

LEGEND

SOILS CLASSIFICATION	AbC1	EXISTING WOODS LINE	
SOILS DELINEATION		PROPOSED WOODS LINE	
EXISTING CONTOURS		EXISTING STRUCTURE	
PROPOSED CONTOURS		PROPOSED STRUCTURE	
LIMIT OF WETLANDS		SPECIMEN TREE	

PLAN
SCALE: 1" = 400'

NO.	DATE	REVISION

STORM DRAIN RUNOFF

INLET	DA (Ac.)	C	%IMP	ZONE
I-1	1.61	0.26	19	RC-DEO
HW2	342.15	0.28	12	RC-DEO
SWALE#1	4.41	0.23	11	RC-DEO
SWALE#2	1.61	0.26	19	RC-DEO
SWALE#3	0.58	0.32	30	RC-DEO
SWALE#4	0.36	0.34	22	RC-DEO

SOILS LEGEND

MAP SYMBOL	SOIL GROUP	SOIL TYPE
Bs	D	BAILE SILT LOAM
CgB2	B	CHESTER GRAVELLY SILT LOAM, 3 TO 8 % SLOPES, MODERATELY ERODED
CgC2	B	CHESTER GRAVELLY SILT LOAM, 8 TO 15 % SLOPES, MODERATELY ERODED
ChA	B	CHESTER SILT LOAM, 0 TO 3 % SLOPES
ChB2	B	CHESTER SILT LOAM, 3 TO 8 % SLOPES, MODERATELY ERODED
ChC2	B	CHESTER SILT LOAM, 8 TO 15 % SLOPES, MODERATELY ERODED
ChD2	B	CHESTER SILT LOAM, 15 TO 25 % SLOPES, MODERATELY ERODED
Cs	B	COMUS SILT LOAM
ExA	C	ELLOAK SILT LOAM, 0 TO 3 % SLOPES
ExB2	C	ELLOAK SILT LOAM, 3 TO 8 % SLOPES, MODERATELY ERODED
ExC2	C	ELLOAK SILT LOAM, 8 TO 15 % SLOPES, MODERATELY ERODED
GkA	C	GLENVILLE SILT LOAM, 0 TO 3 % SLOPES
Hs	D	HATBORO SILT LOAM
Mie	B	MANOR LOAM, 25 TO 45 % SLOPES

* INDICATES HYDRIC SOILS
TAKEN FROM SOILS SURVEY, ISSUED JULY 1988, MAP NO. 7

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ENGINEERS & LAND SURVEYORS & PLANNERS

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E-MAIL: benchmrk@cois.com

Donald Maan
e/19/04

OWNER/DEVELOPER:
JOHN R. & AUDREY L. AVERY
14331 FREDERICK ROAD
COOKSVILLE, MD 21723
410-368-3292

PROJECT: AVERY PROPERTY
RESUBDIVISION OF LOT 3, PLAT No. 14285-14287, ADDING LOTS 4 THRU 8 AND PRESERVATION PARCELS A THRU C

LOCATION: TAX MAP 8 - GRID 23
PARCEL 97
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: STORM DRAIN DRAINAGE AREA MAP

