

**SWM/BMP NARRATIVE:**

**EXISTING CONDITIONS:**  
THE PRIVATE SPACE PROPERTY CONSISTS OF AN EXISTING PARK WITH TENNIS COURTS, SOCCER FIELD, AND ACCOMPANYING HARDSCAPE, AND STORM DRAIN FEATURES.

THE PUBLIC SPACE DISTURBANCE CONSISTS OF A NEW DRIVEWAY ENTRANCE, CURB AND GUTTER, SIDEWALK AND LANDSCAPE IMPROVEMENTS ALONG THE ADJACENT IDAHO AVENUE N.W. RIGHT-OF-WAY.

**PROPOSED CONDITIONS:**  
THE PRIVATE SPACE PROJECT PROPOSES THE CONSTRUCTION OF A NEW 2-STORY, 3,500 SQ. FT. POOL HOUSE, POOL, TENNIS COURT, SOCCER FIELD WITH SITE, UTILITY, LANDSCAPE AND STORMWATER FEATURES. THE STORMWATER MANAGEMENT FOR THE SITE WILL BE FULFILLED BY A COMBINATION OF GREEN ROOF AND BIO-RETENTION AREAS. THESE BMP'S WILL TREAT THE BUILDING ROOF AND LANDSCAPE FEATURE AREAS. THE BMP'S WILL THEN TIE INTO THE EXISTING SPRINGLAND LANE N.W. SEPARATE STORM SYSTEM AND EVENTUALLY OUTFALL INTO THE XXXXXXXX....

THE PUBLIC SPACE DISTURBANCE PROPOSES THE CONSTRUCTION OF A NEW DRIVEWAY ENTRANCE, CURB AND GUTTER, SIDEWALK AND LANDSCAPE IMPROVEMENTS ALONG THE ADJACENT IDAHO AVENUE N.W. RIGHT-OF-WAY STORMWATER MANAGEMENT TREE PLANTINGS ARE PROPOSED ALONG THE SURROUNDING RIGHT OF WAYS WHERE POSSIBLE.

**STORMWATER RETENTION AND DETENTION REQUIREMENTS:**  
STORMWATER RETENTION AND DETENTION FOR THIS SITE WILL MEET THE DISTRICT DEPARTMENT OF ENERGY AN ENVIRONMENT REQUIREMENTS FOR MAJOR LAND DISTURBING ACTIVITY. THEREFORE, THE FIRST 1.2" OF RAINFALL SHALL BE RETAINED ON-SITE FOR THE PROPOSED IMPROVEMENTS THROUGH THE USE OF GREEN ROOF AND BIORETENTION FACILITIES. THE 15-YEAR POST DEVELOPMENT DISCHARGE WILL BE EQUAL TO OR LESS THAN PRE-PROJECT DISCHARGE.

- NOTE:** 2 YEAR POST DEVELOPMENT PEAK DISCHARGE (DETENTION) REQUIREMENT DOES NOT APPLY SINCE
1. THE SITE DISCHARGE FLOW THROUGH A SEPARATE SEWER SYSTEM TO THE MAIN SYSTEM OF THE ANACOSTIA RIVER.
  2. SIDE DISCHARGE DOES NOT FLOW INTO OR THROUGH AN ABOVE ROUND TRIBUTARY TO POTOMAC OR ANACOSTIA RIVERS, THE WASHINGTON CANAL, OR THE C&O CANAL.
  3. THE SITE DISCHARGE WILL NOT CAUSE EROSION OF LAND OR TRANSPORT OF SEDIMENT.

**PUBLIC RIGHT OF WAY NARRATIVE:**  
THE AREA DESIGNATED AS PUBLIC RIGHT OF WAY (PROW) CONSISTS OF PEDESTRIAN ACCESS AREA AS WELL AS ADJACENT RIGHT-OF-WAY IMPROVEMENTS. STORMWATER MANAGEMENT WILL INCLUDE TREE PLANTINGS AND PRESERVATION WHERE POSSIBLE ALONG THE PROW FOR THIS PROJECT.

