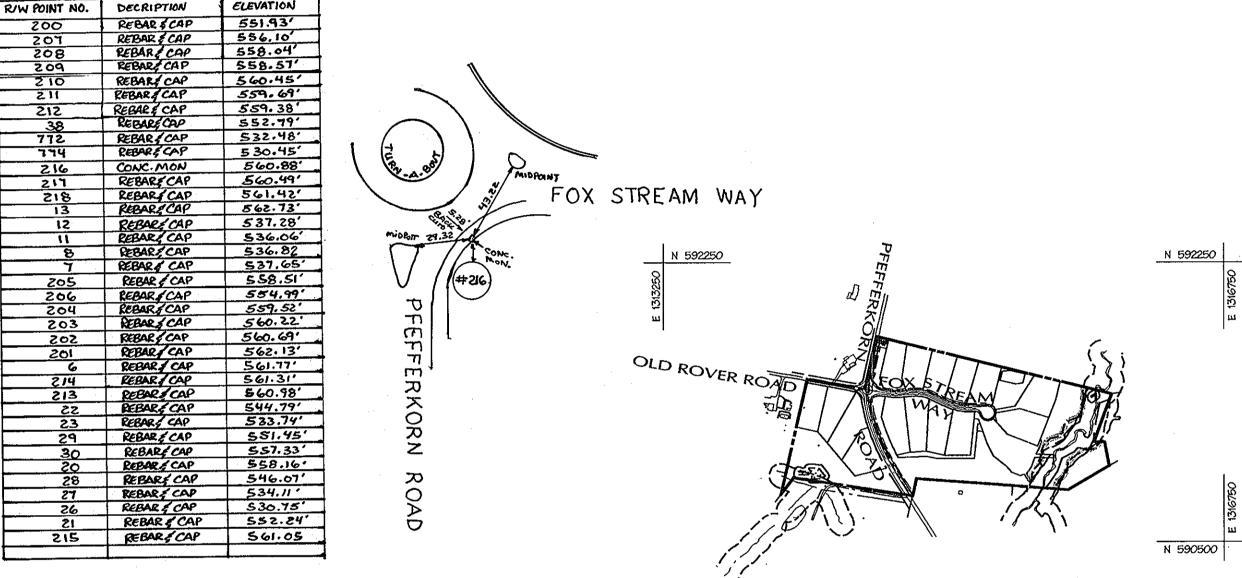
Legend EX. MAJOR CONTOURS ----- 402-----15" RCCP CL. IV PROP. STORM DRAIN EX. STORM DRAIN UTILITY EASEMENTS LIMIT OF DISTURBANCE PROPOSED SHADE TREE PROPOSED FLOWERING TREE PROPOSED EVERGREEN TREE RIGHT-OF-WAY PROPOSED STREET TREE ELEVATION CHART NAD 83 SOIL LABEL SOIL BOUNDARY SLOPES >25% SLOPES 15%-25% EX. FOREST EDGE SCRUB/SHRUB: HEDGEROW OR TREE GROUP PROPOSED WOODS EDGE NON-WOODY VEGETATION BUFFER FOREST CONSERVATION EASEMENT LINE EARTH/DIVERSION DIKE SILT FENCE ----sr--------SSF-----SUPER SILT FENCE CLEAN WATER DIVERSION PIPE LOD LIMIT OF DISTURBANCE *** MOUNTABLE BERM E3 CIP CURB INLET PROTECTION AGIP AT GRADE INLET PROTECTION SCE . STABILIZED CONSTRUCTION ENTRANCE B TOJ PERMANENT SWALE _h _h _h _h PROPOSED SWM EASEMENT _____ PROPERTY LINE ROADWAY RIGHT-OF-WAY _____ _____ PROPOSED LOT LINE EXISTING CONDITION DRAINAGE The second second second AREA TO TRAPS AND BASINS INTERIM CONDITION DRAINAGE AREAS PROPOSED CONDITION DRAINAGE EXISTING CONDITION TO PATH PROPOSED CONDITION To PATH SOIL BORING B-10 100 YR. FLOODPLAIN LOT 5

Final Plan Fox Meadow

(Formerly Pfefferkorn Property)

Howard County

Maryland



Overall Property Outline ED/PAY FOX STREAMWAY ED/PAV General Notes LOT 14

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 five (5) working days prior to the start of work.

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). All street and regulatory signs be in place prior to the placement of any asphalt.

5. All plan dimensions are to face of curb unless otherwise noted.

6. The existing topography is taken from aerial survey with 2' contour intervals prepared by Virginia Resources Mapping, dated December 2001.

7. The coordinates shown hereon are based upon the Howard County Geodetic Control which is based upon the Maryland State Plane Coordinate System. Howard County Monument Nos. 21CA and 22A2 were used for this project.

8. Water is private

10. Water quality is met by micro pool, bioretention and natural area conservation credits. Recharge is met by a grass swales along the proposed road along the south edge of lots 11-14 and behind Lots 1 and 16. Channel protection volume is met by extended detention of the 1-year storm in the swm facilities and by natural area conservation credits.

11. The floodplain study for this project was prepared by Daft-McCune-Walker, Inc., dated March 2002, and was approved in June 2002.

12. The wetlands delineation study for this project was prepared by Daft-McCune-Walker, Inc.

13. The traffic study was prepared by Wells & Associates, and was approved on October 2, 2000.

14. Project background information:

Subdivision Name: Fox Meadow

Tax Map: 15 Lot./Parcel: 167 Zoning: RR & RC Election District: 3rd Total Tract Area: 32.2± acres Preliminary Plan Approval Date: OCTOBER 2, 2002 File Number: P-02-13, S-00-16

15. Street light placement and the type of fixture and pole shall be in accordance with the Howard County Design Manual, Volume III (1993) and as modified by "Guidelines for Street Lights in Residential Developments (June 1993)." A minimum spacing of 20' shall be maintained between lights and any tree.

16. Street trees shall be planted at least 5' from any inlet structure. 17. Storm water management facilities to be owned by the Home

Owners Association (HOA)(PARCEL C). FACILITY ON (PARCEL B) TO BE 18. Maintenance Responsibility, routine and non-routine schedule are shown on sheet 19 of 24. The SWM facilities are be jointly maintained by Howard Co. and the HOA - routine maintenance by HOA and non-routine by Howard County. 19.95% compaction in fill area will be in accordance with AASHTO - T180.

STORMWATER MANAGEMENT DETAILS STORMWATER MANAGEMENT SPECIFICATIONS FOREST CONSERVATION PLAN FOREST CONSERVATION PLAN FOREST CONSERVATION NOTES AND DETAILS STREET TREE & SWM POND PLANTING PLAN PERIMETER LANDSCAPE PLAN LANDSCAPE NOTES AND DETAILS

STORMWATER MANAGEMENT PLAN STORMWATER MANAGEMENT PROFILES

COYER SHEET

TRAFFIC CONTROL PLAN

TRAFFIC CONTROL PLAN

DRAINAGE AREA MAP STORM DRAIN PROFILE

Sheet Index

FINAL ROAD PLAN & PROFILE - FOX STREAM WAY

ROAD SIGNAGE AND PAVEMENT MARKING PLAN

SEDIMENT AND EROSION CONTROL PLAN

SEDIMENT AND EROSION CONTROL DETAILS

SEDIMENT AND EROSION CONTROL SPECIFICATIONS

DRAINAGE AREA MAP - SWM EXISTING CONDITIONS

DRAINAGE AREA MAP - SWM PROPOSED CONDITIONS

STORMWATER MANAGEMENT - FACILITY 2 PLAN & DETAIL

DESCRIPTION

20. Development of the Fox Meadow community under the current Forest Conservation Act proposes the retention of approximately 4.17 acres of forest and the clearing of approximately 1.84 acres of forest generating a reforestation obligation of 3.68 acres to be satisfied on-site

21. A Landscape Surety in the amount of \$43,350.00 will be posted as part of the Developer's Agreement. A forest conservation surety in the amount of \$110,604.00 will be posted as part of the Developer's Agreement. A Street Tree Surety in the amount of \$4,950 will be posted as part of the Developer's Agreement.

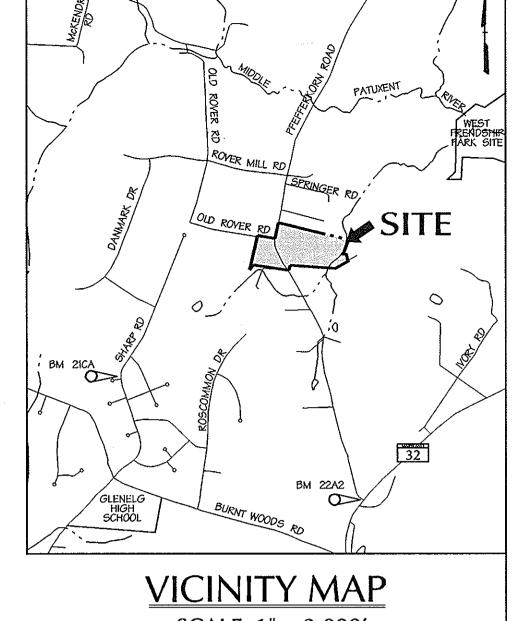
22. This project is subject to the 4th edition Subdivision Regulations and the Zoning Regulations amendments effective 1-8-02.

23. The developer shall enter into an agreement with Howard County for the construction of the traffic circle on Pfefferkorn Road in accordance with J-4134 Developer/County-shared improvements and also be compatible with the B-3836 Pfefferkorn Road bridge project.

24. A fee-in-lieu of construction of the APFO required road improvements in the amount of \$55,000 shall be paid by the developer to the Department of Public Works, Real Estate Division prior to or concurrent with the submission of the Developers Agreement at Final Plan.

25. The outfall from the stormwater management facility is a necessary disturbance to the floodplain/stream buffer.

26. The MDE permit number is 200360320.



SCALE: 1'' = 2,000'

Benchmark Description

21CA - Standard Howard County stamped disk set in a concrete monument northwest of the intersection of Sharp Road and Our Mile Court. Elev.- 612.65 ft.

22A2 - Standard Howard County stamped disk set in a concrete monument southwest of the intersection of Maryland Route 32 and Pfefferkorn Road.

BOUNDARY PER DMW FIELD SURVEY DATED DECEMBER 2001. TOPO FLOWN BY VIRGINIA RESOURCE MAPPING, DECEMBER, 2001. APPROX.WETLAND LOCATION PER DMW FIELD VISIT DATED APRIL 2000. OFF SITE SEPTIC RESERVE AREAS PER RECORD PLATS, LOCATIONS OF WELLS NOT AVAILABLE.

APPRO\	/ED:	HOWARD COUNTY DEPARTMENT OF PUBL	LIC WORKS
CHIEF	, BURE	AU OF HIGHWAYS	
APPROV	MAC.	HOWARD COUNTY DEPT. OF PLANNING 8 JULIANA DEPMENT ENGINEERING DIVISION &	ZONING LIDATE
CHIEF, C	DIVISIO	My Havate Ny of LAND DEVELOPMENT JA	4/29/09 DXIE

1-12-07	1	REVISE PER AS-BUILT CONDITIONS	
Date	No.	Revision Description	· .
OWNER	:	NORTHRIDGE DEVELOPMENT. LLC 14045 GARED DRIVE	

NORTH

TRACKING No. 200360320

3-25-04

Professional Engr. No. 10551

200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296–3333

Engineers, Surveyors & PLAT# OR LIF BLOCK # ZONE TAXIZONE MAP ELECT. DISTRICT CENSUS TRACT 5983/492 13, 19, 20 RR, RC 15 3

DEVELOPER: JAMES F. SELFRIDGE BUILDERS, INC.

14045 GARED DRIVE

GLENWOOD, MD 21738

FOX MEADOW (FORMERLY PFEFFERKORN PROPERTY)

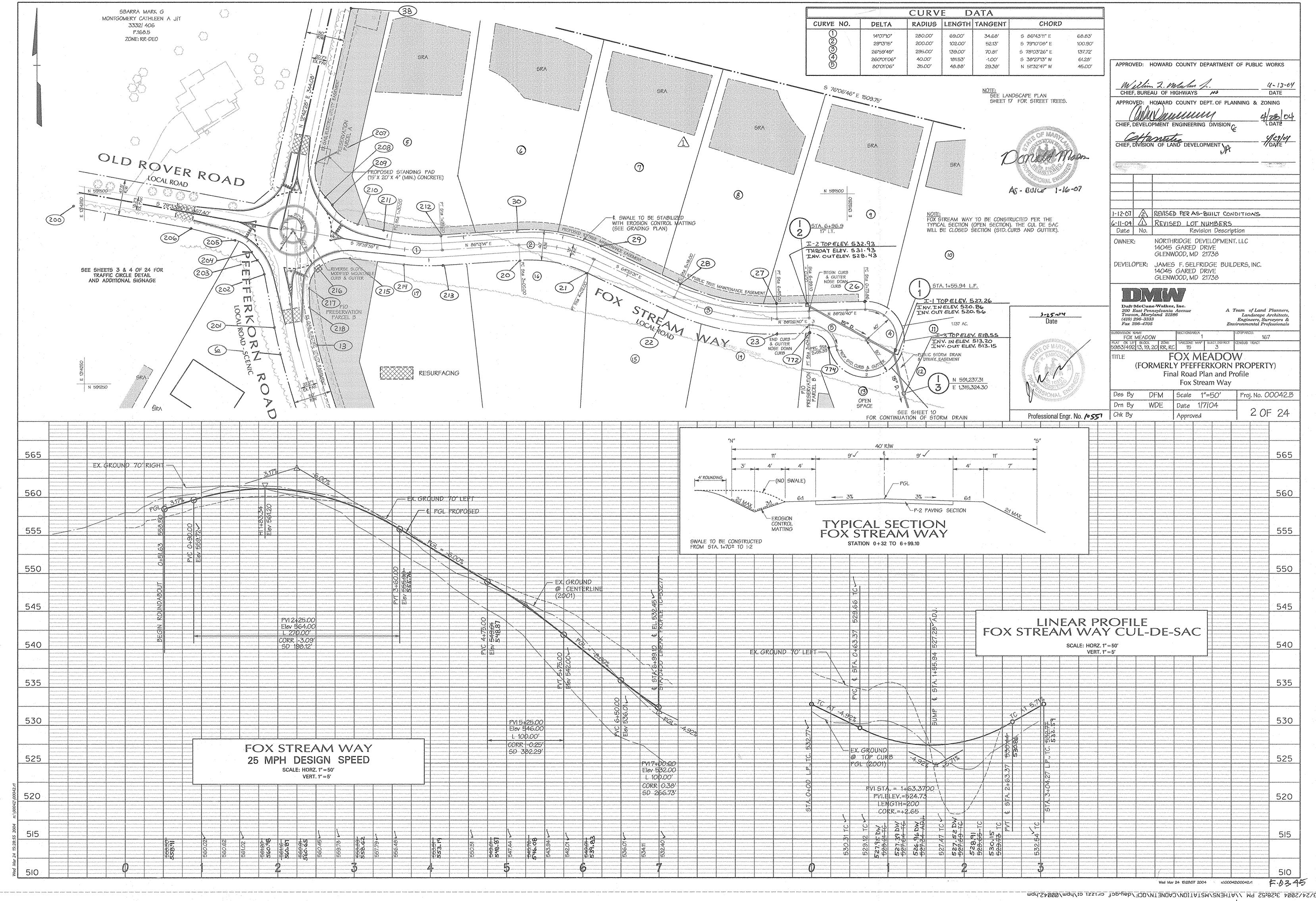
COVER SHEET

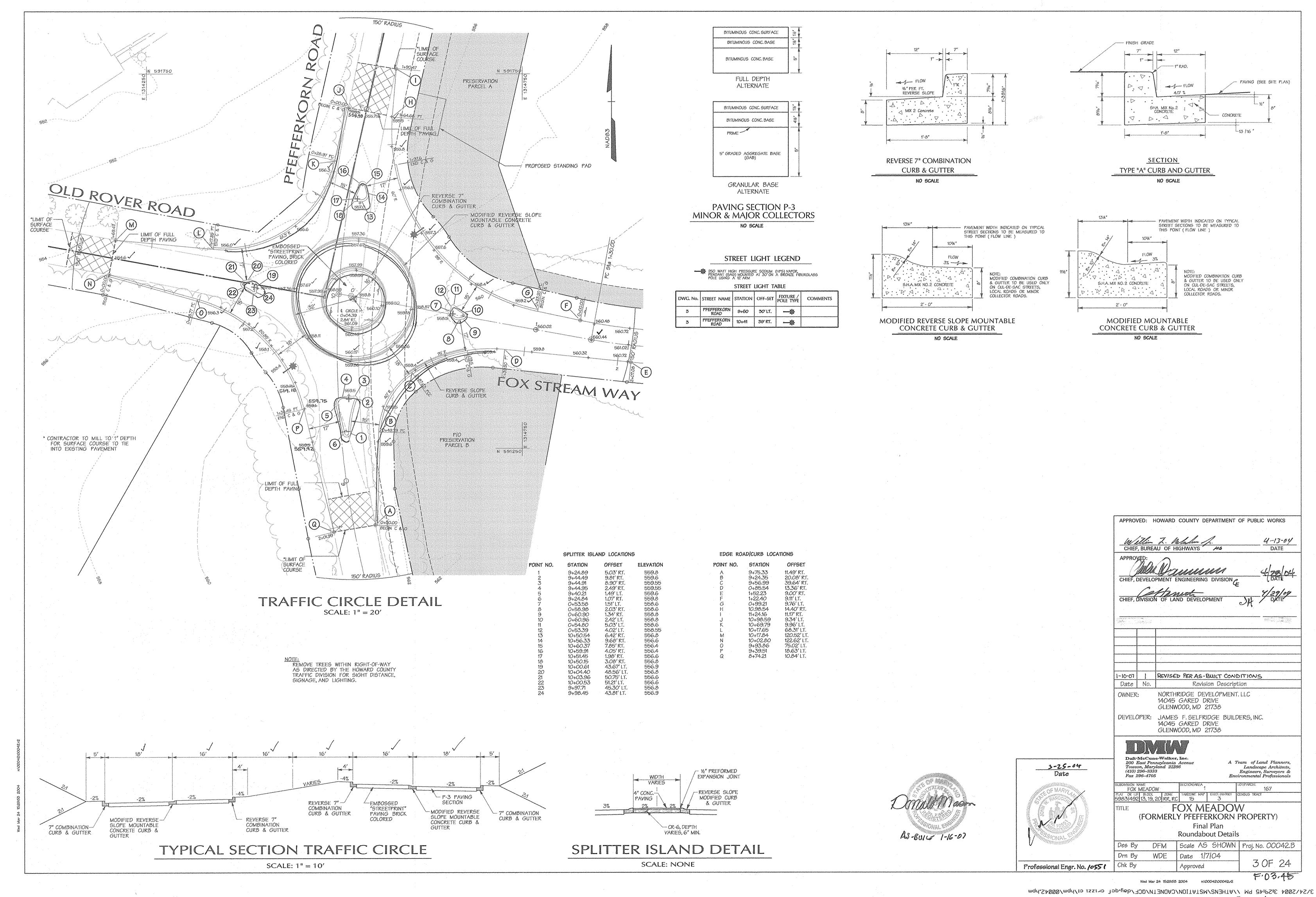
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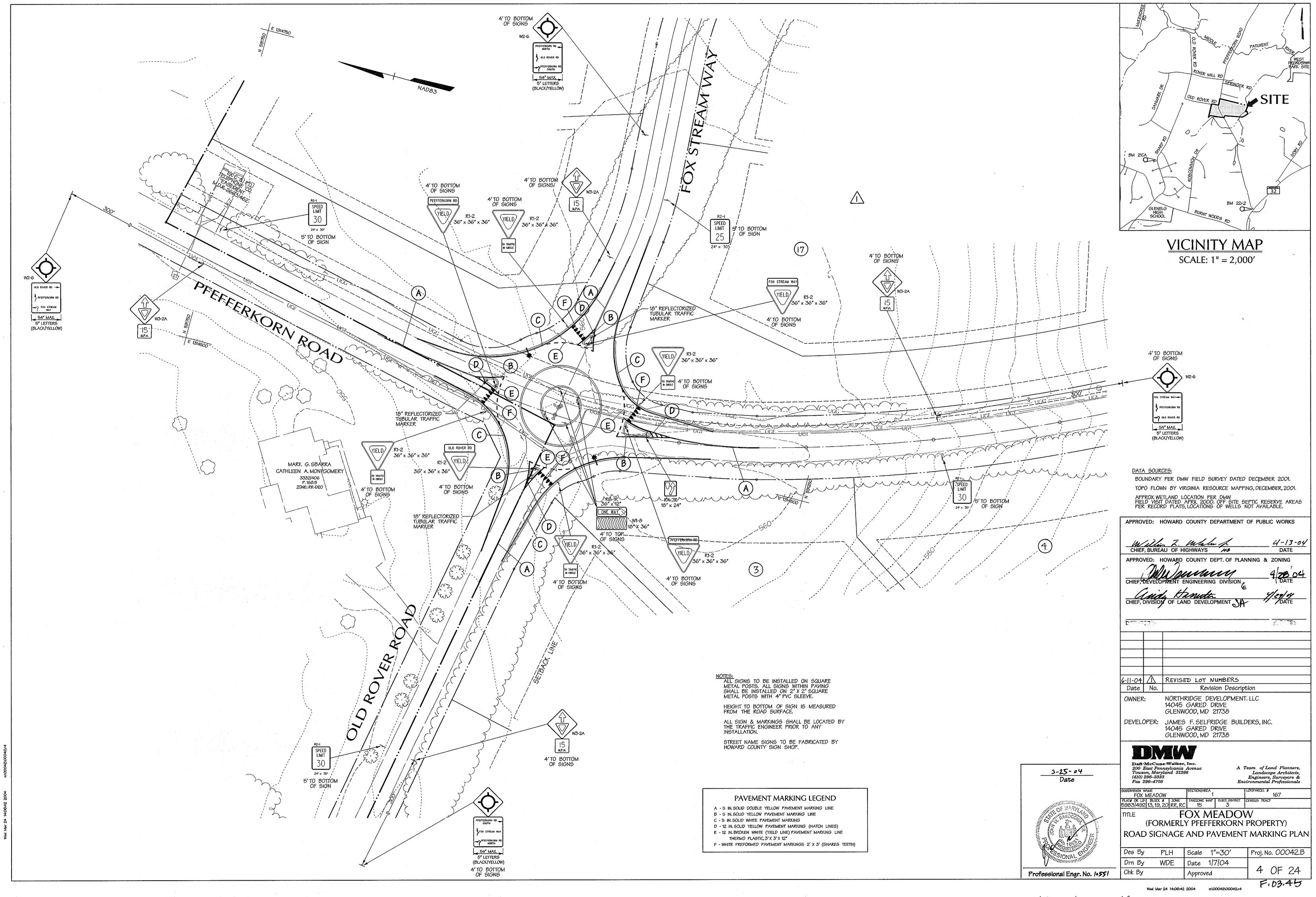
A Team of Land Planners,

