SHEET INDEX

DESCRIPTION

SEDIMENT CONTROL NOTES & DETAILS HABITAT MANAGEMENT PLAN VIEWS HABITAT MANAGEMENT PLAN DETAIL SHEET 8-9 OVERALL HABITAT MANAGEMENT PLAN

SHEET NO.

TITLE SHEET

Wetland Restoration (GN Credit D-1)

The wetland restoration efforts shall restore the natural hydrologic conditions, vegetative community and habitat value of Wetland D as follows:

- 1. Eliminate ongoing source of disturbance by securing access points to the property.
- 2. Invasive species will be removed from throughout the Wetland D. 3. Two small vernal pools will be created within the wetland in an area previously disturbed
- by ORV traffic (Restoration Area #3). 4. The culvert in the northwest corner of the wetland (Restoration Area #2) will be blocked with the addition of rip rap at the inlet to restore hydrology in this portion of the wetland.
- 5. The culvert on the northern edge of the wetland that goes under the utility access road (Restoration Area #1) will be cleared by removing rip rap from the inlet and outfall to enhance wildlife connections for the wetland. If the existing culvert is not serviceable, it will be
- replaced with an exact replacement. 6. Native shrub and herbaceous species will be planted throughout Wetland D to increase vegetative structural diversity.
- 7. Protect the wetland through access restrictions and periodic inspections to control invasive species.
- 8. All work done will have follow-up monitoring for 5 years after restoration actions have been completed.
- 9. The Existing Culvert On The Northern Edge Of The Wetland F & G (Restoration Area #4), South Of The Gas Easement Will Be Replaced And The Outfall Will Be Reconstructed With A Plunge Pool To Reduce Erosive Velocities.

Habitat Management Plan (GN Credit D-2)

The Habitat Management Plan efforts shall focus on maintaining and enhancing the health and habitat value of the natural resource systems on the property Short term efforts shall include the following:

- 1. Eliminate ongoing source of disturbance by securing access points to the property. 2. Remove woody invasive species, trash and debris from all existing forest resources, including those within wetlands and both credited and non-credited forest retention areas, to enhance their successional development.
- 3. Remove trash and debris from all forest and wetland systems to remain.
- 4. Plant native trees to close canopy gaps within the forested portions of the wetland and stream buffers, to limit the return of invasive species and to enhance the habitat and water quality benefits of the buffers.
- 5. Grade and reseed with native vegetation any areas within the open space lots that are undergoing active erosion, particularly the following areas: a. Eroding areas within Colonial pipeline easement
- b. Eroding areas within sewer utility easement
- c. Eroding areas within the access roads for the NRFs, including side trail going
- downhill from the road that circles NRF 5. d. Eroding area along eastern edge of Forest Conservation Easement #1 within fiber optic line easement.
- 6. Stabilization within the Colonial pipeline will include areas within Wetlands E and EE and buffers for Wetlands D, E and EE. Where reseeding is not possible because access road is needed, the road shall be graded and leveled to correct erosion along with other necessary stabilization measures.
- 7. Install bluebird nest boxes, to provide enhanced habitat.
- 8. Provide 8.644 acres of forest retention (credited and non-credited) and 1.58 acres of forest afforestation

Long-term efforts will monitor and maintain these areas to ensure invasive species do not return and newly planted areas have good survival. Afforestation areas will be included in this monitoring and maintenance effort, to extend beyond the minimum two-year regulatory requirement

FISHER, COLLINS & CARTER, INC. NGINEERING CONSULTANTS & LAND SURVEYOR

UARE OFFICE PARK - 10272 BALTIMORE NATIONA ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2055

WETLAND STREAM RESTORATION AND HABITAT MANAGEMENT PLAN

OXFORD SQUARE

ZONING: TOD

TAX MAP No. 38, GRID No. 20

PARCEL No. 1003



REFER TO HOWARD CO. ADC MAP 35, D-6

GENERAL NOTES

- PRIOR TO THE START OF WORK.

- 8. BACKGROUND INFORMATION: a. SUBDIVISION NAME: OXFORD SQUARE
- b. TAX MAP NO.: 38 & 44 c. PARCELS NOS.: 761
- d. ZONING: TOD (PER ZB-1086M e. ELECTION DISTRICT: FIRST
- h. TOTAL AREA OF PUBLIC ROADWAY TO BE DEDICATED per 5-15-001: 6.125 ACRES

- k. AREA OF 25% OR GREATER SLOPES = 3.867 ACRES I. NET AREA OF TRACT = 107.513 AC. \pm
- a. AMENITY AREA REQUIRED: 10.751 ACRES FOR THE ENTIRE PROJECT (107.513 x 10%)
- UNDER 5DP-14-019, 0.78 ac. UNDER 5DP-14-027, 0.45 ac. UNDER 5DP-14-072 & 1.72 AC. UNDER 5DP-14-071) = 14.04 ac. + to
- 11. EXISTING WATER IS PUBLIC (CONTRACT NO. 14-1707-D & 14-4726-D)
- THE SOIL GROUPS REQUIRED FOR THIS SWM REPORT.
- PREPARED BY FISHER, COLLINS AND CARTER, INC. DATED MAY, 2010.
- (0.298 Ac.).
- Easement Are Allowed."

FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VICINITY MAP

SCALE: 1'' = 2000'

Owner

Kellogg-CCP, LLC c/o David P. Scheffenacker, Jr., Managing Member 100 West Road, Suite 304 Towson, Maryland 21204 Ph# 410-296-3800

Developer Preston • Scheffenacker Properties 100 West Road, Suite 304

Towson, Maryland 21204 Ph# 410-296-3800

APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING GREEN NEIGHBORHOOD PLAN FOR SITES Bet Burgen 4-17-17 CHIEF, RESOURCE CONSERVATION DIVISION APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING let Sherbook 4-24-17 8.19.16 9-24-17 This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT. Howard S Date

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE. 2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST (5) WORKING DAYS

3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE

4. TRAFFIC CONTROL DEVICES. MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 5. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE ZONING REGULATIONS EFFECTIVE OCTOBER 6, 2013 PER COUNCIL BILL No. 32-2013. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION.

6. COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 38DA AND NO. 38GA

Station No. 300A N 556,796.3221 E 1,390,221,4576 Elev. = 126.00 Station No. 38GA N 555,897.3373 E 1,390,132.0933 Elev. = 80.78

7. SUBJECT PROPERTY ZONED TOD PER ZB-1086M DATED 9/13/10.

f. GROSS AREA OF TRACT = 118.514 ACRES (EXISTING PARCEL 'Q' & OXFORD HOLDINGS-CCP L.L.C. PROPERTY (FORMERLY CSX PROPERTY)) + 11.010 ACRES (EXISTING PARCEL 'M-1') = 129.532 AC.+ 1. TOTAL NUMBER OF UNITS PROPOSED PER 5-15-001: 1,492 RESIDENTIAL UNITS

i. PREVIOUS FILE NUMBERS: 5-07-066, P-07-070, F-00-055, F-09-005, 5DP-09-275, F-90-125, F-91-069, 5DP-90-041, F-93-023, 5DP-93-055, ZB-1006M, WP-11-130, F-11-057, WP-11-147, 5-11-001, ECP-11-046, SDP-12-075, F-12-026, F-13-095, F-13-100, ZB-1102 M, 5-15-001, SDP-13-060, F-14-011, SDP-14-004, SDP-14-019, 5DP-14-027, 5DP-14-071, 5DP-14-072, F-15-000, F-15-000, 5DP-15-052 & 5DP-15-053. AREA OF FLOODPLAIN = 7.671 ACRES (PARCEL 'Q' & OXFORD HOLDINGS-CCP LLC. PROPERTY) + 10.481 ACRES (PARCEL 'M-1') = 18.152 ACR

9. AMENITY REQUIREMENTS: T.O.D. DEVELOPMENT SHALL INCLUDE AN AMENITY AREA PER SECTION 127.4.F.I. OF THE ZONING REGULATIONS AND THE ROUTE 1 MANUAL.

b. TOTAL AMENITY AREA PROVIDED: = (1.43 ac.+ UNDER SDP-15-052, 6.60 ac.+ UNDER SDP-12-075, 1.57 ac.+ UNDER SDP-13-060, 0.42 ac.+ UNDER SDP-14-004, 1.07 AC.+

10. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-180.

EXISTING SEWER IS PUBLIC (CONTRACT NO. 14-1707-D & 101-5)

12. SOILS INFORMATION TAKEN ECS SOIL SURVEY DATED NOVEMBER 2, 2009. THE PROPERTY LIES WITHIN THE DEEP RUN TRIBUTARY TO THE PATAPSCO RIVER WATERSHED (2130906). MOST OF THE PARCEL 'Q' CONSISTS OF OVERGROWN FIELD HABITAT THAT DEVELOPED ON A PORTION OF THE SITE THAT WAS MASS GRADED IN THE LATE 1980'S. IT IS DUE TO THIS PREVIOUSLY MASS GRADED CONDITION THAT THE NORMAL HOWARD COUNTY SOIL SURVEY MAP Nos. 26 & 31 DATED JULY 1968 DO NOT APPLY. AS A RESULT OF THIS SITE CONDITION, THE OWNER/ DEVELOPER HAVE CONTRACTED ECS-MID ATLANTIC, LLC OF HANOVER, MARYLAND. THE SOIL REPORT IS DATED NOVEMBER 2009 WITH AN ADDENDUM DATED FEBRUARY 2010 THAT SUMMARIZED

13. BOUNDARY OUTLINE BASED ON FIELD RUN SURVEY PERFORMED BY FISHER COLLINS AND CARTER, INC. DATED MARCH, 2008.

14. TOPOGRAPHIC CONTOURS BASED ON AERIAL SURVEY PERFORMED BY HARFORD AERIAL SURVEYS, INC. DATED JANUARY, 2008 AND SUPPLEMENTED WITH FIELD RUN TOPOGRAPHY

15. THERE IS ONE AREA OF STEEP SLOPES LOCATED ON THIS PROPERTY AS DEFINED BY THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.116.b.,

16. SEVERAL SPECIMEN TREES ARE KNOWN TO BE LOCATED WITHIN THE EXISTING FOREST: HOWEVER, NONE EXIST WITHIN THE LIMITS OF FOREST THAT HAVE BEEN REMOVED.

17. FLOODPLAIN STUDY SHOWN HEREON WAS PREPARED BY WHITMAN REQUARDT AND ASSOCIATES AND 15 DELINEATED ON PLAT Nos. 9924-9925 (F-91-069).

18. THE FOREST CONSERVATION ACT REQUIREMENTS FOR THE OXFORD SQUARE DEVELOPMENT WERE SATISFIED BY F-12-026, HOWEVER, HAVE BEEN REVISED BY THE F-15-000 PLAN. THE FOREST CONSERVATION ACT REQUIREMENTS FOR THIS PROJECT UNDER F-12-026 WERE MET THROUGH THE RETENTION OF 10.51 ACRES OF ON-SITE FOREST AND THE PLANTING OF 5.25 ACRES OF ON-SITE FOREST. THE REVISED FOREST CONSERVATION ACT REQUIREMENTS WILL BE MET BY THE RETENTION OF 6.32 ACRES OF ON-SITE FOREST, THE PLANTING OF 1.50 ACRES OF ON-SITE FOREST AND THE RETENTION OF 34.043 AC. OF OFF-SITE FOREST LOCATED ON THE BERMAN PROPERTY, TAX MAP NO. 11, GRID NO. 19, PARCEL NO. 13. "No Clearing, Grading Or Construction Is Permitted Within The Forest Conservation Easement; However, Forest Management Practices As Defined In The Deed Of Forest Conservation

19. THE FOREST STAND DELINEATION AND WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED MARCH 17, 2011 AND APPROVED UNDER 5-11-001 & ECP-11-046. A NEW FOREST STAND DELINEATION AND WETLAND DELINEATION PLAN (NATURAL RESOURCE INVENTORY PLAN) PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED APRIL 21, 2015 WAS SUBMITTED AND APPROVED UNDER 5-15-001 PLAN. A REVISED WETLAND DELINEATION PREPARED BY GEO - TECHNOLOGY ASSOCIATES WAS SUBMITTED IN MARCH, 2016 WITH SDP-16-052.

