$1,037,850
				Construction Total (Rounded):	**$1,038,000**
				Total Project Cost:[4]	**$1,453,200**

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

ALBERT A. WEBB ASSOCIATES

Technical Memorandum

To: Ted Beckwith, RCSD

Cc: Shane Bloomfield, WEBB

From: Sinnaro Yos, WEBB

Checked by: Brad Sacket, WEBB

Date: September 19, 2024 (revised July 1, 2025)

Subject: Rubidoux Community Services District
Leland J. Thompson Water Treatment Facility Expansion Basis of Design

COST ESTIMATES

Construction and project costs are provided herein for the proposed three phases. The costs associated with well drilling and equipping and offsite raw and potable water pipelines are not included in these cost estimates. The construction and project costs have been adjusted based on the August 2024 Engineering News Record (ENR) Los Angeles Cost Index (ENR = 15,379.68).

The project costs were determined by using a 1.4 multiplier (rounded to the nearest $10,000) on the construction cost estimates in order to include construction costs; construction contingencies; design engineering including plans and specifications; environmental; design and construction surveying; geotechnical services; contract administration; field inspection; etc. Escalation and costs associated with right-of-way and/or land acquisition are excluded. The cost estimates are considered Class 3 (Budget Level) per the Association for Advancement of Cost Engineering (AACE) and therefore the range around the estimates is approximately minus 15% on the low end to plus 20% on the high end.

Table 9 – Phase I Expansion

Item No.	Item Description	Construction Cost
1	One (1) Fe/Mn vessel, piping, and appurtenances (Thompson site)	$300,000
2	Sodium bisulfite system expansion (Thompson site)	$100,000
3	Disinfection system expansion (Thompson site)	$150,000

4	Two (2) PFAS vessels, piping, and appurtenances (Lot 8)	$340,000
5	Two (2) cartridge filters, piping, and appurtenances (Lot 8)	$230,000
6	Grading, site work, fencing, gates, and paving (Lot 8)	$750,000
7	Control building (Lot 8)	$480,000
8	Piping modification and additions (Thompson site and Lot 8)	$1,000,000
9	Emergency generator (Lot 8)	$750,000
10	Plant MCC, electrical, SCE service, transformer (Lot 8)	$1,500,000
	Total Construction Cost	**$5,600,000**

Table 10 – Phase II Expansion

Item No.	Item Description	Construction Cost
1	One (1) Fe/Mn vessel, piping, and appurtenances (Lot 8)	$300,000
2	Four (4) PFAS vessels, piping, and appurtenances (Lot 8)	$570,000
3	Two (2) cartridge filters, piping, and appurtenances (Lot 8)	$230,000
4	One (1) backwash tank and associated pump stations (Lot 8)	$900,000
5	Piping modification and additions (Thompson site and Lot 8)	$350,000
6	Emergency generator (Lot 8)	$750,000
7	Treatment MCC modifications (Lot 8)	$150,000
8	Five (5) pumping unit, pipping, and appurtenances (Lot 8)	$3,550,000
9	Pump station MCC, shade, electrical, control (Lot 8)	$2,650,000
13	Demolition (Mahnke site)	$75,000
14	One (1) treated water effluent storage tank 0.40 MG (Mahnke site)	$860,000
15	Piping modification and additions (Mahnke site)	$150,000
	Total Construction Cost	**$10,535,000**

Table 11 – Phase III Expansion

Item No.	Item Description	Construction Cost
1	Two (2) Fe/Mn vessels, piping, and appurtenances (Lot 8)	$600,000
2	Four (4) PFAS vessels, piping, and appurtenances (Lot 8)	$570,000
3	Piping modification and additions (Lot 8)	$350,000
4	Treatment MCC modifications (Lot 8)	$150,000
5	One (1) pumping unit, pipping, and appurtenances (Lot 8)	$350,000
6	Pump station MCC modifications (Lot 8)	$150,000
	Total Construction Cost	**$2,170,000**

Table 12 – Project Cost Summary

Phase	Construction Cost	Project Cost
Phase I	$5,600,000	$7,840,000
Phase II	$10,535,000	$14,750,000
Phase III	$2,170,000	$3,040,000
Total Costs	**$18,305,000**	**$25,630,000**

The construction and project cost were based on utilizing and adding to the existing Fe/Mn treatment process which accounts for approximately $1,200,0000 (construction cost) and $1,680,0000 (project cost). As an option, the existing Fe/Mn system may be entirely replaced by horizontal pressure filter system utilizing greensand. The budgetary cost for this technology to treat 11,500 gpm is $5,405,000[1]. The following Table 13 summarizes the construction and project cost for the Thompson Plant upgrade when replacing the existing Fe/Mn treatment with greensand treatment.

[1] June 21, 2024 Tonka Water preliminary proposal and budgetary cost estimate (Appendix L).

RCSD WATER BOOSTER CIP COST EVALUATION DATED OCTOBER 4, 2024 UPDATED JULY 1, 2025, REVISED APRIL 1, 2026

ALBERT A. WEBB ASSOCIATES

Technical Memorandum

To: Jaclyn Makarzec, RCSD

From: Sinnaro Yos, WEBB
Checked by: Jeff Hart, WEBB

Date: October 4, 2024 (revised August, 2026)

Subject: Rubidoux Community Services District
Water Master Plan Booster Station CIP Cost Evaluation

BACKGROUND

The Rubidoux Community Services District (RCSD) Water Master Plan (WMP), completed in May 2022, identifies future capital improvements to provide water service under ultimate development. The WMP provides RCSD with a planning document to develop and implement a Capital Improvement Program (CIP). The population of RCSD's service area is approximately 36,827 people for 2020. The mid-range density buildout population is estimated at 65,100 people and the maximum-density buildout scenario is projected at 82,400 people. As RCSD's buildout is estimated to be reached by about 2049 it is important to understand and budget for cost escalation in implementing these projects.

Prioritization of water facility improvements were determined based on hydraulic modeling results and were split into two categories. Near-term projects incorporate essential developments that require immediate attention and are recommended to be addressed within 1-5 years. Long-term projects, on the other hand, were given a 6- to 25-year recommended timeline.

The CIP includes cost estimates based on capital, construction costs, project costs, construction contingencies, cost index and price escalation, engineering costs, and legal and administrative costs.

The following summarizes the criteria in developing the CIP costs 2022 WMP:

- Estimated Construction Cost – Based upon the average cost of recent bids of actual projects.
- Project Cost – Additional 40-percent (1.4 times) the Estimated Construction Cost:
    - Assumes sewer main in public right-of-way
    - 20-percent for contingencies
    - 10-percent for engineering fees
    - 10-percent for other costs

  - An additional 10% has been included for projects where Final Plans and Specifications have not yet been developed
- Engineering News-Record Construction Cost Index
  - March 2022
  - Los Angeles ENR Index 13,341.33

Table 1 summarizes the CIP proposed improvements with their associated cost estimates based on RCSD's May 2022 Water Master Plan that are related to proposed development. No additional land is required for this proposed water booster station as RCSD currently owns the property for this two booster station.

Table 1 – CIP Summary Table of Proposed Water Booster Stations[1]

Water Booster Station Capital Improvement Project	Project Criteria		Project Cost Water Master Plan
	Firm Capacity	Total Capacity	
(BS-5) Hunter Booster Station (Long-Term)	800 gpm	1600 gpm	$2,806,000
Total CIP Project Cost			**$2,806,000**

Table 2 summarizes the developer-funded proposed improvements with their associated cost estimates based on RCSD's May 2022 Water Master Plan. The developer will provide the land for these three booster stations.

Table 2 – Developer Funded Summary Table of Proposed Water Booster Stations[1]

Water Booster Station Developer Funded Improvement Project	Project Criteria		Project Cost Water Master Plan
	Firm Capacity	Total Capacity	
(SS-2) Rio Vista 1360 Booster Station (Near-Term)	1060 gpm	1590 gpm	$3,704,400
(BS-3) Rio Vista 1360 Redundant Booster Station (Mid-Term)	350 gpm	350 gpm	$1,573,600
(BS-4) Rio Vista 1440 Booster Station (Mid-Term)	140 gpm	280 gpm	$711,200
Total Developer Funded Project Cost			**$5,989,200**

[1] Tables 7-1 to 7-3 CIP Summary Table of Proposed Improvements, RCSD May 2022 WMP.

COST ESCALATION

As previously stated, understanding cost escalation is important to the planning and development of RCSD's CIPs. The planning level cost estimates do not include a detailed breakdown of costs associated with water booster station construction; therefore, engineering estimate level detail was applied for each project to better understand the cost associated. Additionally, the project costs from the May 2022 WMP were indexed to March 2022 ENR LA CCI of 13,341.33 and then escalated utilizing the current September 2024 ENR LA CCI of 15,374.24. The following Table 3 summarizes the CIP project costs, and Table 4 summarizes the developer-funded project costs (see Attachment A for detailed breakdowns).

Table 3 – Proposed CIP Water Booster Station Cost Escalation

Water Booster Station Capital Improvement Project	Project Criteria		May 2022 Water Master Plan		Preliminary Engineer's Estimate Method (Sept 2024 ENR LA CCI 15,374.24)	
	Firm Capacity	Total Capacity	Project Cost (Mar. 2022 ENR LA CCI 13,341.33)	Project Cost (Sept 2024 ENR LA CCI 15,374.24)	Construction Cost	Project Cost
(BS-5) Hunter Booster Station (Long-Term)	800 gpm	1600 gpm	$2,806,000	$3,223,569	$2,604,200	$3,650,000
Total CIP Project Cost			**$2,806,000**	**$3,233,569**	**$2,604,200**	**$3,650,000**

Table 4 – Proposed Developer Water Booster Station Cost Escalation

Water Booster Station Developer Funded Project	Project Criteria		May 2022 Water Master Plan		Preliminary Engineer's Estimate Method (Sept 2024 ENR LA CCI 15,374.24)	
	Firm Capacity	Total Capacity	Project Cost (Mar. 2022 ENR LA CCI 13,341.33)	Project Cost (Sept 2024 ENR LA CCI 15,374.24)	Construction Cost	Project Cost
(BS-2) Rio Vista 1360 Booster Station (Near-Term)	1060 gpm	1590 gpm	$3,704,400	$4,268,865	$2,958,600	$4,140,000
(BS-3) Rio Vista 1360 Redundant Booster Station (Mid-Term)	350 gpm	350 gpm	$1,573,600	$1,813,380	$1,854,400	$2,600,000
(BS-4) Rio Vista 1440 Booster Station (Mid-Term)	140 gpm	280 gpm	$711,200	$819,570	$1,476,600	2,070,000
Total Project Cost			**$5,989,200**	**$6,901,816**	**$6,289,600**	**$8,810,000**

SUMMARY

Cost escalation is significant and can be attributed to outside factors such as overall inflationary pressures and labor and material impacts. Construction costs have been adjusted using the Engineering News-Record Construction Cost Index for the period between March 2022 and September 2024.

- March 2022 Los Angeles ENR Index: 13,341.33
- September 2024 Los Angeles ENR Index: 15,374.24

Evaluating each project based on the development of an engineer's estimate for each project provides for a more detailed breakdown of assumptions and project components. The following summarizes typical project components.

- Onsite and Offsite Pipeline and Bedding
- Potholing and Shoring
- Trench Excavation, Backfill, and Compaction
- Paving and Site Improvements
- Generators and SCE Service
- Permits

The unit cost for each item was based on the average cost of recent and available bids of actual projects.

Attachment A - Detailed Engineer's Estimate Cost Breakdown

ALBERT A. WEBB ASSOCIATES

CONSTRUCTION AND PROJECT COST ESTIMATE

RCSD Water Booster Station Capital Improvement Project - Cost Escalation Analysis

W.O.: 2023-3361.00

Client: RCSD

Plan Title: Conceptual Scope from Master Plan

Purpose of Estimate: Capital Improvement / Developer Funded

Estimate Prepared By: Sinnaro Yos

Date Prepared: 10/15/25

Estimate Checked By: Jeff Hart

Date Checked: 4/1/2026

RCSD Water Booster Capital Improvement Project	Firm Capacity (gpm)	Total Capacity (gpm)	Project Cost Master Water Plan, Mar 2022 ENR LA CCI of 13,341.33	Project Cost Master Water Plan, escalated to Sept 2024 ENR LA CCI of 15,374.24	Construction Cost by Engineer Estimate, Sept 2024 ENR LA CCI of 15,374.24	Project Cost by Engineer Estimate, Sept 2024 ENR LA CCI of 15,374.24
CIP No. BS-5 Hunter Booster Station	800	1600	$2,806,000	$3,233,569	$2,604,200	$3,650,000
Total CIP Project Cost			**$2,806,000**	**$3,233,569**	**$2,604,200**	**$3,650,000**

RCSD Water Booster Developer Funded Project	Firm Capacity (gpm)	Total Capacity (gpm)	Project Cost Master Water Plan, Mar 2022 ENR LA CCI of 13,341.33	Project Cost Master Water Plan, escalated to Sept 2024 ENR LA CCI of 15,374.24	Construction Cost by Engineer Estimate, Sept 2024 ENR LA CCI of 15,374.24	Project Cost by Engineer Estimate, Sept 2024 ENR LA CCI of 15,374.24
CIP No. BS-2 Rio Vista 1360 Booster Station	1,060	1590	$3,704,400	$4,268,865	$2,958,600	$4,140,000
CIP No. BS-3 Rio Vista 1360 Redundant Booster Station	350	350	$1,573,600	$1,813,380	$1,854,400	$2,600,000
CIP No. BS-4 Rio Vista 1440 Booster Station	140	280	$711,200	$819,570	$1,476,600	$2,070,000
Total Developer Funded Project Cost			**$5,989,200**	**$6,901,816**	**$6,289,600**	**$8,810,000**

Project Title: Rio Vista 1360 Booster Station

Facility Type	Impacted Zone(s)	Improvement Phase
Booster Station	1360 PZ	Near-Term

2024 Cost Estimate $4,140,000

Project Location: 20th Street North of Catepillar Court
Purpose: Pump 1,060 gpm to 1360 Rio Vista PZ
Project Type: Developer Funded
Required When: Near-Term to support future Rio Vista development

Project Description:

This project will provide 1,060 gpm of pumping capability to the 1360 pressure zone for future developer driven Rio Vista Development. Firm capacity to be verified at design stage.

