



To: Honorable Mayor and Members of Town Council

Through: David L. Corliss, Town Manager

From: Mark Marlowe, P.E., Director of Castle Rock Water

Title Resolution Approving a Construction Contract with T. Lowell Construction, Inc. for the Glovers Water Rehabilitation Project Phase 1

Executive Summary

Castle Rock Water is seeking Town Council approval of a resolution approving a construction contract (**Attachment A**) with T. Lowell Construction, Inc. (T. Lowell) for the Glovers Water Rehabilitation Project Phase 1. This project will replace all of the water mains in the Glovers neighborhood (**Attachment B**). Phase 1 will replace the mains in the southern portion of the neighborhood in 2021 and Phase 2 will replace the remaining water mains in 2022. T. Lowell submitted the lowest responsive bid for a total construction cost of \$1,707,000. Staff also requests approval for a 10% Town-managed contingency of \$170,700, for a total project authorization of \$1,877,700.

Notification and Outreach Efforts

CR Water will send out a notice of construction letter to residents. CR Water will also post a project update on the department's webpage.

History of Past Town Council, Boards & Commissions, or Other Discussions

This item was presented to the Castle Rock Water Commission on March 24, 2021, and the Commission voted to XXXX.

Discussion

The Glovers Water Rehabilitation Project is located east of S. Gilbert Street, between Ash Avenue and Elm Avenue. This project will replace the aging and undersized potable water distribution piping in this subdivision. There is a total of 10,544 linear feet of old 6" cast iron pipe that was installed in 1976. This subdivision has had a significant number of main breaks in recent years — 17 dating back to 2009, but with increasing frequency in the last few years. There have been approximately two to three main breaks per year for the past four years, and one already this year. Based on our experience and industry standard practice, these pipelines have reached the end of their useful life. Repair costs will continue to increase if the pipes are not replaced. Repair costs average approximately \$5,000 each, but that does not factor in the

inconvenience to the residents. This project will be constructed in two phases. Phase 1 will include the southern portion of the neighborhood and will involve replacement of 5,490 linear feet. Phase 2 will replace the water mains in the northern portion of the neighborhood, roughly another 5,000 linear feet, and will be constructed in 2022. The old pipe will be replaced with new 8” PVC pipe per current standards, which will also improve fire flows in the neighborhood. New fire hydrants and system valves will also be installed.

There is over just over 8 miles of old cast iron pipe (CIP) still active throughout Town, including the almost two miles in the Glovers neighborhood. Almost all of the cast iron pipe is 6 inch (6.33 miles), and most was installed in the period from 1966 to 1986. Less than a half-mile of cast-iron pipe of any size has been installed since 1995. With a practical life expectancy of 50 years, most of the CIP is reaching the end of its useful life. For planning purposes, \$750,000 to \$1,000,000 per linear mile is a reasonable cost estimate for replacement given that all of the pipe is in residential areas and under roadways. Roadway restoration is a significant portion of the overall cost to replace. Priority is given to replacing pipe in areas with a history of line breaks, where significant roadway improvement will take place, and/or where fire flow issues are a concern. Emphasis is also placed on the criticality of failure. For example, a pipe that fails under a bridge or railroad could have catastrophic consequences. A failure in a high value area such as a hospital could have significant consequences for life safety. The tables below show a summary of active cast-iron pipe in Town, by age and size. Current funding for the next five years for waterline rehab averages \$880,000 per year.

Year Installed	Miles	Age
before 1966	0.55	55+
1966 - 1975	2.87	45-55
1976-1985	4.14	35-45
1986-1995	0.21	25-35
post 1995	0.49	25+
	8.3	

Size, inches, diam.	Miles
4	0.9
6	6.3
8	0.4
12	0.6
	8.3

Future water replacement projects currently being designed for replacement in 2021 and 2022 include Prestwick Way in the Plum Creek neighborhood, portions of the Craig and Gould North neighborhood, and also in Castle North.

Budget Impact

The request for bids for the project was sent to six qualified contractors. Bids were received from four contractors, as summarized in the table below. The Engineer’s

estimate was \$1,685,513. The low bid was received by T. Lowell and is considered a responsive bid.

Consultant	Bid Amount
T. Lowell	\$1,707,000.00
RME	\$1,748,425.00
Global Underground	\$1,785,233.56
C&L	\$1,895,957.00
53 Corporation	No Bid
Iron Woman	No Bid

Sufficient funding for this project is available in the approved 2021 Budget following a first quarter budget amendment. The project will be funded from the Glovers Waterline Replacement Account (Account No. 210-4275-442-78-24). T. Lowell's bid is \$1,707,000. Staff requests an additional \$170,700 (Town-managed 10% contingency) be authorized for a total project authorization of \$1,877,700.

