



**CITY OF KIRKLAND**  
**Department of Public Works**  
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**MEMORANDUM**

**To:** Kurt Triplett, City Manager

**From:** Aaron McDonald, P.E., Senior Project Engineer  
David Snider, P.E., Capital Projects Manager  
Kathy Brown, Public Works Director

**Date:** April 25, 2019

**Subject:** ROSE POINT LIFT STATION—PRE-BID UPDATE

**RECOMMENDATION:**

City Council receives an update about a potential need for increased funding for construction of the Rose Point Lift Station Project, which is soon to be advertised for bids.

**BACKGROUND DISCUSSION:**

This Project replaces an aged, high-maintenance sanitary sewer lift station built in the early 1970's with a modern facility that will provide reliable service for perhaps forty years or more. The station serves approximately 70 residential properties in the Market Neighborhood. (See Attachment A, "Vicinity Map.")

Sanitary sewer collection and conveyance systems generally make use of gravity-flow for the transport of sewerage to treatment facilities. This is primarily because gravity-flow systems have lower operating costs and maintenance needs. But in areas with topographic constraints (e.g., hills or valleys) where a gravity-flow outlet is not a viable option, sewerage is collected at a low point and conveyed to a higher elevation using mechanical pumps, where it is then re-conveyed into a gravity collection system.

The current Rose Point facility is requiring an increasing amount of maintenance to ensure operability. On average, there are a half-dozen local power outages per year that require immediate maintenance crew response with a portable power generator. Replacement of the existing station is critical to providing reliable and effective sanitary sewer service to residents and for protecting the environment from potential overflows.

Replacing this lift station will reduce operating costs and minimize potential system failure and/or overflow because the new lift station will have multiple redundant protective systems.

The new station features an updated telemetry system connected to the City’s Maintenance & Operations Center, as well as an array of sensors and alarms that allow for early problem identification and response. A dedicated automatic emergency back-up generator for use during power outages also is included in the Project.

The Project is located within the Shoreline Management Zone and was permitted through zoning Process IIA (Utility). The Project complies with Shoreline Master Program policies, *Zoning Code* regulations, and applicable *Comprehensive Plan* policies. Though opportunity was provided, no public comments were received during the application process.

The Project team attended a Rose Point Community Board meeting to present the scope of work. Staff also held two open-houses for residents to learn more about the scope of work, and the team attended a combined Kirkland Alliance of Neighborhoods/Market Neighborhood meeting to present the Project scope.

With the most current opinion of probable construction cost (i.e., engineer’s estimate) of \$2,019,000 (including 10% contingency), staff has identified a potential project funding shortfall, as shown in Table 1:

**Table 1: Estimated Expenses vs. Funding**

Items	Estimate Expenses
Design/Insp./CM/Staff/Permitting	\$1,051,000
Construction/Contingency	\$2,019,000
<b>TOTAL</b>	<b>\$3,070,000</b>
	<b>Funding</b>
Design/Insp./CM/ Staff/Permitting	\$1,069,400
Construction/Contingency	\$1,490,600
<b>TOTAL</b>	<b>\$2,560,000</b>
<b>Estimated Funding Shortfall</b>	<b>(\$510,000)</b>

The Rose Point Lift Station is of a size and complexity that typically result in high soft costs attributable to the site civil, building, structural, electrical, mechanical, and plumbing design efforts. In addition to the physical building permitting process, the location of the subject station—within the Shoreline Management Zone IIA—added to the high soft costs shown in Table 1. During the 2+ year permitting activities, including a Hearing Examiner process, modifications to the City’s Telemetry and Monitoring system design were deemed necessary to reflect the most current City standards. Further, this mid-process design change to make the Project fully compatible with the City’s updated telemetry network, as well as the City’s current Maintenance & Operations standards derived from the latest update to the *Comprehensive Sewer System Plan*, added to the overall project design costs.

Some additional storm drainage system work was evaluated during the design phase of the lift station to respond to associated City storm system deficiencies that presented themselves at the time of an adjacent private development project. Since the physical work efforts for the lift station and new force main pipe will occur in the same general vicinity as the storm system

deficiencies, it will be cost effective to make those improvements concurrent with the lift station work. An estimated \$150,000 for design, project management, inspection, and construction costs has also been added to make these drainage improvements. Funding from the Surface Water Utility Fund for those drainage improvements will be recommended, as appropriate, at the time of the lift station contract award.

Though we do not yet have a bid in hand and thus don't know for certain that there will be a funding shortfall, the City plans for such circumstances. The City's utility rates are established to adequately fund operations, capital improvements for the utility systems, and to establish reserves. The reserves enable the City pay for unforeseen expense, whether in operations or the capital program, including funding budget shortfalls for approved capital projects.

Recognizing the general strong construction cost escalation continuing in our region, and that the time of year does influence the bids received (earlier in the year generally leads to more favorable bids because contractors prefer to line-up work for the summer construction season), staff will be moving forward with the bidding process. Once bids are received and analyzed, staff will determine if additional funds are needed to complete the Project. Staff will return to City Council with a recommended action and a source for additional funds, if needed.

Attachment A: Vicinity Map

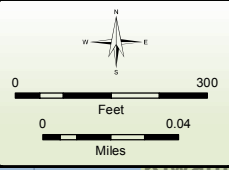
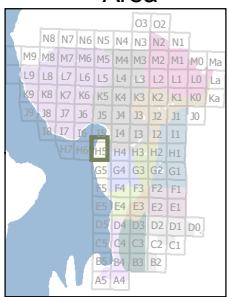
Juanita Bay Park



Return to Gravity System (elev. 70')

### Rose Point Lift Station Project (SS-0073)

- Lift Station (elev. 30')
- SS\_Manholes
- SS\_Main
- Parcels
- Parks / Open Spaces
- Service Area



Author: Name In Map Doc Properties  
 Name: Attachment A - Vicinity Map  
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### ROSE POINT LIFT STATION PROJECT - VICINITY MAP