



Green Roof Demonstration Project

The Chesapeake Bay Foundation
February 2006

Project Goals

- Improve Stormwater Management
- Demonstrate Technical Feasibility
- Illustrate Economics
- Provide Public Outreach and Education
- Identify Incentives for widespread replication
- Document Performance

Project Background

- DCWASA Funds \$300K from Consent Decree (2003) – additional \$50K from DCDOH (2005)
- Boundaries – Anacostia Watershed and DC Combined Sewer System (1/3 of city)
- Goal to reduce pollution in Anacostia River [top urban polluted river, stormwater a major contributor, sources are CSO 75X per yr, surface runoff and airborne pollutants]

Typical Green Roof Installation for CBF Demonstration Projects

- Flat Roof Structure
- Extensive Roof
- 3-4 inches growing medium
- Sedum Plants
- Low Maintenance
- Retain 15 gal/sf in average year of rain



Photo credit: Steven Holl Architects

Typical Green Roof early plants



Photo credit:
JBG Maryland Project

CBF Green Roof Grantees

- ASLA – 636 Eye Street NW (3,000 sf)
- DOT Headquarters – M St SE (68,000 sf)
- APA Headquarters – 10 G St NE (3,000 sf)
- AEDC – 1800 MLK Ave SE (10,000 sf)
- Akridge – 700 6th St NW (10,000 sf)
- DC Rec – 1310 Childress St NE (5,000 sf)
- JBG – 51 Louisiana Ave NW (12,000 sf)

ASLA HQTRS 636 Eye St NW



Rooftop of
building prior
to renovation

ASLA Headquarters Green Roof



Photo credit: Van Valkenburg Associates

JBG/DOT Headquarters Green Roof at Navy Yard SE



- First new cabinet-level HQ to be built in 30 years.
- One of the largest green roofs in US at 68,000 sf
- Adjacent to the Anacostia River

APA Headquarters at 10 G St. NE



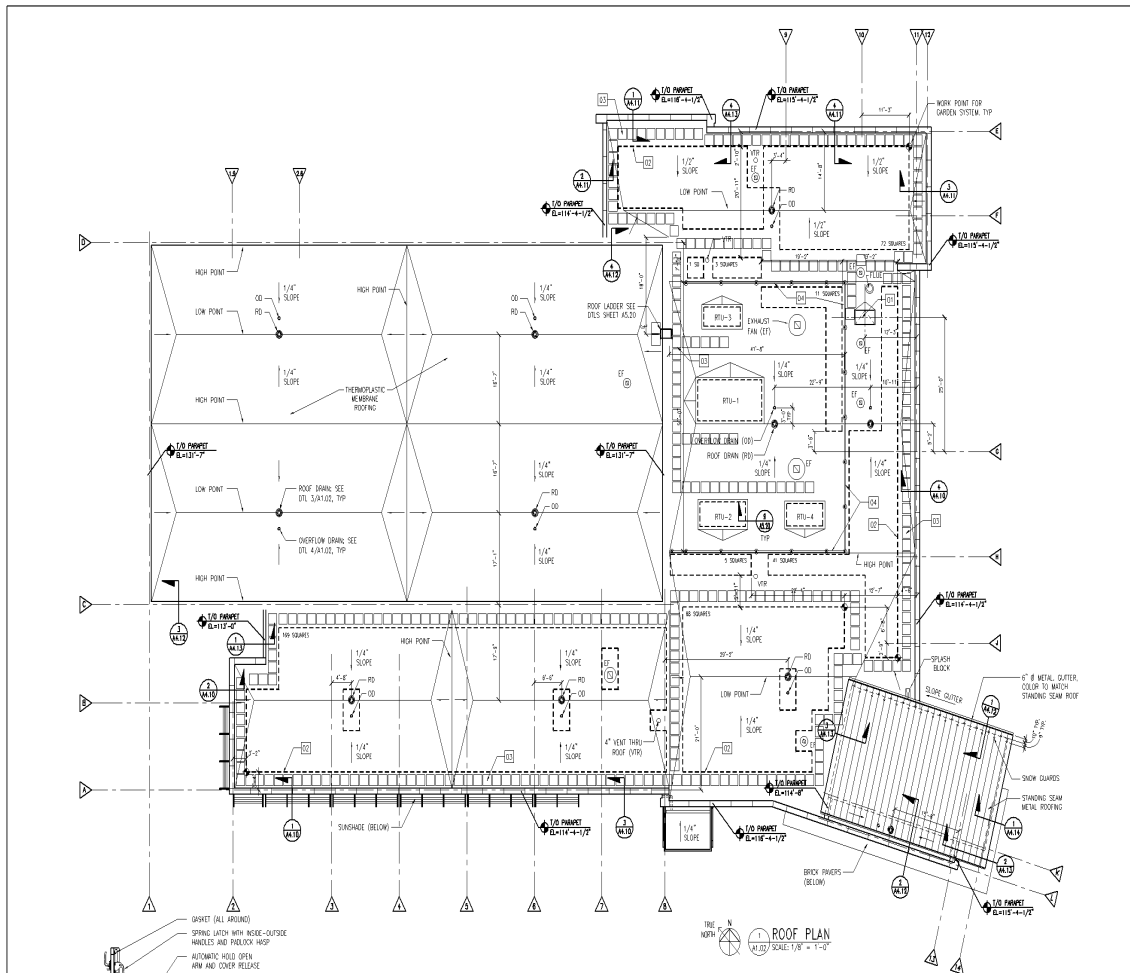
- A 3000 sq ft green roof will be installed on this building in the Spring of 2006
- Public access and a meditation labyrinth will also be provided by the owners

