| | SHEET INDEX | | | |
|----------|--|--|--|--|
| SHEET NO | DESCRIPTION | | | |
| 1 | TITLE SHEET | | | |
| 2 | EXISTING CONDITIONS & DEMOLITION PLAN | | | |
| 3 | CONCEPTUAL SEDIMENT & EROSION CONTROL PLAN | | | |
| 4 | NOTES AND DETAILS | | | |
| | | | | |
| | | | | |

| NAME | CLA55 | 'K'VALUE |
|---------------|---|-------------------------------|
| ercent slopes | D | 0.43 |
| cent slopes | С | 0.28 |
| rcent slopes | C | 0.28 |
| | ercent slopes cent slopes crcent slopes | ercent slopes D cent slopes C |

| STORMWATER MANAGEMENT SUMMARY | | | | | |
|-------------------------------|----------------------------|----------------------------|---------|--|--|
| AREA ID. | ESDV REQUIRED CU.FT. | ESDV PROVIDED CU.FT. | REMARK5 | | |
| SITE | 2,596 | 2,927 | | | |
| TOTAL | 2,596 | 2,927 | | | |

GROSS AREA = 2.77 ACRE LOD = 1.74 ACRES (SITE) RCN = 55

TARGET Pe = 1.0

REV = 476 cu. ff. OF STORAGE PROVIDED

REV = 79 cu. ff. OF STORAGE REQUIRED

SWM NARRATIVE

THIS REPORT WILL DEMONSTRATE HOW THE CRITERIA SET FORTH IN THE MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I AND II (EFFECTIVE OCTOBER 2000, REVISED MAY 2009) WILL BE SATISFIED ON THIS PROJECT. THE GOAL OF CREATING HYDROLOGY SIMILAR TO THAT OF "WOODS IN GOOD CONDITION" WILL BE ACCOMPLISHED THROUGH THE USE OF THE PRACTICES CONTAINED WITHIN CHAPTER 5 OF SAID MANUAL.

600 (LOTS 7C AND 7D) OF THE HOWARD COUNTY, MARYLAND TAX MAP DATABASE SYSTEM EASEMENT DEDICATED TO HOWARD COUNTY MARYLAND AGRICULTURAL LAND PRESERVATION PROGRAM. THE SITE IS RELATIVELY RECTANGULAR IN SHAPE. THE SUBDIVISION WILL UTILIZE SIDE OF THE SITE DRAINS FROM NORTH TO SOUTH. THE WEST SIDE OF THE SITE DRAINS TOWARD THE WEST INTO AN EPHEMERAL STREAM AND WOODED AREA. THE WEB SOILS SURVEY SHOWS SOILS ON THE OVERALL SITE CONSIST OF Jab, Lab, AND LaC.

. NATURAL RESOURCE PROTECTION:

I. MAINTENANCE OF NATURAL FLOW PATTERNS:
IT IS THE INTENT OF THE PROPOSED DESIGN TO DISCHARGE RUNOFF SIMILAR TO THE CHARACTERISTICS AND DIRECTION OF THIS SITE PRIOR TO ANY OF THE PROPOSED IMPROVEMENTS. THE COLLECTION OF THE DRAINAGE AT THE BIO-RETENTION FACILITIES WILL CONCENTRATE THE DISCHARGE OF LARGER STORMS WHEN THE FACILITIES REACH CAPACITY HOWEVER, THE LARGER STORMS WILL CONTINUE TO DISCHARGE NEAR THE SAME LOCATION AND AT A RATE SIMILAR TO WOODS IN GOOD CONDITION. THE FACILITIES INCLUDE

UNDERDRAINS THAT DISCHARGE AT THE WESTERN AND SOUTHWESTERN SIDES OF THE SITE AT THE SAME LOCATION WHERE EXISTING DISCHARGE CURRENTLY LEAVES THE PROPERTY. ALTHOUGH THIS DISCHARGE POINT CAN BE CONSIDERED "POINT" DISCHARGE THIS IS A LOW FLOW POINT DEVICE THAT WOULD NOT REASONABLY BE CONSIDERED A SIGNIFICANT REVISION TO THE NATURAL FLOW CHARACTERISTICS OF THE PROPERTY.

