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| **AGENDA BILL Item 6.C** | **Flat Car Sewer Lift Station Reverse Flow Retrofit Project Professional Services Agreement** | | | |
| DATE SUBMITTED: | September 1, 2023 | MEETING DATE: | September 13, 2023 | |
| TO: BOARD OF COMMISSIONERS | | FROM: Justin Clary, General Manager | | |
| GENERAL MANAGER APPROVAL | |  | | |
| ATTACHED DOCUMENTS | | 1. Professional Services Agreement with Wilson Engineering | | |
| TYPE OF ACTION REQUESTED | | RESOLUTION ☐ | FORMAL ACTION/ MOTION ☒ | INFORMATIONAL /OTHER ☐ |

**BACKGROUND / EXPLANATION OF IMPACT**

The Lake Whatcom Water and Sewer District (District) owns and operates a sewer collection and conveyance system serving the Sudden Valley and Geneva communities, as well as much of the north shore of Lake Whatcom. The system is comprised of approximately 75 miles of sewer mains supported by 27 sewer lift stations that pump wastewater generated by District customers out of the Lake Whatcom watershed to the City of Bellingham's sewer conveyance system for treatment at the City's Post Point wastewater treatment plant.

Wastewater generated in the Sudden Valley community accounts for approximately two-thirds of all District-managed wastewater. Given topographical constraints, conveyance of wastewater out of Sudden Valley is limited to two sewer interceptors: 1) Lake Whatcom Boulevard sewer interceptor (LWBI), which was constructed in the early 1970s to serve the then recently platted Sudden Valley community; and 2) Lake Louise Road sewer interceptor (LLRI), which was constructed in 2003 to relieve capacity constraints on the LWBI.

The Flat Car sewer lift station is located in Area Z of Sudden Valley and receives approximately one-half of Sudden Valley-generated wastewater, which it then conveys (pumps) to Geneva (for ultimate conveyance to the City of Bellingham) via the LLRI. Recognizing a desire to create system resiliency, District staff identified an opportunity to re-direct wastewater flows from the Flat Car sewer lift station to the LWBI (and the 750,000-gallon Sudden Valley detention basin, if necessary) for instances where the LLRI is rendered unusable (examples include pipe failures that occurred in 2017 and on July 20th of this year). The District currently has a procedure for redirecting Flat Car lift station flows to the LWBI; however, it relies on setting up and connecting a portable pump and hose system, all of which takes significant effort and time. To mitigate the potential for sewage releases during emergency situations, the District created capital improvement program project No. C2113 and hired Wilson Engineering through the on-call consultant services

contract to perform an analysis of potential Flat Car sewer lift station flow redirection pumping and piping options. The recommended alternative consists of:

- Bypass Pumps. Reverse flow pumping using the existing lift station submersible pumps rather than the District's variable speed portable pump.
- Bypass Piping Alignment. Construct permanent forcemain piping approximately 100-feet in length that crosses Beaver Creek immediately northeast of the Flat Car lift station wet well and ties into existing District system near the retired Old Flat Car lift station.

With reverse flow preferred pump/piping system set, Wilson has generated a scope of work and budget for the design, permitting, and construction administration services necessary to construct the project.

The total contract cost is $117,166, which is within the available project budget of $132,408. The anticipated schedule is to complete design and permitting to allow for construction bid advertisement in February-March 2024, with construction in summer 2024.

**FISCAL IMPACT**

The remaining budget associated with Project No. C2113 is $132,408 ($20,592 has been incurred associated with development of the alternatives analysis). Approval of the professional services agreement for design and permitting is within the available budget; however, additional funding will require allocation for construction.

**APPLICABLE EFFECTIVE UTILITY MANAGEMENT ATTRIBUTE(S)**

Infrastructure Strategy and Performance
Enterprise Resiliency

**RECOMMENDED BOARD ACTION**

Staff recommends that the Board authorize the general manager to execute the professional services agreement with Wilson Engineering.

**PROPOSED MOTION**

Recommended motion is:

> "I move to authorize the general manager to execute the professional services agreement with Wilson Engineering for design, permitting, and construction administration services associated with District Project No. C2113, Flat Car Reverse Flow Project, for time and materials not to exceed $117,166, as presented."