

DUPONT TREE PLAZA

*A new
community
green space in
the heart of
Dupont*



DUPONT TREE PLAZA

ANC 2B MEETING
JULY 10, 2019

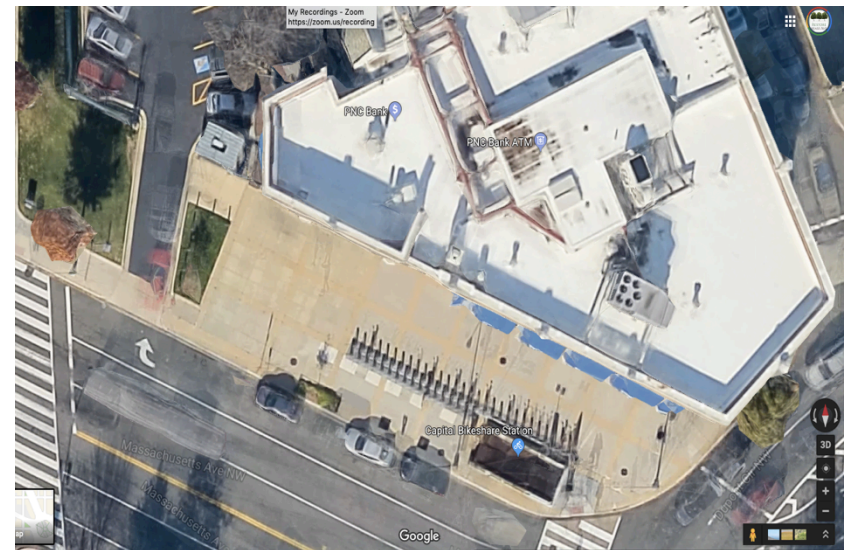
KEY NODE IN REGIONAL TRANSPORTATION

Each weekday

- 20,000 use Dupont Circle Metrorail
- 25,000 vehicles pass
- 9 Metrobus Lines and Georgetown U buses – riders day & night
- Capital Bikeshare stand is one of system's busiest
- Pedestrians – estimate ~ 1000

Sundays

- 12,000 visit Fresh Farm Market
On 20th St from Mass to Hillyer/Conn Ave



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PROBLEMS

Walkway bottleneck
Busy pedestrian area not lit

Flood-prone
Expanse of runoff pollutes watershed

"Heat Island"
Noxious exhaust from buses & cars =
health risk for pedestrians, cyclists, drivers

No ownership
No sense of place
Trash collects

EVERYBODY HURRIES TO GET
SOMEPLACE ELSE



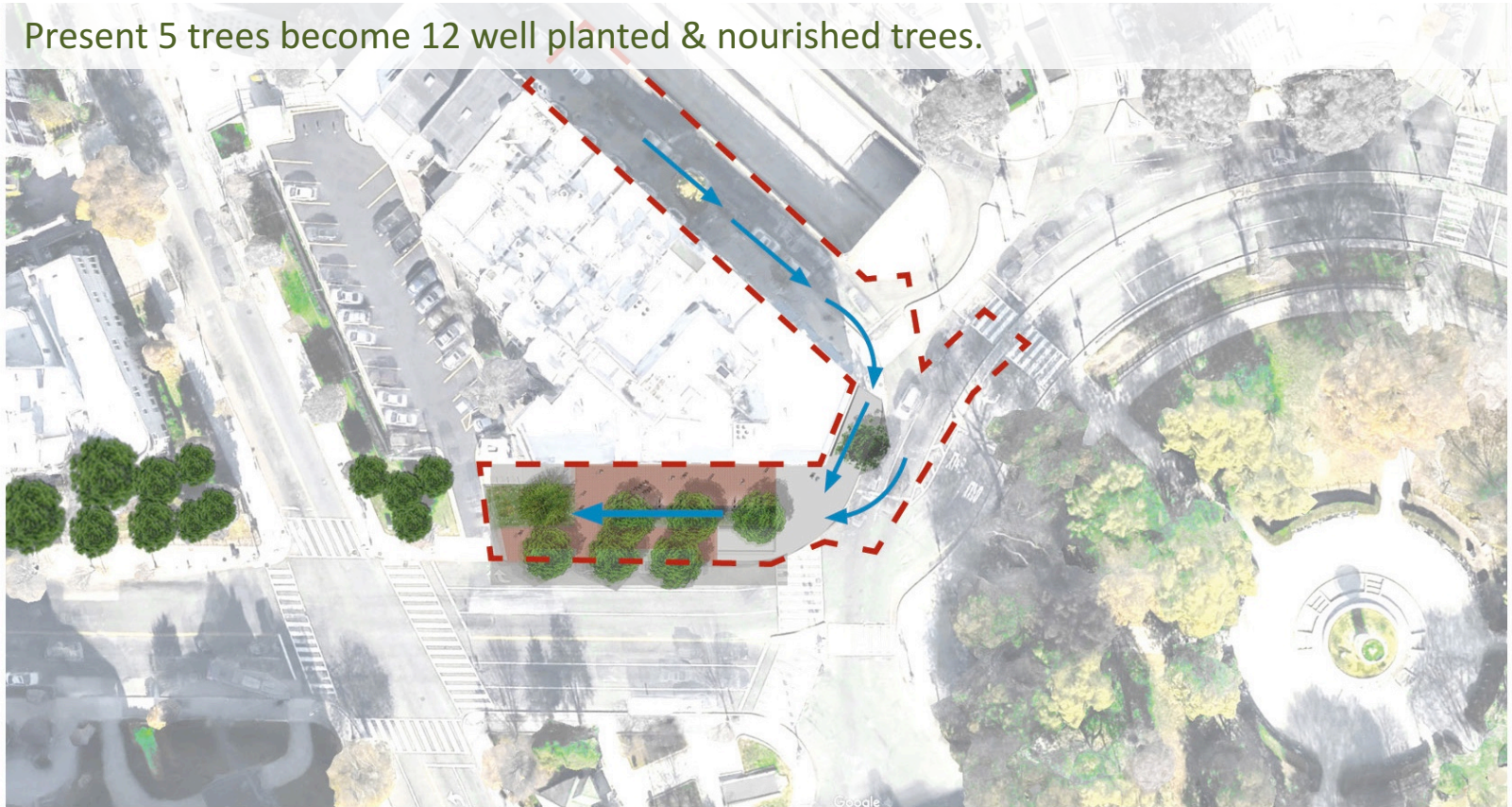
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OUR SOLUTION

Present 5 trees become 12 well planted & nourished trees.