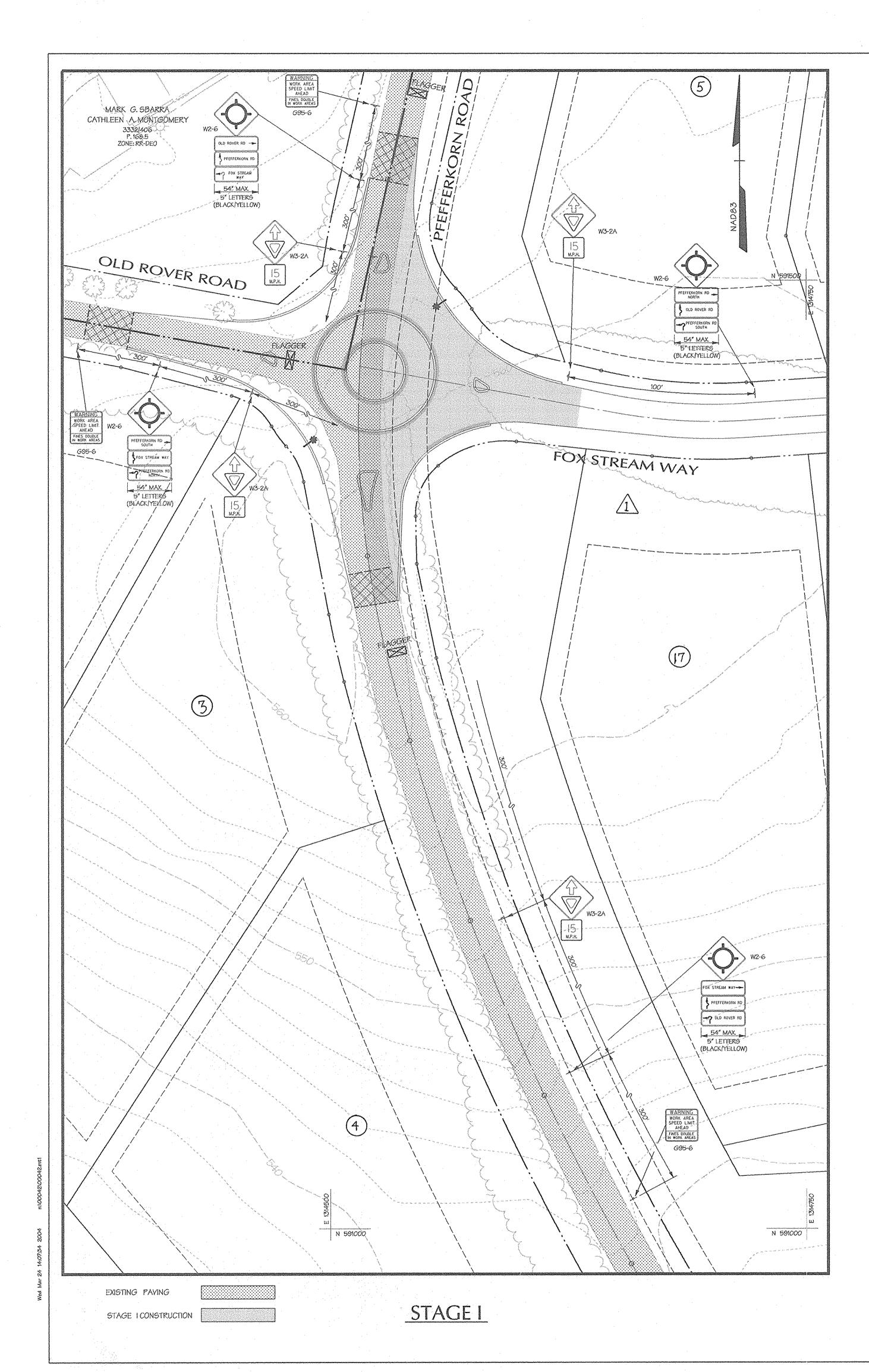
Landscape Architects,





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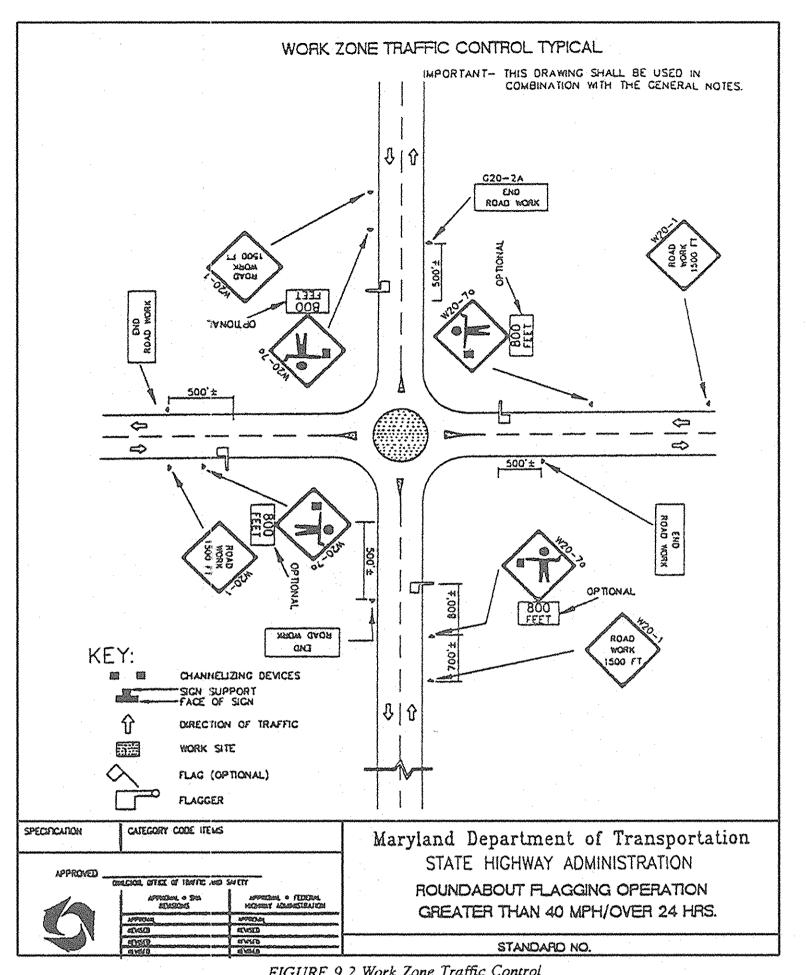


FIGURE 9.2 Work Zone Traffic Control

TRAFFIC CONTROL DURING CONSTRUCTION OF ROUNDABOUT

Construction in 4 stages, during each stage will need 3 flaggers for control of single lane, two way traffic during construction activities. In off hours will need stone, temporary paving, and temporary markings for maintenance of traffic. During each stage, will need to provide smooth transition from new work to existing paving grade. Will want to place 15 mph limit on approaches during work.

Construct easterly $1/2^{\pm}$ of roundabout (grade, base courses and base for over-run paving in island. Use 3 flaggers to control single lane two way traffic on Pfefferkorn Road and turning movements. Hold barrier curb in center Island for construction in stage II.

STAGE II:

STAGE I:

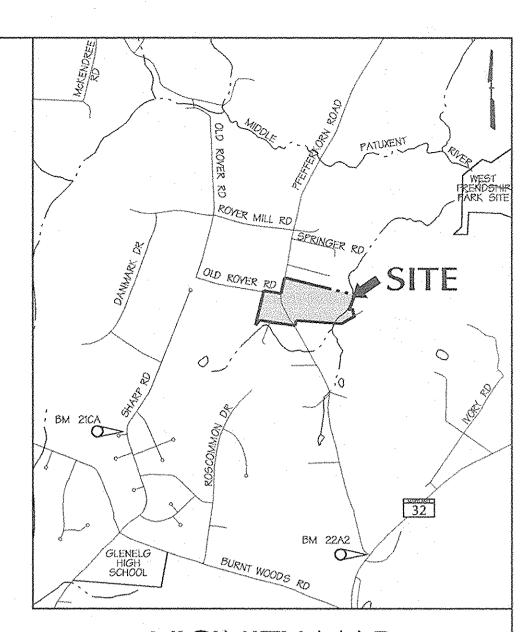
Install stone base and temporary bituminous paving in Southwest quadrant to maintain a minimum 12' single lane for Old Rover Road to Pfefferkorn Road movements while the Northwest quadrant is being constructed.

Construct Northwest quadrant and remainder of center island, all base courses, mountable curbs and the barrier curbs in the Island.

STAGE III:

Complete installation of base courses in Southwest quadrant. Complete installation of over-run paving in island.

Finish construction of splitter islands, if not previously finished. Install final surface course. Complete installation of all traffic control signs.



VICINITY MAP SCALE: 1'' = 2,000'

DATA SOURCES: BOUNDARY PER DMW FIELD SURVEY DATED DECEMBER 2001. TOPO FLOWN BY VIRGINIA RESOURCE MAPPING, DECEMBER, 2001.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS 4-13-64 APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING CHIEF, DEVELOPMENT ENGINEERING DIVISION &

6-11-04 A REVISED LOT NUMBERS Revision Description

14045 GARED DRIVE GLENWOOD, MD 21738 DEVELOPER: JAMES F. SELFRIDGE BUILDERS, INC. 14045 GARED DRIVE GLENWOOD, MD 21738

3-15-04

Date

Daft McCune-Walker, Inc. 200 East Pennsylvania Avenue Towson, Maryland 21286 FOX MEADOW

Landscape Architects, Engineers, Surveyors & Environmental Professionals

A Team of Land Planners,

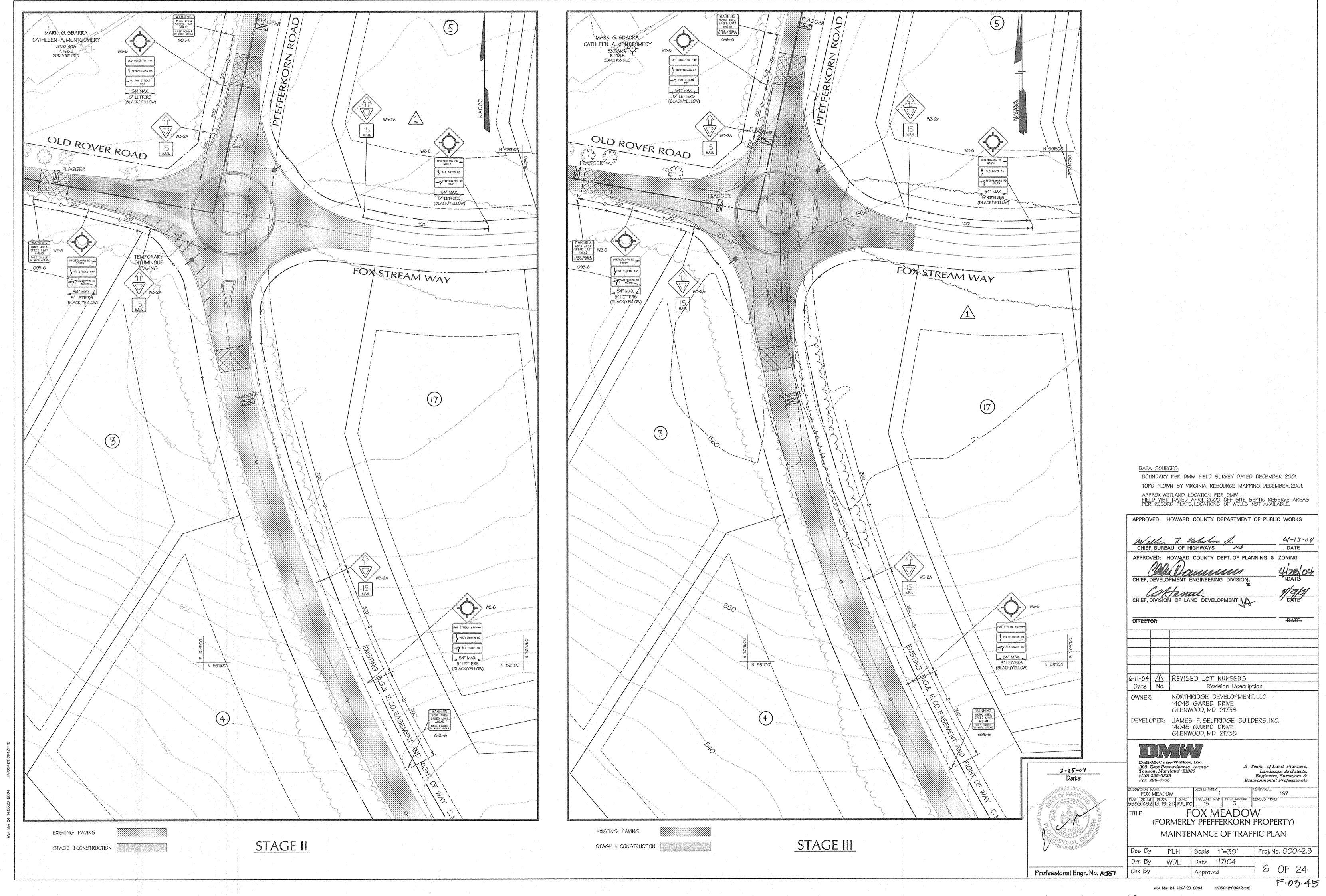
FLAT# OR LIFE BLOCK # ZONE TAXIZONE MAP ELECT. DISTRICT 5983/492 13, 19, 20 RR, RC 15 3 FOX MEADOW (FORMERLY PFEFFERKORN PROPERTY) MAINTENANCE OF TRAFFIC PLAN

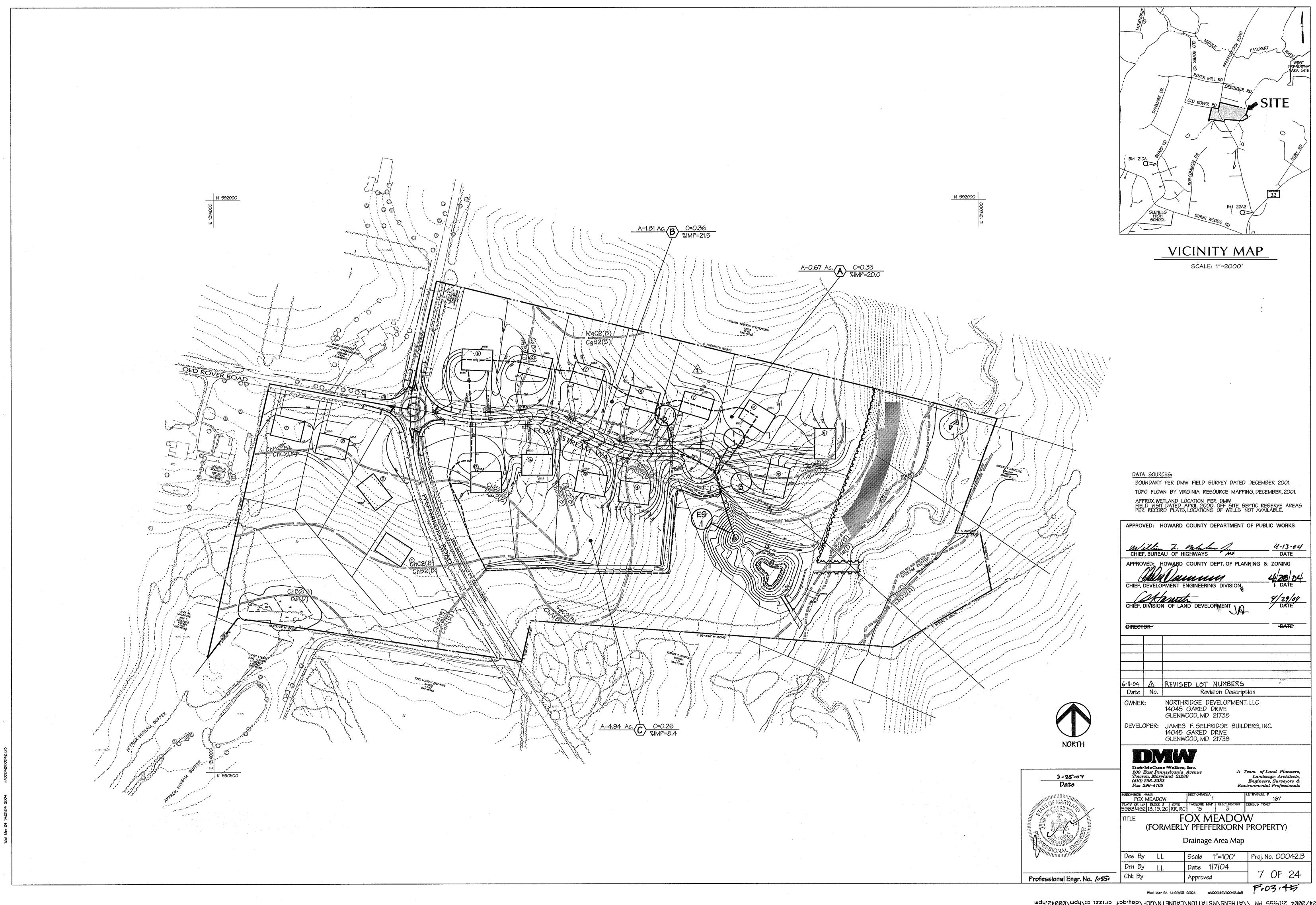
NORTHRIDGE DEVELOPMENT, LLC

Des By PLH Scale 1"=30' Proj. No. 00042.B Date 1/7/04 Drn By WDE 5 OF 24 Chk By Professional Engr. No. 19551 Approved

Wed Mar 24 14:07:34 2004 n:\000042\00042.mt1

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3/24/2004 2:19:55 PM //ATHENS/MSTATION/CADNETN/OCF/day.qcf crizzi c:/hpm/00042.hpm

STORM DRAIN PROFILE SCALE: HORIZ. 1"=50' VERT. 1"=5'

1. LOTS 3-7 CULVERTS ARE TO BE 15" RCCP CL. IV. 2. DRIVEWAYS FOR LOTS 8,9 & 10 ARE CLOSED SECTION ENTRANCE, HO.CO. STD. R-6.05, REMAINDER ARE OPEN SECTION, HO.CO. STD. R-6.06

INLET SCHEDULE

NO.	ТҮРЕ	Q	INV. OUT	TOP ELEV.
I-1	A-5, W = 2'6", HO. CO. SD 4.40	1.28	521.79	527.28
I-2	YARD INLET, W= 2'6", HO.CO. SD 4.14	3.56	528.2 543	532,00 Throat
1-3	YARD INLET, W= 2'6", HO.CO. SD 4.14	7.08	513. 3 7 15	518.00 Throat
ES-1	CONC. END SECTION, HO. CO. SD 5.51		494.95	

PIPE SCHEDULE

SIZE (IN)	CATEGORY	L (FT)
15	RCCP CL. III	184
18	RCCP CL. III	119

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CHIEF, BUREAU OF HIGHWAYS

1-10-07 | REVISED PER AS-BUILT CONDITIONS Revision Description

NORTHRIDGE DEVELOPMENT. LLC 14045 GARED DRIVE GLENWOOD, MD 21738 DEVELOPER: JAMES F. SELFRIDGE BUILDERS, INC. 14045 GARED DRIVE GLENWOOD, MD 21738

Daft·McCune-Walker, Inc. 200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296–3333 Fax 296–4705

3-25-44 Date

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

SUBDIMISION NAME
FOX MEADOW

PLAT# OR LIF BLOCK # ZONE TAXIZONE MAP ELECT. DISTRICT CENSUS TRACT

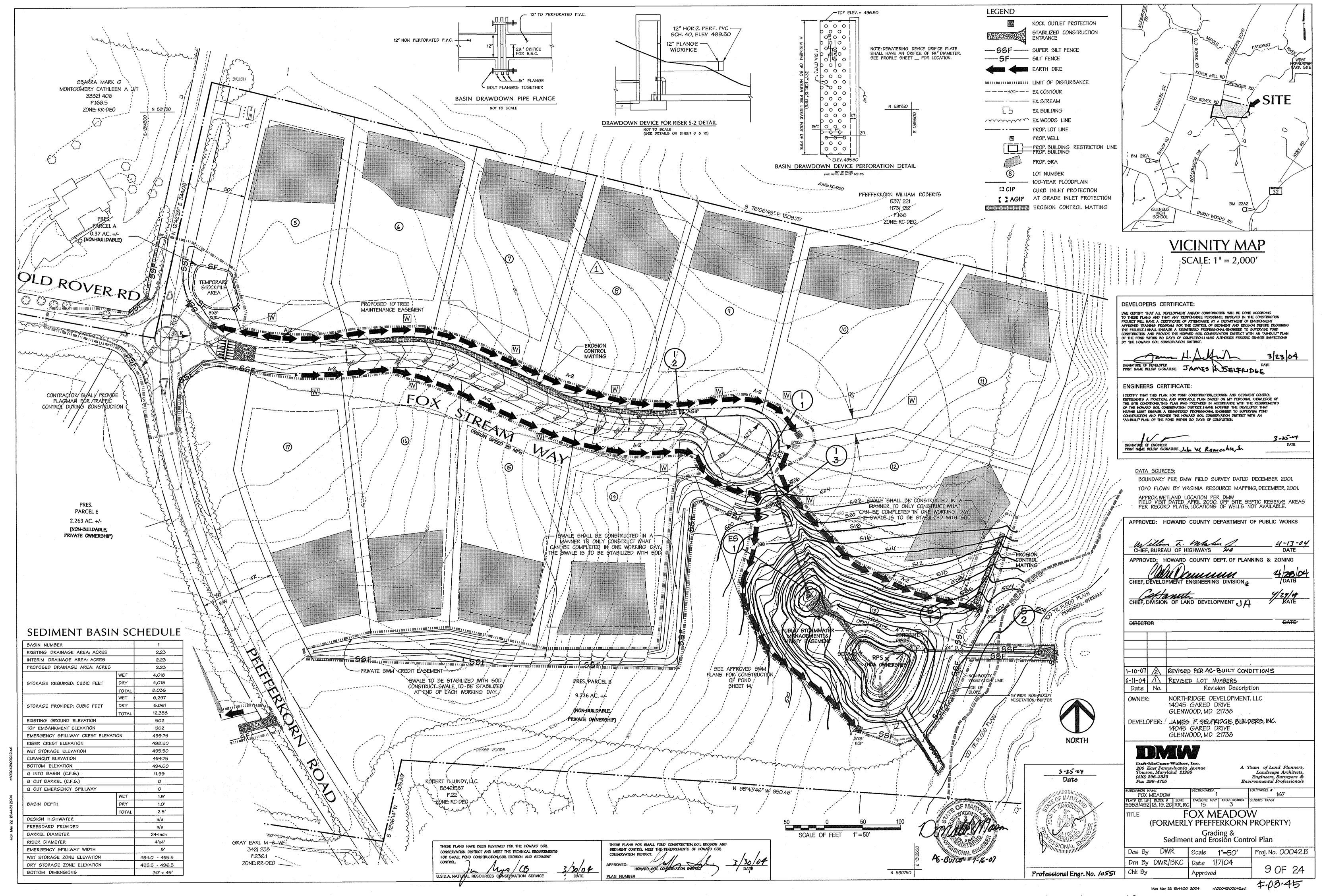
5983/492 13, 19, 20 RR, RC 15 3 FOX MEADOW (FORMERLY PFEFFERKORN PROPERTY)

