# BRUSH CREEK FEASIBILITY STUDY

DRAFT MAR. 2011

# BI-STATE REACH – STATE LINE ROAD TO ROANOKE PARKWAY

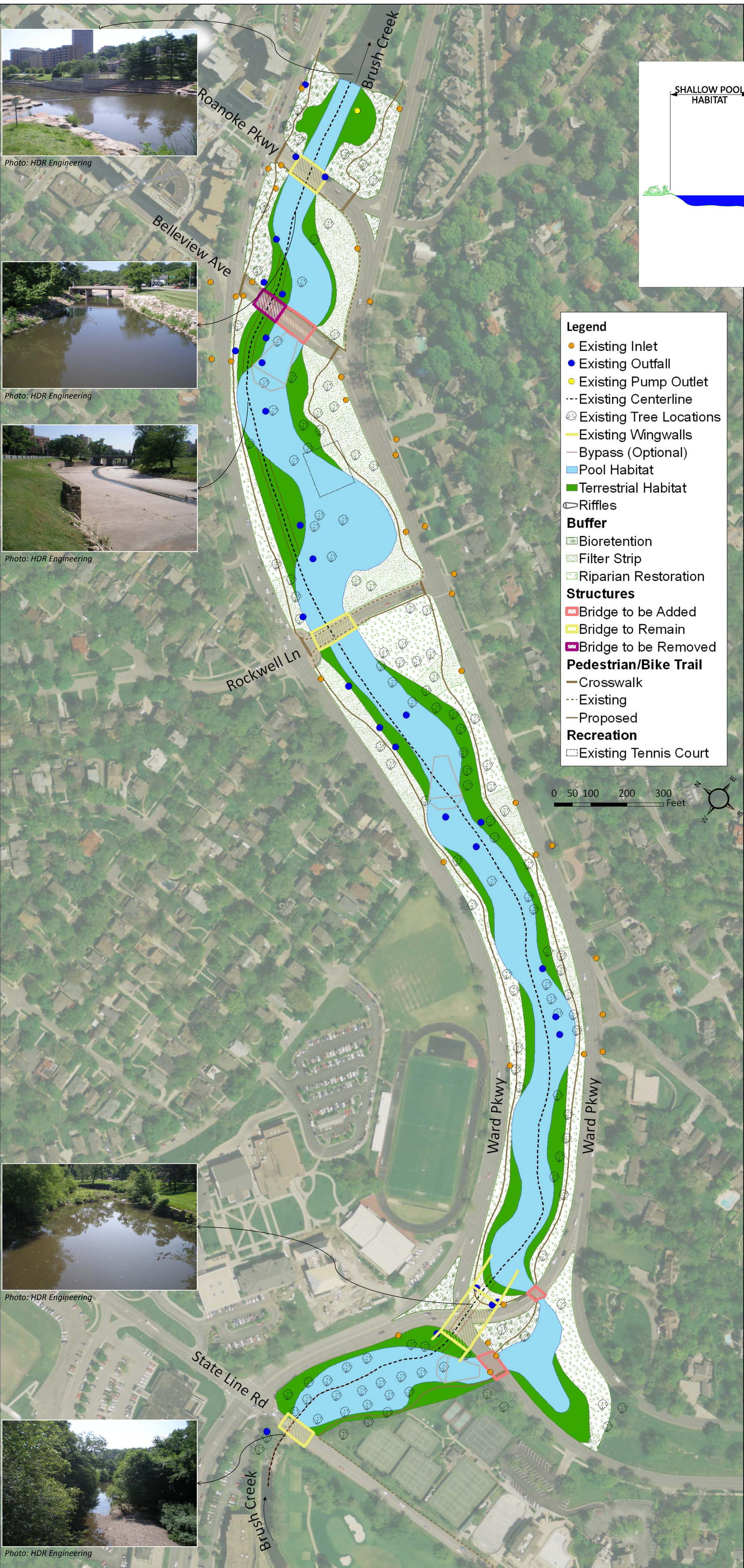


Photo: HDR Engineering

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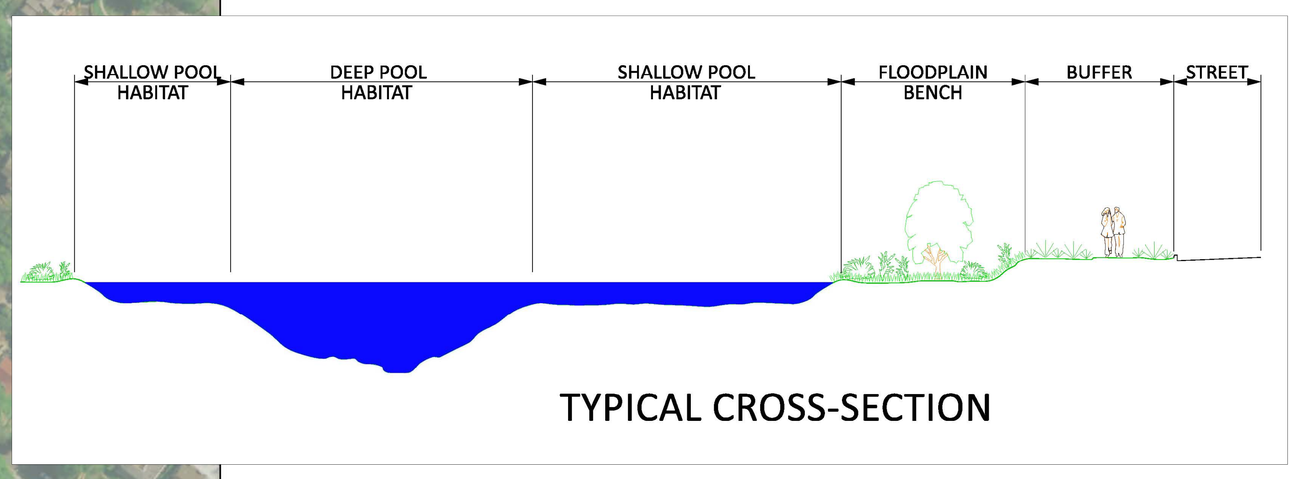
## ALTERNATIVE 2




## MULTIPURPOSE PROJECT OPPORTUNITIES

### Manage Flood Risk

**Widened channel**

- Increases conveyance capacity

**Floodplain benching**

- Increases conveyance capacity

**Bridge replacements and new bridges**

- Increases open flow areas of bridges increasing conveyance capacity

### Restore Ecosystems

**Pool Habitat**

- **Deep Pool Habitat– Habitat within the stream channel with average depths of 5 – 6 feet**
  - Creates habitat diversity within the stream channel for various aquatic species such as fish

Deep Pool Habitat

Photo: Courtesy WikiHow

Engineered Rock Riffle

Photo: Courtesy lakecountyil.gov

Shallow Pool Habitat

Photo: HDR Engineering

- **Shallow Pool Habitat– Habitat within the stream channel with average depths of 1 – 2 feet**
  - Provides habitat for emergent aquatic vegetation
  - Improves water quality through plant uptake

**Riparian Habitat**

- **Buffers – Features planted with vegetation**
  - Intercepts and reduces stormwater runoff
  - Removes pollutants through infiltration, plant uptake and sedimentation
  - Enhances riparian habitat diversity

Filter Strip

Photo: Courtesy NRCS

Bioretention Cell

Photo: Courtesy www.cleanwatermn.org

- **Floodplain Bench – Benches planted with vegetation**
  - Increases stream bank and slope stability
  - Removes pollutants through infiltration and plant uptake
  - Enhances riparian habitat diversity

### Provide Recreational Benefits

**Active – Pedestrian and bike trail**

**Passive – Quality of life, interpretive signage, education**

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