

Case Study:

Route 40 Culvert - Westford, MA

DOCUMENT

The Keyes Brook culvert, which crosses under Route 40 in Westford, was comprised of a stone arch structure that experienced a partial collapse in 1987. When the collapse happened, a corrugated metal pipe was inserted into the structure to provide additional structural strength, however, over time the bottom of the pipe corroded. It was imperative that the entire culvert be replaced given that nearly 10,000 vehicles travel along Route 40 each day.



DESIGN

LandTech utilized 3D laser scanning to obtain the exact dimensions of the existing culvert, for use when analyzing the entire watershed, to determine the adequate size of the new culvert. Careful planning and scheduling by the Town enabled the construction to proceed, with the entire road shut down for two weeks, in order to place the new precast structure.



DEVELOP

The FEMA Hazard Mitigation Grant that was awarded to this project worked exactly as the program intended. The Town saw a potential hazard, applied for the grant, and fixed the issue before any catastrophic event could take place.