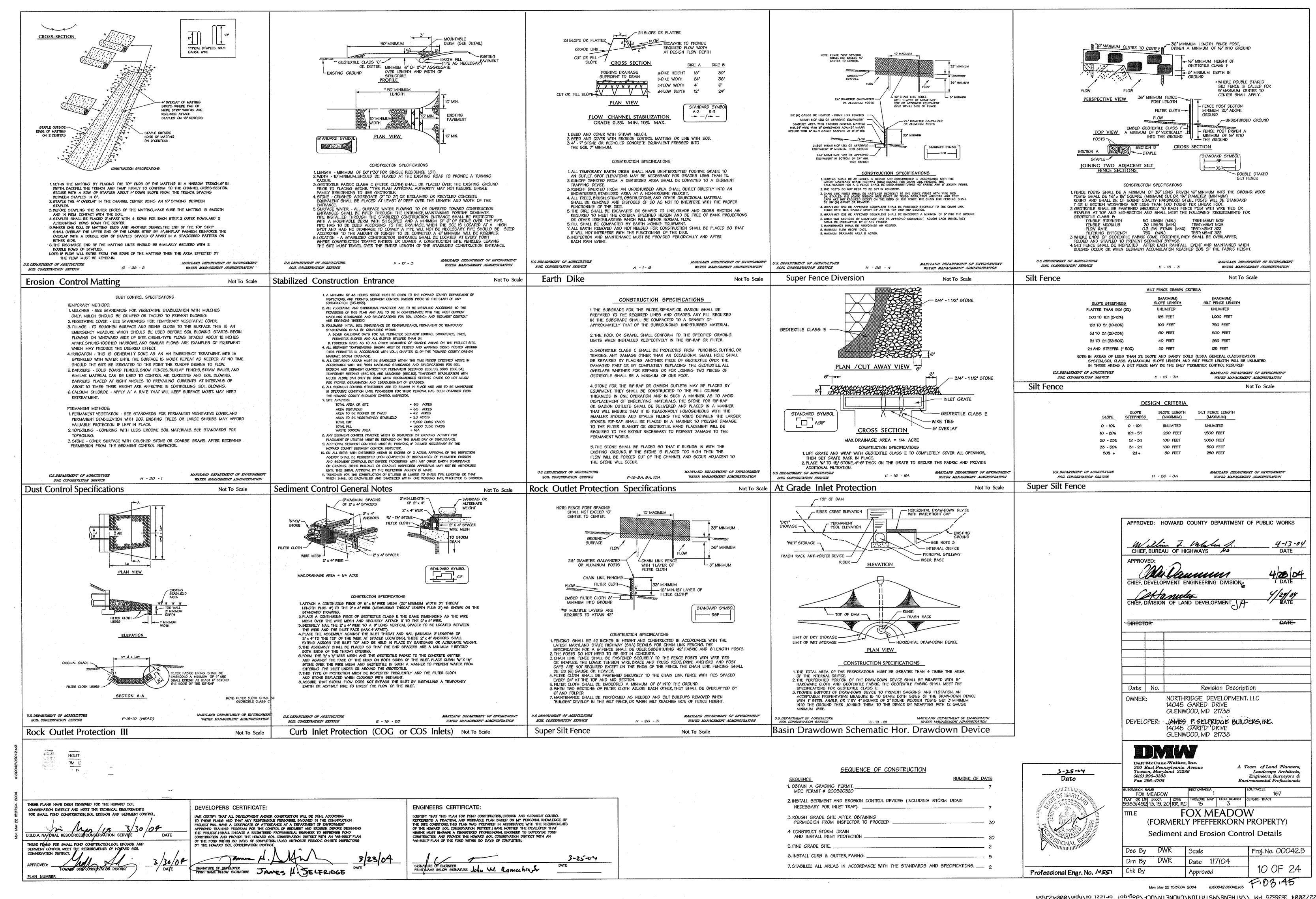
Storm Drain Profile

Scale AS SHOWN Proj. No. 00042.B Drn By Date 1/7/04

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8 OF 24 Chk By Professional Engr. No. 6551





SECTION I - YEGETATIVE STABILIZATION METHODS AND MATERIALS

- A. SITE PREPARATION
 - I. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms waterways, or sediment control
 - II. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
 - III. Schedule required soil test to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.

B. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

- I. Soil test must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analysis.
- II. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.
- III. Lime materials shall be around limestone (hydrated or brunt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 98 - 100% will pass through a #20 mesh sieve.
- IV. Incorporate lime and fertilizer into the top 3 5 inches of soil by disking or other suitable means.

C. SEEDBED PREPARATION

I. TEMPORARY SEEDING

- A. Seedbed preparation shall consist of loosening soil to a depth of 3 inches to 5 inches by means of suitable agricultural or construction equipment, such a disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the counter
- B. Apply fertilizer and lime as prescribed on the plans.
- C. Incorporate lime and fertilizer into the top 3 5 inches of soil by disking or other suitable means.

II. PERMANENT SEEDING

- A. Minimum soil conditions required for permanent vegetative establishment:
- 1. Soil ph shall be between 6.0 and 7.0. 2. Soluble salts shall be less than 500 parts per million (PPM). 3. The soil shall contain less than 40% clay but enough fine grained material
- (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if Lovegrass or Serecia Lespedeza is to be planted. Then a sandy soil (< 30% silt plus clay) would be acceptable. 4. Soil shall contain 1.5% minimum organic matter by weight. 5. Soil must contain sufficient pore space to permit adequate root penetration.
- 6. If these conditions cannot be met by the soils on site, adding topsoil is required in accordance with Section 21 - Standard and Specification for
- B. Areas previously graded in conformance with the drawings shall be maintained in a true and even arade, then scarified or otherwise loosened to a depth of 3 - 5 inches to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
- C. Apply soil amendments as per soil test or as included on the plans.
- D. Mix soil amendments into the top 3 5 inches of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1 - 3 inches of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

D. SEED SPECIFICATIONS

- 1. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.
- Note: Seed tags shall be made available to the inspector to verify type and rate of seed
- II. Inoculant The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75-80 F. can weaken bacteria and make the inoculant less effective.

E. METHODS OF SEEDING

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL

FOR SMALL POND CONSTRUCTION SOIL EROSION AND SEDIMENT

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE

CONTROL

CONSERVATION DISTRICT.

PLAN NUMBER

CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL

- I. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeder, or cultipacker seeder.
- A. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: Nitrogen; maximum of 100 pounds per acre total of soluble
- Nitrogen; P205 (phosphorcus): 200 pounds per acre; K20 (potassium): 200 pounds per acre. B. 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. C. Seed and fertilizer shall be mixed on site and seeding shall be done immediately
- and without interruption. II. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
- A. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the temporary or permanent seeding summaries or tables 25 or 26. The seeded area shall then be rolled with a weighed roller to provide good seed soil contact.
- B. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

DEVELOPERS CERTIFICATE:

I'ME CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION LAISO AUTHORIZE PERIODIC ON-SITE INSPECTIONS

if the pond within 30 days of completion, I also authorize periodic on-site inspections

STONATURE OF DEVELOPER PRINT NAME BELOW SIGNATURE JAMES & SELFRIDGE

III. Drill or cultipacker seeding: Mechanized seeders that apply and cover seed with soil. A. Cultipacking seeders are required to bury the seed in such a fashion as to

Seedbed must be firm after planting.

provide at least 14 inch of soil covering.

B. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

F. MULCH SPECIFICATIONS (IN ORDER OF PREFERENCE)

- 1. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weeds seeds as specified in the Maryland Seed Law.
- II. Wood cellulose fiber mulch (WCFM)
- A. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
- B. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
- C. WCFM, including dye shall contain no germination or growth inhibiting factors.
- D. WCFM materials shall 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 muich material shall form a blotter-like around cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedings.
- E. WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic.
- F. WCFM must conform to the following physical requirements: Fiber length to approximately 10 mm., diameter approximately 1mm., ph range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90%
- Note: Only sterile straw mulch should be used in areas where one species of grass
- G. MULCHING SEEDED AREAS Mulch shall be applied to all seeded areas where one species of arass is desired.
 - 1. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
 - II. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons per acre. Mulch shall be applied in a uniform loose depth of between linches and 2 inches. Mulch applied shall achieve a uniform distribution and depth so that the surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons per acre.
 - III. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 pounds per acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of
- H. SECURING STRAW MULCH Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:
 - I. A mulch anchoring tool is a tractor drawn implement design to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. It used on sloping land, this practice should be used on the contour
 - II. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds per acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
 - III. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys or on crest of banks. The remainder of area should appear uniform after binder application. Synthetic binders - such as Acrylic DLR (agro-tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
 - IV. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.

SECTION II - TEMPORARY SEEDING

VEGETATION - Annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetative cover, permanent seeding is required.

Seed Mixture (Hardiness Zone 6B) No. Species Application Seeding Seeding					Fertilizer Rate	Lime Rate	
No.	Species	Application Rate (Lb./Ac.)	Seeding Dates	Seeding Depths	(10-10-10)	Line Rabe	
1	Annual Ryegrass	50	2 1 - 4 30 8 15 - 11 1	14"-1/2"	600 Lbs./Ac.	2 Tons/Ac.	
2	Waanina		5/1 - 8/14 14"-1/2"		(15 Lbs./1000 SF)	(100 Lbs./1000 SF)	

SECTION III - PERMANENT SEEDING

Seeding grass and legumes to establish ground cover for a minimum of one year on disturbed areas generally receiving low maintenance.

	Seed Mix	ture No. 3 (Hai	rdiness Zone (ess Zone 6B)		Fertilizer Rate (10-20-20)			
%	Species	Application Rate (Lb./Ac.)	Seeding * Dates	Seeding Depths	N	P205	K20	Rate	
85	Rebel II Tall Fescue	125			90	175	175	2 Tons/Ac.	
10	Pennfine Perennial Ryegrass	15	3/1 - 5/15 8/15 - 10/15	3/1 - 5/15 8/15 - 10/15	1/4"-1/2"	Lb./Ac. (2 Lb./ 1000	Lb./Ac. (4 Lb./ 1000	Lb./Ac. (4 Lb./ 1000	(100 Lb./ 1000 Sq.Ft.)
5	Kenblue Kentucky Bluegrass	10			5q.Ft.) 5q.F	Sq.Ft.)	Sq.Ft.)		

^{*} For 5-16 through 8-14 add two (2) pounds of Weeping Lovegrass per acre or ten (10) pounds of Millet per acre to seed mixture (i.e. Mix #3 shown).

ENGINEERS CERTIFICATE: I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. HAVE NOTIFIED THE DEVELOPER THAT HE/8HE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN SO DAYS OF COMPLETION. 3-25-44 SIGNATURE OF ENGINEER PRINT NAME BELOW SIGNATURE John W. Rancchia, 5.

SECTION IV - SOD

To provide quick cover on disturbed areas (2:1 grade or flatter)

A. GENERAL SPECIFICATIONS

- 1. Class of turfgrass sod shall be Maryland or Virginia State certified or approved. Sod labels shall be made available to the job foreman and inspector.
- II. Sod shall be machine cut at a uniform soil thickness of ", plus or minus ", at the time of cutting. Measurement for thickness shall exclude top growth and thatch. Individual pieces of sod shall be cut to the suppliers width length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken pads and torn or uneven ends will not be acceptable.
- III. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
- IV. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
- V. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period shall be approved by an agronomist or soil scientist prior to its installation.

B. SOD INSTALLATION

- I. During periods of excessively high temperature or in areas having dry subsoil, the subsoil shall be lightly irrigated immediately prior to laying the sod.
- II. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which air drying of the roots.
- III. Wherever possible, sod shall be laid with the long edges parallel to the contour and with staggering joints. Sod shall be rolled and tamped, pegged or otherwise secured to prevent slippage on slopes and to ensure solid contact between sod roots and the underlying soil surface.
- IV. Sod shall be watered immediately following rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. the operations laying, tamping and irrigating for any piece of sod shall be completed within eight hours.

C. SOD MAINTENANCE

- I. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4 inches. Watering should be done during the heat of the day to prevent
- II. After the first week, sod watering is required as necessary to maintain adequate moisture content.
- III. The first mowing of sod should not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2 inches and 3 inches unless otherwise specified.

SECTION Y - TURFGRASS ESTABLISHMENT

Areas where turfgrass may be desired may include lawns, parks, playgrounds, and commercial sires which will receive a medium high level of maintenance. Areas to receive seed shall be tilled by disking or other approved methods to a depth of 2 to 4 inches, leveled and raked to prepare a proper seedbed. Stones and debris over 1½inches in diameter shall be removed. The resulting seedbed shall be in such condition that future mowing of grasses will pose no difficulty.

Note: Choose certified material. Certified material is the best quarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed genetic line.

A. TURFGRASS MIXTURES

- 1. Kentucky Bluegrass Full sun mixture For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended certified Kentucky Bluegrass cultivars seeding rate: 1.5 to 2.0 pounds per 1000 square feet. A minimum of three Bluegrass cultivars should be chosen ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.
- II. Kentucky Bluegrass/Perennial Rye Full sun mixture For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass cultivars/certified Kentucky Bluegrass seeding rate: 2 pounds mixture per 1000 square feet. A minimum of 3 Kentucky Bluegrass cultivars must be chosen, with each cultivar ranging from 10% to 35% of the mixture by weight.
- III. Tall Fescue/Kentucky Bluegrass Full sun mixture For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; certified Tall Fescue cultivars 95-100%, certified Kentucky Bluegrass cultivars 0 - 5%, seeding rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
- IV. Kentucky Bluegrass/Fine Fescue Shade mixture For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; certified Kentucky Bluegrass cultivars 30-40% and certified Fine Fescue and 60-70%. Seeding rate: 11/2-3 pounds per 1000 square feet. A minimum of 3 Kentucky Bluegrass cultivars must be chosen. With each cultivar ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.
- Note: Turfarass varieties should be selected form those listed in the most current University of Maryland publication, agronomy mimeo number 77, "Turfgrass Cultivar Recommendations for Maryland".

B. IDEAL TIMES OF SEEDING

- Western Maryland: March 15 June 1, August 1 October 1 (hardiness zones 5B, 6A).
- Central Maryland: March 1 May 15, August 15 October 15 (hardiness zone 6B).
- Southern Maryland, Eastern Shore: March 1 May 15, August 15 October 15 (hardiness zones - 7A, 7B).

C. IRRIGATION

If soil moisture is different, supply new seedlings with adequate water for plant growth (1/2" - 1" every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

D. REPAIRS AND MAINTENANCE

Inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings within the planting season.

- i. Once the vegetation is established, the site shall have 95% groundcover to be considered adequately stabilized.
- II. If the stand provides less than 40% ground coverage, re-establish following original lime, fertilizer, seedbed preparation and seeding recommendations.
- III. If the stand provides between 40% and 94% ground coverage, overseeding and fertilizing using half of the rates originally applied may be necessary.
- IV. Maintenance fertilizer rates for permanent seedings are shown in Table 24, for lawns and other medium high maintenance turfgrass areas, refer to the University of Maryland publication "Lawn Care in Maryland" bulletin number 171. G - 20 - 1A

Vegetative Stabilization

TABLE 28 STONE SIZE

	Size Range	D ₅₀	D ₁₀₀	AASHTO	Weight
Number 57 *	3/8" - 11/2"	1/2"	11/2"	M-43	N/A
Number 1	2" - 3"	2½"	3"	M-43	N/A
Rip-Rap **	4" - 7"	5½″	7"	N/A	N/A
Class I	N/A	9.5"	15"	NIA	150 Lb. max.
Class II	N/A	16"	24"	NIA	700 Lb. max.
Class III	N/A	23"	34"	NΙΑ	2000 Lb. max

* This classification is to be used on the inside face of stone outlets and check dams.

** This classification is to be used when ever small rip-rap is required. The State Highway Administration designation for this stone is stone for gabions (905.01.04).

STONE FOR GABION BASKETS

Ba	Basket Thickness		lividual Stones
Inches	ММ	Inches	ММ
6	150	3 - 5	75 - 125
9	225	4 - 7	100 - 175
12	300	4 - 7	100 - 175
18	460	4 - 7	100 - 175
36	910	4 - 12	100 - 300

Note: Recycled concrete equivalent may be substituted for all stone classifications. Recycled concrete equivalent shall be concrete broken into the sizes meeting the appropriate classification, shall contain no steel reinforcement, and shall have a density of 150 pounds per cubic foot.

TABLE 27 GEOTEXTILE FABRICS

Class	Apparent Opening Size MM. Max.	Grab Tensile Strength Lb. Min.	Burst Strength PSI. Min.
Α Α	0.30 **	250	500
В	0.60	200	320
С	0.30	200	320
D	0.60	90	145
E	0.30	90	145
F (silt fence)	0.40-0.80 *	90	190

** .50 MM max. for super silt fence * US Standard sieve CW-02215

The properties shall be determined in accordance with the following procedures:

Apparent opening size msmt 323 - Grab tensile strength ASTMD 1682: $4 \times 8"$ specimen, $1 \times 2"$ clamps, 12" min. strain rate in both principal directions of geotextile fabric. - Burst strength: ASTMD D 3786.

The fabric shall be inert to commonly encountered chemicals and hydrocarbons, and will be rot and mildew resistant. It shall be manufactured from fibers consisting of long chain synthetic polymers, and composed of a minimum of 85% by weight of polyolephins, polyesters, or polyamides. The geotextile fabric shall resist deterioration from ultraviolet exposure

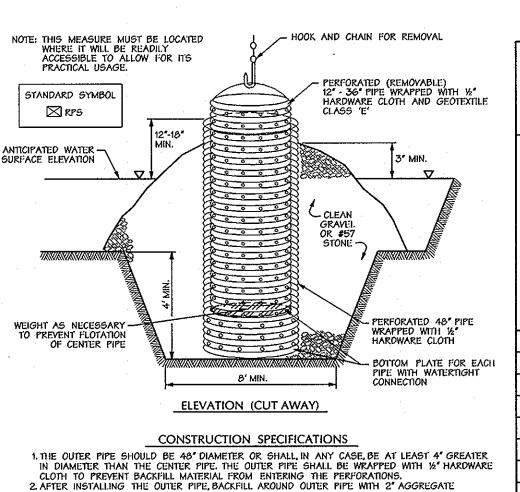
In addition, classes A through E shall have a 0.01 cm./sec. minimum permeability when tested in accordance with msmt 507, and an apparent minimum elongation of 20 percent (20%) when tested in accordance with the grab tensile strength requirements listed above.

