



**DATE:** May 14, 2019

**CATEGORY:** Consent

**DEPT.:** Public Works

**TITLE:** **Villa Street Water and Sanitary Sewer Main Replacement, Projects 13-21A and 13-22A – Accept Construction**

### **RECOMMENDATION**

Accept Villa Street Water and Sanitary Sewer Main Replacement, Projects 13-21A and 13-22A, and authorize the final contract payment.

### **BACKGROUND**

In 2015, the City replaced the existing sewer main along Villa Street between Castro Street and Hope Street as part of the Annual Water and Sewer Main Replacements, Projects 13-21 and 13-22. The sewer main was replaced by pipe bursting, a trenchless construction method. Pipe bursting was used in lieu of the traditional open-cut construction to reduce impacts to downtown traffic, businesses, and residents. The completed pipe-bursting work was accepted by Council on March 22, 2016.

A post-construction inspection of the new pipe revealed sags at the following three locations:

1. Intersection of Castro Street and Villa Street
2. Midblock of Villa Street between Castro Street and Hope Street
3. Intersection of Hope Street and Villa Street

Pipe bursting follows the profile of the existing pipe, so while the pipe is replaced, sags must be corrected by conventional trenching. To correct these sags and replace a short segment of water main at the intersection of Castro Street and Villa Street, the City Council authorized the award of a construction contract to C2R Engineering, Inc., for Villa Street Water and Sanitary Sewer Main Replacement, Projects 13-21A and 13-22A, on March 20, 2018. The contract was awarded at the low bid price of \$338,600, which included a \$32,800 construction contingency.

## ANALYSIS

Upon exposing the existing sewer main segments to be replaced on Villa Street, the contractor discovered unforeseen utility conflicts at all sewer segments that prohibited the replacement of the sewer main as originally identified. Details of conditions and mitigation measures are as follows.

### Villa Street and Castro Street Intersection

At the Villa Street and Castro Street intersection, the contractor discovered that existing active PG&E underground electrical lines were in conflict with the City's sewer main. These electrical lines were not at the location that PG&E provided to the City during project design. Furthermore, the City's sewer main was in between three electrical lines (two over and one under the sewer main) with little to no vertical clearance. This unforeseen field condition prohibited the replacement of the gravity sewer main because the elevation of the existing sewer main could not be changed.

Staff notified PG&E of the utility conflict, but PG&E was not able to complete design and relocate their electrical lines for the City's contractor to replace the sewer main. Therefore, the contractor temporarily mitigated the sags on Villa Street at Castro Street by vertically realigning the existing sewer main in place without removing the existing pipe. This was successful because the existing main is a thermoplastic polymer pipe which is a flexible plastic pipe that allows for minor bending by an experienced contractor.

Staff is in continuous contact with PG&E for the relocation of their electrical lines. They recently applied for a City excavation permit to relocate the power lines. Upon completion of the electrical relocation by PG&E, the existing sewer main at the Villa Street and Castro Street intersection can be replaced under a new construction contract.

The work to replace the existing water main at the Villa Street and Castro Street intersection was also eliminated after the contractor exposed the pipe, and staff found the pipe to be in better condition than expected. (The condition of the pipe was difficult to determine without exposing the pipe in the busy downtown corridor.)

### Midblock of Villa Street between Castro Street and Hope Street

The replacement of the sewer main at this segment was not feasible due to the fix of the elevation issue at the downstream segment at the Villa Street/Castro Street intersection

discussed above. However, the contractor was able to remove the sag completely by bending and lowering the existing sewer pipe due to sufficient clearance from other utilities.

### Villa Street and Hope Street Intersection

The contractor found existing AT&T conduits were in conflict with the City sewer main at the Villa Street and Hope Street intersection. These AT&T conduits were over the sewer main. The contractor was able to remove the sag completely by bending and lowering the existing sewer pipe similar to the midblock segment.

A summary of the work initially planned and actually implemented is depicted in the exhibits below.

#### Exhibit A – Planned Replacement



#### Exhibit B – Repairs Performed



The final construction cost of \$167,093 is within the construction budget of \$338,600 and included seven change orders and a final adjustment change order, resulting in a contract savings of \$171,507.

The recommended action would accept the modified scope of work as having been completed. The final repair of the sewer main at the intersection of Castro and Villa Streets will be included in an upcoming construction contract.

“Acceptance” of a construction contract is a legal event recognized by State law when the City verifies the contractor has satisfactorily completed a public project. Once accepted, the work on the public project is complete and other actions occur, such as final payment to the contractor and the release of bonds obtained by the contractor that ensure completion of the project. Following acceptance, the City becomes responsible for the maintenance of the public project.

**FISCAL IMPACT**

Villa Street Water and Sanitary Sewer Main Replacement, Projects 13-21A and 13-22A, has a project budget of \$448,000 from the following funding sources:

<b>Funds</b>	<b>Budget</b>	<b>Total Project Expense</b>
Water Fund, Project 13-21A	\$179,000	\$ 66,157
Wastewater Fund, Project 13-22A	<u>269,000</u>	<u>208,655</u>
Total	<u>\$448,000</u>	<u>\$274,812</u>

**ALTERNATIVES**

Determine that the improvements have not been completed in conformance with City standards and decline to accept the improvements until they are completed to the satisfaction of the Council.

**PUBLIC NOTICING** – Agenda posting.

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