

Staff Report

TO: Board of Directors

FROM: Adrian Schneider, P.E., Senior Engineer
Doug Roderick, P.E., Director of Engineering

DATE: August 24, 2022

SUBJECT: Squirrel Creek Siphon Replacement Project (Project #2624)
(Consent)

ENGINEERING

RECOMMENDATION:

Award a construction contract to Hanson Bros. for the Squirrel Creek Siphon Replacement Project in the amount of \$843,197.00, and authorize the General Manager to execute the appropriate documents.

BACKGROUND:

The Squirrel Creek Siphon allows the Rex Canal to cross Squirrel Creek. The Rex Canal also feeds the Quincy Canal. The siphon is comprised of a 24-inch diameter steel pipe. A portion of the pipe is buried within the hills on both sides of Squirrel Creek, and approximately 85 feet of the pipe is elevated across the creek. The oldest sections of pipe total 720 feet in length. Sections have been replaced over the years, with the last being in 1988 (approximately 180 feet). The siphon is only used during the summer irrigation season and serves 43 active and 16 inactive customers purchasing a total of 173.25 inches of raw water. This equates to approximately \$85,744 in annual revenue. No winter water is sold through this facility.

During the winter of 2021/2022, Operations staff noted surface water flowing down the side embankment on the south side of Rough & Ready Highway at the location of the pipe crossing. Further investigation found an additional leak on the exposed elevated portion of the siphon crossing Squirrel Creek. An investigation of the exposed portion of the pipe indicated its very poor condition. A video of the pipe's interior revealed corrosion in the lower sections. The maintenance department has temporarily fixed the leaks on the pipe so that the facility will be operational for the 2022 irrigation season.

Portions of this siphon has been replaced over the years and staff has determined that the total replacement of the siphon is warranted. The initial pipe replacement was initially determined to be 720 feet long but was changed to include the 180 feet replaced in 1988 for a total length of 900 feet. This project is identified on the project list due to its age and condition but was not considered a high priority until the recent identification of leaks both in the buried section as well as the elevated pipe section. An amendment to the 2022 budget for this project was approved on April 13, 2022. Since then, an additional leak has been detected and is being monitored.

The plans and specifications were sent out to eleven contractors on July 25, 2022. On August 18, 2022, the District received quotes from five (5) contractors. The submitted quotes are listed below:

Contractor	Quote
Westcon Construction	\$ 849,700.00
Granite Construction	\$ 1,095,650.00
McGuire & Hester	\$ 1,128,775.00
Lorang Bros.	\$ 1,004,400.00
Hanson Bros. Enterprise	\$ 843,197.00
Engineer's Estimate	\$ 800,000.00

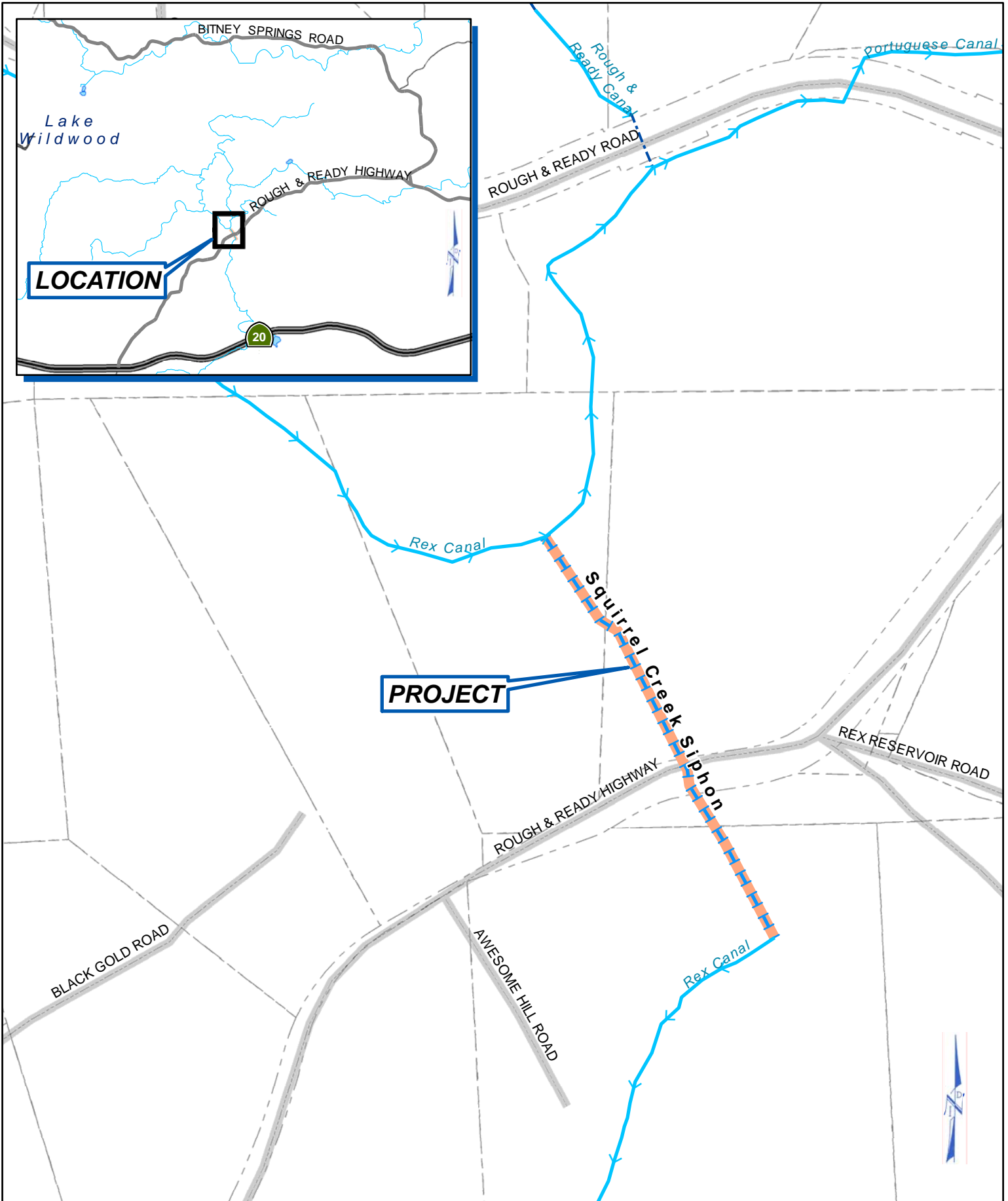
It is staff's recommendation to award a construction contract to Hanson Bros. Enterprises in the amount of \$843,197.

BUDGETARY IMPACT:

The Board of Directors approved a Budget Amendment to Fund 15 for a total cost not to exceed \$800,000 by Resolution 2022-23 on April 13, 2022. To date, \$2,850 has been spent on this project, leaving \$797,150 remaining in the 2022 budget. While work on this project will begin in October of 2022, construction will continue into 2023 and as such a portion of this project will be budgeted in 2023. Staff does not anticipate the entire contract being completed this year and therefore is not recommending a 2022 budget amendment.

ATTACHMENTS: (1)

- Project Site Map



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PROJECT

LOCATION

SQUIRREL CREEK SIPHON



Date: 3/8/2022
 Drawn By: L. HAMMER

NEVADA IRRIGATION DISTRICT
 NEVADA COUNTY -- PLACER COUNTY
 GRASS VALLEY, CALIFORNIA

Scale: 1" = 200' @ 8.5x11
 Sheet: 1 of 1