Class F geotextile fabric for silt fence shall have a 50 lb./in. minimum tensile strength and a 20 lb./in. minimum tensile modules when tested in accordance with msmt 509. The material shall also have a 0.3 gal./ft./min. flow rate and seventy-five percent (75%) minimum filtering efficiency when tested in accordance with msmt 322. Geotextile fabrics used in the construction of silt fence shall resist deterioration from ultraviolet exposure. The fabric shall contain sufficient amount of ultraviolet ray inhibitors and stabilizers to provide a minimum of 12 months of expected usable construction life at a

temperature range of 0 to 120 degrees fahrenheit. MATERIALS SPECIFICATIONS

H - 24 - 1

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS



ELEVATION OR RISER CREST ELEVATION WHEN DEWATERING A BASIN MARYLAND DEPARTMENT OF ENVIRONMEN WATER MANAGEMENT ADMINISTRATION U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE D - 12 - 5 Removable Pumping Station NOT TO SCALE

3-25-04

Date

Professional Engr. No. 19551

THE INSIDE STAND PIPE (CENTER PIPE) SHOULD BE CONSTRUCTED BY PERFORATING A CORRUGATED OR PVC PIPE BETWEEN 12" AND 36" IN DIAMETER. THE PERFORATIONS SHALL

4. THE CENTER PIPE SHOULD EXTEND 12' TO 18' ABOVE THE ANTICIPATED WATER SURFACE

4-13-04 CHIEF, BUREAU OF HIGHWAYS DATE APPROVED: Mannen CHIEF, DEVELOPMENT ENGINEERING DIVISION CHIEF, DIVISION OF LAND DEVELOPMENT JA DIRECTOR -Date No. Revision Description OWNER: NORTHRIDGE DEVELOPMENT. LLC 14045 GARED DRIVE BE 16' X 6' SLITS OR 1' DIAMETER HOLES 6' ON CENTER. THE CENTER PIPE SHALL BE WRAPPED WITH 16' HARDWARE CLOTH FIRST, THEN WRAPPED AGAIN WITH GEOTEXTILE CLASS E. GLENWOOD, MD 21738 DEVELOPER: JAMES F. SELFRIDGE BUILDERS, INC. 14045 GARED DRIVE GLENWOOD, MD 21738

> Daft McCune Walker, Inc. FOX MEADOW

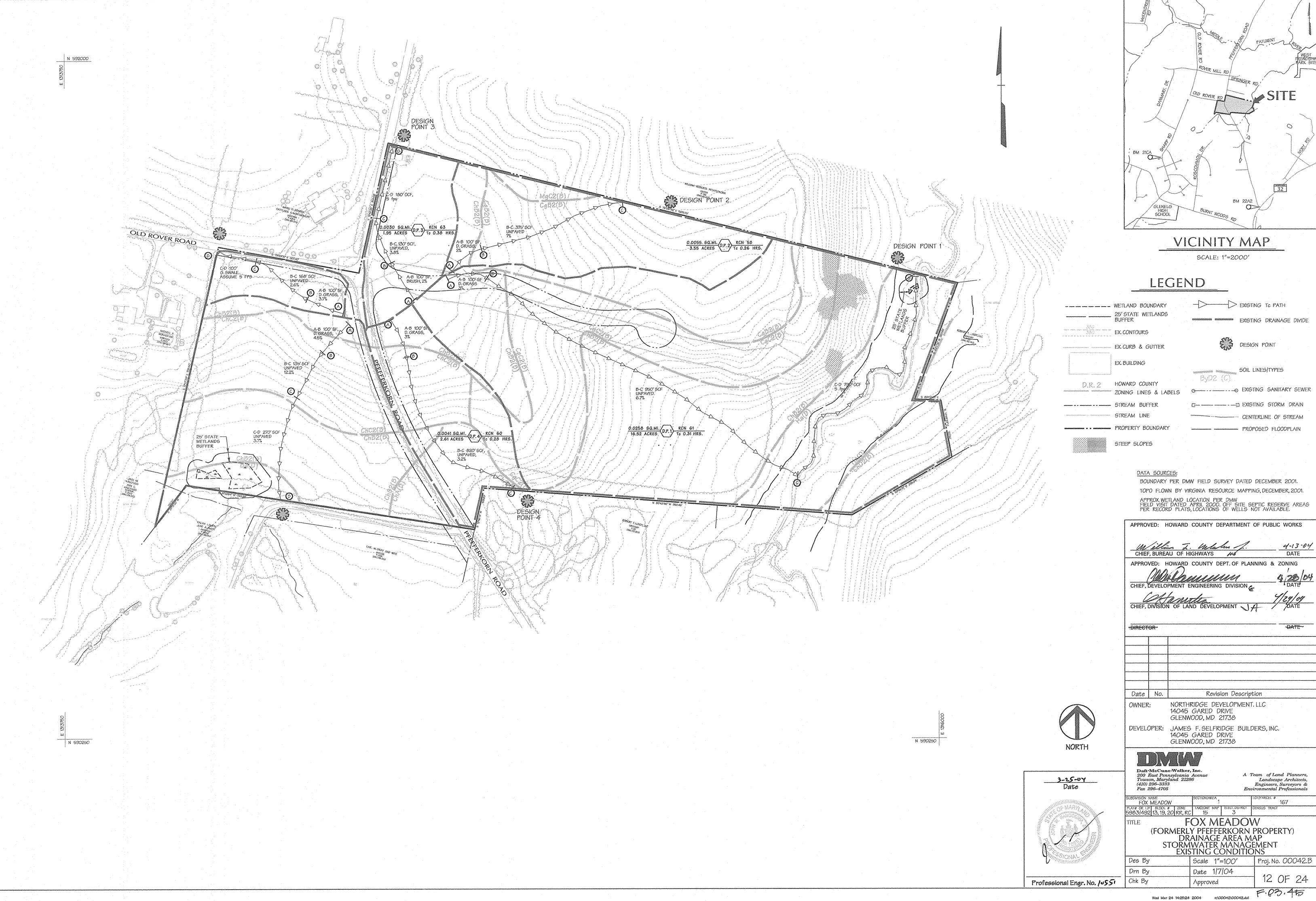
200 East Pennsylvania Avenue Towson, Maryland 21286 A Team of Land Planners, Landscape Architects Engineers, Surveyors & PLAT OR LIF BLOCK ZONE TAX/ZONE MAP 5983/492 13, 19, 20 RR, RC 15 FOX MEADOW

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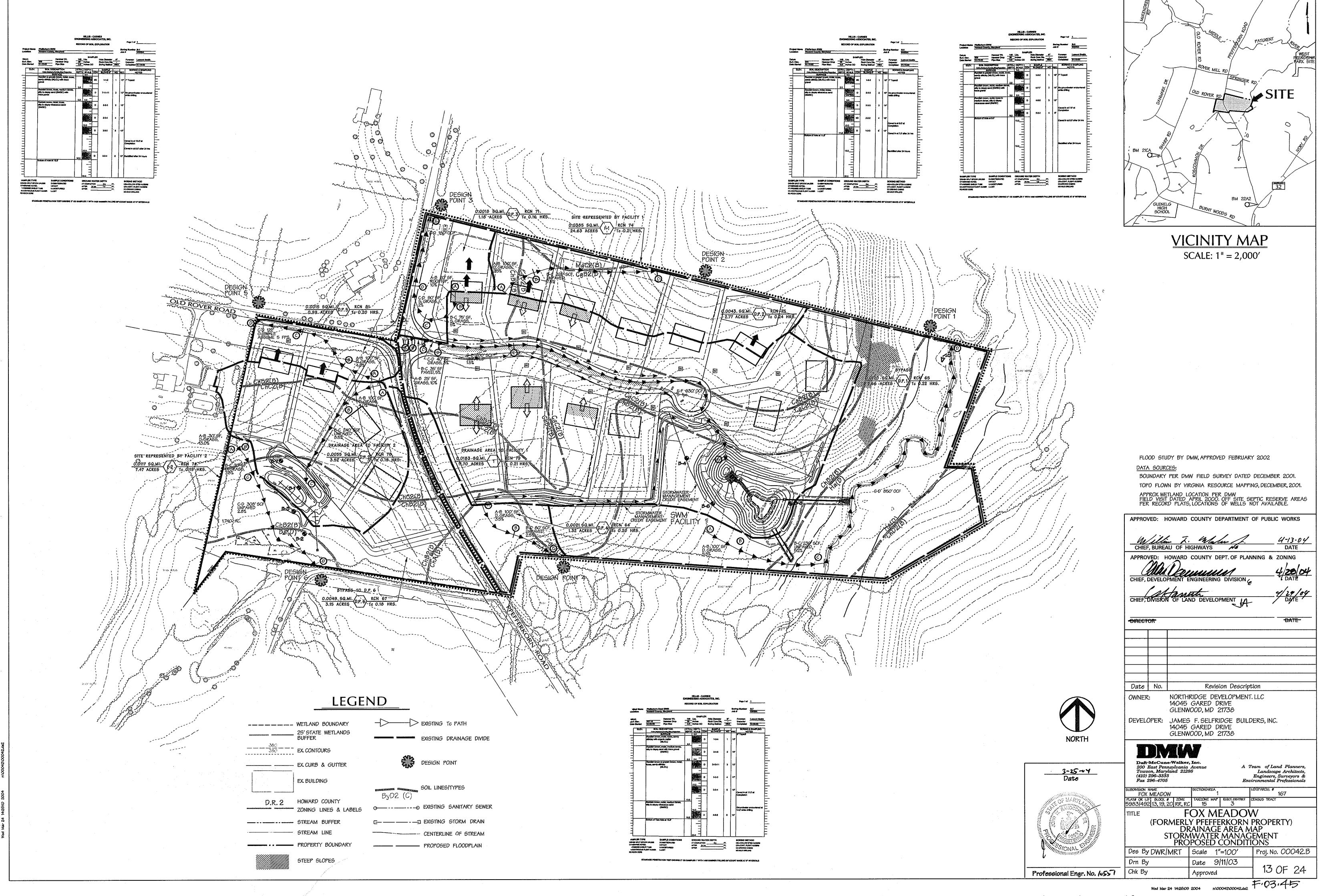
(FORMERLY PFEFFERKORN PROPERTY) Sediment and Erosion Control Specifications Proj. No. 00042.B Scale

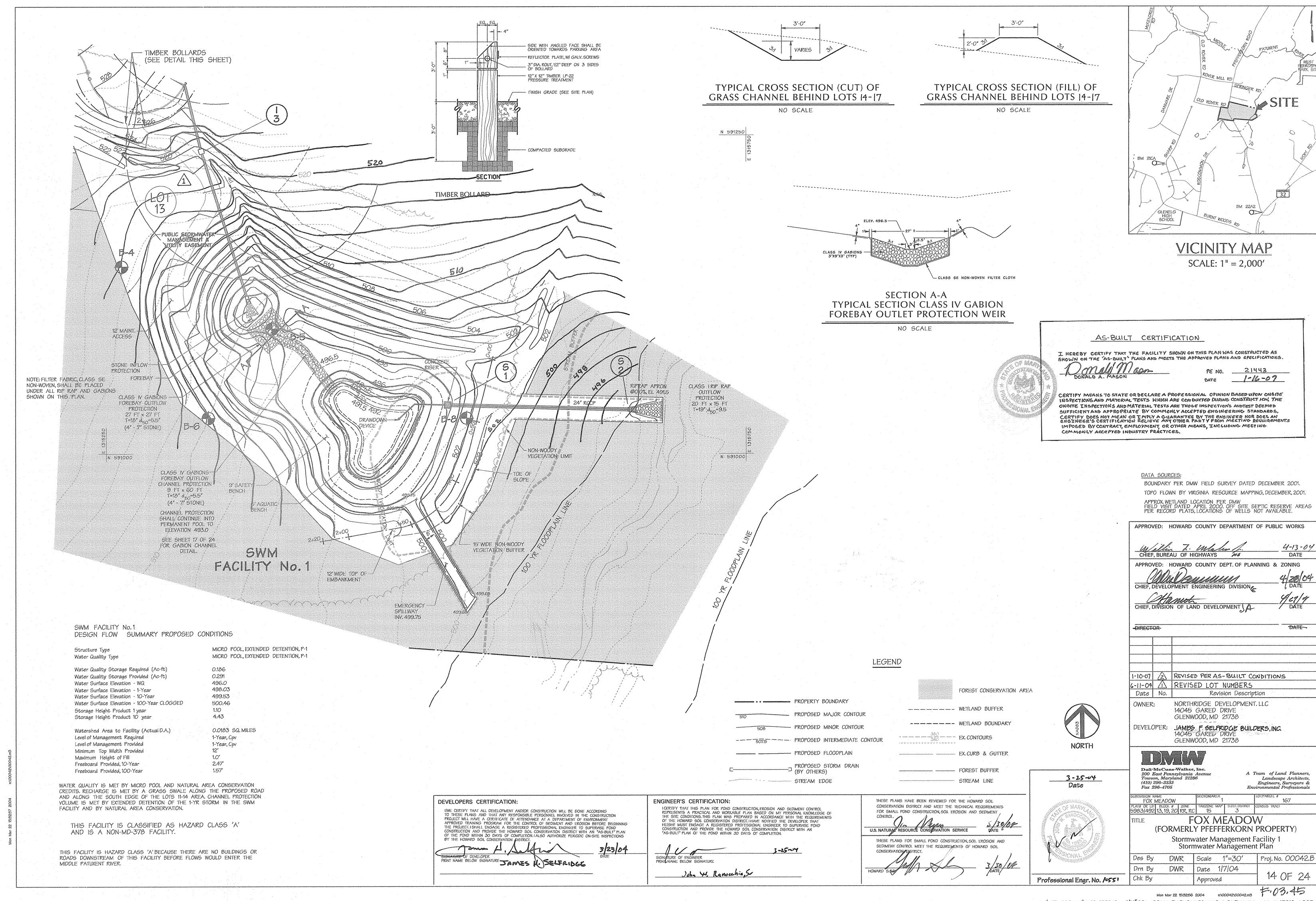
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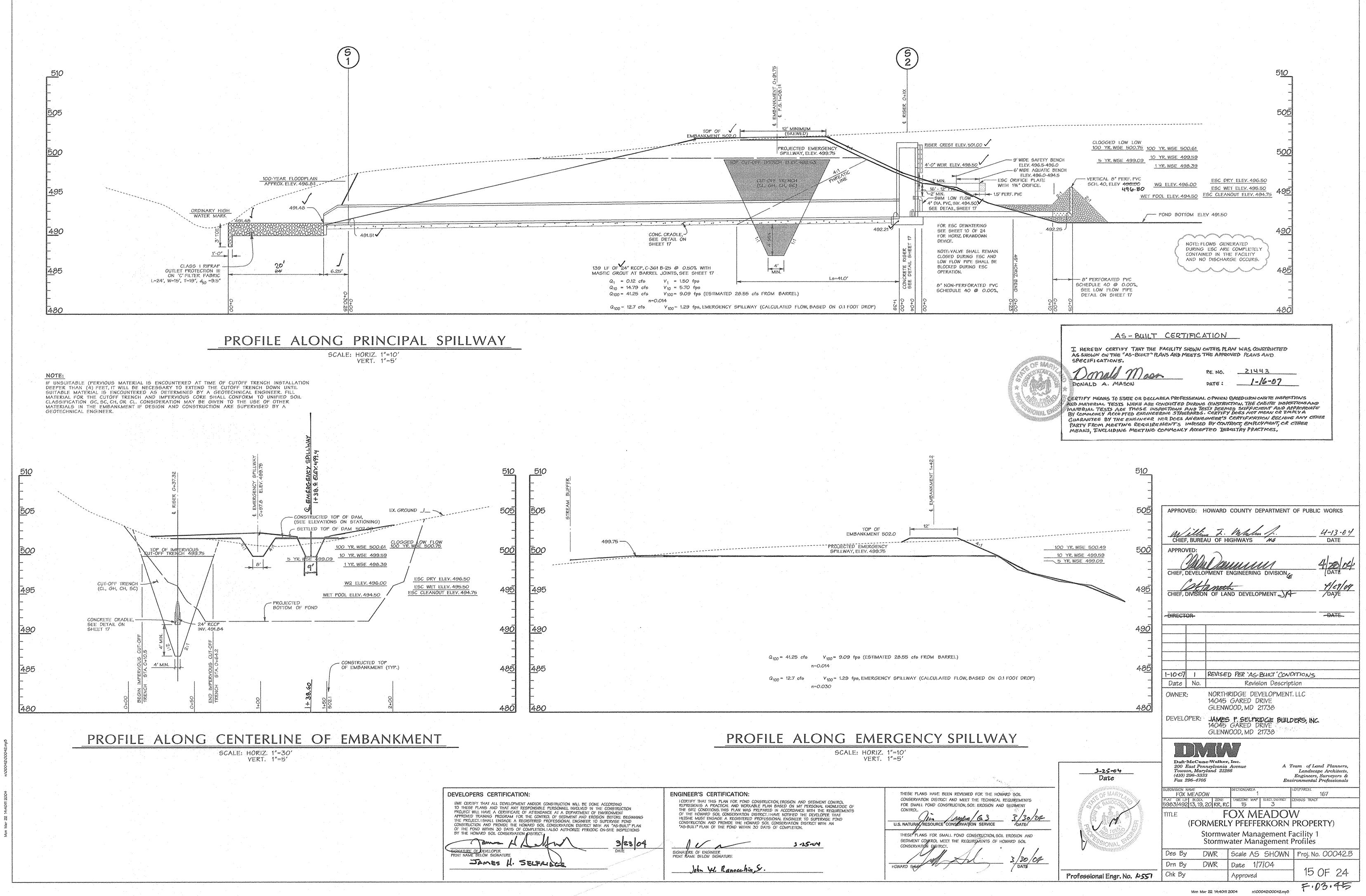


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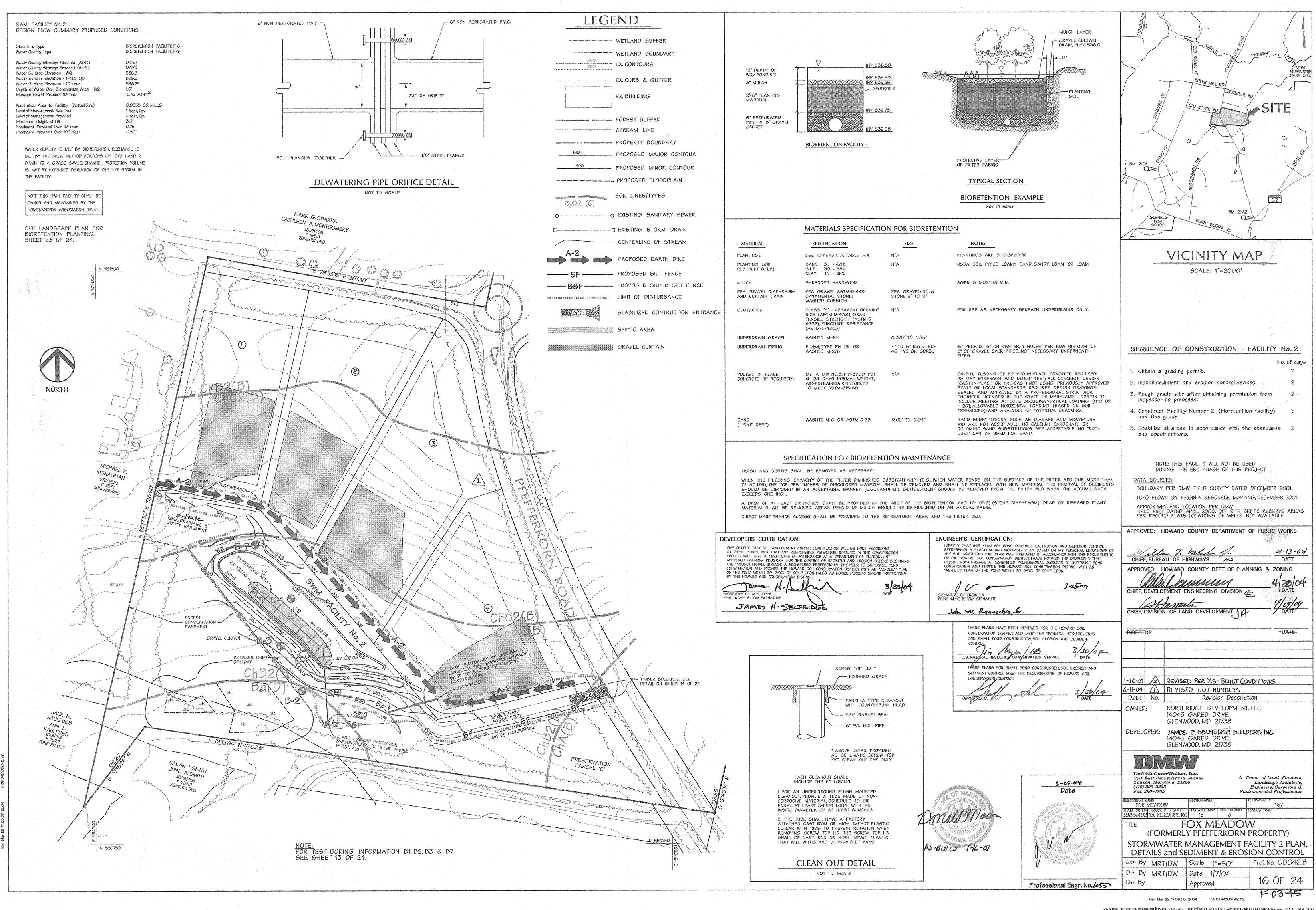


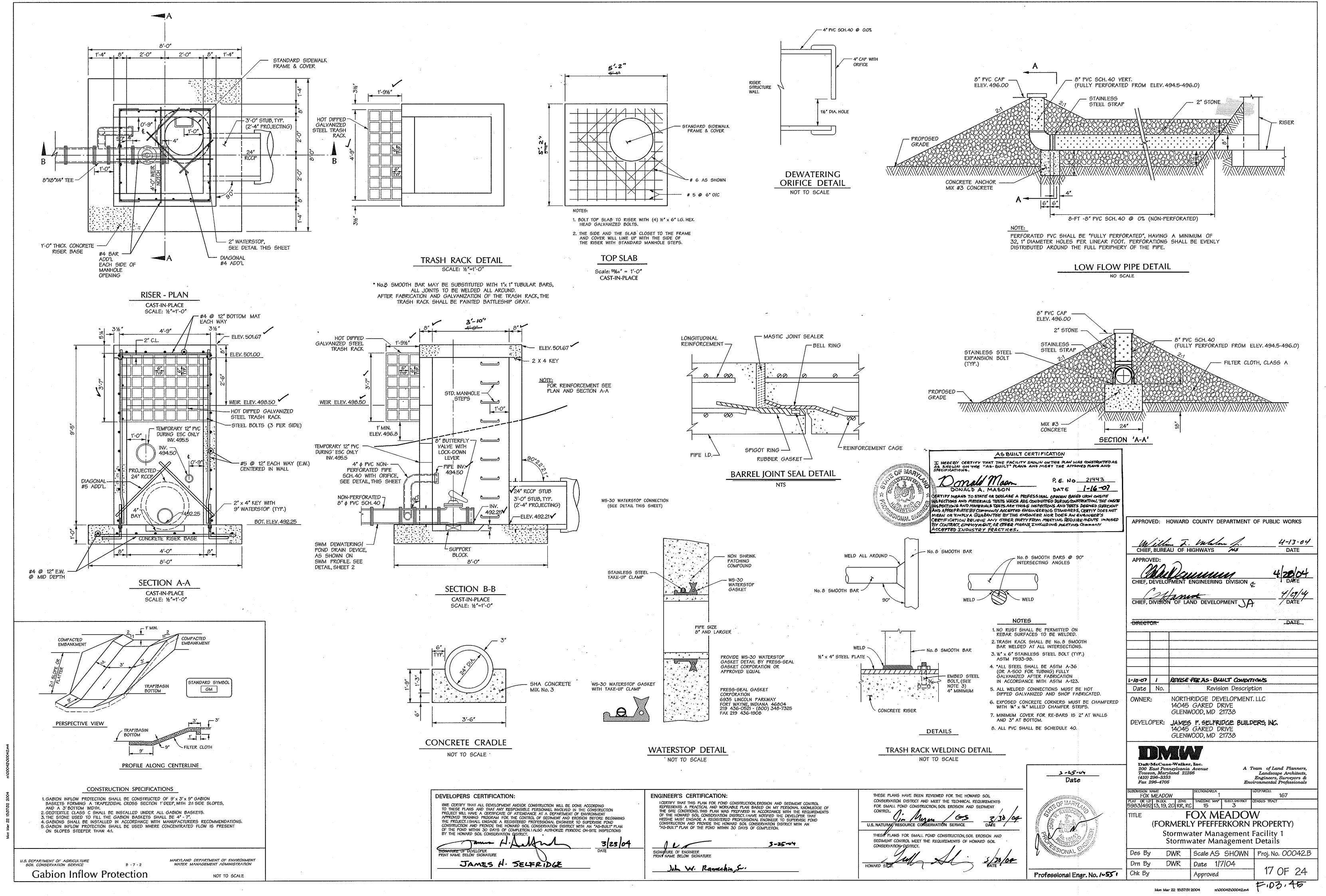


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STORMWATER MANAGEMENT POND GENERAL CONSTRUCTION SPECIFICATIONS

GENERAL

ALL STORMWATER MANAGEMENT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY'S "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (1985)" AND THE N.R.C.S. MARYLAND "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378, 2000). THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD PRACTICE MD-378. ALL REFERENCES TO ASTM AND AASHTO

2. SITE PREPARATION

SPECIFICATIONS APPLY TO THE MOST RECENT VERSION.