Project Details

- Three 60 HP 530 gpm pumps
- 2 active pumps 1 standby for firm capacity
- 180 combined HP

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. BS-2 Rio Vista 1360 Booster Station

W.O.: 2023-3361.00 | Estimate Prepared By: Sinnaro Yos

Client: RCSD | Date Prepared: 10/15/2025

Plan Title: Conceptual Scope from Master Plan | Estimate Checked By: Jeff Hart

Purpose of Estimate: Developer Funded | Date Checked: 4/1/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - RIO VISTA 1360 BOOSTER STATION				
101	Mob / Demob / Insurance	1	LS	$135,000	$135,000
102	Pothole existing utilities verify above grade facilities	1	LS	$13,500	$13,500
103	Trench sheeting, shoring, and bracing	1	LS	$13,500	$13,500
104	Pre-construction survey and construction staking	1	LS	$12,300	$12,300
105	On-site and off-site below grade pipe, fittings, valves, thrust restraints, connections	1	LS	$353,100	$353,100
106	Pump & motor, pump can and appurtenances	3	EA	$143,700	$431,100
107	Air valves, pump control valves, flow meters, relieaf valve, gate valves, gauges	1	LS	$157,100	$157,100
108	Above grade pump station manifold piping, fittings, flanges, pipe supports, etc.	1	LS	$73,000	$73,000
109	Reinforced mansonry block building (30' x 30')	1	LS	$450,000	$450,000
110	Building and site electrical, lighting, security, conduits, junction boxes, duct banks, control panels for pumps, SCADA, RTU, breakers, etc.	1	LS	$423,700	$423,700
111	SCE service, transformer, primary and secondary, pull boxes, conduits, meter main panel, site work, paving, backfill and compaction	1	LS	$80,800	$80,800
112	Emergency standby generator and concrete pad	1	LS	$240,500	$240,500
113	Site grading, improvements, paving, fence and gates, driveway	1	LS	$193,300	$193,300
114	Off-site pavement and trench repair, backfill, compaction, grind and overlay	1	LS	$54,300	$54,300
115	Pipe inspection, flushing, testing, disinfection, testing and startup	1	LS	$31,200	$31,200
116	City of Jurupa Valley Permits, traffic control, BMPs	1	LS	$27,200	$27,200
117	10-percent Contingency (Final Plans & Specifications) [3]	1	LS	$269,000	$269,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 117)				**$2,958,600**
	TOTAL PROJECT COST (ROUNDED)[4]				**$4,140,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Rio Vista 1360 Redundant BPS

Facility Type	Impacted Zone(s)	Improvement Phase
Booster Station	1360 PZ	Mid-Term

2024 Cost Estimate $2,600,000

Project Location: East of Shadow Rock Development
Purpose: Emergency/Redundancy pumping to 1360 Rio Vista PZ
Project Type: Developer Funded
Required When: Mid-Term to support future Rio Vista development

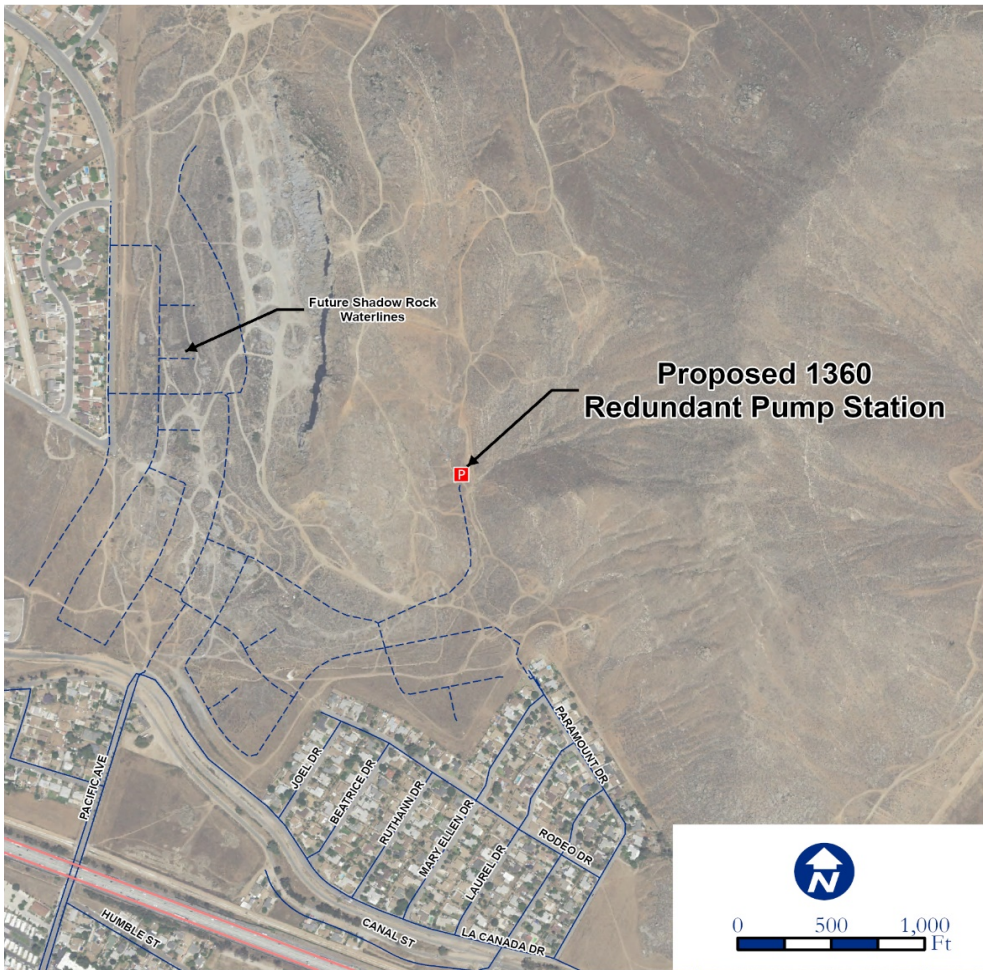
Project Description:

This project will provide emergency and redundancy pumping capability from the 1060 PZ to the 1360 PZ for the future Rio Vista Development. Sized for indoor water use only at 350 gpm.

Project Details

- Two 20 HP 175 gpm pumps
- 2 active pumps
- Combined 40 HP and 350 gpm

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. BS-3 Rio Vista 1360 Redundant Booster Station

W.O.: 2023-3361.00 | Estimate Prepared By: Sinnaro Yos

Client: RCSD | Date Prepared: 10/15/25

Plan Title: Conceptual Scope from Master Plan | Estimate Checked By: Jeff Hart

Purpose of Estimate: Developer Funded | Date Checked: 4/1/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
SCHEDULE I - RIO VISTA 1360 REDUNDANT BOOSTER STATION					
101	Mob / Demob / Insurance	1	LS	$84,000	$84,000
102	Trench sheeting, shoring, and bracing	1	LS	$13,500	$13,500
103	Pre-construction survey and construction staking	1	LS	$12,300	$12,300
104	On-site and off-site below grade pipe, fittings, valves, thrust restraints, connections	1	LS	$217,300	$217,300
105	Pump & motor, pump can and appurtenances	2	EA	$112,200	$224,400
106	Air valves, pump control valves, flow meters, relieaf valve, gate valves, gauges	1	LS	$121,200	$121,200
107	Above grade pump station manifold piping, fittings, flanges, pipe supports, etc.	1	LS	$56,100	$56,100
108	Reinforced mansonry block building (20' x 30')	1	LS	$300,000	$300,000
109	Building and site electrical, lighting, security, conduits, junction boxes, duct banks, control panels for pumps, SCADA, RTU, breakers, etc.	1	LS	$317,800	$317,800
110	SCE service, transformer, primary and secondary, pull boxes, conduits, meter main panel, site work, paving, backfill and compaction	1	LS	$60,600	$60,600
111	Emergency standby generator and concrete pad	1	LS	$143,200	$143,200
112	Site grading, improvements, paving, fence and gates, driveway	1	LS	$100,000	$100,000
113	Pipe inspection, flushing, testing, disinfection, testing and startup	1	LS	$15,000	$15,000
114	City of Jurupa Valley Permits, traffic control, BMPs	1	LS	$20,000	$20,000
115	10-percent Contingency (Final Plans & Specifications) [3]	1	LS	$169,000	$169,000
TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 115)					**$1,854,400**
TOTAL PROJECT COST (ROUNDED)[4]					**$2,600,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Rio Vista 1440 Pump Station

Facility Type	Impacted Zone(s)	Improvement Phase
Booster Station	1440 PZ	Mid-Term

2024 Cost Estimate $2,070,000

Project Location: Northwest corner of service area near Crestmore Heights
Purpose: Pump 140 gpm to 1440 Rio Vista PZ
Project Type: Developer Funded
Required When: Mid-Term to support future Rio Vista development

Project Description:

This project will provide 140 gpm of pumping capability to the 1440 pressure zone for future developer driven Rio Vista Development. Firm capacity to be verified at design stage.

Project Details

- Two 5 HP 140 gpm pumps
- 1 active pumps 1 standby for firm capacity
- 10 combined HP

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. BS-4 Rio Vista 1440 Booster Station

W.O.: 2023-3361.00 | Estimate Prepared By: Sinnaro Yos

Client: RCSD | Date Prepared: 10/15/25

Plan Title: Conceptual Scope from Master Plan | Estimate Checked By: Jeff Hart

Purpose of Estimate: Developer Funded | Date Checked: 4/1/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - RIO VISTA 1440 BOOSTER STATION				
101	Mob / Demob / Insurance	1	LS	$66,000	$66,000
102	Trench sheeting, shoring, and bracing	1	LS	$11,200	$11,200
103	Pre-construction survey and construction staking	1	LS	$11,200	$11,200
104	On-site and off-site below grade pipe, fittings, valves, thrust restraints, connections	1	LS	$163,000	$163,000
105	Pump & motor, pump can and appurtenances	2	EA	$101,000	$202,000
106	Air valves, pump control valves, flow meters, relieaf valve, gate valves, gauges	1	LS	$84,200	$84,200
107	Above grade pump station manifold piping, fittings, flanges, pipe supports, etc.	1	LS	$39,000	$39,000
108	Reinforced mansonry block building (20' x 20')	1	LS	$200,000	$200,000
109	Building and site electrical, lighting, security, conduits, junction boxes, duct banks, control panels for pumps, SCADA, RTU, breakers, etc.	1	LS	$271,600	$271,600
110	SCE service, transformer, primary and secondary, pull boxes, conduits, meter main panel, site work, paving, backfill and compaction	1	LS	$50,500	$50,500
111	Emergency standby generator and concrete pad	1	LS	$128,900	$128,900
112	Site grading, improvements, paving, fence and gates, driveway	1	LS	$80,000	$80,000
113	Pipe inspection, flushing, testing, disinfection, testing and startup	1	LS	$15,000	$15,000
114	City of Jurupa Valley Permits, traffic control, BMPs	1	LS	$20,000	$20,000
115	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$134,000	$134,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 115)				**$1,476,600**
	TOTAL PROJECT COST (ROUNDED)[4]				**$2,070,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Hunter Booster Pump Station

Facility Type	Impacted Zone(s)	Improvement Phase
Booster Station	1238 PZ	Long-Term

2024 Cost Estimate $3,650,000

Project Location: Northeast of Sedona Drive and Pheasant Run Circle intersection
Purpose: Pump 800 gpm firm capacity to the Hunter Zone
Project Type: New Development/Demand
Required When: Increase in ADU demand in 1238 PZ

Project Description:

This project will replace existing Mission BPS to pump 800 gpm of water from Atkinson Zone (1066) to the Hunter Zone (1238) to help meet ultimate demands.

Project Details

- Total flow rate of 1,600 gpm
- 1 operating pump and 1 standby
- 60 HP per pump

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. BS-5 Hunter Booster Station

W.O.: 2023-3361.00 | Estimate Prepared By: Sinnaro Yos

Client: RCSD | Date Prepared: 10/15/25

Plan Title: Conceptual Scope from Master Plan | Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement | Date Checked: 4/1/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - HUNTER BOOSTER STATION				
101	Mob / Demob / Insurance	1	LS	$118,000	$118,000
102	Trench sheeting, shoring, and bracing	1	LS	$13,500	$13,500
103	Pre-construction survey and construction staking	1	LS	$12,300	$12,300
104	On-site and off-site below grade pipe, fittings, valves, thrust restraints, connections	1	LS	$271,600	$271,600
105	Pump & motor, pump can and appurtenances	2	EA	$144,000	$288,000
106	Air valves, pump control valves, flow meters, relieaf valve, gate valves, gauges	1	LS	$121,200	$121,200
107	Above grade pump station manifold piping, fittings, flanges, pipe supports, etc.	1	LS	$56,100	$56,100
108	Reinforced mansonry block building (30' x 30')	1	LS	$450,000	$450,000
109	Building and site electrical, lighting, security, conduits, junction boxes, duct banks, control panels for pumps, SCADA, RTU, breakers, etc.	1	LS	$370,700	$370,700
110	SCE service, transformer, primary and secondary, pull boxes, conduits, meter main panel, site work, paving, backfill and compaction	1	LS	$67,300	$67,300
111	Emergency standby generator and concrete pad	1	LS	$200,500	$200,500
112	Site grading, improvements, paving, fence and gates, driveway, access road	1	LS	$315,000	$315,000
113	Off-site pavement and trench repair, backfill, compaction, grind and overlay	1	LS	$40,000	$40,000
114	Pipe inspection, flushing, testing, disinfection, testing and startup	1	LS	$23,000	$23,000
115	City of Jurupa Valley Permits, traffic control, BMPs	1	LS	$20,000	$20,000
116	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$237,000	$237,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 116)				**$2,604,200**
	TOTAL PROJECT COST (ROUNDED)[4]				**$3,650,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

RCSD WATER PIPELINES CIP COST EVALUATION DATED OCTOBER 4, 2024 UPDATED JULY 1, 2025, REVISED AUGUST 2025

ALBERT A. WEBB ASSOCIATES

Technical Memorandum

To: Jaclyn Makarzec, RCSD

From: Sinnaro Yos, WEBB
Checked by: Jeff Hart, WEBB

Date: October 4, 2024 (revised August 2026)

Subject: Rubidoux Community Services District
Water Master Plan Waterlines CIP Cost Evaluation

BACKGROUND

The Rubidoux Community Services District (RCSD) Water Master Plan (WMP), completed in May 2022, identifies future capital improvements to provide water service under ultimate development. The WMP provides RCSD with a planning document to develop and implement a Capital Improvement Program (CIP). The population of RCSD's service area is approximately 36,827 people for 2020. The mid-range density buildout population is estimated at 65,100 people and the maximum-density buildout scenario is projected at 82,400 people. As RCSD's buildout is estimated to be reached by about 2049 it is important to understand and budget for cost escalation in implementing these projects.

Prioritization of water facility improvements were determined based on hydraulic modeling results and were split into two categories. Near-term projects incorporate essential developments that require immediate attention and are recommended to be addressed within 1-5 years. Long-term projects, on the other hand, were given a 6- to 25-year recommended timeline.

The CIP includes cost estimates based on capital, construction costs, project costs, construction contingencies, cost index and price escalation, engineering costs, and legal and administrative costs.

The following summarizes the criteria in developing the CIP costs in the 2022 WMP:

- Estimated Construction Cost – Based upon the average cost of recent bids of actual projects.
- Project Cost – Additional 40-percent (1.4 times) the Estimated Construction Cost:
  - Assumes sewer main in public right-of-way
  - 20-percent for contingencies
  - 10-percent for engineering fees
  - 10-percent for other costs

  - An additional 10% has been included for projects where Final Plans and Specifications have not yet been developed
- Engineering News-Record Construction Cost Index
  - March 2022
  - Los Angeles ENR Index 13,341.33

Table 1 summarizes the CIP proposed improvements with their associated cost estimates based on RCSD's May 2022 Water Master Plan that are related to proposed development.

Table 1 – CIP Summary Table of Proposed Waterlines[1]

Waterlines Capital Improvement Project	Project Criteria		Unit Cost per Linear Feet	Project Cost Water Master Plan
	Sze (in)	Length (ft)		
(WL-4) Atkinson Tank (Near-Term)	18	715	$580	$415,000
(WL-5) Alta (Near-Term)	18	700	$575	$402,500
(WL-6) Canal St (Near-Term)	18	2,175	$580	$1,260,700
(WL-7) La Cananda (Mid-Term)	18	3,000	$487	$1,462,000
(WL-8) Well Field I (Near-Term)	24	1,200	$624	$749,280
(WL-11) Well Field II (Mid-Term)	16/12	3,200	$395	$1,264,000
(WL-12) Sedona Dr (Long-Term)	24	2,815	$618	$1,740,000
(WL-13) Hunter Booster Station (Long-Term)	12	525	$326	$171,000
(WL-14) Thompson Plant Drain (Near-Term)	10	1,190	$432	$514,000
(WL-15) Crestmore (Long-Term)	12/16	3,235	$460	$1,488,000
Total CIP Project Cost				**$9,466,480**

[1] Tables 7-1 to 7-3 CIP Summary Table of Proposed Improvements, RCSD May 2022 WMP.

COST ESCALATION

As previously stated, understanding cost escalation is important to the planning and development of RCSD's CIPs. The planning level cost estimates do not include a detailed breakdown of costs associated with waterline construction. Smaller projects tend to be more expensive on a linear foot basis as the project overhead is applied to less pipeline length. To gain more insight into the potential costs on a project-by-project basis, a more detailed engineering cost estimate was prepared based on a typical construction project bid sheet envisioned for each project to better understand the costs associated with each project. Additionally, the project costs from the May 2022 WMP were indexed to March 2022 ENR LA CCI of 13,341.33 and then escalated utilizing the current September 2024 ENR LA CCI of 15,374.24. The following Table 2 summarizes these costs (see Attachment A for detailed breakdowns).