III. REDUCTION OF IMPERVIOUS AREAS THROUGH BETTER SITE DESIGN. ALTERNATIVE SURFACES AND NONSTRUCTURAL PRACTICES IMPERVIOUS AREA ON THIS SITE HAS BEEN MINIMIZED BY UTILIZING A USE-IN-COMMON DRIVEWAY

FOR THE PROPOSED HOMES. V. INTEGRATION OF EROSION AND SEDIMENT CONTROLS INTO STORMWATER STRATEGY:

IF REQUIRED, SEDIMENT TRAPPING WILL BE PLACED IN THE AREA OF BIO-RETENTION FACILITIES.

V. IMPLEMENTATION OF ESD PLANNING TECHNIQUES AND PRACTICES TO THE MAXIMUM EXTENT PRACTICABLE (MEP) THE FULL REQUIRED ESD VOLUME IS BEING PROVIDED FOR PROPOSED

VI. REQUEST FOR DESIGN MANUAL WAIVER: NO WAIVERS ARE EXPECTED TO BE REQUIRED ON THIS PROJECT.

MICRO BIO-RETENTION #1

MICRO BIO-RETENTION #3

IMPROVEMENTS TO THE MAXIMUM EXTENT PRACTICAL.

STORMWATER MANAGEMENT INFORMATION HOA MICRO BIO-RETENTION #4 BIO #4 EXISTING HOUSE- n/a MICRO BIO-RETENTION #2 M-6 - (1)HOA

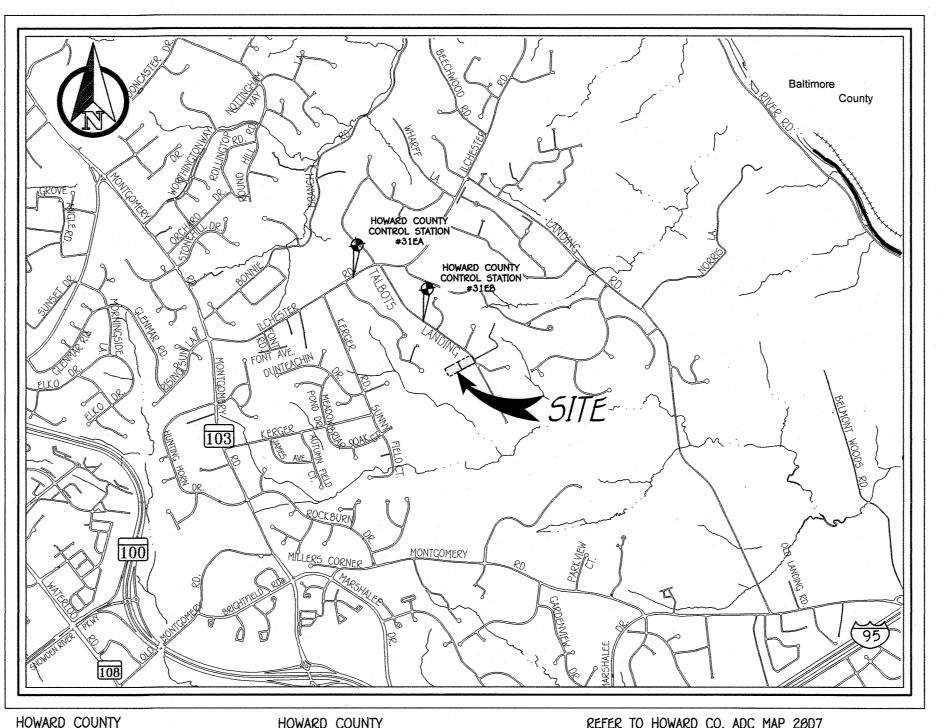
Χ

M-6 - (1)