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, YEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. ALL TREES SHALL BE CLEARED AND GRUBBED WITHIN 15 FEET OF THE TOE OF THE EMBANKMENT.

AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS, TREES, BRUSH AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE. FOR DRY STORMWATER MANAGEMENT PONDS, A MINIMUM OF A 25-FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE, WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

3. EARTH FILL

MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE REE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND CUT OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL AND MUST HAVE AT LEAST 30% PASSING THE #200 SIEVE. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGNED BY A GEOTECHNICAL ENGINEER, SUCH SPECIAL DESIGNS MUST HAVE CONSTRUCTION SUPERVISED BY A GEOTECHNICAL ENGINEER.

MATERIALS USED IN THE OUTER SHELL OF THE EMBANKMENT MUST HAVE THE CAPABILITY TO SUPPORT VEGETATION OF THE QUALITY REQUIRED TO PREVENT EROSION OF THE EMBANKMENT.

LACEMENT - AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL FILL MATERIALS SHALL BE PLACED IN MAXIMUM & INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO

COMPACTION - THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF THE EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TIRED OR VIBRATORY ROLLER, FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL IT WILL NOT CRUMBLE, YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.

WHEN REQUIRED BY THE REVIEWING AGENCY THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 95% OF THE MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN +1- 2% OF THE OPTIMUM EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99 (STANDARD PROCTOR).

CUT OFF TRENCH - THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE EQUIPMENT USED FOR EXCAYATION, WITH THE MINIMUM WIDTH BEING FOUR FEET SHALL GOVERN THE BOTTOM WIDTH OF THE RENCH. THE DEPTH SHALL BE AT LEAST 4 FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM

<u>EMBANKMENT CORE</u> - THE CORE SHALL BE PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE CORE SHALL BE A MINIMUM OF FOUR FEET. THE HEIGHT SHALL EXTEND JP TO AT LEAST THE 10 YEAR WATER ELEVATION OR AS SHOWN ON THE PLANS. THE SIDE SLOPES SHALL BE 1 TO 1 OR FLATTER. THE CORE SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY. IN ADDITION, THE CORE SHALL BE PLACED CONCURRENTLY WITH THE OUTER SHELL OF THE EMBANKMENT.

STRUCTURE BACKFILL

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 4 INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION FOUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACEN TO THE PIPE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN 4 FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE, UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE, JNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.

STRUCTURE BACKFILL MAY BE FLOWABLE FILL MEETING THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION313 AS MODIFIED. THE MIXTURE SHALL HAVE A 100-200 PSI; 28 DAY UNCONFINED COMPRESSIVE STRENGTH. THE FLOWABLE FILL SHALL HAVE A MINIMUM PH OF 4.0 AND A MINIMUM RESISTIVITY OF 2,000 OHM-CM. MATERIAL SHALL BE PLACED SUCH THAT A MINIMUM OF 6" (MEASURED PERPENDICULAR TO THE OUTSIDE OF THE PIPE) OF FLOWABLE FILL SHALL BE UNDER (BEDDING), OVER AND, ON THE SIDES OF THE PIPE. IT ONLY NEEDS TO EXTEND UP TO THE SPRING LINE FOR RIGID CONDUITS. AYERAGE SLUMP OF THE FILL SHALL BE 7" TO ASSURE FLOWABILITY OF THE MATERIAL. ADEQUATE MEASURES SHALL BE TAKEN (SAND BAGS, ETC.) TO PREVENT FLOATING THE PIPE. WHEN USING FLOWABLE FILL, ALL METAL PIPE SHALL BE BITUMINOUS COATED. ANY ADJOINING SOIL FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL SHALL COMPLETELY FILL ALL YOIDS ADJACENT TO THE FLOWABLE FILL ZONE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN 4 FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE, UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A STRUCTURE OR PIPE, UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE, BACKFILL MATERIAL OUTSIDE THE STRUCTURAL BACKFILL (FLOWABLE FILL) ZONE SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE CORE OF THE EMBANKMENT OR OTHER

REMOVAL AND REPLACEMENT OF DEFECTIVE FILL

FILL PLACED AT DENSITIES LOWER THAN SPECIFIED MINIMUM DENSITY OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED ACCEPTABLE RANGE OF MOISTURE CONTENT OR OTHERWISE NOT CONFORMING TO THE REQUIREMENTS OF THE SPECIFICATIONS SHALL BE REWORKED TO MEET THE REQUIREMENTS OR REMOVED AND REPLACED BY ACCEPTABLE FILL. THE BOTTOMS OF SUCH EXCAVATIONS SHALL BE FINISHED FLAT OR GENTLY CURVING AND AT THE SIDES OF SUCH EXCAVATIONS THE ADJACENT SOUND FILL SHALL BE TRIMMED TO A SLOPE NOT STEEPER THAN 3 FEET HORIZONTALLY TO 1 FOOT VERTICALLY EXTENDING FROM THE BOTTOM OF THE EXCAVATION TO THE FILL SURFACE.

PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION. ALL PERFORATED PIPES SHALL HAVE A MINIMUM OF 3.31 SQUARE INCHES OF OPENING PER SQUARE FOOT OF PIPE SURFACE (EX. 30 3/8-INCH HOLES PER SQUARE FOOT), PERFORATIONS ARE TO BE UNIFORMLY SPACED AROUND THE FULL PERIPHERY OF THE PIPE. ANY HOLES BLOCKED OR PARTIALLY BLOCKED BY BITUMINOUS COATING SHALL BE OPENED PRIOR TO INSTALLATION.

REINFORCED CONCRETE PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE: MATERIALS - REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH

- BEDDING REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING FOR THEIR ENTIRE LENGTH. THIS BEDDING / CRADLE SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 50 PERCENT OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 6 INCHES. WHERE CONCRETE CRADLE IS NOT NEEDED FOR STRUCTURAL REASONS, FLOWABLE FILL MAY BE USED AS DESCRIBED IN THE "STRUCTURE BACKFILL" SECTION OF THIS STANDARD. GRAYEL BEDDING IS NOT PERMITTED.
- 3. LAYING PIPE BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED
- 4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".
- 5. CONNECTIONS ALL CONNECTIONS (TO ANTI-SEEP COLLARS, RISER, ETC.) SHALL BE WATERTIGHT.
- 6. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

PLASTIC PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR PLASTIC PIPE:

RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM C-361.

- MATERIALS PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM 1785 OR ASTM D-2241. CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE), COUPLINGS AND FITTINGS SHALL CONFORM TO THE FOLLOWING: 4" - 10" INCH PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M252 TYPE S, AND 12" THROUGH 24" SHALL MEET THE REQUIREMENTS OF
- 2. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATERTIGHT.
- 3. BEDDING THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE
- 4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL".
- 5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

7. CONCRETE

CONCRETE SHALL MEET THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION

CAST-IN-PLACE CONCRETE STRUCTURES

1. SPECIFICATIONS: MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, LATEST

AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, LATEST EDITION, FOR DESIGN. CONCRETE DESIGN BY THE "SERVICE LOAD DESIGN METHOD".

- 2. CONCRETE: SHALL MEET THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 414 AND 902, MIX NO. 3.
- 3. CONTRACTOR MAY ADD COLOR MIX AT PLANT IN ACCORDANCE WITH MANUFACTURES RECOMMENDATION "C-12 MESA BEIGE" AS MANUFACTURED BY L. M. SCOFIELD COMPANY

CONTRACTOR SHALL SUPPLY MIX DESIGN FOR APPROVAL PRIOR TO APPLICATION. LOAD AND MIX TICKETS SHALL BE SUPPLIED FOR EACH TRUCK DELIVERY, NO PARTIAL FIELD MIXES SHALL BE

ALL CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI AT 28 DAYS. DESIGN FC = 1,200 PSI. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4" X 3/4". ALL CONSTRUCTION KEYS ARE

- REINFORCING STEEL: REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60. WHERE NOT INDICATED, BAR LAP SPILICES SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATIONS. THE MINIMUM CONCRETE COVER SHALL BE 2 INCHES UNLESS OTHERWISE NOTED. DESIGN FS =
- 5. FOUNDATION: PRESUMED SOIL BEARING CAPACITY = 2,500 PSF. THE ENGINEER MUST APPROVE ALL FOUNDATIONS PRIOR TO CONCRETE PLACEMENT. IF UNSUITABLE MATERIAL IS ENCOUNTERED, THE MATERIAL SHALL BE UNDERCUT AND BACKFILLED WITH STRUCTURAL BACKFILL.
- 6. STRUCTURAL BACKFILL: CAST-IN-PLACE CONCRETE STRUCTURES AND PIPE SHALL BE BACKFILLED WITH SELECT GRANULAR BACKFILL MEETING THE REQUIREMENTS OF SHA GRADED AGGREGATE-SUBBASE, STRUCTURAL FILL SHALL BE PLACED IN LOOSE LIFTS OF APPROXIMATELY 6 INCHES, AND COMPACTED TO 95 PERCENT OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY IN ACCORDANCE WITH AASHTO T-180. THE STATIC WEIGHT OF EQUIPMENT USED ADJACENT TO WALLS SHALL NOT EXCEED 3,000 POUNDS. NO BACKFILL SHALL BE PLACED AGAINST THE CAST-IN-PLACE WALLS UNTIL THE CONCRETE HAS ATTAINED THE SPECIFIED 28 DAY STRENGTH.

PRE-CAST CONCRETE STRUCTURES

SHOP DRAWINGS FOR PRE-CAST STRUCTURES WITH SUPPORTING STRUCTURAL COMPUTATIONS (SIGNED AND SEALED BY A MARYLAND REGISTERED PROFESSIONAL ENGINEER) MEETING ASTM REQUIREMENTS FOR PRE-CAST STRUCTURES MUST BE SUBMITTED TO THE ENGINEER AND THE APPROVING AGENCY (HOWARD COUNTY DEVELOPMENT ENGINEERING DIVISION) FOR APPROVAL PRIOR TO FABRICATION.

8. ROCK RIP-RAP

ROCK RIP-RAP SHALL MEET THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS,

GEOTEXTILE SHALL BE PLACED UNDER ALL RIP-RAP AND SHALL MEET THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 921.09, CLASS C.

THE RIP-RAP SHALL BE PLACED TO THE REQUIRED THICKNESS IN ONE OPERATION. THE ROCK SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL INSURE THE RIP-RAP IN PLACE SHALL BE REASONABLY HOMOGENEOUS WITH THE LARGER ROCKS UNIFORMLY DISTRIBUTED AND FIRMLY IN CONTACT ONE TO ANOTHER WITH THE SMALLER ROCKS FILLING THE VOIDS BETWEEN THE LARGER ROCKS.

9. CARE OF WATER DURING CONSTRUCTION

ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DIKES, LEVEES, COFFERDAMS, DRAINAGE CHANNELS, AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM THE VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS FOUNDATION AND OTHER PARTS OF THI WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART O THE WORK, AFTER HAVING SERVED THEIR PURPOSE, ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEYER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAYATED SLOPES AND BOTTOM OF REQUIRED EXCAVATIONS AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS DURING THE PLACING AND COMPACTING OF MATERIAL IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATIONS BEING REFILLED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER TO SUMPS FROM WHICH THE WATER SHALL BE

10. STABILIZATION

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SIGHTLY CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT. SPILLWAY, SPOIL AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING IN ACCORDANCE WITH THE NATURAL RESOURCES CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.

EROSION AND SEDIMENT CONTROL

CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES TO BE EMPLOYED DURING THE CONSTRUCTION PROCESS.

ALL DISTURBED AREAS SHALL BE CONTROLLED BY AN EROSION AND SEDIMENT CONTROL PLAN WHICH HAS BEEN APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT (H. S. C. D.).

SEEDING, FERTILIZING AND MULCHING SHALL BE AS FOLLOWS:

SEED MIX: 50% KENBLUE KENTUCKY BLUEGRASS 40% PENNLAWN CREEPING RED FESCUE 10% STREAKER REDTOP

APPLIED AT A RATE OF 150 LBS. PER ACRE. REBEL II TALL FESCUE (125 LBS. PER ACRE) PENNFINE PERENNIAL RYEGRASS (15 LBS. PER ACRE) KENBLUE KENTUCKY BLUEGRASS (10 LBS. PER ACRE)

PENNLAWN CREEPING RED FESCUE (70 LBS. PER ACRE) AURORA HARD FESCUE (50 LBS. PER ACRE) COMMON WHITE CLOVER (6 LBS. PER ACRE) WINTER RYE (45 LBS. PER ACRE)

70% FORAGER TALL FESCUE 30% CHEMUNG CROWNVETCH, INOCULATED APPLIED AT A RATE OF 55 LBS. PER ACRE

OPTIMUM SEEDING DATES: MARCH 1 TO APRIL 30. 2 TONS/ACRE DOLOMITIC LIMESTONE.

FERTILIZER: 600 LBS./ACRE 10-10-10 FERTILIZER BEFORE SEEDING,

400 LBS./ACRE 30-0-0 UREAFORM FERTILIZER AT TIME OF SEEDING.

RECOMMENDED BY THE MANUFACTURER.

STRAW AT 4,000 LBS. PER ACRE ANCHORING: MULCHING TOOL OR WOO CELLULOSE FIBER BINDER AT A NET DRY BINDER RATE OF

750 POUNDS PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER OR AT RATES

13. FILTER CLOTH

ALL FILTER CLOTH SHALL CONFORM TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, OR THE LATEST EDITION.

14. GABIONS

ALL GABIONS SHALL BE PYC COATED WOVEN WIRE BASKETS, STONE SIZE SHALL BE 4 INCHES TO 7 INCHES. (CLASS IV GABIONS).

15. CONSTRUCTION INSPECTION BY DESIGNATED ENGINEERS

THE CONSTRUCTION OF THE POND AND EMBANKMENT, AND CERTIFICATION THAT THE POND AND EMBANKMENT HAVE BEEN BUILT IN ACCORDANCE WITH THE PLANS SHALL BE UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER THE ENGINEER SHALL BE NOTIFIED SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT ARRANGEMENTS CAN BE MADE FOR (1) INSPECTION OF PIPE TRENCH AND BEDDING. (2) INSPECTION OF RISER AND ANTI-SEEP COLLARS AND (3) SUPERVISION OF EMBANKMENT CONSTRUCTION AND COMPACTION TESTING. THE ENGINEER SHALL DIRECT THE HANDLING OF WATER DURING CONSTRUCTION, MINOR CHANGES NOT AFFECTING THE INTEGRITY OF THE DAM IN ORDER TO COMPENSATE FOR UNUSUAL SOIL CONDITIONS, AND THE REMOVAL AND REPLACEMENT OF DEFECTIVE FILL.

16. INSPECTION SCHEDULE

1. PRIOR NOTIFICATION SHALL BE GIVEN TO THE ENGINEER SO THAT INSPECTIONS MAY BE MADE AT THE FOLLOWING STAGES:

(1) UPON COMPLETION OF EXCAVATION TO SUBFOUNDATION AND WHERE REQUIRED, INSTALLATION OF STRUCTURAL SUPPORTS OR REINFORCEMENT FOR STRUCTURES,

INCLUDING BUT NOT LIMITED TO: CORE TRENCHES FOR STRUCTURAL EMBANKMENTS. (II) INLET-OUTLET STRUCTURES AND ANTI-SEEP STRUCTURES, WATERTIGHT CONNECTORS ON PIPES AND

TRENCHES FOR ENCLOSED STORM DRAINAGE FACILITIES. (2) DURING PLACEMENT OF STRUCTURAL FILL, REINFORCING AND CONCRETE, AND INSTALLATION OF PIPING AND CATCH BASINS (3) DURING BACKFILL OF FOUNDATIONS AND TRENCHES 4) DURING EMBANKMENT CONSTRUCTION AND

PERMANENT STABILIZATION. NO WORK SHALL PROCEED UNTIL THE ENGINEER INSPECTS AND APPROVES THE WORK

2. GEOTECHNICAL COMPACTION TESTING OF THE FACILITY EMBANKMENT IS REQUIRED. CERTIFICATION MUST BE PROVIDED TO THE DESIGNATED ENGINEER IN CHARGE OF 3. A COPY OF ALL MATERIAL SUPPLY TICKETS MUST BE GIVEN TO THE DESIGNATED ENGINEER IN CHARGE OF THE AS-BUILT.

(5) UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF

17. "ROUTINE BY HOA" AND "HON ROUTINE BY

1. THE FACILITY SHALL BE INSPECTED TWICE ANNUALLY, MARCH AND SEPTEMBER, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS SUCCESSORS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATION OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING. 2. YEGETATED COYER SHALL BE MAINTAINED AT ALL TIMES.

3. RILLS ON THE SLOPES OF THE DAM AND WASHED IN THE EARTH SPILLWAY SHALL BE FILLED WITH SUITABLE MATERIAL AND THOROUGHLY COMPACTED. THESE AREAS SHALL BE RESEEDED OR RESODDED, LIMED, AND FERTILIZED AS NEEDED. 4. ALL APPURTENANCES SHALL BE KEPT FREE OF TRASH.

5. SEDIMENT SHALL BE REMOVED FROM FOREBAYS WHEN THE DEPTH EXCEEDS 1' 5. TRASH AND DEBRIS SHALL BE REMOVED AS NECESSARY. 7. VEGETATION ON EMBANKMENT AND ACCESS BENCH SHALL NOT EXCEED 18" IN HEIGHT 8. TOP AND OUTSIDE SIDE SLOPE OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. INSIDE SIDE SLOPE, AND MAINTENANCE ACCESS SHOULD BE MOWED AS NEEDED, CARE SHALL BE TAKEN NOT TO MOW ANY OF THE WETLAND PLANTINGS IN THE VICINITY OF THE 5' SAFETY BENCH.

18. OPERATION, MAINTENANCE AND INSPECTION

INSPECTION OF PONDS SHOWN HEREON SHALL BE PERFORMED AT LEAST TWICE ANNUALLY. IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCA "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

19. UTILITIES

NO UTILITIES MAY BE CONSTRUCTED WITHIN/ALONG ANY MD-378 EMBANKMENT

GEOTECH RECOMMENDATIONS

THE AREAS OF THE PROPOSED SWM FACILITIES SHOULD BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE EMBANKMENT OR STRUCTURE AREAS IN ACCORDANCE. WITH SOIL CONSERVATION GUIDELINES. AFTER STRIPPING OPERATIONS HAVE BEEN COMPLETED, THE EXPOSED SUBGRADE MATERIALS SHOULD BE PROOFROLLED WITH A LOADED DUMP TRUCK OR SIMILAR EQUIPMENT IN THE PRESENCES OF A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE. FOR AREAS THAT ARE NOT ACCESSIBLE TO A DUMP TRUCK, THE EXPOSED MATERIALS SHOULD BE OBSERVED AND TESTED BY A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE UTILIZING A DYNAMIC CONE PENETROMETER. ANY EXCESSIVELY SOFT OR LOOSE MATERIALS IDENTIFIED BY PROOFROLLING OR PENETROMETER TESTING SHOULD BE EXCAVATED TO SUITABLE FIRM SOIL AND THE GRADES RE-ESTABLISHED BY BACKFILLING WITH SUITABLE MATERIAL.

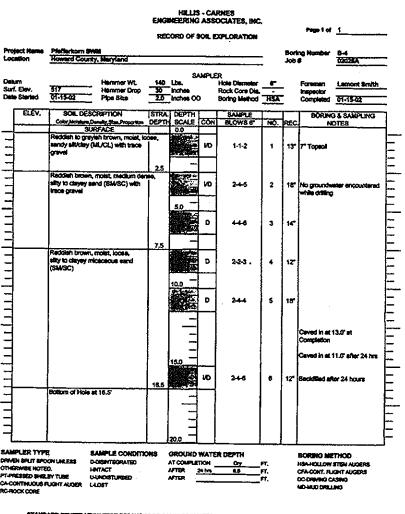
A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHOULD BE PRESENT TO MONITOR PLACEMENT AND COMPACTION OF FILL FOR THE EMBANKMENT AND CUT-OFF TRENCH. IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SPECIFICATION 378 SOILS CONSIDERED SUITABLE FOR THE CENTER OF EMBANKMENT AND CUT-OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL.

IT IS OUR PROFESSIONAL OPINION THAT IN ADDITION TO THE SOIL MATERIALS DESCRIBED ABOVE A FINE-GRAINED SOIL INCLUDING SILT (ML) WITH A PLASTICITY INDEX OF 10 OR MORE CAN BE UTILIZED FOR THE CENTER OF THE EMBANKMENT AND CORE TRENCH. ALL FILL MATERIALS MUST BE PLACED AND COMPACTED IN ACCORDANCE WITH MD SCS 378 SPECIFICATIONS.

20. NON-ROUTINE MAINTENANCE (BY COUNTY)

I STRUCTURAL COMPONENTS OF THE POND SOCH AS THE DAM, THE RIBER, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSTECTED TURING ROUTINE MAINTENANCE OF ERATIONS.

