



# The Wilber School Redevelopment Project

Sharon, Massachusetts

## Incorporating Integrated Water Management Techniques in an LID Mixed-Use Redevelopment

The Horsley Witten Group, Inc. (HW) was retained by the Town of Sharon to provide a concept for a hydrologically sustainable redevelopment for the historic Wilber School property that integrates smart growth and low-impact development (LID) principles. The prominent location of the historic site within downtown Sharon, the 3.7-acre size of the site, the iconic visual presence of the property, and the role of this former school in the lives of many long time residents, all contribute to the strong attachment the community has for this property. The concept plan proposes a mixed-use development that includes a new library, affordable housing and commercial opportunities. These inter-related land uses will foster pedestrian access, reduce automobile traffic and minimize environmental impacts. Specific hydrologic objectives for the site include improving water quality by reducing nitrogen loading to a downgradient water supply well and augmenting baseflow to the nearby Beaver Brook.

Water conservation measures will include the use of stormwater for irrigation and toilet flushing, which will result in a 30% reduction in water demand (Vickers, 2001). The majority of the roof runoff will be directed to a series of cisterns that will store the rainwater for toilet flushing and outdoor irrigation. In addition, a portion of the roof runoff will be directed to stormwater planters, designed as aesthetically appealing landscape features in close proximity to the buildings and pedestrian ways. Parking lot runoff will be directed to bioretention areas that will provide high level treatment of stormwater prior to infiltration and recharge and will also provide an attractive vegetated landscape feature to the property.

In order to decrease nitrogen loading to the town water supply, a sewage treatment plant is proposed to provide enhanced treatment of both onsite and offsite wastewater flows from the nearby Pleasant Street Apartments and ten nearby homes that may be experiencing Title V problems. A submerged wetland contained in a solar greenhouse will provide a high level of treatment while providing an educational opportunity, illustrating an innovative sewage treatment technology.

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