

May 29, 2007

Mr. John FitzGerald
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201-1007

Subject: Emmanuel College

Dear Mr. FitzGerald:

Thank you for the opportunity to comment on the Notice of Project Change for the Emmanuel College Academic Science Building. The Boston Groundwater Trust was established by the Boston City Council to monitor groundwater levels in sections 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 restricted to groundwater related issues.

As the NPC states, the project is located within the Groundwater Conservation Overlay District and is subject to the requirements of Article 32. I appreciate the commitment of the proponent to meeting the recharge standard of the Code and look forward to working with Emmanuel to make sure that this is done in the most effective way possible.

Article 32 also requires that the project demonstrate that it cannot cause a reduction in groundwater levels on the site or on adjacent lots. Because the building includes a three level underground parking garage, it is especially important that steps be taken to make sure that this standard is met. Critical to success in meeting the standard is proper waterproofing of all below water table surfaces. Unfortunately, there is no mention of waterproofing in the NPC, making it impossible to determine if the standard will be met.

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.

In order to further assure that the project is meeting groundwater standards, the project should install a groundwater observation well at a location to be chosen in consultation with the Trust. This well should be monitored before, during, and after construction to assure that the project is not leading to a reduction in groundwater levels. The well should be constructed to BGwT standards and should be turned over to the Trust for incorporation into our observation well network after completion of the project.

I believe that meeting all of the concerns outlined above is necessary to satisfy the standards of Article 32. I look forward to working with the proponent and the Authority to assure that the project can only help to improve the groundwater situation in Boston.

Very truly yours,

Elliott Laffer
Executive Director

Cc: Kathleen Pederson, BRA
Maura Zlody, BED