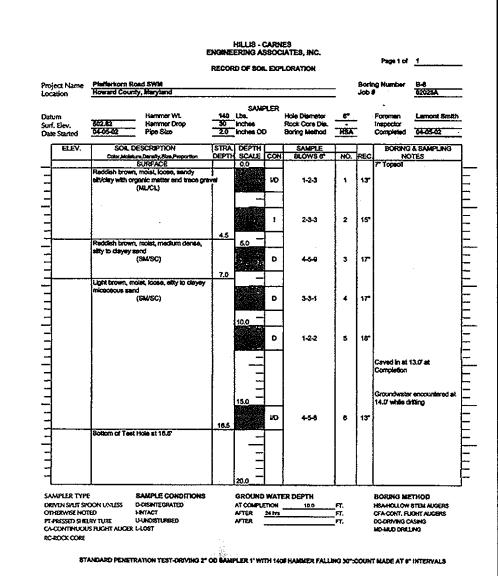
2 SEPIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE, INTERFERE WITH THE FUNCTION OF THE RISER, WHEN DEEMED HECESSARY FOR AESTHETIC REAGONS, OR WHEN DEEMED NECESSARY BY THE HOWARD COUNTY'S DEPARTMENT OF FUBLIC WORKS.



STANDARD PENETRATION TEST-DRIVING IT OD SAMPLER 1' WITH 1408 HAMMER FALLING 30": COUNT MADE AT 4" INTERVAL

nedium donse, ality to clayey

DITVEN SPLIT SPOON UNILESS OTHERWISE NOTED



ELEV. SOIL DESCRIPTION STRA DEPTH SAMPLE Cato Adapting Depth SCALE CON BLOWS 6" NO. REC. SURFACE 0.0

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 4-13-04 CHIEF, BUREAU OF HIGHWAYS Wannen CHIEF, DEVELOPMENT ENGINEERING DIVISION, CHIEF, DIVISION OF LAND DEVELOPMENT JA DATE

Revision Description

A Team of Land Planners,

Landscape Architects Engineers, Surveyors &

NORTHRIDGE DEVELOPMENT. LLC

14045 GARED DRIVE GLENWOOD, MD 21738 DEVELOPER: JAMES P. SELFRIDGE BUILDERS, INC. 14045 GARED DRIVE GLENWOOD, MD 21738

Daft·McCune·Walker, Inc 200 East Pennsylvania Avenue Towson, Maryland 21286

FOX MEADOW

Stormwater Management Facility 1 Specifications and Borings Proj. No. 00042.B Des By DWR | Scale NONE

Chk By Approved

PLAT OR L/F BLOCK ZONE TAX/ZONE MAP ELECT. DISTR 5983/492 13, 19, 20 RR, RC 15 3 FOX MEADOW (FORMERLY PFEFFERKORN PROPERTY) DWR Date 1/7/04 Drn By

Mon Mar 22 14:41:09 2004 n:\00042\00042\m5

THE POND WITHIN 30 DAYS OF COMPLETION, I ALSO AUTHORIZE PRIODIC ON-SITE INSPECTIONS

I/WE CERTIFY THAT ALL DEVILOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION

APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND

CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN

PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT

ENGINEER'S CERTIFICATION:

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTRO REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT U.S. NATURAL RESOURCE CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL

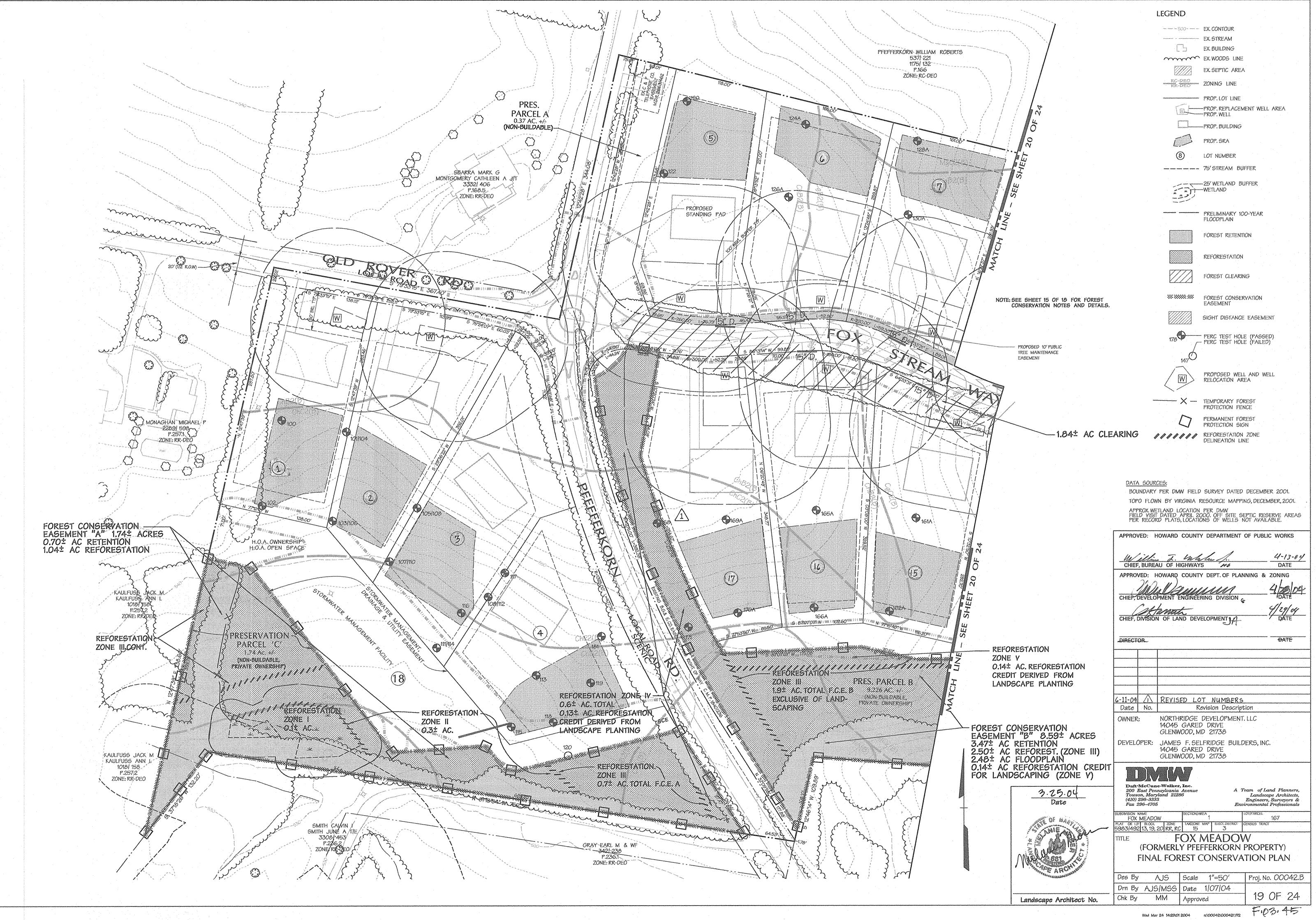
3-25-04 Date

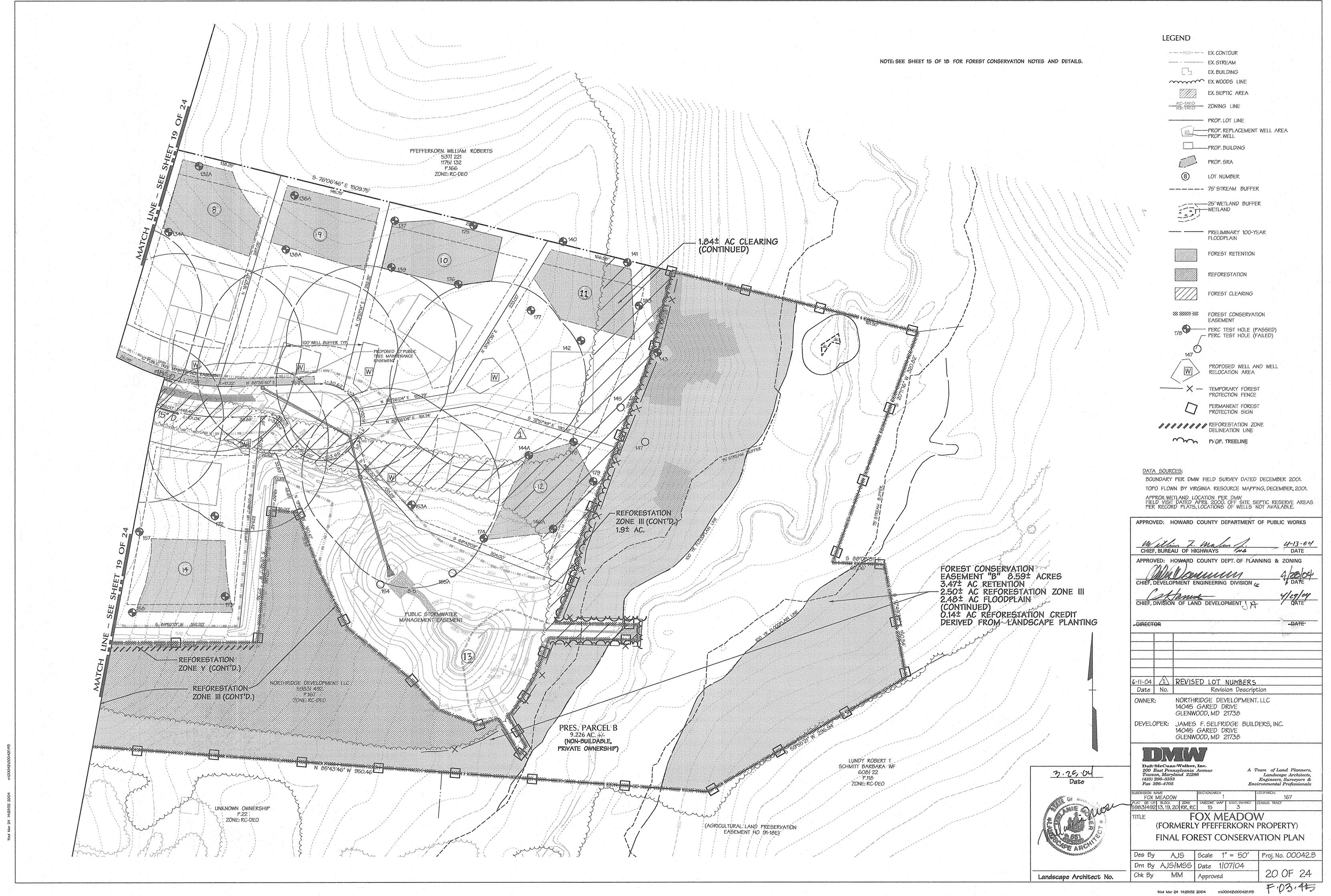
Professional Engr. No. 1055'

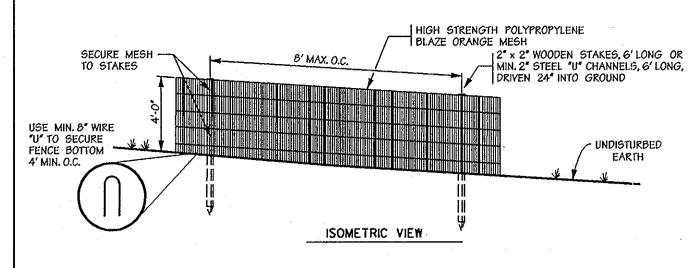
James H. Selfrydle

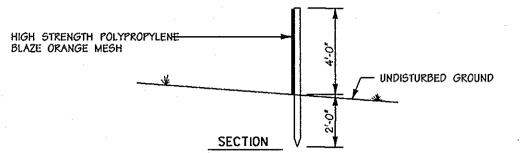
DEVELOPERS CERTIFICATION:

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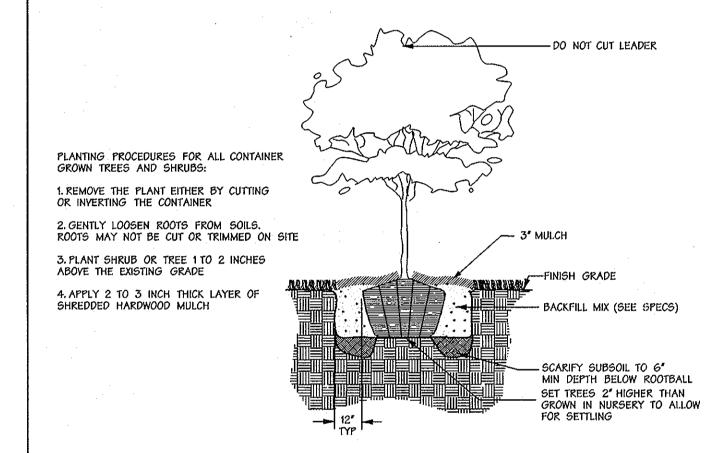
1. THIS DETAIL IS FOR FOREST PROTECTION DEVICE ONLY 2. FOREST RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS 3. BOUNDARIES OF FOREST RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING THE DEVICE

4. ROOT DAMAGE SHALL BE AVOIDED 5. PROTECTION SIGNAGE MAY ALSO BE USED

6. FOREST PROTECTION FENCE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION

Forest Protection Fence*

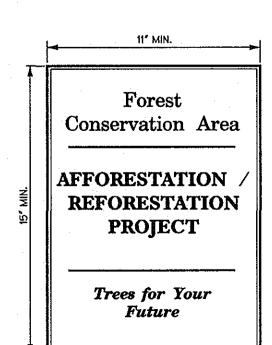
* WHERE SUPER SILT FENCE (S.S.F.) IS TO BE INSTALLED ADJACENT TO FOREST RETENTION AREAS, ATTACH HIGH VISIBILITY TAPE OR FLAGGING TO THE TOP EDGE OF S.S.F. AT 5' INTERVALS AND USE S.S.F. IN LIEU OF BLAZE ORANGE FENCE. TEMPORARY FOREST PROTECTION SIGNAGE MAY BE ATTACHED TO S.S.F.



GRID PATTERN WILL BE AVOIDED AFFORESTATION -AREA

Typical Tree Planting (For container grown)

Planting Design Schematic



SIGNS TO BE PLACED ON METAL POSTS 5'+1-ABOVE FINISH GRADE

PRIOR TO PLANTING.

PLACE SIGNS EVERY

PERIMETER OF FOREST

CONSERVATION AREA.

Permanent Signage

FOREST CONSERVATION CALCULATIONS

ACRES (1/10)

GROSS SITE AREA 32.22 AREA WITHIN 100 YEAR FLOODPLAIN AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE) 0.0 LAND USE CATEGORY RESIDENTIAL INFORMATION FOR CALCULATIONS 7.43 B. REFORESTATION THRESHOLD (25% x A) C. AFFORESTATION MINIMUM (20% x A) D. EXISTING FOREST ON NET TRACT AREA E. FOREST AREAS TO BE CLEARED F. FOREST AREAS TO BE RETAINED REFORESTATION CALCULATIONS 29.73 A. NET TRACT AREA B. REFORESTATION THRESHOLD (25% x A) C. EXISTING FOREST ON NET TRACT AREA D. FOREST AREAS TO BE CLEARED E. FOREST AREAS TO BE RETAINED F. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD G. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD H. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD CLEARING BELOW THE THRESHOLD

IF FOREST AREAS TO BE RETAINED ARE LEGS THAN THE REFORESTATION THRESHOLD (IF F IS GREATER THAN B), THE FOLLOWING CALCULATIONS APPLY:

REFORESTATION FOR CLEARING ABOVE THRESHOLD REFORESTATION FOR CLEARING BELOW THRESHOLD TOTAL REFORESTATION REQUIRED (Fx1/4) + (Gx2)TOTAL AFFORESTATION REQUIRED NO CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD 3.68 ACRES REFORESTATION REQUIRED REFORESTATION PROVIDED 3.68 ACRES

* NOT ALL VEGETATION WILL BE REMOVED, VEGETATION REMAINING AFTER ROAD GRAPING WILL BE COUNTED TOWARDS LANDSCAPE REQUIREMENTS AND AUGMENTED WITH STREET TREES, HOWEVER FOR THE PURPOSE OF FOREST CONSERVATION CALCULATIONS THIS AREA 19 COUNTED AS CLEARED BECAUSE IT IS NOT FORMERLY RETAINED IN AN FCE.

NOTE: LANDSCAPE-SIZE MATERIAL IS TO BE PLANTED ALONG FCE EDGES ADJACENT TO THE SCENIC ROAD.

GOALS AND OBJECTIVES

BASIC SITE DATA

The goals and objectives of this Forest Conservation Plan are to identify forest retention areas under the current Forest Conservation Act in accordance with development of the Fox Meadow property, and to assign reforestation areas on-site to satisfy the replacement obligation. Approximately 4.17 acres of existing forest will be retained adjacent to water resources, and approximately 1.84 acres of forest will be cleared, generating a 3.68-acre reforestation obligation to be satisfied on-site with a combination

Planting Zones have been described according to varying hydrologic regimes, with Zone Lincluding wetland areas on the southwestern portion of the site. Zone II is a mesic area located on the outer fringes of the wetlands on the southwestern portion of the site, and is roughy bound by the 532-ft. contour. Zone III is assigned to uplands across the site. Zone IV is located along Pfefferkorn Road and will consist of larger-caliper planting stock to provide an aesthetic screen of forest between the proposed residential community and the scenic road. Zone V consists of landscaping behind lots 11-14.

Tree retention! Soil Protection areas will be delineated with temporary forest protection fencing and retention area signage as appropriate. See forest protection fence and temporary signage Detail prior to the beginning of any construction activity. Attachment of signs to trees is prohibited.

PRECONSTRUCTION MEETING/CONSTRUCTION PERIOD PRACTICES

Before construction begins, a required preconstruction meeting shall be held. The principle contractors, engineer, Howard County Inspectors and a qualified forest professional familiar with the plan shall be present. All items pertaining to forest retention, tree preservation, and construction period practices shall be discussed.

Any changes to the plan due to on-site conditions must be approved by the Howard County Department of Planning and Zoning. No grading, excavation, utility placement, sediment and erosion control activities, or vehicular traffic will occur within forest retention areas. Storage of equipment and materials shall not be permitted in the forest retention areas. There will be no burial or disposal of discarded material on-site within the retention area.

There will be no open burning within 100 feet of woodlands. Temporary structures including, but not limited to construction trailers, sanitary facilities, etc. shall not be placed within the forest retention areas.

Employee parking shall not be permitted in the forest retention areas. POST CONSTRUCTION MANAGEMENT/MAINTENANCE BY CONTRACTOR

All dead trees or tree limbs which pose an immediate safety hazard will be felled. Trees dropped within the forest retention area will not be removed. All temporary forest protection structures will be removed after construction and permanent signage will be placed where indicated on the plan. A 2-year Contractor's Maintenance and Monitoring Period shall begin at mobilization. Seventy five percent survivorship must be guaranteed for this period. The site shall be inspected at the end of the two year period to ascertain survivorship and provide for replacement if necessary. The Contractor's maintenance of new planting shall consist of watering, cultivating, weeding, and mulching as necessary to insure survival. Contractor shall protect planting areas and plants at all times against damage of all kinds for duration of maintenance period. Maintenance includes temporary protection barriers and signs as required for protection. If any plants become damaged or injured, because sufficient protection was not provided, treat or replace as directed by Landscape Architect at no additional cost to Owner.

ALL FOREST RETENTION & REFORESTATION AREAS SHOWN ON THIS PLAN TO BE PLACED IN FOREST CONSERVATION EASEMENT

STANDARDS AND SPECIFICATIONS FOR PLANTING

A. Nursery grown plant materials greater than 1° caliper should meet or exceed the requirements of the American Nurserymen Specifications, i.e. should be typical of the species and variety, have a normal habit of growth, be first quality, sound, vigorous, well-branched, have healthy, well furnished root systems, and be free of disease, insect pests and mechanical injuries. B. Planting stock less than 1" caliper should meet the following standards:

Hardwoods - 1/4" to 1/2" caliper with roots not less than 8" long Shrubs - 1/8" or larger caliper with 8" root system.

2. PLANTING SITE PREPARATION

Soils shall not be disturbed outside the area necessary for planting individual specimens and the removal of exotic invasive plant material.

Seedling/whips:

All material shall be planted between September 15 and May 31. Material shall not be installed when ground is frozen.

Plants should be planted within 24 hours of delivery if possible. Plant material which are left unplanted for more than 24 hours shall be protected from direst sun and weather and kept moist. Nursery stock should not be left unplanted for more than two weeks.

6. TOPSOIL FOR PLANTING SOIL

2. Topsoil must be free of plants or plant parts of bermudagrass, quackgrass, Johnsongrass, nutsedge, polson ky, Canada thistle, or others as specified.

3. All topsoil shall be tested by a recognized laboratory for pH and soluble salts. A pH of 4.5 to 7.5 is required. Soluble salts shall not be higher than than 500 parts per million.

7. ADDITIVE FOR BACKFILL MIX

A. Wood Residuals: 1. Source shall be well composted, not chemically treated.

2. Physical properties - grading:

U.S. Sieve Dry Weight Percent Passing

3. Organic content by ash analysis: 90 - 100 percent dry weight 4. Chemistry:

a. Saturation Extract Conductivity (EC) — Nil - 3.5 3.0 - 5.5

5. Salinity: Maximum saturation extract conductivity 1.0 millimhos per cm at 25 degrees centigrade.

B. Sand 1. Physical Properties - Grading:

U.S. Sieve Dry Weight Percent Passing

Saturation Extract Conductivity (EC) ----- Nil - 3.0 Sodium Absorption Ratio (SAR) --- Nil - 6.0 Boron - ppm in saturation extract solution — Nil - 1.0

Available calcium - sodium acetate extractable - ppm Nil - 2000

C. Treble Superphosphate: Commercial product containing 19 to 20 percent available phosphoric acid.

A. Shredded long fiber hardwood.

B. Mulch shall have been shredded within the last six (6) months.

9. PLANTING MIX

A. Planting mix shall be prepared at approved on-site staging area using approved on-site existing soil. Mix minimum quantities of 20 cubic yards or sufficient mix for entire job if less than 20 cubic yards is required.

