



Agenda Date: 5/15/2019

Agenda Placement: 8E

Napa Sanitation District Board Agenda Letter

TO: Honorable Board of Directors

FROM: Timothy Healy - General Manager
NS-Technical Services/Engineer

REPORT BY: Karl Ono, Associate Engineer - (707) 258-6013

SUBJECT: Award Task Order for the 66-inch Trunk Sewer Rehabilitation Project (CIP 19701) Design Services

RECOMMENDATION

Authorize the Purchasing Agent to execute Task Order 2 with Woodard & Curran to provide engineering design services for the 66-inch Trunk Sewer Rehabilitation Project (CIP 19701) in the amount of \$475,352.

EXECUTIVE SUMMARY

The 66-inch Trunk Sewer is approximately three miles long and extends along the eastern bank of the Napa River from Imola Avenue to the Soscol Water Recycling Facility (SWRF). Observations from a partial closed-circuit television (CCTV) inspection and manhole entries conducted in 2017 indicated that the pipeline had deteriorated significantly since its previous inspection in 2012.

In 2018, Woodard & Curran (W&C) performed a condition assessment of the entire 3-mile alignment of the 66-inch Trunk Sewer. The condition assessment consisted of CCTV and sonar inspection, which identified the limits and severity of structural deterioration and also measured volumes of sediment that would need to be removed in order to perform rehabilitation. Additionally, an analysis of the CCTV inspection footage was conducted to prioritize future rehabilitation work. W&C prepared a Condition Assessment Summary Technical Memorandum (TM) which summarizes observed conditions and recommends near-term and long-term rehabilitation projects to address condition of the aging trunk main.

The Condition Assessment Summary TM recommends near-term rehabilitation of approximately 6,450 linear feet (LF) of the downstream portion of the trunk between Kaiser Road and the SWRF. Rehabilitation of the upstream portion of the trunk will be planned in the future under a separate project. Under this task order, W&C will prepare CEQA documents, provide resource agency permitting support, perform design, and prepare construction bid documents to rehabilitate the recommended portion of the trunk. The anticipated CEQA documentation that will be

required is an Initial Study / Mitigated Negative Declaration due the sensitive location and potential impacts associated with temporary bypass and required excavations at manholes. The permitting and design process will begin in May 2019 and is scheduled to be completed by the fall of 2020.

NapaSan staff anticipates requesting that the Board approve the project in the fall of 2020 to bid and award in the winter of 2020. Construction is anticipated to take place in the dry weather season of 2021.

FISCAL IMPACT

Is there a Fiscal Impact?	Yes
Is it currently budgeted?	Yes
Where is it budgeted?	The project is budgeted in the FY 2018/19 and proposed FY 19/20 and FY 20/21 budgets.
Is it Mandatory or Discretionary?	Discretionary
Discretionary Justification:	Portions of the trunk sewer have reached the end of their service life and are in need of structural rehabilitation.
Is the general fund affected?	Yes
Future fiscal impact:	Design work and subsequent construction will extend in to future fiscal years.
Consequences if not approved:	Design of a rehabilitation system will not be able to begin, and the risk of a failure along the trunk sewer will increase as deterioration continues to occur.
Additional Information:	W&C will perform a CEQA analysis as part of this Task Order.

ENVIRONMENTAL IMPACT

None.

BACKGROUND AND DISCUSSION

The 66-inch Trunk Sewer conveys over 90 percent of flow from the collection system to the Soscol Water Recycling Facility (SWRF). The trunk main, which was constructed in 1967, is approximately three miles long and extends along the eastern bank of the Napa River from Imola Avenue to the SWRF. Observations from a partial closed-circuit television (CCTV) inspection conducted in 2017 indicated that the pipeline had deteriorated significantly since its previous inspection in 2012. Subsequent condition assessment work was performed via manhole entries and test pit excavations, which revealed that portions of the trunk sewer have experienced structural degradation with visibly exposed steel reinforcement.

In addition to the condition issues associated with the trunk sewer, its hydraulic capacity is also a concern. The 2007 Collection System Master Plan (CSMP) identified that the trunk requires a capacity upgrade in order to convey peak wet weather flows. Because peak flows are directly attributable to inflow and infiltration (I/I) during storm

events, a strategy was put in place to reduce I/I upstream of the trunk sewer rather than increase its capacity. This strategy provides numerous additional benefits, including eliminating the need to add wet-weather capacity at the SWRF, rehabilitating and replacing aging assets throughout the collection system, and reducing the potential for overflows elsewhere in the system. The complete CSMP will include a dynamic all-pipes collection system model which will verify the results of the preliminary analysis and confirm the recommendation to rehabilitate the existing pipe. The CSMP will be completed early in the design phase of this rehabilitation project.

Any rehabilitation method that addresses the structural condition of the trunk would reduce its internal diameter, and thus, its hydraulic capacity. The potential impacts of such a reduction will need to be carefully considered, taking into account updated design flows and future projections. Therefore, development of a new CSMP began concurrently with the condition assessment phase of this project. Preliminary modeling analysis performed as part of the CSMP development indicates that rehabilitation of the 66-inch trunk should result in acceptable hydraulic conditions.

District staff managed a competitive consultant selection and procurement process. A request for proposals seeking qualified engineering firms to provide professional engineering services for the condition assessment, planning, and design of the 66-inch Trunk Sewer Rehabilitation Project was sent to eight (8) firms and five (5) proposals were received by the District. Based on Staff review of the proposals, the top three (3) firms were invited to interview. Staff selected W&C's team as the most qualified team to perform the required services.

NapaSan contracted W&C in July 2018 to conduct a condition assessment of the entire three miles of the 66-inch trunk sewer and manholes using CCTV and sonar inspections. The CCTV and sonar inspections were performed by W&C's subconsultant, Pro-Pipe, and occurred between July 25th and August 9th, 2018. Based on the results of the inspections, W&C recommended a near-term project to rehabilitate approximately 6,450 LF of the trunk (between Kaiser Road and the SWRF). This Task Order includes design services for the recommended near term project.

SUPPORTING DOCUMENTS

- A . Woodard & Curran Task Order 2
- B . Presentation Slides

Napa Sanitation District: Approve

Reviewed By: Timothy Healy