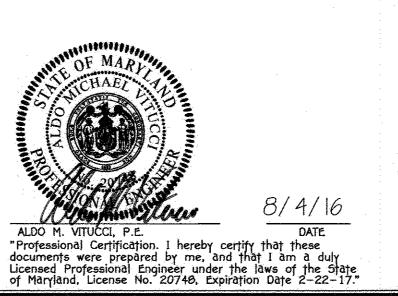
20. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.

21. NO CEMETERIES OR HISTORIC STRUCTURES EXIST WITHIN THIS SUBDIVISION.

22. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAMS, THEIR REQUIRED BUFFERS OR THEIR EXTENDED GREEN NEIGHBORHOOD BUFFERS, UNLESS THE ACTIVITIES ARE CONSIDERED NECESSARY OR WAIVERS ARE APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING. ACTIVITIES PROPOSED IN WETLANDS, STREAMS, THEIR BUFFERS, AND THEIR extended green neighborhood buffers as part of the approved stream and wetland restoration and habitat management plans are considered necessary by the department

23. THIS PROPERTY IS SUBJECT TO A HABITAT MANAGEMENT AGREEMENT WHICH ALLOWS PERIODIC INSPECTIONS BY THE DEPARTMENT OF PLANNING AND ZONING. 24. CONTRACTOR SHALL NOTIFY THE COLONIAL PIPELINE COMPANY PRIOR TO ANY ACTIVITIES WITHIN THEIR EASEMENT

25. THE HABITAT MANAGEMENT AGREEMENT WAS SIGNED ON AUGUST 29, 2016 AND RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND AT LIBER 17138, FOLIO 453.



WETLAND STREAM RESTORATION AND HABITAT MANAGEMENT PLAN OXFORD SQUARE

ZONING: TOD TAX MAP No. 38, GRID No. 20, PARCEL No. 1003 FIRST ELECTION DISTRICT - HOWARD COUNTY, MARYLAND DATE: AUGUST 4, 2016 SHEET 1 OF 9

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

A Soil Preparation

1. Temporary Stabilization

a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans. c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.

Permanent Stabilization

a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:

Soil pH between 6.0 and 7.0 ii. Soluble salts less than 500 parts per million (ppm).

iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable. iv. Soil contains 1.5 percent minimum organic matter by weight.

v. Soil contains sufficient pore space to permit adequate root penetration

b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.

c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.

d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test. e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas

to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

8. Topsoijing

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content. low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.

3. Topsoiling is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible

4. Areas having slopes steeper than 2:1 require special consideration and design.

5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:

a. Topsoil must be a loam, sandy loam, clay loam, sitt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter

b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified

c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

6. Topsoil Application

a. Erosion and sediment control practices must be maintained when applying topsoil

b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets

c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.

2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.

3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.

4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.

5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

TEMPORARY SEEDING NOTES (B-4-4)

To stabilize disturbed soils with vegetation for up to 6 months

Purpose

To use fast growing vegetation that provides cover on disturbed soils

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and

completed, then Table B.1 plus fertilizer and lime rates must be put on the plan. 2. For sites having soil tests performed, use and show the recommended rates by the testing agency

Soil tests are not required for Temporary Seeding. 3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch

alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season. Temporary Seeding Summary

Hardiness Zone (from Figure B.3): <u>6b</u> Seed Mixture (from Table B.1):			Fertilizer Rate (10-20-20)	Lime Rațe	
5pecies	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1"	436 b/ac	2 tons/dc
OATS	72	3/1 - 5/15, 8/15 - 10/15	1"	(10 lb/ 1000 sf)	(90 lb/ 1000 sf)
RYÉ	112	3/1 - 5/15, 8/15 - 10/15	1"		

FISHER, COLLINS & CARTER, INC. . ENGINEERING CONSULTANTS & LAND SURVEYOR

WARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIK ELLICOTT CITY, MARYLAND 21042

(410) 461 - 2855

SEED MIXTURES FOR RESTORATION PLAN

(FLOOD PLAIN & VERNAL POOL) SEED MIX # ENRMX-154 SEEDING RATE 15 LB. PER ACRE OR 1/3 LB. to 1/2 LB. PER 1,000 5Q. FT. MIX TYPE RIPARIAN SITES

SPECIES LIST 20% FOX SEDGE, PA ECOTYPE (CAREX VULPINOIDEA, PA ECOTYPE) 20% VIRGINIA WILD RYE, PA ECOTYPE (ELYMUS VIRGINICUS, PA ECOTYPE)

10% BIG BLUESTEM, 'NIAGARA' (ANDROPOGON GERARDIL, 'NIAGARA')

10% INDIANGRASS, 'PRAIRIE VIEW', IN ECOTYPE (SORGHASTRUM NUTANS, 'PRAIRIE VIEW', IN ECOTYPE) 7 % BLUNT BROOM SEDGE, PA ECOTYPE (CAREX SCOPARIA, PA ECOTYPE) 5% BILLE VERVAIN (VERBENA HASTATA)

5% SWITCHGRASS, 'SHELTER' (PANICUM VIRGATUM, 'SHELTER')

4% FRINGED (NODDING) SEDGE, PA ECOTYPE (CAREX CRINITA, PA ECOTYPE)

3% GRASS LEAVED GOLDENROD, PA ECOTYPE (EUTHAMIA GRAMINIFOLIA (SOLIDAGO G.), PA ECOTYPE) 3% COMMON SNEEZEWEED (HELENIUM AUTUMNALE) 2% PURPLE STEMMED ASTER, PA ECOTYPE (ASTER PUNICEUS (SYMPHYOTRICHUM PUNICEUM), PA ECOTYPE)

2% AWL SEDGE, PA ECOTYPE (CAREX STIPATA, PA ECOTYPE) 2% BONESET, PA ECOTYPE (EUPATORIUM PERFOLIATUM, PA ECOTYPE)

2% OX EYE SUNFLOWER. PA ECOTYPE (HELIOPSIS HELIANTHOIDES, PA ECOTYPE) 2% JOE PYE WEED, PA ECOTYPE (EUPATORIUM FISTULOSUM, PA ECOTYPE)

1% SEEDBOX, PA ECOTYPE (LUDWIGIA ALTERNIFOLIA, PA ECOTYPE) 1% SWAMP MILKWEED, PA ECOTYPE (ASCLEPIAS INCARNATA, PA ECOTYPE)

1% WILD BERGAMOT (MONARDA FISTULOSA)

(MARYLAND UPLAND) MIX # ERNMX-172

SEEDING RATE 15 LB. PER ACRE

MIX TYPE UPLAND & MEADOW SITES

SPECIES LIST 25% LITTLE BLUESTEM. EASTERN U.S. ECOTYPE (SCHIZACHYRIUM SC., E. U.S. ECOTYPE) 15% RIVERBANK WILD RYE, PA ECOTYPE (ELYMUS RIPARIUS, PA ECOTYPE)

15% PURPLE TOP, SE VA ECOTYPE (TRIDENS FLAVUS. SE VA ECOTYPE)

10% INDIANGRASS, PA ECOTYPE (SORGHASTRUM NUTANS, PA ECOTYPE) 10% PARTRIDGE PEA PA ECOTYPE (CHAMAECRISTA FASCICULATA (CASSIA H.), VA & WV ECOTYPE) 6% WILD SENNA, VA & WV ECOTYPE (SENNA HEBECARPA (CASSIA H.), VA & WV ECOTYPE)

6% BLACK EYED SUSAN, CP NC ECOTPYE (RUDBECKIA HIRTA, CP NC ECOTYPE) 5% MARYLAND SENNA (SENNA MARILANDCA (CASSIA M.))

3% WILD BERGAMOT (MONARDA FISTULOSA)

3% VIRGINIA SPIDERWORT, SE PA/N VA BLEND (TRADESCANTIA VA. SE PA/N VA BLEND) 2% BUTTERFLY MILKWEED (ASCLEPIAS TUBEROSA)

(FACW WETLAND MEADOW) SEED MIX - # ERNMX-122

SEEDING RATE 15 LB. PER ACRE

MIX TYPE WET MEADOW & WETLAND SITES

SPECIES LIST 21% FOX SEDGE, PA ECOTYPE (CAREX VULPINOIDEA, PA ECOTYPE)

21% VIRGINIA WILD RYE, PA ECOTYPE (ELYMUS VIRGINICUS, PA ECOTYPE)

10% BLUNT BROOM SEDGE, PA ECOTYPE (CAREX SCOPARIA, PA ECOTYPE)

8% LURID (SHALLOW) SEDGE, PA ECOTYPE (CAREX LURIDA, PA ECOTYPE) 5% SOFT RUSH (JUNCUS EFFUSES)

4% BLUE VERVAIN (VERBENA HASTATA)

3% GREEN BULRUSH, PA ECOTYPE (SCIRPUS ATROVIRENS, PA ECOTYPE)

3% SQUARE STEMMED MONKEY FLOWER, PA ECOTYPE (MIMULUS RINGENS, PA ECOTYPE) 2% HOP SEDGE, PA ECOTYPE (CAREX LUPULINA, PA ECOTYPE) 2% GRASS LEAVED GOLDENROD, PA ECOTYPE (EUTHAMIA GRAMINIFOLIA (SOLIDAGO G.), PA ECOTYPE) 2% COSMOS (BRISTLY) SEDGE, PA ECOTYPE (CAREX COMOSA, PA ECOTYPE)

2% COMMON SNEEZEWEED (HELENIUM AUTUMNALE)

SEDIMENT CONTROL, and revisions thereto.

6. Site Analysis:

Total Cut:

Total Fill:

Total Area of Site

on the same day of disturbance.

Ared Disturbed:

areas on the project site except for those areas under active grading.

permission for their removal has been obtained from the CID

Area to be roofed or paved: ______ Acres

Area to be vegetatively stabilized: _____2.3 Acres

Offsite waste/borrow area location: <u>N/A</u>

sediment basin or other approved washout structure.

• Use I and IP March 1 - June 1

Use IV March 1 - May 31

• Use III and IIIP October 1 - April 30

intervals, with lower ends curled uphill by 2' in elevation.

2% GOLDEN ALEXANDERS (ZIZIA AUREA) 2% MANY LEAVED BULRUSH. PA ECOTYPE (SCIRPUS POLYPHYLLUS, PA ECOTYPE)

1% SEEDBOX, PA ECOTYPE (LUDWIGIA ALTERNIFOLIA, PA ECOTYPE)

1% PURPLE STEMMED ASTER, PA ECOTYPE (ASTER PUNICEUS (SYMPHYOTRICHUM PUNICEUM), PA ECOTYPE) 1% SWAMP MILKWEED, PA ECOTYPE (ASCLEPIAS INCARNATA, PA ECOTYPE)

1% FLAT TOPPED WHITE ASTER. PA ECOTYPE (ASTER UMBELLATUS) 1% ZIGZAG ASTER, PA ECOTYPE (ASTER PRENANTHOIDES (SYMPHYOTRICHUM P.), PA ECOTYPE)

1% NEW ENGLAND ASTER, PA ECOTYPE (ASTER NOVAE-ANGLIAE (SYMPHYOTRICHUM N.), PA ECOTYPE)

1% NEW YORK IRONWEED, PA ECOTYPE (VERNONIA NOVEBORACENSIS, PA ECOTYPE)

1% GREAT BLUE LOBELIA. PA ECOTYPE (LOBELIA SIPHILITICA, PA ECOTYPE) 1% ROUGH AVENS, PA ECOTYPE (GEUM LACINIATUM, PA ECOTYPE)

1% BONESET. PA ECOTYPE (EUPATORIUM PERFOLIATUM)

1% JOE PYE WEED, PA ECOTYPE (EUPATORIUM FISTULOSUM. PA ECOTYPE) 1% AWL SEDGE. PA ECOTYPE (CAREX STIPATA, PA ECOTYPE)

1% WOOLGRASS, PA ECOTYPE (SCIRPUS CYPERINUS, PA ECOTYPE)

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

STANDARD STABILIZATION NOTE

a.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3

HORIZONTAL TO 1 VERTICAL (3:1); AND

b.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

HOWARD SOIL CONSERVATION DISTRICT (HSCD) STANDARD SEDIMENT CONTROL NOTES

1. A pre-construction meeting must occur with the Howard County Department of Public Works, Construction Inspection Division (CID), 410-313-1855 after the future LOD and protected areas are marked clearly in the field. A minimum of 40 hour notice to CID must be given at the following stages: a. Prior to the start of earth

Other building or grading inspection approvals may not be authorized until this initial approval by the inspection

igency is made. Other related state and tederal permits shall be referenced, to ensure coordination and to

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND

3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization is required within three (3) calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and seven (7) calendar days as to all other disturbed

4. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for topsoil (Sec.

