

Lake Street Extension Burlington, Vermont

Owner: Community and Economic Development Office

Services Provided: Civil and geotechnical engineering, plus construction inspection & testing.

Problem: Build a 400-foot extension to Lake Street on a narrow Brownfield site with no adjacent stormwater system. Additional constraints involved numerous old foundations and junk fill left from previous railroad and waterfront activity.



New Depot Street Paved Swale

Design Approach: In order to reduce the chance of contact with the soil contaminants, the site was capped with 4 to 8 feet of soil. Stormwater runoff was collected from upper Depot Street by a new paved swale and directed to a new treatment system. Stormwater treatment was achieved by means of a pre-treatment box and sand filter buried beneath Lake Street Extension. A new 24" PE stormwater outfall was designed through the Waterfront Park to handle 100-year design flows from the Depot Street, Lake Street Extension and Waterfront Housing watersheds.

Construction: The project was constructed between the summer of 2003 and the fall of 2004.

Concept Design: Site grading concepts had to incorporate the findings of the Phase 2 Environmental Assessment Report. Site stormwater design needed to address existing flooding problems at the bottom of Depot Street; stormwater treatment needed to result in 80% removal of TSS and 40% removal of phosphorus. The limited shape and size of the lot did not permit the use of aboveground treatment ponds or ditches.



Sand Filter for Stormwater



New 24" PE Outfall