



COUNTY OF SONOMA

575 ADMINISTRATION
DRIVE, ROOM 102A
SANTA ROSA, CA 95403

SUMMARY REPORT

Agenda Date: 5/11/2021

To: Board of Directors, Sonoma County Water Agency
Department or Agency Name(s): Sonoma County Water Agency
Staff Name and Phone Number: Carlos Diaz 547-1946
Vote Requirement: Majority
Supervisory District(s): First

Title:

Santa Rosa Creek Vortex Tube Rehabilitation- Contract Award

Recommended Action:

- A) Adopt and approve the Project Manual and Drawings ("plans and specifications") entitled "Santa Rosa Creek Vortex Tube Rehabilitation."
- B) Award the contract to Granite Construction Company for \$1,095,580 for construction of Santa Rosa Creek Vortex Tube Rehabilitation and authorize the Chair to execute the contract.
- C) Authorize the General Manager of Sonoma County Water Agency to sign Section 00 65 23 (Agreement and Release of Any and All Claims), with County Counsel review, if any unresolved claims are listed by the contractor.

Executive Summary:

This item requests approval of a contract with Granite Construction Company for \$1,095,580 for construction of Santa Rosa Creek Vortex Tube Rehabilitation.

The Project is required to rehabilitate the Vortex Tube to protect its structural integrity and prolong its useful life. The Vortex Tube is a culvert beneath Montgomery Drive and is a critical component of the Santa Rosa Creek diversion structure built as part of the Central Sonoma Watershed Project to protect downtown Santa Rosa from flooding. The Vortex Tube has experienced structural deterioration from abrasion by gravels and sediment being transported within Santa Rosa Creek.

Discussion:

HISTORY OF ITEM/BACKGROUND

The Santa Rosa Creek diversion structure was constructed in 1963 as part of the Central Sonoma Watershed Project (CSWP), developed through coordination between the Sonoma County Flood Control and Water Conservation District (Sonoma County Water Agency) and the USDA Soil Conservation Service. The CSWP involved a multi-year plan that was intended to improve flood protection in the Sonoma County area. The Sonoma County Water Agency was tasked with operation and maintenance of all structural measures included in the CSWP. The Santa Rosa Creek diversion structure is a critical flood protection element of the overall project.

One of the primary infrastructure elements responsible for proper hydraulic function of the Santa Rosa Creek diversion structure is a culvert beneath Montgomery Drive known as the Vortex Tube. The Vortex Tube was designed to convey low flows within the natural channel of Santa Rosa Creek, and also designed to split high flows between Santa Rosa Creek and Spring Lake. A portion of high flows are diverted to Spring Lake for flood attenuation and storage.

In 2017, dive inspections of the Vortex Tube identified structural deterioration of the reinforced concrete pipe sections. While the original design included a 3-inch wearing surface of grout placed on the inside of the concrete pipe sections, the continued bedload transport of sand, gravels, and cobbles for decades within the vortex tube has completely eroded this protective layer in places. In some locations, bedload transport has worked through both the sacrificial grout and structural concrete cover of the original pipe sections exposing some of the reinforcing steel within the original precast pipe sections. Left unchecked, the continued surface erosion and exposure of the reinforcing steel could compromise the structural integrity of the culvert. The work to be done under the proposed contract is required to rehabilitate the existing culvert to protect its structural integrity.

The Project consists of rehabilitation of the vortex tube located at the Santa Rosa Creek diversion structure beneath Montgomery Drive, Santa Rosa, California. The work includes, but is not limited to, rehabilitation of approximately 112 linear feet of 8-foot diameter reinforced concrete pipe (Vortex Tube), replacement of approximately 21 linear feet of cast-in-place concrete transitional section (Transition Area), trenchless installation of approximately 140 linear feet of 36-inch diameter welded steel bypass pipe (Bypass Pipe), and approximately 160 linear feet of unlined trapezoidal channel to facilitate future inspection and maintenance. Work shall be completed within 138 Days from the date when Contract Time commences to run.

The low bid was approximately 15% higher than the Engineer's Estimate, which appears to reflect the premium paid for continued volatility in the construction marketplace particularly related to supply disruption and cost of materials, and the inherent risk of construction within an active creek channel under a compressed timeline.

Competitive process, selection & cost detail

The Project was advertised for bids : 02/18/2021

Bids were opened: 03/23/2021

Bids for construction of said Project were received on Tuesday, March 23, 2021, as follows:

| | |
|---|-------------|
| Granite Construction Company, Ukiah, CA | \$1,095,580 |
| Terracon Constructors, Inc., Healdsburg, CA | \$1,252,565 |

The Engineer's Estimate was \$956,700.00

The lowest responsive and responsible bid is from Granite Construction Company and is \$138,880 above the Engineer's Estimate. Granite Construction Company is experienced in this type of construction and met the experience requirements.

A contractor must execute a release of claims (Section 00 65 23) before final payment but may except any unresolved claims from the release. The requested action authorizes the General Manager to approve the release unless the contractor lists unresolved claims. In that case, County Counsel must review Section 00 65 23 prior to General Manager approval.

Construction on the Project is scheduled to begin approximately June 21, 2021, with an estimated completion date of November 5, 2021.

ALTERNATIVES

There are no viable alternatives to rehabilitating the Vortex Tube aside from full replacement of the culvert which would require significant excavation in Montgomery Drive and impacts to traffic circulation resulting in a much higher project cost.

Prior Board Actions:

11/17/2020: Resolution determining that the Vortex Tube Rehabilitation Project will not have a significant adverse effect on the environment, adopting the Initial Study and Mitigated Negative Declaration for the Project, adopting mitigation measures and the mitigation monitoring reporting program, making certain related findings, and approving the Project.

7/19/2019: Authorizing Sonoma County Water Agency's General Manager to execute an agreement with BKF, Inc. for engineering and design services for vortex tube rehabilitation through June 30, 2022, in the not-to-exceed amount of \$364,972.

FISCAL SUMMARY

| Expenditures | FY 20-21 Adopted | FY21-22 Projected | FY 22-23 Projected |
|------------------------------------|-----------------------------|------------------------------|-------------------------------|
| Budgeted Expenses | \$1,095,580 | | |
| Additional Appropriation Requested | | | |
| Total Expenditures | \$1,095,580 | | |
| Funding Sources | | | |
| General Fund/WA GF | | | |
| State/Federal | | | |
| Fees/Other | \$1,095,580 | | |
| Use of Fund Balance | | | |

Agenda Date: 5/11/2021

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| Contingencies | | | |
| Total Sources | \$1,095,580 | | |

Narrative Explanation of Fiscal Impacts:

Budgeted amount of \$1,095,580 is available from FY 2020/2021 appropriations for the Flood Control Zone 1A Fund. No additional appropriation is required.

| Staffing Impacts: | | | |
|--|--|---------------------------|---------------------------|
| Position Title (Payroll Classification) | Monthly Salary Range (A-I Step) | Additions (Number) | Deletions (Number) |
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Narrative Explanation of Staffing Impacts (If Required):

N/A

Attachments:

None

Related Items "On File" with the Clerk of the Board:

Project Manual and Project Drawings