



**DATE:** May 16, 2023

**TO:** Mayor and City Council

**FROM:** Director of Public Works

**SUBJECT:** Adopt a Resolution Authorizing the City Manager to Execute Amendment No. 2 to the Professional Services Agreement with HydroScience Engineers, Inc., Increasing the Contract Amount for Project Design and Engineering Services for the Sewer and Water Line Improvements Projects by \$99,083 for a Total Not-to-Exceed Contract Amount of \$1,741,948

## **RECOMMENDATION**

That Council adopts a resolution (Attachment II) authorizing the City Manager to execute Amendment No. 2 to the Professional Services Agreement (PSA) for project design and engineering services with HydroScience Engineers, Inc., (HydroScience) in an amount not-to-exceed \$99,083, for a total not-to-exceed contract amount of \$1,741,948 for the Sewer and Water Line Improvement Projects (Project).

## **SUMMARY**

The City's current Capital Improvement Program (CIP) includes funding to replace the City's water mains to improve supply reliability and fire flow through annual water line replacement projects. Additionally, the CIP includes funding to replace the City's undersized and structurally damaged sanitary sewer mains through annual sewer line replacement projects.

On September 28, 2020, the City entered into a PSA with HydroScience to provide engineering, design, and construction support services for the Project. The City amended the PSA in February 2022. Staff is requesting to further amend the contract by increasing the contract amount by \$99,083 for a total not-to-exceed contract amount of \$1,741,948 to include additional items in the scope of services and to address unforeseen construction conditions. The scope of work for construction support services required by HydroScience has increased due to unanticipated changes in site conditions and additional engineering services that are required to support the project.

## **BACKGROUND**

The water portion of the Project includes replacing approximately 26,600 linear feet of existing 4, 6, 8, and 12-inch cast iron, ductile iron, and asbestos cement pipes throughout the City at fourteen locations. The sewer portion of the Project includes replacing approximately 18,500 linear feet of existing 6, 8, 10 and 12-inch sanitary sewer vitrified clay, asbestos cement, and high-density polyethylene pipes at twenty-nine locations.

On September 15, 2020<sup>1</sup>, Council approved Resolution No. 20-141, authorizing the City Manager to enter into a PSA with HydroScience for design services and technical support during construction in an amount not-to-exceed \$1,467,865.

On January 18, 2022<sup>2</sup>, Council approved Resolution No. 22-005, adopting Amendment No. 1 to the PSA with HydroScience for unanticipated and additional services for the completion of the project design and engineering, increasing the contract amount by \$175,000 for a total not-to-exceed contract amount of \$1,642,865.

The design for the water and sewer projects were completed in January 2022 and June 2022 respectively. Following completion of the project plans and specifications, the City called for construction bids for each project separately. The construction contracts were awarded to Ranger Pipeline, Inc., for both projects. Construction in the field for the sewer project started in October 2022 and water project started in November 2022 and are anticipated to be completed by June 2024.

## **DISCUSSION**

During the construction phase of the Sewer and Water Projects, HydroScience provided additional design and engineering services, which were not anticipated and incurred costs that exceeded the budgeted amount. Additional services from HydroScience may be needed for unforeseen conditions discovered during construction for both projects including further submittal reviews and design revisions.

- 1) Sanitary Sewer Main Installation at Rose Street – Additional design revisions were necessary to accommodate the unforeseen underground conditions. A redesign including preparing drawings were necessary for a portion of the City’s new 8” sewer main that was located approximately 3’ from the existing 33” vitrified clay sewer pipeline belonging to Castro Valley Sanitary District. Only upon commencement of construction was it discovered that the existing Castro Valley Sanitary District sewer main was close enough to negatively impact the construction of the new Hayward sewer main.
- 2) BART Settlement Calculations – In the course of obtaining encroachment permits from BART to conduct the jack and bore operations underneath BART railroad tracks located in BART right-of-way, BART’s structural engineering review required calculations demonstrating the work will not have an adverse impact on the BART tracks due to settlement. HydroScience assisted the City by providing technical review and engineering support to comply with BART’s requirements.
- 3) Sanitary Sewer Main Installation at Whitestone Court – Pipe bursting is the specified method of installation per the Project Plans. The Contractor had submitted several alternative installation methods, which required additional review by HydroScience. Additional construction support is anticipated for the Whitestone Court site on account of the complex nature of the operation as the pipeline replacement is in a woody hillside.

