



MEMORANDUM

TO: Silicon Valley Clean Water (SVCW) Commission

FROM: Arvind Akela, Engineering Director

DATE: April 6, 2026

SUBJECT: Breakdown of Project Costs – Laboratory Building Roof Replacement Project
(Project #0388)

This memorandum provides the information requested by the Commission regarding the Laboratory Building Roof Replacement Project's reported soft costs. As discussed at the March 12, 2026 Commission meeting (Agenda Item 8B) and in the accompanying project cost presentation, the project's soft costs are higher than typically observed on larger capital projects mostly due to management costs associated with the following factors:

- 1) The project was not initially planned for implementation last year, but leaks necessitated implementation last summer to avoid another rainy season;
- 2) Due to the unplanned nature, SVCW engineering staff were not available to manage the project, and consultants were assigned to perform tasks typically assigned to staff;
- 3) Unforeseen conditions and resulting design modifications during construction extended the duration of construction and associated project oversight; and
- 4) There was a large amount of planning and sequencing necessary to scope and execute the project while maintaining an active analytical laboratory under the work area.

However, despite the above difficulties and added expense, the overall design, construction management, and inspection soft costs are in alignment with projects of this size and duration, as discussed further below.

Project Background

The laboratory building roof was constructed in 1993 and had reached the end of its useful life. Although the roof was repaired and recoated in 2013, leaks increased in frequency over several years and, during the late 2024 wet weather season, water intrusion damaged

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interior drywall and created risk of damage to sensitive analytical equipment. SVCW initially pursued spot repairs and additional flashing work while also initiating the design of a roof replacement. The project was temporarily paused when repairs appeared to reduce leaks; however, leaks resumed after a small rain event in April 2025. To reduce risk to laboratory operations and prevent recurring water intrusion during the 2025/2026 wet weather season, the Manager directed staff to proceed with a full roof replacement. This project was not budgeted and SVCW engineering resources were not available due to being assigned to seven other active construction projects. So, Tanner Pacific and DNS Strategic Partners were relied upon to serve as staff augmentation to manage the project implementation.

Updated Project Costs

The project is funded through Fund 14 (pay-go capital). As reported to the Commission under Agenda Item 8B, March 12, 2026, total expenditures as of January 2026 were \$535,102. Project costs have been updated since the meeting and are shown in Table 1 with a cost breakdown as follows:

- Design and Constructability Review – 9.7% of total project costs
- Construction Management and Inspection – 16.4% of total project costs
- Management Costs – 23.1% of total project costs
- Total Soft Costs – 49.2% of total project costs
- Construction – 50.8% of total project costs

Based on RS Means and Engineering News Record (ENR), which are well-known industry publications, soft costs for small construction projects are typically higher than large-project averages and commonly fall in the range of approximately 25–40% of total. These greater percentages of the total project cost reflect project setup costs, professional fees, permitting costs, owner expenses, and other costs that do not scale linearly with construction value. Based on RS Means- and ENR-style capital planning, soft costs percentages used by estimators for small projects typically fall in the following ranges:

- Very small projects (< \$1M): 35%–40% soft costs
- Small projects (\$1M–\$3M): 30%–35% soft costs
- Upper-end “small” (\$3M–\$5M): 25%–30% soft costs

With a total project cost of \$555,612, the laboratory roof project is considered a very small project and the 49% soft costs are somewhat elevated compared to the typical range. However, staff note that 7% of the project’s soft costs were associated with responding to

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reports of lab roof leaks and coordinating the temporary relocation of HVAC, which are not generally considered or included in industry ranges for soft costs.

Staff also note that the percentages presented during the March 12, 2026 Commission meeting were as a percentage of construction cost rather than total project costs. Soft costs are typically expressed as a percentage of the total project costs. Staff's presentation may have inadvertently resulted in additional confusion when comparing these values on this project to industry standards.

Overall Capital Program Soft Cost Analysis

SVCW manages capital delivery at the program level. Table 2 summarizes nine recent projects and their cost categorization. Across these nine projects, the combined soft costs are 32% of total cost. Based on a review of RS Means and ENR, infrastructure-adjacent vertical construction soft costs are typically between 25%–35% because they include additional items not present in basic vertical construction such as additional utility coordination, environmental compliance, process adjustments, and public agency oversight. Programmatically, SVCW's soft costs are aligned with industry averages.

Summary of Findings

While the laboratory roof project soft costs are slightly greater than industry standards, staff do not feel they are unreasonable given the increased costs associated with outsourcing tasks typically performed by staff, the very small size of the project, and the effort incurred responding to multiple reports of leaking roof and the difficulty sequencing and performing construction over an active laboratory. Additionally, the overall capital program soft costs are within the range of industry standards for similar types of construction.