PROPOSED CONTRIBUTING DRAINAGE AREA
BOUNDARY



PROPOSED STORMWATER RUNOFF FLOW
DIRECTION

RESTORE MASS AVE

MISSION

“We engage residents, embassies and public and private partners to plant and sustain a full canopy of trees on Embassy Row, Washington DC’s most famous diplomatic avenue.

VISION

“We envision Embassy Row as ... the best remaining “grand avenue” in the United States and a model for sustainable historic streets everywhere.”

Who We Are: 501 c3 registered in 2006. Began tree planting 2007.



Double row of American Linden, planted 1880, photo c.1913



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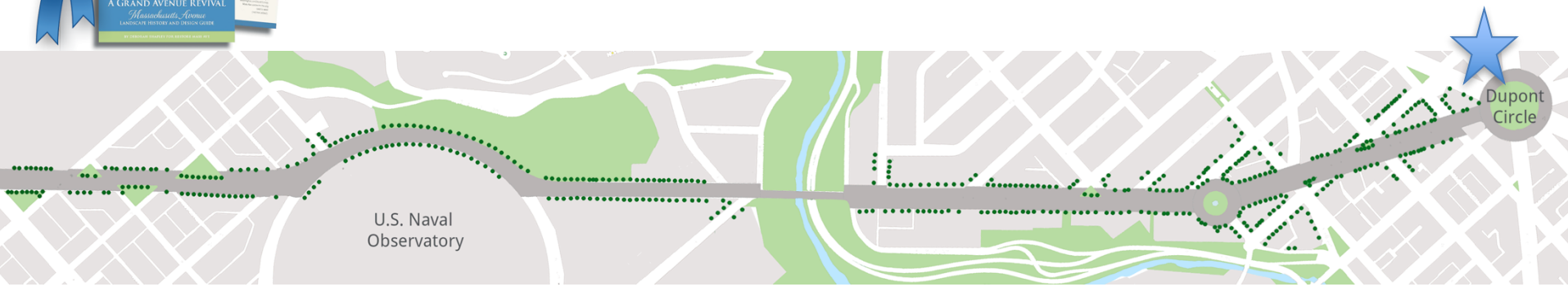
HISTORIC: THE FIRST MANSION WAS BUILT HERE

The "castle" which Sen. William Stewart built on this site in 1873 sparked the wave of mansion-building westward. Note the trees in this 1890s photo. Rows of American lindens were planted along Mass Ave all the way to the Anacostia River. RMA is reviving this landscape from Dupont Circle westward.

Historically the Plaza site is where Embassy Row begins.



Our book *A Grand Avenue Revival* won 2015 Award for Excellence in Historic Preservation—Education.



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OUR TRACK RECORD

Canopy increase by 73% at 20th and Mass Ave

**13% canopy increase overall where we work
2006-2015**

Detailed satellite data map and Canopy Change Stories at
<http://restoremassave.org/green-your-street/canopy-growth/>

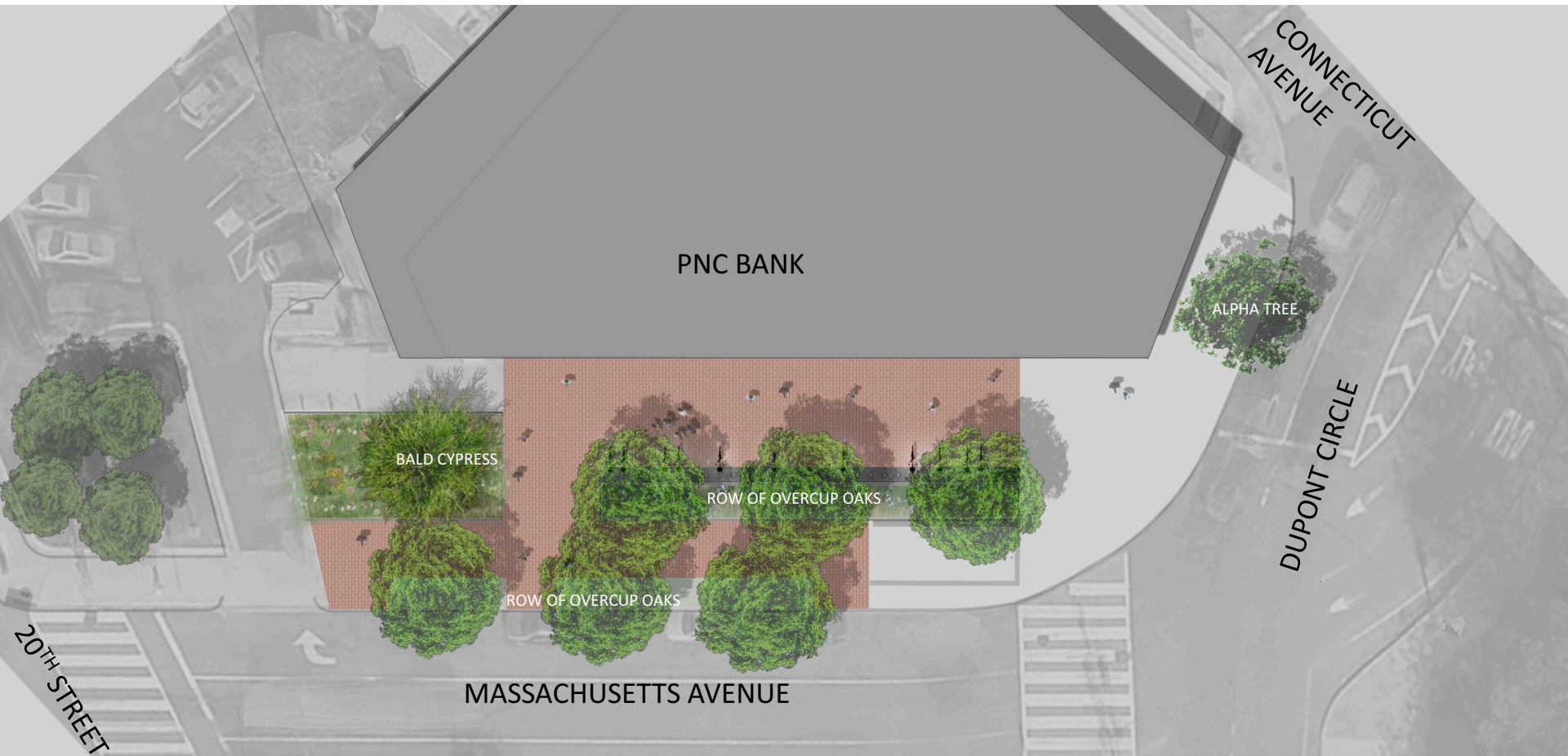


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PLAZA WILL HAVE NEW ROWS OF SHADE TREES