Table 2 – Proposed Waterlines Cost Escalation

Waterlines Capital Improvement Project	Size (in) / Length (ft)	May 2022 Water Master Plan			Preliminary Engineer's Estimate Method (Sept 2024 ENR LA CCI 15,374.24)		
		Project Cost (Mar. 2022 ENR LA CCI 13,341.33)	Project Cost (Sept 2024 ENR LA CCI 15,374.24)	Unit Cost per LF	Construction Cost	Project Cost	Unit Cost per LF
(WL-4) Atkinson Tank (Near-Term) (1)	18 / 715	$415,000	$478,240	$669	n/a	n/a	n/a
(WL-5) Alta (Near-Term) (1)	18 / 700	$402,500	$463,830	$663	n/a	n/a	n/a
(WL-6) Canal St (Near-Term) (1)	18 / 2,175	$1,260,700	$1,452,800	$668	n/a	n/a	n/a
(WL-7) La Canada (Mid-Term) (1)	18 / 3,000	$1,462,000	$1,684,770	$562	n/a	n/a	n/a
(WL-4) Atkinson Tank (Near-Term) (1)(2)	18 / 770	n/a	n/a	n/a	$541,390	$758,000	$984
(WL-5) Alta (Near-Term) (1)(2)	18 / 710	n/a	n/a	n/a	$339,290	$480,000	$676
(WL-6) Canal St (Near-Term) (1)(2)	18 / 1,752	n/a	n/a	n/a	$923,828	$1,290,000	$736
(WL-7) La Canada (Mid-Term) (1)	18 / 2,900	n/a	n/a	n/a	$1,626,340	$2,280,000	$786
(WL-8) Well Field I (Near-Term) (1)	24 / 1,200	$749,280	$863,450	$720	n/a	n/a	n/a
(WL-11) Well Field II (Mid-Term) (1)	12/16/ 3,200	$1,264,000	$1,456,600	$455	n/a	n/a	n/a
Well Pipelines within the District @ JV (1)	12/18 / 4,081	n/a	n/a	n/a	$1,705,568	$2,390,000	$586
(WL-12) Sedona Dr (Long-Term)	24 / 2,815	$1,740,000	$2,005,140	$712	$1,918,135	$2,690,000	$956
(WL-13) Hunter Booster (Long-Term)	12 / 525	$171,000	$197,060	$375	$240,850	$340,000	$648
(WL-14) Thompson Plant Drain (Near-Term)	10 / 1,190	$514,000	$592,320	$498	$448,280	$630,000	$529
(WL-15) Crestmore (Long-Term)	12/16/ 3,235	$1,488,000	$1,714,740	$530	$1,533,345	$2,150,000	$665
Total CIP Project Cost		**$9,466,480**	**$10,908,970**		**$9,277,026**	**$13,008,000(2)**	

(1) Lengths from May 2022 master plan were adjusted to align with development reimbursements.
(2) Project Costs have been updated based on existing Developer Reimbursement Agreements (see "Updated Project Costs Based on Developer Reimbursement Agreements" on following page.

SUMMARY

Cost escalation is significant and can be attributed to outside factors such as overall inflationary pressures and labor and material impacts. Construction costs have been adjusted using the Engineering News-Record Construction Cost Index for the period between March 2022 and September 2024.

- March 2022 Los Angeles ENR Index: 13,341.33
- September 2024 Los Angeles ENR Index: 15,374.24

Evaluating each project based on development of an engineer's estimate for each project provides for a more detailed breakdown of assumptions and project components. The following summarizes typical project components.

- Pipe Material
- Pipeline and Bedding
- Alignment and Length
- Pipeline Appurtenances (blow-offs and air valves)
- Butterfly and Gate Valves
- Potholing and Shoring
- Trench Excavation, Backfill, and Compaction
- Paving and Capping
- Traffic Control and Construction Staking
- Permits

The unit cost for each item was based on the average cost of recent bids of actual projects. The quantities developed were based on reviewing aerial views, mapping information, and RCSD's standards.

UPDATED PROJECT COSTS BASED ON DEVELOPER REIMBURSEMENT AGREEMENTS

The following project costs have been updated based upon existing Developer Reimbursement Agreements:

Project	Amount	Agreement(s)
WL-4 Atkinson Tank Waterline	$ 531,858	Tract No. 36947
WL-5 Alta Waterline	$ 280,000	Tract No. 37640 (Alta Street Water Transmission) & Tract No. 36947
WL-6 Canal Waterline	$ 1,290,000	Tract No. 32721 & Tract No. 36947

As a result, the total project cost for the Waterlines component is **$12,581,858.**

Attachment A - Detailed Engineer's Estimate Cost Breakdown

ALBERT A. WEBB ASSOCIATES

CONSTRUCTION AND PROJECT COST ESTIMATE

RCSD Waterlines Capital Improvement Project - Cost Escalation Analysis

W.O.: 2023-3361.00 | Estimate Prepared By: Sinnaro Yos

Client: RCSD | Date Prepared: 10/04/24

Plan Title: Conceptual Scope from Master Plan | Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement | Date Checked: 8/15/2026

RCSD Waterlines Capital Improvement Project	Project Criteria		Project Cost Master Water Plan				Cost Estimate by Engineer Estimate Method		
	Size (in)	Length (ft)	Mar 2022 ENR LA CCI of 13,341.33	$/LF	Escalated to Sept 2024 ENR LA CCI of 15,374.24	$/LF	Construction Cost, Sept 2024 ENR LA CCI of 15,374.24	Project Cost, Sept 2024 ENR LA CCI of 15.374.24	$/LF
CIP No. WL-4 Atkinson Tank Waterline	18	715	$415,000	$580	$478,240	$669	n/a	n/a	n/a
CIP No. WL-5 Alta Waterline	18	700	$402,500	$575	$463,830	$663	n/a	n/a	n/a
CIP No. WL-6 Canal Waterline	18	2,175	$1,260,700	$580	$1,452,800	$668	n/a	n/a	n/a
CIP No. WL-7 La Canada Waterline	18	3,000	$1,462,000	$487	$1,684,780	$562	n/a	n/a	n/a
CIP No. WL-4 Atkinson Tank Waterline [1]	18	770	n/a	n/a	n/a	n/a	$541,390	$758,000	$984
CIP No. WL-5 Alta Waterline [1]	18	710	n/a	n/a	n/a	n/a	$339,290	$480,000	$676
CIP No. WL-6 Canal Waterline [1]	18	1,752	n/a	n/a	n/a	n/a	$923,828	$1,290,000	$736
CIP No. WL-7 La Canada Waterline	18	2,900	n/a	n/a	n/a	n/a	$1,626,340	$2,280,000	$786
CIP No. WL-8 Well Field Waterline	24	1,200	$749,280	$624	$863,450	$720	n/a	n/a	n/a
CIP No. WL-11 Well Field II Waterline	12/16	3,200	$1,264,000	$395	$1,456,610	$455	n/a	n/a	n/a
Well Pipelines within the District @ JV Project	12/18	4,081	n/a	n/a	n/a	n/a	$1,705,568	$2,390,000	$586
CIP No. WL-12 Sedona Dr Waterline	24	2,815	$1,740,000	$618	$2,005,140	$712	$1,918,135	$2,690,000	$956
CIP No. WL-13 Hunter Booster Station Waterline	12	525	$171,000	$326	$197,060	$375	$240,850	$340,000	$648
CIP No. WL-14 Thompson Plant Discharge Drainline	10	1,190	$514,000	$432	$592,320	$498	$448,280	$630,000	$529
CIP No. WL-15 Crestmore Waterline	12/16	3,235	$1,488,000	$460	$1,714,740	$530	$1,533,345	$2,150,000	$665
Total CIP Project Cost			**$9,466,480**		**$10,908,970**		**$9,277,026**	**$13,008,000** [1]	

Pipeline lengths from the May 2022 master plan for WL-4 through WL-7 were adjusted to align with planned developer reimbursements.
Well Pipelines within the District @ JV based on design lengths replace WL-8 and WL-11 projects.

[1] Project Costs have been updated based on existing Developer Reimbursement Agreements (see "Updated Project Costs Based on Developer Reimbursement Agreements")

Project Title: Atkinson Tank Pipeline

Facility Type	Impacted Zone(s)	Improvement Phase
Transmission Pipeline	1066 PZ	Near-Term

2024 Cost Estimate $758,000

Project Location: N of Canal St in between Atkinson Tank and Alta St

Purpose: Provide redundancy within the Atkinson Zone

Project Type: New Development/Demand

Required When: Developer builds proposed streets & when western Atkinson Tank supply pipeline is abandoned

Project Description:

This project consists of upsizing 770 LF of 12-inch diameter waterline to 18-inch diameter. Spanning from the east outlet of Atkinson Tank to the proposed Canal St pipeline helping support future developments in the vicinity.

Project Details

- 770 LF
- 18-inch diameter
- DIP pipe material

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. WL-4 Atkinson Tank Waterline

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/24

Plan Title: Conceptual Scope from Master Plan Estimate Checked By: Brad Sackett

Purpose of Estimate: Capital Improvement Date Checked: 10/04/24

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - ATKINSON TANK WATERLINE				
101	Mob / Demob / Insurance	1	LS	$25,000	$25,000
102	Pothole existing utilities	1	LS	$1,500	$1,500
103	Trench sheeting, shoring, and bracing	1	LS	$14,000	$14,000
104	18-inch DIP waterline & pipe bedding	770	LF	$384	$295,680
105	36-inch steel casing pipe, jack & bore, excavation pits	130	LF	$960	$124,800
106	18-inch butterfly valves	2	EA	$9,000	$18,000
106	2-inch air valve	1	EA	$8,970	$8,970
107	Connection to existing waterlines	2	EA	$10,000	$20,000
108	Trench repair, backfill and compaction for mainline	770	LF	$20	$15,400
109	Waterline video inspection	770	LF	$2	$1,540
110	Flush, pressure test, and disinfection	1	LS	$7,000	$7,000
111	Pre-construction survey and construction staking	1	LS	$7,000	$7,000
112	BMPs	1	LS	$2,500	$2,500
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 112)				**$541,390**
	TOTAL PROJECT COST (ROUNDED)[3]				**$758,000**

[1]Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2]The above prices include any amount payable by the Owner for taxes.

[3] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Alta Pipeline

Facility Type	Impacted Zone(s)	Improvement Phase
Transmission Pipeline	1066 PZ	Near-Term

2024 Cost Estimate $480,000

Project Location: N of 60 freeway in between Canal St and Avalon St

Purpose: Provide redundancy within the Atkinson Zone

Project Type: New Development/Demand

Required When: Developer builds proposed streets & when western Atkinson Tank supply pipeline is abandoned

Project Description:

This project consists of upsizing 377 LF of 12-inch diameter waterline to 18-inch diameter. Spanning from the Avalon St to the proposed Atkinson Tank Pipeline helping support future developments in the vicinity.

Project Details

- 377 LF
- 18-inch diameter
- DIP pipe material

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. WL-5 Alta Waterline

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/24

Plan Title: Conceptual Scope from Master Plan Estimate Checked By: Brad Sackett

Purpose of Estimate: Capital Improvement Date Checked: 10/04/24

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - ALTA WATERLINE				
101	Mob / Demob / Insurance	1	LS	$18,000	$18,000
102	Pothole existing utilities	1	LS	$1,500	$1,500
103	Trench sheeting, shoring, and bracing	1	LS	$14,000	$14,000
104	18-inch DIP waterline & pipe bedding	710	LF	$320	$227,200
105	18-inch butterfly valves	1	EA	$9,000	$9,000
106	2-inch air valve	1	EA	$8,970	$8,970
107	Connection to existing waterlines	2	EA	$10,000	$20,000
108	Trench repair, backfill and compaction for mainline	710	LF	$20	$14,200
109	Waterline video inspection	710	LF	$2	$1,420
110	Flush, pressure test, and disinfection	1	LS	$5,000	$5,000
111	Pre-construction survey and construction staking	1	LS	$5,000	$5,000
112	Railroad Permit, Flood Control Permit, BMPs	1	LS	$15,000	$15,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 112)				**$339,290**
	TOTAL PROJECT COST (ROUNDED)[3]				**$480,000**

[1]Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2]The above prices include any amount payable by the Owner for taxes.

[3] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Canal Pipeline

Facility Type	Impacted Zone(s)	Improvement Phase
Transmission Pipeline	1066 PZ	Near-Term

2024 Cost Estimate $1,290,000

Project Location: In Canal St between Alta St and La Rue St; N. of exist. railroad tracks within planned street for TTM 36947

Purpose: Provide redundancy within the Atkinson Zone

Project Type: New Development/Demand

Required When: Developer builds proposed streets & when western Atkinson Tank supply pipeline is abandoned

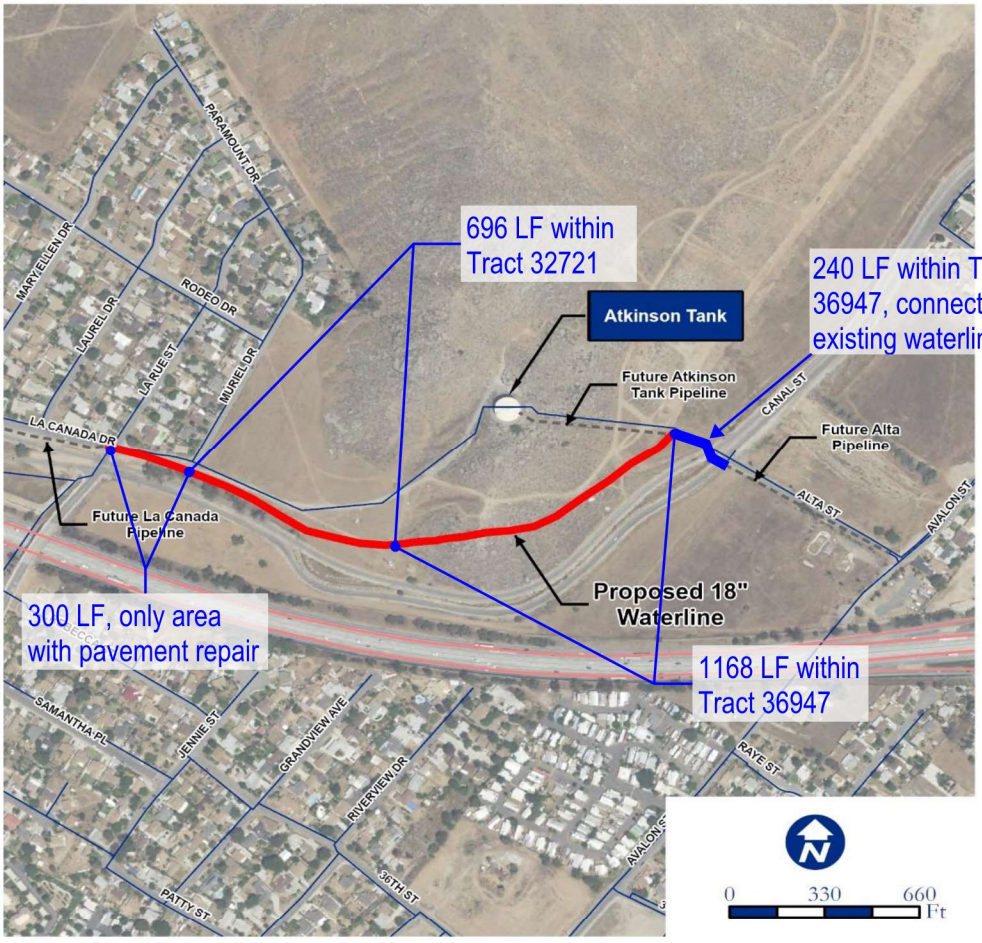
Project Description:

This project consists of installing 2,175 LF of 18-inch diameter waterline. Spanning from the Alta St Pipeline to the La Canada Pipeline helping support future developments in the vicinity.

Project Details

- 2,175 LF (See updates below)
- 18-inch diameter
- DIP pipe material

Project Map



ALBERT A. WEBB ASSOCIATES

ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. WL-6 Canal Waterline

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/24

Plan Title: Conceptual Scope from Master Plan Estimate Checked By: BAS

Purpose of Estimate: Capital Improvement Date Checked: 10/04/24

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - CANAL WATERLINE				
101	Mob / Demob / Insurance	1	LS	$46,000	$46,000
102	Pothole existing utilities	1	LS	$3,000	$3,000
103	Trench sheeting, shoring, and bracing	1	LS	$24,000	$24,000
104	18-inch DIP waterline & pipe bedding	1,752	LF	$384	$672,868
105	18-inch butterfly valves	5	EA	$9,000	$45,000
106	2-inch air valve	3	EA	$8,970	$26,910
107	Connection to existing waterlines	2	EA	$10,000	$20,000
108	Trench repair, backfill and compaction for mainline with paving restoration	0	LF	$40	$0
109	Trench repair, backfill and compaction for mainline	1,752	LF	$20	$35,045
110	Waterline video inspection	1,752	LF	$2	$3,505
111	Flush, pressure test, and disinfection	1	LS	$20,000	$20,000
112	Pre-construction survey and construction staking	1	LS	$20,000	$20,000
113	BMPs	1	LS	$7,500	$7,500
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 113)				**$923,828**
	TOTAL PROJECT COST (ROUNDED)[3]				**$1,290,000**

[1]Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2]The above prices include any amount payable by the Owner for taxes.