Homeowner

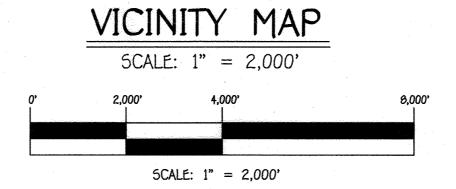
ENVIRONMENTAL CONCEPT PLAN 5192 & 5196 TALBOTS LANDING

ZONING: R-20 (RESIDENTIAL: SINGLE DISTRICT) TAX MAP No. 31 GRID No. 16 PARCEL Nos. 687 & 688, LOTS 7C & 7D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND



HOWARD COUNTY GEODETIC SURVEY CONTROL NO. 31EB GEODETIC SURVEY CONTROL NO. 31FA N 568,730,995 E 1,376,273.635 N 569,641.138 E 1,374,816.086 ELEVATION: 452.657 **ELEVATION: 468.877**

REFER TO HOWARD CO. ADC MAP 2807



SITE ANALYSIS DATA CHART

TOTAL AREA OF THIS SUBMISSION = 2.77 AC. (120,902.42 54.Ft.)

LIMIT OF DISTURBED AREA = 1.74 Ac. ± (75,749 Sq.Ft.) PRESENT ZONING DESIGNATION = R-20:

PROPOSED USE: SINGLE FAMILY DETACHED HOUSING

(TOTAL SITE AREA - FLOODPLAIN - STEEP SLOPES AREA) $(2.77 \text{ Ac} - (0.00 \text{ Ac} + 0.00 \text{ Ac})) = 2.77 \text{ AC} \pm$ F. BUILDING COVERAGE OF SITE:

PROP. = 6,613 5q.Ft.; EX. TO REMAIN = 4.784 Sq.Ft. TOTAL = 11,397 5q.Ft. (0.261 Ac) (8.6%)G. PREVIOUS HOWARD COUNTY FILES: N/A

. TOTAL AREA OF FLOODPLAIN LOCATED ON SITE 0.0 AC. TOTAL AREA OF SLOPES IN EXCESS OF 15% = 0.00 AC2 (0 AC. 25% OR GREATER)

TOTAL AREA OF WETLANDS (INCLUDING BUFFER) LOCATED ON SITE = 0.00 AC.± TOTAL FOREST 0.00 Ac. ±

TOTAL GREEN OPEN AREA = 98,853.95 5q.Ft. (2.27 Ac.+) M. TOTAL IMPERVIOUS AREA = 22,004.6 5q.Ft. (0.5 Ac.+) 10%

N. AREA OF ERODIBLE SOILS = 99,931.46 Sq.Ft. (2.29 Ac.) O. TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0.14 AC., NONE OF WHICH IS IMPACTED.

PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY (CENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARY LAND, ICENSE NO. 27020, EXPIRATION DATE: 1/25/24. OWNER/DEVELOPER BARRY & CHETA MEHTA 5192 Talbots Landing Ellicott City, MD. 21043

GEODETIC SURVEY CONTROL NO. 31EB GEODETIC SURVEY CONTROL NO. 31EA N 568,730.995 E 1,376,273.635 N 569,641.138 E 1,374,816.086 **ELEVATION: 468.877**

Approved: Department Of Planning And Zoning

GENERAL NOTES

-2.5" BIT.CONC.BASE

P-1 DRIVEWAY PAVING SECTION

THE SUBJECT PROPERTY IS ZONED R-20 (PER 10/06/13 COMPREHENSIVE ZONING PLAN.) BOUNDARY IS BASED ON A FIELD RUN SURVEY PERFORMED BY FISHER, COLLINS & CARTER ON

3. CONTOURS ARE BASED ON A TOPOGRAPHIC FIELD RUN SURVEY PERFORMED BY FISHER, COLLINS AND CARTER, ON OR ABOUT OCTOBER, 2021.

. COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWAR COUNTY GEODETIC CONTROL STATIONS NO. 29GB AND NO. 35DA: HOWARD COUNTY MONUMENT NO. 31EB N 568,730.995

E 1,376,273.635 ELEV. 452.657 N 569,641.138

E 1,374,016.006 ELEV. 460.077 5. STORM WATER MANAGEMENT IS IN ACCORDANCE WITH THE M.D.E. STORM WATER DESIGN MANUAL, VOLUMES I & II, REVISED 2009. THIS PLAN PROPOSES THE USE OF FOUR (4) M-6 MICRO-

6. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. PUBLIC WATER AND SEWER WILL BE UTILIZED FOR THIS PROJECT.

7. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE CONTRACTOR'S 6. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL

BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(5) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN. 9. TWO HOUSES, A GARAGE, AND TWO SHEDS EXISTS ON THIS PROPERTY, BOTH SHEDS WILL BE

REMOVED. BOTH HOUSES AND GARAGE WILL REMAIN.

COUNTY CODE OF ORDINANCES FOR RESIDENTIAL INFILL DEVELOPMENT

15. THIS PROPERTY IS SUBJECT TO SECTION 16.119(a)(Ø) OF THE REGULATIONS AND IS NOT DESIGNED TO PERPETUATE THE LAND-LOCKING OF ADJACENT UNDEVELOPED LAND.

400 400 54.Ft. 54.Ft. DRAINAGE AREAS SCHEMATIC (FOR DOWN SPOUTS WITH ROOF LEADERS TO MICRO-BIORETENTIONS) TITLE SHEET 5192 & 5196 TALBOTS LANDING LOTS 1 THROUGH 5

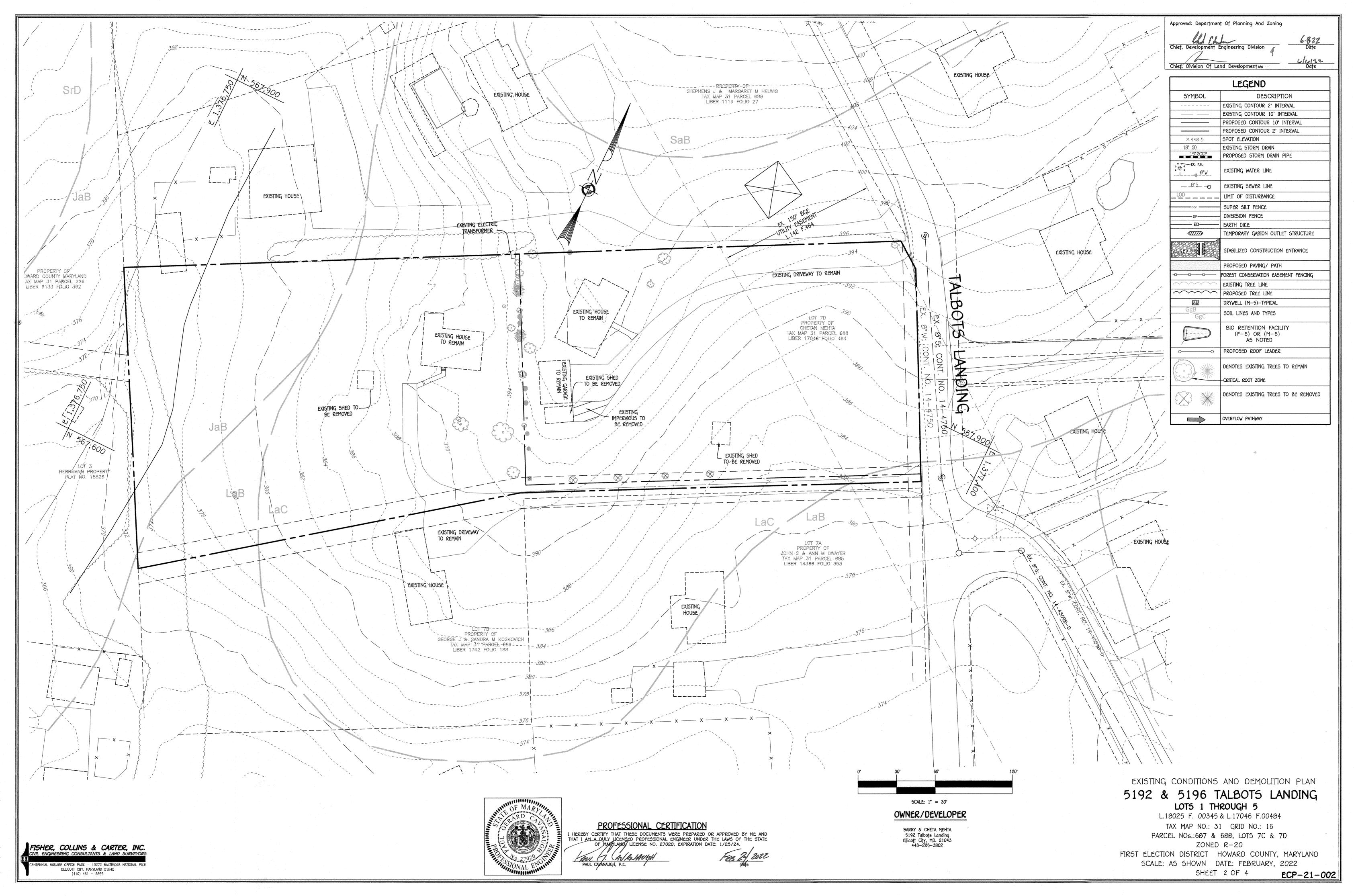
L.18025 F. 00345 & L.17046 F.00484 TAX MAP NO.: 31 GRID NO.: 16 PARCEL NOs.:687 & 688, LOTS 7C & 7D

