STATION

L.P. 2+10

STREET NAME

SERENA DYLAN WAY

ROADWAY INFORMATION CHART				
ROAD NAME	CLASSIFICATION	DESIGN SPEED	R/W WIDTH	
SERENA DYLAN WAY	PUBLIC ACCESS PLACE	25 M.P.H.	40'	

FIXTURE/POLE TYPE

OPEN SPACE LOT 7

OPEN SPACE LOT

ULTIMATE CONDITIONS SITE MAP

MOUNTED ON A 14-FOOT BLACK FIBERGLASS

FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLAN

TALBOTS WOODS II

PHASE ONE

BUILDABLE LOTS 1 - 5, OPEN SPACE LOTS 6 - 8 NON-BUILDABLE BULK PARCELS 'A', 'C' & 'D', NON-BUILDABLE PARCEL 'E' AND BUILDABLE BULK PARCEL 'B'

ZONING: R-20

TAX MAP No. 31 GRID No. 16 PARCEL Nos. 713-720



SCALE: 1" = 2000'

FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

				1
ROAD NAME	CENTERLINE STA.	OFFSET	POSTED SIGN	SIGN CO
SERENA DYLAN WAY	0+30	15' L	STOP	R1-1
SERENA DYLAN WAY	1+25	15' R	SPEED LIMIT 25	R2-1

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS
- 2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
- 3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 40 HOURS PRIOR TO ANY EXCAVATION WORK
- 4. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF
- 5. COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 31 EA AND NO. 31 EB.
- HOWARD COUNTY MONUMENT NO. 31 EA N 569641.1294, E 1374816.0271, ELEV. 468.899' HOWARD COUNTY MONUMENT NO. 31 EB - N 560730.9925, E 1376273.5700, ELEV. 452.700'
- 6. SUBJECT PROPERTY ZONED R-20 PER 02/02/04 COMPREHENSIVE ZONING PLAN AND COMP LITE ZONING REGULATIONS
- 7. BACKGROUND INFORMATION: a. SUBDIVISION NAME: TALBOTS WOODS II
- b. TAX MAP NO. 31 c. PARCELS NO. 713-720
- d. ZONING R-20
- e. ELECTION DISTRICT: FIRST
- a. NUMBER OF BUILDABLE LOTS: 5 n. NUMBER OF OPEN SPACE LOTS: 3
- i. NUMBER OF NON-BUILDABLE BULK PARCELS: . NUMBER OF BUILDABLE BULK PARCELS: 1
- . NUMBER OF NON-BUILDABLE PARCELS: 1
- I. AREA OF BUILDABLE LOTS: 3.311 ACRES m. AREA OF OPEN SPACE LOTS: 4.813 AC. # (31.6% - TO BE RECORDED WITH PHASE I)
- n. AREA OF NON-BUILDABLE BULK PARCELS: 3.352 ACRES
- O. AREA OF BUILDABLE BULK PARCEL: 3.048 ACRES p. AREA OF NON-BUILDABLE PARCEL: 0.051 ACRES
- 4. AREA OF ROADWAY TO BE DEDICATED: 0.647 ACRES r. PREVIOUS FILE NUMBERS: 5-05-010, P07-010, P-08-009, WP-08-022
- t. AREA OF 25% OR GREATER SLOPES = 0.00 AC.± u. NET AREA OF TRACT = 15.222 AC.+
- 8. OPEN SPACE REQUIREMENTS:

s. AREA OF FLOODPLAIN = 0.00 AC. ±

- a. AREA OF OPEN SPACE REQUIRED = (15.222 x 0.30) = 4.567 AC.+
- b. AREA OF NON-CREDITED OPEN SPACE = 0.00 AC.* c. AREA OF CREDITED/TOTAL OPEN SPACE PROVIDED = 4.813 AC. ± (31.6%)
- d. RECREATIONAL OPEN SPACE REQUIRED: (200 SQ.FT. PER UNIT) = 200 x 5 = 1,000 SQ.FT. e. RECREATIONAL OPEN SPACE PROVIDED ON OPEN SPACE LOT 8 = 5,521 SQ.FT. (4,886 SQ.FT. CREDITED AND 635 SQ.FT.
- NON-CREDITED (DRAINAGE & UTILITY EASEMENT)). 9. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION O
- 10. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
- 11. WATER IS PUBLIC (CONTRACT NO. 14-4070-D) SEWER IS PUBLIC (CONTRACT NO. 14-4070-D)
- 12. SOILS INFORMATION TAKEN FROM SOIL SURVEY MAP NO. 20, HOWARD COUNTY, MARYLAND
- 13. ALL EXISTING STRUCTURES LOCATED ON SITE ARE TO REMAIN UNLESS OTHERWISE NOTED.
- 16. THERE ARE NO AREAS OF STEEP SLOPES LOCATED ON THIS PROPERTY AS DEFINED BY
- AND LAND DEVELOPMENT REGULATIONS, SECTION 16.116.b.
- 17. STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH HOWARD COUNTY AND MARYLAND 378 SPECIFICATIONS RECHARGE VOLUME WILL BE PROVIDED THROUGH THE USE OF A STONE RESERVOIR. WATER QUALITY AND CHANNEL PROTECTION VOLUME WILL BE PROVIDED BY A POCKET POND (P-5) OVERBANK FLOOD PROTECTION VOLUME AND EXTREME FLOOD VOLUMES ARE NOT REQUIRED FOR THIS SITE. THE STORMWATER MANAGEMENT FACILITY WILL BE PRIVATELY OWNED BY H.O.A. AND JOINTL` MAINTAINED BY H.O.A. AND HOWARD COUNTY. THE UNDERGROUND STONE RESERVOIR AND UNDERDRAIN SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE H.O.A.
- STATE DEPARTMENT OF THE ENVIRONMENT.
- 19. THERE IS NO FLOODPLAIN WITHIN THIS SITE.
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED AND APPROVED UNDER 5-05-010. 21. THE FOREST CONSERVATION REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION
- ACT FOR THIS SUBDIVISION WILL BE FULFILLED BY PROVIDING 2.28 ACRES OF ON-SITE AFFORESTATION. A TOTAL SURETY OF \$49,658.40 BASED ON 2.28 AC. AFFORESTATION WILL BE PROVIDED WITH THE DEVELOPER'S AGREEMENT. "No Grading, clearing, dumping Or Construction Is Permitted Within The Forest Conservation Easement; However, Forest Management Practices As Defined In The Deed Of Forest Conservation Easement Are Allowed."
- 22. THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY HILLIS-CARNES ENGINEERING ASSOCIATES, INC. DATED
- OCTOBER, 2006 AS PART OF THE P-07-010 PLAN. 23. THE FOREST STAND DELINEATION AND WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE
- PROFESSIONALS, INC., DATED DECEMBER, 2003 AND APPROVED UNDER 5-05-010.

OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION.

documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748. Expiration Date 2-22-09.

- 24. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. 25. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD RIGHT-OF-WAY LINE ONLY AND NOT ONTO THE FLAG OR PIPESTEM LOT
- 27. THE LANDSCAPE SURETY IN THE AMOUNT OF \$10,030.00 FOR THE 51 SHADE, 15 EVERGREEN TREES & 16 SHRUBS FOR PERIMETER LANDSCAPE REQUIREMENTS OF SECTION 16.124:OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL WILL BE POSTED WITH THE DEVELOPER'S AGREEMENT FOR THIS SUBDIVISION. FINANCIAL SURETY FOR THE REQUIRED STREET TREES WILL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$12,000.00.
- 28. STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20'
- 29. PRIVATE WELL & SEPTIC TO BE PROPERLY ABANDONED PRIOR TO SIGNATURE OF THE FINAL PLAT. DOCUMENTATION OF PROPER ABANDONDMENT/SEALING OF THE WELLS WILL BE PROVIDED BY A LICENSED WELL DRILLER FOR THE WELL ABANDONMENT AND THE SEPTIC WILL BE PUMPED, COLLAPSED AND FILLED IN. AN AGREEMENT WILL BE RECORDED TO HOLD THE DEVELOPER RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF ALL SEPTIC EASEMENTS THAT EXCEED THE PROPOSED LOT LINE BOUNDARIES ONCE PUBLIC SEWER IS GRANTED TO PARCELS 713, 714, & 715.
- 30. THE INDIVIDUAL PARCEL DESIGNATIONS FOR THIS PROJECT ARE : A. NON-BUILDABLE BULK PARCEL 'A' - RESERVES THE RIGHT TO BE FURTHER SUBDIVIDED. AREA = 1.463 AC.* (PHASE 2)
- B. BUILDABLE BULK PARCEL 'B' RESERVES THE RIGHT TO BE FURTHER SUBDIVIDED. AREA = 3.048 AC. (PHASE 2) C. NON-BUILDABLE BULK PARCEL 'C' - RESERVES THE RIGHT TO BE FURTHER SUBDIVIDED. AREA = AC. + (PHASE 2)
- 31. THE EXISTING DRIVEWAY FROM LOT 13 IN PHASE 2 THAT EXTENDS TO TALBOT'S LANDING ROAD SHALL BE REMOVED AS A PART OF THE FUTURE PHASE 2 PROCESSING. SEE PLAN VIEW. THIS SHEET, FOR ULTIMATE CONDITIONS SITE MAP.
- 32. PROPERTY IS SUBJECT TO WAIVER PETITION WP-08-22 FROM SECTION 16.121.a.4.IV. OF THE SUBDIVISION REGULATIONS 33. THIS SUBDIVISION PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 2004 ZONING REGUATIONS PER COUNCIL BILL NO. 45-2003 AND THE ZONING REGULATIONS AS AMENDED BY COUNCIL BILL NO. 75-2003 NAD THE COMP LITE ZONING REGULATION AMENDMENTS EFFECTIVE 7/28/06. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME
- 34. SIGN POSTS: ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT OF WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3" LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP
- 36. THE STRIP OF NON-BUILDABLE BULK PARCEL 'C' BETWEEN OPEN SPACE LOT 6 AND SERENA DYLAN WAY PUBLIC ROAD R/W SHALL BE RESUBDIVIDED INTO OPEN SPACE LOT 6 TO CREATE NEW OPEN SPACE LOT 8 ON THE PLAT AND PLANS FOR PHASE
- 35. AN ADDRESS RANGE SIGN SHALL BE PROVIDED FOR LOTS 2 THRU 4 AT THE INTERSECTION OF THE CUL-DE-SAC AND THE USE-IN-COMMON DRIVEWAY. EACH NUMBER SHALL BE A MINIMUM OF 3" PLAIN BLOCK LETTERING. IN ADDITION, THERE SHALL BE AN ADDRESS SIGN AT THE POINT WHERE EACH INDIVIDUAL DRIVEWAY INTERSECTS WITH THE USE-IN-COMMON DRIVEWAY.

