HAMLIN STREET STORMWATER RETROFIT PROJECT

PUBLIC STAKEHOLDER CONSTRUCTION KICKOFF PUBLIC MEETING

February 23, 2022

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DPR DC DEPARTMENT OF PARKS AND RECREATION

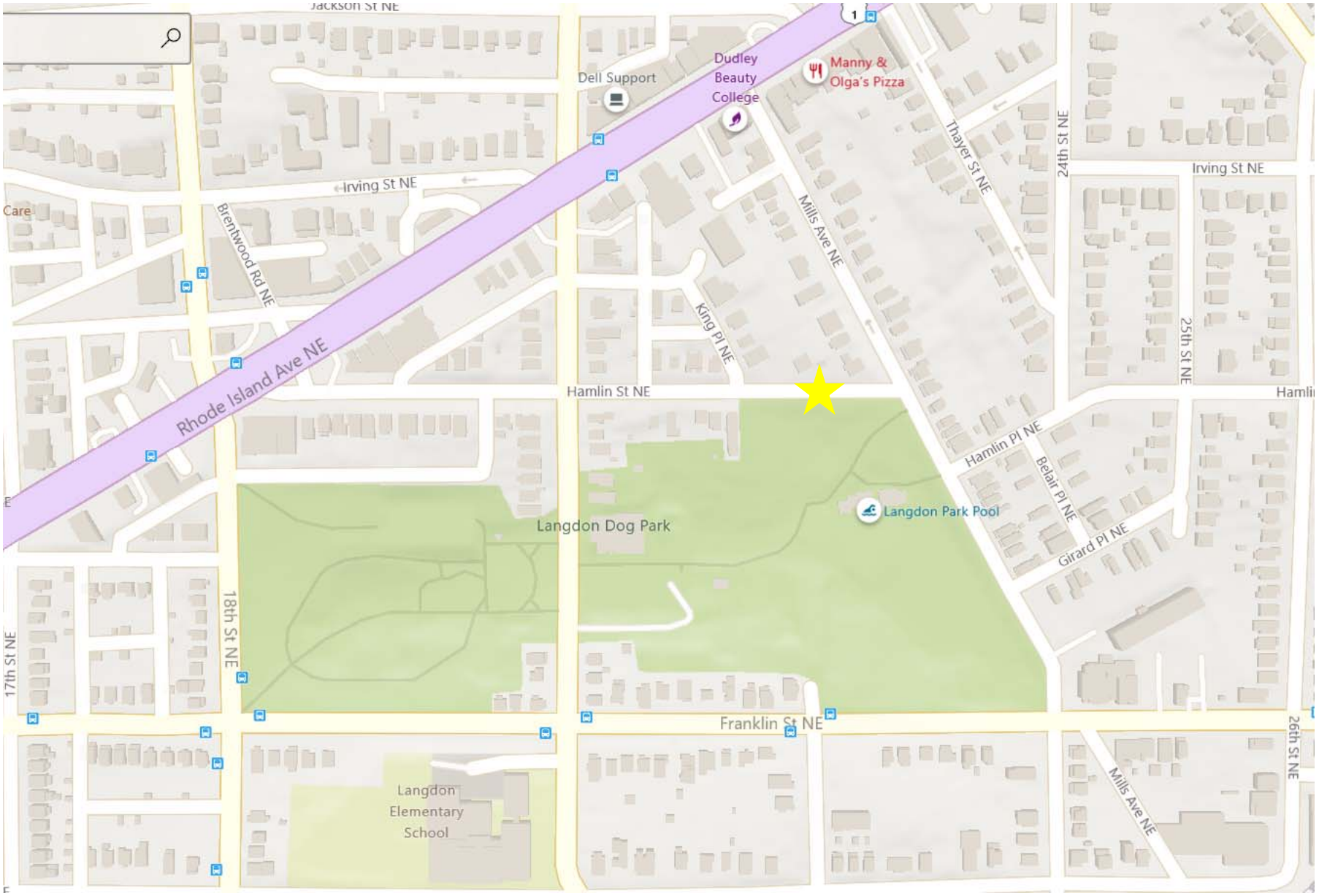
DEPARTMENT OF ENERGY & ENVIRONMENT

WE ARE WASHINGTON DC GOVERNMENT OF THE DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

AGENDA

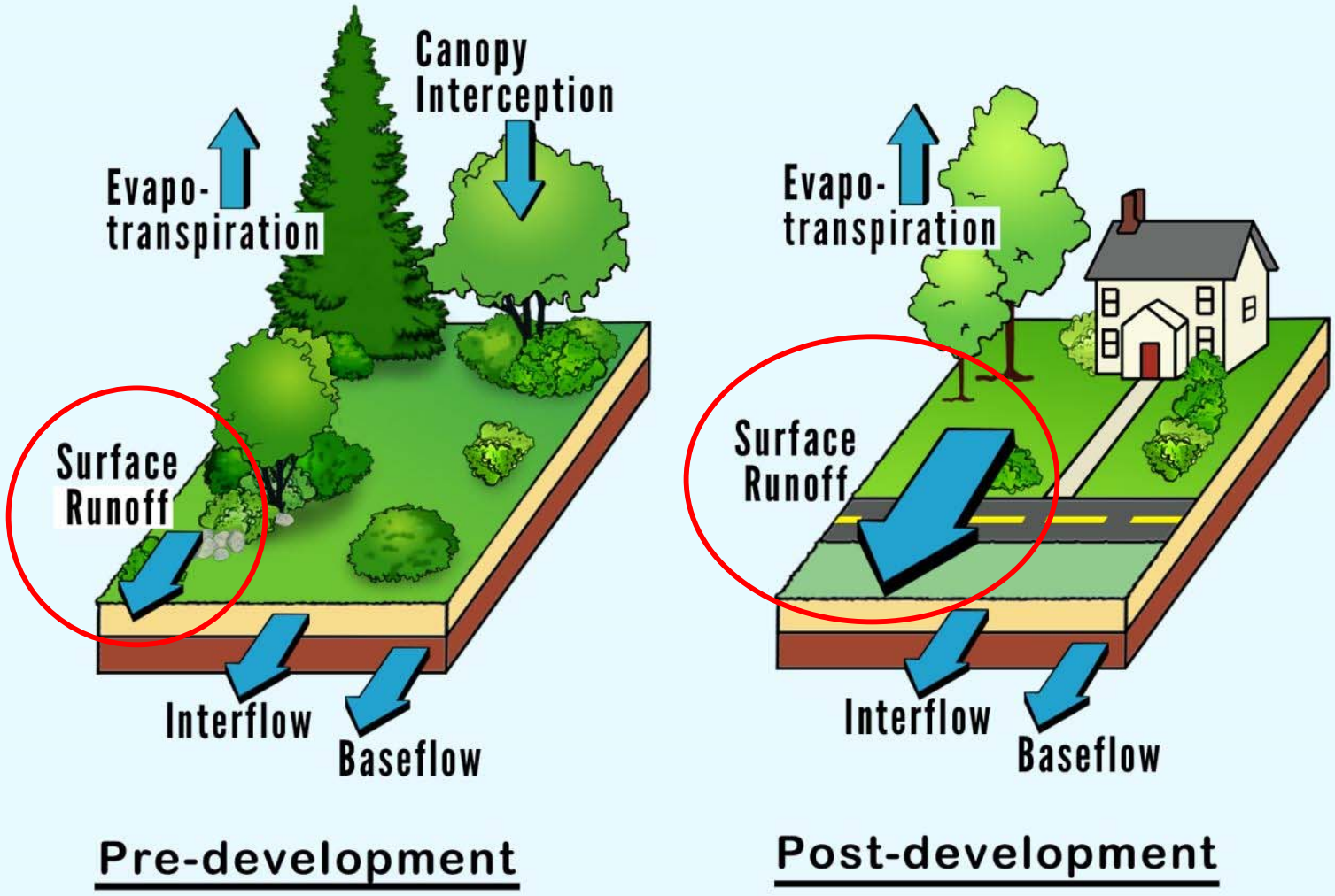
- Project Area & Background
- Existing Conditions
- Project Objectives
- Restoration Approaches
- Final Design
- Construction Details
- Timeline
- FAQs
- Q&A