**BIORETENTION STORAGE VOLUME**

$S_v = \text{SURFACE AREA (SF)} \times [(\text{MEDIA DEPTH (FT)} \times \text{POROSITY}) + (\text{GRAVEL DEPTH (FT)} \times \text{POROSITY})] + (\text{PONDING DEPTH (FT)} \times \text{AVERAGE SURFACE AREA})$

**BIO-RETENTION 1 STORAGE VOLUME:**  
 $S_v = 979 \text{ SF} \times [(3.0' \times 0.25) + (1.0' \times 0.40)] + (1.0' \times 1225)$   
 $S_v = (0.60 \times 2,351 \text{ CF}) = 1,410.6 \text{ CF}$

**BIO-RETENTION 2 STORAGE VOLUME:**  
 $S_v = 799 \text{ SF} \times [(3.0' \times 0.25) + (1.0' \times 0.40)] + (1.0' \times 1014)$   
 $S_v = (0.60 \times 1,933 \text{ CF}) = 1,159.8 \text{ CF}$

**BIO-RETENTION 3 STORAGE VOLUME:**  
 $S_v = 195 \text{ SF} \times [(4.0' \times 0.25) + (1.0' \times 0.40)] + (1.0' \times 305)$   
 $S_v = (0.60 \times 578 \text{ CF}) = 346.8 \text{ CF}$

**BIO-RETENTION 4 STORAGE VOLUME:**  
 $S_v = 578 \text{ SF} \times [(6.0' \times 0.25) + (1.0' \times 0.40)] + (1.0' \times 841)$   
 $S_v = (0.60 \times 1,940 \text{ CF}) = 1,164 \text{ CF}$

**TOTAL STORAGE VOLUME**  
 $S_v = 1,410.6 \text{ CF} + 1,159.8 \text{ CF} + 346.8 \text{ CF} + 1,164 \text{ CF}$   
 $S_v = 4,081.2 \text{ CF}$

**GREEN ROOF STORAGE VOLUME**

**GREEN ROOF #1:**  
 $S_v = 2,627 \text{ SF} \times [(6" \times .40) + (2" \times 0.93)]$   
 $S_v = 933 \text{ CF}$

**TR-55 ON-SITE RUNOFF SUMMARY**

	CN	Q(cfs)
Q2 MEADOW	0	0.00
Q2 DEVELOPED	0	0.00
Q15 EXISTING	0	0.00
Q15 DEVELOPED	0	0.00
Q100 DEVELOPED	0	0.00

THE CURVE NUMBERS (CN) SHOWN ABOVE ARE USED TO DETERMINE THE STORMWATER MANAGEMENT RETENTION COMPLIANCE. THE ADJUSTED CN ARE BASED ON THE DEVELOPED CONDITIONS ENTERED INTO THE ONLINE DATABASE. THE RUNOFF RATE Q (cfs) WAS CALCULATED USING A SITE AREA OF 113,090 SF OR 2.596 ACRES.

SWM #: xxxx

**PRIVATE SPACE LEGEND:**

- TOTAL SITE AREA: 136,769 SQ. FT.
- IMPERVIOUS COVER (32,325 SQ. FT.)
- COMPACTED COVER (97,597 SQ. FT.)
- GREEN ROOF BMP COVER (2,628 SQ. FT.)
- BIO-RETENTION BMP COVER (4,220 SQ. FT.)

**STATEMENT BY PROFESSIONAL ENGINEER REGISTERED IN THE DISTRICT OF COLUMBIA**

THIS IS TO CERTIFY THAT THE ENGINEERING FEATURES OF ALL STORMWATER BEST MANAGEMENT PRACTICES (BMPs), STORMWATER INFRASTRUCTURE, AND LAND COVER (COLLECTIVELY THE "FACILITY") HAVE BEEN DESIGNED/EXAMINED BY ME AND FOUND TO BE IN CONFORMITY WITH MODERN ENGINEERING PRINCIPLES APPLICABLE TO THE TREATMENT AND DISPOSAL OF STORMWATER POLLUTANTS. I FURTHER CERTIFY THAT THE FACILITY HAS BEEN DESIGNED IN ACCORDANCE WITH THE SPECIFICATION REQUIRED UNDER CHAPTER 5 OF TITLE 21 OF THE DISTRICT OF COLUMBIA MUNICIPAL REGULATIONS. IT IS ALSO STATED THAT THE UNDERSIGNED HAS FURNISHED THE APPLICANT WITH A SET OF INSTRUCTIONS FOR THE MAINTENANCE AND OPERATION OF THE SITE'S FACILITY.

