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April 9, 2008

Mr. Dennis Croteau
Douglas Water Department
29 Charles Street, P.O. Box 624
Douglas, MA 01516

Subject: Town of Douglas, Massachusetts
Proposal for Engineering Services

Dear Dennis:

Fay, Spofford & Thorndike, LLC (FST) is pleased to submit this proposal to perform engineering services for the Town of Douglas, Massachusetts to:

1. Review the Aquifer Protection Bylaw
2. Update the Water Facilities Master Plan and
3. Explore for groundwater sources of drinking water.

Phase 1: Review of the Aquifer Protection Bylaw

The Town wants to encourage possible industrial and commercial development along Route 146. Much of this area under consideration lies within the Town's Aquifer Protection District although the Town has no water supply sources in this area currently. The engineering services provided will include the following:

- Review local zoning bylaws and other pertinent documents, and confer with Town officials to discuss the existing bylaw and planned land usage that might effect it,
- Review hydrogeologic reports previously prepared for the Town,
- Evaluate refinements to the delineated aquifer protection zones in light of the Zone 2 for all the wells mapped by the Department of Environmental Protection (DEP),
- Confer with Town officials, as required, during the progress of the work,
- Prepare a concise report outlining our findings and recommendations and submit five copies to the Town, and

- Attend one meeting with Town officials to discuss the findings

Phase 2: Update the Water Facilities Master Plan

The engineering services provided will include the following:

- Review previous studies and reports including the 1995 Master Plan, developed by Fay, Spofford & Thorndike, Inc. (FST).
- Review local zoning bylaws and other pertinent documents, and confer with Town planning officials to discuss existing and planned land usage.
- Update the existing water system map and hydraulic model to show improvements made to the water system since 1995.
- Determine the present Town population, service population, and current water requirements, and make projections for the years 2020 and 2030.
- Conduct hydrant flow tests and make other system operation measurements as necessary to define system operations. Perform calculations to establish flow capacity at strategic locations in the pipe network and the carrying capacity of important existing mains.
- Investigate existing wellfields, including adequacy of current capacity, potential capacity increase of existing wells, and feasibility of rehabilitating or expanding existing wellfields.
- Determine adequacy of transmission and distribution mains, and storage facilities.
- Investigate potential growth in industrial areas of the Town. Evaluate improvement options needed to expand water service to these areas.
- Perform computer analyses of the distribution system to locate inadequacies and recommend improvements to establish system adequacy under domestic and fire flow conditions projected through the 20-year planning period.
- Develop a 20-year Capital Improvements Program, including project cost estimates, for each recommended improvement.
- Evaluate available funding sources for implementation of the recommended improvements.
- Show all recommended improvements on the Master Plan.
- Prepare a concise report outlining our findings and recommendations.
- Submit draft and five final copies of the Master Plan Study and Report.

- Confer with Town officials, as required, during the progress of the work.

Phase 3: Conduct Groundwater Explorations

The proposed Master Plan will evaluate the current water supplies of the Town relative to its projected water demands. The plan may recommend the exploration for additional sources.


- Review previous studies and reports prepared for the Town and available applicable USGS publications.
- For areas with favorable hydrogeologic settings, review local land use, distances to water distribution system, the presence of Town-owned land, and availability of undeveloped land.
- Develop an exploration program that includes geophysical investigations, and the installation and testing of small diameter test wells for review by the Town.
- Conduct the exploration program upon receiving Town approval
- Prepare a report presenting the results of the exploration program along with, recommendations for further testing and possible land acquisitions.

FST would be pleased to discuss this proposal with the Board at its convenience including level of effort and price. If you have any questions, do not hesitate to call.

Very truly yours,

Fay, Spofford & Thorndike, LLC

By



Dennis P. Boucher, P.E.
Vice President