

E-FILE STAMP

PROJECT NARRATIVE:
• 2 STORY COMMERCIAL BUILDING
• RETAIL/COMMERCIAL WITH UNDERGROUND PARKING
• NEW SITE STORMWATER FACILITIES AND STORM DRAIN PIPE

SITE DATA:
• SITE AREA = 46,875 SF (1.076 AC)
• EXISTING IMPERVIOUS AREA = 29,337 SF (0.673 AC)
• PROPOSED NEW IMPERVIOUS AREA = 8,215 SF (0.189 AC)
• PROPOSED TOTAL IMPERVIOUS AREA = 37,552 (0.862 AC)

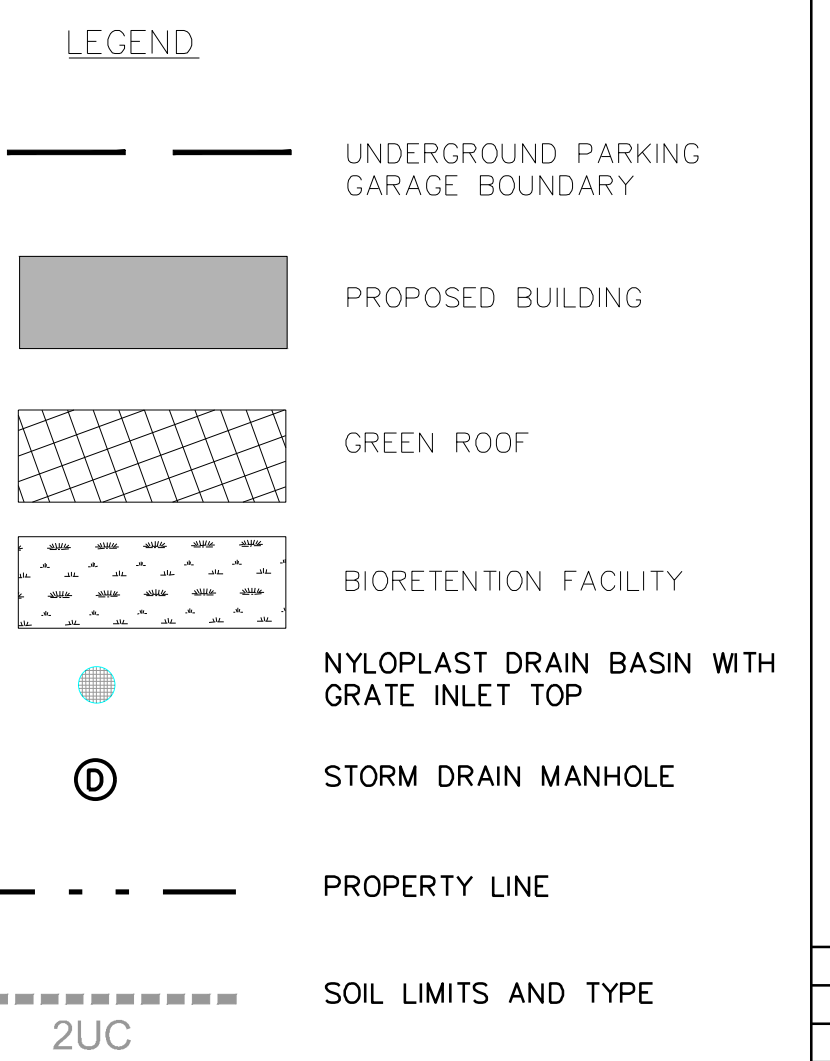
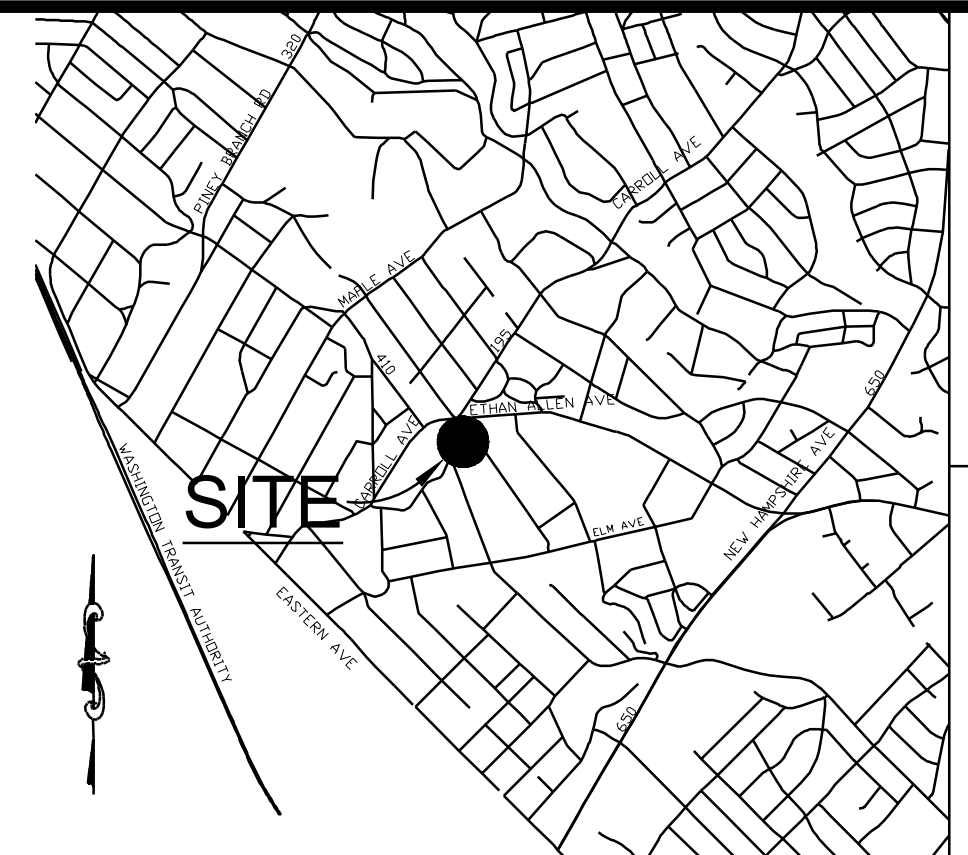
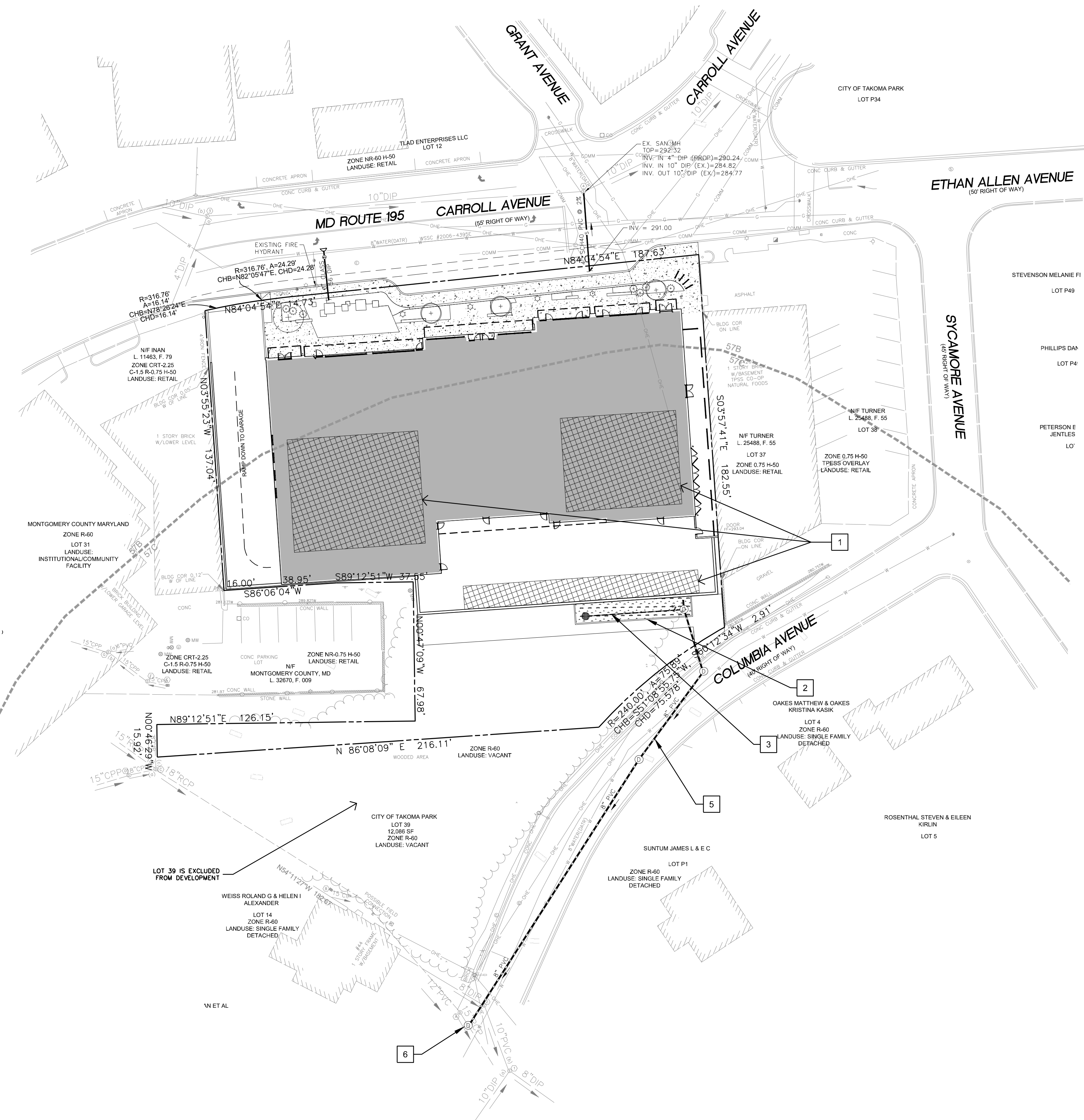
ESD VOLUME SUMMARY:
(TOTAL ESDv PROVIDED IN CUBIC FEET)
• TOTAL ESDv REQUIRED = 2,545
• GREEN ROOF #1: 1,546 CF
• BIORETENTION #2: 1,690 CF
TOTAL ESDv PROVIDED = 3,235 CF

