DATE: June 24, 2025

TO: Mayor and City Council

FROM: Director of Public Works

SUBJECT: Adopt a Resolution Authorizing the City Manager to Execute Amendment No. 1 to the Agreement with Redwood Painting Co., Inc., Increasing the Agreement Amount by $215,239 for the Final Project Cost of the Water Resource Recovery Facility (WRRF) North Vacuator Rehabilitation Project, Project No. 07818, and Appropriating Funds in the Amount of $230,239 from Sewer System Replacement Fund (Fund 611)

RECOMMENDATION

That City Council adopts the attached resolution (Attachment II) authorizing the City Manager to execute Amendment No. 1 to the Agreement with Redwood Painting Co., Inc., (Redwood) for the Water Resource Recovery Facility (WRRF) North Vacuator Rehabilitation Project in an amount not-to-exceed $215,239, and authorizing the City Manager to transfer and appropriate additional funds in the amount of $15,000 from the Sewer System Replacement Fund (Fund 611) for the final project cost, for a total appropriation of $230,239.

SUMMARY

Additional funding is needed to complete the North Vacuator Rehabilitation Project. This effort will restore a key component of the treatment facility, improving overall plant performance and reliability. It will also reduce maintenance demands on existing sludge pumping systems until the new Grit Facility, part of the Phase II Project, becomes operational.

The North Vacuator structure has been out of service since January 2024 and needs repair. When in use, the Vacuator removes grit and floating debris (grease/scum) from raw wastewater prior to primary treatment. The approximately 50-foot-diameter, 20-foot-tall concrete structure was built in 1958 and includes mechanical components and a self-supported concrete dome roof. To return the structure to service, the rehabilitation project included the following project elements:

- removal of existing coatings on interior metal and concrete surfaces
- coating of interior metal components

- coating of interior concrete surfaces
- interior concrete surface repairs
- interior steel component repairs
- grinding of edges of sludge and scum collector equipment

Construction of the North Vacuator Rehabilitation Project at the WRRF started in February 2025 with a target completion date of August 2025. During construction, the removal of existing coatings from the concrete dome revealed that the entire concrete surface required repairs in accordance with the project specifications. The extent of repairs was unforeseen, as the bid documents only anticipated repairs to approximately 30 percent of the surface.

Repairing the entire concrete surface per project specifications would nearly triple the total project cost. Given that the project's goal is to restore the structure to service for an interim period of 8 to 10 years until the Phase II upgrades are implemented; this approach was deemed cost prohibitive.

As a result, staff consulted with Redwood, the coating manufacturer (Global Eco Technologies), Coating Specialists and Inspection Services, Inc. (CSI), and a structural engineer (Carollo) to explore alternative solutions. An alternative coating system (Enduraflex EF-1988 Expanded) was identified that can be applied directly to the exposed concrete without extensive surface repairs. This system is considered adequate for achieving the desired operational life of the structure. Areas with exposed rebar will be treated with corrosion-inhibiting paint, and localized concrete repairs will be made where the rebar is not firmly embedded in the substrate. Implementing the expanded coating system will result in a change order in the amount of $165,841.

In addition, the existing concrete coatings were thicker than anticipated, exceeding ½-inch in several areas, which required Redwood to expend additional time, labor, and materials to complete the removal. This resulted in a change order of $31,900.

Furthermore, the abrasive grit material used to blast the coatings became saturated due to an apparent leak at the bottom of the tank. Because the wet abrasive could not be removed using vacuum equipment, it was manually removed using 5-gallon buckets. This issue caused four additional days of labor and resulted in a separate change order totaling $17,498.

To complete the project with the alternative coating approach, staff is recommending approval of Amendment No. 1 to the Agreement with Redwood in the amount not-to-exceed $215,239 and a time extension of 30 calendar days. An additional $15,000 in funds is requested to cover administrative change orders related to other project costs including scaffolding rental, structural engineering consultation, certified payroll reporting, and additional special inspection services, if required. A total of $230,239 is requested for all change orders and project costs needed to complete the project.

BACKGROUND

On December 17, 2024[1], City Council adopted a resolution awarding a construction contract to Redwood for the WRRF North Vacuator Rehabilitation Project in a not-to-exceed amount of $358,481, including an administrative change order contingency of $17,071 (5% of the bid amount), entering into a Professional Services Agreement with Coating Specialists and Inspection Services, Inc., in a not-to-exceed amount of $44,080, and appropriating funds in the amount of $402,561.

Redwood was issued a notice to proceed letter on February 20, 2025 and with a contract schedule of 168 calendar days, the project completion date was August 7, 2025. Redwood mobilized to the site on April 1, 2025.

Redwood completed the removal of existing coatings from interior metal and concrete surfaces by April 18, 2025. Cleanup of the spent abrasive grit was finished on May 6, 2025, at which point Redwood demobilized from the site.

To date, Redwood has been paid $117,325 for completed tasks, representing approximately 34% of the original bid amount. This total does not include any requested change orders.

Due to the extent of the concrete damage revealed after the removal of the interior coatings, Redwood's construction activities were put on hold to determine how to proceed with the project. Staff met and consulted with Redwood, Global Eco Technologies, CSI, and Carollo to develop a viable coating alternative and associated pricing.

The Phase II Project at the WRRF includes plans for a new grit facility to replace the vacuator process. However, these Phase II upgrades won't be operational for at least 8 to 10 years. Because of the maintenance and operational issues caused by not having a grit removal system, it is necessary to make the repairs needed to get the North Vacuator back online so that the WRRF treatment system can continue to perform as intended, and to minimize maintenance issues.

