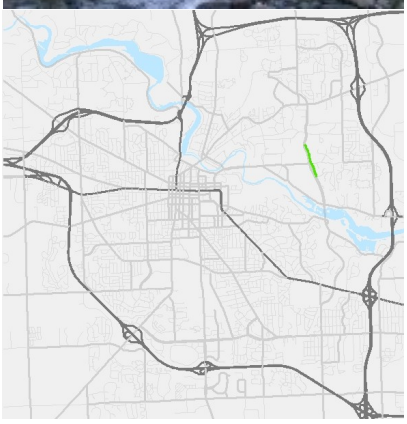
City of Ann Arbor Green Infrastructure

Millers Creek Bank Stabilization

- **Completed**: 2008
- **Design Cost**: $149,300
- **Construction Cost**: $881,800
- **Stormwater Utility Fund Portion:** $921,200
- **Other GI Funding Sources**: Street Maintenance Fund $109,900

Green Infrastructure:

- Longitudinal stone toe
- Turf reinforcement mats
- Erosion control blankets
- Articulated concrete blocks
- Slope flattening
- Live brush layering
- Live staking
- Live fascines
- Mechanically stabilized earth
- Geocell wall



The banks of the west side of Millers Creek between Hubbard and Glazier Way were severely eroding with vertical banks as high as 15 feet in some areas. This section of creek was moved between 1964 and 1967 when Huron Parkway was constructed.

The Millers Creek Watershed Improvement Plan, completed in April 2004, determined this as a high priority area and recommended using natural bank stabilization techniques. To prevent the road from eroding further, a design consultant was brought on board in 2006.

Fifteen actively eroding streambank sections on the west side of Millers Creek between Hubbard and Glazier Way were analyzed. The fifteen sites were ranked according to a scoring system based on five criteria: bank height, bank length, shortest distance to the pedestrian path, Bank Erosion Hazard Index value (BEHI), and whether a damaged storm sewer outfall structure was associated with the site. An Alternatives Analysis for treating the seven top priority eroding streambanks and six storm sewer outfalls was completed in April 2007. The City used the Alternative Analysis to select preferred treatment alternatives.

Using the following methods, eight stream stretches totaling 800 linear feet were stabilized in 2008: longitudinal stone toe, turf reinforcement mats, erosion control blankets, articulated concrete blocks, slope flattening, live brush layering, live staking, live fascines, mechanically stabilized earth, geocell wall.

Additionally, portions of the channel were realigned and rock vanes and cross vanes were used to stabilize the channel.

Prior to stabilization the eroding streambank sites combined delivered an estimated 262 tons of sediment, 262 pounds of phosphorous and 524 pounds of nitrogen to Millers Creek each year.