PROJECT LOCATION



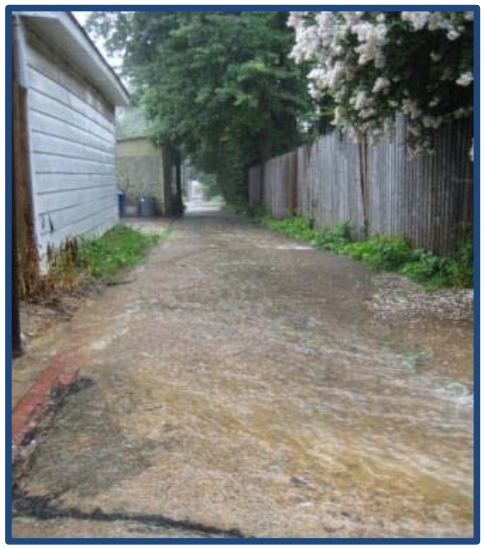
BACKGROUND

Figure 1.1 Water Balance at a Developed and Underdeveloped Site
(Source: Schueler, 1987)

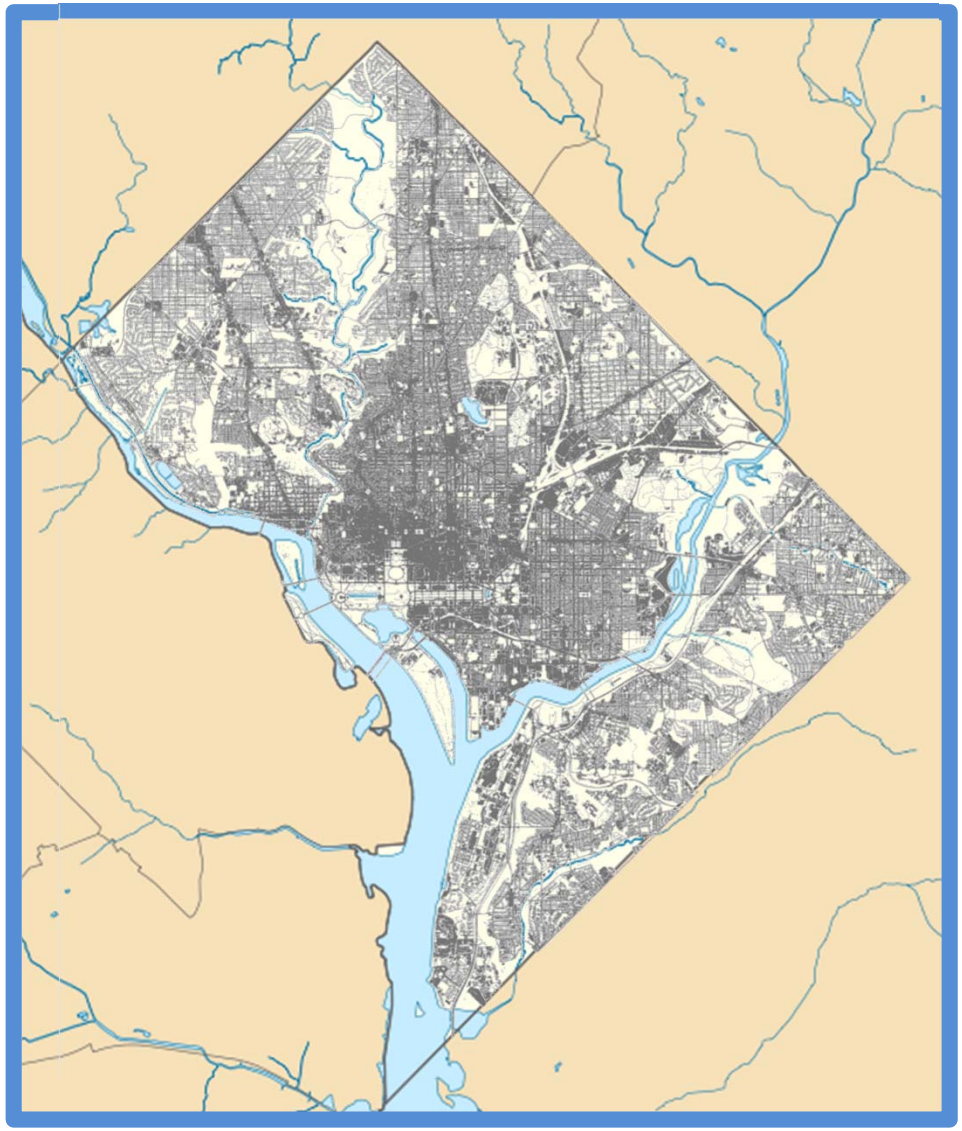


Surface runoff is minimal in an undeveloped site, but dominates the water balance at a highly impervious site.