SIGNATURE OF THE ENGINEER \_\_\_\_\_  
AFFIX SEAL: \_\_\_\_\_

NAME AND TITLE (PLEASE TYPE): \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
DATE: \_\_\_\_\_ PHONE NO. \_\_\_\_\_

**AS-BUILT CERTIFICATION BY PROFESSIONAL ENGINEER**

WITHIN 21 DAYS AFTER COMPLETION OF CONSTRUCTION OF THE STORMWATER DISCHARGE FACILITY, PLEASE SEND THIS PAGE TO THE WATERSHED PROTECTION DIVISION OF THE DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT.

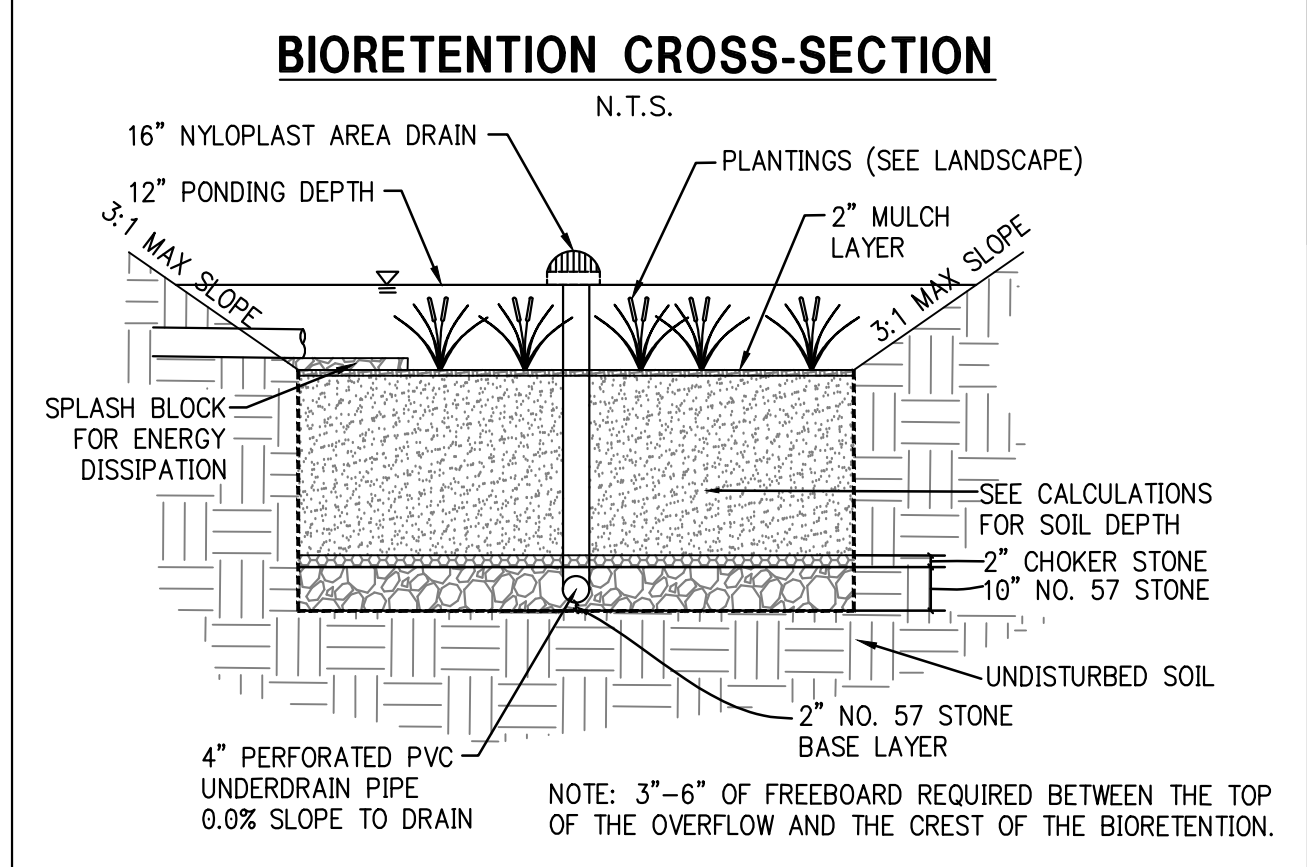
1. STORMWATER DISCHARGE FACILITY INFORMATION:  
SOURCE NAME: \_\_\_\_\_  
SOURCE LOCATION: STREET: \_\_\_\_\_ CITY: \_\_\_\_\_ DCRA PERMIT No.: \_\_\_\_\_ DATE ISSUED: \_\_\_\_\_
2. AS BUILT CERTIFICATION

