

BREM 050-08-14-2014

Brem - 050 - 08, 14, 2014

Horsley Witten Group
Sustainable Environmental Solutions

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August 14, 2014

VIA EMAIL

Town of Carlisle, Zoning Board of Appeals
Steve Hinton
66 Westford Street
Carlisle, MA 01741

RECEIVED
AUG 14 2014

TOWN CLERK-CARLISLE
CHARLENE M. HINTON

RECEIVED
AUG 14 2014

crh

Re: Environmental and Engineering Consulting Services
Long Ridge Road, Carlisle, MA

Dear Mr. Hinton:

The Horsley Witten Group, Inc (HW) is pleased to submit this proposal to provide Environmental Consulting Services regarding a technical review of the proposed 40B project located at the above referenced address. HW has conducted dozens of similar reviews and has provided testimony at local and state hearings and expert testimony in court on similar matters.

Based upon my preliminary review of the project it warrants a review of the adequacy of private wells as a viable drinking water source, design of the shared septic systems (with shallow water table conditions) and the adequacy of the stormwater management system. Our proposal also includes a provision to provide a general engineering standards compliance analysis that includes traffic and circulation impact review to be provided by our subcontractor McMahon Associates.

1. Preliminary Review: HW will review all available plans, reports, test pit data, and related publicly available data including MAGIS. HW will identify key issues and with regard to probable compliance with the Massachusetts Wetlands Protection Act and Regulations, Massachusetts Stormwater Standards, Massachusetts Drinking Water Regulations, Massachusetts Surface Water Quality Standards and Title 5.

Budget: \$500

2. Conference with Client and Site Visit: HW will meet with client to discuss the issues identified, and project review objectives (including any desired project changes) and will develop a strategy to attain these objectives (including the need for additional hydrologic analyses and/or water quality impact assessments). HW will also conduct a site visit to view the subject property and abutting properties.

Budget: \$800

3. Hydrogeologic Evaluation: HW will utilize existing available information provided by the Applicant and other sources to conduct a groundwater mounding analysis and a flow net analysis. The groundwater mounding analysis will evaluate the hydrologic modifications to the water table as a result of the proposed wastewater and stormwater infiltration systems. These discharges will result in "mounding" of the water table, compromising the functioning of the systems, and possible modifications in flow direction. The flow net analysis will

evaluate the potential impacts of the proposed wastewater and stormwater discharges on private drinking water wells in the neighborhood. HW will also evaluate the impacts of the proposed project on adjacent wetland system.

Budget: \$5,000

4. Preliminary and Final Reports: HW will prepare a preliminary written report with supporting graphics, tables and charts. The report will document our project review method, our findings and recommendations for the protection of public health and wetlands. After reviewing this report with the applicant and the town, and following responses and revisions, HW will prepare a second, final report with our revised comments and recommendations

Budget: \$2000

5. Traffic, Public Safety & Circulation Analysis: HW will retain McMahan Associates to perform a review of the proposed roadway layout and traffic impacts associated with the proposed development. The subcontractor will prepare preliminary and final letter reports that outlines their findings. This will include a field visit to assess the existing roadway conditions and to evaluate the sight distance at the proposed intersection of Long Ridge Road/Project Site Driveway, determination of trip generation, evaluation of proposed driveway layout with regard to sight distance and internal circulation (including emergency vehicle/fire truck access), compliance with town standards for cul-de-sac dimensions, and a review of accident history on the adjacent roadways over the last three years. A draft and final letter report will be prepared and provided. A representative of McMahan will attend two meetings. Additional meetings will be attended and billed at our contracted hourly rates.

Budget: \$2,500

6. Meetings: HW will prepare for and attend public meetings to present our findings and answer questions. For the purposes of this proposal we have budgeted for three meetings. Additional meetings will be attended and billed at our contracted hourly rates.

Budget: \$2,400

TOTAL BUDGET: \$13,200

I will serve as the Project Manager and primary expert for this project and will participate directly in the public meetings. I have extensive experience in site design, wastewater and stormwater management, and water quality assessments and have worked on dozens of 40B projects, some for the applicant and some as a peer reviewer. I will be supported on the project by Neal Price, Senior Hydrogeologist who will conduct the groundwater mounding analysis. Please call me with any questions at my cell 508-364-7818 as I will be out of my office until next Tuesday. I look forward to working with you on this project.

Sincerely,

HORSLEY WITTEN GROUP, INC.

**ACKNOWLEDGED AND ACCEPTED
BY:**

Name

Title

Mr. Steve Hinton
August 14, 2014
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A handwritten signature in black ink, appearing to read 'SWH', with a stylized flourish extending to the right.

Scott W. Horsley
Principal