PROBLEM OF STORMWATER POLLUTION



DISTRICT OF COLUMBIA LAND USE



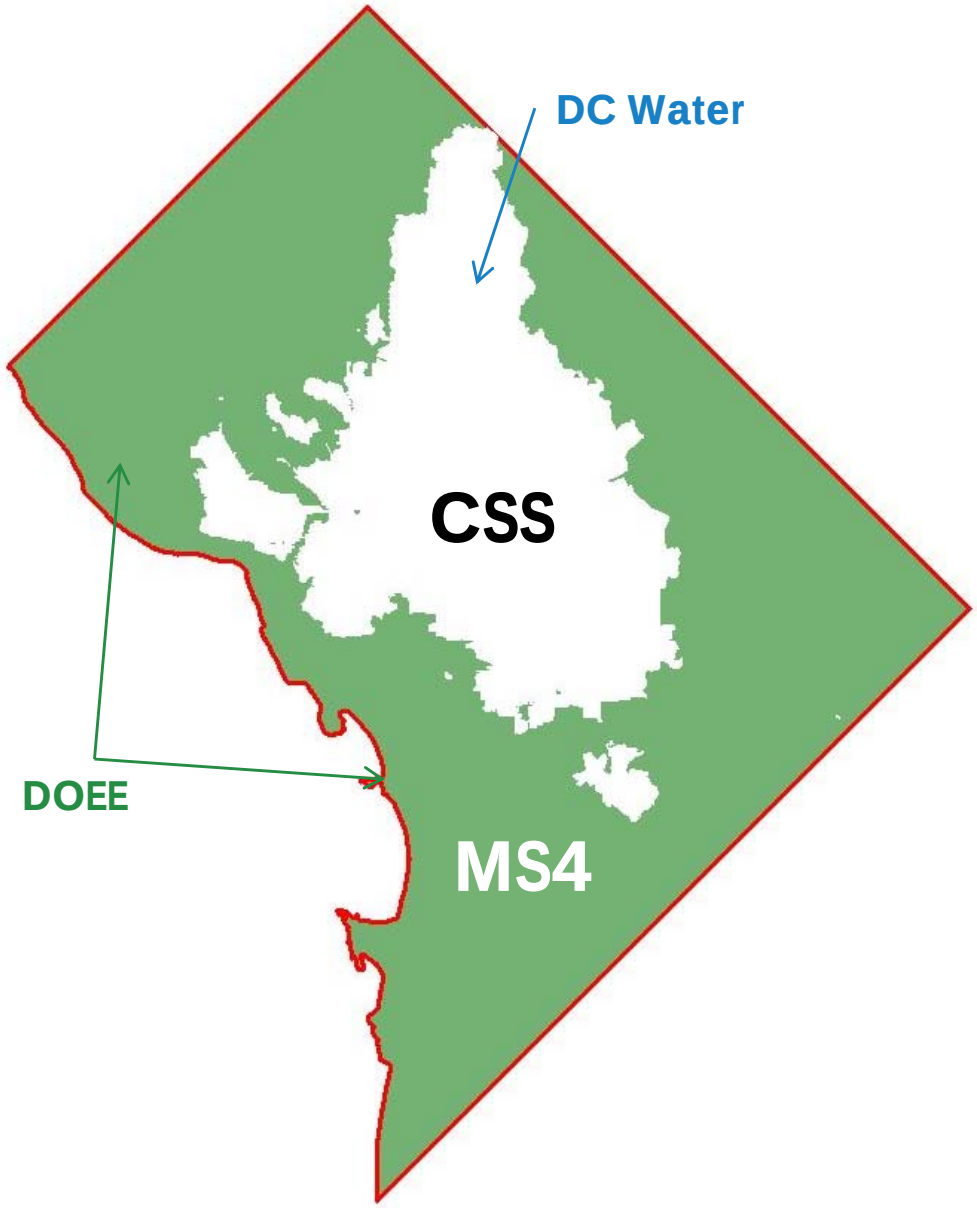
Total Area
68.3 mi^2

Land Area
61.3 mi^2

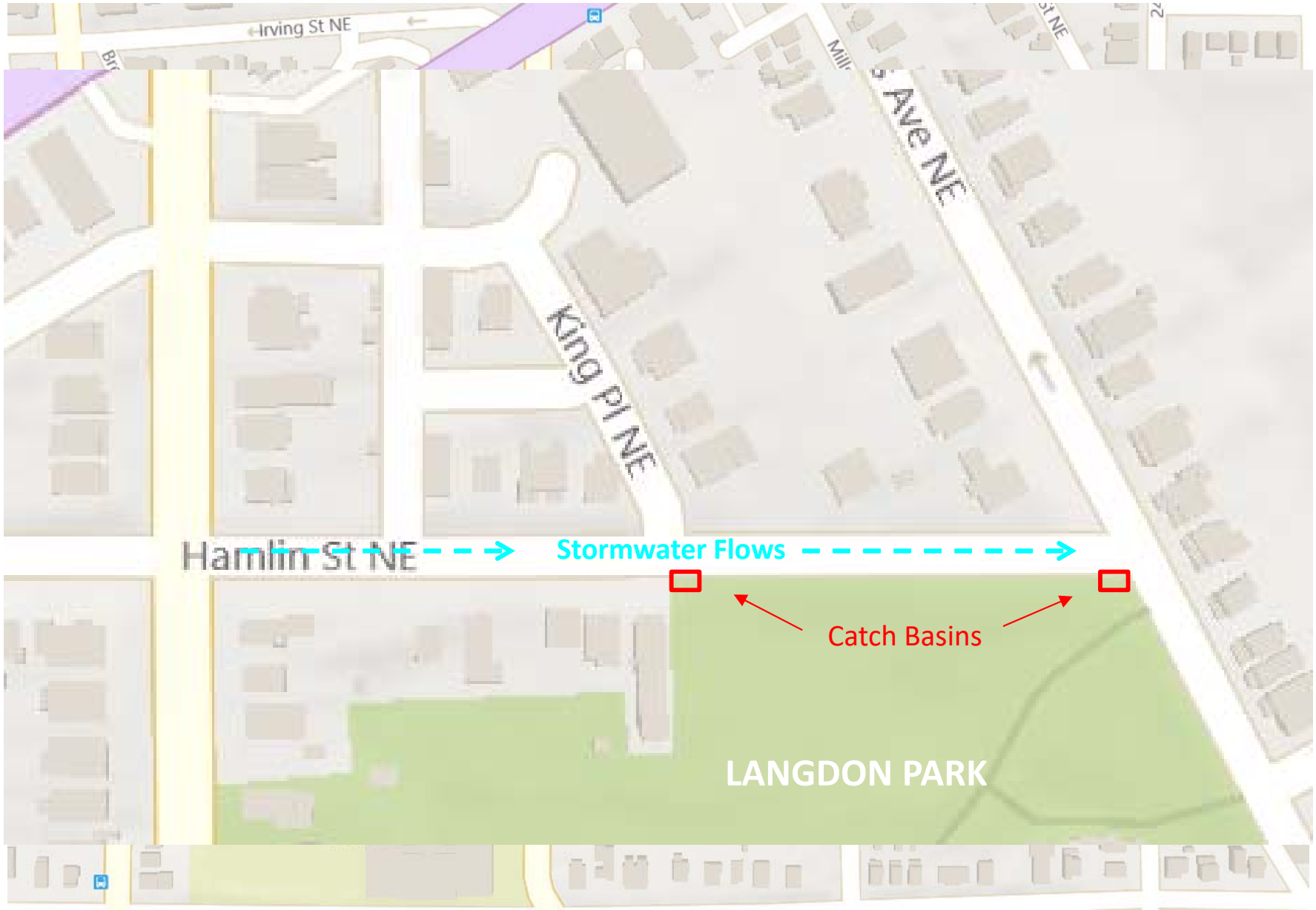
Impervious Area
26.6 mi^2
Approx 43%
of Land Area

A single 1.2 inch storm falling on this area produces about 525 million gallons of stormwater runoff.

DC'S RESTORATION APPROACHES

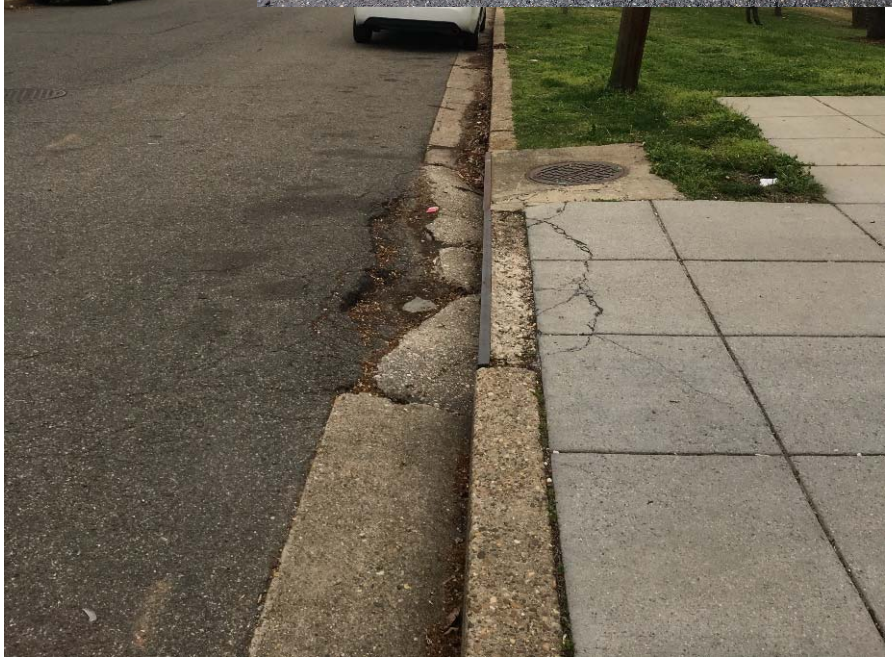


EXISTING CONDITIONS



EXISTING CONDITIONS

EXISTING CONDITIONS - UPPER



PROJECT OBJECTIVES

- Treat maximum amount of stormwater from the site in the most cost effective way
- Create and enhance habitat within Langdon Park
- Minimal impacts to the community
- Development of a community amenity
- Educational opportunities