TALBOTS WOODS II

BUILDABLE LOTS 1 - 5, OPEN SPACE LOTS 6 - 8 NON-BUILDABLE BULK PARCELS 'A', 'C' & 'D', NON-BUILDABLE PARCEL 'E' AND BUILDABLE BULK PARCEL 'B'

ZONING: R-20
TAX MAP No. 31 GRID No. 16 PARCEL Nos. 713 Through 720
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND DATE: DECEMBER, 2008

F-08-194

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

EXISTING CONDITIONS SITE MAP

5107 TALBOTS LANDING ELLICOTT CITY, MARYLAND 21043

5191 TALBOTS LANDING ELLICOTT CITY, MARYLAND

(410) 788-6672

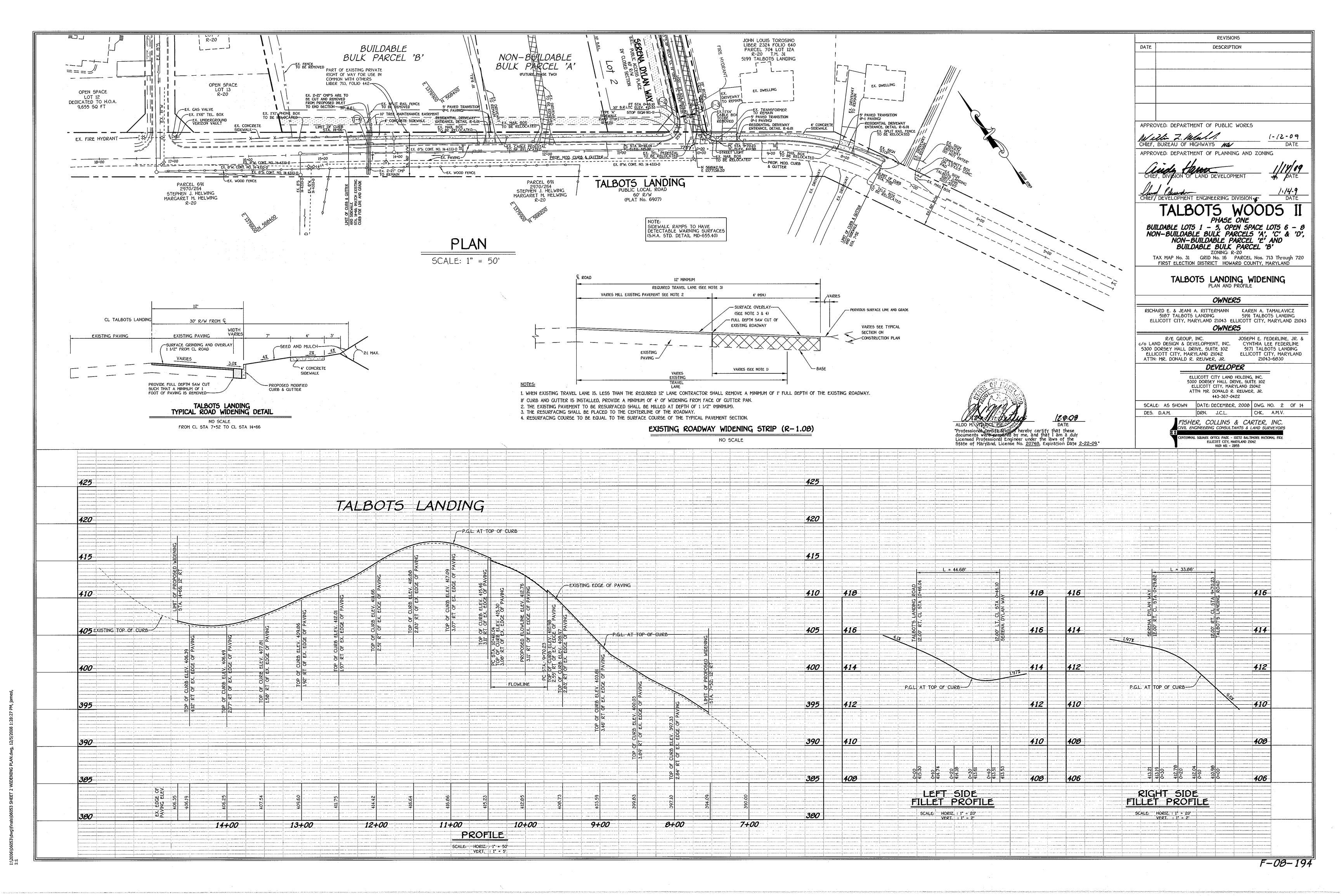
c/o LAND DESIGN & DEVELOPMENT, INC 5300 DORSEY HALL DRIVE, SUITE 102 ELLICOTT CITY, MARYLAND 21042 ATTN: MR. DONALD R. REUWER, JR.

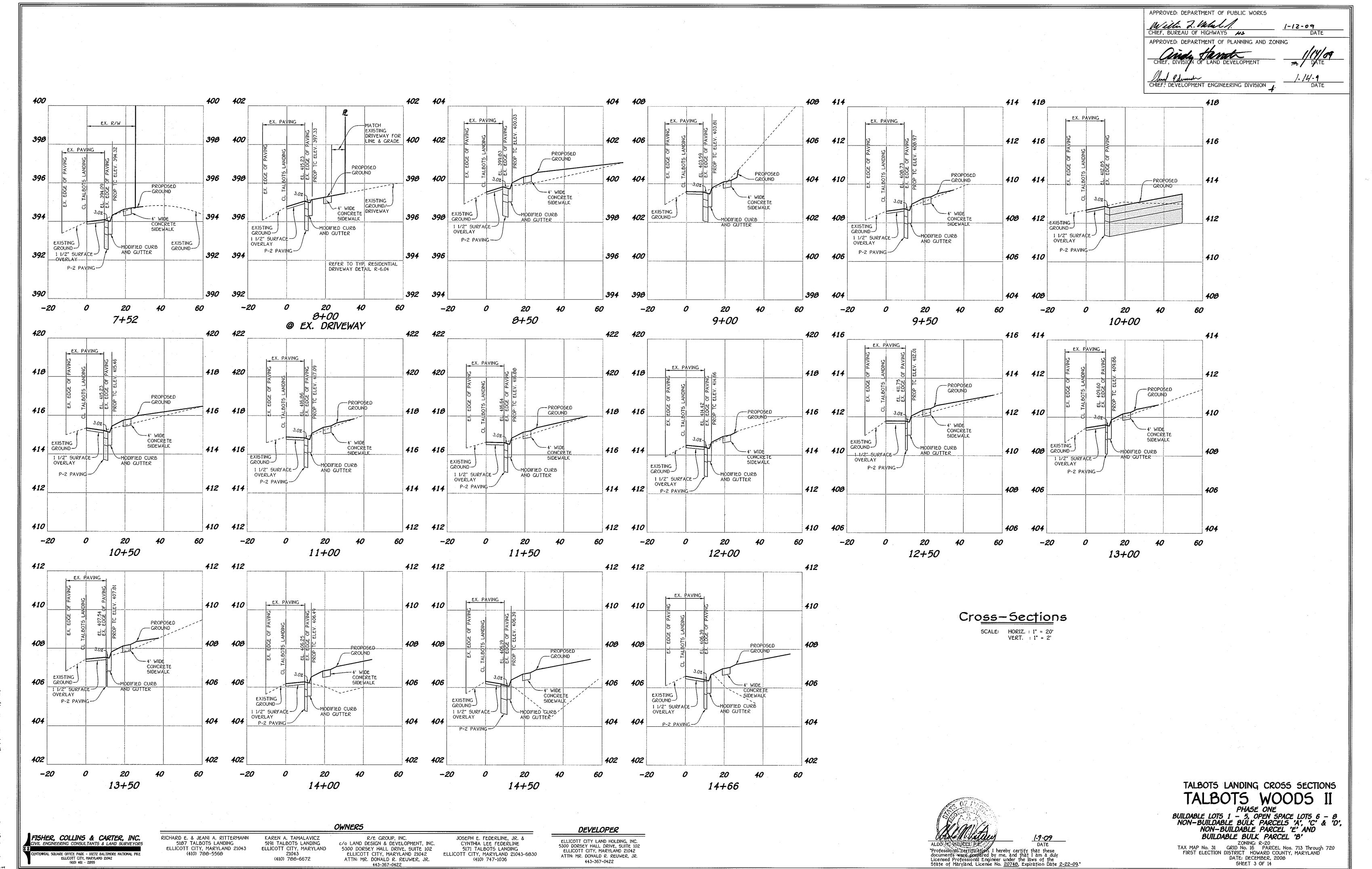
DENOTES PHASE ONE

LOTS 1 - 8

JOSEPH E. FEDERLINE, JR. & CYNTHIA LEE FEDERLINE 5171 TALBOTS LANDING ELLICOTT CITY, MARYLAND 21043-6030 (410) 747-1036

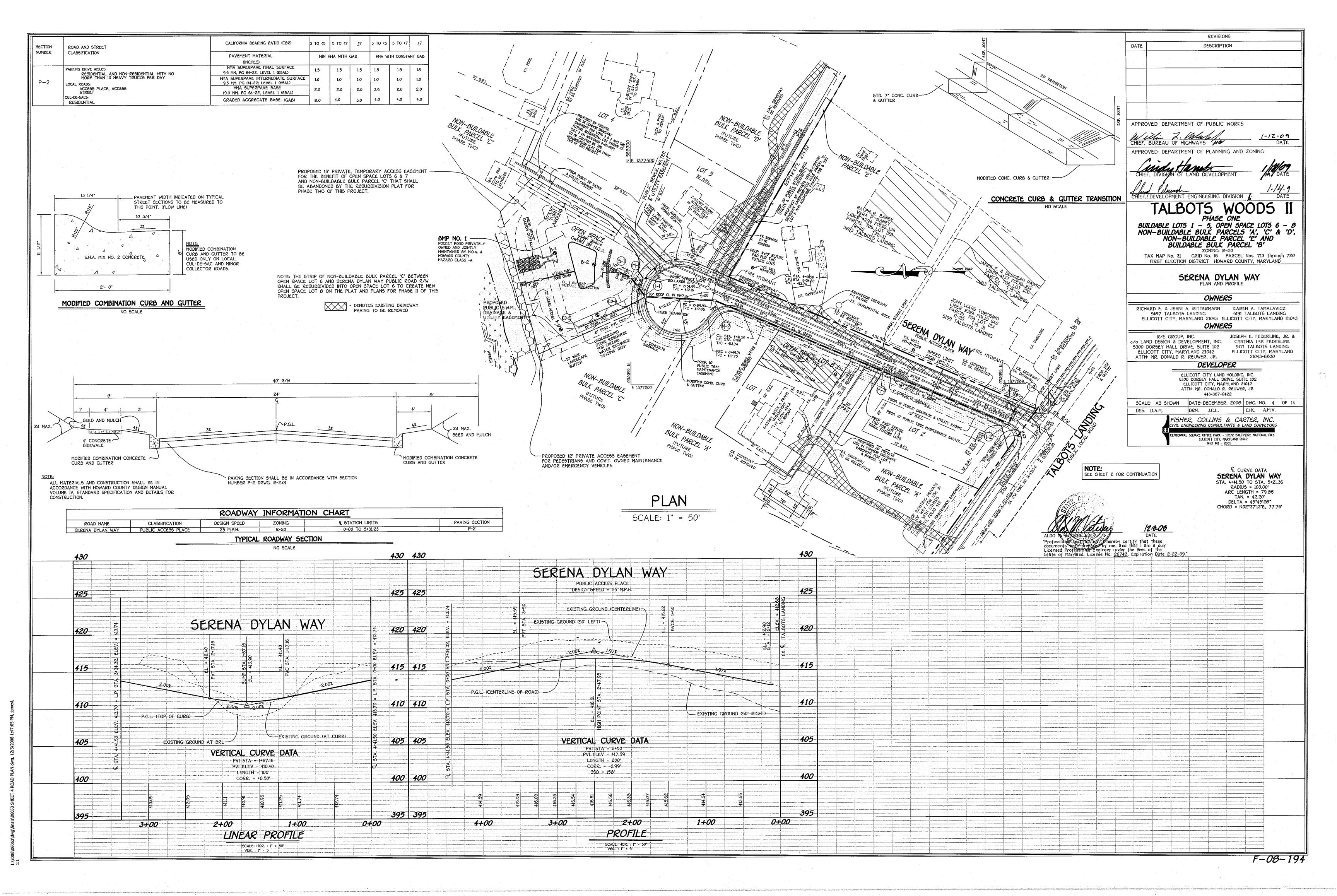
ELLICOTT CITY LAND HOLDING, INC. 5300 DORSEY HALL DRIVE, SUITE 102 ELLICOTT CITY, MARYLAND 21042 ATTN: MR. DONALD R. REUWER, JR.