[3] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: La Canada Pipeline

Facility Type	Impacted Zone(s)	Improvement Phase
Transmission Pipeline	1066 PZ	Mid-Term

2024 Cost Estimate $2,280,000

Project Location: N of 60 freeway in between Pacific Ave and La Rue St
Purpose: Provide redundancy within the Atkinson Zone
Project Type: New Development/Demand
Required When: Goldenwest Tank is constructed

Project Description:

This project consists of 2,900 LF of 18-inch diameter within La Canada Dr to support interconnection to 1066 PZ tanks, add redundancy to the area and surrounding future developments and connect to the recently constructed 24-inch diameter waterline in Pacific Ave

Project Details

- 2,900 LF (See updates below)
- 18-inch diameter
- DIP pipe material

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. WL-7 La Canada Waterline

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/24

Plan Title: Conceptual Scope from Master Plan Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement Date Checked: 04/01/26

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - LA CANADA WATERLINE				
101	Mob / Demob / Insurance	1	LS	$55,000	$55,000
102	Pothole existing utilities	1	LS	$7,500	$7,500
103	Trench sheeting, shoring, and bracing	1	LS	$24,000	$24,000
104	18-inch DIP waterline & pipe bedding	2,900	LF	$384	$1,113,600
105	18-inch butterfly valves	4	EA	$9,000	$36,000
106	2-inch air valve	2	EA	$8,970	$17,940
107	Connection to existing waterlines	2	EA	$10,000	$20,000
108	Pavement removal and replacement, trench repair, backfill and compaction for mainline	2,000	LF	$30	$60,000
109	Pavement grind and overlay	26,000	SF	$3	$78,000
109	Trench repair, backfill and compaction for mainline in horse trail	600	LF	$20	$12,000
110	Waterline video inspection	2,900	LF	$2	$5,800
111	Flush, pressure test, and disinfection	1	LS	$20,000	$20,000
112	Pre-construction survey and construction staking	1	LS	$20,000	$20,000
113	Jurupa Valley Permits, BMPs	1	LS	$8,500	$8,500
114	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$148,000	$148,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 114)				**$1,626,340**
	TOTAL PROJECT COST (ROUNDED)[4]				**$2,280,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Well Field Pipeline (II)

Facility Type	Impacted Zone(s)	Improvement Phase
Transmission Pipeline	1066 PZ	Near-Term

2024 Cost Estimate $2,390,00

Project Location: Located within The District @ Jurupa Valley Project along Wallace and through easements within the project to the Thompson plant

Purpose: Provide connection for proposed Wells 23 & 24

Project Type: New Development/Demand

Required When: Well 23 and 24 are constructed

Project Description:

This project will provide flow capabilities to future Well 23 and 24. Sized to meet ultimate demand criteria.

Project Details

- Consisting of 12-inch and 18-inch diameter pipeline along the alternative alignment
- 4,061 LF
- DIP or CML/C pipe material

Project Map



ALBERT A. WEBB ASSOCIATES

ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. Raw Water within The District @ Jurupa Valley

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/24

Plan Title: Conceptual Scope from Master Plan Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement Date Checked: 8/15/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - RAW WATER PIPELINE WITHIN THE DISTRICT @ JV				
101	Mob / Demob / Insurance	1	LS	$55,000	$55,000
102	Trench sheeting, shoring, and bracing	1	LS	$40,000	$40,000
103	18-inch DIP waterline & pipe bedding	2,369	LF	$384	$909,696
104	12-inch DIP waterline & pipe bedding	1,692	LF	$300	$507,600
105	2-inch air valve	4	EA	$8,970	$35,880
106	Blow Off - Wharf Head	4	EA	$8,970	$35,880
107	12-in RSGV	5	EA	$8,970	$44,850
108	Waterline video inspection	4,081	LF	$2	$8,162
109	Flush, pressure test, and disinfection	1	LS	$40,000	$40,000
110	Pre-construction survey and construction staking	1	LS	$20,000	$20,000
111	Jurupa Valley Permits, BMPs	1	LS	$8,500	$8,500
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 111)				**$1,705,568**
	TOTAL PROJECT COST (ROUNDED)[3] [4][5]				**$2,390,000**

[1]Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2]The above prices include any amount payable by the Owner for taxes.

[3] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

[4]Existing Agreement in place for $1,130,000. Total Pipeline capacity fee basis will be reduced by agreement amount.

[5]The precise alignment of the Well Field Pipeline project has not yet been determined; however, the ultimate pipeline locations are anticipated to be similar in extent and overall scope to the estimate provided herein.

Project Title: Sedona Dr. Pipeline

Facility Type	Impacted Zone(s)	Improvement Phase
Transmission Pipeline	1066 PZ	Long-Term

2024 Cost Estimate $2,690,000

Project Location: Along Sedona Dr from 600 ft west of Fairbanks Ave to Mission Blvd
Purpose: Provide connection for the proposed Goldenwest Tank
Project Type: New Development/Demand
Required When: Goldenwest Tank is constructed

Project Description:

This project will connect the proposed Goldenwest Tank to the Atkinson Zone, allowing for increased storage to the 1066 PZ.

Project Details

- 24-inch diameter pipeline
- Total 2,815 LF
- DIP or CML/C pipe

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. WL-12 Sedona Dr Waterline

W.O.: 2023-3361.00 | Estimate Prepared By: Sinnaro Yos

Client: RCSD | Date Prepared: 10/04/24

Plan Title: Conceptual Scope from Master Plan | Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement | Date Checked: 4/1/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - SEDONA DR WATERLINE				
101	Mob / Demob / Insurance	1	LS	$85,000	$85,000
102	Pothole existing utilities	1	LS	$18,000	$18,000
103	Trench sheeting, shoring, and bracing	1	LS	$40,000	$40,000
104	24-inch DIP or CML/C waterline & pipe bedding	2,815	LF	$422	$1,187,930
105	24-inch butterfly valves	4	EA	$11,000	$44,000
106	2-inch air valve	2	EA	$9,020	$18,040
107	Connection to existing waterlines	2	EA	$10,000	$20,000
108	Pavement removal and replacement, trench repair, backfill and compaction for mainline	2,815	LF	$50	$140,750
	Pavement grind and overlay	36,595	SF	$3	$109,785
109	Waterline video inspection	2,815	LF	$2	$5,630
110	Flush, pressure test, and disinfection	1	LS	$30,000	$30,000
111	Pre-construction survey and construction staking	1	LS	$25,000	$25,000
112	City of Jurupa Valley Permits, BMPs	1	LS	$20,000	$20,000
113	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$174,000	$174,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 113)				**$1,918,135**
	TOTAL PROJECT COST (ROUNDED)[4]				**$2,690,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Hunter BPS Pipeline

Facility Type	Impacted Zone(s)	Improvement Phase
Transmission Pipeline	1238 PZ	Long-Term

2024 Cost Estimate $340,000

Project Location: Along Sedona Dr from 500 ft west of Fairbanks Ave to Fairbanks Ave
Purpose: Provide connection for the proposed Hunter Pump Station
Project Type: New Development/Demand
Required When: Hunter Booster Pump Station is constructed

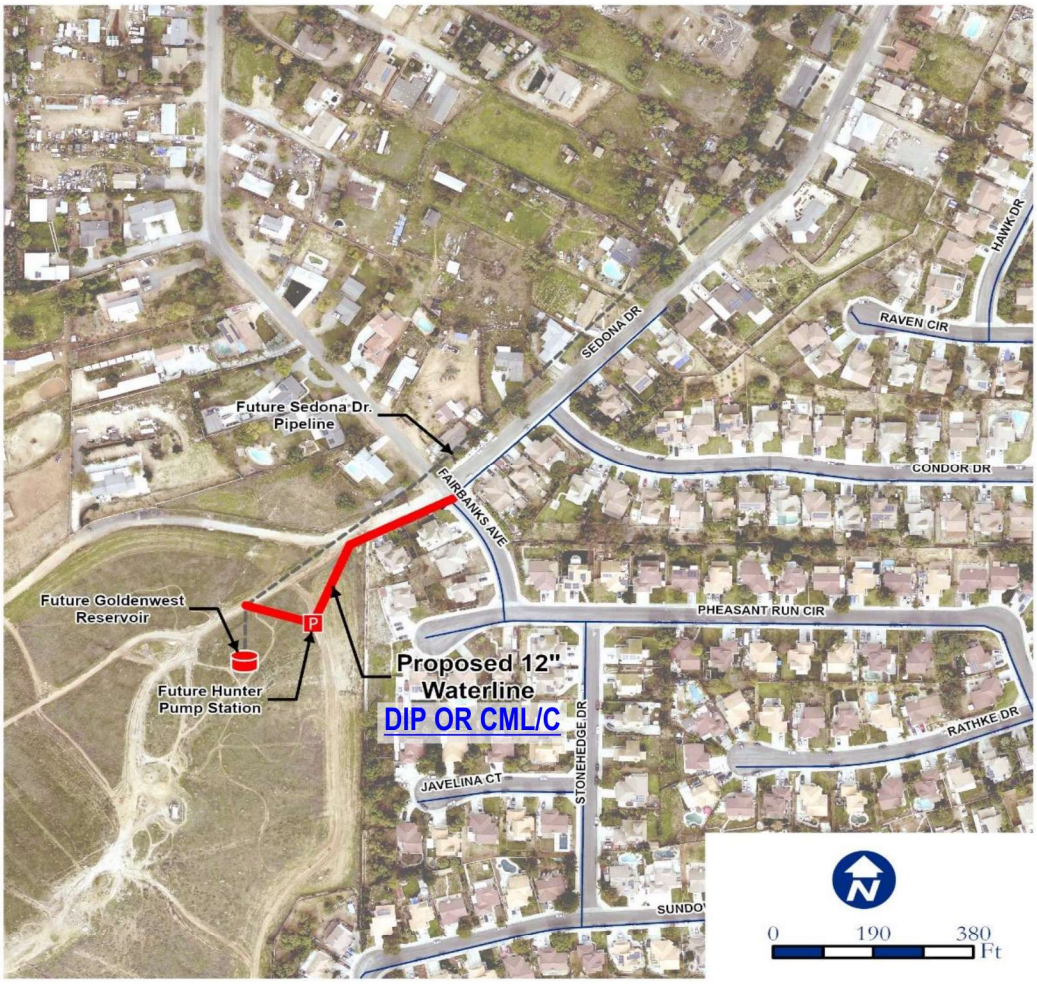
Project Description:

This project will connect the proposed Hunter BPS to the Hunter Zone, allowing for increased pumping capability to the 1238 PZ.

Project Details

- 525 LF
- 12-inch diameter
- DIP or CML/C pipe material

Project Map



ALBERT A. WEBB ASSOCIATES

ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. WL-13 Hunter Booster Station Waterline

W.O.: 2023-3361.00 | Estimate Prepared By: Sinnaro Yos

Client: RCSD | Date Prepared: 10/04/24

Plan Title: Conceptual Scope from Master Plan | Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement | Date Checked: 4/1/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - HUNTER BOOSTER STATION WATERLINE				
101	Mob / Demob / Insurance	1	LS	$12,000	$12,000
102	Pothole existing utilities	1	LS	$2,000	$2,000
103	Trench sheeting, shoring, and bracing	1	LS	$4,800	$4,800
104	12-inch DIP or CML/C waterline & pipe bedding	525	LF	$211	$110,775
105	12-inch gate valves	2	EA	$5,000	$10,000
106	1-inch air valve	2	EA	$8,000	$16,000
107	Connection to existing waterlines	1	EA	$7,000	$7,000
108	Pavement removal and replacement, trench repair, backfill and compaction for mainline	525	LF	$30	$15,750
109	Pavement grind and overlay	6,825	SF	$3	$20,475
110	Waterline video inspection	525	LF	$2	$1,050
111	Flush, pressure test, and disinfection	1	LS	$6,000	$6,000
112	Pre-construction survey and construction staking	1	LS	$5,000	$5,000
113	City of Jurupa Valley Permits, BMPs	1	LS	$8,000	$8,000
114	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$22,000	$22,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 114)				**$240,850**
	TOTAL PROJECT COST (ROUNDED)[4]				**$340,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Thompson Discharge Pipeline

Facility Type	Impacted Zone(s)	Improvement Phase
Flush Pipeline	1066 PZ	Near-Term

2024 Cost Estimate $630,000

Project Location: 34th Street southeast of Wallace Street

Purpose: Provide flush capability from Thompson Water Treatment Facility

Project Type: New Development/Demand

Required When: Adjacent property develops eliminating current discharge approach

Project Description:

This project will provide convey roughly 300 gpm of discharge wastewater from the Thompson Water Treatment facility to the 18-in dia. sewer trunk line in Wallace St. The proposed 10-inch dia gravity line at 75% d/D with a minimum slope of 0.0024 ft/ft can transport up to 440 gpm.

Project Details

- 1,190 LF
- 10-inch diameter
- PVC pipe material

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. WL-14 Thompson Plant Disharge Drainline

W.O.: 2023-3361.00 | Estimate Prepared By: Sinnaro Yos

Client: RCSD | Date Prepared: 10/04/24

Plan Title: Conceptual Scope from Master Plan | Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement | Date Checked: 4/1/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - THOMPSON PLANT DISCHARGE DRAINLINE				
101	Mob / Demob / Insurance	1	LS	$20,000	$20,000
102	Pothole existing utilities	1	LS	$7,500	$7,500
103	Trench sheeting, shoring, and bracing	1	LS	$9,100	$9,100
104	10-inch PVC waterline & pipe bedding	1,190	LF	$201	$239,190
105	Air gap structure	1	LS	$8,000	$8,000
106	Connection to existing trunk sewer with manhole	1	LS	$13,000	$13,000
107	Pavement removal and replacement, trench repair, backfill and compaction for mainline	1,190	LF	$30	$35,700
108	Pavement grind and overlay	15,470	SF	$3	$46,410
109	Pipeline video inspection	1,190	LF	$2	$2,380
110	Flush, air test	1	LS	$8,000	$8,000
111	Pre-construction survey and construction staking	1	LS	$10,000	$10,000
112	City of Jurupa Valley Permits, BMPs	1	LS	$8,000	$8,000
113	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$41,000	$41,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 113)				**$448,280**
	TOTAL PROJECT COST (ROUNDED)[4]				**$630,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Crestmore Pipeline

Facility Type	Impacted Zone(s)	Improvement Phase
Transmission Pipeline	1066 PZ	Long-Term

2024 Cost Estimate $2,150,000

Project Location: Along Crestmore Rd between 34th St and Capary Rd
Purpose: Convey raw water to treatment facility
Project Type: New Development/Demand
Required When: Well 26 and 28 are constructed

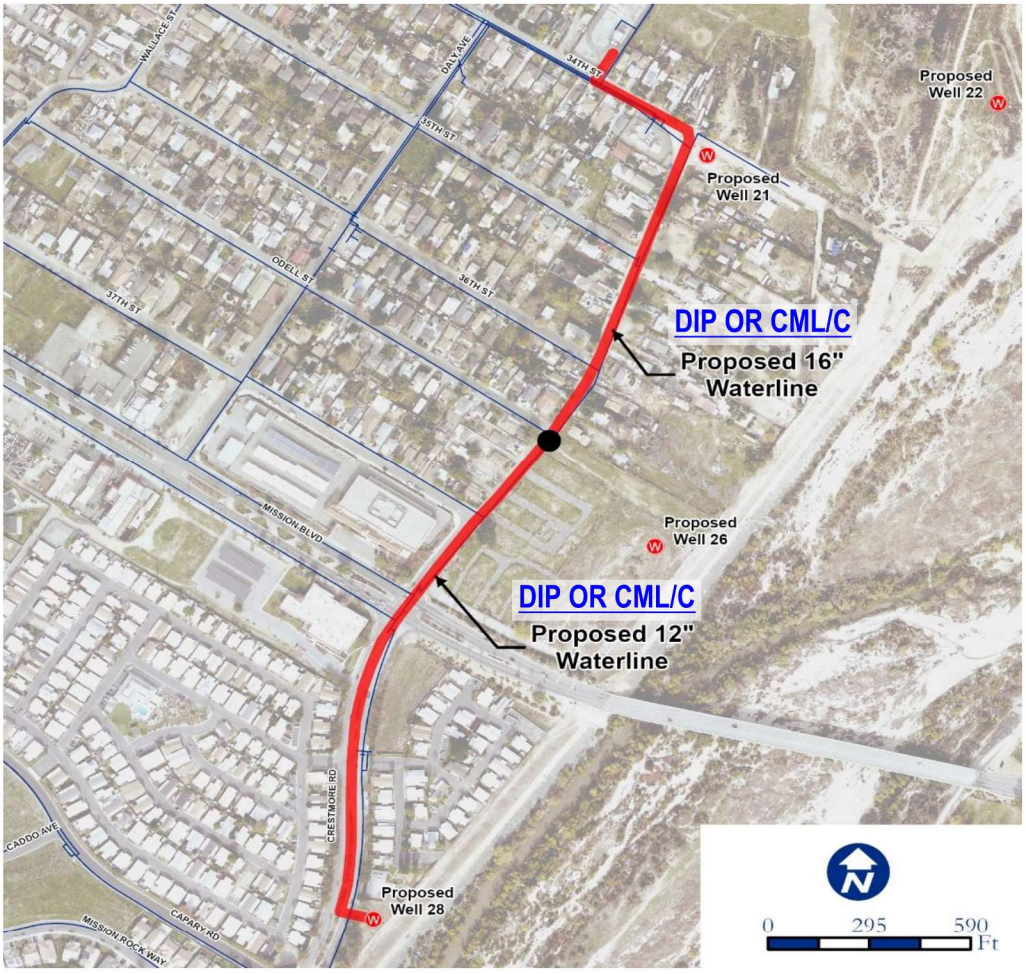
Project Description:

This project consists of 1,635 LF of 12-inch diameter discharge piping from Well 28 to Well 26 and 1,600 LF of 16-inch diameter piping from Well 26 to Thompson Treatment Plant.