ZONED R-20 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: AS SHOWN DATE: FEBRUARY, 2022

SHEET 1 OF 4

ECP-21-002

FISHER, COLLINS & CARTER, INC.



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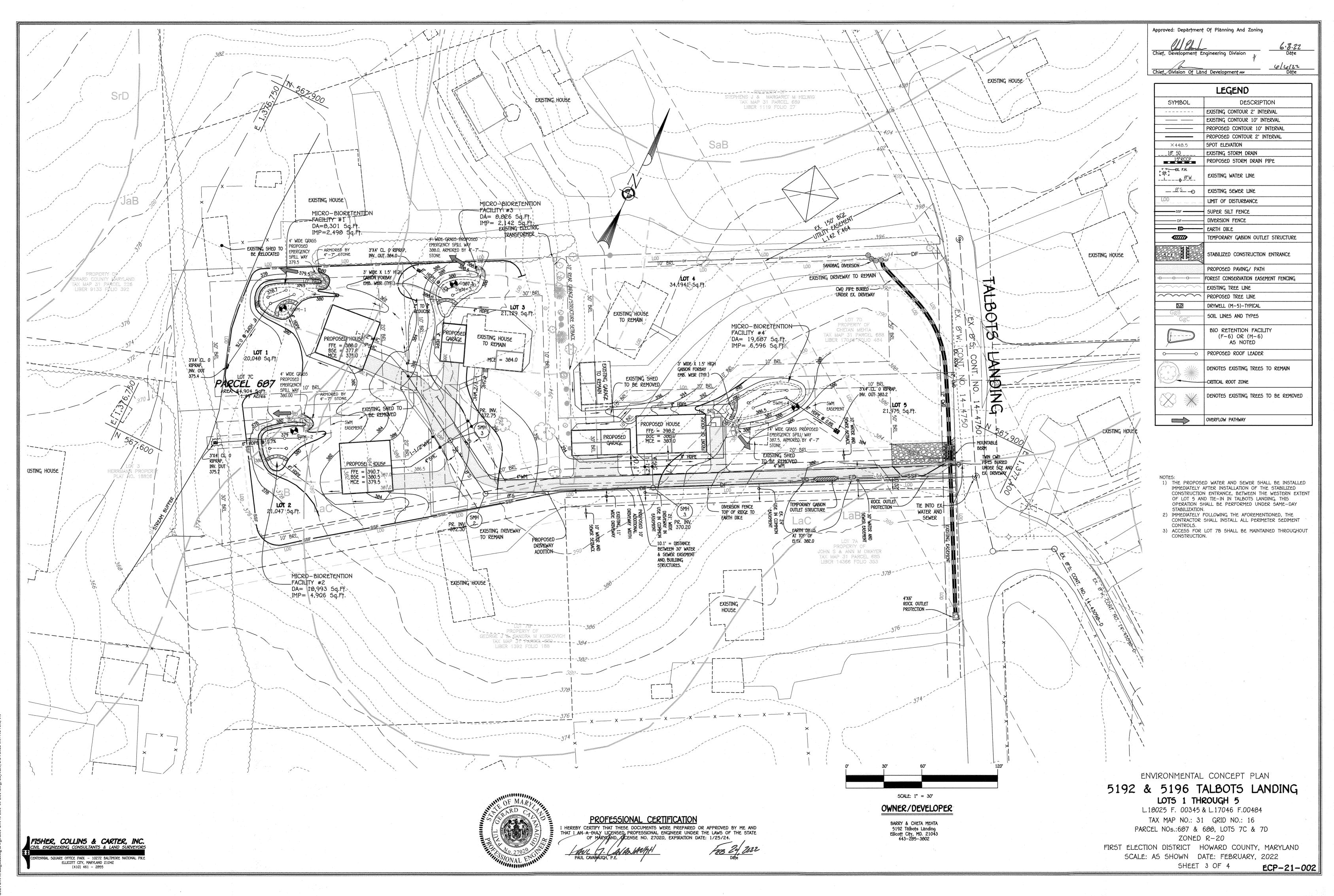
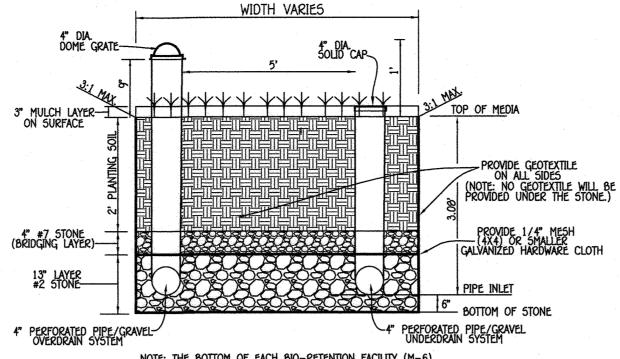


Table 8.4 Materials Specifications for Micro-Bioretention Rain Gardens & Landscape Infiltration

| Material | Specification | Size | Notes |
|--|--|--|--|
| Plantings | see Appendix A; Table A.4 | n/ā | plantings are site-specific |
| Planting soil [2' to 4' deep] | loamy sand 60-65% compost 35-40% or sandy loam 30% coarse sand 30% compost 40% | | USDA soil types loamy sand or sandy loam; clay content <5% |
| Organic Content | Min. 10% by dry weight (A5TM D 2974) | | |
| Mulch | shredded hardwood | - | aged 6 months, minimum |
| Pea gravel diaphragm | pea gravel: ASTM-D-440 | No. 0 or No. 9 (1/8" to 3/8") | |
| Curtain drain | ornamental stone: washed cobbles | stone: 2" to 5" | |
| Geotextile | | n/ā | PE Type 1 nonwoven |
| Grāvel (underdrāins ānd infiltrātion berms) | AASHTO M-43 | No. 57 or No. Aggregate (3/8° to 3/4°) | |
| Underdrain piping | F 750, Type P5 20 or AA5HTO M-270 | 4" to 6" rigid schedule 40 PVC or 5DR35 | Slotted or perforated pipe; 3/8" pert. © 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth |
| Poured in place concrete (if required) | MSHA Mix No. 3; f = 3500 psi at 20 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60 | n.ā | on-site testing of poured-in-place concrete required: 20 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland — design to include meeting ACI Code 350.R/09; vertical loading [H-10 or H-20]; allowable horizontal loading (based on soil pressures); and analysis of potential cracking |
| and | AA5HTO-M-6 or A5TM-C-33 | 0.02" to 0.04" | Sand substitutions such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand. |