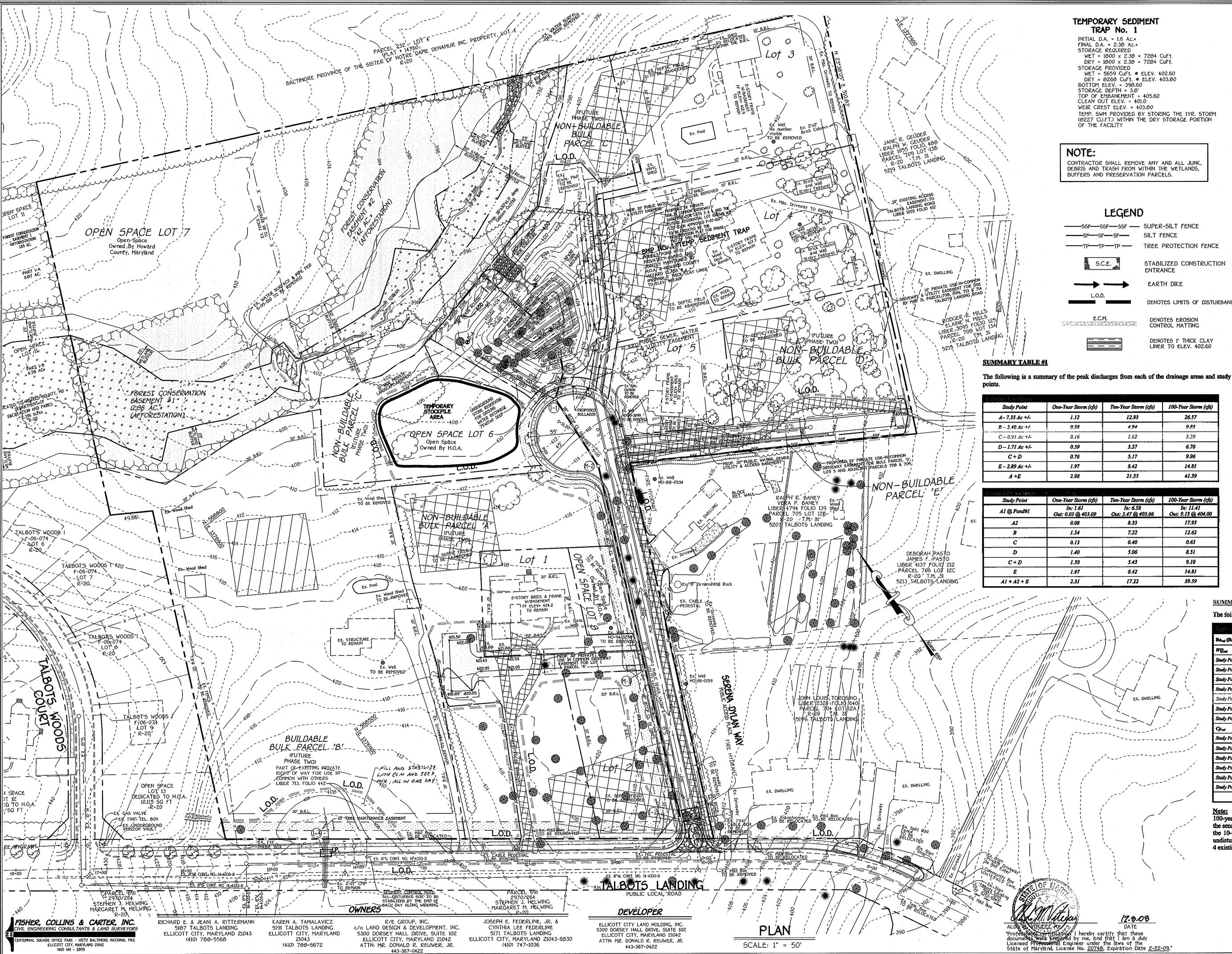




F-08-194

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TEMPORARY SEDIMENT

STABILIZED CONSTRUCTION

DENOTES LIMITS OF DISTURBANCE

ENTRANCE

EARTH DIKE

DENOTES EROSION CONTROL MATTING

DENOTES 1' THICK CLAY LINER TO ELEV. 402.60

100-Year Storm (cfs)

26.57

9.83

3.29

6.70

14.81

rut: 9.15 @ 404.00

17.95

12.62

0.65

8.51

9.10

14.81

39.59

1-12-09

By The Developer:

"I/We 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 The 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. I Also
Authorize Periodic On-Site Inspections By The Howard Soil Conservation District."

DONALD R. REUWER, JR.
Printed Name Of Developer

By The Engineer:
"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. I Have Notified The Developer That He/She Must Engineer A Registered Professional Engineer To Supervise Pond Construction And Professional Engineer To Supervise Pond Construction And Professional Engineer To Supervise Pond Construction

Printed Name Of Engineer

AS-BUILT CERTIFICATION

P.E. No.

I Hereby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted

> 9'x3'x3' GABION TOEWALL-- 9'x3'x3' GABION TOEWALL 9'x9'x1.5' GABION ------- 9'x9'x1.5' GABION 9'x6'x1.5' GABION 9'x6'x1.5' GABION 398.0x ~ 9'x3'x3' GABION TOEWALL 9'x3'x3' GABION TOEWALL-

> > GABION OUTFALL

The following is a summary of the Revols WQvol and CPv Requirements:

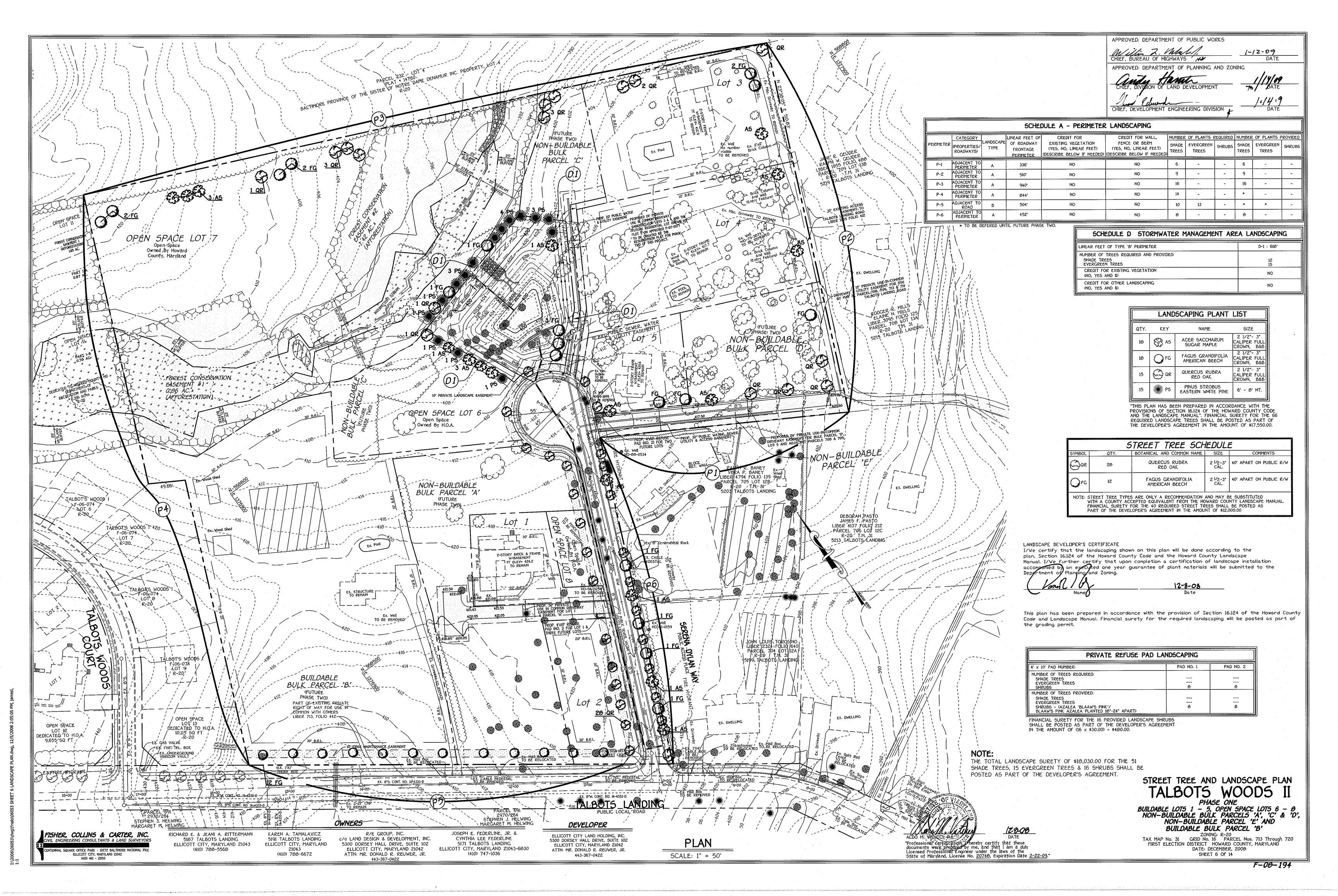
# 3 Log 4 8 1 1 4 5 1 3 1 1 1 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1		
Re _{ret} (Recharge Vol. for Entire Site)	0.95 acres w/ % Area or 0.0874 ac. ft. w/ % Volume	0.1102 acre feet w/ % Area Volume Vla Sione Reservoir
WQ _{rei}		
Study Point #A1 - Pocket Pond-(P-5)	4,190.47 Cu. Ft.	5,950 Ca. Ft. @ BMP #1
Study Point #A2	0.1117 ac. ft.	Provided Via Credits
Study Point B-1	2,455 cu. ft.	2,455 cu. fl. @ BMP#2 -Bio-retention
Study Point B-2	299 cu. ft.	299 cu. ft. @ BMP#2 -Bio-retention
Study Point #C	No planned disturbances.	N/A No disturbance
Study Point #D	No planned disturbances.	N/A No disturbance
Study Point HE	No planned disturbances.	N/A No disturbance
Cpml		
Study Point #A1 - Pocket Pond - (P-5)	0.0792 Ac. Ft.	0.0792 Ac. Ft. @ BMP#1
Study Point #A2	N/A	Less Then < 2.0 cfs
Study Point #B	N/A	Less Then < 2.0 cfs
Study Point #C	N/A	Less Then < 2.0 cfs
Study Point #D	N/A	Less Then < 2.0 cfs
Study Point #E	NA	Less Then < 2.0 cfs

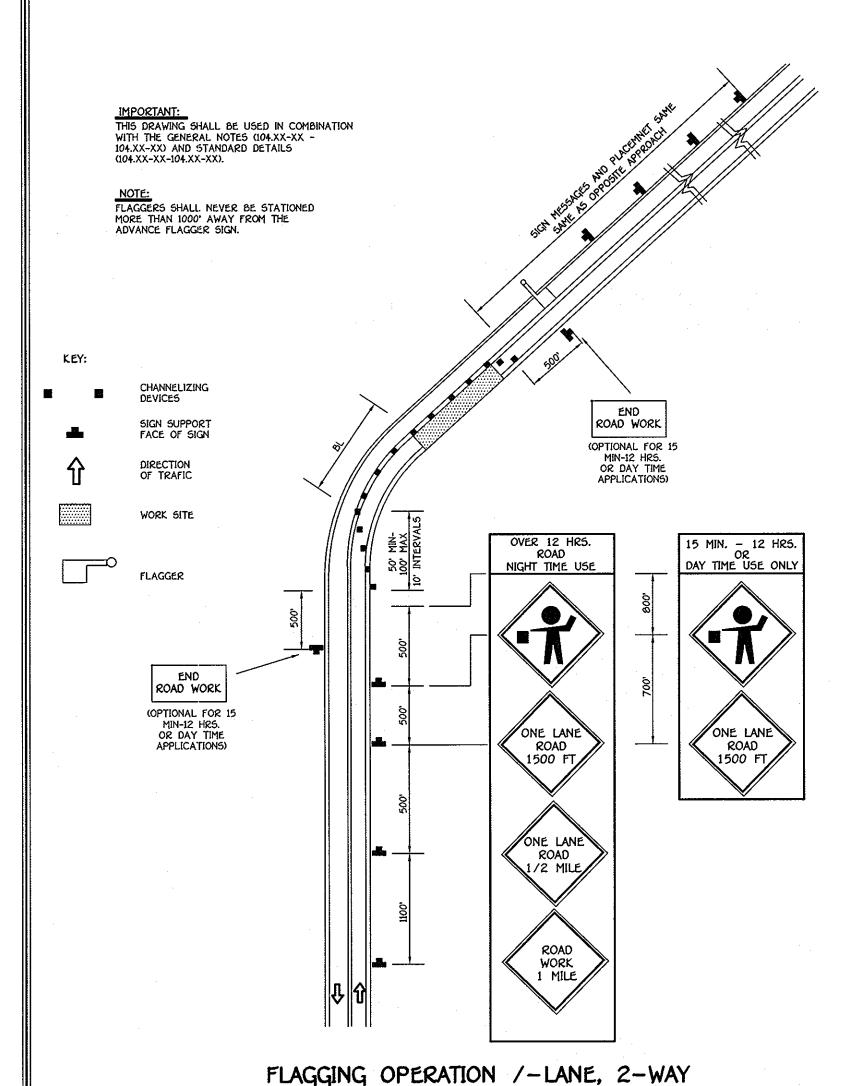
Note: Both Q_p(Overbank Flood Protection or 10-year storm) and Q_t(Extreme Flood Volume or 100-year storm) are not required for this site since this watershed area is not classified as one of the sensitive watershed areas for Howard County. However the proposed Pocket Pond will allow the 10-year and 100-year storms to bypass this facility. The majority of the site will remain undisturbed until Phase II of the project. Phase I of the project incorporates just the roadway, the 4 existing homes and one additional proposed lot.

