



Green Infrastructure & Stormwater Management CASE STUDY

Guilford Pharmaceutical Company (Subsidiary of MGI Pharma Inc.)

Location: Baltimore, MD

Client: Guilford Pharmaceutical Co.

Design Firm(s): Gaudreau Architects and Site Resources, Inc.

Landscape architect/Project contact: Michael W. Fisher, RLA, ASLA

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ASLA Chapter: Maryland

Project Specifications

Project Description: Very little curbs were designed/installed at parking lots edges to allow rain runoff to flow directly into grass and planted swales on two sides of the parking areas and the building. These vegetated swales are a series of connected dry and wet swales flowing into a stilling basin on one side and into a bioretention facility on the other side. Both the stilling basin and the bioretention facility had 'overflow relief' into Collgate Creek that is immediately adjacent to the site. Since Collgate Creek is tidally influenced, Maryland stormwater management regulations do not required the extended detention for peak flow (quantity) stormwater management, therefore these water quality facilities (stilling basin and bioretention) were designed to manage some quantity storage.

Project Type:

Commercial

Part of a new development

Design features: Bioretention facility, rain garden, bioswale, curb cuts, and vegetated dry and wet swales.

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

Local ordinance

Impervious area managed: 1 acre to 5 acres

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? Yes, usable green space and how it could be "intertwined" with outdoor hardscape space. This included a walking path and pedestrian bridge over Colgate Creek to allow employees to walk from Guilford Pharmaceuticals Beckley Street to their existing Tributary Street building.

Cost & Jobs Analysis

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

Related Information:

- Labor = approx. \$80,000
- Materials = approx. \$70,000
- Equipment = approx. \$ 95,000

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: There was very little cost to preserve existing green and wooded areas on three sides of the site. Two other areas required new plant material installation as part of Maryland/Baltimore City's requirements for afforestation. Although these plants (trees and shrubs) are not actually "forest", they have matured to create a pleasant buffer and are truly enhance the trees and undergrowth that were already on the site.

It is important to note that Guilford Pharmaceutical Inc. and now the parent company MGI Pharma Inc. have maintained the property, plantings and stormwater quality facilities quite well. Naturally there is a cost for such maintenance, but as important as keeping everything aesthetically pleasing, it keeps the water quality features functioning properly.

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Slightly reduced costs (1-9% savings). Trees and understory plants that were preserved saved some money by reducing the amount of new plantings to meet afforestation requirements. Small costs were incurred when contractors were required to install tree protection fencing and work around preserved areas. Since some quantity SWM was achieved in the stilling basin and bio-retention facilities, there was savings in not having to provide a larger SWM facility.

Number of jobs created: Jobs for the site construction was about 15, plus on going maintenance of crew of three. The new building provided over 200 new permanent jobs.

Job hours devoted to project:

Planning and Design: over 800 hours.

Construction: Total site construction approx. 120,000 combined hours

Annual Maintenance: \$14,000 for all plant material and the SWM water quality facilities.

Other: Hours for just the SWM construction is approx. 1,600 hrs.

Performance Measures**Stormwater reduction performance analysis:**

All 2-year storm events are managed on site. The combination of the water quality facilities was designed to manage approximately the equivalent of a 5-year event.

Community & economic benefits that have resulted from the project: Since this site had been vacant for over twenty years, the city was very helpful in getting the project completed. In the few years before the project started construction, a portion of the site had been used for dog fights and other undesirable activities. The police no longer have to constantly patrol the site. In fact, since Guilford Pharm. has a high level of security, they have saved the city police a lot of time in patrolling this site and surroundings. It has been an economic as well as aesthetic boost to the neighborhood.

Project Recognition

APA Maryland Chapter "Innovative Site Planning Award"

Additional Information

Links to images: Can be provided later if needed. Google Earth provides a 2010 aerial view of the property at 6411 Beckley Street, Baltimore MD 21224