B-4-2), permanent seeding (Sec. B-4-3), temporary seeding (Sec. B-4-4) and mulching (Sec. B-4-3). Temporary stabilization with mulch alone can only be applied between the fall and spring seeding dates if the

ground is frozen. Incremental stabilization (Sec. 8-4-1) specifications shall be enforced in areas with >15' of cut and/or fill. Stockpiles (Sec. 8-4-0) in excess of 20 ft. must be benched with stable outlet. All concentrated flow, steep slope, and highly erodible areas shall receive soil stabilization matting (Sec. 8-4-6)

5. All sediment control structures are to remain in place, and are to be maintained in operative condition until

118.514 Acres

_____2.3____ Acres

___N/A Cu. Yds

N/A Cu. Yds.

be inspected by the contractor weekly; and the next day after each rain event. A written report by the

ontractor, made available upon request, is part of every inspection and should include

7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired

8. Additional sediment control must be provided, if deemed necessary by the CID. The site and all controls shall

Inspection date
Inspection type (routine, pre-storm event, during rain event)
Name and fifte of inspector
Weither information (current conditions as well as time and amount of last recorded precipitation)
Brief description of project's status (e.g., percent complete) and/or current activities
Evidence of sediment discharges
Identification of plan deficiencies
Identification of ediment controls that require maintenance
Identification of missing or improperty installed sediment controls
Compliance status regarding the sequence of construction and stabilization requirements

Photographs
 Monitoring/sampling
 Maintenance and/or corrective action performed
 Other inspection items as required by the General Permit for Stormwater Associated with Construction
 Actional (MODES MODE)

9. Trenches for the construction of utilities is limited to three pipe lengths or that which can and shall be back-filled and stabilized by the end of each workday, whichever is shorter.

10. Any major changes or revisions to the plan or sequence of construction must be reviewed and approved by the HSCD prior to proceeding with construction. Minor revisions may allowed by the CDD per the list of

11. Disturbance shall not occur outside the LO.D. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has been stabilized and approved by the CID. Unless otherwise specified and approved by the control of a cres cumulatively may be disturbed at a given time.

12. Wash water from any equipment, vehicles, wheels, pavement, and other sources must be treated in a

14. All Silt Fence and Super Silt Fence shall be placed on-the-contour, and be imbricated at 25' minimum

16. A copy of this plan, the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT

13. Topsoil shall be stockpiled and preserved on-site for redistribution onto final grade.

15. Stream channels must not be disturbed during the following restricted time periods

CONTROL, and associated permits shall be on-site and available when the site is active.

b. Upon completion of the installation of perimeter erosion and sediment controls, but <u>before proceeding</u> with any other earth disturbance or grading. c. Prior to the start of another phase of construction or opening of another grading unit, d. Prior to the removal or modification of sediment control practices.

STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING (8 - 4 - 3)

Definition The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading

Specifications All seed must meet the requirement of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector

Criteria

- to verify type of seed and seeding rate. Mulch alone may be applied between the fall and spring seeding dates only if the ground is
- rozen. The appropriate seeding mixture must be applied when the ground thaws. Inoculants: The inoculant for treating learne seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keetp
- inoculant as cook as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weedcontrol until sufficient time has elapsed (14 days min.) to permit dissipation of

2. Application

phyto-toxic materials.

- Dry Seeding: This includes use of conventional drop or broadcast spreaders. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1. Permanent Seeding Table B.3, or site-specific seeding summaries. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with weighted roller to provide good seed to soil
- b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in
- each direction. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer) If fertilizer is being applied at the time of seeding, the application rates should not exceed
- the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P 0 (phosphorus), 200 pounds per acre; K 0 (potassium), 200 pounds per acre. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by
- hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
- Mix seed and fertilizer on site and seed immediately and without interruption. iv. When hydroseeding do not incorporate seed into the soil.

B. Mulchine

- Mulch Materials (in order of preference) Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas
- where one species of gross is desired. b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into uniform fibrous physical state.
- WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate colot to facilitate visual inspection of the uniformly spread slurry. WCFM, including dye, must contain no germination or growth inhibiting factors. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch
- material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings. iv. WCFM material must not contain elements or compounds at concentration levels that will by phyto-toxic
- WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum. Application
- Apply mulch to all seeded areas immediately after seeding. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the
- application rate to 2.5 tons per acre. Wood cellulose fiber used as mulch must be applied to a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
- a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
- i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
- Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
- Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra lack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind
- catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4-15 feet wide and 300 to 3,000

STANDARDS AND SPECIFICATIONS

102 STOCKPILE AREA

(8-4-8)

Definition

The mound or pile of soil protected by appropriately designed erosion and sediment control measures. Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

- The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan
- The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper tha 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
- Runoff from the stockpile area must drain to a suitable sediment control practice. Access the stockpile area from the upgrade side.
- Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner
- Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as
- Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization. 8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Gradina.

Owner

sheeting.

feet long.

Kellogg-CCP, LLC c/o David P. Scheffenacker, Jr., Managing Member 100 West Road, Suite 304 Towson, Maryland 21204 Ph# 410-296-3800

Developer

Preston • Scheffenacker Properties 100 West Road, Suite 304 Towson, Maryland 21204 Ph# 410-296-3800

-	3. INSTALL STABILIZED CONSTRUCTION ENTRANCES AND ACCESS ROAD AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN. INSTALL SILT FENCE IN WETLAND RESTORATION AREA 1 AND HMP RESTORATION AREAS 1 AND 2 AS SHOWN ON THE PLAN. (1 DAY)	SIRIE.
	4. BEGIN WORK IN WETLAND RESTORATION AREA #1 WITH THE FORD REPLACEMENT AND RESTORATION AREA #4 FOR THE CULVERT REPLACEMENT. (5 DAYS)	
	 5. PERFORM EROSION STABILIZATION AT HMP#1 AND #2. PERFORM FORD UPGRADES ALONG GAS EASEMENT ALIGNMENT. (5 DAYS) 6. THE REMAINDER OF THE WETLANDS RESTORATION WORK IS HAND WORK NOT REQUIRING THE USE OF MACHINES THUS NO CONTROLS ARE NECESSARY. (2 WEEKS) 	
1	7. PROVIDE PERMANENT SEEDING TO ANY DISTURBED AREAS ONSITE AND STABILIZE THE ENTIRE SITE. (1 DAY)	IN A E
	8. WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR START REMOVING ANY SEDIMENT CONTROL FEATURES NOT REQUIRED TO REMAIN FOR FUTURE SITE PLAN PHASES AND STABILIZE THE AREAS WITH PERMANENT SEEDING. (3 DAYS)	
-	NOTE: FOR USE 1 WATERS, STREAM CLOSURE DATES ARE FROM MARCH 1st. TO JUNE 15th.	
-		
-		<u>C(</u>
021	GINAL GRADE	1.
	501L MIX BACKFILL	2.
		3

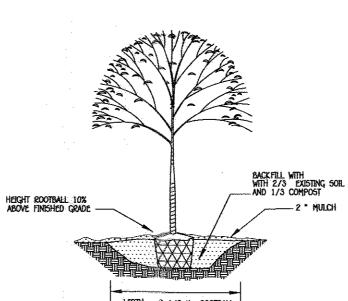
STEP 1

STEP 3

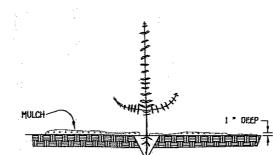
WIDTH = 2 1/2 X ROOTBALL OR CONTAINER DIAMETER Planting on Slope

HEIGHT ROOTBALL 10% ABOVE FINISHED GRADE _ 2 * MULCH

WIDTH = 2 1/2 X ROOTBALL OR CONTAINER DIAMETER Undisturbed Soi

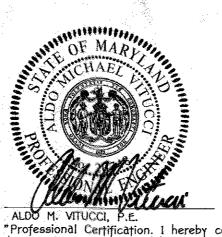


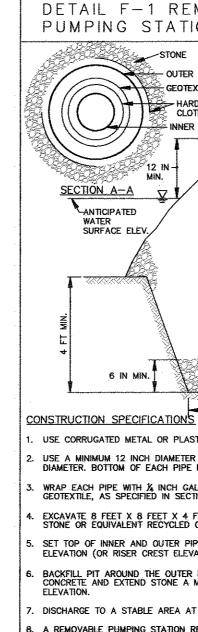
WIDTH = 2 1/2 X ROOTBAL CONTAINER DIAMETER Disturbed Soil