NOTE: THE BOTTOM OF EACH BIO-RETENTION FACILITY (M-6) SHALL BE ROTOTILLED PRIOR TO STONE INSTALLATION.

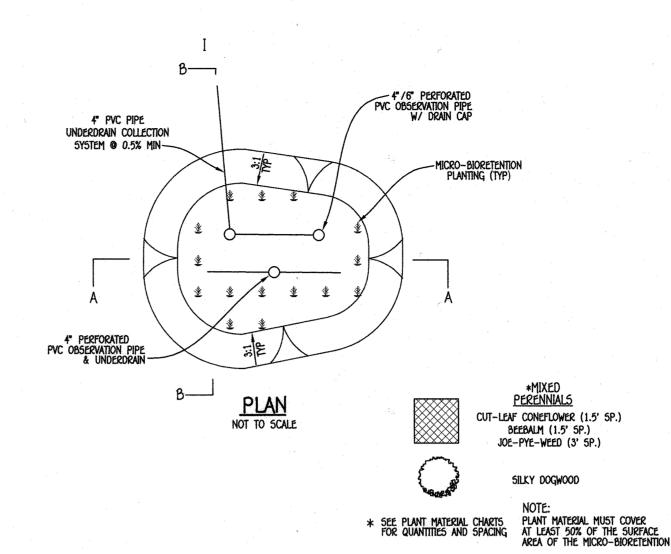
TYPICAL SECTION MICRO-BIORETENTION FACILITY (M-6) NO NOT SCALE

OPERATION & MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

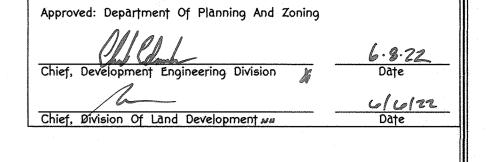
- A. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE A.4.1 AND 2. B. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR.
- DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS AND REPLACE ALL DEFICIENT STAKES AND WIRES. C. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED
- NEW LAYER IS APPLIED. D. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

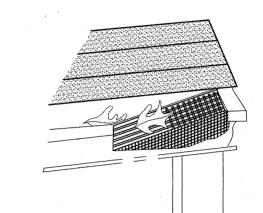
EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE

| MICOO_B | MICRO-BIORETENTIONS | | | |
|-------------------------|---------------------|-----------|--|--|
| TILCRO | | | | |
| MICRO-BIO/ TOP | OF BOTTOM OF | EMERGENCY | | |
| BIORETENTION FILTER MED | A STONE | SPILLWAY | | |
| | | | | |



| MICRO-BIORETENTIONS PLANT MATERIAL | | | | | |
|------------------------------------|-------------------------|-------------------------|-------------------------|---------------------|------------------------------------|
| MICRO-BIO 1 QUANTITY | MICRO-BIO 2 QUANTITY | MICRO-BIO 3 QUANTITY | MICRO-BIO 4 QUANTITY | NAME | MAXIMUM 5PACING (FT.) |
| 45 | 45 | 45 | 45 | MIXED PERENNIALS | 1.5 TO 3.0 FT. |
| 1 | 1 | 1 | 1 | SILKY DOGWOOD | PLANT AWAY FROM INFLOW LOCATION |