DATE: SEPTEMBER, 2003
DECEMBER, 2003

PROJECT NO.: 1523

SCALE: AS SHOWN

DRAWING: 3 OF 10

Design: JMC Draft: JMC Check: DAM

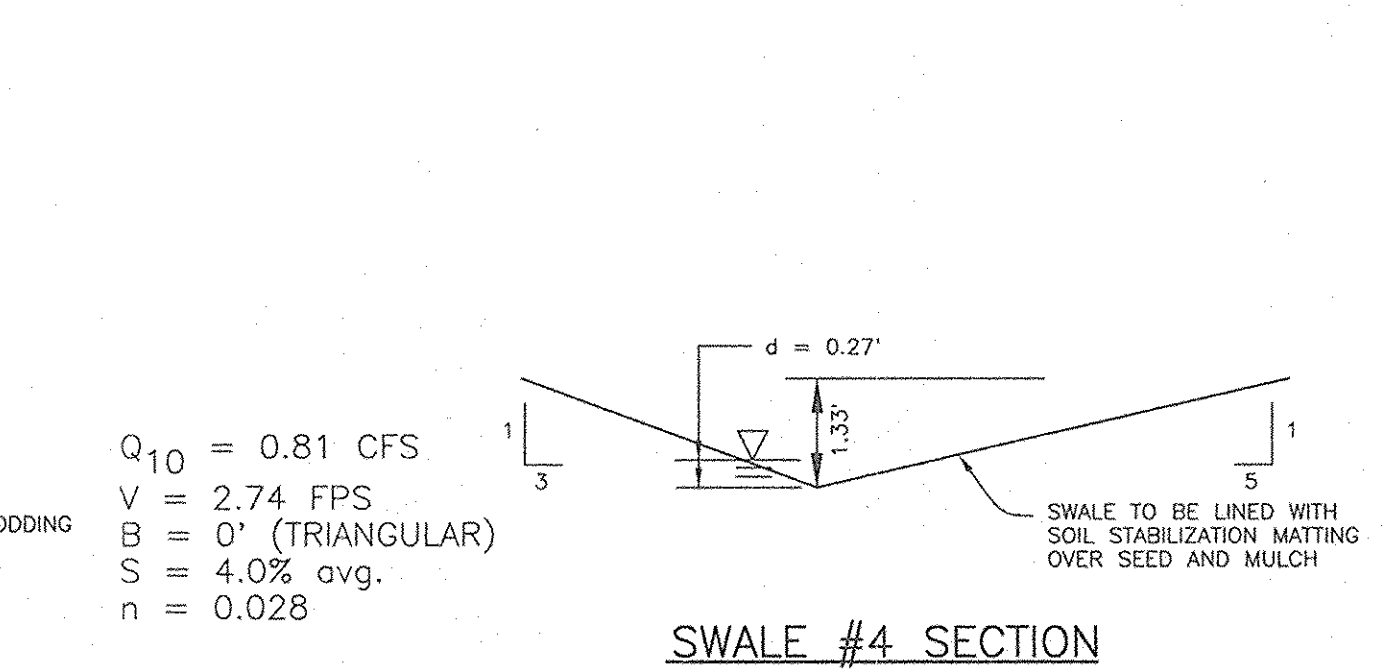
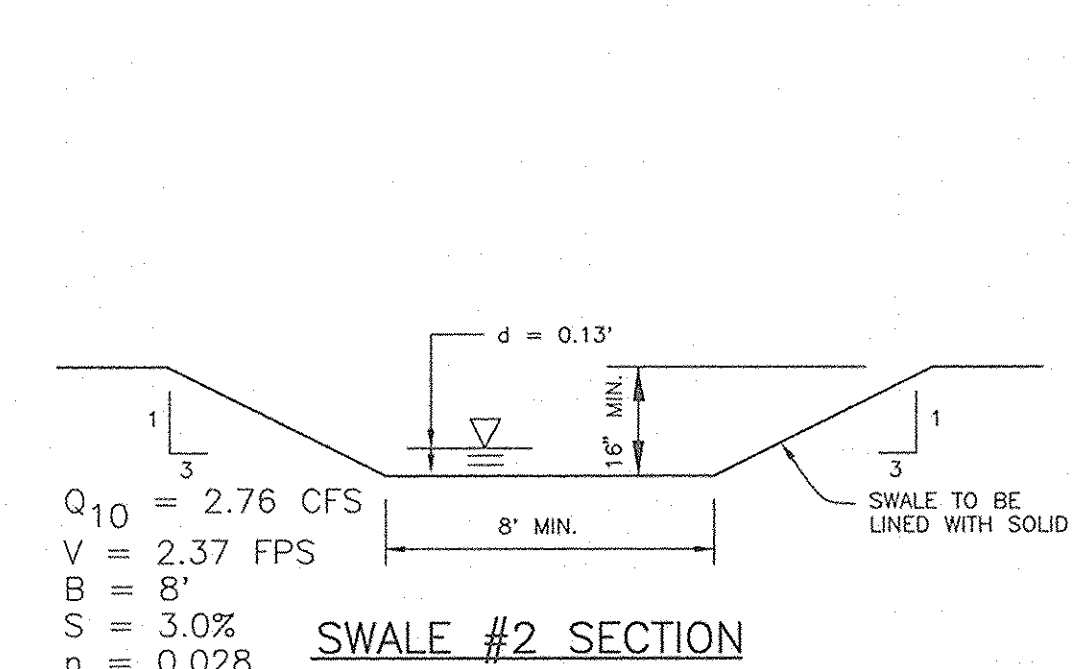
