

April 11, 2022

Tom Rooney- Superintendent
Barnstable Fire District Water Department
1841 Phinney's Lane
Barnstable, MA 02630

SUBJECT: Well #2 and #5 WTP 60% Design Cost Estimate

Dear Tom,

Construction costs are continuing to escalate industry wide due to supply chain issues, labor shortages, rising energy costs, inflation, and other factors. Based on recent manufacturer's quotes and bid results for similar projects we anticipate costs for the construction of the Well #2 and #5 water treatment plant to increase from the construction estimate presented in the preliminary design memo.

The estimated construction cost of the water treatment plant at preliminary design was \$15,880,000. This estimate projected the construction cost to the midpoint of construction, 8/1/23, carried a 4% factor for annual inflation, and carried a 15% contingency. Attached to this letter is the 60% Design cost estimate for construction of the water treatment plant for Wells #2 and #5. The updated construction cost is now estimated to be \$18,500,000. This cost estimate applies adjustments based on bids recently received for similar projects, projects the construction cost to the midpoint of construction, which would be reflected at the time of bidding, carries a 7% factor for annual inflation, and carries a 15% contingency.

While value engineering performed during preliminary design has left few non-essential items in the facility, we hope to work with the District to discuss possible options to reduce cost and produce a design that meets your needs. For construction of the design presented at 60% we recommend the District plan to budget for the construction cost estimated with contingency, attached. If you have any questions or would like to discuss further, please contact us.

Sincerely,

WRIGHT-PIERCE



Dylan Thisse, PE
Lead Project Engineer
Dylan.Thisse@wright-pierce.com

Enclosure: 60% Design Cost Estimate

CONSTRUCTION CAPITAL COSTS - GREENSAND+ PRESSURE FILTERS AND GAC

Item/Description	Unit	Quantity	Unit Cost	Extended Cost
General Conditions/ Contractor	1	LS	\$ 1,560,000	\$ 1,560,000
Civil/Site/Utilities*	1	LS	\$ 1,600,000	\$ 1,600,000
Building				
Excavation	1	LS	\$ 475,000	\$ 475,000
Concrete	1	LS	\$ 1,100,000	\$ 1,100,000
Structural Steel/Misc.	1	LS	\$ 200,000	\$ 200,000
Masonry	1	LS	\$ 620,000	\$ 620,000
Roofing	1	LS	\$ 165,000	\$ 165,000
Water/Damproofing	1	LS	\$ 110,000	\$ 110,000
Windows/Glazing	1	LS	\$ 80,000	\$ 80,000
Architectural Items	1	LS	\$ 710,000	\$ 710,000
Painting/FRP Paneling	1	LS	\$ 250,000	\$ 250,000
Plumbing/Fire Protection	1	LS	\$ 415,000	\$ 415,000
HVAC	1	LS	\$ 360,000	\$ 360,000
Electrical	1	LS	\$ 3,000,000	\$ 3,000,000
Temporary Power	1	LS	\$ 65,000	\$ 65,000
Solar Provisions***	1	LS	\$ 20,000	\$ 20,000
Electric Utility Service Allowance	1	LS	\$ 80,000	\$ 80,000
Rock Excavation	0	CY	\$ 150	\$ -
Building Total				\$ 7,650,000
Process Equipment / Installation				
Process Equipment	1	LS	\$ 3,100,000	\$ 3,100,000
Instruments/Controls	1	LS	\$ 410,000	\$ 410,000
Process Total				\$ 3,510,000
Bonds and Insurances	1	LS	\$ 250,000	\$ 250,000
Construction Subtotal				\$ 14,570,000
Construction Contingency	15%			\$ 2,190,000
Opinion of Total Probable Construction Cost (Future Value)**				\$ 18,500,000

*Estimate provided by GZA for civil site/utilities. This item includes a 30% contingency and a 7% inflation factor. Estimate dated 1/20/2022- PDR level.

** Future Value is determined using a 7% annual rate of inflation projected to the mid point of construction, estimated to be August 2023, for relevance to bid pricing.

*** Photovoltaic Panels to be Provided and Installed by others- cost not carried

ENR CCI Boston March 2022- 17395

AACE Class 2 Estimate (-15% to +20% accuracy range)