I HEREBY CERTIFY THAT STORMWATER DISCHARGE FACILITY HAS BEEN BUILT SUBSTANTIALLY IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THAT ANY SUBSTANTIAL DEVIATIONS (NOTED BELOW) WILL NOT PREVENT THE SYSTEM FROM FUNCTIONING IN COMPLIANCE WITH THE REQUIREMENTS OF SECTION 526 THROUGH 535 OF DCMR-21, CHAPTER 5 WHEN PROPERLY MAINTAINED AND OPERATED. THESE DETERMINATIONS HAVE BEEN BASED UPON ON-SITE OBSERVATION OF CONSTRUCTION, SCHEDULED AND CONDUCTED BY ME OR BY A PROJECT REPRESENTATIVE UNDER MY DIRECT SUPERVISION. I HAVE ENCLOSED ONE SET OF AS-BUILT ENGINEERING DRAWINGS.

SIGNATURE OF THE ENGINEER \_\_\_\_\_  
AFFIX SEAL: \_\_\_\_\_

NAME (PLEASE TYPE) D.C. REG. No. \_\_\_\_\_  
COMPANY NAME \_\_\_\_\_  
COMPANY ADDRESS \_\_\_\_\_  
DATE: \_\_\_\_\_ PHONE NO. \_\_\_\_\_

SUBSTANTIAL DEVIATIONS FROM THE APPROVED PLANS AND SPECIFICATIONS (ATTACH ADDITIONAL SHEETS IF REQUIRED).



**PROJECT**  
**Hearst Park & Pool**  
37th Street, NW  
Washington, DC 20008

**OWNER'S REPRESENTATIVE**  
**Department of General Services**  
2000 14th Street NW, 8th Floor  
Washington DC, 20009

**ARCHITECT**  
**cox graae + spack architects**  
2909 M Street NW  
Washington DC 20007  
T: 202.965.7070  
F: 202.965.7144

**CIVIL ENGINEER**  
**Wiles Mensch Corporation**  
Address: 510 8th Street SE  
Washington DC 20003  
T: 202.436.9384

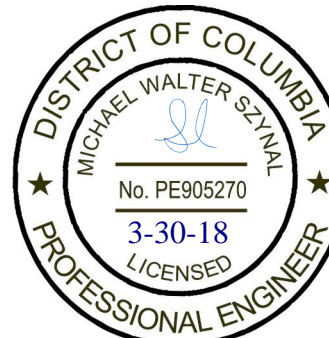
**STRUCTURAL ENGINEER**  
**Keast & Hood Co.**  
1350 Connecticut Ave NW, Suite 412  
Washington, DC 20036  
T: 202.223.1941

**MPE ENGINEER**  
**Setty & Associates International, PLLC**  
Address: 5185 MacArthur Blvd., Suite 220  
Washington, DC 20016  
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**LANDSCAPE ARCHITECT**  
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1025 Connecticut Avenue NW., Suite 1000  
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**POOL CONSULTANT**  
**Councilman-Hunsaker**  
10733 Sunset Office Dr., Suite 400  
St. Louis, MO 63127  
T: 314.894.1245

**AV/ IT/ ACOUSTICS CONSULTANT**  
**Polysonics**  
405 Belle Air Lane  
Warrenton, VA 20186  
T: 540.341.4988



Mark	Date	Description
01	02.02.18	Schematic Design

Drawing Title:  
Storm Water Management Plan  
and Calculations  
Graphic Scale:

Project No: 1614  
Date: 1/29/18  
Drawing No:

**CIV0703**