<u>Project Account</u>	<u>Amount</u>	<u>Contingency</u>	<u>Total</u>
210-4275-442-78-24	\$1,707,000	\$170,700	\$1,877,700

Staff Recommendation

Staff recommends Town Council approval of the resolution approving the construction contract between the Town of Castle Rock and T. Lowell Construction, Inc. for the construction for the Glovers Water Rehabilitation Project Phase 1 in the amount of \$1,707,000 plus a 10% Town-managed contingency of \$170,700 for a total authorization of \$1,877,700.

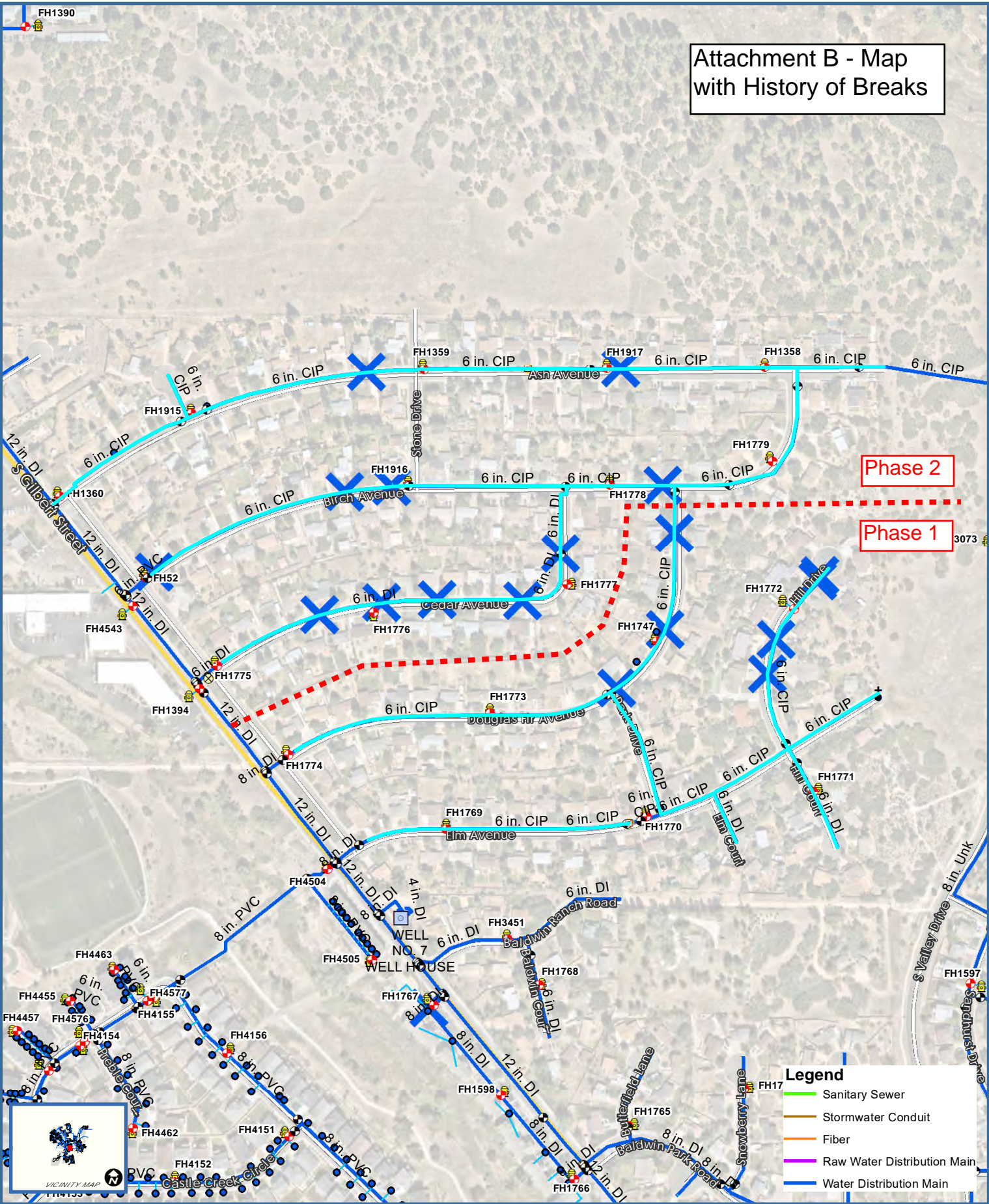
Proposed Motion

"I move to approve the resolution as introduced by title."

Attachments

- Attachment A: Resolution Approving a Construction Contract with T. Lowell Construction, Inc. (Not Attached)
- Attachment B: Project Map with History of Breaks

Attachment B - Map with History of Breaks



Phase 2

Phase 1

Legend	
	Sanitary Sewer
	Stormwater Conduit
	Fiber
	Raw Water Distribution Main
	Water Distribution Main



0 180 360 720 Feet

Date: 3/17/2021 1 inch = 357 feet
 Document Path: J:\GIS\Standard Maps\10.6\Letter Portrait_10.6.mxd



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CASTLE ROCK UTILITIES MAP (INTERNAL USE ONLY)