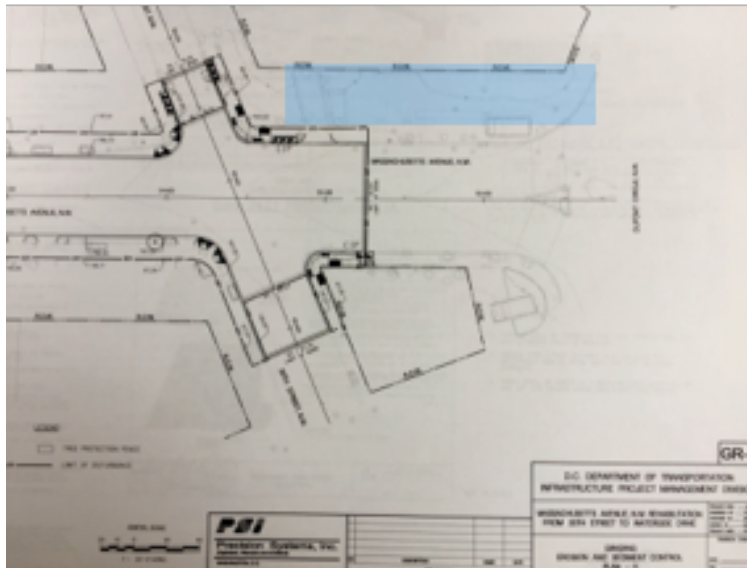
The project will increase shade trees from 5 to 12 important, healthy trees.



BIG DDOT PROJECTS

The Dupont Tree Plaza will integrate with and complement other large DDOT improvement projects such as:

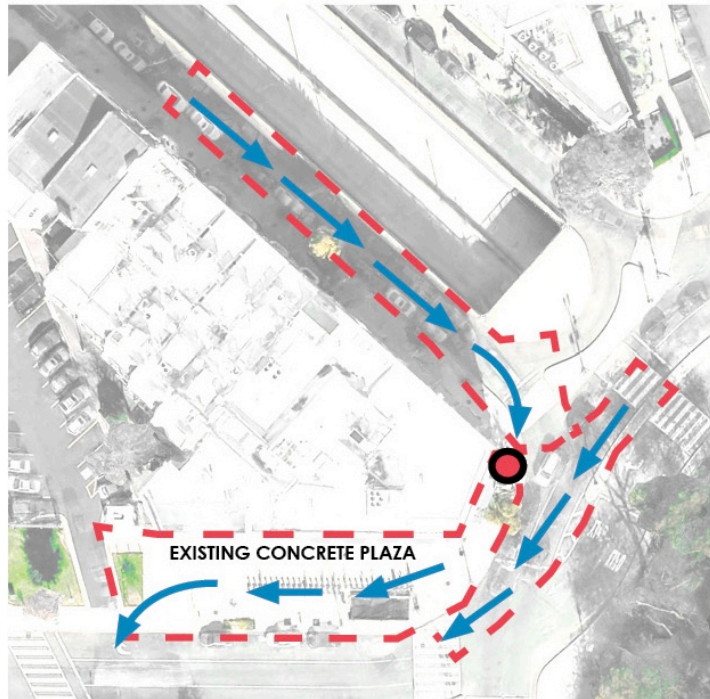
- Connecticut Ave Streetscape Program
- Connecticut Ave Deck Over
- Massachusetts Ave Rehabilitation Project



**Massachusetts
Avenue
Rehabilitation
Project**
Fall 2019
Plaza area
is blue mask

RESILIENCE - CLIMATE CHANGE

Underground the Plaza has a reservoir to absorb water from present and future storms.



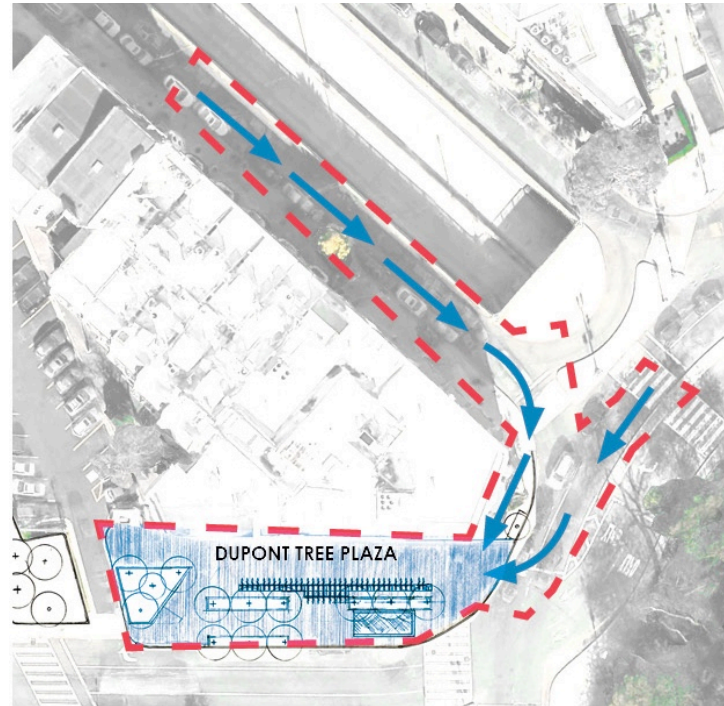
EXISTING INLET



EXISTING CONTRIBUTING
DRAINAGE AREA BOUNDARY



EXISTING STORMWATER
RUNOFF FLOW DIRECTION



PROPOSED CONTRIBUTING
DRAINAGE AREA BOUNDARY



PROPOSED STORMWATER
RUNOFF FLOW DIRECTION

RESILIENCE – HUMAN CAPITAL

G3 Grants Goal: Teach local students sustainable practices.

School Without Walls @ Francis-Stevens is our Plaza partner:

- Teacher/staff briefings, shared base map & model
- Sustainability class field trip
- Coach students on plaza design



Such projects will only be understood and sustained if Generation Z and the one that follows - "the glass generation" - have a stake in them.

