

Providing Quality Engineering For Our Water Resources Since 2002

**Client**

City of Hartford, Wisconsin  
 Hartford Engineering Department and Library Board  
 Contact: Gary Koppelberger, City Administrator  
 (262) 673-8204

**Project**

Design of a new public library and related site

**Overview/Description**

Stormwater Solutions Engineering, LLC contracted with the City of Hartford to assist the architecture and site team to design features into the site that would improve water quality, reduce flows, and fit into the very space-constrained site.

**Concerns/Challenges**

- Proposed building and parking lot left little green space for traditional stormwater management
- Project is on the bank of the Rubicon River
- Hard surfaces increased runoff beyond existing storm sewer capacity
- Low maintenance options desired
- City's DNR Stormwater Permit requires a decrease in total suspended solids from city-owned property

**Actions Addressing Challenges**

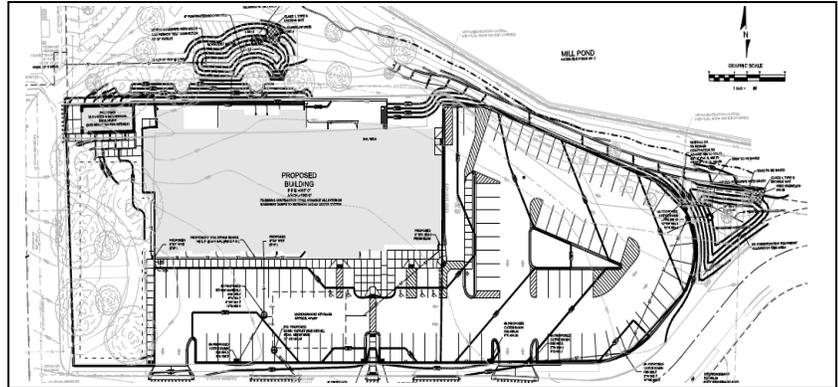
Two distinct solutions were designed for this site:

**Bioretention Devices (BioGardens)**

- Bioretention devices (Biogardens) use "engineered soil" along with stormwater storage both above and below ground to store and treat stormwater. Two bioretention devices were designed and built for this site.
- Plant species used with the BioGardens are Wisconsin natives and are tolerant of our climate, both during heavy rains and periods of drought.
- Stormwater from the parking lot and site is directed to the BioGardens, allowing for the drainage from the site to be cleaner, cooler and released to the Rubicon River at a slower rate.

**Underground Storage**

- "Clean" roof water directed to storm sewer increased flows to the city's storm sewer. SSE designed an over-sized underground pipe system with a reduced outlet size, to temporarily hold the increases in flow and slowly release that water to the storm sewer.



**Proposed Site Layout**

**Bioretention Devices (BioGardens)**

**Underground Storage**



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