



# Santa Clara Valley Water District

**File No.:** 22-0547

**Agenda Date:** 5/10/2022

**Item No.:** 3.2.

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## BOARD AGENDA MEMORANDUM

### **SUBJECT:**

Adopt Plans and Specifications and Authorize Advertisement for Bids for the Almaden Valley Pipeline Inspection and Rehabilitation Project, as part of the 10-Year Pipeline Inspection and Rehabilitation Project No. 95084002, Contract No. C0685 (San Jose, Unincorporated Santa Clara County) (District 1, District 7).

### **RECOMMENDATION:**

- A. Find that the Almaden Valley Pipeline Inspection and Rehabilitation Project is substantially complex and requires a construction contract retention of 10 percent;
- B. Adopt the Plans and Specifications and Authorize Advertisement for Bids for Construction of the Almaden Valley Pipeline Inspection and Rehabilitation Project per the Notice to Bidders; and
- C. Authorize the Designated Engineer to issue addenda, as necessary, during the bidding process.

### **SUMMARY:**

The objective of the Almaden Valley Pipeline Inspection & Rehabilitation Project (Project) is to ensure the reliability of the Almaden Valley Pipeline and to extend the useful life of the facility until a more robust long-term replacement strategy is constructed via the Almaden Valley Pipeline Replacement Project.

### ***Project Background***

The Almaden Valley Pipeline (AVP) transmission system includes approximately 11.6 miles of 72" to 78" prestressed concrete cylinder pipe (PCCP) and welded steel pipe. AVP begins at Calero Reservoir and ends at Vasona Pumping Plant. Raw water from San Luis Reservoir, Anderson Reservoir, and Calero Reservoir is conveyed through Santa Clara Valley Water District's (Valley Water) raw water transmission network to AVP. AVP then conveys this raw water to Santa Teresa Water Treatment Plant through Santa Teresa Force Main; to Rinconada Water Treatment Plant through Vasona Pumping Plant and Rinconada Force Main; and to Penitencia Water Treatment Plant through the Vasona Pumping Plant and Central Pipeline.

The AVP is comprised of three pipeline segments: Unit I (4.4 miles), Unit II Phase 1 (3.6 miles), and

### Unit II Phase 2 (3.6 miles).

This Project will shut down AVP to inspect and verify the condition of the Unit II Phase 2 segment and conduct Carbon Fiber Reinforcement Polymer repairs on sections of pipe that are currently being monitored with the Acoustic Fiber Optic monitoring system. Unit II Phase 2 is located between Santa Teresa Force Main and Calero Reservoir

The embrittled Unit II Phase 2 portion of AVP continues to degrade and poses a significant risk to the San Luis Reservoir, Anderson Reservoir, and Calero Reservoir raw water source availability. To maintain the availability and reliability of the water supply to the region serviced by AVP, routine maintenance, rehabilitation, and factual condition assessment considering the embrittled state of the Unit II Phase 2 portion of the facilities is necessary to ensure that AVP can continue to convey water to Santa Clara County. If AVP fails and is offline, Valley Water's raw water source will be reduced to the South Bay Aqueduct.

#### Inspection of Almaden Valley Pipeline

Staff will conduct a visual and electromagnetic inspection of the pipeline system to verify the Acoustic Fiber Optic (AFO) data received from the monitoring system. In preparation for the Almaden Valley Pipeline Replacement Project, Valley Water's Land Surveying and Mapping unit will also conduct an internal LIDAR scan of Almaden Valley Pipeline to obtain a point cloud/3D model of the pipeline.

#### Carbon Fiber Reinforced Polymer (CFRP) Repairs

A minimum of fifteen (15) pipes will be repaired with CFRP. As of the 2020 Almaden Valley Pipeline Emergency Response Project, fifteen (15) additional pipes have been identified for repair using data collected by the AFO monitoring system. Internal visual and electromagnetic pipeline scanning will verify unlocated wire breaks and may result in identification of additional pipes in need of repair.

#### Calero Pipeline AFO Repair

During summer of 2020, Valley Water vendor Pure Technologies identified that the AFO cable downstream of Bailey Line Valve is damaged and in need of repair. During the Project, Staff, assisted by the construction contractor, will repair the damaged AFO cable inside of Calero Pipeline.

#### **Construction Contract Retention**

Public Contract Code (PCC) Section 7201 limits retention amounts for public works construction contracts to five percent (5%) of the total contract price. PCC section 7201(b)(4) provides that retention proceeds on a project may exceed 5% where the Board makes a finding that the proposed project is "substantially complex" and, therefore, requires a retention amount greater than 5%.

To comply with the PCC in regard to increasing the retention to 10%, Staff recommends the Board find that the Project is substantially complex. Substantially complex Project challenges in this case pertain to the complexity and precision required to conduct critical work within a constrained

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shutdown schedule. Pipeline shutdown durations are negotiated up to years in advance and require the cooperation of other water agencies to minimize unplanned disruption in the delivery of water to Santa Clara County.

