



Culvert Outlet and Retaining Wall

Dufresne Group provided design and construction services for a 9' x 7' precast box culvert under the Washington Railroad right-of-way and Barre Street, replacing a storm-damaged corrugated metal culvert.

The existing culvert was overwhelmed by runoff flows during the May 2011 storm event, which qualified the project for Federal Highway Administration (FHWA) Emergency Repair grant funding, administered by VTrans.

The project development phase included a Hydrological and Hydraulic study, topographic survey and right-of-way documentation. The contract documents included design plans for a 140' long box culvert, cast-in-place concrete retaining wall and replacement of water, storm and sewer main.

KEY FEATURES:

- Construction challenges included accommodating adjacent property owner's access.
- Culvert located under the railroad right-of-way required specialty culvert design for E80 Cooper loading
- Replacement design incorporated a concrete box constructed with bed retention sills to hold native gravels to allow fish passage.