



# Green Infrastructure & Stormwater Management CASE STUDY

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## Fuller Road Station

**Location:** Ann Arbor, MI

**Client:** University of Michigan & City of Ann Arbor

**Design Firm(s):** Beckett & Raeder, Inc. (LA/PE); Mitchell & Moatt (Architect); Walker Parking (Parking Structure Professional)

**Landscape architect/Project contact:** Deb Cooper, ASLA

**Email:** [coop@bria2.com](mailto:coop@bria2.com)

**ASLA Chapter:** Michigan

## Project Specifications

**Project Description:** Phased development of an intermodal transportation facility with immediate or future provisions for automobile, City bus, University bus, over-the-road coach bus, commuter rail, inter-city rail, taxi, and private shuttle components. Major destinations near the facility include Fuller Park, UM Medical Center (hospital, clinics, medical education, etc.), UM North Campus, UM Central Campus, City of Ann Arbor downtown. A number of green infrastructure technologies including permeable pavers, bioswales, naturalized detention areas, and native landscape restoration.

### Project Type:

Intermodal transportation facility

Part of a new development

**Design features:** Bioretention facility, bioswale, and porous pavers.

**This project was designed to meet the following specific requirements or mandates:**

Local ordinance, developer/client preference

**Impervious area managed:** 1 acre to 5 acres

**Amount of existing green space/open space conserved or preserved for managing stormwater on site:** 1 acre to 5 acres

**The regulatory environment and regulator was** supportive of the project.

**Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements?** Fuller Road Station sits within the City of Ann Arbor's Fuller Park. The client requested that stormwater and other project infrastructure be designed to enhance the park experience and preserve an existing soccer/play field immediately adjacent to the intermodal facility.

### Cost & Jobs Analysis

**Estimated Cost of Stormwater Project:** \$100,000-\$500,000 (Public funding: State, local)

**Was a green vs. grey cost analysis performed?** No

**Cost impact of conserving green/open space to the overall costs of the site design/development project:** Conserving open space reduced project costs by eliminating the need for underground storage and mechanical water quality treatment.

**Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)?** Significantly reduced costs (10% or greater savings).

**Number of jobs created:** Construction jobs were created/maintained. Numbers not available.

**Job hours devoted to project:**

Planning and Design: 800

Construction: 100

Annual Maintenance: Not available

### Performance Measures

**Stormwater reduction performance analysis:**

The stormwater system is designed to treat and infiltrate first flush storm events in a series of bioswales. Bankfull and 100-year storm events are treated by the same series of bioswales before overflowing into a secondary pre-treatment forebay and naturalized detention area. Ultimately, water in the naturalized detention area is released in a three-stage controlled manner over a period of 48-hours. Detailed calculations are available upon request.

**Community & economic benefits that have resulted from the project:** The Fuller Road Station green infrastructure is an asset to Fuller Park users and serves as visible evidence of the City's and University's forward thinking and environmental leadership.

### **Additional Information**

**Links to images:** Drawings and photographs are available by email upon request.