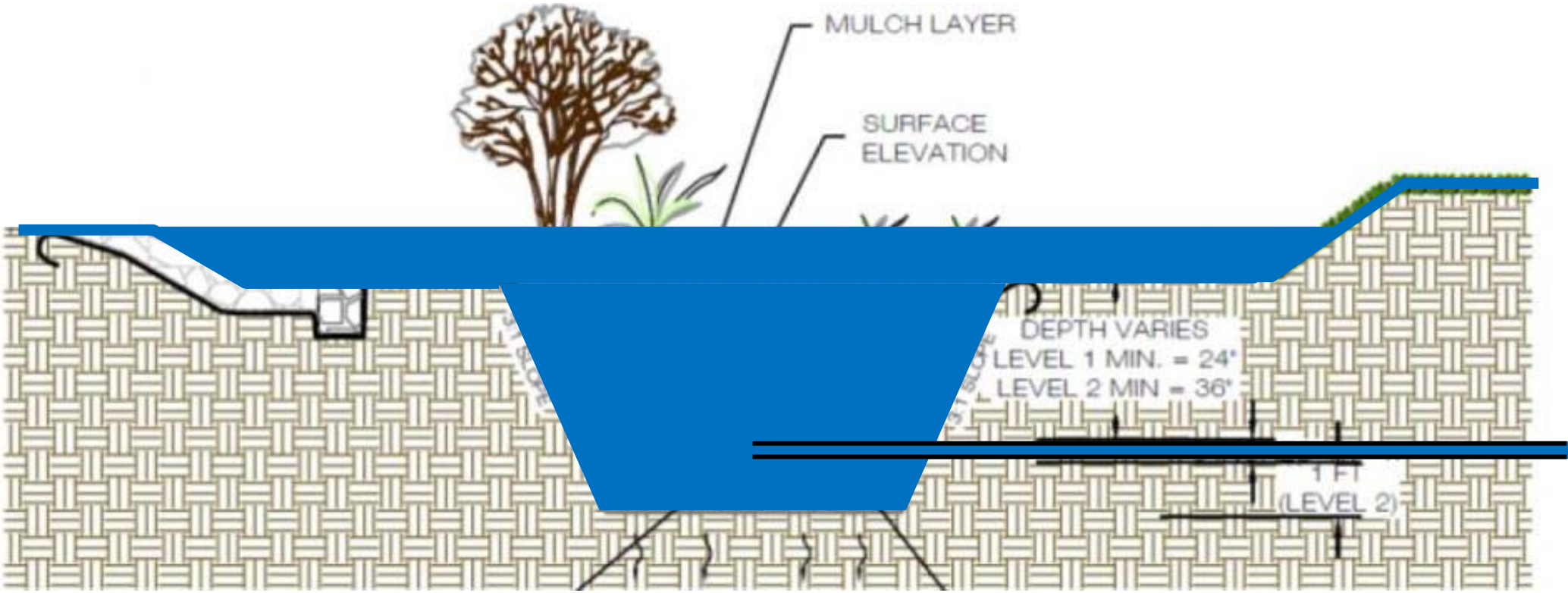
RESTORATION APPROACHES

Most stormwater practices all work the same way: “they collect stormwater runoff and use or mimic natural processes that result in the infiltration, evapotranspiration or use of stormwater in order to protect water quality and associated aquatic habitat” (EPA).

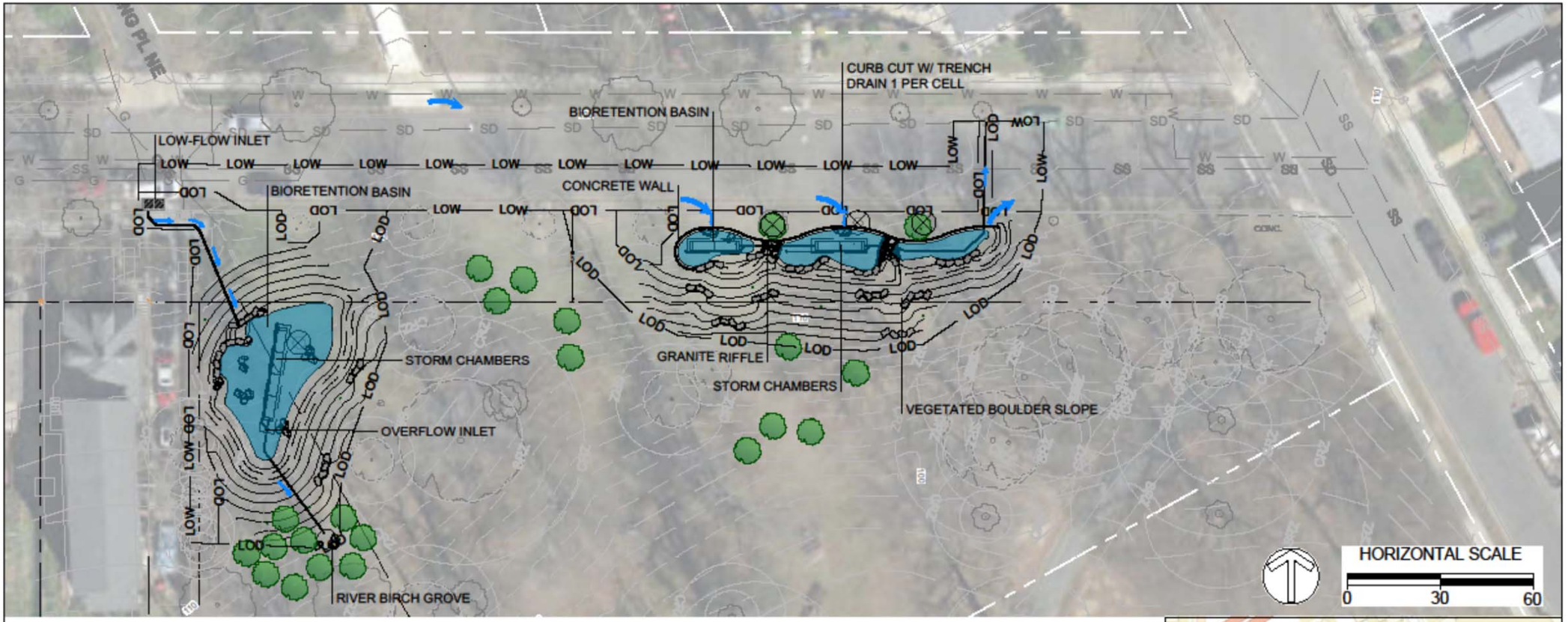
Slow it down, Spread it Out, Soak it In !

BIORETENTION

BIORETENTION: HOW IT WORKS



PROJECT DESIGN



SUMMARY TABLE

BMP	Bioretention Version	SWRv (P = 1.2") CF	SWRv (P = 1.7") CF	Areas SA_{top} SF	Areas SA_{bottom} SF	Areas $SA_{average}$ SF	Depths $d_{ponding}$ IN	Depths d_{media} IN	Depths Gravel Underdrain IN	Depths Infiltration Sump IN	Sv CF	Retention Volume Provided %	Retention Volume Provided CF
1	Standard	5,042	7,142	1,453	1,071	1,262	12	36	12	0	2,494	60%	1,496
2	Standard	2,190	3,102	915	657	786	12	36	12	0	1,542	60%	925
		7,231								Total	4,035		2,421

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Washington, D.C.