Seeding and Whip

Planting Specification



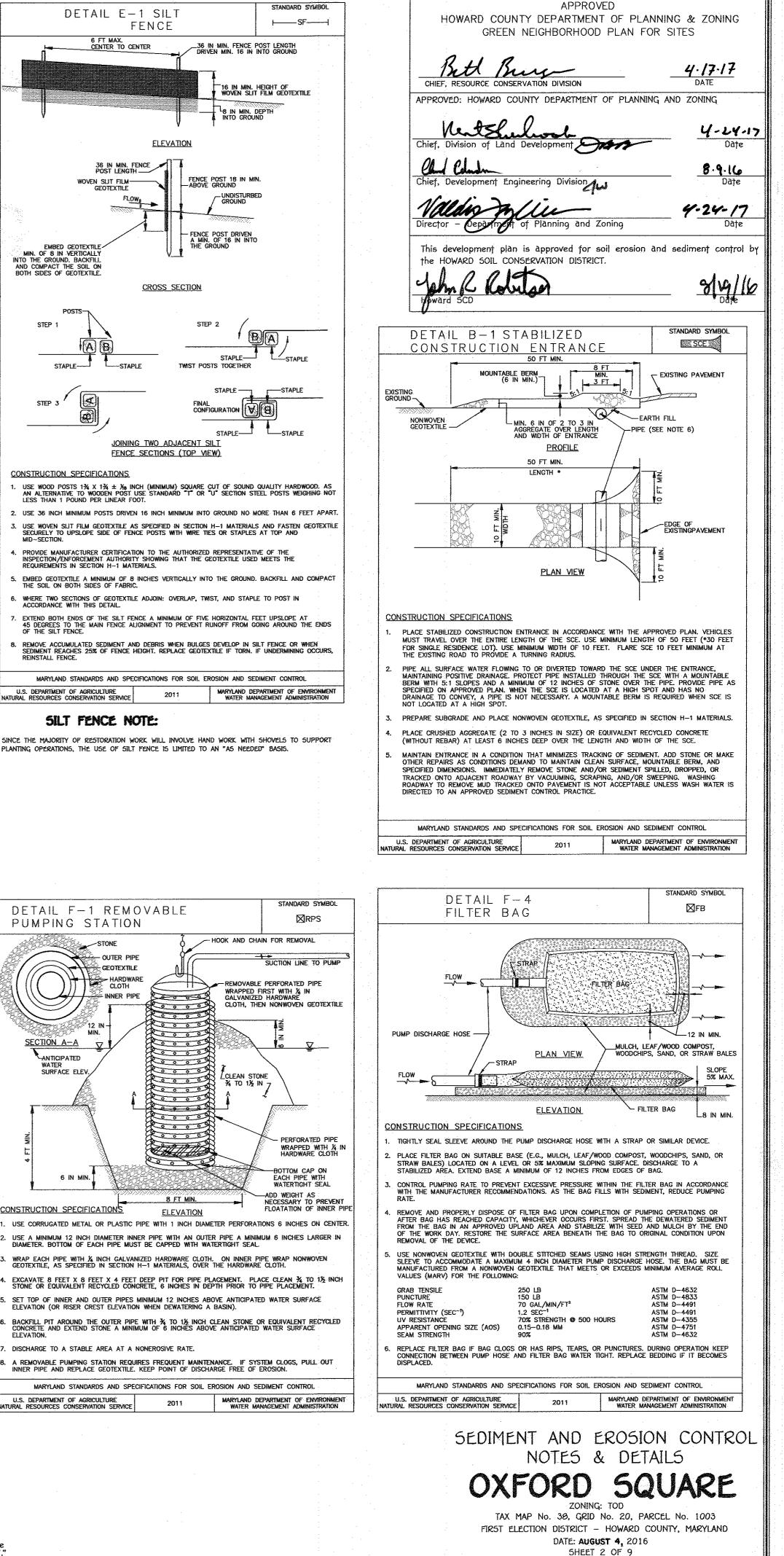


8/4/16

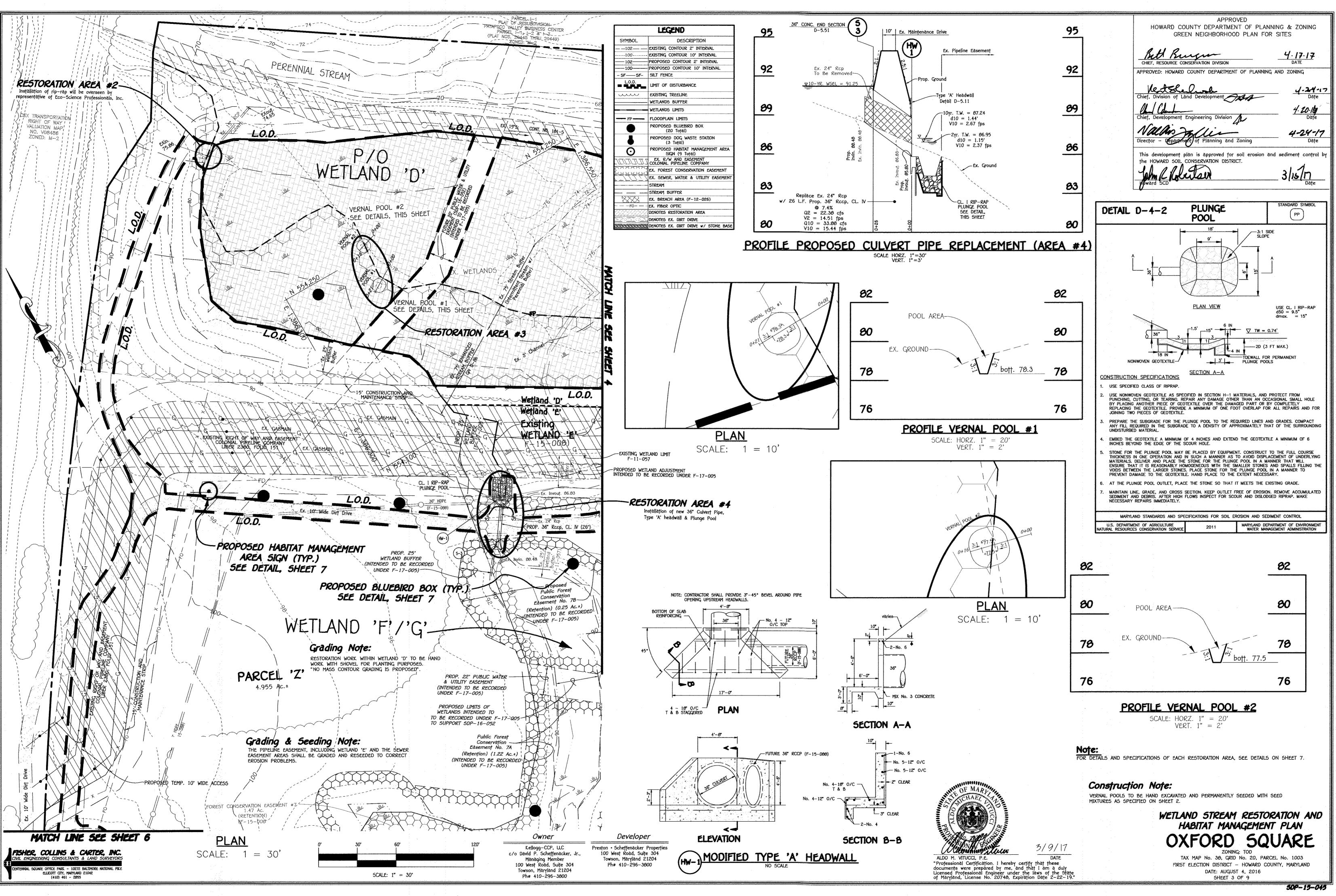
DATE "Professional Certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland. License No. 20748, Expiration Date 2–22–17.

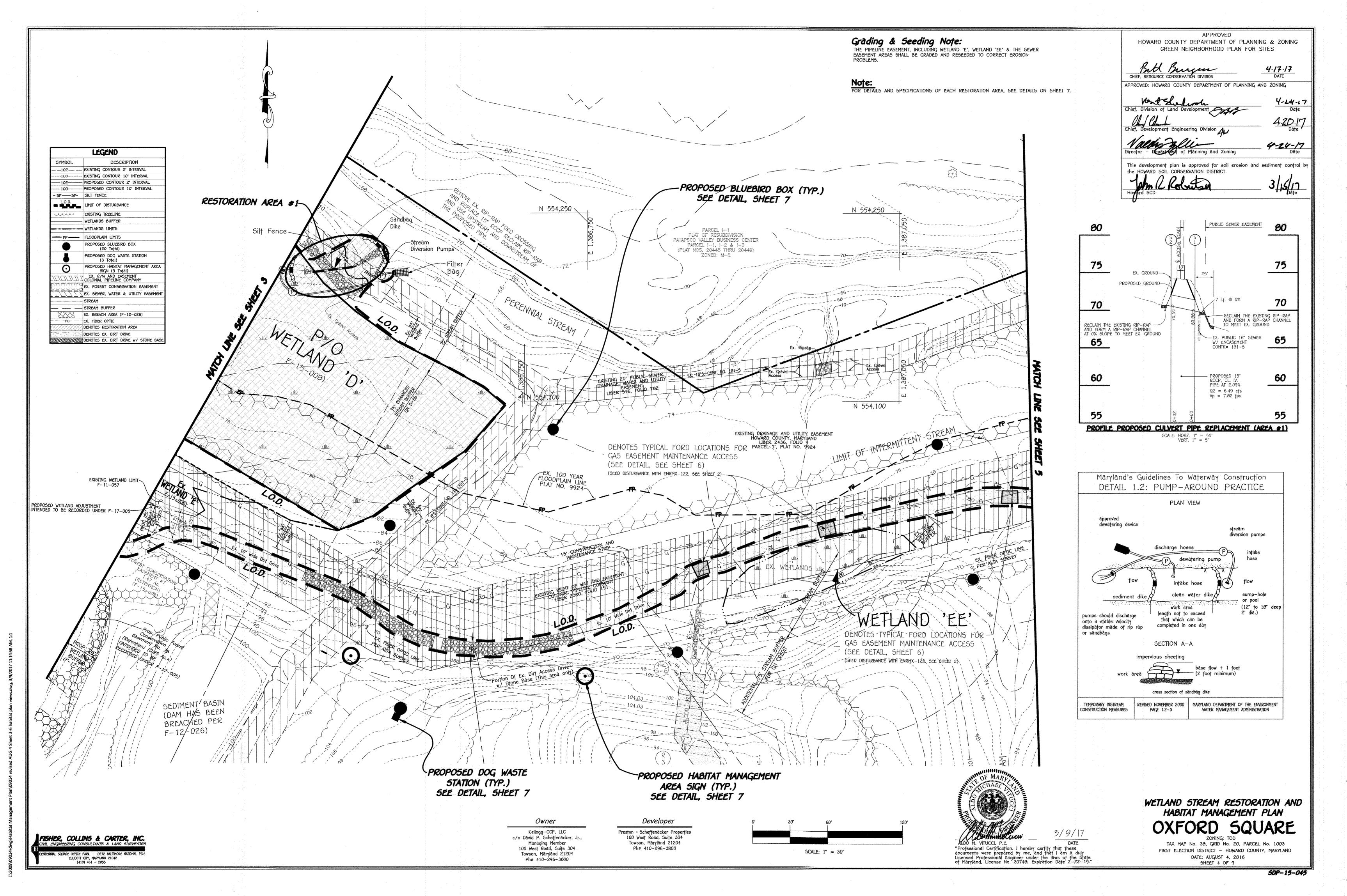
SEQUENCE OF CONSTRUCTION

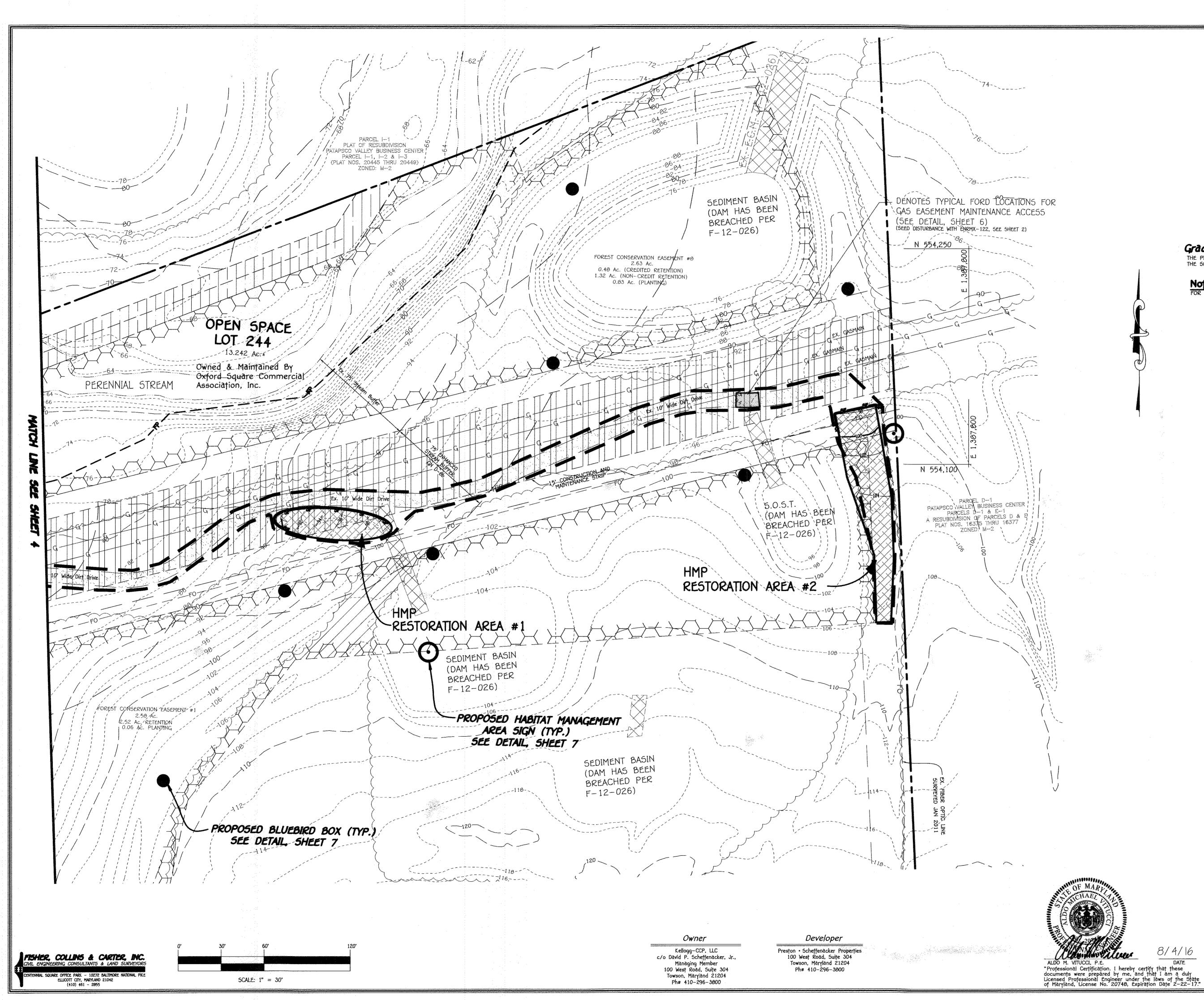
1. CALL MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION TO MARK THE EXISTING UTILITIES IN THE FIELD. (1 DAY) 2. OBTAIN GRADING PERMIT. (7 DAYS)



