

# ENGINEERING

## Capital Improvement Projects

Updated January 2017

### CONSTRUCTION PHASE

#### **1. Multi-Year Open Sanitary Sewer Repair Contract**

The Multi-Year Open Sanitary Sewer Repair Contract was awarded to Pacific Underground Construction, Inc. (San Jose, CA) in June 2014 for an initial two years, and extendable for three additional one-year periods at the District's sole discretion. Its purpose is to perform emergency and planned point repairs on our sewer mains and laterals. The contract amount for FY 2016-2017 is currently authorized in the amount of \$800,000, with the anticipation of an additional \$300,000 increase in the coming months. Over \$780,000 has been expended to date.

#### **2. Los Gatos Creek Trunk Sewer Rehabilitation (Vasona Park)**

The Los Gatos Creek Trunk Sewer Rehabilitation (Vasona Park) includes rehabilitation of approximately 6,100 feet of 15-inch to 27-inch diameter asbestos cement and reinforced concrete sewers within the County of Santa Clara's Vasona Park. The contract was awarded to SAK Construction, LLC (Rocklin, CA) for the amount of \$1,664,169. Pipeline rehabilitation using Cured-in-Place Pipe (CIPP) was completed in November, while manhole rehabilitation and a short section of pipe rehabilitation using pipe bursting technology will be completed in February 2017.

### DESIGN AND BIDDING PHASE

#### **1. University Avenue Sewer Rehabilitation Project (Blossom Hill to Hwy 85)**

The University Avenue Sewer Rehabilitation Project (Blossom Hill to Hwy 85) includes the rehabilitation of approximately 9,200 lf of 15-inch to 18-inch diameter asbestos cement pipe (ACP) and vitrified clay pipe (VCP) trunk sewers in Los Gatos. Design of the project was awarded to Brown and Caldwell (Walnut Creek, CA) with completion of the design expected in February 2017. Advertisement and award of a construction contract is expected to occur before May 2017.

#### **2. Quito Basin 3 & 4 Sanitary Sewer Rehabilitation Project**

The Quito Basin 3 & 4 Sanitary Sewer Rehabilitation Project includes the rehabilitation of approximately 8,700 lineal feet of existing 8 and 10-inch vitrified clay pipe (VCP) sewers in Saratoga. Design of the project was awarded to Brown and Caldwell (Walnut Creek, CA) with completion of the design and environmental clearance expected by the end of 2017. Advertisement and award of a construction contract is expected to occur in spring of 2018.

## **STUDIES**

### **1. Pipeline Condition Assessment Pilot Project**

Condition assessment of the District's sewer collection system is performed using CCTV (closed circuit television) equipment, referred to as pan and tilt CCTV video inspection camera. A District goal is to significantly increase its CCTV production such that it can perform condition assessment of its entire sewer system in an eight year cycle. In the past decade, a newer technology using digital pipeline scanning equipment has established itself as a technology which can dramatically increase production while also providing much higher resolution images. This pilot project will compare production rates between the current and new CCTV technologies. This project is being conducted by Brown and Caldwell (Walnut Creek, CA) and is expected to be completed by April 2017.

### **2. Hydraulic Modeling Expansion**

The District maintains a computer model of its major trunk lines in the collection system. This model allows the District to evaluate the hydraulic capabilities of its collection system under peak future wet weather flow conditions (10-year design storm events). The existing hydraulic model is being expanded to incorporate approximately 25% of the District's collection system. Updates to this model are being performed by RMC Water and Environment (San Jose, CA) with support from V&A Engineering Services (Oakland, CA). Completion of the expanded hydraulic model is expected by February 2017.

### **3. Inflow & Infiltration (I & I) Reduction Program**

Based on findings from previous Hydraulic Model Studies, an Inflow and Infiltration (I & I) Reduction Program was initiated in June 2016 to develop a plan to locate, identify, and eliminate sources of I & I entering the District's collection system. Typical I & I sources may include illegal connections of private area drains, roof gutter leaders, and basement sump pumps, and or defective sewer laterals/mains or manholes. The elimination of I & I has many significant benefits including reduced wastewater treatment costs, reduction of capital improvement project expenditures, and reduced risk of sanitary sewer overflows. V&A Engineering Services (Oakland, CA) is currently assisting with flow monitoring and I & I analysis. The plan is expected to be completed in May 2017 and will incorporate future investigatory field work to help pinpoint the contributors of I & I.

### **4. Santa Rosa Sewer Realignment Study**

The sewer system in the Santa Rosa Road area is located in the District's Hillside Zone, which is considered to be an area subject to unstable soil and above normal erosion potential. Some sections of the sewer system are currently being displaced and malformed due to land movement. The feasibility to realign and or relocate the sewer system in the Santa Rosa area is being studied by Brown and Caldwell (Walnut Creek, CA). This study is expected to be completed by July 2017.