HAMLIN STREET NE LID RETROFIT
FINAL DESIGN
February 2022

Legend

- Existing Drainage Area
- SD — Existing Storm Drain
- SS — Exisitng Sanitary Sewer
- Proposed Bioretention
- Proposed Granite Boulders
- Proposed Tree Planting
- LOD — Proposed Limit of Disturbance
- LOW — Proposed Limit of Work

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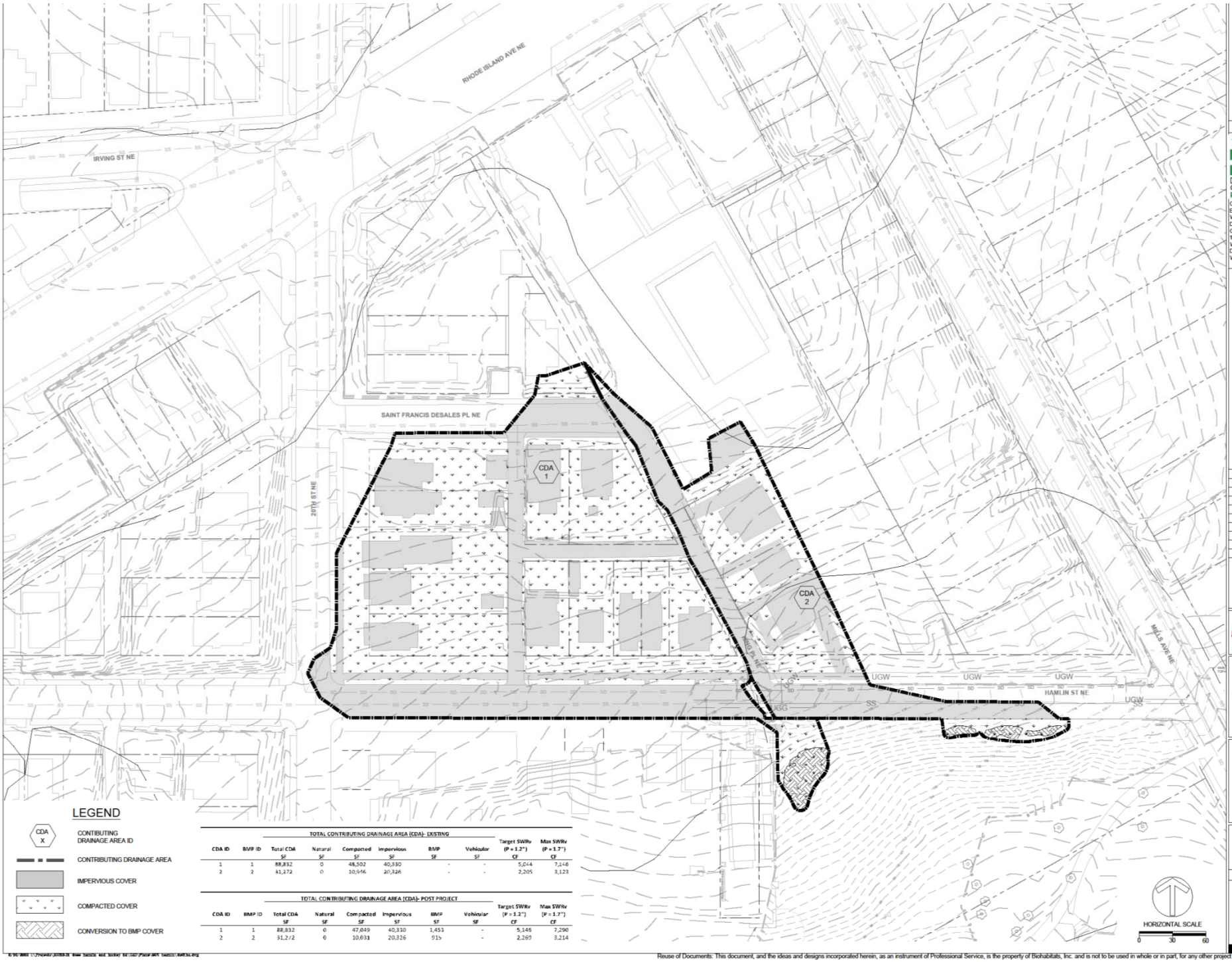

LEGEND

- CDA X — CONTIBUTING DRAINAGE AREA ID
- CONTRIBUTING DRAINAGE AREA
- IMPERVIOUS COVER
- COMPACTED COVER
- CONVERSION TO BMP COVER

TOTAL CONTRIBUTING DRAINAGE AREA (CDA)- EXISTING

CDA ID	BMP ID	Total CDA SF	Natural SF	Compacted SF	Impervious SF	BMP SF	Vehicular SF	Target SWRv (P = 1.2") CF	Max SWRv (P = 1.7") CF
1	1	88,832	0	48,502	40,330	-	-	5,044	7,148
2	2	41,272	0	10,946	20,326	-	-	2,205	3,123

TOTAL CONTRIBUTING DRAINAGE AREA (CDA)- POST PROJECT

CDA ID	BMP ID	Total CDA SF	Natural SF	Compacted SF	Impervious SF	BMP SF	Vehicular SF	Target SWRv (P = 1.2") CF	Max SWRv (P = 1.7") CF
1	1	88,832	0	47,049	40,330	1,453	-	5,146	7,290
2	2	31,272	0	10,031	20,326	915	-	2,260	3,214

CLIENT

DEPARTMENT OF ENERGY & ENVIRONMENT
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ENVIRONMENTAL ENGINEER
WATERSHED PROTECTION DIVISION
DEPARTMENT OF ENERGY AND ENVIRONMENT
GOVERNMENT OF THE DISTRICT OF COLUMBIA
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DC.gov
MAYOR MURIEL BOWSER

DATE:	ISSUES / REVISIONS
02/21/2021	30% CONCEPT DESIGNS
05/20/2021	60% SEMI-FINAL DESIGNS
11/19/2021	90% FINAL DESIGNS

TRIANGLE CONTRACTING L.L.C.

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Restore the Earth & Inspire Ecological Stewardship

HAMLIN ST NE LID RETROFITS

TITLE: DRAINAGE AREA MAP

PROJECT NO.: 20013.01 | SCALE: 1" = 30'
BY: GB | CHECK: BA
SEAL: DISTRICT OF COLUMBIA REGISTERED PROFESSIONAL ENGINEER
SHEET NO.: C600

