

## Mayfield Village & Cleveland Metroparks' Foster's Run Mayfield Village, Ohio

URS provided complete multidiscipline services to daylight 1500 lineal feet of Foster's Run, located in the North Chagrin Reservation of Cleveland Metroparks. The project employed natural channel design and bioengineering slope stabilization techniques to daylight the formerly culverted stream channel.

Rapid development in the 1960s and 1970s dramatically increased stormwater runoff from the watershed resulting in erosion gullies up to five feet deep which washed out portions of Buttermilk Falls Road. The site was considered the most severely eroded tributary in the Chagrin River watershed.

The project restored a multi stage stream channel, carefully fit within the meandering, heavily forested ravine. Extensive HEC RAS modeling was required to test a variety of design options to control erosive velocities. A series of rock cascades, and step pools were devised to reduce the average stream gradient from 4% to just over 2%, and restore stream morphology. Extensive native plantings are reestablishing a riparian corridor.

The project produced a number of other benefits including:

- an 0.6 mile connector trail,
- restoration of more than 8 acres of wetlands, degraded by decades of sedimentation.

URS assisted the owners with a successful Clean Ohio Conservation Fund Grant application for \$720,000. URS coordinated construction of the \$1 million stream restoration project and was completed within budget.



Step pools were effective in managing stream velocities as well as restoring stream habitat.



Stream overflows resulting in closing of the park road



Above & Below: A 0.6 mile all purpose trail reconnects the upper and lower portions of the park.



URS stabilized the stream channel with a series of rock cascades, step pools, as well as restoration of a multi stage channel. This stream restoration allows for not only a stabilized stream bed, but also the new All Purpose Trail running along side it.

This project won an Ohio ASLA Award in 2007.