Project Details

- 3,235 total LF
- 12-inch and 16-inch diameter
- DIP or CML/C pipe material

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. WL-15 Crestmore Waterline

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/24

Plan Title: Conceptual Scope from Master Plan Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement Date Checked: 4/1/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - CRESTMORE WATERLINE				
101	Mob / Demob / Insurance	1	LS	$65,000	$65,000
102	Pothole existing utilities	1	LS	$22,500	$22,500
103	Trench sheeting, shoring, and bracing	1	LS	$16,900	$16,900
104	16-inch DIP or CML/C waterline & pipe bedding	1,600	LF	$322	$515,200
105	12-inch DIP or CML/C waterline & pipe bedding	1,635	LF	$252	$412,020
106	16-inch butterfly valves	2	EA	$7,500	$15,000
107	12-inch gate valves	2	EA	$5,000	$10,000
108	2-inch air valve	2	EA	$9,020	$18,040
109	Connection to existing waterlines	2	EA	$10,000	$20,000
110	Pavement removal and replacement, trench repair, backfill and compaction for mainline	3,235	LF	$30	$97,050
111	Pavement grind and overlay	42,055	SF	$3	$126,165
112	Waterline video inspection	3,235	LF	$2	$6,470
113	Flush, pressure test, and disinfection	1	LS	$25,000	$25,000
114	Pre-construction survey and construction staking	1	LS	$20,000	$20,000
115	City of Jurupa Valley Permits, BMPs	1	LS	$25,000	$25,000
116	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$139,000	$139,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 116)				**$1,533,345**
	TOTAL PROJECT COST (ROUNDED)[4]				**$2,150,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

RCSD SEWER CIP COST EVALUATION DATED OCTOBER 4, 2024, UPDATED AUGUST, 2026

ALBERT A. WEBB ASSOCIATES

Technical Memorandum

To: Jaclyn Makarzec, RCSD

From: Sinnaro Yos, WEBB
Checked by: Jeff Hart, WEBB

Date: October 4, 2024 (Revised August 2026)

Subject: Rubidoux Community Services District
Wastewater Master Plan CIP Cost Evaluation

BACKGROUND

The Rubidoux Community Services District (RCSD) Wastewater Master Plan (WWMP), completed in May 2022, identifies future capital improvements to provide wastewater service under ultimate development. The WWMP provides RCSD with a planning document to develop and implement a Capital Improvement Program (CIP). The population of RCSD's service area is approximately 36,827 people for 2020. The mid-range density buildout population is estimated at 65,100 people, and the maximum-density buildout scenario is projected at 82,400 people. As RCSD's buildout is estimated to be reached by about 2049, it is important to understand and budget for cost escalation in implementing these projects.

The prioritization of wastewater facility improvements was determined based on hydraulic modeling results and split into two categories. Near-term projects incorporate essential developments that require immediate attention and are recommended to be addressed within 1 to 5 years. Long-term projects, on the other hand, were given a recommended timeline of 6 to 25 years.

The Reverse Osmosis (RO) Facility Treatment Project is attributable solely to the wastewater capacity component. RCSD's ability to provide wastewater service to future development is dependent on implementing RO treatment to maintain compliance with existing Total Dissolved Solids (TDS) discharge limits. While RCSD is currently in compliance with these limits, projected future development will increase wastewater flows and TDS loading beyond the District's ability to remain compliant under existing treatment processes. As a result, future RO treatment facilities will be necessary to ensure continued compliance with regulatory TDS requirements and to support planned growth.

The CIP includes cost estimates based on capital, construction costs, project costs, construction contingencies, cost index, price escalation, engineering costs, and legal and administrative costs.

The following summarizes the criteria in developing the CIP costs 2022 WWMP:

- Estimated Construction Cost – Based upon the average cost of recent bids of actual projects.
- Project Cost – Additional 40-percent (1.4 times) the Estimated Construction Cost:
    - Assumes sewer main in public right-of-way
    - 20-percent for contingencies
    - 10-percent for engineering fees
    - 10-percent for other costs
    - An additional 10% has been included for projects where Final Plans and Specifications have not yet been developed
- Engineering News-Record Construction Cost Index
    - September 2021
    - Los Angeles ENR Index 13,212.48

Table 1 summarizes the CIP proposed improvements with their associated cost estimates based on RCSD's May 2022 Wastewater Master Plan.

Table 1 – CIP Summary Table of Proposed Wastewater Improvements[1]

Wastewater Capital Improvement Project	Project Criteria		Unit Cost per Linear Foot	Project Cost Wastewater Master Plan
	Size (in)	Length (ft)		
(S-1) Avalon Street and 60 Freeway New Sewerline (Near-Term)[2]	12	730	$493	$360,000
(S-2) Pacific Ave & Mission Blvd Sewerline Upsizing (Near-Term)	15	5,090	$525	$2,670,000
(S-3) Avalon Street Sewerline New and Upsizing, Raye to Mission (Near-Term)	12	1,423	$492	$700,000
(S-4) Rustic Lane , Pacific Avenue, and 42nd Street Sewerline Upsizing (Long-Term)	12	7,090	$488	$3,460,000
(S-5) Limonite Avenue and Plaza Lane Sewerline Upsizing (Long-Term)	12	370	$486	$180,000
(S-6) Rubidoux Boulevard and RCFC&WCD Sewerline Upsizing (Long-Term)	30	3,110	$871	$2,710,000
(S-7) Agua Mansa Road (Long-Term)	12	2,990	$488	$1,460,000
Total CIP Project Cost				**[(3)]$11,540,000**

[1] Table 6-3 CIP Summary Table of Proposed Improvements, RCSD May 2022 WWMP.

[2] Cost based on lining existing 18-inch RCP crossing the 60 freeway with HDPE pipe.

[3] The RO Facility Treatment project and Inland Empire Brine Line Capacity are allocated to wastewater and are included in subsequent tables but were not identified as wastewater facilities in the 2022 WWMP.

COST ESCALATION

As previously stated, understanding cost escalation is important to the planning and development of RCSD's CIPs. The planning level cost estimates do not include a detailed breakdown of costs associated with sewer main construction. Smaller projects tend to be more expensive on a linear foot basis as the project overhead is applied to less pipeline length. To gain more insight into the potential costs on a project-by-project basis, a more detailed engineering cost estimate was prepared based on a typical construction project bid sheet envisioned for each project to better under the costs associated with each project. Additionally, the project costs from the July 2022 WWMP were indexed to September 2021 ENR LA CCI of 13,212.48 and then escalated utilizing the current September 2024 ENR LA CCI of 15,374.24. Contingencies have been added to the estimates due to volatility in labor and material costs and potential changes in project scope as no specific project plans have been prepared. The following Table 2 summarizes the CIP project costs (see Attachment A for detailed breakdowns).

Table 2 – Proposed Wastewater Improvements Cost Escalation

Wastewater Capital Improvement Project	Size (in) / Length (ft)	May 2022 Wastewater Master Plan			Preliminary Engineer's Estimate Method (Sept 2024 ENR LA CCI 15,374.24)		
		Project Cost (Sept 2021 ENR LA CCI 13,212.48)	Project Cost (Sept 2024 ENR LA CCI 15,374.24)	Unit Cost per Linear Foot	Construction Cost	Project Cost	Unit Cost per Linear Foot
(S-1) Avalon St and 60 Freeway New Sewerline (Near-Term)[1]	12 / 730	$360,000	$418,901	$574	n/a	n/a	n/a
(S-1.1) Avalon St and Alta New Sewerline (Near-Term)	12 / 260	n/a	n/a	n/a	$163,900	$230,000	$885
(S-1.2) Avalon St and 60 Freeway New Sewerline (Near-Term)	12 / 652	n/a	n/a	n/a	$296,630	$420,000	$644
(S-2) Pacific Ave and Mission Blvd Sewerline Upsizing (Near-Term)	15 / 5,090	$2,670,000	$3,106,852	$610	$3,115,080	$4,360,000	$857
(S-3) Avalon St, Sewerline New and Upsizing, Raye to Mission Blvd (Near-Term)[2]	12 / 1,423	$700,000	$814,531	$572	n/a	n/a	n/a
(S-3.1) Avalon St, Raye to 36th Street New Sewerline (Near-Term)	12 / 985	n/a	n/a	n/a	$454,015	$640,000	$650
(S-3.2) Avalon St Sewerline Upsizing, 36th to Mission Blvd (Near-Term)	12 / 823	n/a	n/a	n/a	$447,758	$630,000	$765
(S-4) Rustic Ln, Pacific Ave, and 42nd St Sewerline Upsizing (Long-Term)[3]	12 / 4,916	$2,399,063	$2,791,586	$568	$2,950,840	$4,130,000	$840
(S-5) Limonite Ave and Plaza Lane Sewerline Upsizing (Long-Term)	12 / 370	$180,000	$209,451	$566	$242,850	$340,000	$919
(S-6) Rubidoux Blvd and RCFC&WCD Sewerline Upsizing (Long-Term)	30 / 3,110	$2,710,000	$3,153,397	$1,014	$2,696,730	$3,780,000	$1,215
(S-7) Agua Mansa Road Sewerline Upsizing (Long-Term)	12 / 2,990	$1,460,000	$1,698,878	$568	$1,714,450	$2,400,000	$828
RO Facility Treatment[4]	3,600gpm	$16,474,000	$18,984,260	n/a	$15,546,800	$26,265,520	n/a
Facilities/Operations Building[6]	n/a	n/a	n/a	n/a	$1,849,528	$1,849,528	n/a

Inland Empire Brine Line Capacity	1.0MGD	n/a	n/a	n/a	$12,027,000	$12,027,000	n/a
Total CIP Project Cost		**$26,953,063**	**$31,177,856**		**$43,400,037**	**[5] $57,072,048**	

[1]This project from the original master plan has been extended based on actual design plans and then split into two projects (S-1.1 and S-1.2) to facilitate phased developer reimbursements.
[2]This project from the original master plan has been split into two projects (S-3.1 and S-3.2) to facilitate phased developer reimbursements. In addition, additional length was added based on investigations during detailed design for missing pipe segments.
[3]Length of project adjusted down from master plan based on section already constructed.
[4]RO Treatment Facility costs based on AQUA cost estimate dated 03/04/26 (See Attachment A).
[5]Project Costs have been updated based on existing Developer Reimbursement Agreements (see “Updated Project Costs Based on Developer Reimbursement Agreements” on following page.
[6]Operations Building costs have been allocated evenly between the water and sewer capacity charges (see Water and Sewer Master Plan CIP Cost Evaluation Summary).

SUMMARY

Cost escalation is significant and can be attributed to outside factors such as overall inflationary pressures, as well as labor and material impacts. Utilizing the Engineering News-Record Construction Cost Index from September 2021 to September 2024 accounts for a 16-percent increase in costs.

- September 2021 Los Angeles ENR Index: 13,212.48
- September 2024 Los Angeles ENR Index: 15,374.24

Evaluating each project based on the development of an engineer's estimate for each project provides for a more detailed breakdown of assumptions and project components. The following summarizes typical project components.

- Pipeline and Bedding
- Manholes
- Laterals
- Sewer Bypass
- Potholing and Shoring
- Trench Excavation, Backfill, and Compaction
- Paving and Capping
- Traffic Control and Construction Staking
- Permits

The unit cost for each item was based on the average cost of recent bids for actual projects. The quantities developed were based on reviewing aerial views, sewer atlas map information, and RCSD's standards for manhole spacing and sizing.

UPDATED PROJECT COSTS BASED ON DEVELOPER REIMBURSEMENT AGREEMENTS

The following project costs have been updated based upon existing Developer Reimbursement Agreements:

Project	**Amount**	**Agreement(s)**
(S-1.1) Avalon St & Alta St	$128,219	Tract. No 37640 (Century Communities)
(S-1.2) Avalon St & 60 Fwy	$223,973	Tract. No 37640 (Century Communities)
(S-3.1) Avalon St, Raye to 36th	$449,548	Tract. No 37640 (Century Communities)
(S-3.2) Avalon St, 36th to Mission	$375,994	Tract. No 37640 (Century Communities)

As a result, the total project cost for the Wastewater component is **$56,329,782.**

Attachment A - Detailed Engineer's Estimate Cost Breakdown

Project Title: Avalon Street and Alta Street (Seg 1.1)

Project Type	Existing Facility	Improvement Phase
Gravity Pipeline	N/A	Near-Term

2024 Cost Estimate $230,000

Project Location: Avalon Street From 60 Fwy to Alta Street

Purpose: Provide additional service connection to properties on Avalon Street north of the 60 Fwy

Proposed Facility: Approximately 260 LF of 12-inch diameter VCP or PVC pipe

Required When: For first connection of upstream development

Project Description:

This project will install a new pipeline on Avalon Street with capacity to convey flows from future developments north of Avalon Street to Segment 2.

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. S-1 Seg 1 Avalon Street and Alta Street New Sewerline

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/24

Plan Title: N/A Estimate Checked By: Brad Sackett

Purpose of Estimate: Capital Improvement Date Checked: 10/4/2024

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - AVALON STREET AND ALTA STREET NEW SEWERLINE				
101	Mob / Demob / Insurance	1	LS	$21,000	$21,000
102	Pothole existing utilities	10	LS	$150	$1,500
103	Trench sheeting, shoring, and bracing	1	LS	$10,000	$10,000
104	12-inch VCP or PVC sewerline & pipe bedding	260	LF	$260	$67,600
105	Line exist. 18" RCP with HDPE and connections	0	LF	$200	$0
106	48-inch manhole	4	EA	$12,000	$48,000
107	4-inch wye for future lateral connection	0	EA	$1,000	$0
108	Connection to existing sewer at Raye Street	0	EA	$2,500	$0
109	Flow through sewer bypass and emergency response	0	LS	$4,000	$0
110	Pavement removal and replacement, trench repair, backfill and compaction for mainline	0	LF	$30	$0
111	Pavement grind and overlay	0	SF	$3	$0
112	Sewerline and lateral video inspection	260	LF	$5	$1,300
113	Air test of sewerline and laterals and vacuum test of manholes	1	LS	$4,500	$4,500
114	Pre-construction survey and construction staking	1	LS	$5,000	$5,000
115	City of Jurupa Valley Permits, BMPs	1	LS	$5,000	$5,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 115)				**$163,900**
				TOTAL PROJECT COST[3]	**$230,000**

[1]Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2]The above prices include any amount payable by the Owner for taxes.

