Three bendway weirs direct flow away from the formerly eroding streambank.

Before this project, the force of the flow was directed at the streambank.

Did You Know?

Soil is great when it’s in your garden, but when too much of it gets to our rivers and lakes, it causes problems. Excessive sediment degrades habitat for fish, decreases water clarity, increases dredging costs for navigational channels, and can increase the cost of drinking water treatment. When water travels over bare ground during storms, it picks up soil. This sediment-laden water runs into streams. Eroding streambanks also contribute sediment to streams and rivers. Stabilizing this section of eroding streambank is expected to reduce the amount of sediment entering the Chagrin River by 14.7 tons each year.

This project also creates a better environment for park visitors. Before this project, the streambank was so steep that the City had to fence it off due to safety concerns. Now the bank has a more gentle slope that promotes visitor access to the river as well as minimizing erosion.

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Todd Field
Bendway Weirs

Bendway weirs are constructed by placing the largest rocks first, and then placing smaller and smaller rocks in the gaps until each weir is complete.

To prevent the river from cutting behind the weir, each weir has a key (stone filled trench) that continues up the slope.

The roots of woody plants add further stability to the slope. The roughness provided by vegetation also helps to lessen the force of erosion on the bank.

The City hired an experienced design-build team to ensure that the weirs were placed at the correct locations and angles to avoid causing erosion on the opposite streambank.