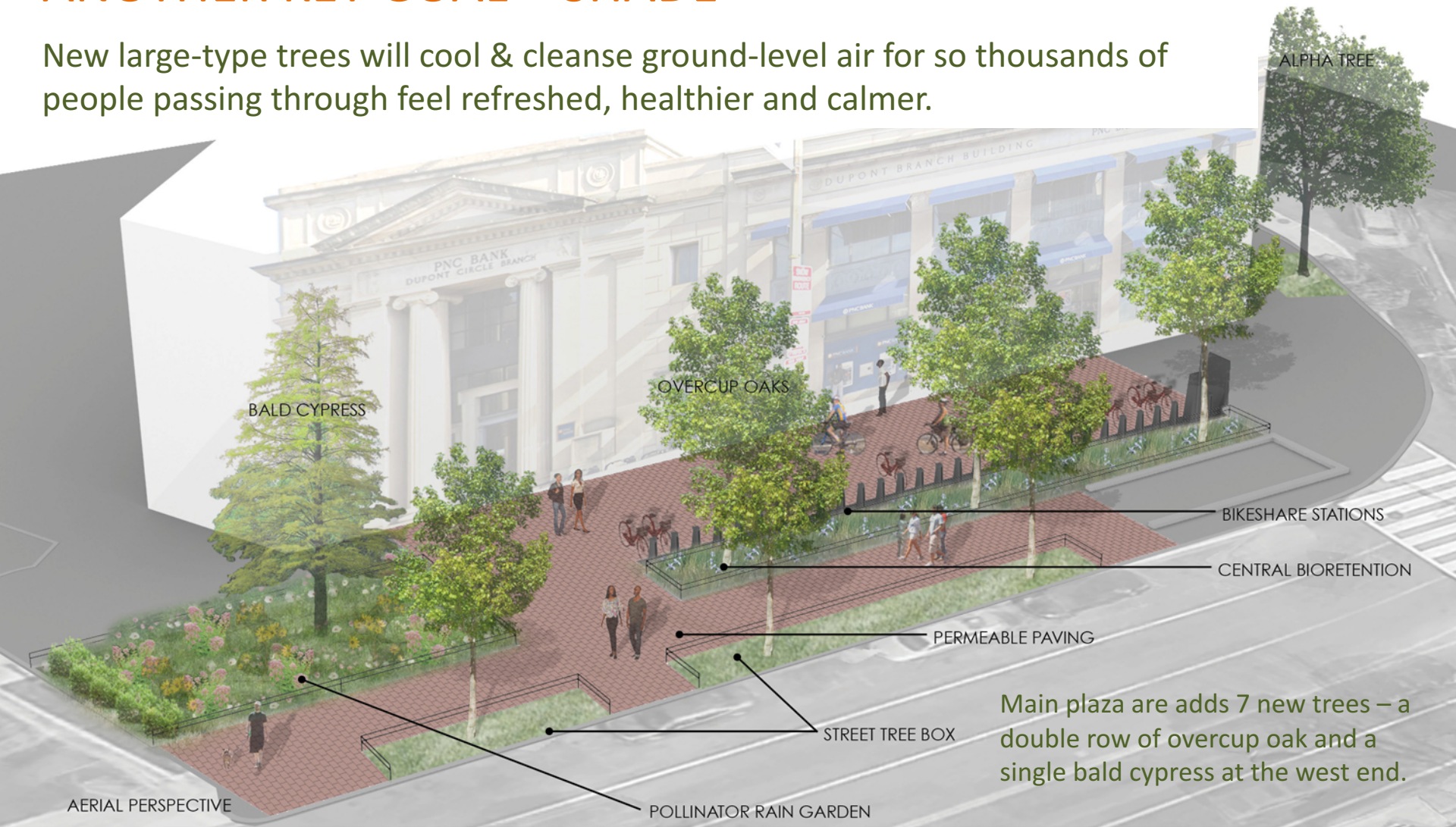


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ANOTHER KEY GOAL = SHADE

New large-type trees will cool & cleanse ground-level air for so thousands of people passing through feel refreshed, healthier and calmer.

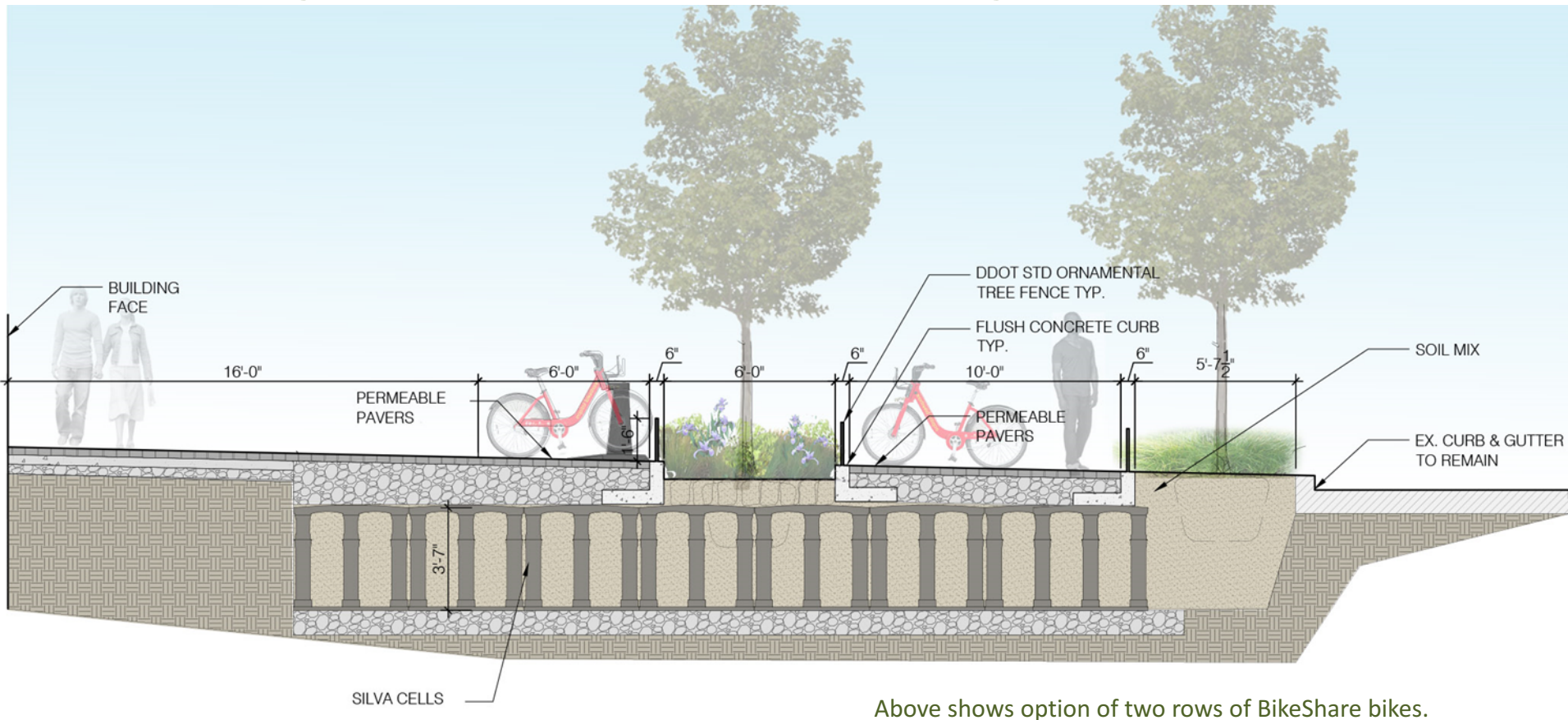


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SHADE TREES NEED LOADS OF GOOD SOIL