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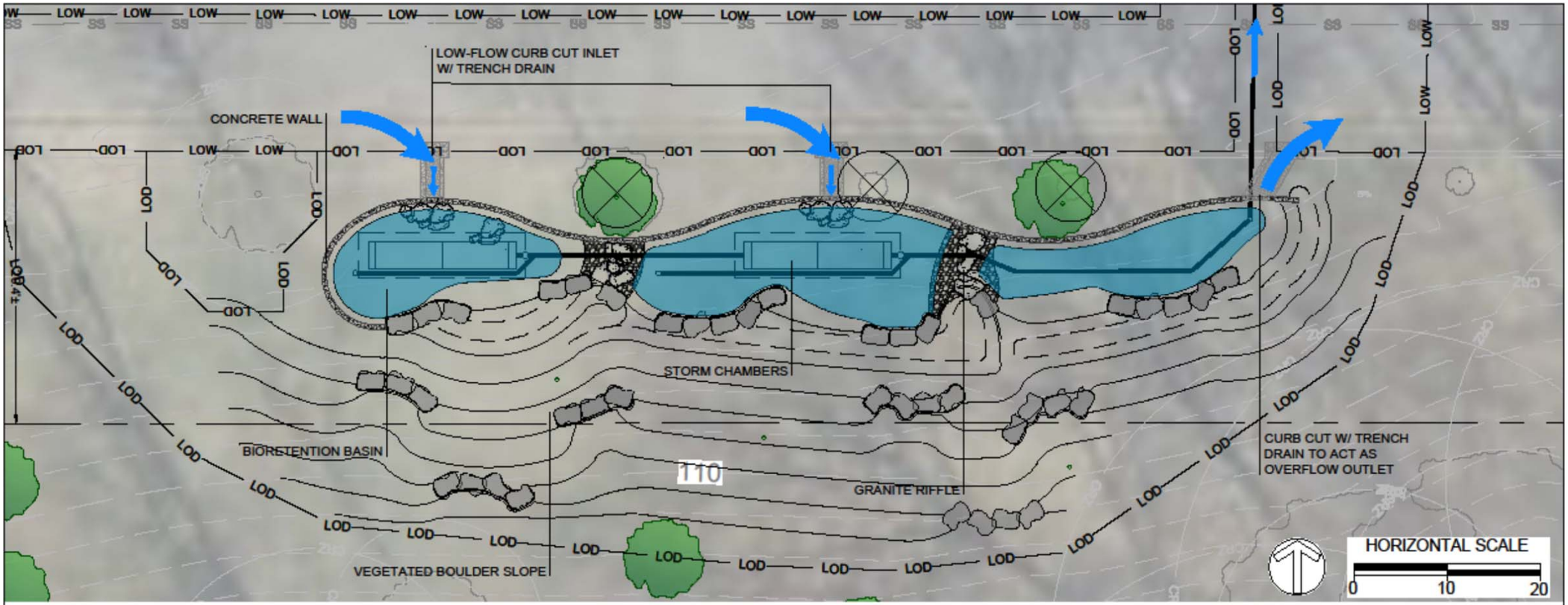
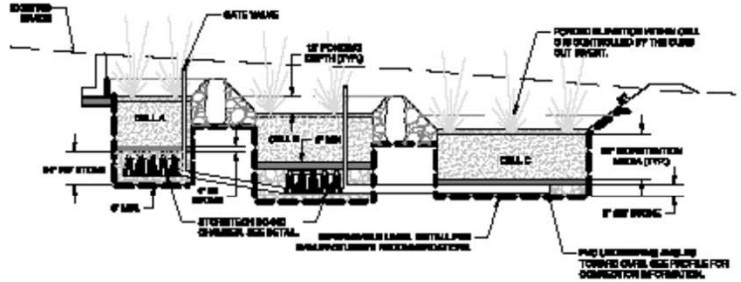
EASTERN

FINAL DESIGN - EASTERN





BMP 2 - BIORETENTION
TYPICAL PROFILE

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Existing Drainage Area
SD Existing Storm Drain
SS Exisitng Sanitary Sewer

Legend

Proposed Bioretention
Proposed Granite Boulders
Proposed Tree Planting

LOD Proposed Limit of Disturbance
LOW Proposed Limit of Work

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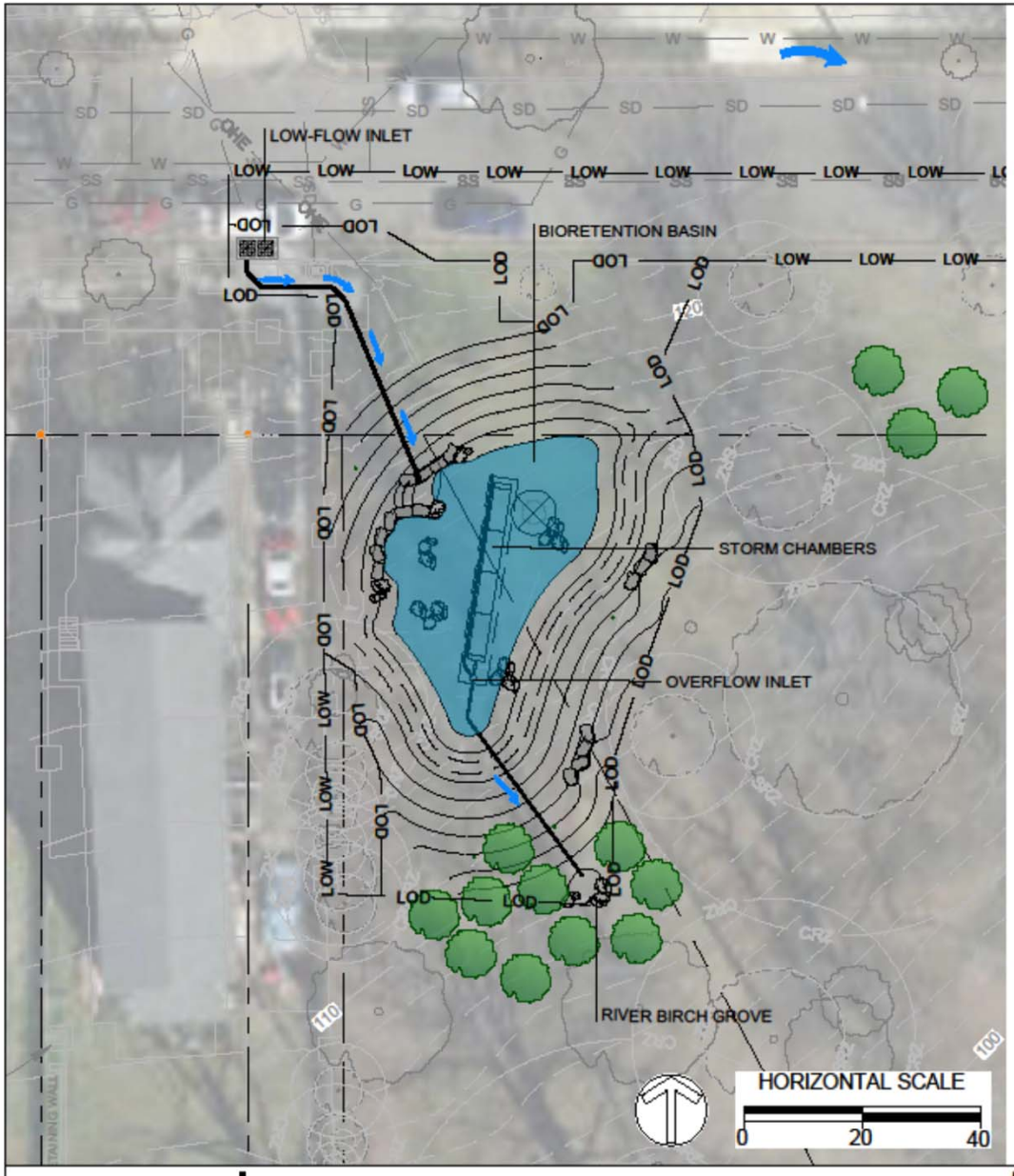
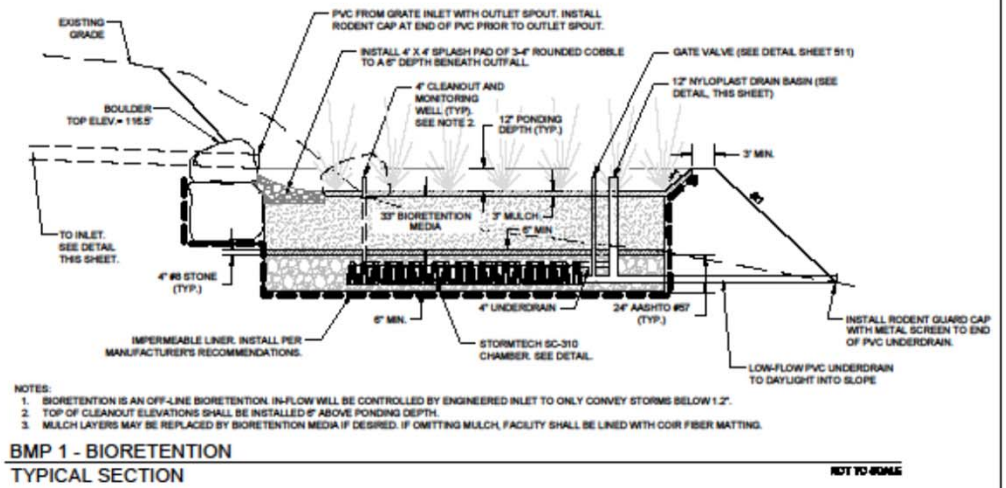
WESTERN