[3] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Avalon Street and 60 Freeway (Seg 1.2)

Project Type	Existing Facility	Improvement Phase
Gravity Pipeline	N/A	Near-Term

2024 Cost Estimate $420,000

Project Location: On Avalon Street at the intersection with the 60 Freeway

Purpose: Provide another 60 Fwy crossing to serve proposed development north of the 60 Fwy

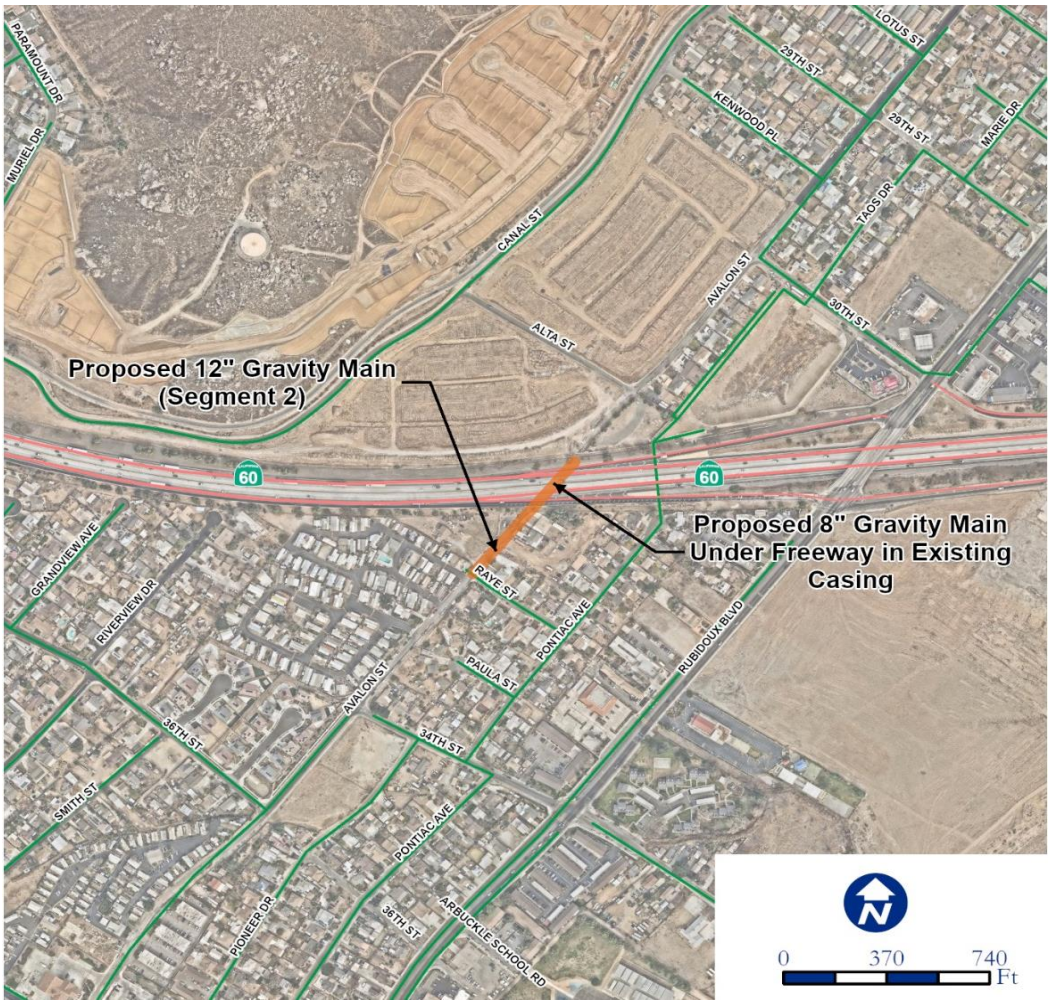
Proposed Facility: Approximately 407 LF of 12-inch diameter and 245 LF of 8-inch diameter HDPE through existing RCP

Required When: For first connection of upstream development

Project Description:

This project will install a new pipeline on Avalon Street with capacity to convey flows from future developments north of the 60 Freeway.

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. S-1 Seg 2 Avalon Street and 60 Freeway New Sewerline

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/24

Plan Title: N/A Estimate Checked By: Brad Sackett

Purpose of Estimate: Capital Improvement Date Checked: 10/4/2024

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - AVALON STREET AND 60 FREEWAY NEW SEWERLINE				
101	Mob / Demob / Insurance	1	LS	$29,000	$29,000
102	Pothole existing utilities	10	LS	$150	$1,500
103	Trench sheeting, shoring, and bracing	1	LS	$12,000	$12,000
104	12-inch VCP or PVC sewerline & pipe bedding	407	LF	$260	$105,820
105	Line exist. 18" RCP with 8-in HDPE and connections	245	LF	$260	$63,700
106	48-inch manhole	2	EA	$12,000	$24,000
107	4-inch wye for future lateral connection	0	EA	$1,000	$0
108	Connection to existing sewer at Raye Street	1	EA	$3,500	$3,500
109	Flow through sewer bypass and emergency response	1	LS	$5,000	$5,000
110	Pavement removal and replacement, trench repair, backfill and compaction for mainline	407	LF	$30	$12,210
111	Pavement grind and overlay	3,750	SF	$3	$11,250
112	Sewerline and lateral video inspection	730	LF	$5	$3,650
113	Air test of sewerline and laterals and vacuum test of manholes	1	LS	$6,000	$6,000
114	Pre-construction survey and construction staking	1	LS	$8,000	$8,000
115	Caltrans and City of Jurupa Valley Permits, BMPs	1	LS	$11,000	$11,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 116)				**$296,630**
				TOTAL PROJECT COST[3]	**$420,000**

[1]Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2]The above prices include any amount payable by the Owner for taxes.

[3] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Pacific Avenue and Mission Boulevard

Project Type	Existing Facility	Improvement Phase
Gravity Pipeline	8" Diameter Pipe	Near-Term

2024 Cost Estimate $4,360,000

Project Location: North and east of Pacific Avenue and Mission Boulevard intersection

Purpose: Address capacity (depth over-diameter (d/D) ratios) for existing 8-in that are expected to surpass District d/D standards in Pacific Avenue and Mission Blvd

Proposed Facility: Approximately 5,090 LF of 15-inch diameter VCP or PVC pipe

Required When: After 100 connections of Rio Vista Project

Project Hydraulics:

Limiting Segment	Existing Model Flow (gpd)	Available Capacity (gpd)	
		for d/D limit	for full-flow conditions
GMH51002 (Mission Blvd) - 8 inch dia.	161,000	229,000	1,330,700
GMG51041 (Mission Blvd) - 8 inch dia.	158,000	235,000	1,324,700

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. S-2 Pacific Ave & Mission Blvd Sewerline R&R

W.O.: 2023-3361.00 | Estimate Prepared By: Sinnaro Yos

Client: RCSD | Date Prepared: 10/04/24

Plan Title: N/A | Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement | Date Checked: 4/8/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - PACIFIC AVE & MISSION BLVD SEWERLINE R&R				
101	Mob / Demob / Insurance	1	LS	$140,000	$140,000
102	Pothole existing utilities	200	LS	$150	$30,000
103	Abandon existing sewerline	5,090	LF	$7	$35,630
104	Trench sheeting, shoring, and bracing	1	LS	$61,000	$61,000
105	Abandon existing manhole	15	EA	$1,800	$27,000
106	15-inch VCP or PVC sewerline & pipe bedding	5,090	LF	$333.00	$1,694,970
107	48-inch manhole	20	EA	$12,000	$240,000
108	4-inch lateral and connection to existing lateral	10	EA	$3,000	$30,000
109	6-inch lateral and connection to existing lateral	11	EA	$3,500	$38,500
110	Connection to existing sewer at major cross streets	10	EA	$4,800	$48,000
111	Sewer bypass and emergency response	1	LS	$50,000	$50,000
112	Pavement removal and replacement, trench repair, backfill and compaction for mainline	5,090	LF	$30	$152,700
113	Pavement removal and replacement, trench repair, backfill and compaction for laterals	1,000	LF	$20	$20,000
114	Pavement grind and overlay	66,300	SF	$3	$198,900
115	Sewerline and lateral video inspection	5,090	LF	$2	$10,180
116	Air test of sewerline and laterals and vacuum test of manholes	1	LS	$15,000	$15,000
117	Pre-construction survey and construction staking	1	LS	$30,000	$30,000
118	City of Jurupa Valley Permits, BMPs	1	LS	$10,000	$10,000
119	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$283,200	$283,200
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 119)				**$3,115,080**
	TOTAL PROJECT COST[4]				**$4,360,000**

[1] Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Avalon Street, Raye to 36th (Seg 3.1)

Project Type	Existing Facility	Improvement Phase
Gravity Pipeline	N/A	Near-Term

2024 Cost Estimate $640,000

Project Location: Avalon Street from Raye Avenue to just short of 36th Street

Purpose: Add missing segment from Raye to 36th

Proposed Facility: Approximately 985 LF of 12-inch diameter VCP or PVC pipe

Project Hydraulics:

Limiting Segment	Existing Model Flow (gpd)	Available Capacity (gpd)	
		for d/D limit	for full-flow conditions
GMH51022 (Avalon St) - 8 inch dia.	200,000	318,024	634,680

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. S-3.1 Avalon Street, Raye to 36th Street

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/24

Plan Title: N/A Estimate Checked By: Brad Sackett

Purpose of Estimate: Capital Improvement Date Checked: 10/4/2024

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - AVALON STREET, RAYE TO 36th Street				
101	Mob / Demob / Insurance	1	LS	$32,000	$32,000
102	Pothole existing utilities	20	LS	$150	$3,000
103	Abandon existing sewerline	0	LF	$7	$0
104	Trench sheeting, shoring, and bracing	1	LS	$13,000	$13,000
105	(N) 12-inch VCP or PVC sewerline & pipe bedding	985	LF	$260	$256,100
106	48-inch manhole	4	EA	$12,000	$48,000
107	Connection to existing sewer per review of Atlas Maps	2	EA	$4,800	$9,600
108	Pavement removal and replacement, trench repair, backfill and compaction for mainline	985	LF	$30	$29,550
109	Pavement grind and overlay	14,775	SF	$3	$44,325
110	Sewerline and lateral video inspection	985	LF	$4	$3,940
111	Air test of sewerline and laterals and vacuum test of manholes	1	LS	$4,000	$4,000
112	Pre-construction survey and construction staking	1	LS	$6,000	$6,000
113	City of Jurupa Valley Permits, BMPs	1	LS	$4,500	$4,500
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 113)				**$454,015**
				TOTAL PROJECT COST[3]	**$640,000**

[1]Quantities (except for "Lump Sum" item numbers) are estimated and are for the purpose of comparing bid only. Payment will be based upon acutal quantities furnished, installed, or constructed in accordance with the Contract Documents.

[2]The above prices include any amount payable by the Owner for taxes.

[3] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Avalon Street, 36th to Mission (Seg 3.2)

Project Type	Existing Facility	Improvement Phase
Gravity Pipeline	8" Diameter Pipe	Near-Term

2024 Cost Estimate $630,000

Project Location: Avalon Street from Raye Street to Mission Blvd

Purpose: Address capacity (depth over-diameter (d/D) ratios) for existing 8-in sewer that are expected to surpass District d/D standards in Avalon Street

Proposed Facility: Approximately 823 LF of 12-inch diameter VCP or PVC pipe

Required When: Per development agreement for upstream development projects

Project Hydraulics:

Limiting Segment	Existing Model Flow (gpd)	Available Capacity (gpd)	
		for d/D limit	for full-flow conditions
GMH51022 (Avalon St) - 8 inch dia.	200,000	318,024	634,680

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. S-3.2 Avalon Street, 36th to Mission

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/24

Plan Title: N/A Estimate Checked By: Brad Sackett

Purpose of Estimate: Capital Improvement Date Checked: 10/4/2024

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - AVALON STREET, 36th to Mission				
101	Mob / Demob / Insurance	1	LS	$31,500	$31,500
102	Pothole existing utilities	20	LS	$150	$3,000
103	Abandon existing sewerline	823	LF	$7	$5,761
104	Trench sheeting, shoring, and bracing	1	LS	$11,000	$11,000
105	Abandon existing manhole	3	EA	$1,800	$5,400
106	(S) 12-inch VCP or PVC sewerline & pipe bedding	823	LF	$260	$213,980
107	48-inch manhole	4	EA	$12,000	$48,000
108	6-inch lateral and connection to existing lateral	5	EA	$3,500	$17,500
109	Connection to existing sewer per review of Atlas Maps	2	EA	$4,800	$9,600
110	Sewer bypass and emergency response	1	LS	$20,000	$20,000
111	Pavement removal and replacement, trench repair, backfill and compaction for mainline	823	LF	$30	$24,690
112	Pavement removal and replacement, trench repair, backfill and compaction for laterals	150	LF	$20	$3,000
113	Pavement grind and overlay	12,345	SF	$3	$37,035
114	Sewerline and lateral video inspection	823	LF	$4	$3,292
115	Air test of sewerline and laterals and vacuum test of manholes	1	LS	$4,000	$4,000
116	Pre-construction survey and construction staking	1	LS	$6,000	$6,000
117	City of Jurupa Valley Permits, BMPs	1	LS	$4,000	$4,000
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 117)				**$447,758**
				TOTAL PROJECT COST[3]	**$630,000**

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[2]The above prices include any amount payable by the Owner for taxes.

[3] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Rustic Lane, Pacific Avenue, and 42nd Street

Project Type	Existing Facility	Improvement Phase
Gravity Pipeline	8"-10" Diameter Pipe	Long-Term

2024 Cost Estimate $4,130,000

Project Location: North and east of Pacific Avenue and 42nd Street intersection

Purpose: Address capacity (depth over-diameter (d/D) ratios) for existing 8-in and 10-in that are expected to surpass District d/D standards in Rustic Ln, Pacific Ave, and 42nd St

Proposed Facility: Approximately 4,900 LF of 12-inch diameter VCP or PVC pipe

Required When: For additional development and ADU's, requires periodic sewer flow monitoring to determine timing of improvement

Project Hydraulics:

Limiting Segment	Existing Model Flow (gpd)	Available Capacity (gpd)	
		for d/D limit	for full-flow conditions
GMH41026 (42nd St) - 10 inch diameter	600,000	619,000	679,000

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. S-4 Rustic Lane, Pacific Avenue, and 42nd Street (less already constructed)

W.O.: 2023-3361.00 | Estimate Prepared By: Sinnaro Yos

Client: RCSD | Date Prepared: 10/04/24

Plan Title: N/A | Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement | Date Checked: 4/8/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - RUSTIC, PACIFIC, AND 42ND				
101	Mob / Demob / Insurance	1	LS	$188,000	$188,000
102	Pothole existing utilities	208	LS	$150	$31,200
103	Abandon existing sewerline	4,916	LF	$7	$34,412
104	Trench sheeting, shoring, and bracing	1	LS	$58,700	$58,700
105	Abandon existing manhole	15	EA	$1,820	$27,300
106	12-inch VCP or PVC sewerline & pipe bedding	4,916	LF	$266	$1,307,656
107	48-inch manhole	15	EA	$12,000	$180,000
108	4-inch lateral and connection to existing lateral	71	EA	$3,000	$213,000
109	6-inch lateral and connection to existing lateral	4	EA	$3,500	$14,000
110	Connection to existing sewer at major cross streets	10	EA	$4,840	$48,400
111	Sewer bypass and emergency response	1	LS	$49,000	$49,000
112	Pavement removal and replacement, trench repair, backfill and compaction for mainline	4,916	LF	$30	$147,480
113	Pavement removal and replacement, trench repair, backfill and compaction for laterals	1,500	LF	$20	$30,000
114	Pavement grind and overlay	98,320	SF	$3	$294,960
115	Sewerline and lateral video inspection	4,916	LF	$2	$9,832
116	Air test of sewerline and laterals and vacuum test of manholes	1	LS	$14,600	$14,600
117	Pre-construction survey and construction staking	1	LS	$24,300	$24,300
118	City of Jurupa Valley Permits, BMPs	1	LS	$9,700	$9,700
119	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$268,300	$268,300
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 119)				**$2,950,840**
	TOTAL PROJECT COST[4]				**$4,130,000**

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[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Limonite Avenue and Plaza Lane

Project Type	Existing Facility	Improvement Phase
Gravity Pipeline	8" Diameter Pipe	Long-Term

2024 Cost Estimate $340,000

Project Location: South and east of Limonite Avenue and Plaza Lane intersection

Purpose: Address capacity (depth over-diameter (d/D) ratios) for existing 8-in that are expected to surpass District d/D standards Limonite Ave and Plaza Ln

Proposed Facility: Approximate 370 LF of 12-inch diameter VCP or PVC pipe

Required When: For additional development and ADU's, requires periodic sewer flow monitoring to determine timing of improvement

Project Hydraulics:

Limiting Segment	Existing Model Flow (gpd)	Available Capacity (gpd)	
		for d/D limit	for full-flow conditions
GMI41023 (Limonite Ave) - 8 inch dia.	271,000	247,000	271,000
GMI41026 (Plaza Ln) - 8 inch dia.	340,000	409,000	449,000

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. S-5 Limonite Avenue and Plaza Lane

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/24

Plan Title: N/A Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement Date Checked: 4/8/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
SCHEDULE I - LIMONITE AVENUE AND PLAZA LANE REPLACEMENT SEWERLINE					
101	Mob / Demob / Insurance	1	LS	$11,000	$11,000
102	Pothole existing utilities	5	LS	$150	$750
103	Trench sheeting, shoring, and bracing	1	LS	$6,100	$6,100
104	12-inch VCP or PVC sewerline & pipe bedding	370	LF	$266	$98,420
105	48-inch manhole	2	EA	$12,000	$24,000
106	6-inch lateral and connection to existing lateral	6	EA	$3,500	$21,000
107	Connection to existing sewer at Plaza St & Limonite	2	EA	$4,840	$9,680
108	Flow through sewer bypass and emergency response	1	LS	$4,000	$4,000
109	Pavement removal and replacement, trench repair, backfill and compaction for mainline and laterals	500	LF	$30	$15,000
110	Pavement grind and overlay	5,600	SF	$3	$16,800
111	Sewerline and lateral video inspection	400	LF	$5	$2,000
112	Air test of sewerline and laterals and vacuum test of manholes	1	LS	$3,000	$3,000
113	Pre-construction survey and construction staking	1	LS	$4,000	$4,000
114	City of Jurupa Valley Permits, BMPs	1	LS	$5,000	$5,000
115	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$22,100	$22,100
TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 115)					**$242,850**
TOTAL PROJECT COST[4]					**$340,000**

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[2] The above prices include any amount payable by the Owner for taxes.

