**File #:** 19-1016, **Version:** 1

# REPORT TO COUNCIL

## SUBJECT
Authorize Amending an Existing Contract with Carollo Engineers, Inc. for the Sunnyvale Clean Water Program Secondary Treatment Thickening and Dewatering Project for Engineering Design Services to incorporate Food to Energy Solutions (F20-088)

## REPORT IN BRIEF
Approval is requested to amend an existing design and construction support contract with Carollo Engineers, Inc. of Walnut Creek for the Water Pollution Control Plant (WPCP) Secondary Treatment and Dewatering Project related to design work for a Food to Energy program, increasing the not to exceed contract amount from $17,746,116 to $18,963,308, and approval to increase the contingency amount from $1,599,533 to $2,041,355.

## EXISTING POLICY
Pursuant to Section 2.08.040 of the Sunnyvale Municipal Code, City Council approval is required for the procurement of goods and/or services exceeding $100,000 in any one transaction.

## ENVIRONMENTAL REVIEW
The action being considered does not constitute a “project” within the meaning of the California Environmental Quality Act (“CEQA”) pursuant to CEQA Guidelines section 15378(a) as it has no potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.

However, it is expected that a CEQA memorandum will be filed, which documents the activities, impacts, and mitigation measures presented in the Sunnyvale Clean Water Program’s approved Programmatic Environmental Impact Report (PEIR) (RTC No.16-0663) that are applicable to this project. It is anticipated that this amendment to the project will have no effects beyond those analyzed in the PEIR and that no new environmental document or public notice will be required. If the CEQA memorandum prepared identifies new effects not analyzed and mitigated in the PEIR, an Initial Study will be prepared and the appropriate level of environmental review will be undertaken. The consultant will review all CEQA documentation as part of their design review.

## BACKGROUND AND DISCUSSION
Methane emissions resulting from the decomposition of organic waste in landfills are a significant source of greenhouse gas (GHG) emissions contributing to global climate change. Organic materials--including waste that can be readily prevented, recycled, or composted--account for a significant portion of California's overall waste stream. In September 2016, Governor Brown signed into law SB 1383, establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) in various sectors of California's economy. SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from

the 2014 level by 2020 and a 75 percent reduction by 2025. The law granted CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets. CalRecycle is currently finalizing the regulations and is expected to adopt these regulations in early 2020. Regulations will be effective January 2022.

Sunnyvale already has an established FoodCycle program that collects more than 50 percent of food waste generated in the City through a source separation program. The FoodCycle program is currently available to single family residence customers and mid-to-large commercial customers. The collected food waste is processed into a fine mash at the Sunnyvale Material Recovery and Transfer (SMaRT) Station and is then sent to a SAFE (Sustainable Alternative Feed Enterprises) facility in Santa Clara for further processing where it is converted into ingredients for bio-diesel and fertilizer. Staff proposes to send the food mash to the Water Pollution Control Plant (WPCP) instead of sending it to SAFE. The food mash can be processed in the anaerobic digestors at the WPCP. The City currently processes 8,000 tons per year of food waste and this amount is expected to increase to 12,000 tons per year by the end of 2021 as a result of improved participation by single-family and program expansion to multi-family and commercial.

The municipal solid waste that is collected in Sunnyvale also has organic material. After processing at SMaRT, the organic fines are separated and are currently sent to Z-Best, a composting facility in Gilroy. Staff proposes to send the organic fines for further processing to South Bay Waste Management Authority (SBWMA). SBWMA has special equipment that can covert the organic fines into a mash that can again be processed by the digestors at the WPCP. This proposal is expected to divert another 15,000 tons per year of organic waste.

During the preliminary design of the WPCP Secondary Treatment project, the City requested that Carollo evaluate the changes needed to accommodate the additional food waste loading. The evaluation found that codigestion of the organics with the waste stream will result in a significant increase in the production of renewable bio-gas that can be utilized to offset the purchase of natural gas or electricity to power the WPCP, which would be a conversion of Food to Energy. City Council was provided with an update to the Sunnyvale Cleanwater Program’s study of food waste at a study session on August 27, 2019 (RTC No. 19-0948).

Per the WPCP Masterplan, food waste input to the WPCP was planned and intended to come online in FY 2026/27. This proposal advances this timeline by one year.

Changes to the Secondary Treatment project required to accommodate Food to Energy include:

- Additional side stream ammonia removal capacity
- Additional tanks for mixing the organics with the waste stream sludge
- Piping and pumps

These changes will allow the City to accommodate approximately 30,000 gallons per day (140 tons/day or 36,000 tons/year) of food waste. This volume is representative of the anticipated organics input from the entire City at the build-out of the Secondary Treatment project.

Processing organic food waste at the WPCP, instead of sending it to SAFE and Z-Best, reduces processing costs while producing energy. While construction costs to accommodate food waste are very preliminary (estimates range from $4 million to $16 million), using this cost range yields a

payback that is anticipated to be between 2 to 8 years if the quantity of foodwaste processed at the WPCP is as expected. Processing food waste at the WPCP also reduces the carbon footprint associated with transporting the food waste and the energy consumed to process the food waste at SAFE.

As agencies across the State begin to comply with SB 1383, the demand for composting facilities will surpass the currently available capacity of organic processing, making the cost of processing organics highly unpredictable. Creating an in-house organic processing option will result in a predictable cost option for the City as well as a reliable disposition method for organics that is under the City's control.

To keep the project timeline on schedule for the Water Infrastructure Finance and Innovation Act (WIFIA) loan application, City staff authorized $320,103 of the project's design contingency for Carollo to perform the initial food waste evaluation. Staff further negotiated with Carollo to establish fair pricing for these potential changes in the project design. With confirmation of implementing codigestion at the WPCP, City staff recommends restoring the originally approved contingency ($320,103) for the project and adding a 10 percent contingency ($121,719) for the additional design work which totals an updated design contingency not to exceed $441,822. At this time, only funds required to accommodate the design changes are being requested. In anticipation of the Food to Energy project, staff included these costs as part of the WIFIA loan application.

## FISCAL IMPACT

Sufficient funds are available in Project 833210 - Split Flow Conventional Activated Sludge System to support the additional $1,217,192 contract amendment and the contingency in the amount of $441,822. The contract increase utilizes money currently set aside for construction so it is a likely possibility that a budget modification to increase funds will be necessary at the award of construction contract. Currently, staff is only requesting an amendment to provide design services. An increase to this contract for additional Engineering Services During Construction for the Food to Energy portion will be requested at the award of construction contract for the Secondary Treatment and Dewatering project.

## PUBLIC CONTACT

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall, at the Sunnyvale Senior Center, Community Center and Department of Public Safety; and by making the agenda and report available at the Sunnyvale Public Library, the Office of the City Clerk and on the City's website.

## RECOMMENDATION

Take the following actions:

- Authorize the City Manager to execute the First Amendment to an existing contract with Carollo Engineers, Inc., in substantially the same format as Attachment 1 to the report, increasing the not-to-exceed contract amount by $1,217,192 for a new not-to-exceed contract amount of $18,963,308, and
- Approve an additional contract contingency in the amount of $441,822 for a new contingency amount of $2,041,355.

Prepared by: Gregory S. Card, Purchasing Officer
Reviewed by: Timothy J. Kirby, Director of Finance

Reviewed by: Ramana Chinnakotla, Director of Environmental Services
Reviewed by: Chip Taylor, Director of Public Works
Reviewed by: Teri Silva, Assistant City Manager
Approved by: Kent Steffens, City Manager

## ATTACHMENTS

1. Draft Amendment to Consultant Services Agreement