50P-15-045







APPROVED HOWARD COUNTY DEPARTMENT OF PLANNIN GREEN NEIGHBORHOOD PLAN FOR S	
Bett Brugen	4.17.17
Kent De Quality	4-24-17 Date
CALEA L	B · /9 · /6 Date
Nal his main	<u>4-24-/7</u> Date
This development plan is approved for soil erosion and the HOWARD SOIL CONSERVATION DISTRICT.	sediment control by
Howard SCD	8/19///
	HOWARD COUNTY DEPARTMENT OF PLANNIN GREEN NEIGHBORHOOD PLAN FOR S <u>Buth Rumm</u> CHIEF, RESOURCE CONSERVATION DIVISION APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AN <u>Use Poolog</u> Chief, Division of Land Development <u>Chief, Development Engineering Division</u> <u>Chief, Development Engineering Division</u> <u>Director - Department of Planning and Zoning</u> This development plan is approved for soil erosion and the HOWARD SOIL CONSERVATION DISTRICT. <u>Use Round</u>

Grading & Seeding Note: The pipeline easement, including access roads for the breached sediment basins and the sewer easement areas shall be graded and reseeded to correct erosion problems.

Note: For details and specifications of each restoration area, see details on sheet 7.

	LEGEND
SYMBOL	DESCRIPTION
	EXISTING CONTOUR 2' INTERVAL
100	- EXISTING CONTOUR 10' INTERVAL
102	- PROPOSED CONTOUR 2' INTERVAL
	PROPOSED CONTOUR 10' INTERVAL
- 5F5F	SILT FENCE
LO.D.	LIMIT OF DISTURBANCE
jui	EXISTING TREELINE
	- WETLANDS BUFFER
	WETLANDS LIMITS
FP	FLOODPLAIN LIMITS
	PROPOSED BLUEBIRD BOX (20 Total)
6	PROPOSED DOG WASTE STATION (3 Total)
Ο	PROPOSED HABITAT MANAGEMENT AREA SIGN (9 Total)
THANK	COLONIAL PIPELINE COMPANY
калала Каккана	EX. FOREST CONSERVATION EASEMENT
77777,	EX. SEWER, WATER & UTILITY EASEMENT
	- STREAM
	STREAM BUFFER
XXXX	EX. BREACH AREA (F-12-026)
FO	-ex. Fiber optic
HHHHH	DENOTES RESTORATION AREA
	DENOTES EX. DIRT DRIVE
0000000000	DENOTES EX. DIRT DRIVE w/ STONE BASE

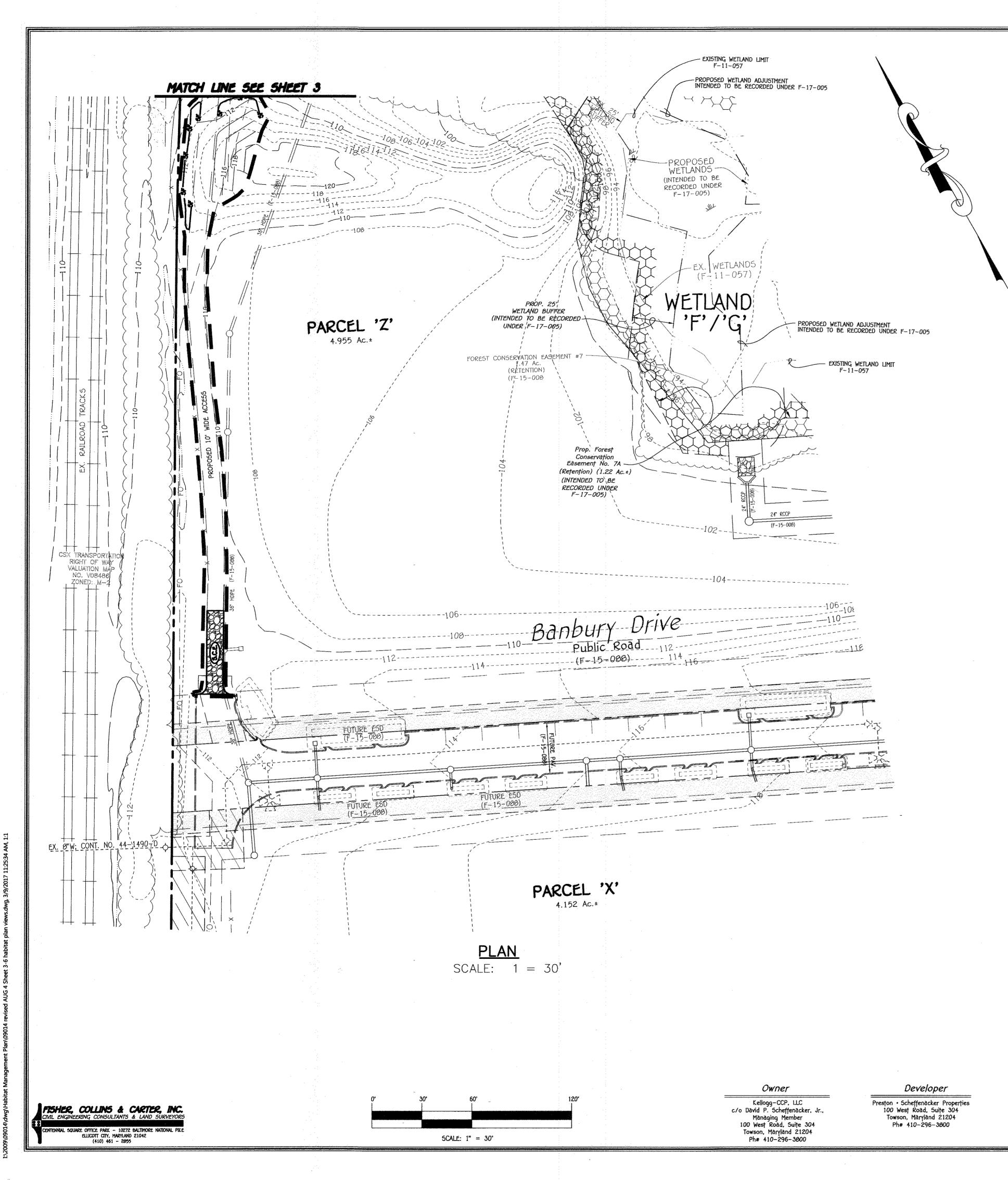
HMP Restoration Area #2 - 3,000 SF.

Qty	Species	Size	Spacing
6	Cercis canadensis 'Red bud'	2-3' whip	8' o.c.
8	Cornus florida - Flowering dogwood	2-3' whip	8' o.c.
6	Juniperus virginana – Red cedar	2-3' whip	8' o.c.
6	Prunus seroțină — Black cherry	2-3' whip	8' o.c.
6	Rubinia pseudo acacia — Black locust	2-3' whip	8' o.c.
6	Sassafras albibum — Sassafras	2-3' whip	8' o.c.
6	Viburnum prunifolium – Black haw	2-3' whip	8' o.c.

WETLAND STREAM RESTORATION AND HABITAT MANAGEMENT PLAN OXFORD SQUARE ZONING: TOD TAX MAP No. 38, GRID No. 20, PARCEL No. 1003

FIRST ELECTION DISTRICT - HOWARD COUNTY, MARYLAND DATE: AUGUST 4, 2016 SHEET 5 OF 9

50P-15-045



-SHALLOW SWALE PROPOSED FORD CROSSING 4-FT. (1.2 M) MAX. (BANK HEIGHT VARIES) GEOTEXILE FABRIC (TYPE III) SHALL BE PLACED UNDER THE ENTIRE WIDTH OF THE No. 57 STONE 5

DOWNSTREAM. DISTURBED AREAS ARE STABILIZED IN ACCORDANCE WITH AN APPROVED SEDIMENT AND EROSION CONTROL PLAN AND THE INSPECTION AUTHORITY APPROVES THEIR REMOVAL.

 \sim

5. ONCE THE CROSSING IS COMPLETED, THE DIVERSION SHOULD BE REMOVED FROM UPSTREAM TO SEDIMENT CONTROL DEVICES, INCLUDING PERIMETER EROSION CONTROLS, ARE TO REMAIN IN PLACE UNTIL ALL

DISPOSAL AREA WMA.

DESCRIPTION:

CHANNEL WHILE

ONLY WHEN BRIDGE

FORD SHOULD BE

STREAM.

CROSSING. ADDITIONALLY,

INSTALLATION GUIDELINES:

PLACE TO MINIMIZE

SECTION 1: TEMPORARY

IMPLEMENTED AS THE

THE CONSTRUCTION

EFFECTIVE USES AND LIMITATIONS:

OR CULVERT CROSSINGS ARE NOT FEASIBLE.

4. ALL MATERIAL EXCAVATED FROM THE CONSTRUCTION AREA SHOULD BE PLACED IN AN APPROVED

AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. SHALLOW SWALES SHOULD BE INSTALLED AS

OUTSIDE OF THE 100-YEAR FLOOD PLAIN UNLESS OTHERWISE ALLOWED ON THE PLANS BY THE

NECESSARY TO TRAP

SURFACE RUNOFF, THUS COLLECTING POLLUTION FROM THE FORD ACCESS ROAD.

APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING GREEN NEIGHBORHOOD PLAN FOR SITES THE WORK SHOULD CONSIST OF CONSTRUCTING A FORD ACCESS ACROSS A STREAM. Bett Burgen 4.17.17 THE FORD SHOULD CREATE A STREAM CROSSING THAT IS COMMENSURATE WITH THE NATURAL CHIEF, RESOURCE CONSERVATION DIVISION DATE FACILITATING THE NATURAL PASSAGE OF FISH AND OTHER STREAM FAUNA. FORDS SHOULD BE USED APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING STREAMS WITH STEEP BANKS OR SOFT SILTI-CLAY BEDS ARE NOT SUITED FOR THIS TYPE OF 4-24-17 THE EFFECTS OF SIZE, TYPE, AND FREQUENCY OF TRAFFIC ON THE STRUCTURAL INTEGRITY OF THE Date Development TAA CONSIDERED. FINALLY, VEHICLES WHICH LEAK OIL OR HYDRAULIC FLUID SHOULD NOT CROSS THE 4.20.17 Date ALL EROSION AND SEDIMENT CONTROL DEVICES, INCLUDING DEWATERING BASINS, SHOULD BE 4-24-17 FIRST ORDER OF BUSINESS ACCORDING TO A PLAN APPROVED BY THE WMA OR LOCAL AUTHORITY. anning and Zonin Date (SEE THE 2011 STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.) THE PROPOSED CONSTRUCTION SEQUENCE IS AS FOLLOWS: This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT. 1. THE CONTRACTOR SHOULD INSURE THAT A CONTINUOUS PERIMETER CONTROL BARRIER IS IN Am R Relator 3 THE AMOUNT OF POLLUTANTS ENTERING THE FLOW. 2. THE STREAM SHOULD BE DIVERTED BY AN APPROVED TEMPORARY STREAM DIVERSION (SEE INSTREAM CONSTRUCTION MEASURES, MARYLAND'S GUIDELINES TO WATERWAY CONSTRUCTION), AREA SHOULD BE DEWATERED, AND ANY DISTURBED BANKS SHOULD BE STABILIZED. 3. THE FORD SHOULD BE CONSTRUCTED IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS MDE DETAIL 4.1: PERMANENT FORD CROSSING - TOE OF BANK PLAN VIEW -TOP OF BANK (NATURAL GROUND) FLOW - TEMPORARY SANDBAG / STONE BARRIER AGGREGATE BED OVER FILTER CLOTH 'ĠRADE 5:1 _DEWATERING BASIN SECTION VIEW -CROWN w/6" OF No. 57 STONE ORIGINAL STREAM BANK NEW ROADWAY HEIGHT VARIES └─ SWALE CONSTRUCTION ROAD RUNOFF MUST NOT ENTER STREAMS. PROVIDE DEPRESSED 'SAG' OVERFLOW AREA ADJACENT TO THE ACCESS ROAD. -CLASS A-1 RIP-RAP FILTER CLOTH WITH AGGREGATE COVER GEOTEXILE FABRIC (TYPE III) SHALL BE PLACED ON THE STREAM BED AND BANKS PRIOR TO PLACEMENT OF ACCREGATE WETLAND STREAM RESTORATION AND HABITAT MANAGEMENT PLAN OXFORD SQUARE 3/9/17 ZONING: TOD DATE TAX MAP No. 38, GRID No. 20, PARCEL No. 1003 LDO M. VITUCCI, P.E.

"Professional Certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-19.

FIRST ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

DATE: AUGUST 4, 2016

SHEET 6 OF 9

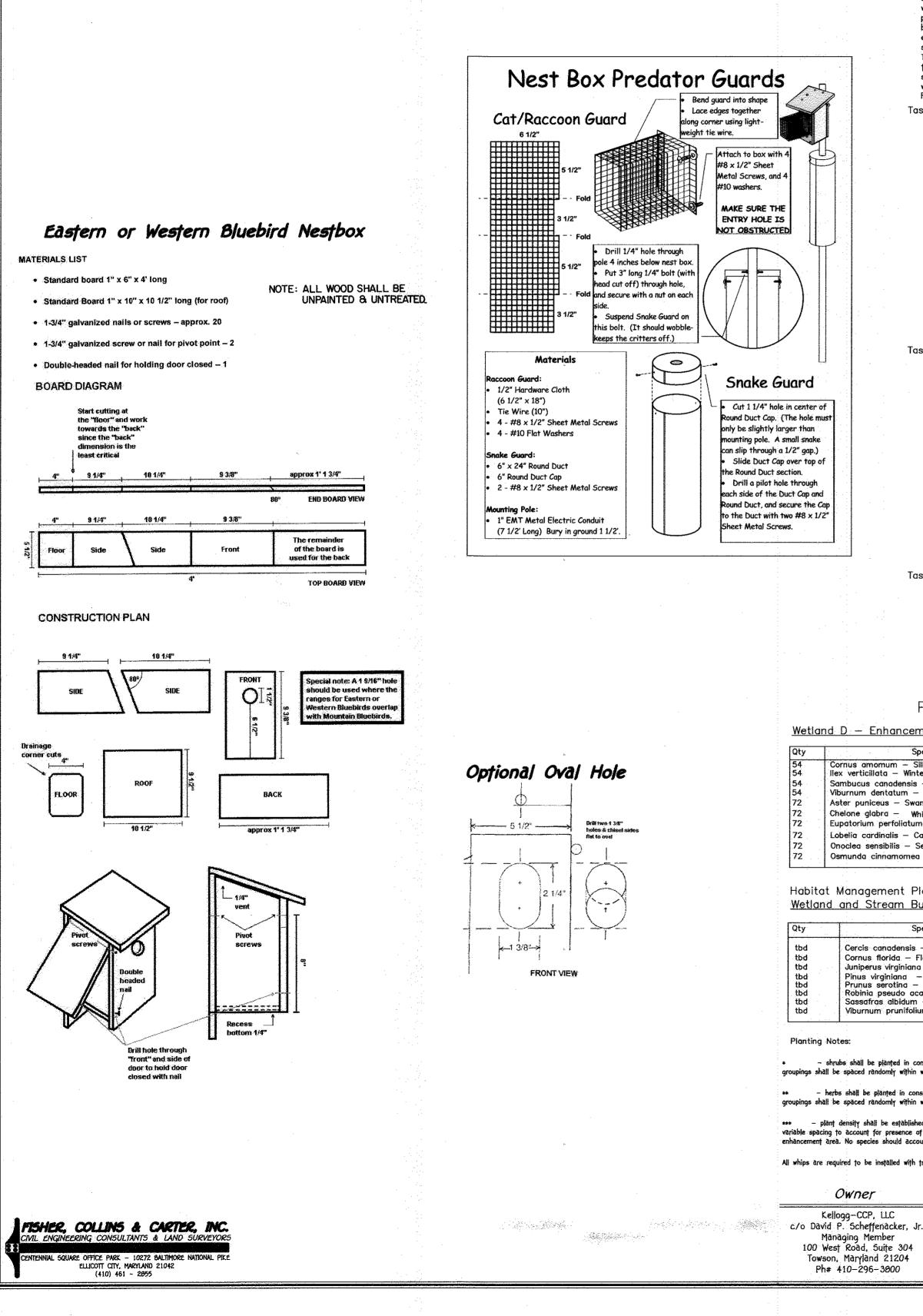
Maintenance of Plantings

Site inspections will be performed a minimum of three times during the growing season. The purpose of the inspections will be to assess the health of the plantings. Appropriate measures will be taken to rectify any problems which may arise.

- In addition, maintenance of the plantings will involve the following steps:
- 1. Watering All plant material shall be watered twice a month during the 1st growing season, more or less frequently depending on weather conditions. During the second growing season, once a month during May-September, if needed.
- 2. Removal of invasive exotics and noxious weeds. Old field successional species will be retained.
- 3. Identification of serious plant pests and diseases, treatment with appropriate agent.
- 4. Pruning of dead branches.
- 5. After each growing season, replacement of plants, if required, in accordance with the Guarantee Requirements.

Guaranțee Requiremențs

A 90 percent survival rate of the Wetland and reforestation plantings will be required after one growing season. All plant material below the 90 percent survival threshold will be replaced at the beginning of the second growing season. At the end of the second growing season, a 75 percent survival rate will be required. All plant material below the 75 percent survival threshold will be replaced by the beginning of the next growing season. A 75 percent survival threshold shall be maintained throughout the 5 year maintenance period. Natural succession may be credited toward survival rate provided plantings are at least 10" in height and appropriately spaced in planting area.



