Richmond Gateway Sewage line extension

Estimated costs v2

1.11.2021

	Route of line: A Up Willis Hill	B Rte 2 ROW	B-A
connect to Phase 1 (to Reaps)	$250,000	$200,000	-$50,000
connect to Phase 2 (to Mobil Station)	$300,000	$200,000	-$100,000
connect to Phase 3 (to Riverview Common)	$600,000	$600,000	$0
TOTAL	$1,150,000	$1,000,000	-$150,000

Notes:

Per KC, Willis Hill cost estimates estimated costs included costs of some work on private properti n Phase 1 and 2
Willis Hill cost estimates are from GME engineering report 2016/2017 and are not 2021 costs
Willis Hill route is shorter but steeper; also through three private properties not in public ROW (Reaps, RLT, school)
Assume 3" force main for each Route, adequate size for all Phases, per GME and KC
Willis Hill costs do not include line from top of hill to Jericho Road (or improvements/takeover of school line)
Rte 2 estimates are intitial estimates per KC
Rte 2 ROW is preferable for future maintenance per KC

Opinion of probable Gateway extension costs 1/10/2021.

Per GME engineering report 2016/2017 – UP THE HILL
Phase I, CHMS to Reap property, includes private work, 3” force main, does not include pipe all the way to Jericho Road.
~$250,000
Phase II, Reap property to 920 West Main (Chiropractor), includes private work.
~$200,000
Phase III, 920 West Main to Riverview, includes private work at Mobil Station and force main with shut off/check valve/meter pit for the park to connect to.
~$700,000
Grand Total is ~ **$1,150,000 in 2017 $$$**

Per town price per ft quick estimates – ALONG ROUTE II, sized for Riverview
Phase I, Doherty house manhole in West Main to Reap property,
~3300 ft. 3” force main only @ $50/ft plus two combination shut off/check valve service connections @ edge of ROW and stub for future expansion.
(cost of meter and installation as needed responsibility of property owner)

~$165,000 plus ~$35,000 engineering, contingency, etc... = ~$200,000
Phase II, Reap property stub to 920 West Main (Chiropractor),
~1500 ft 3” force main and (10?) combination shut off/check valve service connections @ edge of ROW and stub for future expansion.
(cost of meters and installations as needed responsibility of property owners)

~$75,000 plus ~$25,000 engineering, contingency, etc...= ~$100,000
Phase III, 920 West Main to Riverview,
use GME estimate as the only change is no private work at the Mobil station, just a combination shut-off/check valve service connection @ edge of ROW.
(cost of meters and installations as needed responsibility of property owners)

~$700,000
Grand Total is ~ $1,000,000 in current $$$

Notes from Engineer Tyler Billingsley

1) I think the $50/ft for small diameter forcemain is reasonable. I should have been more clear…this is for the pipe install and does not include the other ancillary items you typically see on a project like this….bonds, traffic control, ledge (if discovered), some paving, etc. Although the pipe is the biggest cost, the small items do tend to add up. Either option (Reap Hill or Route 2) would see some of these extra costs, so it may not matter and come out even, but just wanted to note this on the pricing.

2) Several years ago I did a few inspections out at Riverview Commons (Phase 3). I have not worked with them for several years, so things may have changed, but I doubt it. Their system may only be 20 or 30 years old, but it is not in good condition and very susceptible to inflow/infiltration as well as grease. They are permitted for around 30,000 gallons per day, but on big rain or snow melt events, can see upwards of 50,000 gallons per day. 50,000 gallons per day through a small forcemain, especially over the distances we are discussing (almost two miles) seems very optimistic. I think the sizing of the forcemain required to serve Phase 3 may need to be revisited at some point to make sure we are on the same page. Just for reference, currently Riverview is served by a 6” forcemain that is about 0.5 miles long (it pumps from their common pump station up to their disposal fields). Even if the sizing worked out, to reconfigure their pump station and re-route a new forcemain to the closest public right-of-way (Route 117), they would have to put in 800’+ of private forecemain and new pumps…easily $40,000 to $50,000 (very likely much more). $50,000++ for a connection, then usage fees, may be a tough sell to Peter Brown/Falcon Management/Riverview.