

April 26, 2007

Mr. Jay Rourke, Project Manager  
Boston Redevelopment Authority  
One City Hall Square  
Boston, MA 02201-1007

Subject: 121 Brookline Avenue

Dear Mr. Rourke:

Thank you for the opportunity to comment on the Project Notification Form for 121 Brookline Avenue. The Boston Groundwater Trust was established by the Boston City Council to monitor groundwater levels in areas of the City where the integrity of building foundations is threatened by lowered groundwater levels and to make recommendations for solving the problem. As such, my comments are limited to groundwater related issues.

As noted in the PNF, the project is located in the Groundwater Conservation Overlay District. I appreciate the commitment by the proponent to meet the recharge requirements of Article 32 and the commitment to work with the Trust to protect groundwater levels in the area. I look forward to meeting with the proponent to discuss locations for the promised groundwater observation wells to monitor groundwater levels before, during, and after construction. The well readings should be shared with the BRA and the Trust on a regular schedule to be agreed on during the approval process. I appreciate the proponent's commitment in the PNF for contingency plans including additional recharge if groundwater levels drop to unacceptable levels. These levels should be defined during the review process.

Most importantly, Article 32 requires that projects show that they are designed so that they cannot lower groundwater levels on site or on adjoining lots. This requires careful consideration of foundation design, especially when there is planned below grade space, in this case the two level parking garage. The PNF speaks of a membrane type of waterproofing protecting the below surface perimeter walls. In further correspondence, the proponent has indicated that he plans to use spray applied or sheet membrane waterproofing. Quality control in the installation of this waterproofing is critical. Improperly designed and

installed membranes have been cited as likely causes of groundwater leakage into other structures in Boston.

The proponent also plans to use an underdrained slab-on-grade. While we would prefer to waterproofed structural slab, the proposed design can be acceptable if it is properly designed and installed to assure that the drains are not removing groundwater from the upper aquifer in which wood pilings are located. The type of backfill used between the perimeter foundation walls and the sheet pile cofferdam is of major importance. This backfill should be a “plastic” soil with a plasticity index of at least 15% to avoid creating a path from the upper level aquifer to a lower stratum that could lead to the draining of the upper aquifer.

The proponent has been open to suggestions for improvement since the scoping session. I look forward to continuing to work with him and with the Authority to assure that this project can have only positive impacts on groundwater levels in Boston.

Very truly yours,

Elliott Laffer  
Executive Director

Cc: Kathleen Pederson, BRA  
Maura Zlody, BED