

May 13, 2005

Mr. Mark McGowan
Boston Redevelopment Authority
One City Hall Square
Boston, MA 02201-1007

Subject: 1330 Boylston Street

Dear Mr. McGowan:

Thank you for the opportunity to comment on the Project Notification Form for this project. The Boston Groundwater Trust was established by the Boston City Council to monitor groundwater levels in areas of the city where wood piling building foundations are threatened by lowered groundwater levels and to make recommendations for overcoming the problem. As such, my comments are limited to groundwater related issues.

I appreciate the proponent's plans to conduct a comprehensive groundwater survey prior to excavation and to consult with the Trust about the potential need for additional groundwater monitoring wells. That said, the proponent's foundation plans, as outlined in the Groundwater Control section of the PNF, raise concerns.

The proponent has maintained, both in the document and in discussions during and after the BRA's scoping session, that the fact that the slab and its underdrain will be located in the relatively impervious clay means it is unlikely that the drainage will cause a negative impact on surrounding groundwater levels. There are two primary concerns with that argument: first, if the unlikely comes to pass, it is difficult to overcome the damage; second, the statement is only true if there is no path for the groundwater in the aquifer above the clay to take to the drain level.

To overcome the first problem, the proponent should commit to install a recharge system using captured rainwater from building roofs to build up groundwater levels. Such a system would likely be easier to engineer and install during initial construction than during a later effort to overcome a problem and would provide immediate benefit even if the underdrain system turns out not to cause a problem.

A remedy to attempt to positively circumvent the second problem would be to backfill the zone between the perimeter barrier with impervious clay rather than standard granular fill to a level above the groundwater. The clay must be placed in a controlled, layered manner and compacted to substantial density, and thoroughly fill the nooks and crannies around the wall and sheeting system. If this method is chosen, an inspection report signed and stamped by a competent registered professional engineer should be required to assure that the clay was in fact used for all of the backfill up to the level specified. Additional groundwater observation wells should be installed around the perimeter to assure that no groundwater drawdown is occurring. Certification on an annual basis, after construction, that no groundwater pumping is taking place from the building should be required.

An alternative that will eliminate the need to install the underdrain system and its potential for causing problems is to use a waterproofed reinforced concrete mat slab to overcome the buoyancy forces that the underdrain is designed to relieve. Such foundations have been installed in Boston for decades and are being proposed in an increasing number of recent building plans.

I look forward to working with the proponents and with the Authority to develop a plan that assures that this project goes forward in a way that assures that it will have no negative impact, and hopefully a positive effect, on surrounding groundwater levels.

Very truly yours,

Elliott Laffer
Executive Director

Cc: John Walser, BRA
Maura Zlody, BED