> GRADING AND SEDIMENT CONTROL PLAN TALBOTS WOODS II

PHASE ONE
BUILDABLE LOTS 1 - 5, OPEN SPACE LOTS 6 - 8
NON-BUILDABLE BULK PARCELS 'A', 'C' & 'D',
NON-BUILDABLE PARCEL 'E' AND BUILDABLE BULK PARCEL 'B'

ZONING: R-20
TAX MAP No. 31 GRID No. 16 PARCEL Nos. 713 Through 720
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND DATE: DECEMBER, 2008 SHEET 5 OF 14





FISHER, COLLINS & CARTER, INC. ENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855

RICHARD E. & JEANI A. RITTERMANN 5107 TALBOTS LANDING ELLICOTT CITY, MARYLAND 21043

EQUAL/LESS THAN 40 MPH

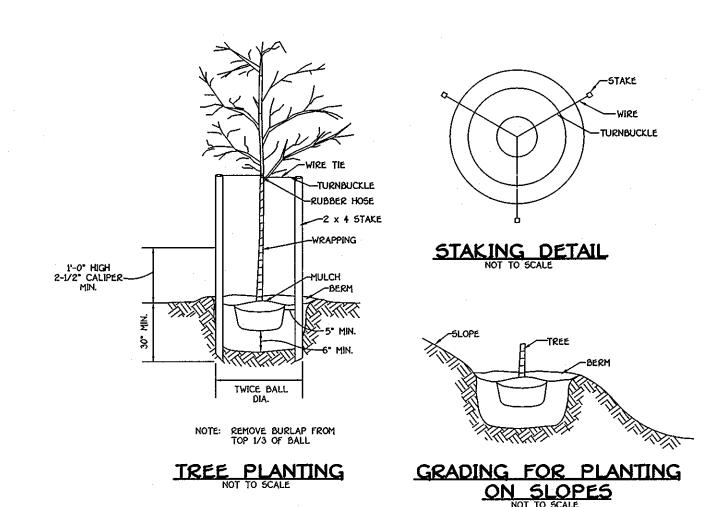
NO SCALE

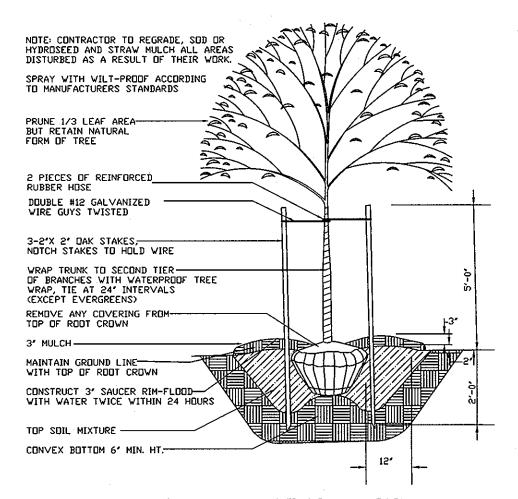
KAREN A. TAMALAVICZ 5191 TALBOTS LANDING ELLICOTT CITY, MARYLAND 21043 (410) 788-6672

OWNERS R/E GROUP, INC. c/o LAND DESIGN & DEVELOPMENT, INC. 5300 DORSEY HALL DRIVE, SUITE 102 ELLICOTT CITY, MARYLAND 21042 ATTN: MR. DONALD R. REUWER, JR. 443-367-0422

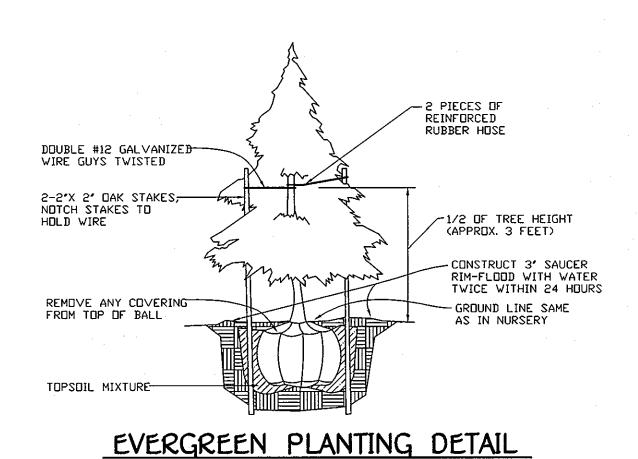
JOSEPH E. FEDERLINE, JR. & CYNTHIA LEE FEDERLINE 5171 TALBOTS LANDING ELLICOTT CITY, MARYLAND 21043-6830 (410) 747-1036

DEVELOPER ELLICOTT CITY LAND HOLDING, INC. 5300 DORSEY HALL DRIVE, SUITE 102 ELLICOTT CITY, MARYLAND 21042 ATTN: MR. DONALD R. REUWER, JR.





TREE PLANTING DETAIL



"Professional certification of hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20740, Expiration Date 2-22-09."

APPROVED: DEPARTMENT OF PUBLIC WORKS CHIEF, BUREAU OF HIGHWAYS 12 1-12-09 APPROVED: DEPARTMENT OF PLANNING AND ZONING

PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.

All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug; no healed-in plants from cold storage will be accepted.

Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to 'Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas', (hereinafter 'Landscape Guidelines') approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

Contractor shall be required to guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility' a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at the drip line.

Contractor id responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site

Bid shall be base on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on drawings and specifications

Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans.

Positive drainage shall be maintained in planting beds 2 percent slope).

Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the

Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded.

This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc.

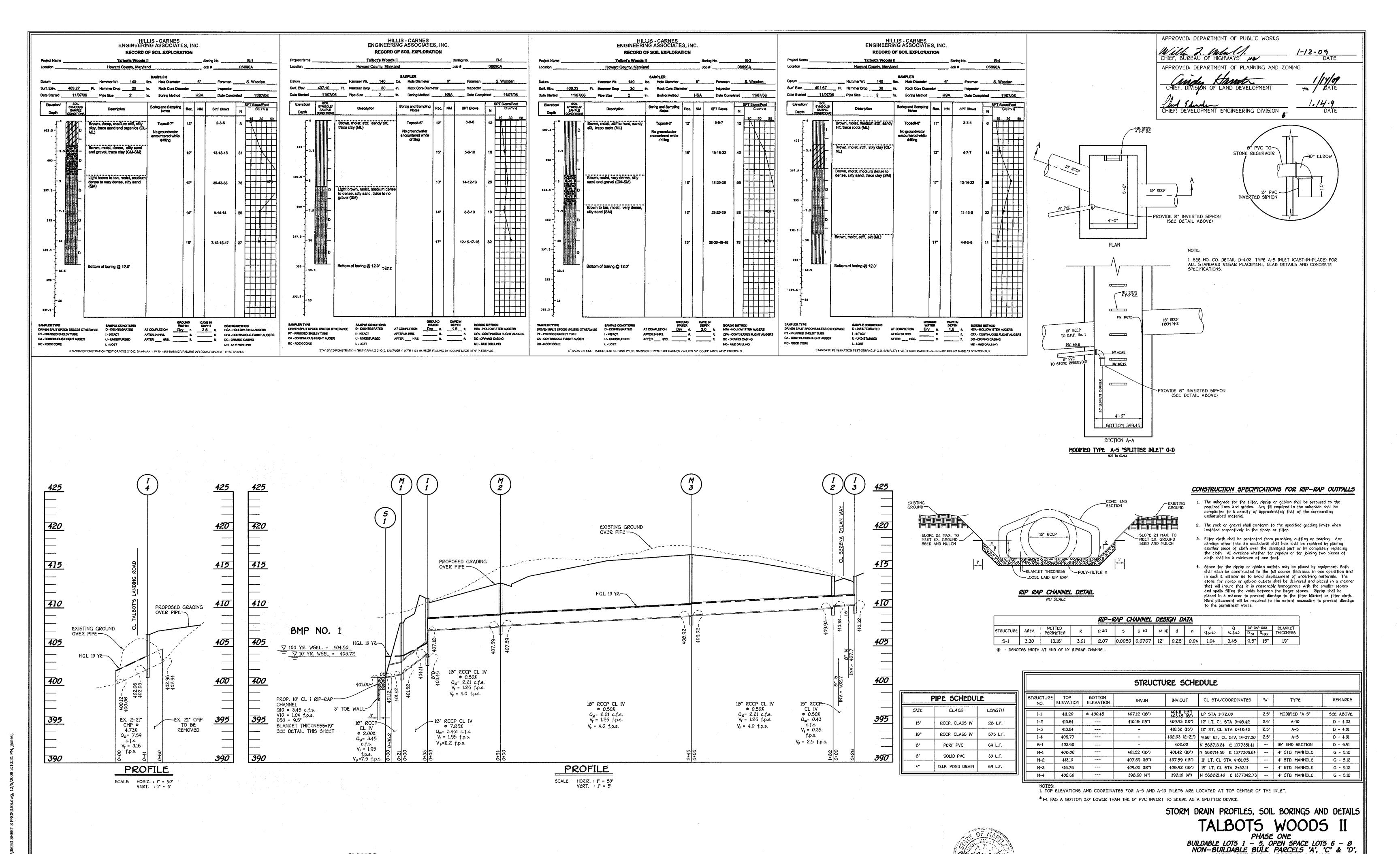
> TRAFFIC CONTROL PLANS & LANDSCAPING NOTES AND DETAILS PHASE ONE

BUILDABLE LOTS 1 - 5, OPEN SPACE LOTS 6 - 8 NON-BUILDABLE BULK PARCELS 'A', 'C' & 'D', NON-BUILDABLE PARCEL 'E' AND BUILDABLE BULK PARCEL 'B' ZONING: R-20
TAX MAP No. 31 GRID No. 16 PARCEL Nos. 713 Through 720
FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: DECEMBER, 2008

SHEET 7 OF 14

F-08-194

443-367-0422



DEVELOPER

ELLICOTT CITY LAND HOLDING, INC.

5300 DORSEY HALL DRIVE, SUITE 102

ELLICOTT CITY, MARYLAND 21042

ATTN: MR. DONALD R. REUWER, JR.

443-367-0422

OWNERS

R/E GROUP, INC.

c/o LAND DESIGN & DEVELOPMENT, INC.

