

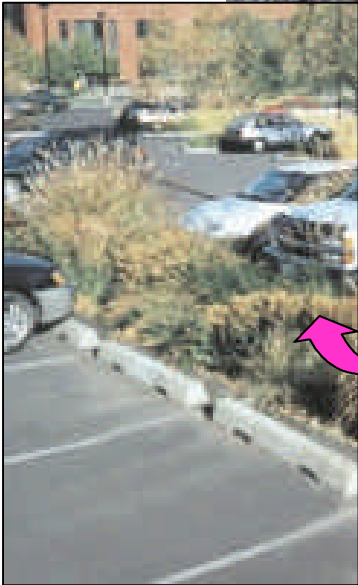
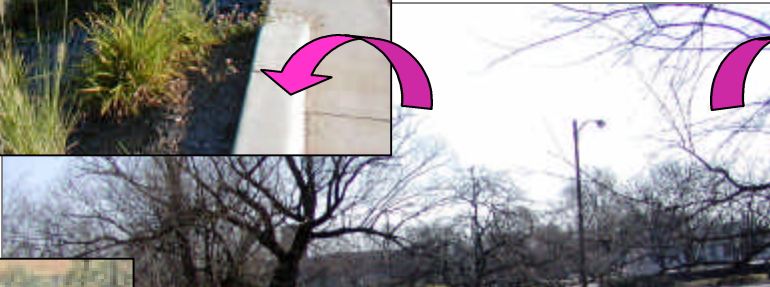
Portage-Arcadia Creeks Transition Project Section 319 Grant Opportunities

Monday, March 28, 2005
11:00 am
National City Meeting

As part of an upcoming Section 319 Grant proposal opportunity, we have prepared three scenarios for discussion and consideration for feasibility of implementation along Axtell Creek within the portion of open channel between Westnedge Avenue and Burdick Street. The basic themes of these scenarios are the same which include: streambank stabilization through dense vegetative planting, parking lot infiltration trenches and small bioinfiltration rain gardens to accommodate direct runoff from impervious surfaces. However, based on the existing conditions and projected needs along the initial portion of open channel at the underground outfall location, different options are presented to accommodate the heavy scouring that currently takes place along streambanks of the National City asphalt parking area. The three options for discussion and consideration include:

- 1) Install large rock rip rap stone to secure and protect the existing portion of streambanks along the parking area from further erosion and undercutting. (est. \$71,425)
- 2) Install a steel sheet pile retaining wall at the edge of the existing asphalt. (est. \$101,425)
- 3) Remove portions of the existing asphalt parking area to accommodate a more natural streambank slope with bioengineering streambank stabilization solutions. (est. \$68,765)

PARKING INFILTRATION CONCEPTS



AFTER

AFTER

BEFORE

STREAMBANK STABILIZATION CONCEPTS



AFTER



AFTER



BEFORE