Green Neighborhood Section D 1- Wetland/Stream Restoration	Green Neighborhood Section D 2— Habitat Management Plan	•
Wetland D - 77,005 sq.ft.	Short_term efforts:	Propos
Task 1. Trash/Debris Removal	Task 1. Remove Invasives	Step 1 – Prepàre HMP Agreement Sign HMP Agreement Wi
All trash and debris will be removed from Wetland D	Remove woody invasive species from all existing forest resources, including	Step 2 - Perform HMP/Wetland Re
Task 2. Invasive Species Removal	Those within wetlands, buffers and both credited and non-credited forest retention areas,	Task 1 — Limit access to site for Estimated schedule — Ir
All invasive species will be removed from Wetland D. Shrubs shall be cut at the base. Plant material may be left or placed in brush	to enhance their successional development. Woody invasive species shall also be removed from pipeline area. Shrubs shall be cut at the base. Plant material may be left or placed in brush piles. Re-growth shall be sprayed	Task 2 – Complete processing of A Estimated work time – 3 Estimated schedule Sum
piles. Re-growth shall be sprayed with Rodeo per manufacturers instructions.	with Rodeo/Round-up or equivalent per manufacturers instructions.	
Task 3 - Vegetative Enhancement	Task 2. Vegetative Enhancement	Task 3 — Removal of all trash and wetlands to be retained,
Following the initial removal of the invasive species in Wetland D the	Plant native trees to close canopy gaps within the	envelope. Estimated work time - 2
wetland shall enhanced with native shrub and herbaceous plantings. Shrubs plantings will include arrowwood, winterberry, spicebush, and elderberry. Herbaceous species will include sensitive fern,	forested portions of the wetlands, wetland buffers and stream buffers, to limit the return of invasive species	Estimated schedule – S
cinnamon fern, cardinal flower, turtle head, asters and Joe-Pye	and to enhance the habitat and water quality benefits of the buffers. Planting of buffers will shall not be	Task 4 - Physical removal of invas
weed.	performed if it conflicts with other existing use such are Utility Line Or Sewer Right Of Way. Includes Wetland 'C' As	forest dreas to be retain olive, Japanese barberry,
Planting schedule provided.	An Area That Will Have Supplemental Understory Planting. Planting schedule provided.	Estimated work time 5 Estimated schedule Sur
Task 4. Vernal Pool Creation	Task 3. Soil Stabilization	Task 5 – Installation of bluebird
Restoration Area 3	Grade and reseed with native seed mix any areas within the open space lots that are undergoing active erosion.	forest areas for chicka of way and scattered r
This area has been previously disturbed by ORV usage. MDE requested that vernal pools be excavated within the area to enhance	These areas should be seeded and strawed with Maryland Upland Mix — ERNMX-172, FACW Wetland Meadow Seed	Estimated work time -
amphibian habitat. As such, excavation of two vernal pool basins within the area that were previously disturbed by ORV traffic shall be	Mix - # ERNMX-122, or Flood Plain Seed Mix # ERNMX-154. Eroded areas will be determined in the	Estimàted schedule - :
performed. The pools will be excavated by hand and excess soil will be removed from wetlands by wheel barrow. The basins will be	field based on conditions occuring at the time of installation. Seed mix to be used will be determined in	Task 6 – Perform restoration of Appropriate Sediment A (Area 1 is Shown On S
excavated to a depth of 6 inches with 3:1 side slopes. Each pool shall be constructed to be approximately 100 sq.ft. in overall size.	field depending on site conditions. This includes but is not limited to the following areas:	This requires MDE perm
The pools shall be circular to semi-circular in shape. Planting of the pools will not be required but basin and disturbed areas shall be		Estimated work time - Estimated schedule -
seeded with floodplain seed mix ERNMX-154. Specific pool location will be determined in the field by representative of Eco-Science	 a. Eroding areas within the Colonial pipeline easement. Includes Wetands 'E' And 'EE'. 	Task 7 - Perform vernal pool cre
Professionals, Inc. Task 5. Wetland Hydrology Restoration	b. Eroding areas within the sewer utility easement.	Estimàted work time – Estimàted schedule – l
Restoration Area 2	c. Eroding areas within the access roads for the NRFs,	Task & Construct stabilized acc
The restoration of this area involves the reduction of drainage	including a side trail going downhill from the road that circles NRF 5.	Estimated work time 2
flows through a culvert pipe under the utility line right of way access road. The drainage way, which is approximately 18	d. HMP Restoration Areas 1 and 2	Estimate schedule Fall
inches below the adjacent grades, appears to have been constructed to drain surface water from the wetland during	These areas include eroded gullies that have developed due to surface water concentration and soils disturbance.	Task 9 – Stabilize eroded areas ((HMP Restoration Areas
storm events. This drainage prevents surface water from	Each gully shall be filled with compacted topsoil seeded with Maryland Upland Mix — ERNMX—172 and protected	Estimated work time -
accumulating and inundating the adjacent wetlands. As a result, this area of the wetlands has experienced some	with erosion control fabric. The upper end of the gully repair shall be elevated to divert flows away from	Estimated schedule - 1
invasion of multiflora rose. The culvert does not convey base flow or provide any aquatic species migration.	restored areas.	Task 10 – Vegetative Enhancement ((Habitat Management Plar
To accomplish this goal, rip rap will be added at the inlet to	e. HMP Restoration Area #3 — Existing utility access road	Estimate work time 2 w Estimated schedule – Fa
reduce the surface flows into the drainage pipe and this will increase hydrologic input to wetlands on south side of access	Access along the utility line right of way is required to be maintained through the site. The current access road has been disturbed by unauthorized uses.	
road. The drainage pipe does not currently convey base flow or provide aquatic species migration route. Installation of rip	The restoration of the area will include the formal development of a 10 foot wide access road along the existing centerline. The road shall be graded to	Täsk 11 Forest Conservation Planti Conservation Plan.
rap will be overseen by representative of Eco-Science Professionals, Inc.	provide a level, stable driving surface. Where necessary stone may be added to the roadway to provide stable base. The access road shall be seeded with	Estimate work time – 1 w Estimated schedule – Fall
Task 6. Culvert/ Road Crossing Upgrade	Maryland Upland Mix — ERNMX—172. The remaining Area Within The Easement Will Be Reseeded to Create A Native Meadow.	Step 3 – Maintenance and Monito
Restoration Area 1	Task 4. Habitat Enhancement	including Wetland 'D' h guarantee requirements
The existing culvert is clogged and impeding aquatic	Installation of bluebird boxes within forest and meadow areas areas. in Shallow Run Riparian area. Box specifications and installation locations provided	
migration. MDE has proposed that the existing culvert be retained if serviceable or replaced if in need of replacement.	Long Term Efforts	
MDE indicated that H&H study will not be required if culvert is replace with exact replacement. The aquatic migration	1. Long term efforts will monitor and maintain these areas to ensure invasive species do not return and newly planted areas have good survival. Afforestation	
function of the culvert will be restored by removing rip rap from inlet/outfall and replacing along channel banks for	areas should also be included in this monitoring and maintenance effort, to extend beyond the minimum two_year regulatory requirement.	
stability of culvert. Determination of need for replacement will be determined by Eco-Science Professionals, Inc. and	2. Monitoring of Wetland 'D' restoration and habitat management areas will be	
the project engineer in the field during removal and replacement of the bank protection riprap. If the culvert must	performed thoughtout the five (5) year monitoring period to insure that restoration efforts have a beneficial impact to the wetland and other on-site resources. If	Σ
be replaced appropriate sediment and erosion control plans will be provided to County for approval. The up-stream end	adverse impacts are observed, efforts will be made to rectify the situation.	
of the culvert will be located to insure that drainage of the upstream wetlands does not occur. The upstream invert of	3. Maintain access restrictions to eliminate future use of the site by unauthorized off road vehicles. This includes installation and maintenance of gates, berms,	Σ
the culvert will match the existing culvert/stream bottom elevation.	fencing and signage, as needed.	[2]
Task 7. Culvert Replacement	4. Pet waste bag stations will be placed along trail system and pet owners will be encouraged to clean up after their pets. Oxford Square Master Association	
Restorațion Area 4	will be responsible for maintenance of pet waste bag stations, trash removal and maintenance of nest boxes.	
The existing culvert is heavily rusted throughout and no	Project Time Frame	
outfall protection is provided. Replace the Existing metal pipe with concrete pipe and provide an adequate rip-rap	The project will be implemented within three years of the final approval of SDP-14-019, the site development plan associated with construction of the 190th	
plunge pool to reduce the outlet velocity to be non-erosive.	residential unit. Follow-up and monitoring of the plantings will continue for a five year period from the date of installation and acceptance by the county to insure	
	that the vegetative enhancements are succeeding. Planting and maintenance specifications and guarantee requirements are provided on the restoration plans.	
PLANTING SCHEDULE	Habitat Management Agreement	HABITAT MA
· · · · · · · · · · · · · · · · · · ·	A long term Habitat Management Agreement and funding mechanism has been implemented by the Oxford Square Master Association.	
ncement Plantings - 80,810 sq.ft.	The Habitat Management Agreement will be executed by the developer, the Oxford Square Master Association and Howard	
Species Size Spacing 1 - Silky dogwood 2-3' whip *	County and is recorded in the land records.	
- Winterberry 2-3' whip * lensis – Elderberry 2-3' whip *	The Habitat Management Agreement stipulates requirements necessary to insure the long term maintenance of the natural	
um — Arrowwood 2—3' whip * - Swamp Aster quart **	resource areas to be retained on the property. In this case the Habitat Management Agreement will be coordinated with Howard	-
- White Turtlehead quart ** bliatum – Joepye-weed quart **	County Department of Public Works as it relates to maintenance and use of the sewer line right of way and with the easement holders for	6' GALVANIZED STEEL
s – Cardinal flower quart ** s – Sensitive fern quart **	the underground utilities.	U-CHANNEL POST MEDIUM GAUGE
nomea — Cinnamon fern quart **	The Agreement will stipulate the management identity for control of pet waste, trash and maintenance of nest boxes.	(DARK GREEN)
nt Plan	<pre>/// /// /////////////////////////////</pre>	
m Buffer Enhancement Areas		
Species Size Spacing	Planting Plan and Methods	
ensis – Red bud 2–3' whip ***	Plant species selection was based on our knowledge regarding plant communities in Maryland's Coastal Plain Provence and information provided in the soil survey on typical vegetation for the soil type on the planting site.	
a — Flowering dogwood 2—3' whip *** giniana — Red cedar 2—3' whip *** Vireinia plac 3—5' cont ***	Species selection was also based on our knowledge of plant availability in the nursery industry.	
ina – Virginia pine 3–5' cont *** ina – Black cherry 2–3' whip *** do acacia – Black locust 2–3' whip ***	Reforestation will be accomplished through a mixed planting of whips and branched transplants. Container grown stock is recommended but bareroot stock may be used to help control afforestation costs. If bareroot stock is used the root systems of all plants will be dipped in an anti-desiccant gel prior to planting to improve moisture retention in	
pidum – Sassafras 2–3' whip *** unifolium – Black haw 2–3' whip ***	the root systems.	
	Prior to planting, invasive species shall be removed from planting area. Removal shall be performed by cutting, mowing and/or herbicide treatments. Physical removal of all top growth following by a periodic herbicide treatment	
	of stump sprouts is recommended. Native tree and shrub species occurring within treatment areas should be retained wherever possible. Herbicides treatments shall occur on 2 month intervals during the first growing season	HABITAT MANAG
d in conspecific groups of 3 plants each, individual plants shall be spaced at 5 feet on center. within wetland	and once each in the spring and fall for subsequent years. Herbicide used shall be made specifically to address target species and shall be applied as per manufacturers specifications. Care should be taken not to spray planted trees or naturally occurring native tree/shrub seedlings. It is recommended that initiation of invasive species removal	e en universite transfer to get the Welling
in conspecific groups of 6 plants each, individual plants shall be spaced 2 feet on center,	begin at least six months prior to planting.	
within wetland.	Enhancement plantings should be installed so that impact to the root zone of existing trees and shrubs is minimized. Enhancement plantings and installation activities should also avoid unnecessary disturbance to native herbaceous species."	STATES STATES
stablished based on 15 foot spacing for the area to be enhanced. Plantings may be planted an		S. S.Y.

+++ - plant density shall be established based on 15 foot spacing for the area to be enhanced. Plantings may be planted an variable spacing to account for presence of existing trees and shrubs. A mix of at least four species should be used for each enhancement area. No species should account for more than 50% of the total planting units.

All whips are required to be installed with tree shelters per Howard County FCA requirements