5300 DORSEY HALL DRIVE, SUITE 102

ELLICOTT CITY, MARYLAND 21042

ATTN: MR. DONALD R. REUWER, JR.

443-367-0422

JOSEPH E. FEDERLINE, JR. &

CYNTHIA LEE FEDERLINE

5171 TALBOTS LANDING

ELLICOTT CITY, MARYLAND 21043-6830

(410) 747-1036

KAREN A. TAMALAVICZ

5191 TALBOTS LANDING

ELLICOTT CITY, MARYLAND

21043

(410) 788-6672

RICHARD E. & JEANI A. RITTERMANN

ELLICOTT CITY, MARYLAND 21043

5187 TALBOTS LANDING

FISHER, COLLINS & CARTER, INC.

ELLICOTT CITY, MARYLAND 21042

IVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

IAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE

FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: DECEMBER, 2008
SHEET 8 OF 14

F-08-194

NON-BUILDABLE PARCEL 'E' AND

BUILDABLE BULK PARCEL 'B'

"Professional certification. I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748. Expiration Date 2-22-09."

ZONING: R-20 TAX MAP No. 31 GRID No. 16 PARCEL Nos. 713 Through 720 Using vegetation as cover for barren soil to protect it from forces that cause erosion

Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration O(up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary Soil Stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc. EFFECTS ON WATER QUALITY AND QUANTITY

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone. Sediment control devices must remain in place during grading, seedbed preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS A. Site Preparation Install erosion and sediment control structures (either temporary of permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins. 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 tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.

B. Soil Amendments (Fertilizer and Lime Specifications)

Soil tests 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 analyses.

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 all 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

iii. Lime materials shall be ground limestone (hydrated or burnt 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 90-100% will pass through a *20

mesh sieve.
Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means. Seedbed Preparation

Temporary Seeding

a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it 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 contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.
c. In corporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
ii. Permanent Seeding

Minimum soil conditions required for permanent vegetative establishment:

1. Soil pH shall be between 6.0 and 7.0. Soluble salts shall be less than 500 parts per million (ppm). 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 lespedezas is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.

Soil shall contain 1.5% minimum organic matter by weight. Soil must contain sufficient pore space to permit adequate root penetration. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from

sliding down a slope. Apply soil amendments as per soil test or as included on the plans.

Mix soil amendments into the top 3-5" 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 and 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 he soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seedbed loosening may not be necessary on

D. Seed Specifications 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 used 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

Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a 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 lbs. per acre total of soluble nitrogen; P205 (phosphorous); 200 lbs/ac; K20 (potassium): 200 lbs/ac.

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.
Seed and fertilizer shall be mixed on site and seeding shall be done immediately and ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 265 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

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 provide at least 1/4 inch of soil covering. Seedbed must be firm after planting. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

Mulch Specifications (In order of preference) i. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
 ii. Wood Cellulose Fiber Mulch (WCFM)

WCFM shall consist of specially prepared wood cellulose processed into a uniform ibrous physical state. 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. WCFM, including dye, shall contain no germination or growth inhibiting factors. 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 mulch material shall form a blotter-like ground 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 seedlings. WCFM material shall contain no elements or compounds at concentration levels that will be phytol-toxic.

f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.

Note: Only sterile straw mulch should be used in areas where one species of grass is desired. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.

i. If grading is completed outside of the seeding season, mulch along 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. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.

iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

Securing Straw Mulch (Mulch Anchoring): 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: A mulch anchoring tool is a tractor drawn implement designed 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 if possible.

Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/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 iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crest of banks. The remainder of area should be appear uniform after binder application. Synthetic binders - such as Acrylic DLR (Agro-Tack), DCA-70 Petroset, Terra Tax

l, Terra Tack AR or other approved equal may be used at rates recommended by the nanufacturer 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.

1 Incremental Stabilization - Cut Slopes

All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15

Construction sequence (Refer to Figure 3 below):

 a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
 b. Perform Phase 1 excavation, dress, and stabilize. Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as

nećessary.
d. Perform final phase excavation, dress and stabilize. Overseed previously seeded

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions int he operation of completing the operation out of the seeding season will necessitate the application of temporary stabilization. Incremental Stabilization of Embankments - Fill Slopes

Embankments shall be constructed in lifts as prescribed on the plans.

ii. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches
 15°, or when the grading operation ceases as prescribed in the plans.
 iii. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge
 of the embankment to intercept surface runoff and convey it down the slope in a non-crosive manner to

of the embarkment to intercept surface runoff and convey it down the slope in a non-erosive a sediment trapping device.

Construction sequence: Refer to Figure 4 (below).

a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slope silt fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.

b. Place Phase 1 embarkment, dress and stabilize.

c. Place Phase 2 embarkment, dress and stabilize.

Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

SECTION 2 - 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.

A. Seed mixtures - Temporary Seeding i. Select one or more of the species or mixtures listed in Table 26 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Temporary seeding summary below, along with application rates, seeding dates and seeding depths. If this summary is not put on the plans and completed, then Table 26 must be put on the plans.

ii. For sites having soil tests performed, the rates shown on this table shall be deleted and the rates recommended by the testing agency shall be written in Soil tests are not required for Temporary Seeding.

50	Seed Mixture (Hardiness Zone <u>6b</u>) From Table 26				Fertilizer Rate	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	(10-10-10)	
1	BARLEY OATS RYE	122 96 140	3/1 - 5/15, 8/15 - 10/15	1" - 2" 1" - 2" 1" - 2"	600 lb/ac (15 lb/1000sf)	2 tons/ac (100 lb/1000sf)

SECTION 3 - PERMANENT SEEDING

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

A. Seed mixtures - Permanent Seeding

i. Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Techinical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintenance areas, see Sections IV Sod and V Turfgrass.

ii. For sites having disturbed area over 5 areas, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in

iii. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, to be performed at

Seed Mixture (Hardiness Zone6b_) From Table 25				Fertilizer Rațe (10-20-20)			Lime Rate	
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P205	K20	
3	TALL FESCUE (05%) PERENNIAL RYE GRASS (10%) KENTUCKY BLUEGRASS (5%)	125 15 10	3/1 - 5/15, 8/15 - 10/15	1" - 2"	90 lb/ac (2.0 lb/	175 lb/ac	175 b/ac	2 tons/ac
10	TALL FESCUE (00%) HARD FESCUE (20%)	120 30	3/1 - 5/15, 8/15 - 10/15	1" - 2"	1000sf)	1000sf)	1000sf)	1000sf)

TOPSOIL SPECIFICATIONS

Definition

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation Purpose

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation. Conditions Where Practice Applies

I. This practice is limited to areas having 2:1 or flatter slopes where: a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth. b. The soil material is so shallow that the rooting zone is not deep

enough to support plants or furnish continuing supplies of moisture and plant growth.

c. The original soil to be vegetated contains material toxic to plant d. The soil is so acidic that treatment with limestone is not feasible.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications 1. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station. II. Topsoil Specifications - Soil to be used as topsoil must meet the

i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders. stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter. ii. Topsoil must be free of plants or plant parts such as Bermuda

grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified. iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at a rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime

shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following II. For sites having disturbed areas under 5 acres:

i. Place topsoil (if required) and apply soil amendments as Stabilization

- Section I - Vegetative specified in 10.0 Vegetative Stabilization

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III. For sites having disturbed areas over 5 acres: i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following: a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil

demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher b. Organic content of topsoil shall be not less than 1.5 percent by

c. Topsoil having soluble salt content greater than 500 parts per million shall not be used. d. No sod or seed shall be placed on soil which has been treated with soil sterilants orchemicals used for weed control until sufficient time has elapsed dissipation of phyto-toxic materials. (14 days min.) to

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil. - Section I - Vegetative specified in 10.0 Vegetative Stabilization

ii. Place topsoil (if required) and apply soil amendments as Stabilization Methods and Materials. V. Topsoil Application i. When topsoiling, maintain needed erosion and sediment control

practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins. ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation. iii. Topsoil shall be uniformly distributed in a 4" - 8" layer and thickness of 4". Spreading shall be lightly compacted to a minimum performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water

iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and

seedbed preparation VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below: i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe for sites having disturbed areas under 5 acres amendments and shall

conform to the following requirements. a. Composted sludge shall be supplied by, or originate from, a person are permitted (at the time of acquisition of the compost) or persons that by the Maryland Department of the Environment under COMAR

b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use. c. Composted sludge shall be applied at a rate of 1 ton/1,000 square

iv. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime

APPROVED: DEPARTMENT OF PUBLIC WORKS STORM WATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, 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 cleared.

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. EARTH FILL

Material - The fill material shall be taken from approved designated borrow areas. It shall be free 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

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8-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 the embankment.

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 heavy 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 maximum dry density with a moisture content within +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 bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four 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

Embankment Core - 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 up 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 four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four 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, unless 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, Section 313 as modified. The mixture shall have a 100-200 psi; 20 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. Average 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 four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adlacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four 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 the specified for the core of the embankment or other embankment materials.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated

1. Materials - (Polymer Coated steel pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pine and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Aluminum Coated Stel Pipe, when used with flowable fill or when soil and/or water conditions warrant the need for increased durability. shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling banks or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in

3. Connections- All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the bandwidth. The following type connections are acceptable for pipes less than 24-inches in diameter: flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, prepunched to the flange bolt circle, sandwiched between adjacent flanges; a 12-inch wide standard lap type band with 12-inch wide by 3/8-inch thick closed cell circular neoprene gasket: and/a 12-inch wide hugger type band with o-ring gaskets having a minimum diameter of 1/2-inch greater than the corrugation depth. Pipes 24-inches in diameter and larger shall be connected by a 24-inch long annular corrugated band using a minimum of 4 (four) rods and lugs, 2 on each connecting pipe end. A 24-inch wide by 3/8-inch thick closed cell circular neoprene gasket will be installed with 12-inches on the end of each pipe. Flanged joints with 3/0-inch closed cell gaskets the full width of the

flance is also acceptable.

4. 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

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced

2. Bedding - Reinforced concrete pipe conduits shall be laid in a concrete bedding/cradle 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% of its outside diameter with a minimum thickness of 6 inches. Where a concrete

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. placed so that all spaces under the pipe are filled. Care shall be exercised to

4. Backfilling shall conform to "Structure Backfill".

The following criteria shall apply for plastic pipe: fittings shall conform to the following: 4" - 10" inch pipe shall meet the requirement of AASHTO M252 Type 5, and 12" through 24" inch shall meet the

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

Drainage Diaphragms - When a drainage diaphragm is used, a registered professional engineer will supervise the design and construction inspection.

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and

Geotextile shall be placed under all riprap and shall meet the requirements of

areas to be occupied by the permanent works. The contractor shall also furnish, excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having whatsoever 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 foundation shall be accomplished in a manner and to the extent that will maintain 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 sumps from which the water shall

Stabilization

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

Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber

cradle is not needed for structural reasons, flowable fill may be used as described in the "Stucture Backfill" section of this standard. Gravel bedding is not permitted.

Joints shall be made in accordance with recommendations of the manufacturer of the material. After the loints are sealed for the entire line, the bedding shall be prevent any deviation from the original line and grade of the pipe. The first loint must be located within 4 feet from the riser.

Plastic Pipe

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and requirement of AASHTO M294 Type S.

4. Backfilling shall conform to "Structure Backfill". 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete

Rock Riprap

Specifications for Construction and Materials, Section 921.09, Class C.

OPERATION AND MAINTENANCE

Millin L. Mulun CHIEF, BUREAU OF HIGHWAYS 45 1-12-09 APPROVED: DEPARTMENT OF PLANNING AND ZONING

By The Developer "I/We 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 The 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. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District."