B. Thoroughly mixed in the following proportions for tree and shrub planting mix:

.2 cy Sharp sand 3 by Wood residuals

4.5 lbs. Treble superphosphate 5 lbs. Dolomite limestone (eliminate for acid loving plants)

10. LAYOUT AND EXCAYATION OF PLANTING AREAS

A. Plants shall be placed in each zone at random locations shown at spacing as indicated on the plan.

B. The Landscape Architect or qualified professional will check location of plants in the field and shall adjust to exact position before planting begins. C. Subsoil shall not be worked when moisture content is so great that excessive compaction will occur, nor when it is so dry that clods will not readily break. Water shall be applied, if necessary, to bring soil to an optimum moisture content before tilling and planting. D. Tree pits shall not be excavated more than 24 hours in advance of planting operation. Tree pits shall be excavated to the following dimensions:

Excavation for ___Width___ Depth Canned Trees B&B Trees E. Excavate shrub pits to the following depths:

Excavation for <u>Width</u> Ball or Can + 8 In. Can + 4 In., not less than 12 In. Shrubs

11. PREPARING PLANT MATERIALS FOR PLANTING

A. Container stock shall be removed carefully after cans have been cut on two sides with approved cutter. Do not use spade to cut cans. Don not lift or handle container plants by tops, stems or trunks at any time.

B. Do not bind or handle any plant with wire or rope at any time so as to damage bark or break branches. Lift and handle plants only

C. Balled and burlapped (B&B) plants shall have firm balls of earth. Plants moved with a ball will not be accepted if the ball is cracked or broken before or during planting operations. B&B material shall be dug only when dormant. Pre-dug stored B&B material shall be inspected and approved

D. Do not force roots for bare rooted trees into excavated pits - custom dig pits to receive roots without deformation.

A. Mix soli base, amendments and chemical additives by mechanical means. B. Soil and sand bases shall be completely pulverized and free of lumps or aggregated material. Moisture content of base materials shall not be such that chemical granular or pelletized additives become dissolved during the mixing process. C. Mix media in quantities of not less than 20 cubic yards or mix total quantity required if less than 50 cubic yards. The Contractor shall be responsible for continuity between batches.

13. INSTALLATION OF CONTAINERIZED PLANT MATERIAL

D. Contaminating backfill mix with unmixed soil in backfill mixing lots shall be avoided.

A. Scarify the walls and bottom of all plant pits immediately prior to the placement of plant and backfill mix. The Contractor shall remove all glazing of soil caused by an auger or mechanical hole digger.

B. Wells around trees and shrubs: after planting is complete form a soll well 3 inches high around each plant, extending to the outer limit of the plant pit in accordance with planting details shown on the Drawings. C. Smooth planted areas to conform to specified grades after full settlement as occurred. Contractor shall bear final responsibility for proper surface drainage of planted areas. Any discrepancy in the drawings or specifications, obstructions on the site, or prior work done by another party, which Contractor feels precludes establishing proper drainage, shall be brought to the attention of the Landscape Architect in writing. D. Water all plants immediately again after planting.

E. Spread mulch in required areas to the compacted depth of 2 inches. F. install tree shelters around new plantings.

GUARANTEE:

A MINIMUM SURVIVAL RATE OF 75% IS TO BE GUARANTEED BY THE DEVELOPER AT THE END OF THE TWO YEAR MAINTENANCE PERIOD.

1. THE PRECISE LOCATION OF PLANT MASSINGS WILL BE LOCATED IN THE FIELD BY LANDSCAPE ARCHITECT.

2. GRID PATTERNS WILL BE AVOIDED

3. PLANT MATERIAL MAY BE GROUPED IN CLUSTERS OF NO MORE THAN 5 TO 7 WHIPS OF THE SAME PLANT. PLANTS WILL BE INSTALLED IN A RANDOM FASHION WITHIN SPECIFIED ZONES.

4. ALL PROPOSED SPECIES ARE TREES. NO SHRUBS SHALL BE PLANTED

Zone i (Wetland and buffer) Plants required -35 (Approx 0.1 acres x 350 whips/acre) Quantity Stage Common name Stratum Remarks Acer rubrum Red Maple 18"-24" cont. stock Tree Botula niara Rivor birch 18"-24" cont. stock Early Troo FACW 18"-24" cont. stock Troo FACW Cornus amomum Silky dogwood MIA Platanus occidentalis American sycamore 18"-24" cont. stock Tree Tree 18'-24' cont. stock FACW+ Quercue bicolor Swamp white oak Mid Jimus americana American elm 18"-24" cont. stock 5 MId Tree | FACW-

Zone II (Meeic) Plante required -105 (Approx. 0.3 acres x 350 whips/acre)

Species	Common name	Size	Quantity	Stage	Stratum	Romarko
Acor rubrum	Red maple	18°-24° cont. stock	40	Ail	Tree	FAC
Diospyros virginiana	Persimmon	18"-24" cont. stock	10	Late	Troo	FAC-
Fraxinus pensylvanica	Green seh	18"-24" cont. stock	25	Early	Tree	FACW
Nyesa sylvatica	Black gum	18"-24" cont. stock	10	Late	Tree	FAC
Quarcus palustris	Pin oak	18*-24* cont. stock	20	Early	Tree	FACW
TOTALS			105			

Zone III (Upland) Plants required -910 (Approx. 2.6 acres x 350 whips/acre)

Specie s	Common name	Sixe	Quantity	Stage	Stratum	Remarks
Corcio canadoneio	Eastorn rod bud	18"-24" cont. stock	. 95	Late	Troo	FACU
Liriodendron tulipifera	Tulip poplar	18*-24* cont. stock	215	Early	Tree	FACU
Pinus strobus	Eastern White Pine	18*-24* cont. stock	95	Early	Troo	FACU
Prunua sarotina	Black cherry	18"-24" cont. stock	180	Early	Tree	FACU
Quercus alba	White oak	18*-24* cont. stock	100	MId	Troo	FACU
Quercue rubra	Northern red oak	18*-24* cont. stock	100	Mid	Troo	FACU
Saccafrac albidum	Saccafrac	18*-24* cont. stock	30	Early	Tree	FACU
Viburnum prunifolium	Black haw	18*-24" cont. stock	95	Late	Treel Shrub	FACU
TOTALS			910			

Zone IV (Landecape fringe) Plante required - 100 (Approx. 0.6 acres x 200 1°cal. trees/acre) See Note 3°

Species	Common name	Sixe	Quantity	Stage	Stratum	Romarko
	C1	Cl Ol and about			*	540
Amelanchier canadensis	Serviceberry	6'-8' cont. stock	20	Lato	Tree	FAC
Liriodendron tulipifera	Tulip poplar	1" callper cont. stock	20	Early	Tree	FACU
Pinus strobus	Eastern white pine	1" caliper cont. etock	20	Mid	Tree	FACU
Quorcuo alba	White oak	1" caliper cont. stock	20	Mid	Troo	FACU
Quorcus rubra	Northern red oak	1" caliper cont. stock	20	Mid	Tree	FACU
						·
TOTALS			100			

TOTALS

1. SMALL-SIZE PLANT MATERIAL SPECIFIED IN ZONES I, II, AND III SHALL BE POTECTED IN TREE SHELTERS. 2. REFORESTATION CREDIT DERIVED FROM LANDSCAPING WITHIN ZONE IV TOTALS 0.14 ACRES OR 6300 S.F., DERIVED AS FOLLOWS: (9 SHADE TREES X 400 S.F.) + (12 EVERGREEN TREES X 225 S.F.) = 6300 S.F.

3. A SURETY IN THE AMOUNT OF \$36,329.00 SHALL BE POSTED FOR FOREST RETENTION (4.17 ACRES x 43560 S.F./ACRE x \$0.20/9.F.). A SURETY IN THE AMOUNT OF \$74,275.00 SHALL BE POSTED FOR REFORESTATION (3.68 ACRES x 43560 S.F. AT \$0.50/9.F. MINUS x 11,750 S.F. AT \$0.50/9.F.).

TOTAL FOREST CONSERVATION SURETY EQUALS \$110,604.00.

BOUNDARY PER DMW FIELD SURVEY DATED DECEMBER 2001. TOPO FLOWN BY VIRGINIA RESOURCE MAPPING, DECEMBER, 2001.

APPROX WETLAND LOCATION PER DMW FIELD VISIT DATED APRIL 2000. OFF SITE SEPTIC RESERVE AREAS PER RECORD PLATS, LOCATIONS OF WELLS NOT AVAILABLE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 4-13-04 CHIEF, BUREAU OF HIGHWAYS DATE APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT)

Date No. Revision Description NORTHRIDGE DEVELOPMENT, LLC OWNER:

14045 GARED DRIVE GLENWOOD, MD 21738 DEVELOPER: JAMES F. SELFRIDGE BUILDERS, INC. 14045 GARED DRIVE

GLENWOOD, MD 21738

Daft·McCune·Walker, Inc. 200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296–3333 Fax 296-4705

FOX MEADOW

A Team of Land Planners Landscape Architects

15 FOX MEADOW (FORMERLY PFEFFERKORN PROPERTY) FINAL FOREST CONSERVATION NOTES AND DETAILS

MM Chk By

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3.25.04

1AT OR LIF BLOCK ZONE 983/492 13, 19, 20 RR, RC

Scale AS SHOWN | Proj. No. 00042.B AJS Drn By AJS/MSS Date 1/07/04

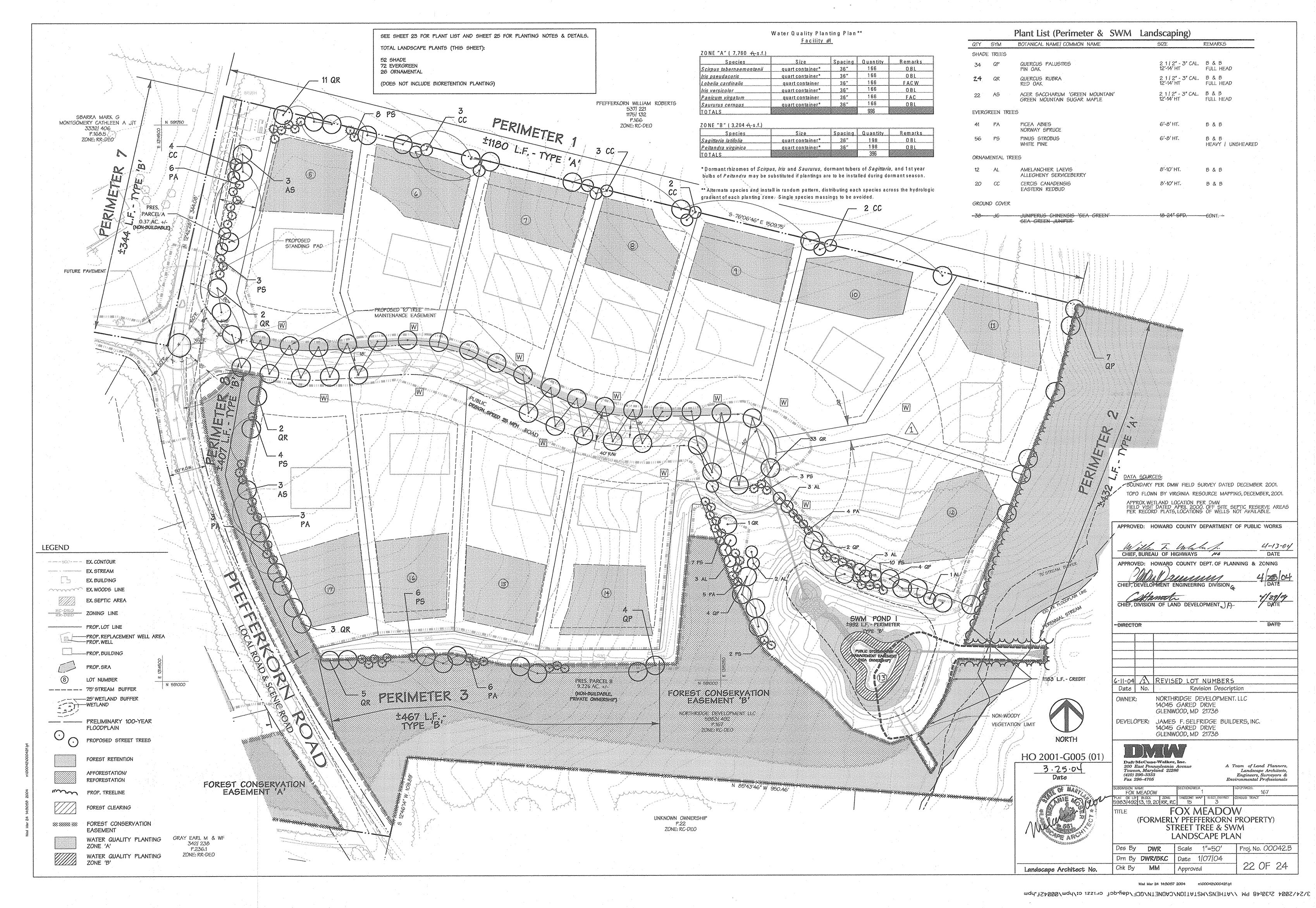
21 OF 24

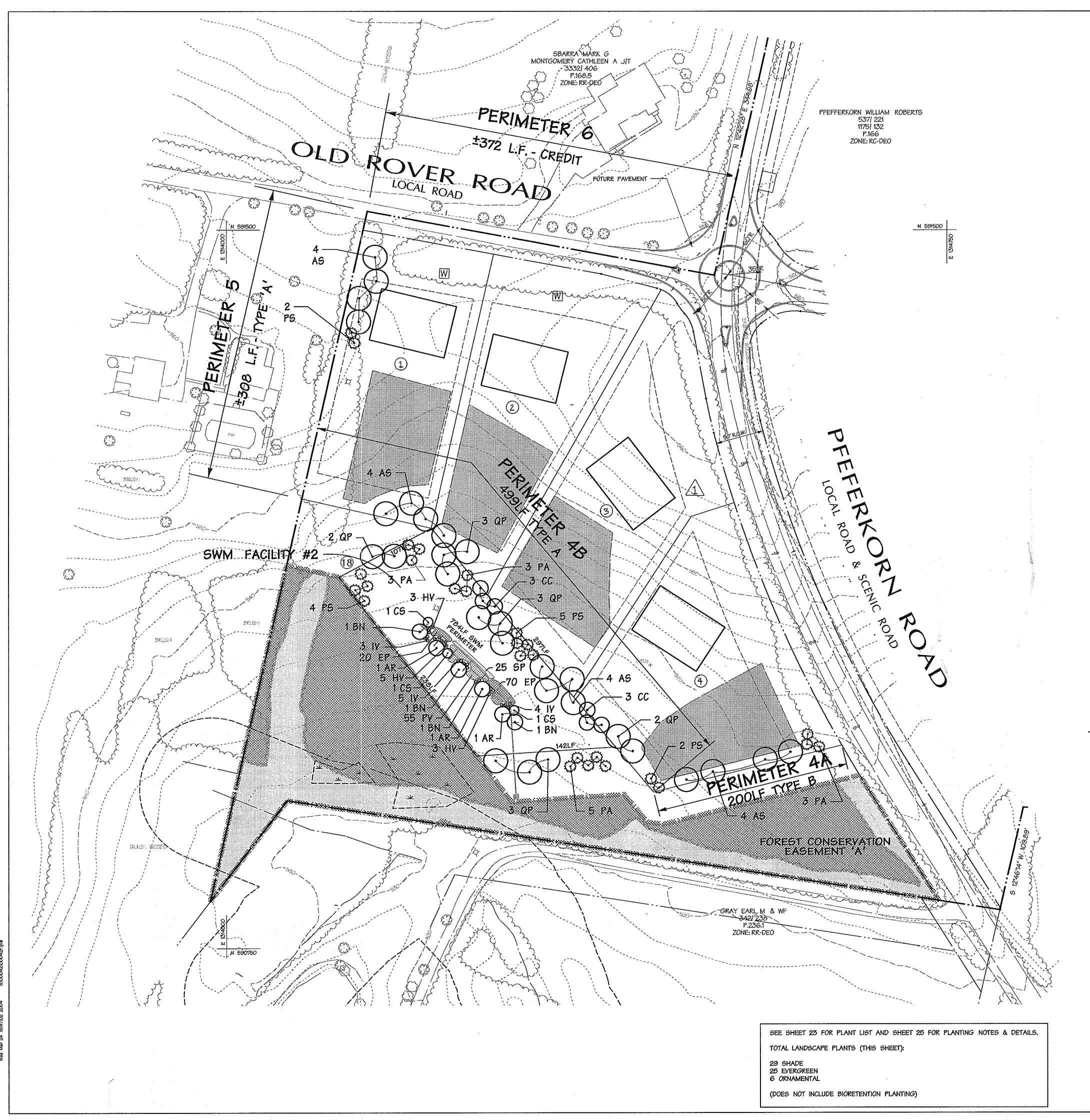
Prior to planting, planting stock shall be inspected by the landscape architect or other qualified professional familiar with this plan. Plant material not conforming to standard nurseryman specifications for size, form, vigor, roots, trunk wounds, insects and disease should be replaced.

These areas should be as shown on the temporary seeding notes on sheet 8.

A. On-site material or imported from same source as topsoil used on site for finish grading. 1. Uniform composition, free of subsoil, clay lumps, stones, stumps, roots or similar objects larger than 1 inch.

Landscape Architect No.





Bioretention Area Plant List

8 postos	Common name	Sizo	Quantity	Spacing .	indicator
·					status
Acor rubrum (AR)	red maple	2 1/2" -5" callper, container grown	3	As shown	FAC
Botula nigra (BN)	river birch	2 1/2" - 3" caliper, container grown	3	As shown	FACW
Cornus stolonifera (CS)	red-osier dogwood	18" - 24" height" container grown	3	As shown	FACW
Hamamelis virginiana (HY)	witch hazel	18" - 24" height, container grown	13	As shown	FAC
llox vorticiliata (IV)	winterberry	18" - 24" height"container grown	12	As shown	FACW
Eupatorium porpuroum (EP)	Joe Pye weed	quart-sized container*	70	Approx 3'OC throughout	FAC
Panicum virgatum (PV)	switchgrass	quart-sized container*	55	Approx 3'OC throughout	FAC
Scirpus pungens (SP)	common three square	quart-sized container*	25	Approx 3'OC throughout	FACW

^{*} Note: Plugs, dormant rhizomes, or bare root stock may be substituted if available.

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACE ROADI			ADJACENT to PERIMETER PROPERTIES					
LANDSCAPE TYPE "A"				P 1	P 2			P 4B	P 5
LINEAR FEET OF PERIMETER				1180 LF.	432 LF.			499 LF.	308 LF.
LANDSCAPE TYPE "B"	P 6	P 7	P 8			P 3	P 4A		
LINEAR FEET OF PERIMETER	313 LF.	344 LF.	407			467 LF.	200 LF.		
LANDSCAPE TYPE "C"									
LINEAR FEET OF PERIMETER									
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)	313 LF.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CREDIT FOR BERM (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of Plant's Required Shade Trees Evergreen Trees Shrubs	0 0	7 9 0	8 10 0	20 0 0	7 0 0	9 12 0	4 5 0	8 0 0	5 0 0
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	0 0	5 9 4	8 10 0	11 8 10	7 0 0	9 12 0	4 5 0	8 0 0	4 2 0

^{*} NOTE: STREET TREES WILL BE PROVIDED @ 1/40 LF.
* THE DEVELOPER WILL PROVIDE ALL PERIMETER LANDSCAPE OBLIGATIONS

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING

POND #	ı	2
LINEAR FT OF PERIMETER (TYPE "B")	1175 LF	784 LF
NUMBER OF TREES REQUIRED SHADE TREES @ 1/50 L.F. EVERGREEN TREES @ 1/40 L.F.	20 25	16 20
CREDIT FOR EXISTING VEGETATION	183 LF	NA
CREDIT FOR OTHER LANDSCAPING	NA	- NA
NUMBER OF TREES PROVIDED SHADE TREES EVERGREEN TREES FLOWERING TREES	11 31 12	13 20 6

^{*} THE DEVELOPER WILL PROVIDE ALL SWM LANDSCAPE OBLIGATIONS

LEGEND

----- EX. CONTOUR

EX. STREAM EX. BUILDING

EX. WOODS LINE EX. SEPTIC AREA

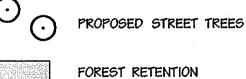
RC-DEO ZONING LINE ----- PROP. LOT LINE

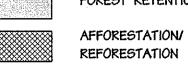
PROP. REPLACEMENT WELL AREA PROP. WELL

PROP. BUILDING

LOT NUMBER ---- 75' STREAM BUFFER ____25'WETLAND BUFFER WETLAND

---- PRELIMINARY 100-YEAR FLOODPLAIN





PROP. TREELINE



****** FOREST CONSERVATION EASEMENT

TOPO FLOWN BY VIRGINIA RESOURCE MAPPING, DECEMBER, 2001. APPROX.WETLAND LOCATION PER DMW
FIELD VISIT DATED APRIL 2000. OFF SITE SEPTIC RESERVE AREAS
PER RECORD PLATS, LOCATIONS OF WELLS NOT AVAILABLE.

BOUNDARY PER DMW FIELD SURVEY DATED DECEMBER 2001.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CHIEF, BUREAU OF HIGHWAYS 4-13-04 DATE APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING CHIEF, DIVISION OF LAND DEVELOPMENT A

6-11-04 A REVISED LOT NUMBERS Date No. Revision Description NORTHRIDGE DEVELOPMENT. LLC 14045 GARED DRIVE

GLENWOOD, MD 21738 DEVELOPER: JAMES F. SELFRIDGE BUILDERS, INC. 14045 GARED DRIVE GLENWOOD, MD 21738

Daft McCune Walker, Inc. 200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296–3333 Fax 296–4705

NORTH

HO 2001-G005 (01)

Landscape Architect No.

