

Main Avenue and Madrone Pipeline Restoration Project Project No. 26564001

Engineer's Report



April 2017

Water Utility Capital Division

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MAIN AVENUE AND MADRONE PIPELINE RESTORATION PROJECT

PROJECT NO. 26564001

ENGINEER'S REPORT

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The Engineer's Report has been prepared under the direct supervision of the undersigned, who hereby certifies that he is a Registered Civil Engineer in the State of California



April 2017

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Main Avenue and Madrone Pipeline Restoration Project
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1. PROJECT DESCRIPTION

The proposed Main Avenue and Madrone Pipeline Restoration Project will replace existing damaged pipelines to restore the pipelines to full operating capacity, in order to meet current and future groundwater recharge demands in the Llagas subbasin. The project is being performed in accordance with the District's Capital Improvement and Safe Clean Water Programs, and is located in the City of Morgan Hill.

The following segments of raw water pipeline will be designed and constructed as a part of this Project;

- Segment 1: Replace the existing 16-inch pressurized steel pipe with a 36-inch pressurized High Density Polyethylene (HDPE) pipe from the Anderson Reservoir outlet structure to the intersection of Cochrane Road and Half Road. This segment represents a 2,800 LF portion of the Main Avenue Pipeline.
- Segment 2: Replace the existing 15-inch Reinforced Concrete Pipe (RCP), 16-inch pressurized steel-pipe, 18-inch pressurized RCP, and 24-inch RCP, with a 24-inch pressurized HDPE pipe from the intersection of Cochrane and Half Roads, to the Main Avenue Ponds. This segment represents the remaining 4,860 LF of the Main Avenue Pipeline.
- Segment 3: Replace the existing 24-inch RCP and 30-inch Corrugated Metal Pipe (CMP) with a 30-inch pressurized HDPE pipe from the intersection of Cochrane and Half Roads, to the Madrone Channel. This segment represents the 6,300 LF Madrone Pipeline.

The objective of the project is to restore the Main Avenue and Madrone Pipeline system to its full operating capacity of conveying 37 cubic feet per second (cfs) of water for groundwater recharge. At full operating capacity, the system is capable of conveying 10 cubic feet per second via the Main Avenue Pipeline, and 27 cubic feet per second via the Madrone Pipeline, from Anderson Reservoir or the Santa Clara Conduit, to the Main Avenue Recharge Ponds and the Madrone Channel.

In summary, the proposed Project will design and construct approximately 14,000 linear feet of 30 and 36-inch diameter raw water pipeline and appurtenances.

2. ZONE BENEFITS

All of the proposed Project work will benefit only customers of Zone W-5 (South County).

3. PROJECT RIGHT OF WAY

The proposed Project would be constructed in both public rights of way and private properties. The Project would require multiple encroachment permits from the City of Morgan Hill and the County of Santa Clara, permanent and temporary construction easements from private property owners as shown in figure 2.

The required permanent easements include the following:

1. A 20-foot wide by 1700-foot long easement on Assessor's Parcel Number (APN) 728-33-005 belonging to Mr. Mariani. (0.78 acre)
2. A 30-foot wide by 35-foot long easement on Assessor's Parcel Number (APN) 728-33-005 belonging to Mr. Mariani. (0.02 acre)
3. A 40-foot wide by 40-foot long easement on APN 728-27-007 belonging to Lam's Investment Company. (0.04 acre)

The required temporary construction easements for construction staging areas include the following:

1. A 50-foot wide by 130-foot long area on Assessor's Parcel Number (APN) 728-34-030 belonging to Anderson Dam LP. (0.15 acre)
2. A 70-foot wide by 110-foot long area on Assessor's Parcel Number (APN) 728-30-009 belonging to Llagas, LLC. (0.18 acre)
3. A 50-foot wide by 100-foot long and 20-foot-wide by 90-foot-long area on Assessor's Parcel Number (APN) 728-27-007 belonging to Lam's Investment Company. (0.16 acre)

4. MAPS AND FIGURES

Figure 1 - Project Location Map

Figure 2 - Pipeline Alignment and Easements Map

5. PROJECT COSTS

The estimated cost to plan, design, and construct the proposed Project is \$17.2 million (in 2018 dollars).

The proposed Project would be partially funded (\$6.3 million) by the Safe, Clean Water and Natural Flood Protection Program with the remaining balance funded by the Water Enterprise Fund (WEF). 100 percent of the WEF cost would be allocated to Zone W-5 (South County), as the proposed Project will benefit only customers of Zone W-5.

