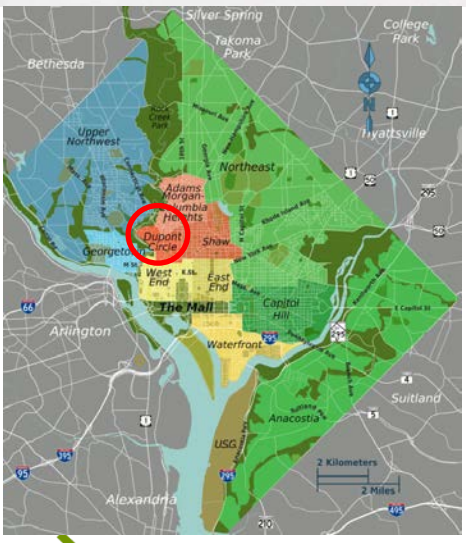
GREEN STREETS | GREEN JOBS | GREEN TOWNS INITIATIVE

The Green Streets, Green Jobs, Green Towns Partnership (G3) aims to stimulate the green jobs market and enable families to work where they live and play. Small to mid-sized communities can boost their local economies and protect water resources through the use of watershed planning, design and construction of stormwater best management practices.



1 design plan created

9 workshops with 109 attendees

2,000 sq. ft. impervious surface to be removed

1,000 sq. ft. pervious surface to be installed

RESTORE MASS AVE

Tree Plaza Stormwater Connections for Dupont Circle in the District of Columbia

The project site is one of the city's busiest intersections. The lack of canopy impacts thousands of pedestrians who traverse the plaza day and night.

Restore Mass Ave (RMA) worked with partners to create a design plan that used green infrastructure to reduce stormwater. This new green infrastructure would shift flows away from the existing grey infrastructure—pipes sending the stormwater to the waste water treatment plant during small rains and direct discharge to the nearby Rock Creek outfall in large storms. This green plaza with engineered structures, soils, perennials and trees will together retain and slow the water's discharge. It would use rather than waste the stormwater, recharging the soils and growing plants. It would clean the stormwater before releasing it and prevent nuisance flooding.

The Dupont Tree Plaza permit-ready engineered designs add seven new large-type trees to the main 7,100-square feet plaza. The design conveys plaza rainfall and roadway runoff to engineered and amended soils watering twelve trees and captures over one acre of stormwater. Two new curb inlets will be introduced to divert Connecticut Avenue curb line runoff towards the plaza and away from the existing catch basin. The plaza will be anchored on the west side by a single large square-shaped 820-square feet bioretention containing a prominent specimen tree and perennial plantings.

Silva Cells will support the bioretention curb walls and extend below the permeable pavement creating 6,610-cubic feet of root-able soil. Once installed, the design is eligible for certification for 8,100 or more Stormwater Retention Credits (SRCs).

RMA has worked with students from the neighboring public school to engage them in the design process throughout. Several field trips to the site expanded on prior class activities. Their artwork will inform the Plaza's educational signage.

PROJECT ELEMENTS

- Design plan– This design plan includes features including tree planting, bioretention areas, permeable paving, and native pollinator plants.
- Tree planting – Native trees and shrubs require less maintenance and absorb rainwater, hold soils in place, and provide food and habitat for birds, pollinators, and other wildlife.
- Bioretention area– These features filter, store, and reduce stormwater runoff, allowing it to infiltrate into the ground before it enters into the storm drain system
- Permeable paving – This alternative to traditional black top allows surface water to flow into the ground where the volume can be held, infiltrate into the lower soil or conveyed through a stormwater system. Porous paving is a good application for areas that require a hardscape surface and have no viable options for stormwater management. There are various applications and styles making porous asphalt a good aesthetic option as well as functional.
- Native plants – Native plants offer numerous benefits. Because native plants are adapted to local environmental conditions, they require far less water. They provide vital habitats for birds, insects and other species of wildlife, prevent water run-off, and improve air quality.
- Engagement of local community – This project engaged local school groups in the production of the design plan.

SUSTAINABILITY & GROWTH

RMA blazed a trail for other local NGOs to organize stormwater retrofits in 'orphan' spaces in the District. They look forward to supporting other District NGOs through the Green Streets, Green Jobs, Green Towns grant application process. Their plans will be shared with other NGOs and private entities who hope to improve District stormwater management while creating new public spaces.

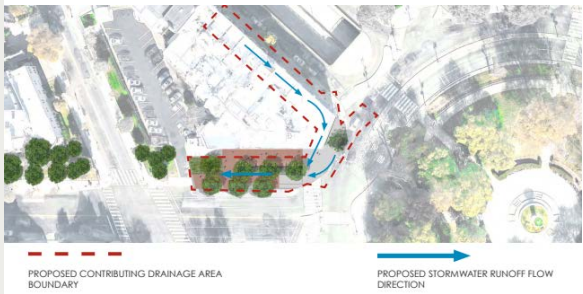
"There are many locations like this in the city that need improvements like this," says the design lead Rebecca Stack. "Environmental improvements – managing stormwater, growing healthy robust canopy trees won't happen at orphan sites without champions like RMA. "

RMA and its contractor team believe they have convinced more stakeholders that, when these small spaces are improved for stormwater and other natural benefits, the District will be more livable and handle storms, heat, and population growth for a long time to come.

For additional information: visit *epa.gov* and *cbtrust.org*

Year Awarded: 2018
Award Amount: $30,000
Match Amount: $16,588

PRESENT SITE



Project Partners: Casey Trees, Chesapeake Bay Trust, Designgreen LLC, Dupont Circle Citizen's Association, Huska Consulting, Lotus Design and Consulting, Restore Mass Ave, Ross Elementary School, School Without Walls at Francis-Stevens, U.S. Environmental Protection Agency, Wooden Studios