[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Rubidoux Boulevard and RCFC&WCD

Project Type	Existing Facility	Improvement Phase
Gravity Pipeline	21"-27" Diameter Pipe	Long-Term

2024 Cost Estimate $3,780,000

Project Location: North of Rubidoux Boulevard and 46th Street intersection

Purpose: Address capacity (depth over-diameter (d/D) ratios) for existing 21-in and 27-in sewer that are expected to surpass District d/D standards in Rubidoux Blvd and RCFC&WCD corridor

Proposed Facility: Approximately 3,110 LF of 30-inch diameter VCP or PVC pipe

Required When: For additional development and ADU's, requires periodic sewer flow monitoring to determine timing of improvement

Project Hydraulics:

Limiting Segment	Existing Model Flow (gpd)	Available Capacity (gpd)	
		for d/D limit	for full-flow conditions
GMI51077 (Rubidoux Blvd) - 21 inch dia.	2,665,000	4,847,000	5,318,000
GMJ51019 (RCFCD&WCD) - 24 inch dia.	2,917,000	4,983,000	5,467,000

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. S-6 Rubidoux Boulevard and RCFC&WCD

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/24

Plan Title: N/A Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement Date Checked: 4/8/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - RUBIDOUX BOULEVARD AND RCFC&WCD				
101	Mob / Demob / Insurance	1	LS	$122,000	$122,000
102	Pothole existing utilities	30	LS	$150	$4,500
103	Abandon existing sewerline	3,110	LF	$12	$37,320
104	Trench sheeting, shoring, and bracing	1	LS	$60,000	$60,000
105	Abandon existing manhole	15	EA	$1,820	$27,300
106	30-inch VCP or PVC sewerline & pipe bedding	3,110	LF	$523	$1,626,530
107	60-inch manhole	15	EA	$20,000	$300,000
108	6-inch lateral and connection to existing lateral	3	EA	$3,500	$10,500
109	Connection to existing sewer at major cross streets	5	EA	$6,050	$30,250
110	Sewer bypass and emergency response	1	LS	$50,000	$50,000
111	Pavement removal and replacement, trench repair, backfill and compaction for mainline along Rubidoux Blvd between 42nd St and Channel	500	LF	$50	$25,000
112	Pavement grind and overlay for mainline along Rubidoux Blvd between 42nd and Channel	7,500	SF	$3	$22,500
113	Trench repair, backfill and compaction, restore access road for mainline along Channel	2,610	LF	$30	$78,300
114	Sewerline and lateral video inspection	3,110	LF	$3	$9,330
115	Air test of sewerline and laterals and vacuum test of manholes	1	LS	$15,000	$15,000
116	Pre-construction survey and construction staking	1	LS	$18,000	$18,000
117	RCFC&WCD and City of Jurupa Valley Permits, BMPs	1	LS	$15,000	$15,000
118	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$245,200	$245,200
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 118)				**$2,696,730**
	TOTAL PROJECT COST[4]				**$3,780,000**

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[3] An additional 10% Contingency has been added since specific project plans have not yet been developed.

[4] Project cost is 1.4 times construction cost. Project cost includes: construction costs, construction contingencies, design engineering including plans and specifications; design and construction surveying and mapping; geotechnical evaluation and report; engineering contract administration; field inspection and environmental documentation. Costs are based on Engineering News Record (ENR) Construction Cost Index Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included.

Project Title: Agua Mansa Road

Project Type	Existing Facility	Improvement Phase
Gravity Pipeline	8"-10" Diameter Pipe	Long-Term

2024 Cost Estimate $2,400,000

Project Location: North of Agua Mansa Road and Wilson Street intersection

Purpose: Address capacity (depth over-diameter (d/D) ratios) for existing 8-in and 10-in sewer that are expected to surpass District d/D standards in Agua Mansa Road

Proposed Facility: Approximately 2,990 LF of 12-inch diameter VCP or PVC pipe

Required When: For commercial development upstream of this facility, requires sewer flow monitoring at the time of any development to determine if d/D is an issue

Project Description:

This project will replace the undersized sewer mains on Agua Mansa Road to help relieve hydraulic deficiencies within the existing pipeline.

Project Hydraulics:

Limiting Segment	Existing Model Flow (gpd)	Available Capacity (gpd)	
		for d/D limit	for full-flow conditions
GMD81002 (Agua Mansa Rd) - 8 inch dia.	17,000	263,000	524,000
GMD81003 (Agua Mansa Rd) - 8 inch dia.	17,000	266,000	530,000

Project Map



ENGINEER'S CONSTRUCTION COST ESTIMATE

CIP No. S-7 Agua Mansa Road

W.O.: 2023-3361.00 Estimate Prepared By: Sinnaro Yos

Client: RCSD Date Prepared: 10/04/24

Plan Title: N/A Estimate Checked By: Jeff Hart

Purpose of Estimate: Capital Improvement Date Checked: 4/8/2026

Item No.	Description	Quantity[1]	Unit	Unit Price[2]	Bid Extensions[2]
	SCHEDULE I - AGUA MANSA ROAD				
101	Mob / Demob / Insurance	1	LS	$78,000	$78,000
102	Pothole existing utilities	120	LS	$150	$18,000
103	Abandon existing sewerline and manholes	2,990	LF	$7	$20,930
104	Trench sheeting, shoring, and bracing	1	LS	$36,300	$36,300
105	Abandon existing manhole	13	EA	$1,820	$23,660
106	12-inch VCP or PVC sewerline & pipe bedding	2,990	LF	$266	$795,340
107	48-inch manhole	13	EA	$12,000	$156,000
108	6-inch lateral and connection to existing lateral	8	EA	$3,500	$28,000
109	Connection to existing sewer at major cross streets	2	EA	$4,800	$9,600
110	Sewer bypass and emergency response	1	LS	$30,000	$30,000
111	Pavement removal and replacement, trench repair, backfill and compaction for mainline	2,990	LF	$30	$89,700
112	Pavement removal and replacement, trench repair, backfill and compaction for laterals	240	LF	$20	$4,800
113	Pavement grind and overlay	74,750	SF	$3	$224,250
114	Sewerline and lateral video inspection	2,990	LF	$3	$8,970
115	Air test of sewerline and laterals and vacuum test of manholes	1	LS	$10,000	$10,000
116	Pre-construction survey and construction staking	1	LS	$15,000	$15,000
117	City of Jurupa Valley Permits, BMPs	1	LS	$10,000	$10,000
118	10-percent Contingency (Final Plans & Specifications)[3]	1	LS	$155,900	$155,900
	TOTAL CONSTRUCTION (SUM OF EXTENSION 101 THRU 118)				**$1,714,450**
	TOTAL PROJECT COST[4]				**$2,400,000**

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Date:	3/1/2026		
By:	BP		

RCSD RO SYSTEM

Opinion of Cost - Conceptual Design

ITEM	DESCRIPTION	Quantity	Unit	Unit Cost	COST
1.0	General Conditions, Overhead / Profit, Markup	15%	percent	$ 12,289,900	$ 1,843,500
2.0	Civil Site Preparation and Yard Piping	1	ls	$ 328,000	$ 328,000
3.0	RO System Building				
3.01	Excavation	1300	cy	$ 30	$ 39,000
3.02	Backfill	150	cy	$ 30	$ 4,500
3.03	Structural Backfill	283	cy	$ 50	$ 14,200
3.04	RO Building Concrete	324	cy	$ 1,800	$ 582,400
3.05	CMU Building (90' X 80')	7,200	sf	$ 210	$ 1,512,000
3.06	RO Skids(W. Forwarding Pumps, CIP, Chemical Addition Skids)	1	ls	$ 4,750,000	$ 4,750,000
3.07	Building Crane (3-Ton Capacity)	1	ls	$ 45,000	$ 45,000
3.08	Building HVAC and Plumbing	1	ls	$ 85,000	$ 85,000
3.09	Control Room Furnishing	1	ls	$ 20,000	$ 20,000
3.10	Misc. Metals	1	ls	$ 45,000	$ 45,000
3.11	Protective Coatings incl. Chemical Storage	1	ls	$ 35,000	$ 35,000
3.12	Mechanical Installation and Piping	30%	percent	$ 4,880,000	$ 1,464,000
4.0	Chemical Storage and Feed				
4.01	Awning	825	sf	$ 75	$ 61,900
4.02	Concrete Containment	37	cy	$ 1,800	$ 66,700
4.03	Misc. grating and Emergency Shower/Eyewash	1	ls	$ 9,750	$ 9,800
4.04	Chemical Storage Tanks (Installed)	4	ea	$ 21,250	$ 85,000
5.0	Electrical/I&C				
5.01	Emergency Backup Generator	1	ls	$ 750,000	$ 750,000
5.02	Electrical Installation	25%	percent	$ 9,569,500	$ 2,392,400
6.00	10% Engineering Plans & Specifications[3]	1	ls	$ 1,413,340	$ 1,413,340
				Total Construction	**$ 15,546,800**
				Total Project Cost[4]	**$ 21,765,520**
				Total Project Cost Including Land Acquisition ($4.5M)[5]	**$ 26,265,520**

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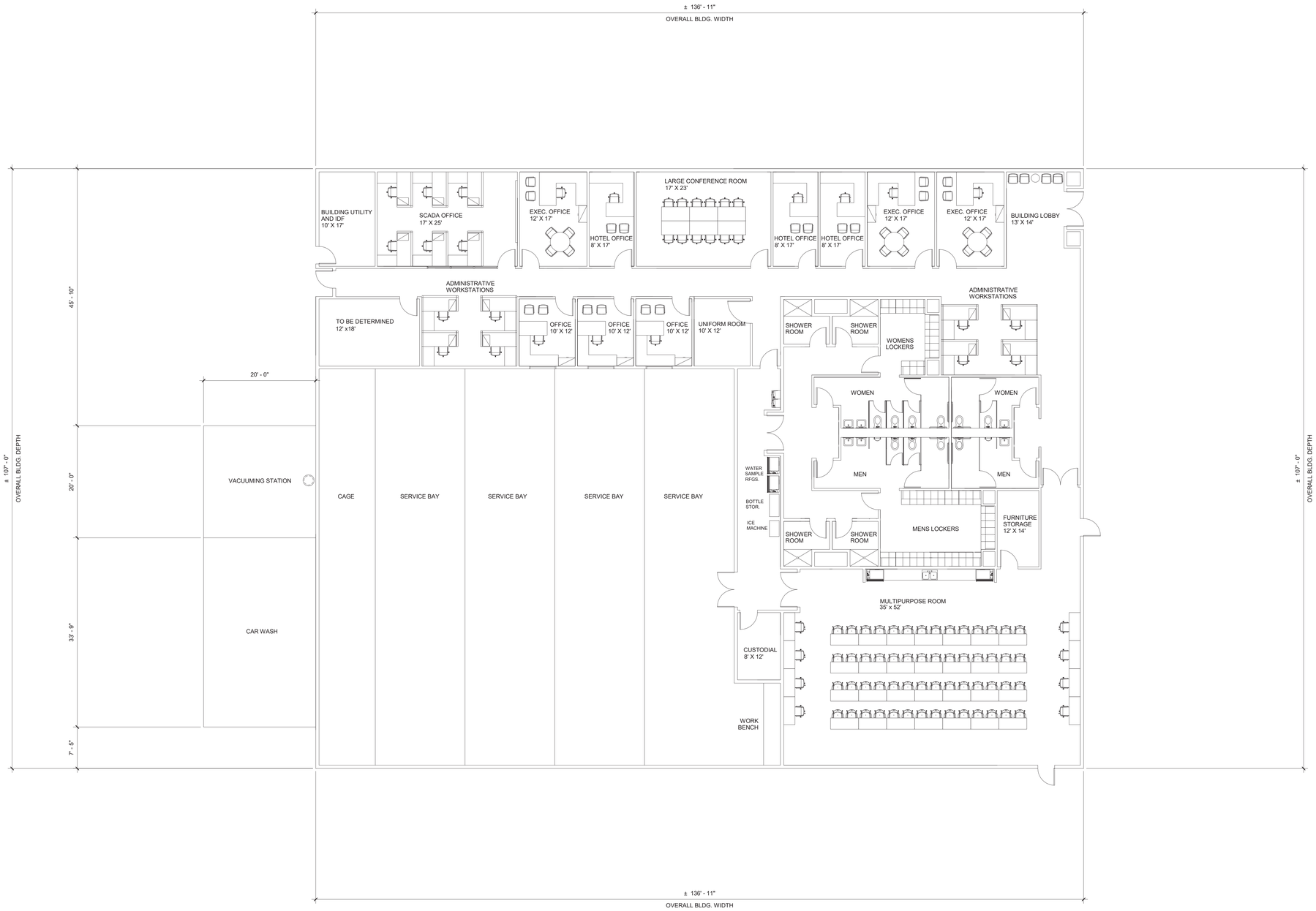
[5] Los Angeles, (ENR = 15,374.24 - September, 2024). Escalation, financing, interest during construction, legal, and R-O-W costs are not included. Water Master Plan 6.3 (Water Quality Analysis): To meet the average TDS target of less than 450 ppm for the maximum day demand condition, a RO system is required with an input of 6,950 gpm, an RO effluent flow of 5,565 gpm at a TDS of 388 ppm, which will blend with water produced directly from existing wells and a bring effluent at 1,390 gpm at 2,391 ppm. This RO system has an estimated capital cost of $21.7M, and $4 50M including land acquisition, brine pump station and brine discharge pipeline costs. Inland Empire Brine Line (IEBL) capacity purchase costs are excluded.