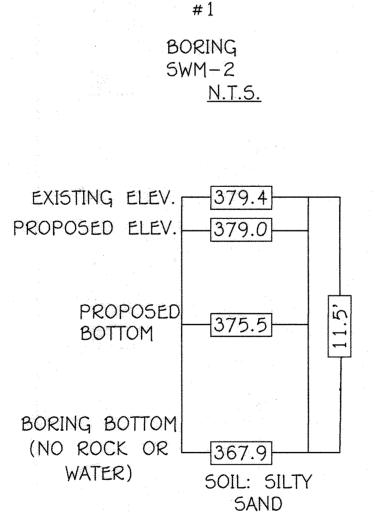




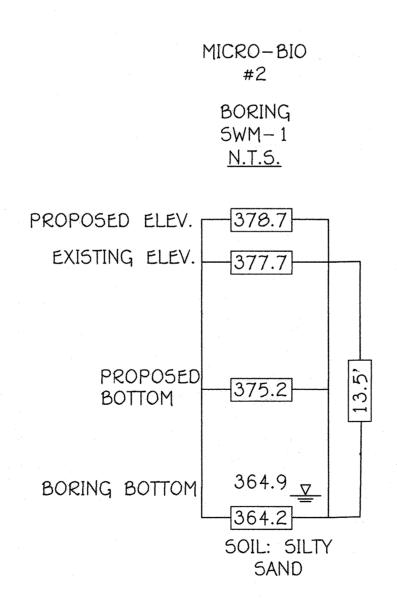
GUTTER DRAIN FILTER DETAIL

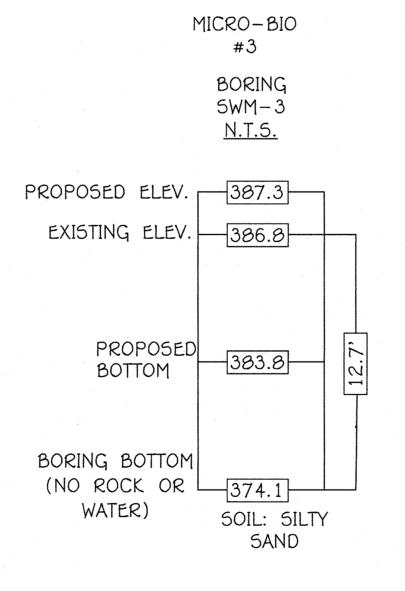
STORMWATER MANAGEMENT NOTES

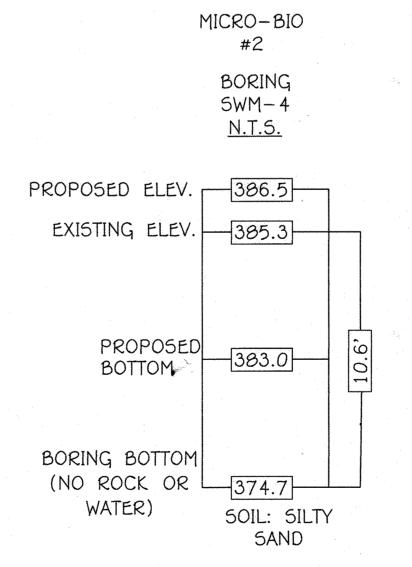
- 1. STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL,
- EFFECTIVE MAY 4, 2010. 2. MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 500 SQ. FT. OR LESS.
- 3. DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH
- OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
- 4. FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.



MICRO-BIO







OWNER/DEVELOPER BARRY & CHETA MEHTA

5192 Talbots Landing Ellicott City, MD. 21043 443-205-3002

NOTES AND DETAILS

5192 & 5196 TALBOTS LANDING LOTS 1 THROUGH 5

L.18025 F. 00345 & L.17046 F.00484 TAX MAP NO.: 31 GRID NO.: 16 PARCEL NOs.:687 & 688, LOTS 7C & 7D

ZONED R-20 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: FEBRUARY, 2022 SHEET 4 OF 4

PROFESSIONAL CERTIFICATION HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A BULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARY AND LICENSE NO. 27020, EXPIRATION DATE: 1/25/24.

FISHER, COLLINS & CARTER, INC. ELLICOTT CITY, MARYLAND 21042

ECP-21-002