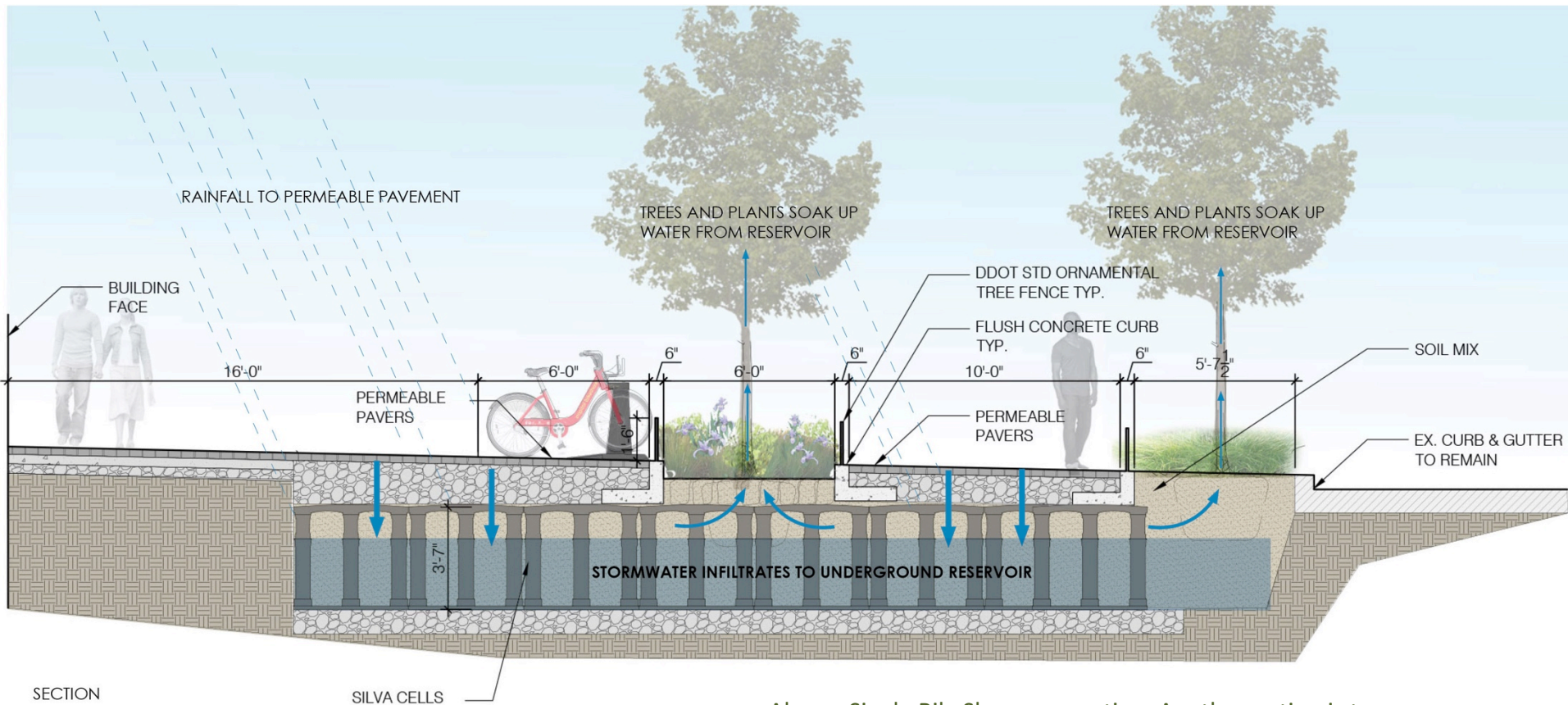
Silva Cell frames create space under ground for large volumes of good soil that aids root and tree growth.



Above shows option of two rows of BikeShare bikes.

INNOVATION BELOW GROUND

Silva Cell frames support surface while allowing roots to spread in roomy soil area below.



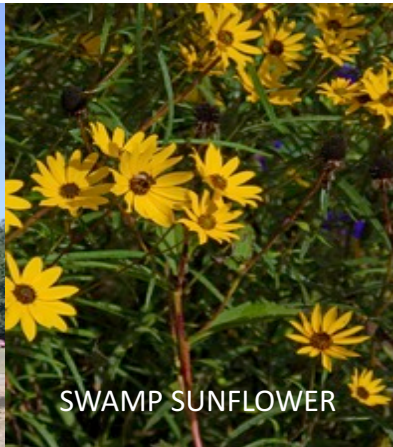
Above: Single BikeShare row option. Another option is two rows.

