# Green Infrastructure & Stormwater Management
# CASE STUDY

## 13/15 George St. Sustainable Parking Lot

**Location:** 13 George St. Charleston, SC
**Client:** Clemson University
**Design Firm(s):** DesignWorks, LC
**Landscape architect/Project contact:** Sean Hoelscher, Associate ASLA
**Email:** sean@seanhoelscher.com
**ASLA Chapter:** South Carolina

### Project Specifications

**Project Description:** Clemson hired DesignWorks to plan a thoughtful upgrade for this project. A dozen trees were saved, and the number of parking spaces were dropped from 36 to 27 so that a half-dozen more trees and about 20 other native plant species could be added. The remaining spaces were narrowed from nine feet to eight feet across to accommodate the extra landscaping. A new fence on the east side was moved four feet onto Clemson's property to save plants and shrubs there and to soften the view from the neighboring bed and breakfast. Landscape architect Evan Brandon of DesignWorks says the project offered an unusual chance to show how environmentally friendly a parking lot can be. Instead of asphalt, the lot contains gravel and concrete paving stones. "We're able to retain all stormwater on site. We don't add any runoff into the city system," he says. "The native plant material will be about as low maintenance of a garden as you can possibly have."

Meanwhile, a new brick and metal fence along George Street has details inspired by its neighbors. "We not only wanted it to be almost a garden parking lot but also as a link in the chain of landscapes up and down George Street," Brandon says.

*Description from The Charleston Post and Courier, see link to article in More Information Section.*

**Project Type**:
Institutional/education
Part of a new development

**Design features**: Rain garden, bioswale, porous pavers, curb cuts, and zero curbing. Project tried to tie several systems together to achieve 100% stormwater held on site.

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

**Impervious area managed:** 5,000 sq/ft to 1 acre

**Amount of existing green space/open space conserved or preserved for managing stormwater on site:** 5,000 sq/ft to 1 acre

**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?** No

## Cost & Jobs Analysis

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

**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:** Significant impact but part of overall goal.

**Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)?** Slightly increased. Overall product was far superior than what is typical which negated initial costs.

**Number of jobs created:** Not available

**Job hours devoted to project:**

Planning and Design: Summer intern position

Construction: 1-3 months
Annual Maintenance: Not available

## Performance Measures

**Community & economic benefits that have resulted from the project:** Community embraced the sustainable stormwater principles as it aesthetically matches the appearance of the surrounding historic Charleston gardens.

## Additional Information

**Links to images:**

Pre:
http://2.bp.blogspot.com/_xAnuaIKmu8U/S84Rlmy7x7I/AAAAAAAAAGU/KWY76mBncpM/s1600/BZA2+copy.jpg

Post:
http://3.bp.blogspot.com/_xAnuaIKmu8U/S84J3NtubgI/AAAAAAAAAFc/Yqj9WBnoLLI/s1600/George+Street+4-10-10flat.jpg

Link to Charleston Post and Courier coverage:
http://archives.postandcourier.com/archive/arch09/0909/arc09218593123.shtml