SWM NARRATIVE:
THE TAKOMA JUNCTION PROJECT HAS BEEN DEVELOPED TO COMPLY WITH THE ENVIRONMENTAL SITE DESIGN REQUIREMENTS AS REQUIRED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE). THE STORMWATER MANAGEMENT DESIGN CALCULATIONS FOR THIS PROJECT ARE BASED UPON THE ENVIRONMENTAL SITE DESIGN (ESD) CRITERIA ESTABLISHED BY THE STORMWATER MANAGEMENT ACT OF 2007.
THE ESDV FOR POI-1 WAS CALCULATED BASED ON AN EXISTING SITE IMPERVIOUS AREA OF 0.67 ACRES. THE AREA'S SITE IMPERVIOUSNESS IS 69%, AS THIS IS GREATER THAN 40% THIS PROJECT IS SUBJECT TO REDEVELOPMENT REQUIREMENTS. THE PROJECT SHALL EITHER DECREASE EXISTING IMPERVIOUSNESS WITHIN THE LOD BY 50% OR PROVIDE TREATMENT FOR AN EQUIVALENT AREA. THE PROJECT IS THEREFORE REQUIRED TO TREAT OR REDUCE THE IMPERVIOUS AREA ON SITE BY 0.34 ACRES. THE PROPOSED IMPERVIOUS AREA WITHIN THE SITE IS 0.86 ACRES. THERE IS A INCREASE OF 0.19 ACRES OF IMPERVIOUS AREA.
a. 0.34 ACRES MUST BE TREATED AS REDEVELOPMENT BY ESD PRACTICES. BASED ON A TARGET PE OF 1.0, AN RV OF 0.95 AND AN AREA OF 0.34 ACRES.
b. 0.19 ACRES MUST BE TREATED AS NEW DEVELOPMENT BY ESD PRACTICES, BECAUSE THERE IS A INCREASE OF 0.19 ACRES OF IMPERVIOUS AREA.
A MINIMUM ESD VOLUME OF 2,545 CUBIC FEET SHALL BE TREATED WITHIN POI-1.
ESD SHALL BE MET WITH ONE GREEN ROOF FACILITY AND ONE BIORETENTION FACILITY.