Trinidad Recreation Center Under Construction



Construction
site at
1310 Childress
Street NE

Trinidad Rec Center Roof Plan



Green roof of about 5,000 sq ft will cover sections that are surrounded by paved walkway

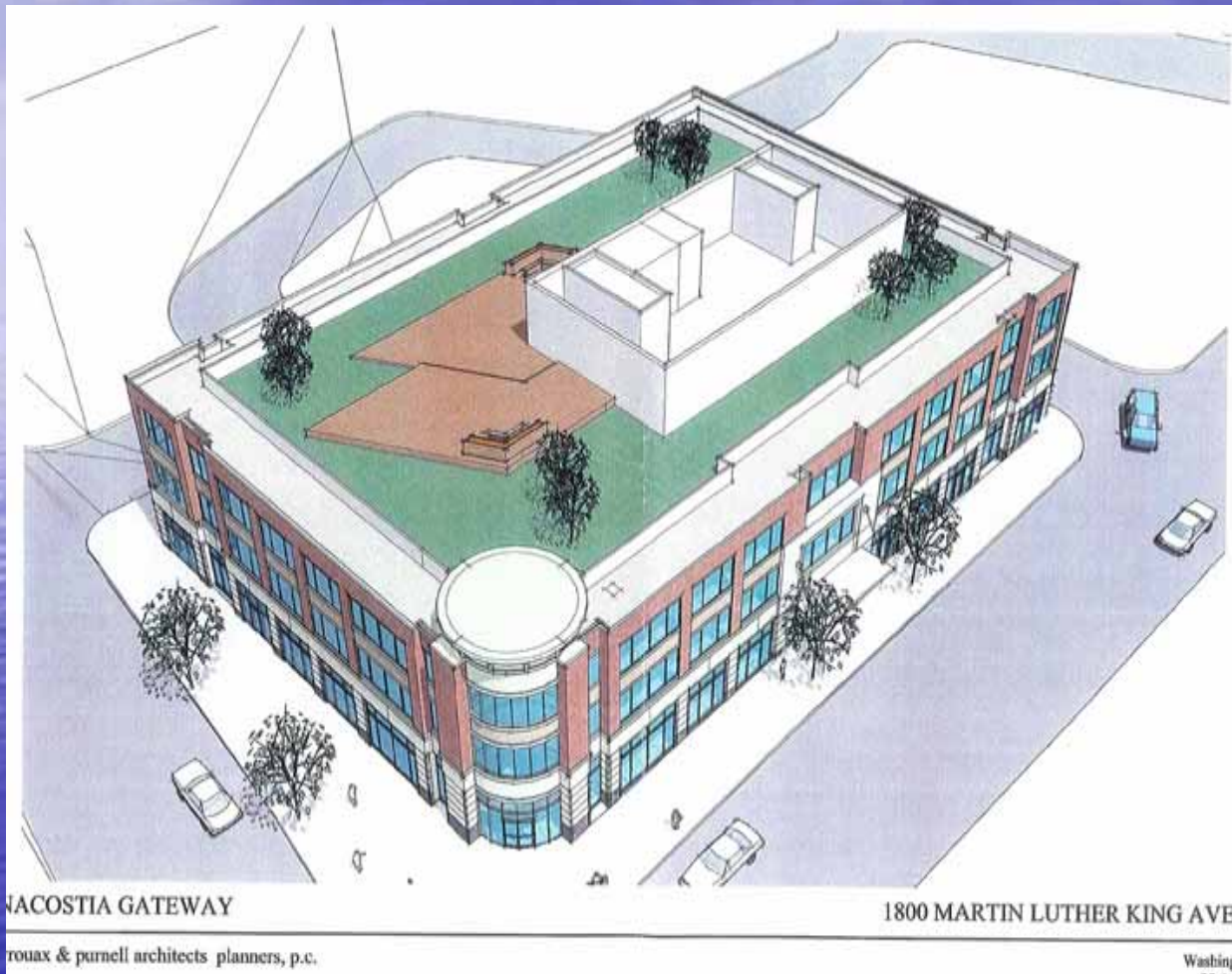
Akridge Office Building 700 6th Street NW



This new office building
Is planned with a
10,000 sq ft green roof

Photo credit: Akridge

AEDC Green Roof Concept



A new office building
Design with a
10,000 sq ft
green roof

Photo credit:
AEDC

51 LA Ave NW Green Roof Concept

[approx. 12,000 sq ft]



Credit: JBG

View from 51 LA Ave Green Roof



Green Roof Project early results

- 20% Subsidy grant provides reasonable incentive for building owners
- Green Roof satisfies DC SW regulation
- Developers indicate environmental responsibility
- Stormwater performance data partially available but improvements needed
- Energy and lifetime cost savings need further verification