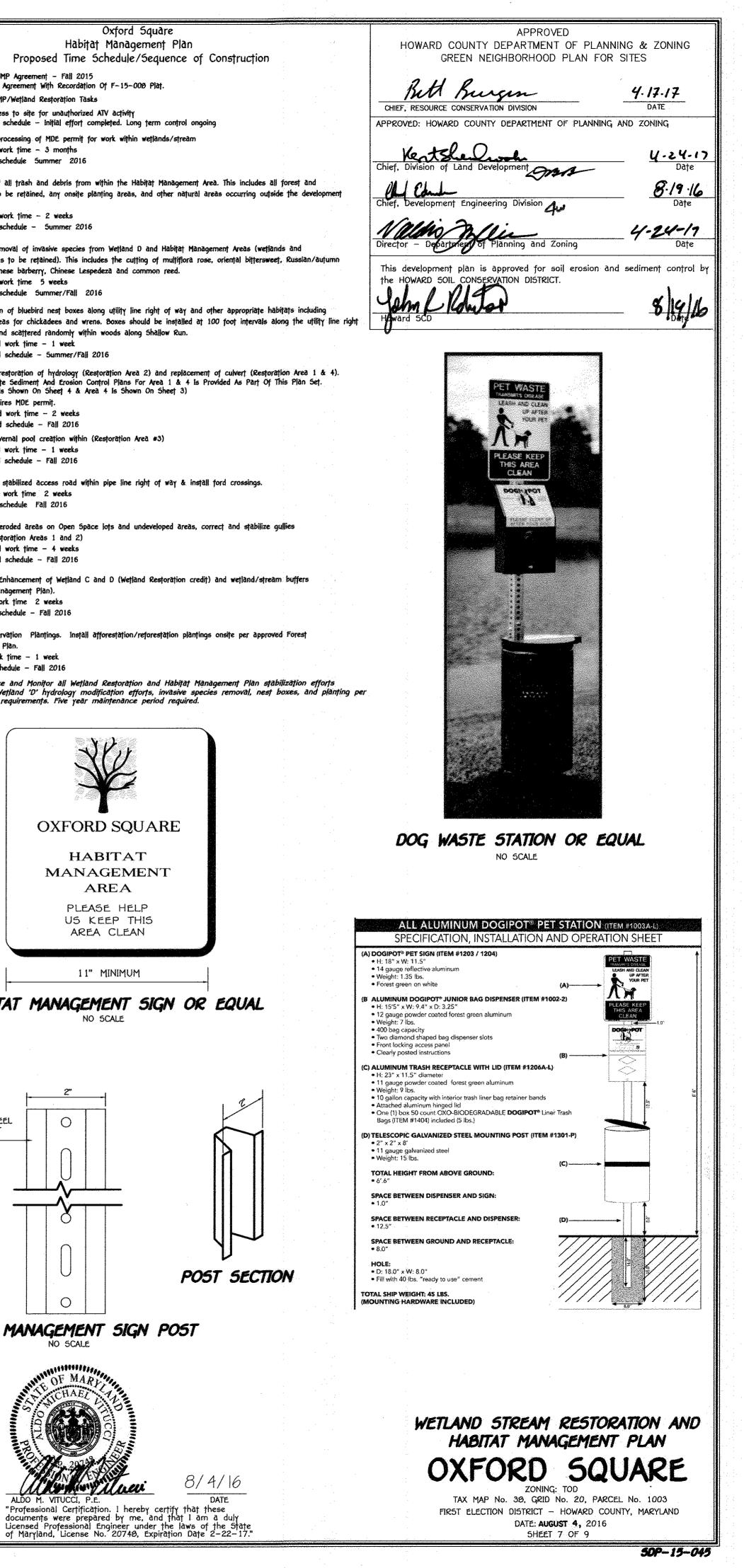
Developer

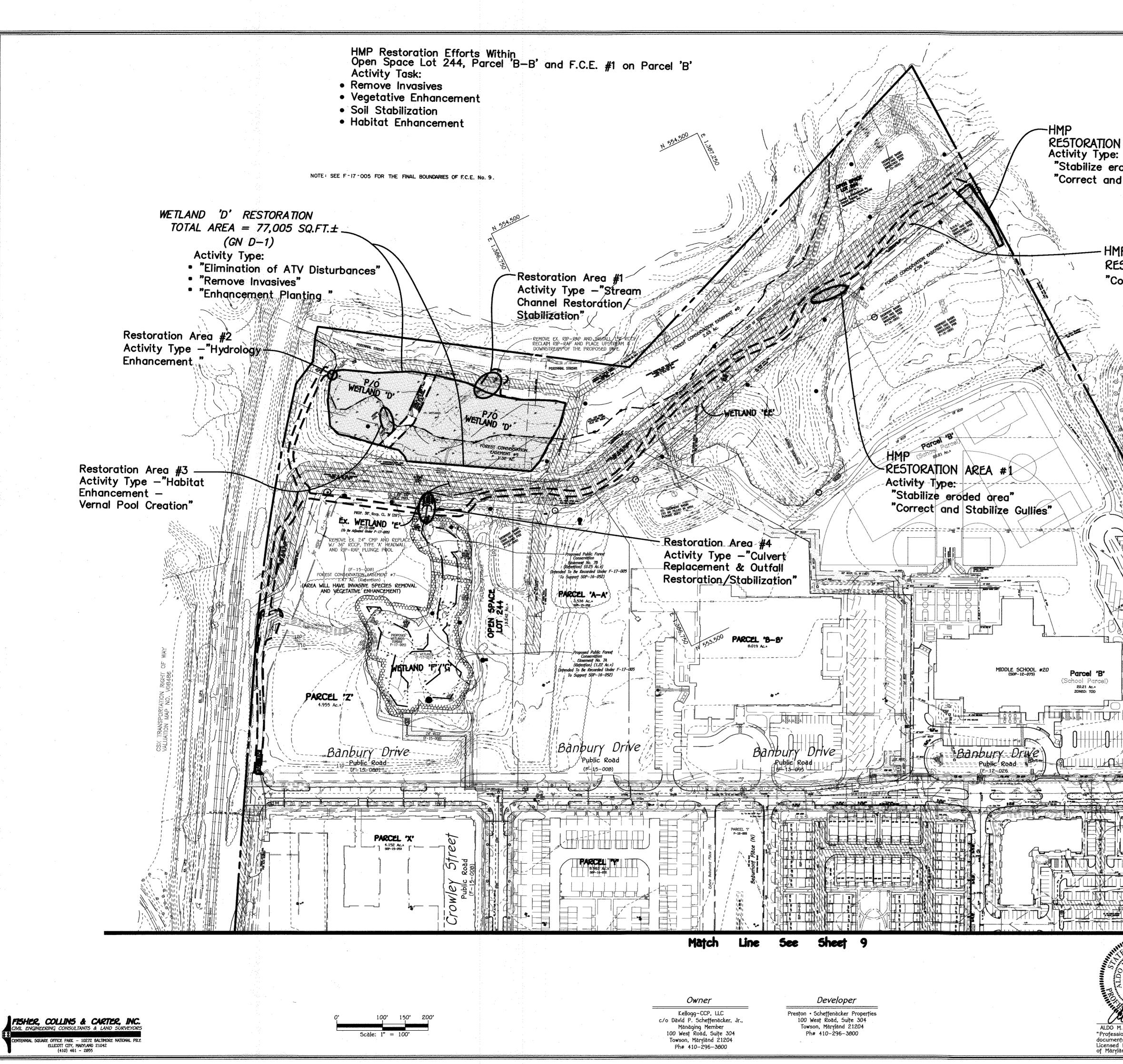
Preston · Scheffenacker Properties 100 West Road, Suite 304 Towson, Maryland 21204 Ph# 410-296-3800

Amendments to existing soil will be in accordance with the Planting Specifications shown on the Forest Conservation Plan. Soil disturbance will be limited to individual planting locations.

Planting and Soil Specifications

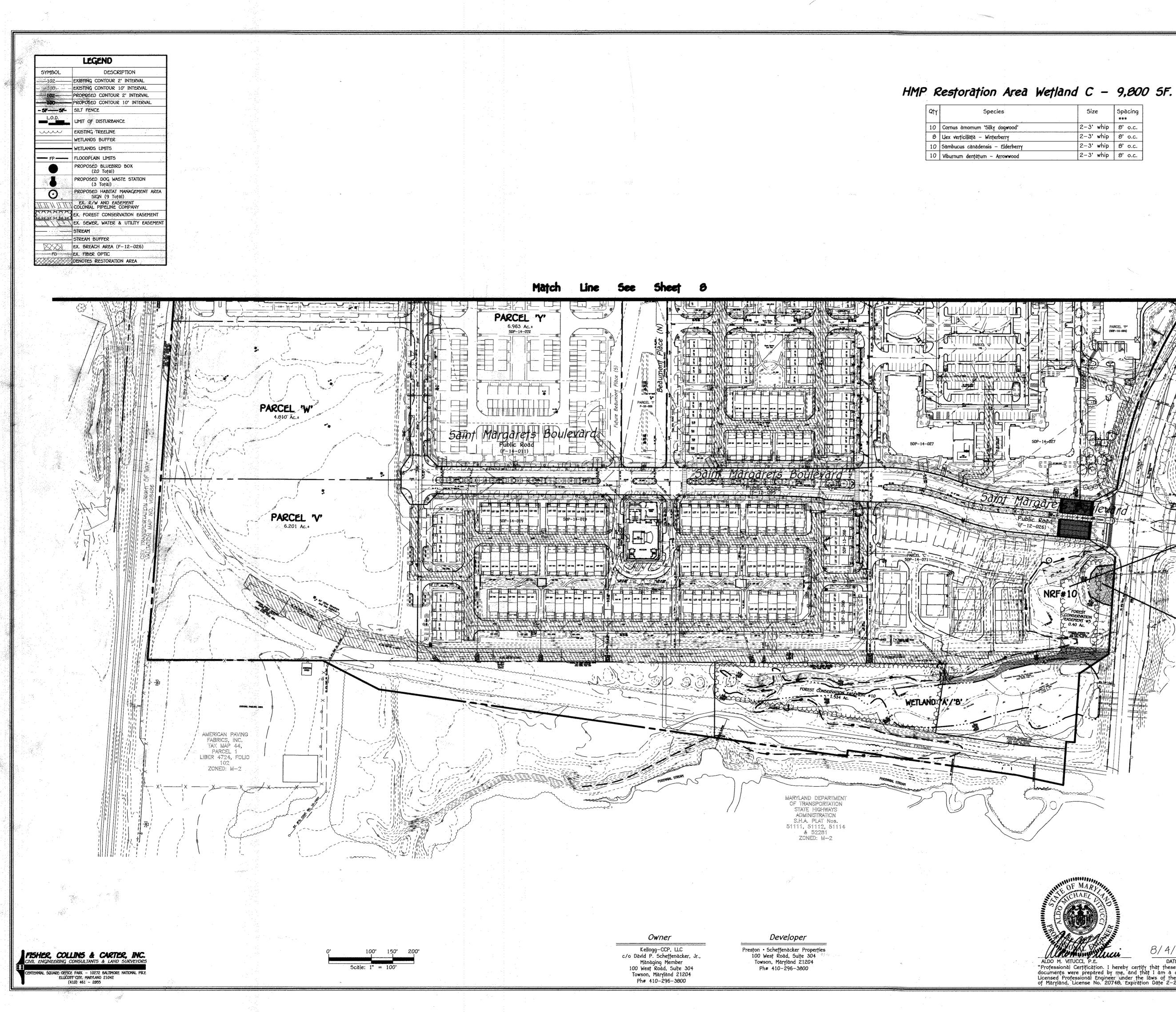
Plant material will be installed in accordance with the <u>Planting Detail and Seed Mixtures</u> shown on sheet 2.





14/dwo/Habitat Management Plan/09014 revised ALIG 4 Sheet 8-9 overall plan.dwg

APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING GREEN NEIGHBORHOOD PLAN FOR SITES Bett Burger 4.17.17 DATE APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING Kert Sher Grook 4-24-17 Development **RESTORATION AREA #2** 4.20.17 "Stabilize eroded area" 4-24-17 "Correct and Stabilize Gullies" sediment control by This development plan is approved the HOWARD SOIL CONSERVATION DISTRICT. 2 Roberts 3/12/17 HMP **RESTORATION AREA #3** LEGEND "Colonial Easement Area" DESCRIPTION SYMBOL Activity Type: XISTING CONTOUR 2' Stabilize eroded areas PROPOSED CONTOUR 2' INTERVAL - Perform ford upgrades PROPOSED CONTOUR 10' INTERVAL SILT FENCE · Re-establish 10 foot wide drive L.O.D. LIMIT OF DISTURBANCE Woody Vegetation Will Be Removed And EXISTING TREELINE The Area Will Be Reseeded With A Native WETLANDS BUFFER WETLANDS LIMITS Meadow Seed Mix - FP ----- FLOODPLAIN LIMITS PROPOSED BLUEBIRD BOX PROPOSED DOG WASTE STATION (3 Total) PROPOSED HABITAT MANAGEMENT AREA SIGN (9 Total) EX. R/W AND EASEMENT COLONIAL PIPELINE COMPANY \odot X. FOREST CONSERVATION EASEMENT (. SEWER, WATER & UTILITY EASEME REAM BUFFER EX. BREACH AREA (F-12-026) EX. FIBER OPTIC DENOTES RESTORATION AREA FOREST CONSERVATION EASEMENT #6 0.29 Ac. HMP Restoration Efforts Within Open Space Lot 2 (FCE #6) Activity Task: Remove Invasives OVERALL PLAN VIEW WETLAND STREAM RESTORATION AND HABITAT MANAGEMENT PLAN OXFORD SQUARE 3/9/17 ZONING: TOD DATE TAX MAP No. 38, GRID No. 20, PARCEL No. 1003 ALDO M. VITUCCI, P.E. "Professional Certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-19." FIRST ELECTION DISTRICT - HOWARD COUNTY, MARYLAND DATE: AUGUST 4, 2016 SHEET 8 OF 9 50P-15-045



Q†Y	Species
10	Cornus amomum 'Silky dogwood'
8	Llex verticillata – Winterberry
10	Sambucus canadensis – Elderberry
10	Viburnum dentātum — Arrowwood

APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING GREEN NEIGHBORHOOD PLAN FOR SITES 4.17.17 Bitt CHIEF, RESOURCE CONSERVATION APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING Size Spacing 4-24-17 *** of Land Development Date 2-3' whip 8' o.c. 8.19.16 2-3' whip 8' o.c. 2-3' whip 8' o.c. Date 2-3' whip 8' o.c. 4-24-M This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT. R Robertos 8/19/16 — NRF#10 (Old 5.0.5.T.) To Be Breached At Stone Weir & Dewatered NRF#1(WETLAND 'C' HMP Restoration Area = 9,800 SF. HMP Restoration Efforts Within F.C.E. #5 & #10, Wetlands A/B & C And Their Buffers Activity Task: Remove Invasives Vegetative Enhancement Soil Stabilization • Habitat Enhancement OVERALL PLAN VIEW WETLAND STREAM RESTORATION AND HABITAT MANAGEMENT PLAN OXFORD SQUARE 8/4/16 willia ZONING: TOD ALDO M. VITUCCI, P.E. DATE "Professional Certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-17." DATE TAX MAP No. 30, GRID No. 20, PARCEL No. 1003 FIRST ELECTION DISTRICT - HOWARD COUNTY, MARYLAND DATE: AUGUST 4, 2016 SHEET 9 DF 9

⁵⁰P-15-045