NATIVE TREES & PLANTS

NATIVE PLANTINGS CREATE WILDLIFE HABITAT
& INCREASE BIODIVERSITY



OVERCUP OAK



SWAMP SUNFLOWER



SOUTHERN BLUE FLAG IRIS



SOFT RUSH



JOE PYE WEED



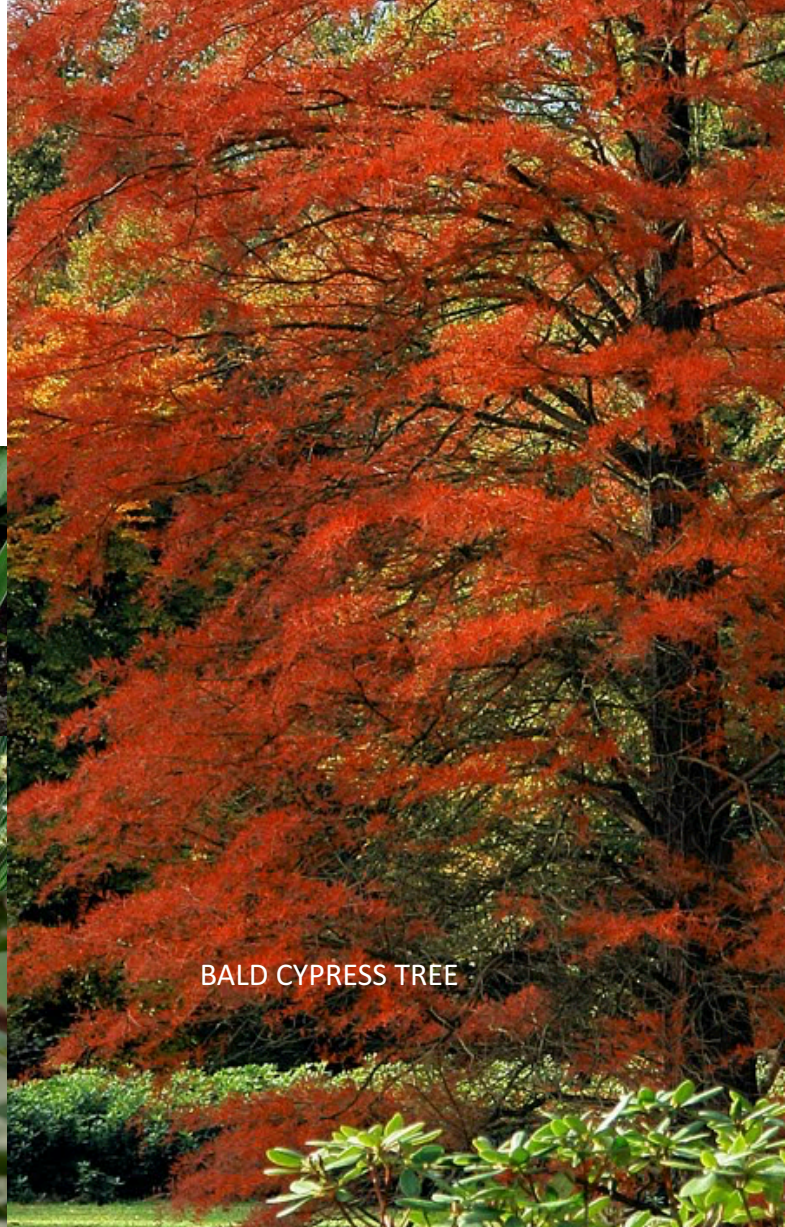
SWAMP MILKWEED



GLADE FERN



SWAMP ROSEMALLOW



BALD CYPRESS TREE



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PROGRAM Q – BIKESHARE DOCKING

Current docks:

Bank Wall Line = 28

Current Inner Line = 18

Total = 46

Design to preserve
maximum

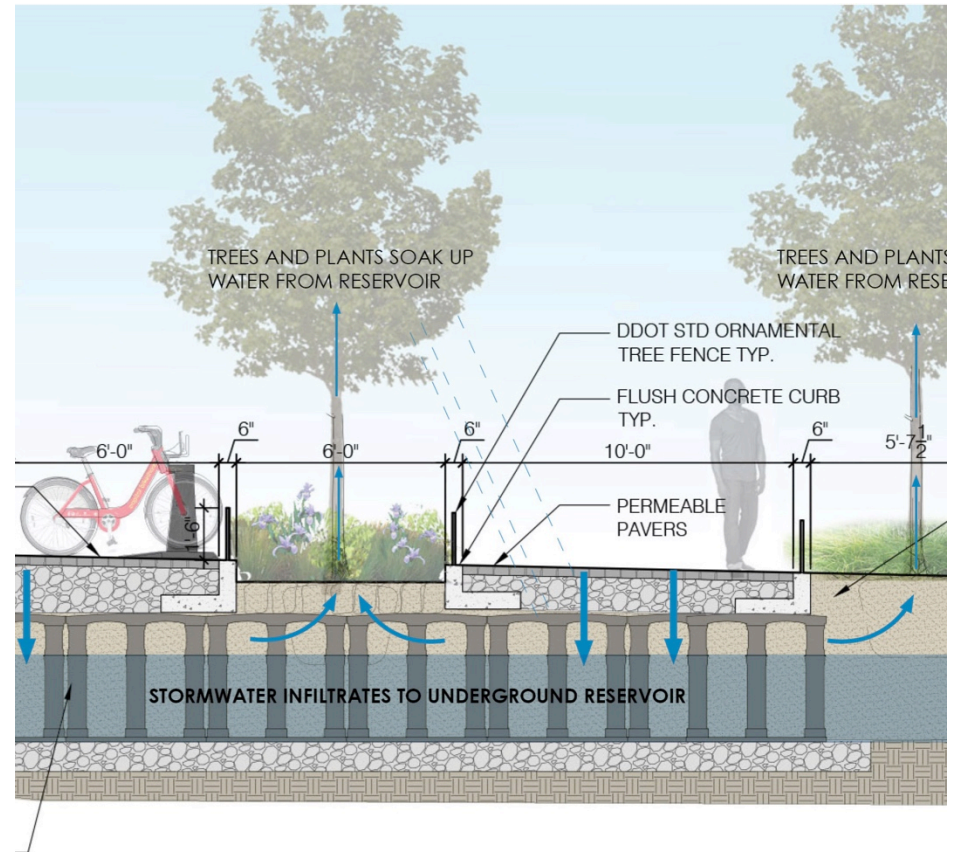
programmable space
keeps Bikes to one line