3.25.04

A Team of Land Planners,

23 OF 24

JEDMISION NAME FOX MEADOW AT OR LIF BLOCK ZONE TAXIZONE MAP ELECT. DISTRICT CENSUS TRACT 983/492 13, 19, 20 RR, RC 15 3 FOX MEADOW (FORMERLY PFEFFERKORN PROPERTY)

Des By **DWR** Drn By DWR/BKC Date 1/07/04 Chk By

STREET TREE & SWM LANDSCAPE PLAN Proj. No. 00042.B Scale 1"=50'

Wed Mar 24 16:47:01 2004 h:\00042\00042f.lpla

- 2. All equipment and tools shall be placed so as not to interfere or hinder the pedestrian and vehicular traffic flow. See Seasonal Plant List for planting times of bulbs and seasonal
- 3. The contractor shall coordinate with lighting and irrigation contractors regarding timing of installation of plant material.
- 4. The contractor shall insure that his work does not interrupt established or projected drainage
- 5. During planting operations, excess waste materials shall be promptly and frequently
- 6. The contractor is advised of the existence of underground utilities on the site. Their exact location shall be verified in the field with type owner or general contractor prior to the commencement of any digging operations. In the event they are uncovered. the contractor shall be held responsible for all damage to utilities and such damage shall not result in any additional expenses to the owner.
- 7. If utility lines are encountered in excavation of tree pits, other locations for trees shall be made by the contractor without additional compensation. No changes of location shall be made without approval of the landscape architect.
- 8. Maintain positive drainage out of planting beds at a minimum 2% slope. All grades, dimensions, and existing conditions shall be verified by the contractor on site before construction begins. Any discrepancies shall be brought to the attention of the landscape
- 9. Every possible safeguard shall be taken to protect building surfaces, equipment, and furnishing. The contractor shall be responsible for any damage or injury to person or property which may occur as a result of his negligence in the execution of the work.
- 10. In the event of variation between quantities shown on the plant list and the plane, the plane shall control. The contractor is responsible for verifying all plant quantities prior to the commencement of work. Sod quantity take-offs are the responsibility of the contractor. All discrepancies shall be reported to the landscape architect for clarification prior to bidding. The contractor shall furnish plant material in sizes as specified in plant list.
- 11. The contractor shall stake all material located on the site for review and/or adjustment by the landscape architect prior to planting. All locations are to be approved by the landscape architect before excavation.
- 12. Plante shall conform to current "American Standards for Nursery Stock" by American Association of Nurserymen (AAN), particularly with regard to size, growth, size of ball, and density of branch structure. Plant material shall be tagged at the source by the landscape architect unless this requirement is specifically waived.
- 13. All plants (B&B or container) shall be properly identified by weather-proof labels securely attached thereto before delivery to project site. Labels shall identify plants by name, species, and size. Labels shall not be removed until the final inspection by the landscape architect or agent in charge.
- 14. Any material and/or work may be rejected by the landscape architect if it does not meet the requirements of the specifications. All rejected materials shall be removed from the site by
- 15. No substitutions shall be made without written consent of the owner or landscape architect.
- 16. The landscape architect or owner shall have the right, at any stage of the operations, to reject any and all work and material which, in his opinion, does not meet the requirements of these plans and specifications.
- 17. The contractor shall be wholly responsible for stability and conditions of all trees and shrubs and shall be legally liable for any damage caused by instability of any plant materials.
- All proposed trees to be installed either entirely in or entirely out of planting beds. Planting bed lines are not to be obstructed. All shrubs and ground cover areas shall be planted in continuous prepared bed and top dressed with 3-inch shredded hardwood mulch. Mulch shall have been shredded within the last six months.
- 19. All planting beds adjacent to lawn, sod, or seeded areas shall be spade edged.
- 20. Maintenance shall begin after each plant has been installed and shall continue until 90 days after final acceptance by the architect or owner representative. Maintenance includes mowing of turf. watering, pruning, weeding, fertilizing, mulching, replacement of sick or dead plants, and any other care necessary for the proper growth of the plant material. The contractor must be able to provide continued maintenance if requested by the owner.
- 21. Upon completion of all landscaping, an acceptance of the work shall be held. The contractor shall notify the landscape architect or owner for scheduling the inspection at least seven (7) days prior to the anticipated inspection date.
- 22. All trees shall be guaranteed for 12 months from the date of acceptance. All shrubs and ground covers shall be guaranteed for 12 months from the date of acceptance.
- 23. The contractor is responsible for testing project soils. The contractor is to provide a certified soils report to the owner. The contractor shall verify that the soils on site are acceptable for the proper growth of the proposed plant material. Should the contractor find poor soll conditions, the contractor shall be required to provide soil amendments as necessary. These amendments shall include, but not be limited to, fertilizers, lime, and topsoil. Proper planting soils must be verified prior to planting of materials.
- 24. PLANTING MIX:
- a. Planting mix shall be prepared at approved on-sit staging area using approved on-site existing soil. Mix minimum quantities of 20 cubic yards or sufficient mix for entire lob if less than 20 cubic yards is required.
- b. Thoroughly mixed in the following proportions for tree and shrub planting mix
- .5 by existing soil .2 cy sharp sand
- .3 cy wood residuals
- 4.5 lbs treble superphosphate 5 lbs dolmonite limestone (eliminate for acid loving plants)
- c. For bed planting, shrubs and groundcover spaces 24 inches or closer, incorporate the following ingredients per 20 of and incorporate into top 8 inches of existing solls by rototilling or similar method of incorporation.
- .2 cy sharp sand .3 cy organic material
- 4.5 lbs treble superphosphate 5 lbs dolmonite limestone (eliminate for acid loving plants)
- 25. The contractor shall dispose of stumps and major roots of all plants to be removed. Any depressions caused by removal operations shall be refilled with fertile, friable soil placed and compacted so as to reestablish proper grade for new planting and/or lawn areas.
- 26. The contractor shall insure adequate vertical drainage in all plant bods and planters.
- 27. All disturbed areas on the site not planted with shrubs or ground cover shall be fine graded and seeded or sodded as noted on landscape plan.
- 28. All sod shall be obtained from areas having growing conditions familiar to areas to be covered. Areas to be sodded shall be raked of stones and debris. Debris and stones over 1 inch in diameter shall be removed from the site. All damaged sod will be rejected. All sod must be placed with staggered joints, tightly butted, with no inequalities in grade. Place all sod in rows at right angles to slopes (where applicable).
- 29. All planting procedures shall conform to Daft McCune Walker Inc. specifications.
- 30. Some field located plants are not graphically shown on this plan but are within the limit of construction line. All plants (field located plants and graphically shown plants) are noted on the plant list.

Water Quality Planting Specifications

PART 1 GENERAL

1.01 DESCRIPTION: Work consists of all labor, materials, equipment and services necessary for and incidental to the execution and completion of WETLAND PLANTS as indicated on the Drawings and

A. Include: 1. Furnishing of all plant material.

2. Soil preparation, planting operations. 3. Maintenance and guarantee

1.02 QUALITY ASSURANCE

A. American Association of Nurserymen (A.A.N.): "American Standard for Nursery Stock", (A.N.S.I. Z60.1) as expanded herein

B. Nomenclature: In accordance with HORTUS III by L. H. Bailey. C. United States Department of Agriculture: Textural Classification Diagram for Solls.

1.03 STANDARD OF COMPARISON A. When the Drawings indicate a total quantity of five (5) or more of an individual plant (other than

bulbs or perennials) the Contractor shall obtain approval of a standard of comparison prior to delivery on site. Assemble samples of all plants to be evaluated as "standards" at the principal business location of the Contractor. Notify Owner to schedule an inspection for approval of "standards" and to obtain record photographs. Photographs of each "standard" shall be used for comparison of all material subsequently installed on the site. 1.04 SUBMITTALS

A. Source: Notify the Owner, in writing, of source of all material before delivery.

A. Root stock of the plant material shall be kept moist during transport from the source to the Job site

B. Transport and handle plants so that foliage, roots, or balls are protected from breakage, sun and winds. Tops or roots of plants allowed to dry out or which have been damaged or disturbed root balls will be cause for rejection.

A. The Contractor shall use quantities of wetland plants noted on the plant list.

1.07 PROJECT CONDITIONS

1.05 DELIYERY, STORAGE AND HANDLING

A Planting shall commence following approval of the as-built certification of the subject water quality facility. B. All emergent wetland plantings shall be installed between April 15 and June 30 or as directed by the Landscape Architect. Do not plant when ground is frozen. Do not use frozen planting soil at any time.

A. Start of Planting: Installation of plant material into excavated pits or beds.

B. Payment Release Inspection: Conducted monthly by the Owner or designated representative to verify quantity only for partial payment to the Contractor. Payment release inspection does not waive any requirements of the standard of comparison or initial acceptance clause. C. Initial inspection: Conducted at the request of the Contractor and the Owner when 90% or more of all planting and related tasks are complete.

D. Initial Acceptance: Occurs when all plant material is in place in accordance with the specifications

E. Maintenance Period: From start of planting to final acceptance. F. Guarantee Period: From Initial acceptance and continuing for 90 days thereafter, excluding the

G. Final Acceptance: Occurs after Contractor has completed all outstanding Items, as determined by the Owner, at the end of the maintenance and guarantee period. 1.09 GUARANTEE AND REPLACEMENT

A. All plante in an impaired dead or dying condition prior to initial acceptance and prior to final acceptance shall be removed and replaced. Replacement materials shall be the same size as other unreplaced material considering growth that has occurred since original installation. Methods of installation shall be identical to the original. The contractor shall guarantee 85% survivorship at the

B. Replacements shall be made between April 15 and June 30, the season following the initial planting and shall conform to the planting specifications listed above.

C. The contractor shall notify the Landscape Architect to arrange a site meeting to determine the replacement requirements, at the end of the guarantee period. 201 PLANTS

A. Sound, healthy, vigorous, free from plant diseases, insect pests or their eggs. B. Plants cut back from larger sizes or pruned prior to delivery will not be accepted.

C. It is anticipated that these plants will need to be obtained from a nursery source. These plant species are normally unavailable from standard landscape nursery sources. D. Shape and Form: Plant materials shall be symmetrical and typical for the variety and species.

E. Container: The soil/root masses shall be thoroughly moist upon delivery to the job site. Any dry

and light weight plants shall be rejected. If not planted immediately after being delivered to the job site, the plants shall be stored out of direct exposure to the sun and wind and their root masses maintained moist, through periodic watering, until the time of planting. Until the removal of the plants from the containers, the soil/root masses shall be the size of the specified

soil exists on the bottom of the containers, the plants will be rejected since they have not been grown The plants shall appear healthy with no leaf spots, leaf damage, leaf discolorations, leaf wilting,

The container size shall be at least as large as indicated in the specifications or shown in the plant tables/lists. Plants shall not be rejected if supplied in containers larger than specified. F. Fiber or Peat Pot: If not planted Immediately after being delivered to the job site, the plants shall be stored out of direct exposure to the sun and wind and their pots and associated root masses maintained moist, through periodic watering, until the time of planting.

The plants shall be well-rooted through the sides and bottoms of the pots and firmly contained therein. Should the plants be removed from the pots by holding them from their tops and gently pulling on

If growing, the plants shall appear healthy with no foliar spots, discolorations, wilting, or other evidence of the presence of disease or insects.

Plants shall not be rejected if supplied in pots larger than specified. The number of plante, steme, or culms per pot as specified or shown in the plant tables/lists at least shall

G. Dormant Propaguic (Herbaceous): If not planted immediately after being delivered to the job site, the dormant propagules shall be stored out of the direct exposure to the sun and wind, and they shall be protected by covering with straw, peat moss, compost, or other suitable materials and shall be maintained moist, through periodic watering, until the time of planting.

The bodies and shoots associated with the propagules shall have turgor or be rigid to the touch. If the bodies and/or shoots associated with the propagules are soft or mushy or appear rotten or decomposed, the plant materials shall be rejected

Rhizome (stolon) sections shall provide a minimum of two shoots per section or Rhizome (stolon) sections containing at least a terminal shoot shall be a minimum of four inches in length (in order to ensure sufficient stored energy to support the new growth). Rhizome sections containing shoots that are soft or mushy or otherwise appear rotten shall not be accepted.

Suckers shall contain a terminal shoot and be a minimum of four inches in length (in order to ensure sufficient stored energy to support the new growth). Growing Bare Root Plant (Herbaceous): The plants shall contain new roots that are clean and white

If not planted immediately after delivery to the job site, the plants shall be stored out of direct exposure to the sun and wind and the new roots shall be protected by the use of straw, peat moss, compost, or other suitable materials and shall be maintained moist, through periodic watering, until The plants shall appear healthy with no foliar spots, discolorations, wilting, or other evidence of the

A. Plant Fertilizer: Słow release fertilizer such as Osmocote 19-6-12 analysis (3-4 month release) or equal approved by the Landscape Architect.

B. Slow release fertilizer shall be applied at the time of planting and at the following rate: All emergent plant material - planting pit application of 1 oz. per container or bare root plant. C. Pesticides, herbicides and fungicides will not be used unless judged necessary by the wetland landecaper. If applied, quantities recommended by the Department of Agriculture shall not be exceeded. D. Fertilizer shall be delivered to the site in the original unopened containers with formulas attached.

A. Plant Locations: As shown on the Drawings.to dimensions if shown, to scale if not dimensioned. Locations subject to review by the Landscape Architect before starting excavation. B. No plant material shall be installed until the Landscape Architect has approved the finish grade of 3.02 PLANTING PROCEDURES

A. Set plants straight and plumb.

B. Plant material shall be planted in existing soil with each planting pit excavated to size sufficient to contain the entire root stock or root mass without cramping G. Where water is not available on-site the Contractor shall furnish sufficient quantities to complete

A. During planting operations, excess and waste materials shall be removed from the site on a daily basis.

B. Repair turf areas and other existing conditions damaged during planting operations, including regrading, seed, mulch and fertilization to the satisfaction of the Owner.

A. Watering of plant material shall take place at the end of each for fourteen (14) consecutive days after planting has been completed. The watering shall completely saturate the soil and partially

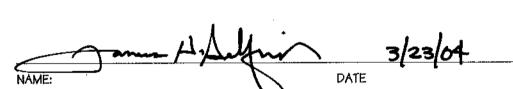
B. During maintenance period, on approximately the 1st and 15th of each month, the Contractor shall provide sufficient supervision, equipment, materials and manpower to: Keep all plants in a healthy growing condition by watering, when necessary, removing dead or dying branches, controlling insect infestations, removing sprouts, weeding. 2. Remove and replace dead or damaged plant material. Where replacement is not possible due to season, remove dead material, etc. and level pit until planting is possible.

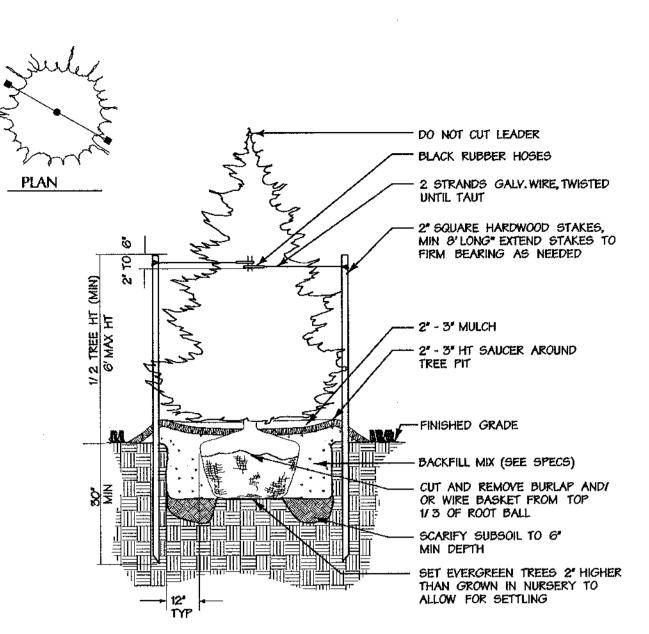
B. Notify Owner for review of activities prior to initiating maintenance operations

General Planting Notes

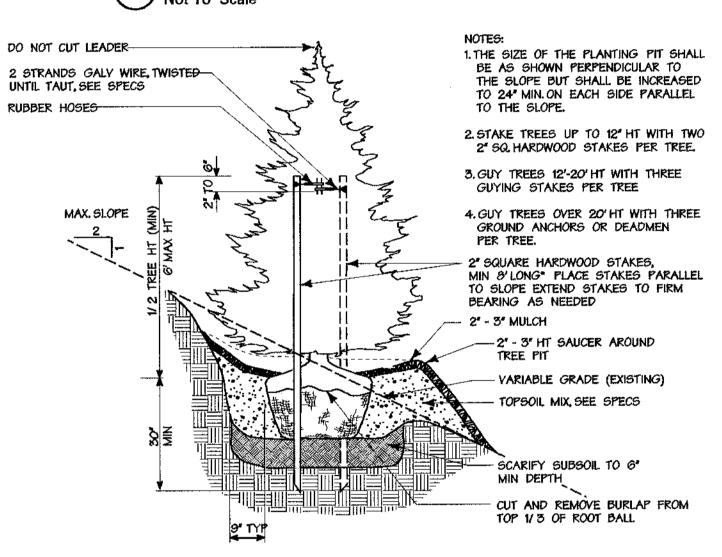
- 1. All plant material to meet A.A.N. Standards. 2. Landscape Contractor to follow landscape specification guidelines for
- Baltimore Washington Metro area approved by LCAMW. 3. No substitutions to be made without consent of Landscape Architect or Owner.
- 4. All beds to be topped with three inches of hardwood mulch.
- 5. Landscape Contractor to verify location of utilities with Owner before planting. 6. Landscape Architect/Owner shall select, verify and/or approve all plant
- material. At Owner's discretion, specimen and other plant material will be selected. 7. Landscape Contractor shall coordinate plant bed filling operations and plant material installation with General Contractor and Utilities Contractor. At the time of final inspection with acceptance, all electric, water, drainage, and fountain
- utilities, as well as all plant materials, shall remain undamaged. Likewise, Landscape Contractor and Utilities Contractor shall coordinate efforts to ensure that surface utilities are at the proper elevation relative to final grades.
- 8. Contractor shall notify Miss Utility 72 hours prior to construction. 9. The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
- 10. This plan has been prepared in accordance with the provisions of Section 16.124 of the Ho. Co. code. Financial surety for the required landscaping in the amount of \$43,350 must be posted as part of the developer's agreement. (104 shade, 81 evergreens).
- 11. Developer's/Builder's Certificate

I/we certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County code and the Howard County Landscape Manual. I/we further certify that upon completion, a certification of landscape installation, accompanied by an executed one-year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

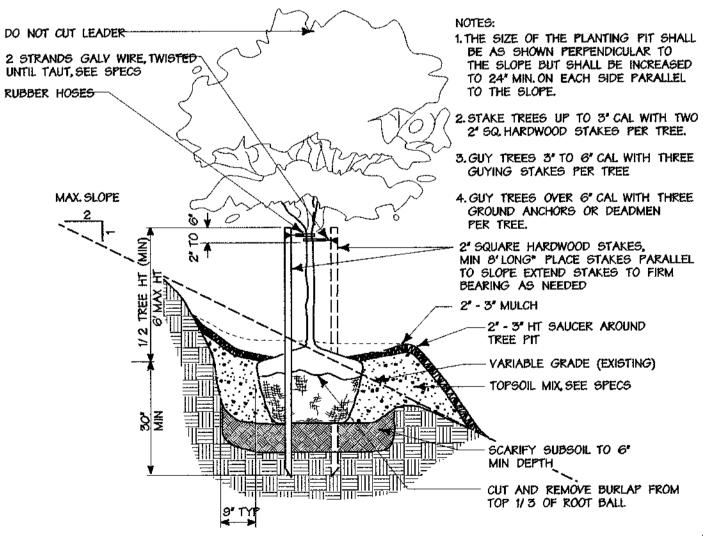




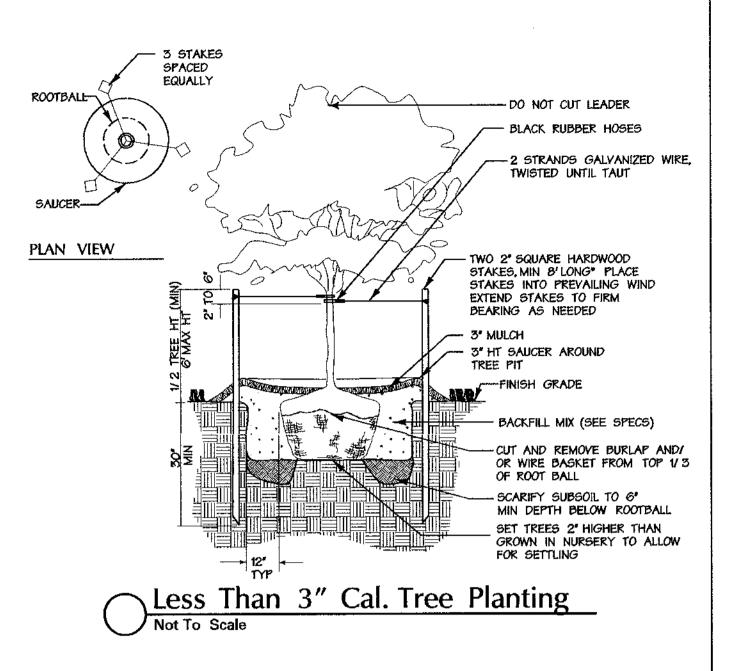
Evergreen Tree Planting Not To Scale



Evergreen Tree Planting on Slope



Tree Planting on Slope



DATA SOURCES: BOUNDARY PER DMW FIELD SURVEY DATED DECEMBER 2001. TOPO FLOWN BY VIRGINIA RESOURCE MAPPING, DECEMBER, 2001.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING Mu Vannun Date No. Revision Description NORTHRIDGE DEVELOPMENT. LLC OWNER: 14045 GARED DRIVE GLENWOOD, MD 21738 DEVELOPER: JAMES F. SELFRIDGE BUILDERS, INC. 14045 GARED DRIVE GLENWOOD, MD 21738

3.25.04

Landscape Architect No.

Daft·McCune·Walker, Inc A Team of Land Planners, 200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296-3333 FOX MEADOW

PLAT OR 1/F BLOCK ZONE TAXIZONE MAP ELECT. DISTRICT 5983/492 13, 19, 20 RR, RC 15 3 **FOX MEADOW** (FORMERLY PFEFFERKORN PROPERTY) LANDSCAPE NOTES & DETAILS

> Proj. No. 00042.B BKC Scale NONE BKC Drn By Date 1/07/04 24 OF 24 Chk By MM

_Landscape Architects,

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Engineers, Surveyors &