Vam ()

DONALD R. REUWER. JR

12-8-08

"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. 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." 12.6.00

Sequence of Construction 1. OBTAIN A GRADING PERMIT. (1 WEEK)

ALDO M. VATUREL

Printed Name Of Engineer

2. NOTIFY "MISS UTILITY" AT LEAST 40 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 24-HOURS BEFORE STARTING WORK. (3 DAYS)

3. CLEAR AND GRUB FOR SEDIMENT CONTROL MEASURES ONLY. INSTALL STABILIZED CONSTRUCTION ENTRANCE. (2 weeks)

4. INSTALL THE REMAINING SEDIMENT CONTROL MEASURES. THIS WOULD INCLUDE SEDIMENT BASIN 1. TREE PROTECTION FENCE AND SILT FENCE AS INDICATED ON THESE PLANS. THIS FACILITY IS SIZED TO PROVIDE TEMPORARY STORMWATER MANAGEMENT. NO BLASTING WILL BE PERMITTED FOR THE EXCAVATION OF THE BASIN. WHERE NECESSARY, RIPPING AND JACK HAMMERING SHOULD BE UTILIZED IN THE EXCAVATION OF EACH FACILITY. (3 weeks)

5. OBTAIN PERMISSION OF THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEEDING. (1 DAY) 6. CLEAR AND GRUB FOR THE REMAINDER OF THE SITE UTILIZING DUST CONTROL MEASURES AS NEEDED. (1 week)

7. GRADE SITE TO THE PROPOSED SUBGRADE FOR EACH ROAD INCLUDING ROAD WIDENING

AND INSTALL THE STORM DRAIN SYSTEM AND UTILITIES. (SEQUENCE *) STABILIZE ALL ROADWAY SLOPES IMMEDIATELY UPON COMPLETION OF GRADING AS SHOWN. (2 weeks) 8. INSTALL BASE COURSE PAVING FOR THE PROPOSED ROADS. (1 week)

9. STABILIZE ALL AREAS AND OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEEDING. (2 DAYS)

10. APPLY TACK COAT TO BASE COURSE AND LAY SURFACE COURSE PAVING. (1 week)

11. WHEN ALL CONTRIBUTING AREAS TO THE BASINS HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR THE TEMPORARY DEVICE MAY BE REMOVED, BACKFILLED OR REGRADED TO THE PROPOSED FINAL GRADES FOR ALL SWM FACILITIES. THIS INCLUDES THE BMP FACILITY *1. CONTRACTOR SHALL VERIFY THE REMOVAL OF ALL STRUCTURES, OLD AND NEW JUNK, TRASH, DEBRIS AND NON-NATURAL ITEMS FROM FLOODPLAIN, STREAM, WETLANDS AND THEIR BUFFERS. REMOVE PIPE AND FENCE FROM STREAM. STABILIZE ALL REMAINING AREAS WITH PERMANENT SEEDING NOTES. (3 weeks)

12. NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR A FINAL INSPECTION OF THE COMPLETED PROJECT. (2 DAYS) SEQUENCE NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE

ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL EVENT AND ON A DAILY BASIS. REMOVE SEDIMENTS FROM ALL BASINS WHEN CLEAN OUT ELEVATIONS ARE REACHED. ALL SEDIMENTS MUST BE PLACED UPSTREAM OF ANY APPROVED

* THE CONSTRUCTION OF STORM DRAIN FROM I-3 TO 5-1 PRIOR TO MASS GRADING OF SITE.

DUST CONTROL

DEFINITION CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.

CONDITIONS WHERE PRACTICE APPLIES THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT

1. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING. 2. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER. 3. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE

EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT. 4. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.

5. BARRIERS - SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALE DIKES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING, BARRIERS PLACED AT RIGHT INGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN 6. CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

I. PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN 2. TOPSOILING - COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.

3. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

SEDIMENT EROSION CONTROL NOTES TALBOTS WOODS II PHASE ONE BUILDABLE LOTS 1 - 5, OPEN SPACE LOTS 6 - 0 NON-BUILDABLE BULK PARCELS 'A'. 'C' & 'D'. NON-BUILDABLE PARCEL 'E' AND

BUILDABLE BULK PARCEL 'B' ZONING: R-20
TAX MAP No. 31 GRID No. 16 PARCEL Nos. 713 Through 720 FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND DATE: DECEMBER, 2008

SHEET 9 OF 14

FISHER, COLLINS & CARTER, INC. ITENNIAL SOUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE

RICHARD E. & JEANI A. RITTERMANN 5187 TALBOTS LANDING ELLICOTT CITY, MARYLAND 21043 (410) 788-5568

KAREN A TAMALAVICZ 5191 TALBOTS LANDING ELLICOTT CITY, MARYLAND 21043 (410) 788-6672

Methods and Materials.

R/E GROUP, INC. 443-367-0422

JOSEPH E. FEDERLINE, JR. & CYNTHIA LEE FEDERLINE 5171 TALBOTS LANDING (410) 747-1036

ELLICOTT CITY LAND HOLDING, INC. 443-367-0422

5. Other details (Anti-seep collars, valves, etc.) shall be as shown on the drawings.

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

Materials, Section 414, Mix No. 3.

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 install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree 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 stability of the excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. During the placing and

be pumped.

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embarkment, 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

An operation and maintenance plan in accordance with Local or State Regulations will be prepared for all ponds. As a minimum, the dam inspection checklist located in Appendix A shall be included as part of the operation and maintenance plan and performed at least annually. Written records of maintenance and major repairs needs to be retained in a file. The issuance of a Maintenance and Repair Permit for any repairs or maintenance that involves the modification of the dam or spillway from its original design and specifications is required. A permit is also required for any repairs or reconstruction that involve a substantial portion of the structure. All indicated repairs are to be made as soon as practical.

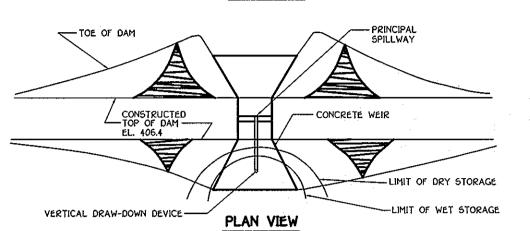
wated by me, and that I am a duly

State of Maryland, License No. 20748, Expiration Date 2-22-09.

Licensed Professional Engineer under the laws of the

5300 DORSEY HALL DRIVE, SUITE 102 FULICOTT CITY, MARYLAND 21042 ATTN: MR. DONALD R. REUWER, JR

DEVELOPER



- CONSTRUCTION SPECIFICATIONS 1. PERFORATIONS IN THE DRAW-DOWN DEVICE MAY NOT EXTEND INTO THE WET STORAGE.
- 2. THE TOTAL AREA OF THE PERFORATIONS MUST BE GREATER THAN 2 TIMES THE AREA OF
- 3. THE PERFORATED PORTION OF THE DRAW-DOWN DEVICE SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH AND GEOTEXTILE FABRIC. THE GEOTEXTILE FABRIC SHALL MEET THE SPECIFICATIONS FOR GEOTEXTILE CLASS E.
- 4. PROVIDE SUPPORT OF DRAW-DOWN DEVICE TO PREVENT SAGGING AND FLOATATION. AN ACCEPTABLE PREVENTATIVE MEASURE IS TO STAKE BOTH SIDES OF DRAW-DOWN DEVICE WITH 1" STEEL ANGLE, OR 1" BY 4" SQUARE OR 2" ROUND WOODEN POSTS SET 3" MINIMUM INTO THE GROUND THEN JOINING THEM TO THE DEVICE BY WRAPPING WITH 12 GAUGE

VERTICAL DRAW-DOWN DEVICE

SEDIMENT CONTROL NOTES

- 1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LISCENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- 2) ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- 3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. 4) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING
- SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12. OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE. 5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER
- 6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

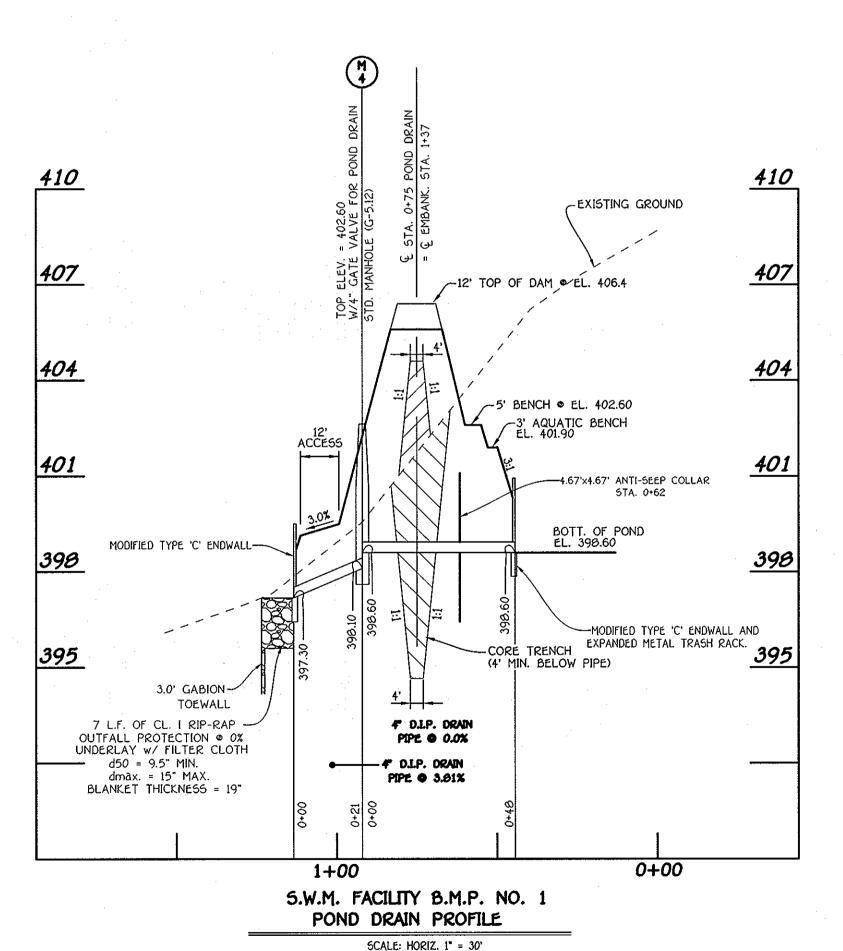
ACRE5

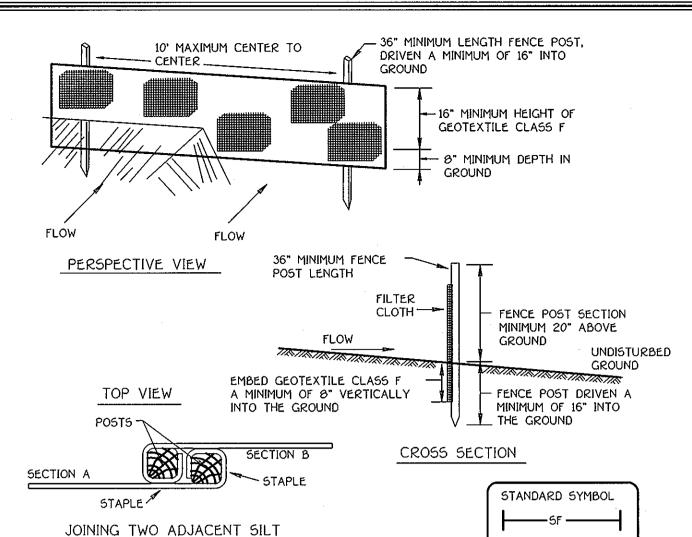
ACRES

7) SITE ANALYSIS: TOTAL AREA OF SITE 15.229 ACRES AREA DISTURBED 4.62 ACRES 1.19 AREA TO BE ROOFED OR PAVED AREA TO BE VEGETATIVELY STABILIZED 3.43 TOTAL CUT 8,300 CU.YD5. TOTAL FILL 8,300 CU.YDS.

GERMINATION AND ESTABLISHMENT OF GRASSES.

