

Harmony Park Flood Control and Channel Stabilization Project

City of Lenexa, Kansas

Concerned with channel erosion and flooding, the City of Lenexa hired Intuition & Logic to perform a hydraulic, hydrologic and geomorphic analysis of the western headwaters tributary to Little Mill Creek. Systemic fluvial processes causing instability were identified, and channel incision was the driving force behind bank erosion along the Harmony Park reach. An undersized and collapsing culvert under Alden Road was also inadequate for projected flood flows.

Although the reach was badly damaged, it was recoverable as a neighborhood asset and capable of regaining the functions of a natural stream with appropriate interventions. Final design components included channel restoration through grade stabilization structures, to control channel incision, and regrading and vegetating streambanks, to provide a natural two-stage channel. The Alden Road culvert was replaced with a two-stage conservation culvert to accommodate stream forming flows, as well as flood flows. The riparian corridor was restored along the entire project reach to provide additional habitat and aesthetic benefits.