Attachments:

Table 1 - Summary of Costs for Lab Roof Replacement Project

Table 2 - Summary of Costs for Active Projects

TABLE 1
SUMMARY OF COSTS FOR LAB ROOF REPLACEMENT PROJECT
 Silicon Valley Clean Water

Cost Breakdown	Role	Cost	Percent of Total Expenditure	Percent of Construction	Comments
Freyer & Laureta	Design	\$ 44,045	7.93%	15.6%	
Tanner Pacific, Inc.	Pre-Design Constructability Review	\$ 10,100	1.82%	3.58%	Develop scope/analyze alternatives DNS (EJ) and Freyer and Laureta Review design drawings/technical specifications from F&L
SUBTOTAL - DESIGN COSTS		\$ 54,145	9.7%	19.2%	
Clean Roofing base contract	Contractor	\$ 240,802	43.3%	85.3%	
RMC	Mold remediation	\$ 24,744	4.5%	8.8%	
Clean Roofing change orders	Change orders	\$ 16,705	3.0%	5.9%	
SUBTOTAL - CONSTRUCTION COSTS		\$ 282,251	50.8%	100.0%	
Tanner Pacific, Inc.	Construction management/inspection	\$ 90,900	16.4%	32.2%	Manage and inspect project from NTP to closeout (7 months)
SUBTOTAL - CONSTRUCTION SOFT COSTS		\$ 90,900	16.4%	32.2%	
SVCW Staff	Payroll Costs	\$ 19,176	3.5%	6.8%	
DNS Strategic Partners, LLC	Staff Augmentation	\$ 35,090	6.3%	12.4%	Provide project management services (EJ Shalaby) on behalf of SVCW including managing pre-design and design.
Tanner Pacific, Inc.	Staff Augmentation	\$ 28,900	5.2%	10.2%	Develop front-end specs; scope, procure, and oversee lab interior water damage remediation effort; manage bid/award phase
	Additional Support Services During Construction	\$ 38,100	6.9%	13.5%	Investigate/respond to 25 reports of roof leaks Coordinate HVAC/conduit relocations (eliminate unexpected conflicts due to design issue and keep work moving forward)
	Program management	\$ 7,050	1.3%	2.5%	Proportional allocation of TPI's time spent administering overall SVCW construction program.
SUBTOTAL - MANAGEMENT COSTS		\$ 128,316	23.1%	45.5%	
SUBTOTAL - NON-CONSTRUCTION COSTS		\$ 273,361	49.2%	96.9%	
TOTAL EXPENDITURE		\$ 555,612			

TABLE 2
SUMMARY OF COSTS FOR ACTIVE PROJECTS
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Project	Total Cost	Construction Cost	Construction Soft Costs		Design, PM, Support Services		Total Non-Construction Costs	
			Cost	Percent	Cost	Percent	Cost	Percent
388-LABROOFREPAIRPROJECTCOSTS*	\$ 555,612	\$ 282,251	\$ 90,900	16.4%	\$ 54,145	9.7%	\$ 182,461	33%
9247-SHBBATTERYREPLACEMENTPROJECT*	\$ 986,922	\$ 550,142	\$ 252,567	26%	\$ 184,213	19%	\$ 436,780	44%
329-DieselAbovegroundStorageTank	\$ 1,167,846	\$ 688,050	\$ 394,699	34%	\$ 85,097	7%	\$ 479,796	41%
342-ChillerReplacement	\$ 764,729	\$ 596,035	\$ 148,661	19%	\$ 20,033	3%	\$ 168,694	22%
9251-LabBuildingHVAC	\$ 3,316,395	\$ 2,346,557	\$ 743,035	22%	\$ 226,803	7%	\$ 969,838	29%
9215-Digester1Rehab	\$ 3,997,852	\$ 2,803,788	\$ 724,378	18%	\$ 469,686	12%	\$ 1,194,064	30%
9242-FIXEDFILMREACTOR&3W*	\$ 40,104,857	\$ 35,342,213	\$ 1,781,339	4%	\$ 2,981,305	7%	\$ 4,762,644	12%
9269-BIOGASUTILIZATION*	\$ 9,353,591	\$ 7,151,680	\$ 962,211	10%	\$ 1,239,700	13%	\$ 2,201,911	24%
9120-RASWASSUCTIONPIPEREHAB	\$ 9,219,251	\$ 6,885,448	\$ 840,949	9%	\$ 1,492,854	16%	\$ 2,333,803	25%
TOTALS	\$ 69,467,055	\$ 56,646,164	\$ 5,938,739	10%	\$ 6,753,836	12%	\$ 12,729,991	22%