- OFFSITE WASTE/BORROW AREA LOCATION 8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- 9) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. 10) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES.
- APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- 11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGHTS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.





FENCE SECTIONS

Construction Specifications

- 1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.
- 2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

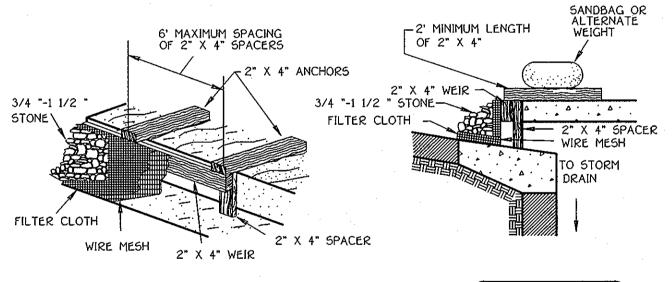
Tensile Strength	50 lbs/in (min.)	Test: MSMT 50
Tensile Modulus	20 bs/in (min.)	Test: MSMT 50
Flow Rate	0.3 gal ft / minute (max.) ²	Test: MSMT 32
Filtering Efficiency	75% (min.)	Test: MSMT 32

- 3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- 4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height. Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 †0 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

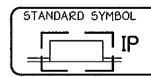
Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control

SILT FENCE NOT TO SCALE



MAX. DRAINAGE AREA = 1/4 ACRE

required.



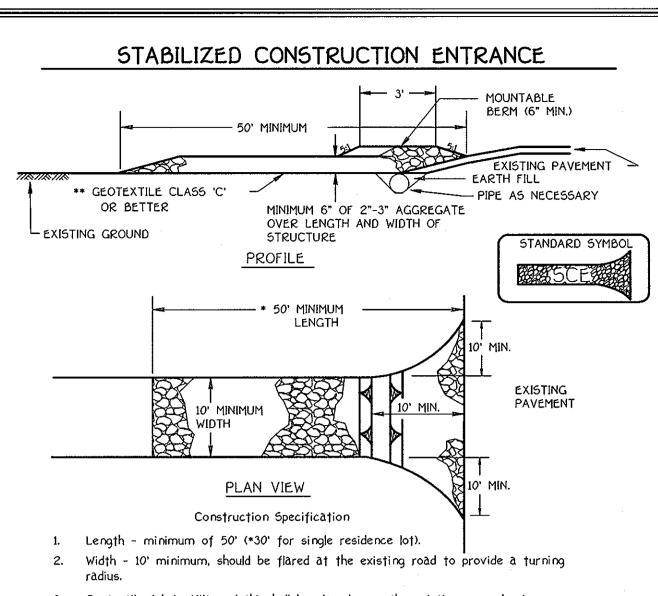
Construction Specifications

- 1. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard
- 2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir. 3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the
- weir and the inlet face (max. 4' apart). 4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across
- 5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening. 6. Form the 1/2 " x 1/2" wire mesh and the geotextile fabric to the concrete gutter

the inlet top and be held in place by sandbags or alternate weight.

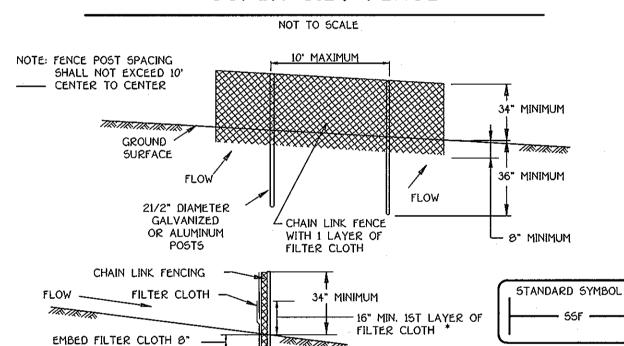
- and against the face of the curb on both sides of the inlet. Place clean 3/4 " x 1 1/2" stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
- 7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment. 8. Assure that storm flow does not bypass the inlet by installing a temporary earth or
- asphalt dike to direct the flow to the inlet.

CURB INLET PROTECTION



- 3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
- 4. Stone crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- 5. Surface Water all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- 6. Location A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

SUPER SILT FENCE



REQUIRED TO ATTAIN 42"

Construction Specifications 1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length

MINIMUM INTO GROUND

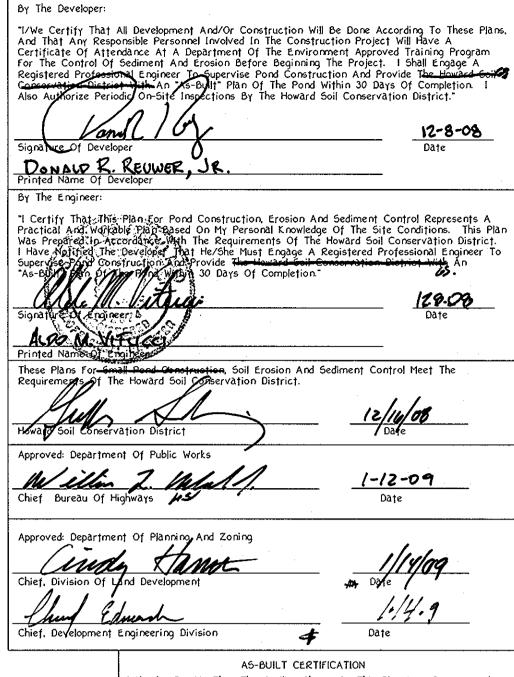
* IF MULTIPLE LAYERS ARE

by 6" and folded.

- 2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not
- required except on the ends of the fence. 3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- 4. Filter cloth shall be embedded a minimum of 8" into the ground. 5. When two sections of filter cloth adjoin each other, they shall be overlapped
- 6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height 7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for

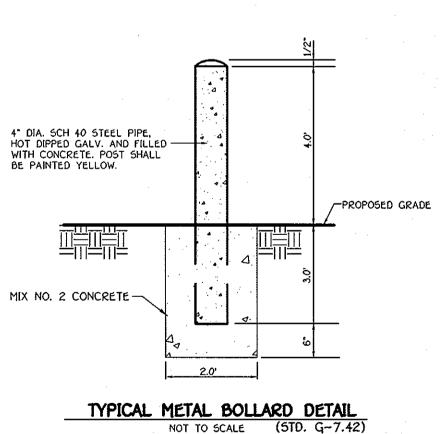
Geotextile Class F:	•	•
Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft /minuté (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
•	Design Criteria	

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 fee†
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet



I Hereby Certify That The Facility Shown On This Plan Was Constructed As Shown On The " As-Built" Plans And Meets The Approved Plans And P.E. No. Certify Means To State Or Declare A Professional Opinion Based Upon

Onsite Inspections And Material Tests Which Are Conducted During
Construction. The Onsite Inspections And Material Tests Are Those
Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed by Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.



SEDIMENT EROSION CONTROL NOTES AND DETAILS TALBOTS WOODS

PHASE ONE BUILDABLE LOTS 1 - 5. OPEN SPACE LOTS 6 - 8 NON-BUILDABLE BULK PARCELS 'A', 'C' & 'D'. NON-BUILDABLE PARCEL 'E' AND BUILDABLE BULK PARCEL 'B' ZONING: R-20
TAX MAP No. 31 GRID No. 16 PARCEL Nos. 713 Through 720

FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND DATE: DECEMBER, 2008 SHEET 10 OF 14

FISHER, COLLINS & CARTER, INC. ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2855

RICHARD E. & JEANI A. RITTERMANN 5187 TALBOTS LANDING ELLICOTT CITY, MARYLAND 21043

(410) 788-5568

KAREN A. TAMALAVICZ 5191 TALBOTS LANDING ELLICOTT CITY, MARYLAND 21043 (410) 788-6672

VERT. 1" = 3"

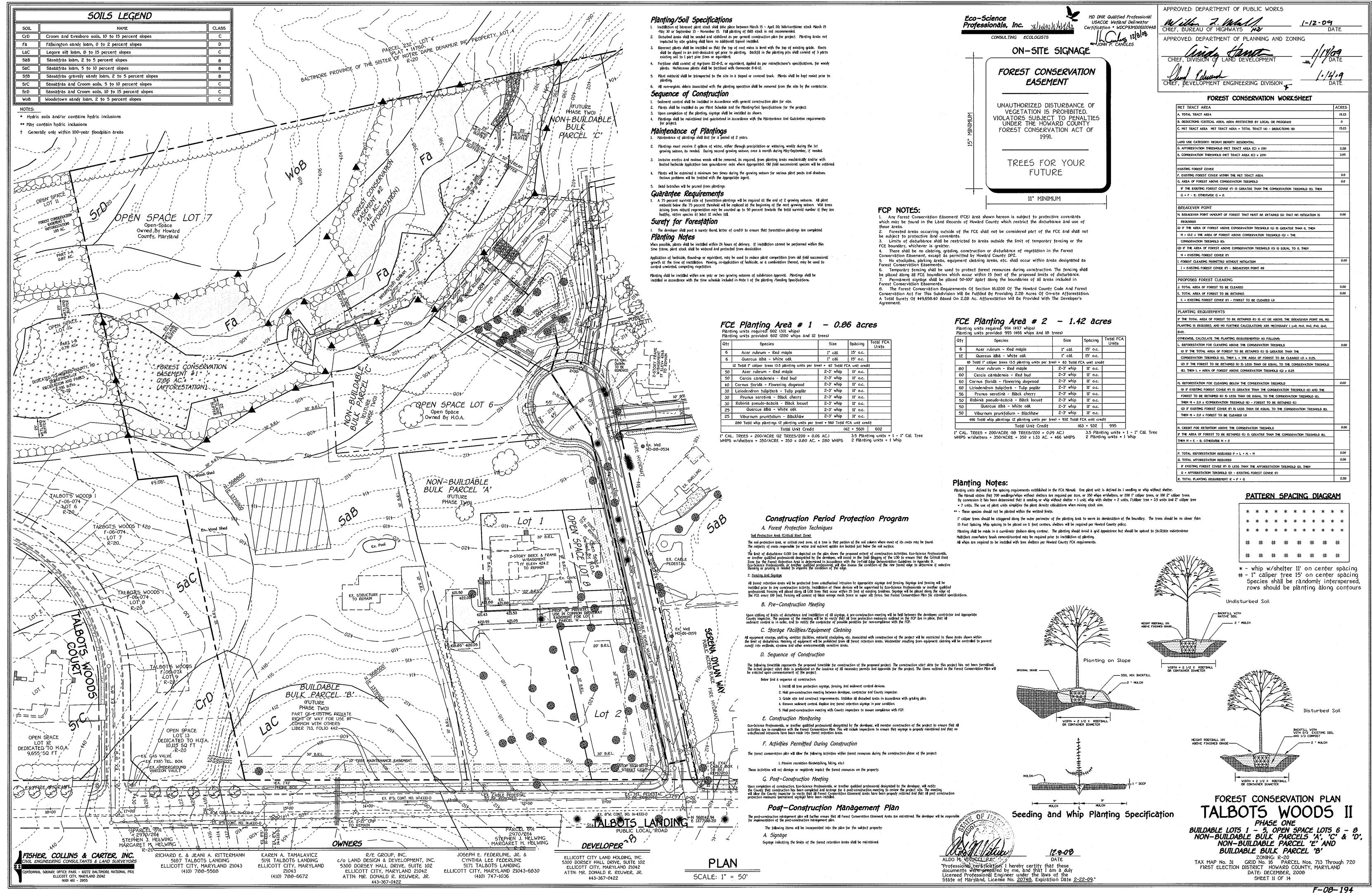
R/E GROUP, INC. c/o LAND DESIGN & DEVELOPMENT, INC. 5300 DORSEY HALL DRIVE, SUITE 102 ELLICOTT CITY, MARYLAND 21042 ATTN: MR. DONALD R. REUWER, JR. 443-367-0422