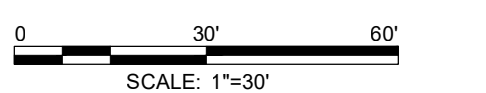
SWM COMPUTATION SUMMARY
SITE AREA = 39,190 SF (0.8997 AC)
EXISTING IMPERVIOUS = (29,337 SF (0.67 AC))
EXISTING PERVIOUS = 13,019 SF (0.18 AC)
%I = 0.67/0.97 = 69%
%P > 40%
EXISTING SITE IMPERVIOUSNESS IS GREATER THAN 40%. THEREFORE THE SITE IS SUBJECT TO REDEVELOPMENT REQUIREMENTS. THE PROJECT SHALL EITHER DECREASE EXISTING IMPERVIOUSNESS WITHIN THE LOD BY 50% OR PROVIDE TREATMENT FOR AN EQUIVALENT AREA.
PROPOSED IMPERVIOUS = 37,552 SF (0.86 AC)
NET INCREASE IN IMPERVIOUS AREA = 0.86-0.67 = 0.68 AC

ESDv TARGETS:
REDEVELOPMENT:
ESDv = (Pe)(Rv)(A)/12
Pe = 1 INCH
Rv = 0.05+(0.009)(I) ; I=100%
Rv = 0.05+(0.009*100) = 0.95
ESDv = (1)(0.95)(0.34)/12
ESDv = 0.027 AC-FT = 1,161 CF
NEW DEVELOPMENT:
ESDv = (Pe)(Rv)(A)/12
Pe = 2.4 INCH (TABLE 5.3)
Rv = 0.05+(0.009)(I) ; I=88%
Rv = 0.05+(0.009*88) = 0.84
ESDv = (2.4)(0.84)(0.19)/12
ESDv = 0.031 AC-FT = 1,384 CF
TOTAL ESDv REQUIRED = 2,545 CF

ESD SHALL BE MET WITH THE USE OF ONE GREEN ROOF FACILITY AND ONE BIORETENTION FACILITY.
ESDv PROVIDED = 3,235 CF*
*ESDv PROVIDED BY SWM FACILITIES EXCEEDS REQUIRED VOLUME BY OVER 25%



KEYNOTES
1 SWM #1 GREEN ROOF
2 SWM #2 BIORETENTION (PLANTER BOX)
3 4" PERF. PVC UNDERDRAIN
4 4" PVC STORM DRAIN
5 8" PVC STORM DRAIN
6 CONNECT PROP. STORM TO PUBLIC STORM SEWER WITH PROP. DOGHOUSE MANHOLE
MAPPED SOIL TYPES
SOIL TYPE: 57B - CHILLIUM SILT LOAM, 3-8% SLOPES
SOIL TYPE: 57C - CHILLIUM SILT LOAM, 8-15% SLOPES
HYDROLOGIC SOIL GROUP: B (BASED ON NRCS)



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SITE PLAN #820190090
TAKOMA JUNCTION
13TH ELECTION DISTRICT
CITY OF TAKOMA PARK
MONTGOMERY COUNTY, MARYLAND
TAX MAP: JN51
WSSC GRID: 208NE01 & 209NE01

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SWM CONCEPT PLAN
DESIGNED: AMC
CHECKED: BCJ
SCALE: AS SHOWN
FILE NO: 114-123
DATE: JULY 2020

DEVELOPER'S CERTIFICATE
THE UNDERSIGNED AGREES TO EXECUTE ALL THE FEATURES OF THE SITE PLAN APPROVAL NO. 820190090 INCLUDING APPROVAL CONDITIONS, DEVELOPMENT PROGRAM, AND CERTIFIED SITE PLAN.
DEVELOPER: NEIGHBORHOOD DEVELOPMENT COMPANY JINGJING LIU
CONTACT PERSON
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EMAIL: JLIU@NEIGHBORHOODEVELOPMENT.COM
SIGNATURE: Jingjing Liu

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