6. PROJECT SCHEDULE

- Acquire rights of way: June 2017
- Complete contract documents: August 2017
- Award Construction contract: October 2017
- Construction: November 2017 to November 2018

Figure 1 – Project Location Map

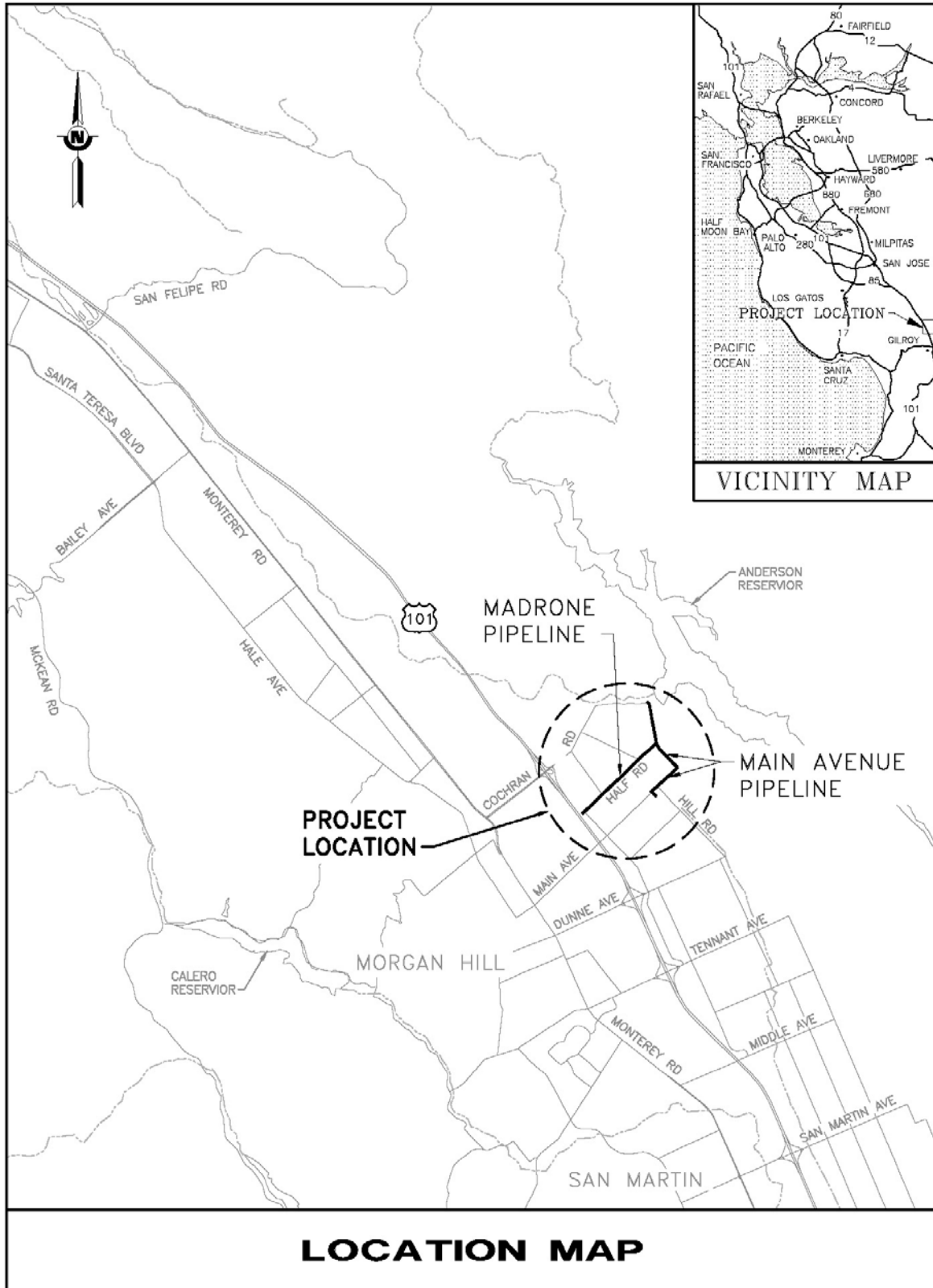


Figure 2 – Pipeline Alignment and Easements Map

