

**Columbia Bottoms Phase I
(ASCE Engineering Achievement Award Winner, 2003)**

Missouri Department of Conservation, Missouri



The Columbia Bottoms Conservation Area is a 4,318-acre site located approximately five miles north of St. Louis at the confluence of the Missouri and Mississippi rivers. The area includes over 6.5 miles of river frontage, 800 acres of forest, a 110-acre island and 3,300 acres of cropland. A multi firm, multi discipline team was tasked with designing river access, a Missouri and Mississippi River confluence viewing tower, and all associated roads and facilities. As part of the design team, Intuition & Logic provided engineering design of the ADA compliant, boat ramp and an ADA compliant fishing pier and access ramp. The design challenge was to provide facilities that could withstand the Missouri River hydraulic forces on the riverside of the levees without damaging the levees or causing flood impacts.

The boat ramp location was based on river currents and safe entry under various flow events. The fishing pier was located based on existing habitat and potential habitat to enhance the opportunity to catch fish. The final design involved a “rail-less” fishing pier. The access ramp to the fishing pier also presented a design challenge. The final design included and a 4-foot deep toe wall on the riverside of the access ramp to protect against river currents and washout.