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<sup>1</sup> <https://hayward.legistar.com/LegislationDetail.aspx?ID=4640098&GUID=DAA86C51-8A86-47A4-B5D0-35F45982BD1F&Options=&Search=>

<sup>2</sup> <https://hayward.legistar.com/LegislationDetail.aspx?ID=5382574&GUID=296BFFA3-36F3-4584-87D0-2644A0D669CE&Options=&Search=>

- 4) Water Main Installations at Zephyr Avenue, Dunn Road, and Main Street – These three specific jobsites incorporate two different trenchless methods for pipe installation. Jack and Bore will be used for Union Pacific Railroad crossings at Zephyr Avenue and Dunn Road. Microtunneling will be used on Main Street for a crossing underneath an existing storm drain culvert. It is anticipated that design adjustments and engineering support from HydroScience will be critical during these operations.
  
- 5) Sanitary Sewer Main Installation at Torrano Avenue – This jobsite will utilize two trenchless methods of pipe installation during the construction phase. Guided Boring will be used beneath the Union Pacific and BART railroad tracks. Pipe reaming will be used to replace the existing sewer main beneath the sidewalk on Torrano Avenue towards Mission Boulevard. Due to the uncertain nature of these complex operations, additional engineering support may be needed to complete the installation of the sewer pipelines.

Construction is anticipated to be completed in June 2024. Due to the nature of underground construction and the complexity of trenchless methods, it is expected that additional services will be needed for unforeseen conditions and changes during construction. Therefore, staff is requesting to amend the PSA with HydroScience by \$99,083 for a new not-to-exceed amount of \$1,741,948 to provide engineering services and construction support.

**ECONOMIC IMPACT**

Replacing the sewer mains, water mains, manholes, and appurtenances are part of an effort to, pursuant to Council direction, modernize and upgrade existing infrastructure. The Project will reduce operations and maintenance costs associated with servicing the high frequency, undersized, and structurally defective sewer mains, water mains, and structures. In addition, staff time attending to issues related to high frequency maintenance, sanitary sewer overflows, and system breaks will be reduced. The community will enjoy the benefits of the Project, including the continued operability and serviceability of the sewer collection and water distribution system. Furthermore, robust and reliable water and sewer infrastructure can help foster economic development and viability in the City.

**FISCAL IMPACT**

The estimated project cost are as follows:

Engineering Services (Consultant)	\$1,741,948
Design and Construction Management – City Staff (Estimated)	\$600,000
Water Project Construction Contract	\$11,352,779
Water Project Administrative Construction Contingency	\$1,135,278
Sewer Project Construction Contract	\$11,087,925
Sewer Project Administrative Construction Contingency	\$1,108,793
Inspection and Testing (Estimated)	\$300,000
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Total	\$27,326,723

The adopted FY23 CIP includes \$14,272,000 for the Water Line Improvements Project, Project No. 07093, and \$14,185,000 for the Sewer Line Improvements Project, Project No. 07761, for a total project budget of \$28,457,000.

### **STRATEGIC ROADMAP**

This agenda item supports the Strategic Roadmap to Invest in Infrastructure. Specifically, this item relates to the implementation of the following projects:

Project 13b: Replace 4-6 miles of water pipelines annually.

Project N20: Upgrade sewer collection system by replacing 3-4 miles of sewer lines annually.

### **STAINABILITY FEATURES**

The repair and replacement of deteriorating sewer lines reduces the risk of sewer overflows, which can cause untreated wastewater to flow into public waterways. Furthermore, the repair and replacement of deteriorating water lines reduces potable water and energy losses.

### **PUBLIC CONTACT**

There is no public contact needed for this item.

### **NEXT STEPS**

If Council adopts the resolution to amend the contract with HydroScience, staff will route the amendment to be executed by the City Manager, allowing the firm to continue to provide design and engineering services.

*Prepared by:* James Damasco, Assistant Civil Engineer

*Reviewed by:* Sammy Lo, Senior Civil Engineer  
Tay Nguyen, Senior Utilities Engineer

*Recommended by:* Alex Ameri, Director of Public Works

Approved by:



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Kelly McAdoo, City Manager