

## Libby Gibson

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**From:** Robert Gardner [rgardner@wannacommet.org]  
**Sent:** Wednesday, May 15, 2013 2:08 PM  
**To:** Andrew Vorce; Jeff Carlson; Kara Buzanoski  
**Subject:** Baxter Road  
**Attachments:** MEMORANDUMBaxterRoad5-15-2013.docx

Good Afternoon Everyone,

Please find my attached memo regarding estimated water costs to relocate the water utilities on Baxter Road from House #67 to the end. I am off-island the rest of the week, but am available by cell phone 508 325-2481 or e-mail. Thanks.

Kara, I took a shot at sewer costs, but there is no pride in authorship there. I wasn't sure how we left it yesterday.

Bob

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## MEMORANDUM

TO: Andrew Vorce, Kara Buzanoski, Jeff Carlson  
FROM: Bob Gardner  
RE: Baxter Road Water Utilities  
DATE: May 15, 2013

As I informed you guys yesterday by e-mail the Sconset Water Commission has authorized me to proceed with planning for replacement of the water infrastructure on Baxter Road. The area to be relocated is from south of Bayberry Lane in the vicinity of House # 67 to the Northern End of Baxter Road. The Commission has also vote to appoint me as their authorized representative for this effort. I have put together a cost estimate for the general cost components for moving the water main to the most westerly side of Baxter Road. The cost estimates for the water infrastructure work were developed from bids received on the Madaket Water Main Projects, updated material costs, water bid amounts on the Sewer Phase II-b project and contractor inquires.

### Engineering

The Siasconset Water Commission had authorized me to sign an engineering contract with Haley & Ward Inc. to develop the preliminary design and cost estimate to replace the existing 6" water main with an 8" water main to the west side of Baxter Road and reconnect the existing services. The cost of this contract is \$23,800.00 In order to determine the load bearing capability of Baxter Road and identify at what point it no longer is capable of supporting vehicular traffic the Siasconset Water Commission has authorized me to procure geotechnical engineering services. The most expedient way to accomplish this is to execute an amendment to the Haley & Ward contract to include these services. Because there is boring involved I am estimating that the cost of this service will be \$40,000. This construction phase is estimated to be 4 weeks. **Thus total preliminary engineering is estimated to be \$63,800.00.**

### Construction

The scope of the construction phase will include the installation of 3,020 feet of new 8" ductile iron ball and socket water main from house #67 to the end of Baxter Road at an estimated cost of \$135.00 per linear foot or a total of \$407,000. This cost is inclusive of all materials, labor, and equipment and resurfacing of the trench with asphalt. Ball and socket water main is used in areas where the soil is unstable, or is prone to instability, and is able to deflect up to 12 degrees (double the deflection on normal push on joint pipe) and will not leak or separate. Additionally, all of the existing water services will be reconnected to the new water main. The 16 services on the East side will cost \$750.00 per service to reconnect for a total of \$12,000 and the 23 services on the west side will be reconnected at a cost of \$400.00 per service for a total of \$9,200.00. Six fire hydrants will also be installed at a cost of \$6,000 per hydrant for a total of \$36,000.00. **Thus, the total estimated cost of construction is \$464,900.00.**

### Project Management

Project Management consists of resident engineering services, police details and administrative support from Wannacomet Water Company. The resident engineering costs are estimated at \$25,000 (this is comparable with the recent water main projects in Madaket). Police Details are estimated at \$2,200 per week for a construction period total of \$8,800.00. Administrative support services from Wannacomet Water Company are estimated to be \$1,000.00. **Therefore, total estimated project management costs are estimated to be \$34,800.00.**

**Cost Summary**

Engineering	\$ 63,800
Construction	\$464,900
Project Management	\$ 34,800
Total	\$563,400
Contingency of 15%	\$ 84,510

**Total Estimated Project Cost \$647,910**

I spoke with Robert Pickering, PE at Haley and Ward today and we scheduled a site visit to Baxter Road in the next two weeks with a Geotechnical Engineer which will give us a better grasp of the engineering costs.

I am not sure if Kara is working on Sewer Costs, but I think it is safe to say that the cost to provide sewer service would be considerably higher than the water costs. While the existing sewer main favors the westerly/center portion of Baxter Road which provides a little more buffer than that afforded the water main when the decision is made to provide sewer service at an alternate location it would involve securing easements or a taking, the use of gravity would be greatly reduced if not eliminated which would necessitated the construction of pumping stations. Pumping stations would also increase the short and long term operating and maintenance expenses. If I had to give a number I would estimate that the cost of the sewer relocation less land acquisition costs would be at least three times that of the water cost for an estimated engineering, construction and project management cost of \$1,690,200.00. This is not a WAG, but it is pretty rough.