RCSD OPERATIONS BUILDING PLAN AND COST ESTIMATE

Rubidoux Community Services District

Administration Building Improvement & Operations Center Project





| ± 14,650 sq. ft. |

| Enlarged New Operations Center Floor Plan - Option 1 |

Jurupa Valley Community Services District
Administration Remodel & New Operations Center
Schematic Design Estimate

Sierra West Group
CONSTRUCTION CONSULTANTS

BUILDING COMPONENT COST SUMMARY

GROSS SF: 14,650
A/E: SVA DATE: 16-Mar-26

SYSTEM	OPERATIONS CENTER BUILDING		COST W/O MARK UP	$/GSF
1.0	FOUNDATION		$155,600	$10.62
2.0	VERTICAL STRUCTURE		$747,500	$51.02
3.0	FLOOR & ROOF STRUCTURE		$382,387	$26.10
4.0	EXTERIOR CLADDING		$162,160	$11.07
5.0	ROOFING		$45,135	$3.08
SHELL			**$1,492,782**	**$101.90**
6.0	INTERIOR PARTITION		$871,852	$59.51
7.0	INTERIOR FINISHES		$366,228	$25.00
INTERIORS			**$1,238,080**	**$84.51**
8.0	MISC. EQUIPMENT		$304,255	$20.77
FUNC. EQUIPMENT			**$304,255**	**$20.77**
10.0	PLUMBING		$552,200	$37.69
11.0	HVAC		$512,750	$35.00
12.0	ELECTRICAL		$1,362,450	$93.00
13.0	FIRE PROTECTION		$146,500	$10.00
MECHANICAL / ELECTRICAL			**$2,573,900**	**$175.69**
TOTAL BUILDING			**$5,609,017**	**$382.87**
SUBTOTAL CONSTRUCTION			**$5,609,017**	**$382.87**
19.0	GENERAL CONDITIONS	10.0%	$560,902	$38.29
20.0	BONDS AND INSURANCE	2.5%	$154,248	$10.53
21.0	CONTINGENCY	15.0%	$841,353	$57.43
23.0	CONTRACTOR'S FEE	4.5%	$322,448	$22.01
SUBTOTAL MARK UPS			**$1,878,951**	**$128.26**
SUBTOTAL CONSTRUCTION - TODAY'S DOLLARS			**$7,487,968**	**$511.12**
TOTAL CONSTRUCTION			**$7,487,968**	**$511.12**

Jurupa Valley Community Services District
Administration Remodel & New Operations Center
Schematic Design Estimate

Sierra West Group
CONSTRUCTION CONSULTANTS

TRADE SYSTEM SUMMARY

GROSS SF: 14,650

ARCHITECT: **SVA**

DATE: 16-Mar-26

TRADE	SYSTEM	OPERATIONS CENTER DESCRIPTION	TRADE COST	COST PER BLDGSF	SYSTEM QUANTITY	UNIT	COST PER SYSTEM	SYSTEM/ BLDGSF
310.0	1.0	SUBTOTAL-CONCRETE FOUNDATIONS	$155,600	$10.62	14,650	BLDGSF	$10.62	1.000
310.0	3.0	SUBTOTAL-SLAB ON GRADE	$382,387	$26.10	14,650	FLSF	$26.10	1.000
		DIVISION 3 TOTAL	**$537,987**	**$36.72**				
410.0	6.0	SUBTOTAL-INTERIOR WALLS	$643,436	$43.92	21,632	SF	$29.74	1.477
		DIVISION 4 TOTAL	**$643,436**	**$43.92**				
510.0	2.0	SUBTOTAL-STRUCTURAL STEEL	$732,500	$50.00	14,650	BLDGSF	$50.00	1.000
550.0	2.0	SUBTOTAL-MISC. METALS	$15,000	$1.02	14,650	BLDGSF	$1.02	1.000
		DIVISION 5 TOTAL	**$747,500**	**$51.02**				
760.0	5.0	SUBTOTAL-SHEET METAL FLASHING	$23,160	$1.58	15,440	RFSF	$1.50	1.054
790.0	5.0	SUBTOTAL-CAULK & SEALANTS	$21,975	$1.50	14,650	BLDGSF	$1.50	1.000
		DIVISION 7 TOTAL	**$45,135**	**$3.08**				
810.0	4.0	SUBTOTAL-DOORS/FRAMES/HDWR - EXT.	$109,960	$7.51	10	DRS	$10,996.00	0.001
810.0	6.0	SUBTOTAL-DOORS/FRAMES/HDWR - INT.	$103,650	$7.08	58	DRS	$1,787.07	0.004
830.0	4.0	SUBTOTAL-EXTERIOR GLAZING	$52,200	$3.56	360	SF	$145.00	0.025
		DIVISION 8 TOTAL	**$278,310**	**$19.00**				
910.0	6.0	SUBTOTAL-DRYWALL,ACOUSTIC - CEILING	$25,016	$1.71	944	SF	$26.50	0.064
930.0	7.0	SUBTOTAL-CERAMIC TILE	$127,380	$8.69	3,792	SF	$33.59	0.259
965.0	7.0	SUBTOTAL-FLOORING	$116,700	$7.97	7,780	FLSF	$15.00	0.531
990.0	6.0	SUBTOTAL-PAINT/ WALL COVERING	$99,750	$6.81	14,650	BLDGSF	$6.81	1.000
		DIVISION 9 TOTAL	**$478,494**	**$32.66**				
1010.0	8.0	SUBTOTAL-TOILET ACCESSORIES	$34,850	$2.38	14,650	BLDGSF	$2.38	1.000
1099.0	8.0	SUBTOTAL-MISCELLANEOUS SPECIALTIES	$260,330	$17.77	14,650	BLDGSF	$17.77	1.000
		DIVISION 10 TOTAL	**$295,180**	**$20.15**				
1160.0	8.0	SUBTOTAL-CASEWORK	$9,075	$0.62	14,650	BLDGSF	$0.62	1.000
		DIVISION 11 TOTAL	**$9,075**	**$0.62**				
1530.0	13.0	SUBTOTAL-FIRE PROTECTION	$146,500	$10.00	14,650	BLDGSF	$10.00	1.000
1544.0	10.0	SUBTOTAL-PLUMBING	$552,200	$37.69	25	FIX	$22,088.00	0.002
1546.0	11.0	SUBTOTAL-HVAC	$512,750	$35.00	14,650	BLDGSF	$35.00	1.000
		DIVISION 15 TOTAL	**$1,211,450**	**$82.69**				
1610.0	12.0	SUBTOTAL-ELECTRICAL SYSTEMS	$1,362,450	$93.00	14,650	BLDGSF	$93.00	1.000
		DIVISION 16 TOTAL	**$1,362,450**	**$93.00**				
TOTAL SUBCONTRACT COST			**$5,609,017**	**$382.87**				

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A/E: **SVA**

GROSS SF: 14,650
DATE: 16-Mar-26
BY: J. Moreno

OPERATIONS CENTER P.E.M.B.

TRADE	SYSTEM	DESCRIPTION	QUAN.	UNIT	UNIT COST	TOTAL	COST/GSF
		EXCAVATION TO FOUNDATIONS AND OFF HAUL	128	CYDS	$250.00	$32,000	$2.18
		FOOTINGS- CONTINUOUS	88	CYDS	$950.00	$83,600	$5.71
		FOOTINGS- ISOLATED	40	CYDS	$1,000.00	$40,000	$2.73
310.0	**1.0**	**SUBTOTAL-CONCRETE FOUNDATIONS**	**14,650**	**BLDGSF**		**$155,600**	**$10.62**
		SLAB ON GRADE- 6"	5,406	SF	$25.50	$137,853	$9.41
		SLAB ON GRADE- 5"	9,244	SF	$23.50	$217,234	$14.83
		CURBING	420	LF	$65.00	$27,300	$1.86
310.0	**3.0**	**SUBTOTAL-SLAB ON GRADE**	**14,650**	**FLSF**		**$382,387**	**$26.10**
		EXTERIOR WALLS					PEMB
410.0	**4.0**	**SUBTOTAL-EXTERIOR WALLS**		**SF**			
		METAL STUD FRAMING- 6" @ 16" OC	12,632	SF	$20.00	$252,640	$17.25
		METAL STUD FRAMING- 4" @ 16" OC	9,000	SF	$16.00	$144,000	$9.83
		BATT INSULATION- ACOUSTICAL	13,824	SF	$2.00	$27,648	$1.89
		GYPSUM BOARD TO WALLS- 5/8" TYPE X	33,608	SF	$6.00	$201,648	$13.76
		CHAIN LINK PARTITIONS	70	LF	$250.00	$17,500	$1.19
410.0	**6.0**	**SUBTOTAL-INTERIOR WALLS**	**21,632**	**SF**		**$643,436**	**$43.92**
		PEMB	14,650	SF	$45.00	$659,250	$45.00
		ADD- INSULATION	14,650	SF	$5.00	$73,250	$5.00
510.0	**2.0**	**SUBTOTAL-STRUCTURAL STEEL**	**14,650**	**BLDGSF**		**$732,500**	**$50.00**
		SUNSHADES	120	SF	$125.00	$15,000	$1.02
550.0	**2.0**	**SUBTOTAL-MISC. METALS**	**14,650**	**BLDGSF**		**$15,000**	**$1.02**

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OPERATIONS CENTER P.E.M.B.

TRADE	SYSTEM	DESCRIPTION	QUAN.	UNIT	UNIT COST	TOTAL	COST/GSF
		STANDING SEAM ROOFING	15,440	SF			PEMB
740.0	**5.0**	**SUBTOTAL- ROOFING**	**15,440**	**RFSF**			
		ROOF ACCESSORIES AND FLASHINGS	15,440	SF	$1.50	$23,160	$1.58
760.0	**5.0**	**SUBTOTAL-SHEET METAL FLASHING**	**15,440**	**RFSF**		**$23,160**	**$1.58**
		CAULKING AND SEALANTS	14,650	SF	$1.50	$21,975	$1.50
790.0	**5.0**	**SUBTOTAL-CAULK & SEALANTS**	**14,650**	**BLDGSF**		**$21,975**	**$1.50**
		DOORS, FRAMES & HARDWARE- HM 3070	1	EA	$4,500.00	$4,500	$0.31
		DOORS, FRAMES & HARDWARE- SF 3070	5	EA	$8,500.00	$42,500	$2.90
		OVERHEAD DOORS- 12 X 12 MOTORIZED	4	EA	$15,740.00	$62,960	$4.30
810.0	**4.0**	**SUBTOTAL-DOORS/FRAMES/HDWR - EXT.**	**10**	**DRS**		**$109,960**	**$7.51**
		DOORS, FRAMES & HARDWARE- HM 3070	34	EA	$2,850.00	$96,900	$6.61
		CHAIN LINK GATES- 3 X 6	6	EA	$750.00	$4,500	$0.31
		ADD- VISION PANELS	18	EA	$125.00	$2,250	$0.15
810.0	**6.0**	**SUBTOTAL-DOORS/FRAMES/HDWR - INT.**	**58**	**DRS**		**$103,650**	**$7.08**
		EXTERIOR GLAZING- STOREFRONT	360	SF	$145.00	$52,200	$3.56
830.0	**4.0**	**SUBTOTAL-EXTERIOR GLAZING**	**360**	**SF**		**$52,200**	**$3.56**
		INTERIOR GLAZING- STORERONT	100	SF	$125.00	$12,500	$0.85
840.0	**7.0**	**SUBTOTAL-INTERIOR GLAZING**	**100**	**SF**		**$12,500**	**$0.85**

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OPERATIONS CENTER P.E.M.B.

TRADE	SYSTEM	DESCRIPTION	QUAN.	UNIT	UNIT COST	TOTAL	COST/GSF
		GYPSUM BOARD TO CLGS & SOFFITS	944	SF	$6.50	$6,136	$0.42
		CEILING FRAMING	944	SF	$20.00	$18,880	$1.29
910.0	**6.0**	**SUBTOTAL-DRYWALL,ACOUSTIC - CEILING**	**944**	**SF**		**$25,016**	**$1.71**
		CERAMIC TILE- FLOOR	944	SF	$35.00	$33,040	$2.26
		CERAMIC TILE- BASE	356	LF	$25.00	$8,900	$0.61
		CERAMIC TILE- WALLS	2,848	SF	$30.00	$85,440	$5.83
930.0	**7.0**	**SUBTOTAL-CERAMIC TILE**	**3,792**	**SF**		**$127,380**	**$8.69**
		MIXED CEILINGS	13,706	SF	$8.00	$109,648	$7.48
950.0	**7.0**	**SUBTOTAL-ACOUSTICAL TILE**	**13,706**	**SF**		**$109,648**	**$7.48**
		MIXED FLOORING & BASE	7,780	SF	$15.00	$116,700	$7.97
965.0	**7.0**	**SUBTOTAL-FLOORING**	**7,780**	**FLSF**		**$116,700**	**$7.97**
		PAINT TO GYPSUM BOARD	32,000	SF	$2.00	$64,000	$4.37
		PAINT TO DOORS & FRAMES	35	EA	$250.00	$8,750	$0.60
		PROTECTIVE WALL COVERING	1,800	SF	$15.00	$27,000	$1.84
990.0	**6.0**	**SUBTOTAL-PAINT/ WALL COVERING**	**14,650**	**BLDGSF**		**$99,750**	**$6.81**
		TOILET PARTITIONS- ADA	4	EA	$1,850.00	$7,400	$0.51
		TOILET PARTITIONS	6	EA	$1,050.00	$6,300	$0.43
		URINAL PARTITIONS	2	EA	$225.00	$450	$0.03
		GRAB BARS	8	PRS	$350.00	$2,800	$0.19
		TOILET PAPER DISPENSERS	10	EA	$275.00	$2,750	$0.19
		SEAT COVER DISPENSERS	10	EA	$275.00	$2,750	$0.19
		SANITARY NAPKIN DISPOSALS	6	EA	$150.00	$900	$0.06
		NAPKIN VENDORS	2	EA	$650.00	$1,300	$0.09
		SOAP DISPENSERS	6	EA	$175.00	$1,050	$0.07
		MIRRORS	6	EA	$300.00	$1,800	$0.12
		PAPER TOWEL DISPENSERS/ WASTE RECEPTACLES	4	EA	$650.00	$2,600	$0.18
		SHOWER SEATS	4	EA	$950.00	$3,800	$0.26
		SHOWER CURTAINS & RODS	4	EA	$150.00	$600	$0.04
		MOP RACKS	1	EA	$350.00	$350	$0.02
1010.0	**8.0**	**SUBTOTAL-TOILET ACCESSORIES**	**14,650**	**BLDGSF**		**$34,850**	**$2.38**

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TRADE	SYSTEM	DESCRIPTION	QUAN.	UNIT	UNIT COST	TOTAL	COST/GSF
		WINDOW COVERINGS	460	SF	$18.00	$8,280	$0.57
		FIRE EXTINGUISHERS & CABINETS	6	EA	$650.00	$3,900	$0.27
		DOOR SIGNAGE	70	EA	$200.00	$14,000	$0.96
		LOCKERS	46	EA	$650.00	$29,900	$2.04
		ICE MACHINES	1	EA	$7,500.00	$7,500	$0.51
		WORK BENCH- 3' D	15	LF	$450.00	$6,750	$0.46
		COMMERCIAL VACUUM SYSTEM	1	LOT	$15,000.00	$15,000	$1.02
		VEHICLE EXHAUST EXTRACTION SYSTEM	1	LOT	$125,000.00	$125,000	$8.53
		AIR COMPRESSOR & LINES	1	LOT	$25,000.00	$25,000	$1.71
		2-POST LIFT	1	LOT	$25,000.00	$25,000	$1.71
1099.0	**8.0**	**SUBTOTAL-MISCELLANEOUS SPECIALTIES**	**14,650**	**BLDGSF**		**$260,330**	**$17.77**
		BASE CABINETS W/ COUNTERTOPS	17	LF	$550.00	$9,075	$0.62
1160.0	**8.0**	**SUBTOTAL-CASEWORK**	**14,650**	**BLDGSF**		**$9,075**	**$0.62**
		FIRE PROTECTION	14,650	SF	$10.00	$146,500	$10.00
1530.0	**13.0**	**SUBTOTAL-FIRE PROTECTION**	**14,650**	**BLDGSF**		**$146,500**	**$10.00**
		PLUMBING FIXTURES	25	FIX	$15,000.00	$375,000	$25.60
1544.0	**10.0**	**SUBTOTAL-PLUMBING**	**25**	**FIX**		**$552,200**	**$37.69**
		HVAC	14,650	SF	$35.00	$512,750	$35.00
1546.0	**11.0**	**SUBTOTAL-HVAC**	**14,650**	**BLDGSF**		**$512,750**	**$35.00**
		LIGHTING	14,650	SF	$20.00	$293,000	$20.00
		POWER	14,650	SF	$35.00	$512,750	$35.00
		DATA/ SIGNAL/ AV	14,650	SF	$8.00	$117,200	$8.00
		AUDIO AND VISUAL	14,650	SF	$5.00	$73,250	$5.00
		SECURITY	14,650	SF	$15.00	$219,750	$15.00
		FIRE ALARM	14,650	SF	$10.00	$146,500	$10.00
1610.0	**12.0**	**SUBTOTAL-ELECTRICAL SYSTEMS**	**14,650**	**BLDGSF**		**$1,362,450**	**$93.00**

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TRADE	SYSTEM	DESCRIPTION	QUAN.	UNIT	UNIT COST	TOTAL	COST/GSF
		BLDG SUBTOTAL				$5,609,017	$382.87
		GENERAL CONDITIONS		10.0%		$560,902	$38.29
		BONDS AND INSURANCE		2.5%		$154,248	$10.53
		CONTINGENCY		15.0%		$841,353	$57.43
		CONTRACTOR'S FEE		4.5%		$322,448	$22.01
		SUBTOTAL OF MARK UP				$1,878,951	$128.26
		TOTAL IN TODAY'S COST				**$7,487,968**	**$511.12**