Total = 28

Adding inner Line 2

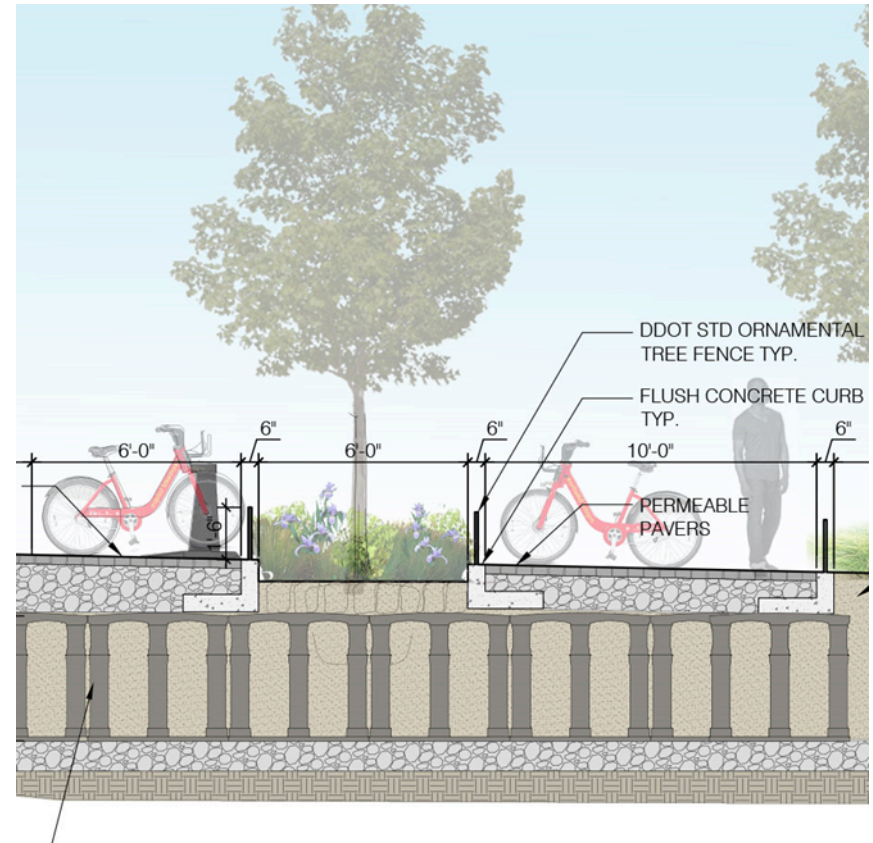
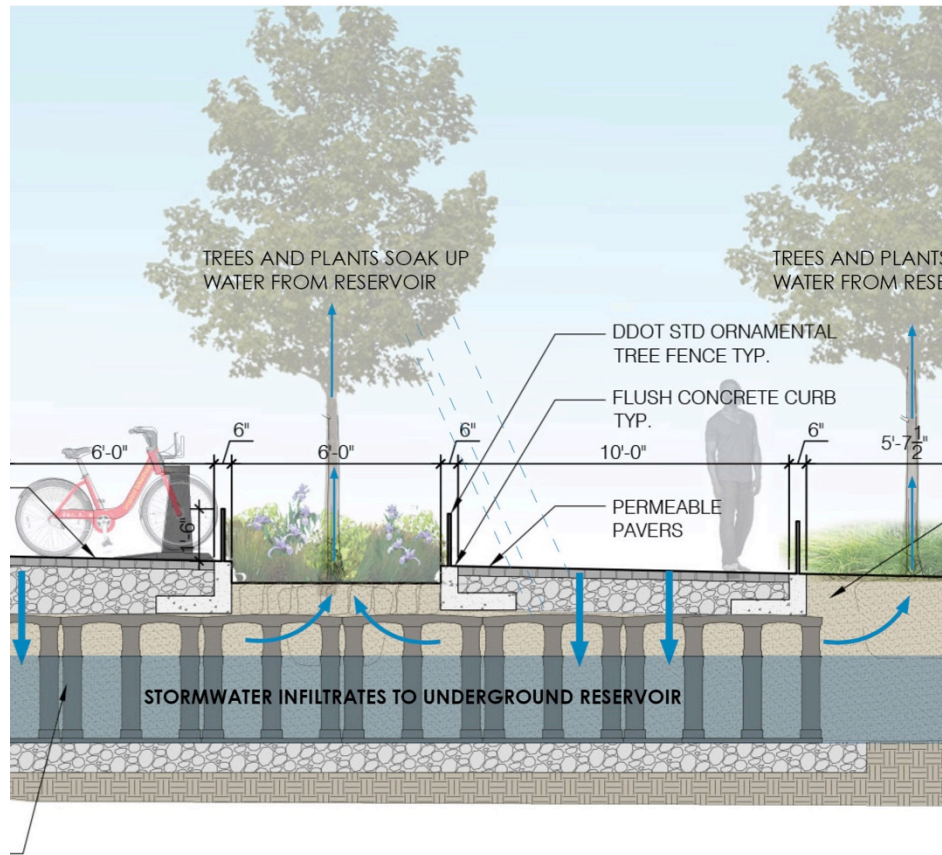
Preserves all spaces

Total = 46



PROGRAM OPTIONS

Bikestands for 1 line or 2 lines. Line 2 only on Sunday mornings?



Comparing share bike docking row configurations



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PROGRAM Q – FRESH FARM MARKET

Current Vendor staging uses area proposed for bioretention

This bioretention area is a key component to stormwater project

Potential Design Options to accommodate both goals

Option 2 = partial deck keeps stormwater credits, loses tree focus

Option 3 = convert 2/3 to permeable paving, loses tree + SW focus

Additional challenge is the conflict between vendor expansion along bank wall. These 10'x10' tents conflict with bike placement and safe pedestrian passage.

Potential work around: Program no bikes Sundays until 2pm

Program Question: Present and additional vendors for Sunday Fresh Farm Market 6 am – 1:30 pm.



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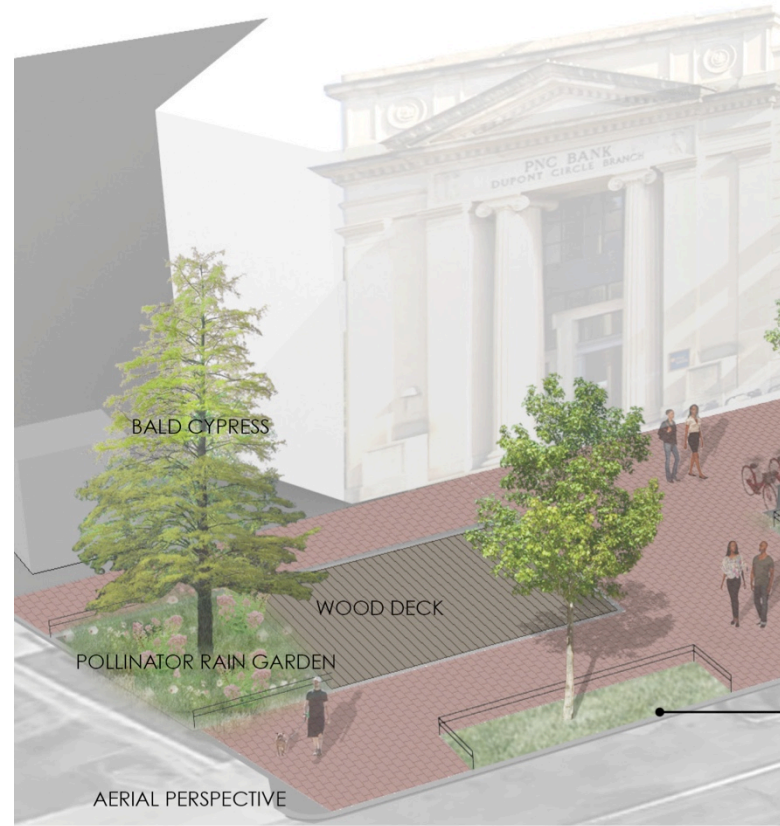
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PROGRAM OPTIONS