The shutdown-required work requires extensive coordination with a Valley Water third-party contractor to complete internal pipeline inspections and repairs. The full scope of the internal repairs is not known until a comprehensive electromagnetic and visual inspection of the pipeline is completed at the beginning of the shutdown and the results of the inspections have been analyzed. The level of precision and coordination required for this Project is unique and beyond what is customarily required to maintain and repair a pipeline.

### ***Relevant Prior Board Actions***

On November 13, 2007, the Board certified the Pipeline Maintenance Program Environmental Impact Report (PMP EIR) and adopted the Mitigation Monitoring Plan.

On April 13, 2010, the Board held a public hearing and adopted Resolution 10-29 approving the PMP Engineer's Report and approving the PMP.

On September 26, 2017, the Board ratified addenda and awarded the construction contract to Con-Quest Contractors.

From December 12, 2017, to May 8, 2018, the Board determined by a four-fifths vote that there was a need to continue the emergency action declared by the CEO on December 5, 2017, pursuant to California Public Contract Code §22050, to repair the Almaden Valley Pipeline, and terminated the emergency action on May 8, 2018.

On August 14, 2018, the Board accepted the work on the Almaden Valley Pipeline Carbon Fiber Reinforced Polymer Structural Repair Project, Structural Group, Inc., Project No 95084002, Contract No. C0636 as complete.

On April 9, 2019, the Board accepted the work as complete on the Almaden Valley Pipeline Inspection and Rehabilitation Project (Contract No. C0631) and the Almaden Valley Pipeline Emergency Response Support Project (Contract No. C0640), Con-Quest Contractors, Inc., Contractor, Project No. 95084002.

From January 14, 2020, to February 25, 2020, the Board received an update on the Almaden Valley Pipeline and determined by a four-fifths vote that there was a need to continue the emergency action declared by the Acting CEO on December 23, 2019, pursuant to California Public Contract Code §22050, to repair the Almaden Valley Pipeline, and terminated the emergency action on March 3, 2020.

On July 28, 2020, the Board accepted the work as complete for the Almaden Valley Pipeline Emergency Response Project, Kiewit Infrastructure West Co., Contractor, Project No. 95084002.

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From November 9, 2021, to January 11, 2022, the Board received an update on the Condition of the Almaden Valley Pipeline and determined by four-fifths vote that there was a need to continue the emergency action declared by the CEO on November 2, 2021, pursuant to California Public Contract Code §22050, to repair Almaden Valley Pipeline, and terminated the emergency action on January 18, 2022.

### ***Permits***

The Project is covered under the California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement (LSAA) Number 1600-2017-0225-R3, which was originally acquired for previous inspection and rehabilitation work on the Almaden Valley Pipeline. Staff has requested CDFW extend and amend the current LSAA to provide coverage for this Project. Staff will not recommend a construction contract be awarded until the necessary LSAA extension and amendment have been secured.

### ***Rights-of-Way***

Valley Water has received conditional encroachment permits from San Jose and the County of Santa Clara that will be finalized after award of contract to a construction contractor. No other rights-of-way are outstanding.

### ***Next Steps***

If the Board approves the recommendations, staff will proceed to advertise the Project for construction bids. Staff anticipates recommending the Board award a construction contract on July 12, 2022.

### **ENVIRONMENTAL JUSTICE IMPACT:**

There are no Environmental Justice impacts associated with this item.

### **FINANCIAL IMPACT:**

There is no financial impact associated with the recommendation to Adopt Plans and Specifications and Authorize Advertisement for Bids.

The Almaden Valley Pipeline Inspection and Rehabilitation Project, as part of the 10-Year Pipeline Inspection and Rehabilitation Project No. 95084002, is included in the Five-Year (FY) 2022-26 Capital Improvement Program (CIP) and in the Board-adopted FY 2021-22 Budget.

The estimated construction contract cost for the Project is between \$4 million and \$6 million. There are adequate funds in the 10-Year Pipeline Inspection and Rehabilitation Project's Board adopted FY23 budget to encumber the initial planned expenditures for construction to be incurred during FY23. Funds to cover subsequent fiscal year anticipated construction costs will be recommended by staff during the annual fiscal year budget process.

The Project is funded by the Water Utility Enterprise Fund with 96.3% of the costs of the 10-Year Pipeline Inspection and Rehabilitation Project allocated to Zone W-2 (North County), 2.9% to South County Zone W-5, 0.8% to South County Zone W-7, and 0.1% to South County Zone W-8.

**CEQA:**

As the lead agency under the California Environmental Quality Act (CEQA) Valley Water certified the Pipeline Maintenance Program (PMP) Final Programmatic Environmental Impact Report (PEIR) in November 2007. The PMP provides for the routine inspection, rehabilitation, and maintenance of Valley Water's raw and treated water pipelines, including the Almaden Valley Pipeline and the PEIR evaluates the potential environmental impacts of PMP activities. All inspection and maintenance components of the Project are consistent with the PEIR. Valley Water and its contractor will comply with all applicable mitigation measures from the PEIR during Project construction.

**ATTACHMENTS:**

Attachment 1: Notice to Bidders  
Attachment 2: Project Delivery Process Chart  
Attachment 3: Map  
Attachment 4: Plans  
Attachment 5: Specifications

**UNCLASSIFIED MANAGER:**

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