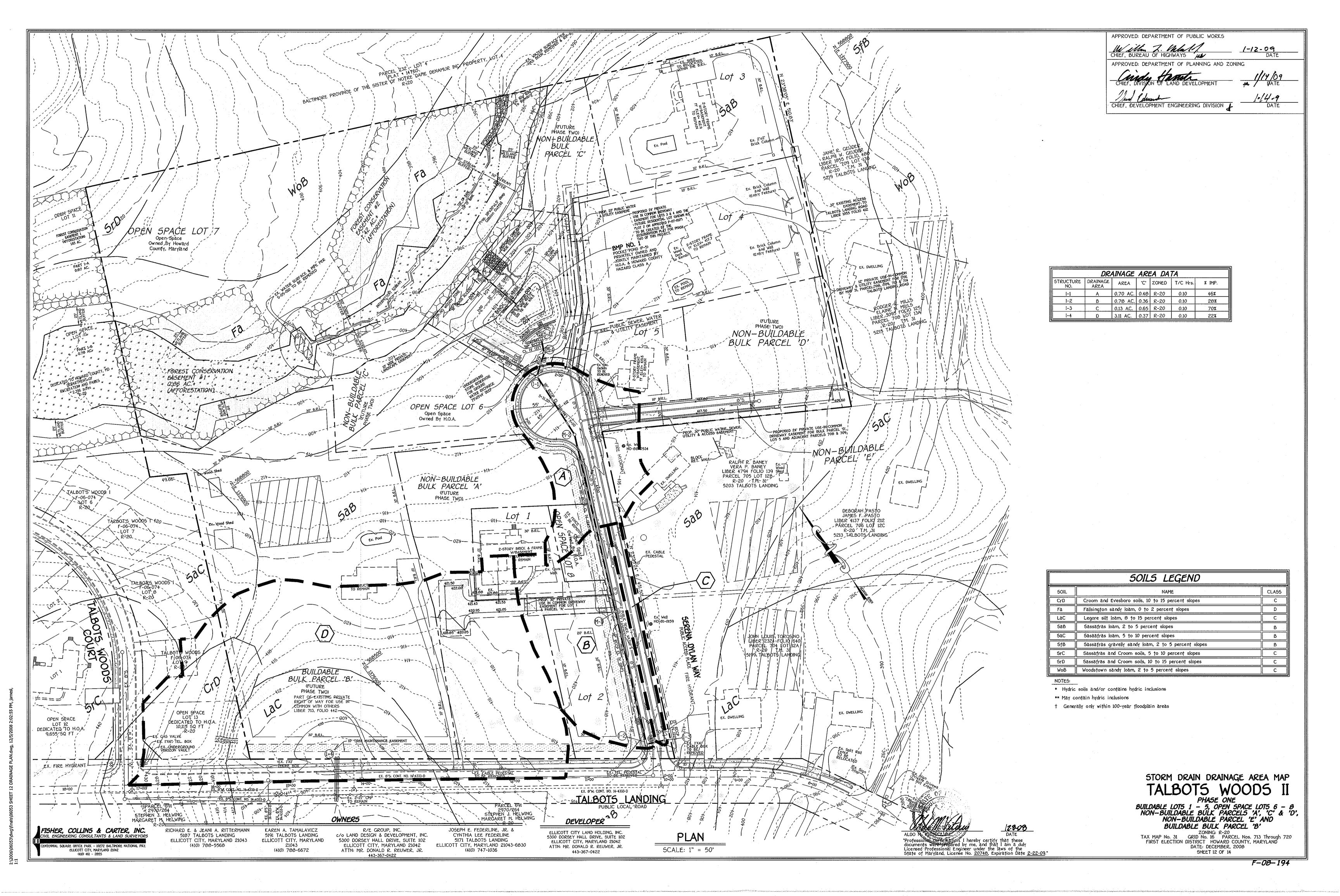
OWNERS

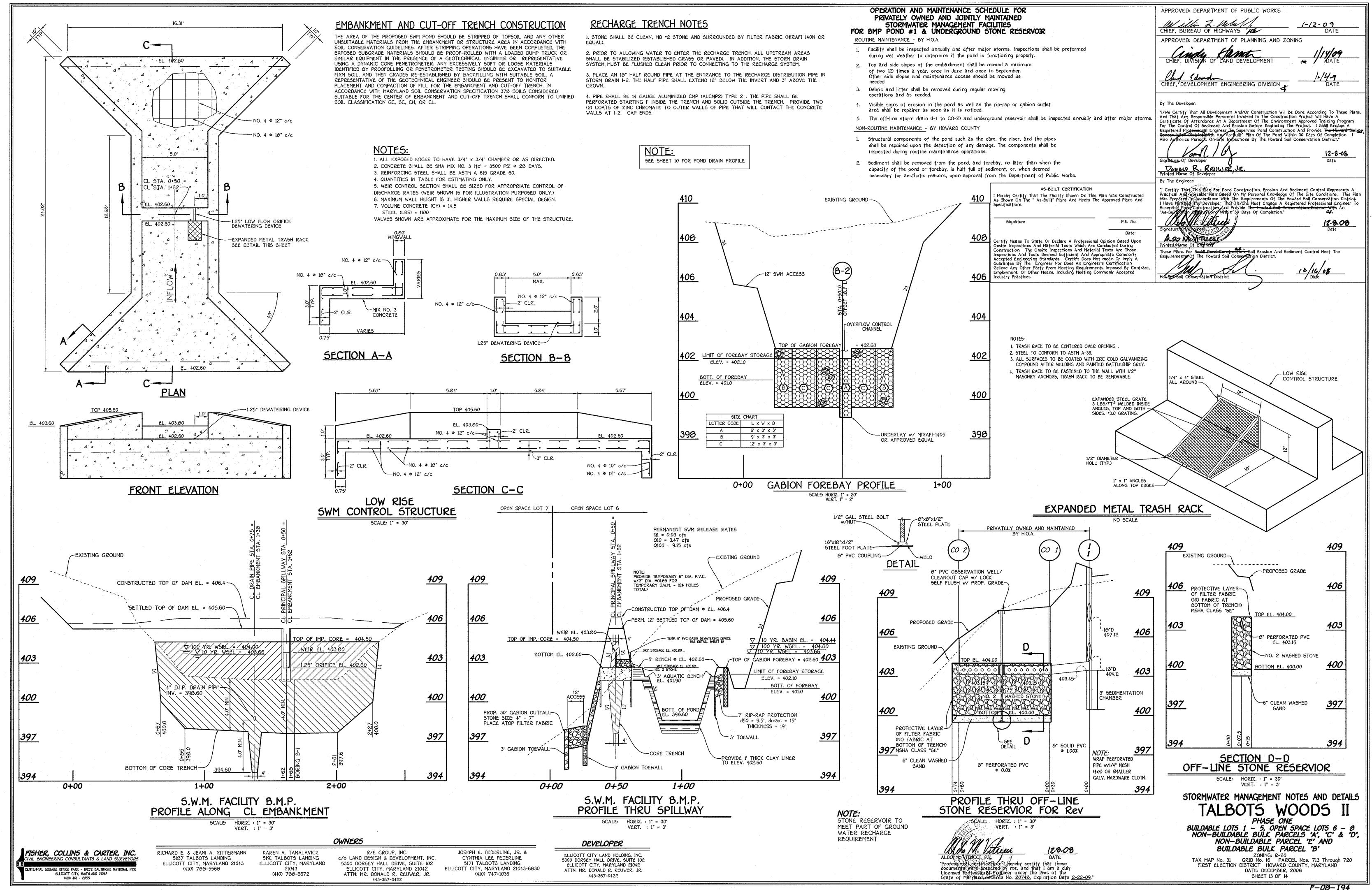
JOSEPH E. FEDERLINE, JR. & CYNTHIA LEE FEDERLINE 5171 TALBOTS LANDING ELLICOTT CITY, MARYLAND 21043-6830 (410) 747-1036

DEVELOPER

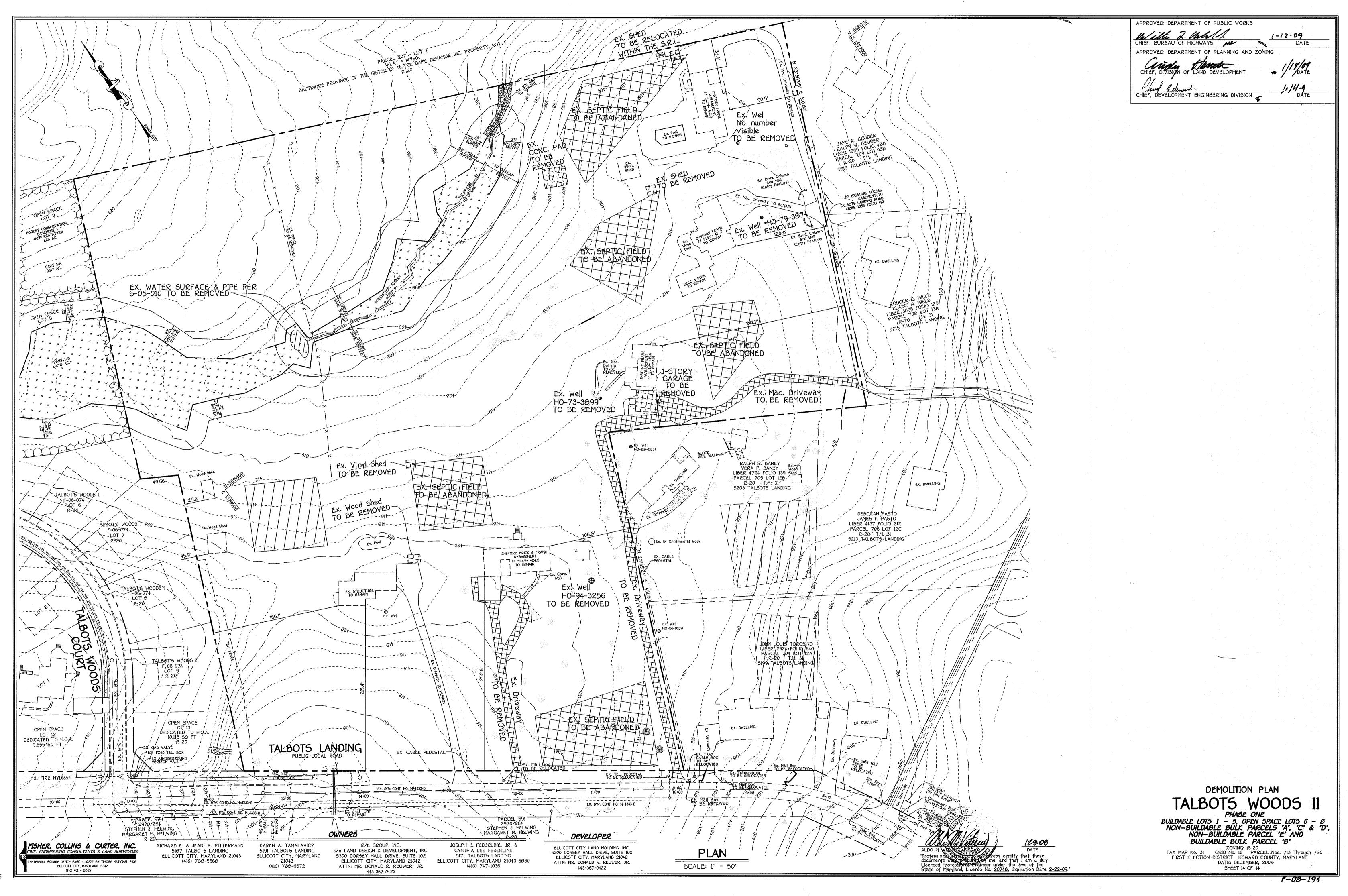
ELLICOTT CITY LAND HOLDING, INC. 5300 DORSEY HALL DRIVE. SUITE 102 ELLICOTT CITY, MARYLAND 21042 ATTN: MR. DONALD R. REUWER, JR. 443-367-0422







F-08-194



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