DISCUSSION

Completing the project will return the grit/scum facility at the WRRF to service, which will help reduce operational stress on plant components and decrease the risk of pipes clogging during wet weather events when grit loading to the plant increases.

Grit that is removed in the vacuator process is sent to a grit washing facility that cleans the grit prior to discharge to a bin that ultimately is hauled to a landfill for disposal. Floating debris is skimmed off the top of the water surface and directed to the sludge blending tank before sending to the digesters for further processing. When the vacuator process is out of

[1] CITY OF HAYWARD - File #: CONS 24-637

service, WRRF staff must bypass flows directly to the primary clarification process where in addition to removing primary sludge, grit and grease must also be removed. Grit removal in the primary clarifiers results in increased sludge flows and other maintenance issues related to handling grit including increased wear and tear on the primary sludge pumps and rotary lobe pumps used in the solids thickening process. In addition to wear and tear, increased grit loading to the primary clarifiers can cause pipes to clog causing the need to remove the clarifiers from service to clear out the sludge lines.

Although the North Vacuator will be replaced with a new grit facility as part of the Phase II project, the grit facility will be one of the last facilities to go online. Construction delays are possible, so the WRRF could be without a grit facility longer than anticipated.

While plant staff have successfully managed treatment operations without a grit facility for the past 17 months, it remains unclear whether higher maintenance costs will be incurred over an extended period. Current maintenance resulting from the North Vacuator being offline includes more frequent replacement of primary clarifier pump lobes, as well as inspection and occasional cleaning sludge lines that become clogged with grit.

After about a month of consultation with the project team and outside consultants, staff have determined a practical path forward for the project that will return the North Vacuator to operation for the desired service life. The revised coating system reduces the number of repairs required.

Staff is requesting execution of Amendment No. 1 to the PSA with Redwood in the amount not-to-exceed $215,239 to return the North Vacuator to service. An additional $15,000 in funds is requested to cover administrative change orders related to other project costs including scaffolding rental, structural engineering consultation, certified payroll reporting, and additional special inspection services. Therefore, the total funds requested is $230,239.

The revised project cost, excluding special inspection services (CSI), is about $588,700, which is approximately 37% above the Engineer's Estimate of $430,000 prepared prior to the bid.

ECONOMIC IMPACT

The modifications and continued upkeep of the existing treatment processes at the WRRF are essential to continue to maintain effective treatment of the City's wastewater. By rehabilitating the North Vacuator, the City can restore an existing component of the treatment facility that will improve plant performance and reliability, as well as reduce maintenance/repairs on existing sludge pumping systems until the new Grit Facility constructed as part of the WRRF Improvements - Phase II Project is operational.

The community will enjoy the benefits of the project, including maintaining effective treatment that provides environmental protection of the San Francisco Bay.

FISCAL IMPACT

The original estimated costs for the North Vacuator Rehabilitation Project are as follows:

Project Tasks	**Cost**
Construction Contract	$341,410
5% Construction Contingency (administrative change orders)	$17,071
Special Inspection & Engineering Services (CSI, Services, Inc.)	$44,080
Total	$402,561

Estimated costs to complete the project are as follows:

Project Tasks	**Cost**
Change to Expanded Coating System	$165,841
Removal of Thick Coatings	$31,900
Wet Grit Removal	$17,498
Contingency for administrative change orders and other costs	$15,000
Total	$230,239

Appropriation of Additional Funds
The adopted FY 2025 CIP did not have funds identified for the North Vacuator Rehabilitation Project. However, through Resolution 24-254, funds in the amount of $402,561 were appropriated from Fund 611. The Project is necessary due to an unanticipated outage caused by corrosion and subsequent failure of the internal rotating mechanism. Subsequent inspection determined additional concrete repairs and coatings are necessary to return the process to reliable operation. Repairs and coatings are necessary to keep the vacuator process operational until the new Grit Facility, constructed as part of the WRRF Improvements – Phase II Project, is operational (anticipated to be 2032-2034).

Staff recommends that City Council authorize the City Manager to appropriate additional funds in the amount of $230,239 from the Sewer System Replacement Fund (Fund 611) to fully fund the project in FY 2025. Sufficient fund balance is available to cover the necessary appropriation. There will be no impact to the General Fund.

STRATEGIC ROADMAP

This agenda item supports the various goals of City Council's Strategic Roadmap. The North Vacuator Rehabilitation project at the WRRF increase the reliability of the City's treatment plant in advance of the upgrades of the Phase II Project, while supporting the goals of Council. Specifically, this item relates to the implementation of the following strategic objectives:

Invest in Infrastructure

- *Invest in City-owned facilities & property*
    - *Enhance local water supplies and wastewater systems*

SUSTAINABILITY FEATURES

All project work is related to operations and maintenance of the existing WRRF aged facilities; therefore, no sustainability features are included in this project.

PUBLIC CONTACT

All project work will be within the WRRF plant boundary and should have no impact on area businesses or the public at large; therefore, no public contact is necessary for this project.

SCHEDULE/NEXT STEPS

If City Council approves the resolution, Amendment No. 1 to the Agreement with Redwood in an amount not-to-exceed $215,239 will be executed by the City Manager. Staff will also transfer an additional $15,000 for other associated project costs, for a total amount of $230,239 from Fund 611 and appropriate to the project.

The Project is tentatively scheduled to resume in June 2025 and anticipated to be completed within 63 calendar days (9 weeks) from contractor remobilization. A time extension of 50 calendar days will be granted to Redwood with a new project completion date September 26, 2025.

Prepared by: Steven Wolfe, Associate Civil Engineer
Zaheer Shaikh, Utilities Engineering Manager

Recommended by: Alex Ameri, Director of Public Works

Approved by:

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Michael S, Lawson, J.D.
Acting City Manager