Less Bioretention Surface Area to Maximize Programming Space



Option 1 – Maximize planting area and stormwater benefit

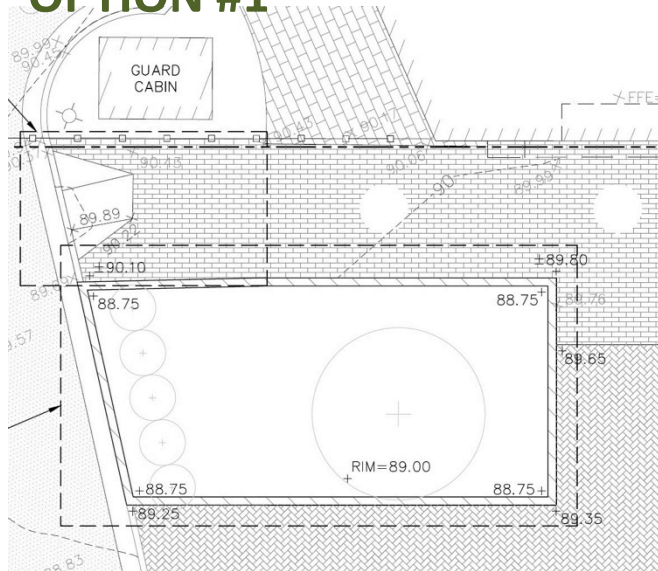


Option 2/3 – Bioretention surface is reduced and cypress moved west

PROGRAM OPTIONS

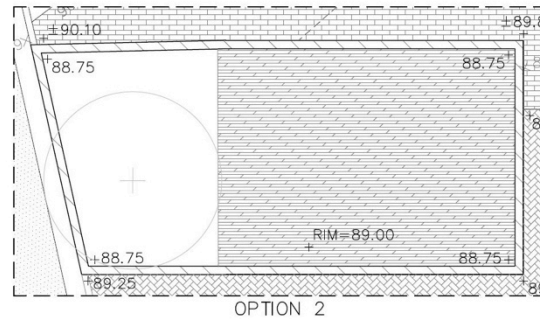
Less surface area = fewer SRCs Stormwater Reduction Credits = Less Resilience

OPTION #1



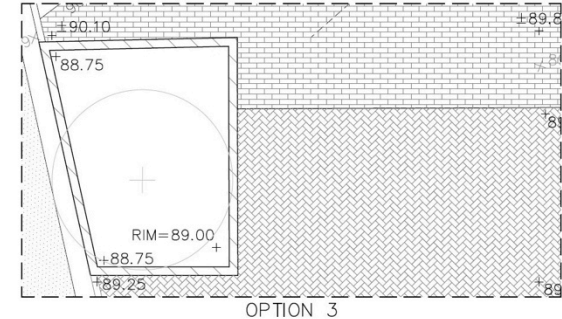
SRC value nearly 10k gallons
Landscape = 600 sf
Maximizes tree health

OPTION #2



SRC value unchanged
Landscape = 200 sf
Tree health constrained

OPTION #3



SRC reduced by 30 percent
Landscape = 200 sf
Tree health constrained

Decking over part of the bioretention area could keep the same SRCs. A permeable pavement surface (with soil below) reduces SRCs for the project.

Let's build

DUPONT TREE PLAZA

to help
PEOPLE

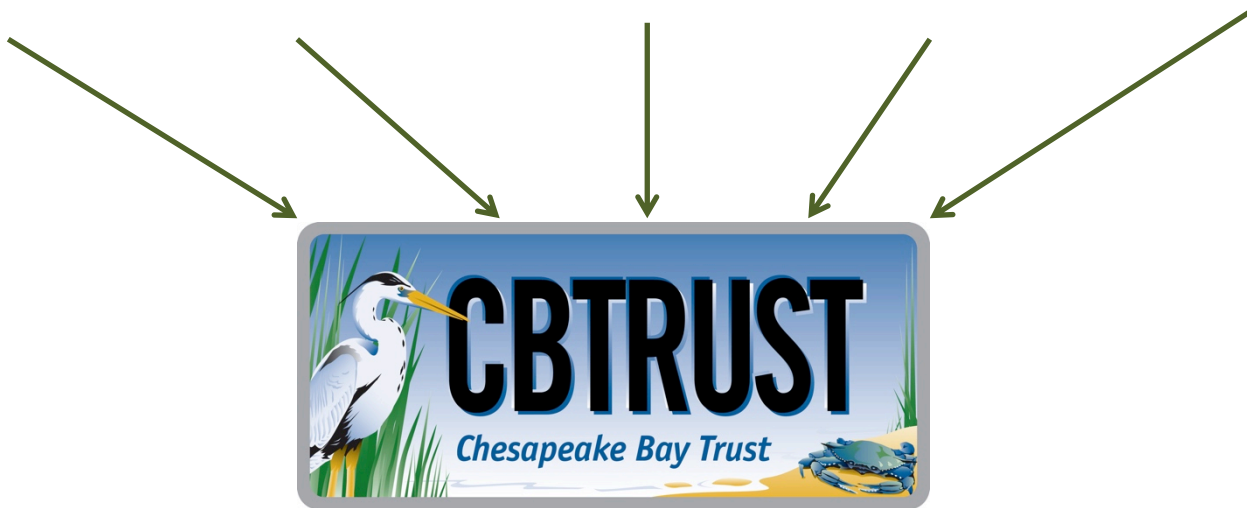
More than 1,000
people per day.
In just 45 minutes
during rush hour,
RMA counted
348 pedestrians +
17 Bike stand users
= 465 total.



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FUNDERS



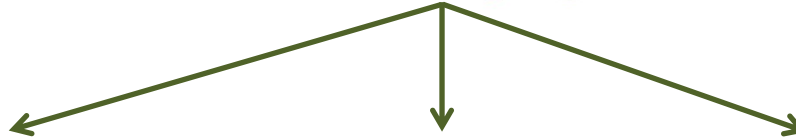
"The mission of the Chesapeake Bay Trust is to promote public awareness and participation in the restoration and protection of the water quality and aquatic and land resources of the Chesapeake Bay region and other aquatic and land resources of the State. The Trust will engage residents of the region in programs that lead to actions that measurably improve local communities and increase resource stewardship."



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TEAM



HUSKA CONSULTING
LLC



LOTUS
Design + Consulting, LLC



DAVID
WOODEN
STUDIO



RESTORE
MASS AVE

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