FINAL DESIGNS - WESTERN

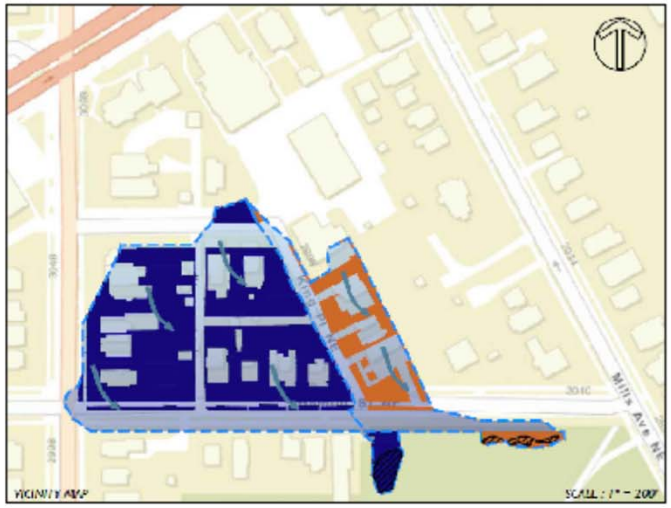




NOTES:
1. BIORETENTION IS AN OFF-LINE BIORETENTION. IN-FLOW WILL BE CONTROLLED BY ENGINEERED INLET TO ONLY CONVEY STORMS BELOW 1.2".
2. TOP OF CLEANOUT ELEVATIONS SHALL BE INSTALLED 6" ABOVE PONDING DEPTH.
3. MULCH LAYERS MAY BE REPLACED BY BIORETENTION MEDIA IF DESIRED. IF OMITTING MULCH, FACILITY SHALL BE LINED WITH COIR FIBER MATTING.

BMP 1 - BIORETENTION
TYPICAL SECTION

NOT TO SCALE



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WESTERN

CONSTRUCTION DETAILS

GENERAL INFORMATION

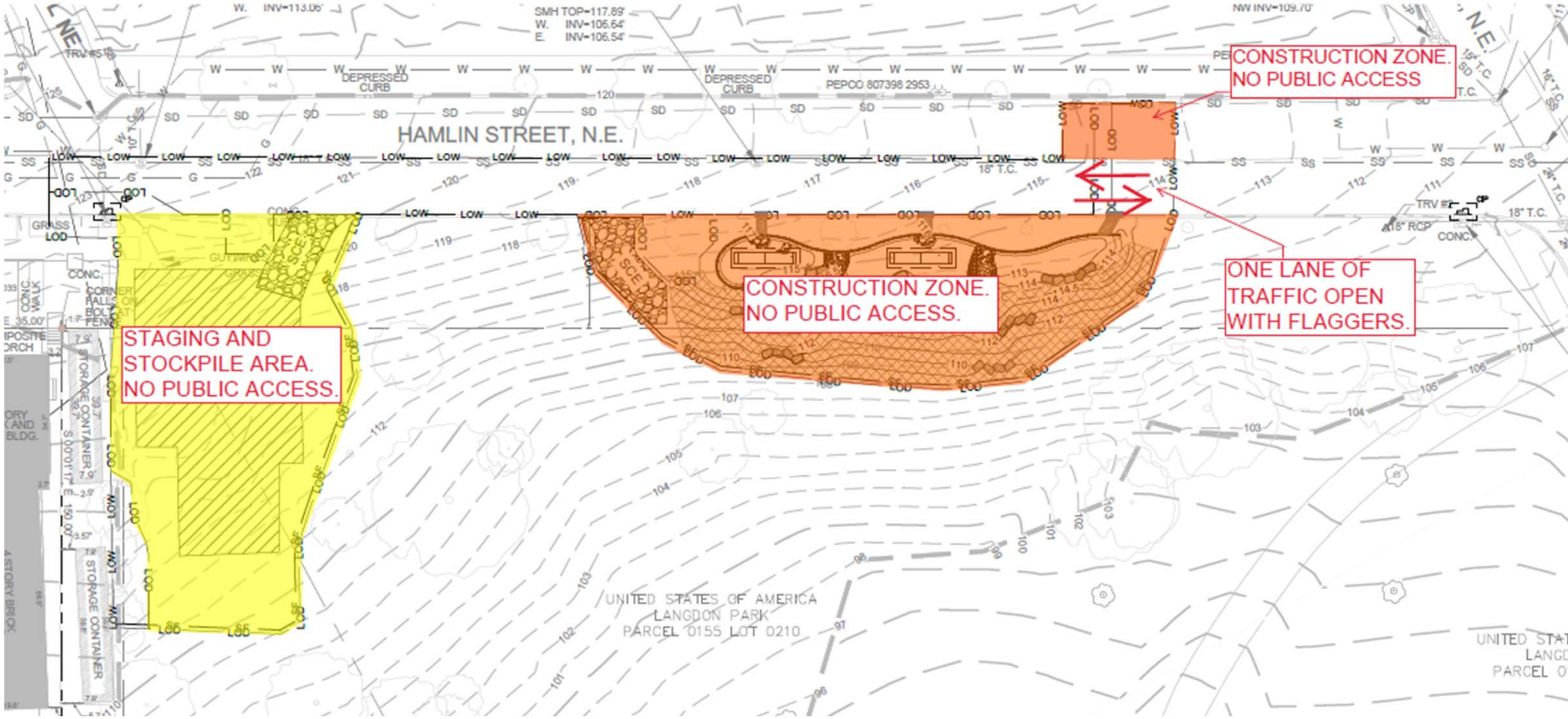
- All work to occur on weekdays (M-F)*
- Work hours are 7:30AM–3:30PM
- Construction vehicles on site:
  - 1 track truck
  - Up to 2 excavators
  - Up to 2 company trucks parked in construction zone
  - 2-3 personal vehicles parked along Hamlin St.
- DOEE Community Point of Contact:

Cecilia Lane

Cecilia.lane@dc.gov

202-535-1961

CONSTRUCTION – SITE ACCESS



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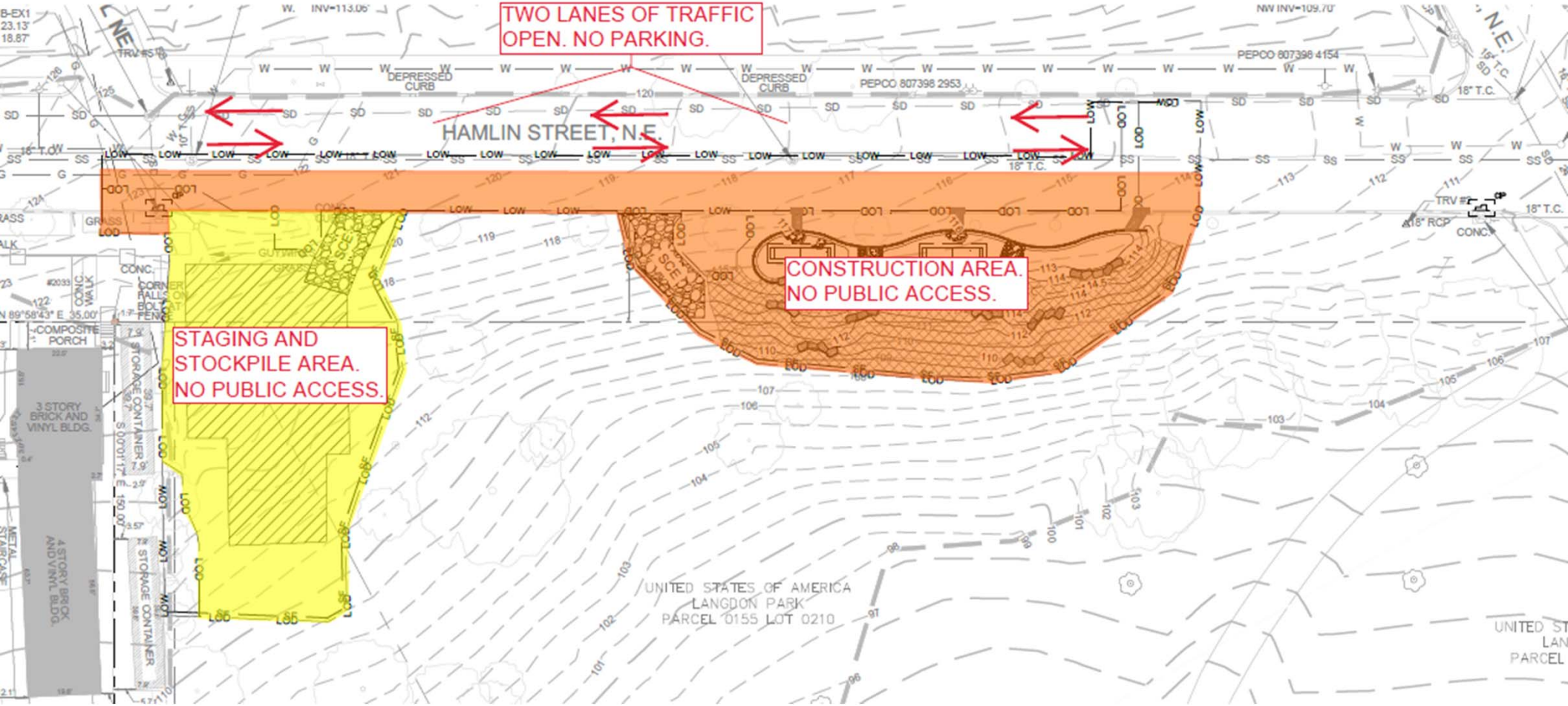

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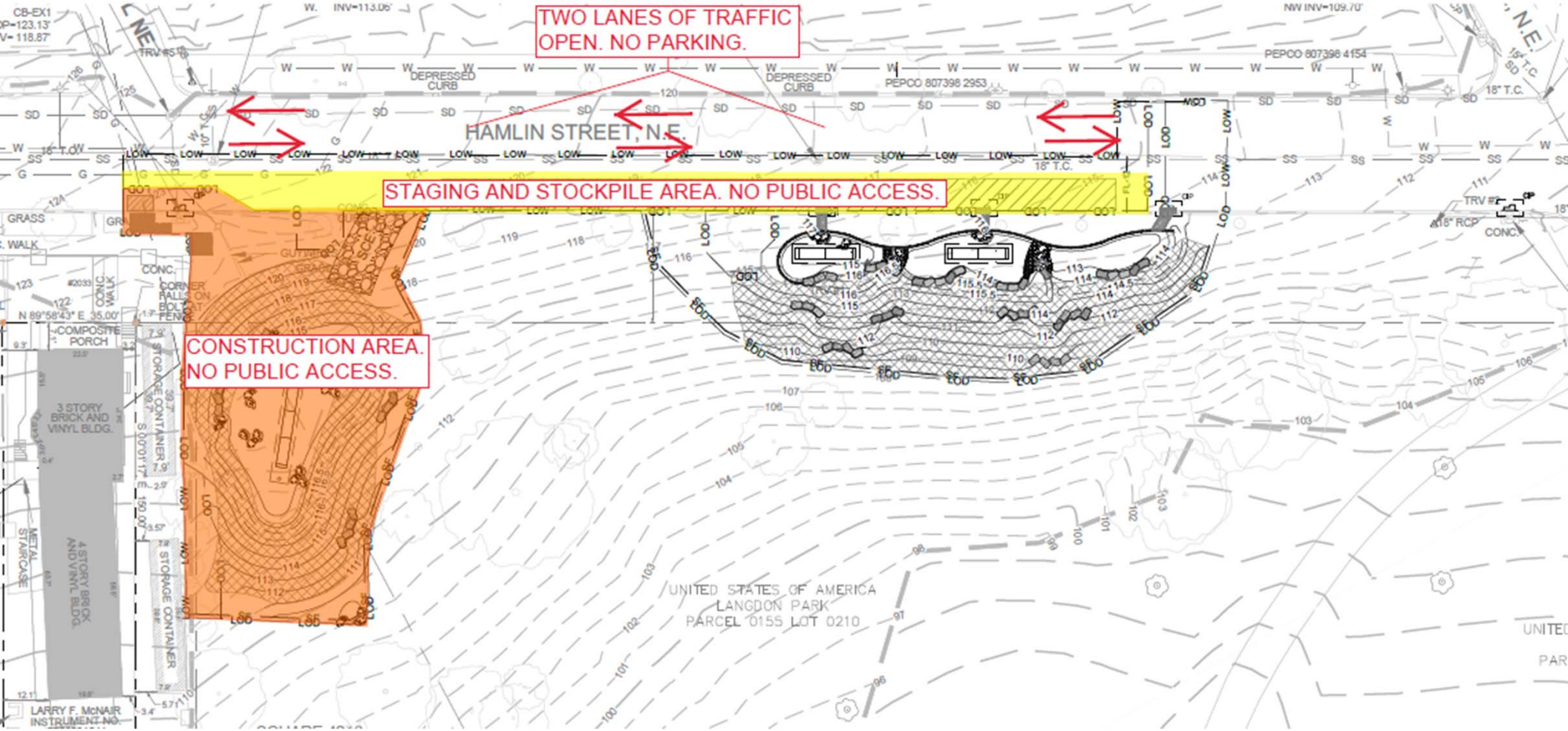

PROJECT TIMELINE

- March 2020: contract awarded
- April – December 2020: field assessment (topographic survey, geotechnical investigations etc.), interagency coordination
- January – Fall 2021: design development
- 3 public meetings:
  - Concept designs on 3/9/2021
  - Semi-final designs (~65%): 9/20/2021
  - Construction kickoff meeting (timeline): 2/23/2022

FAQs

- How do we find our project sites?
  - Enthusiastic landowners!
  - Funding sources
  - Large areas of untreated impervious cover
  - More impactful locations
- What can I do?
  - RiverSmart Homes
    - Rain Gardens
    - Permeable Pavers
    - Rain Barrels
    - Tree Planting
    - “BayScaping”

RIVERSMART
DEPARTMENT OF ENERGY AND ENVIRONMENT

https://www.riversmarthomes.org/

QUESTIONS