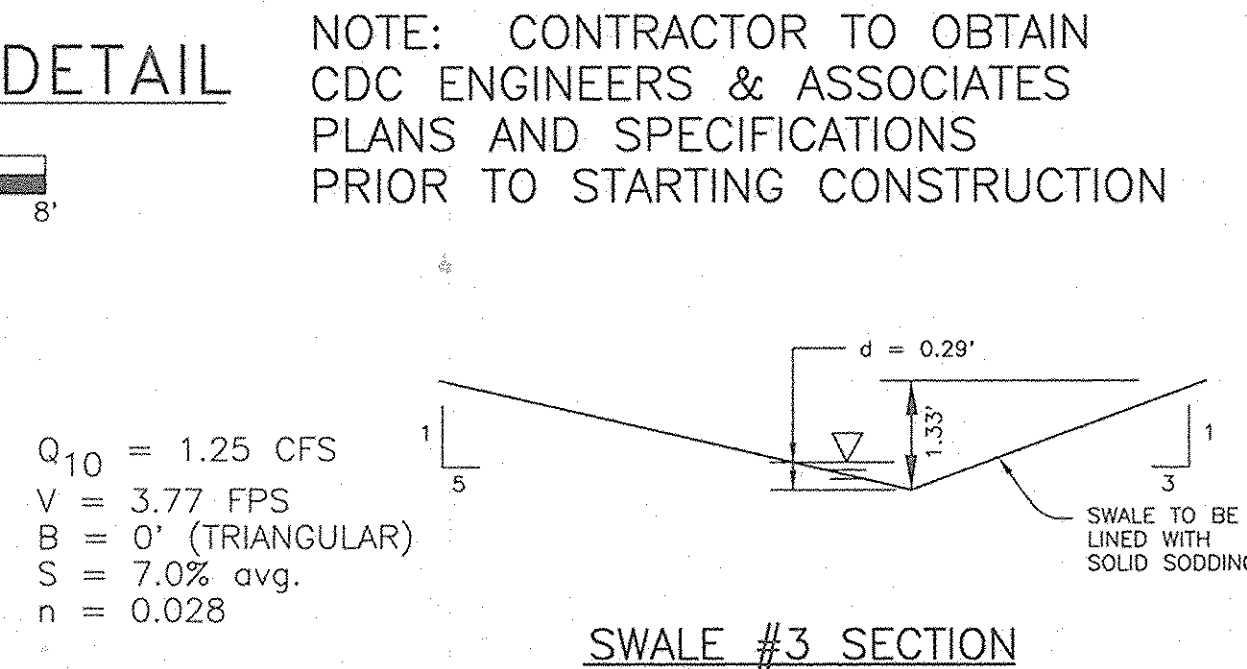
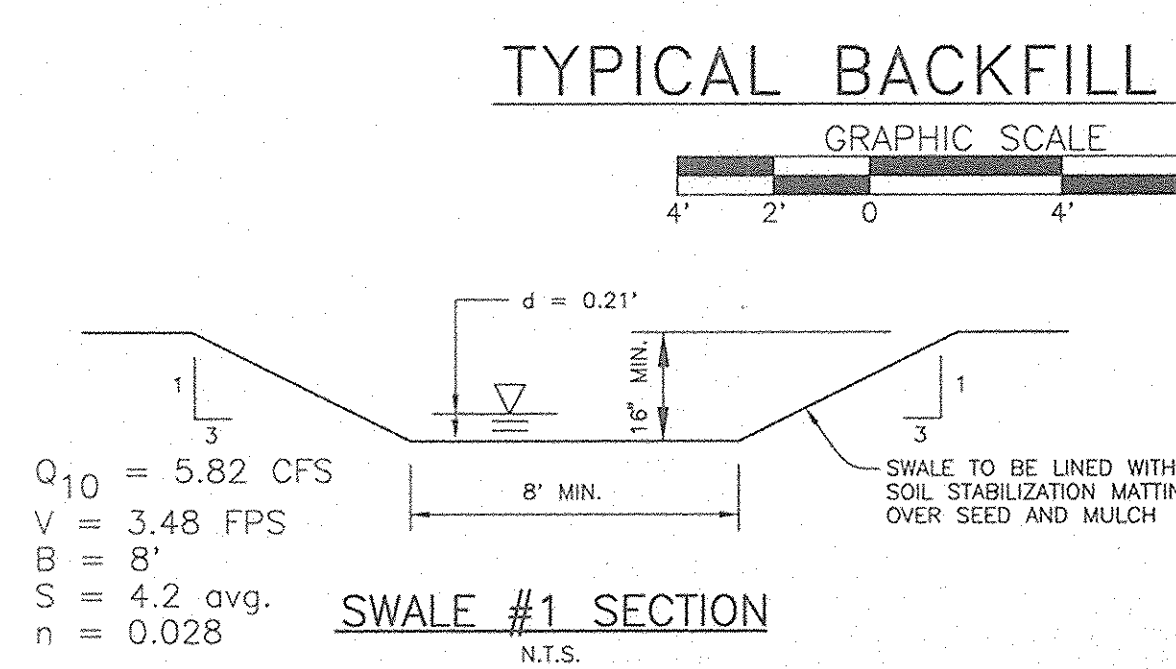
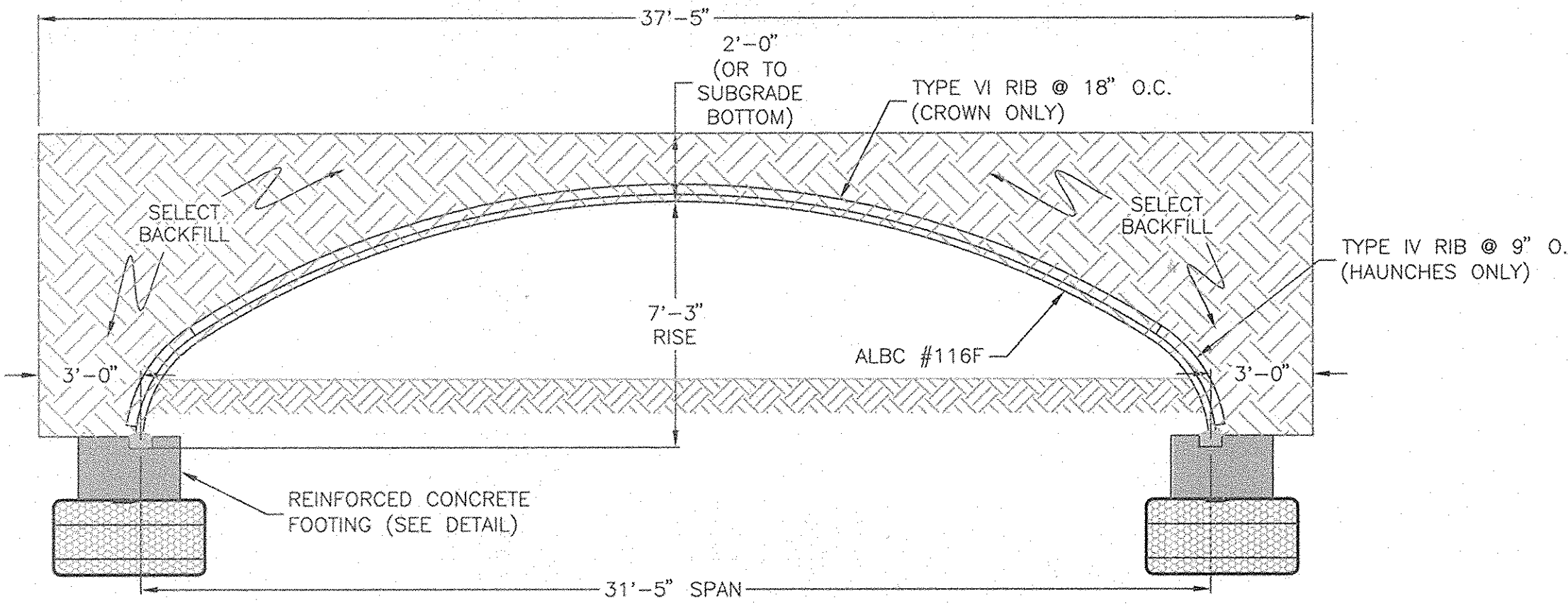
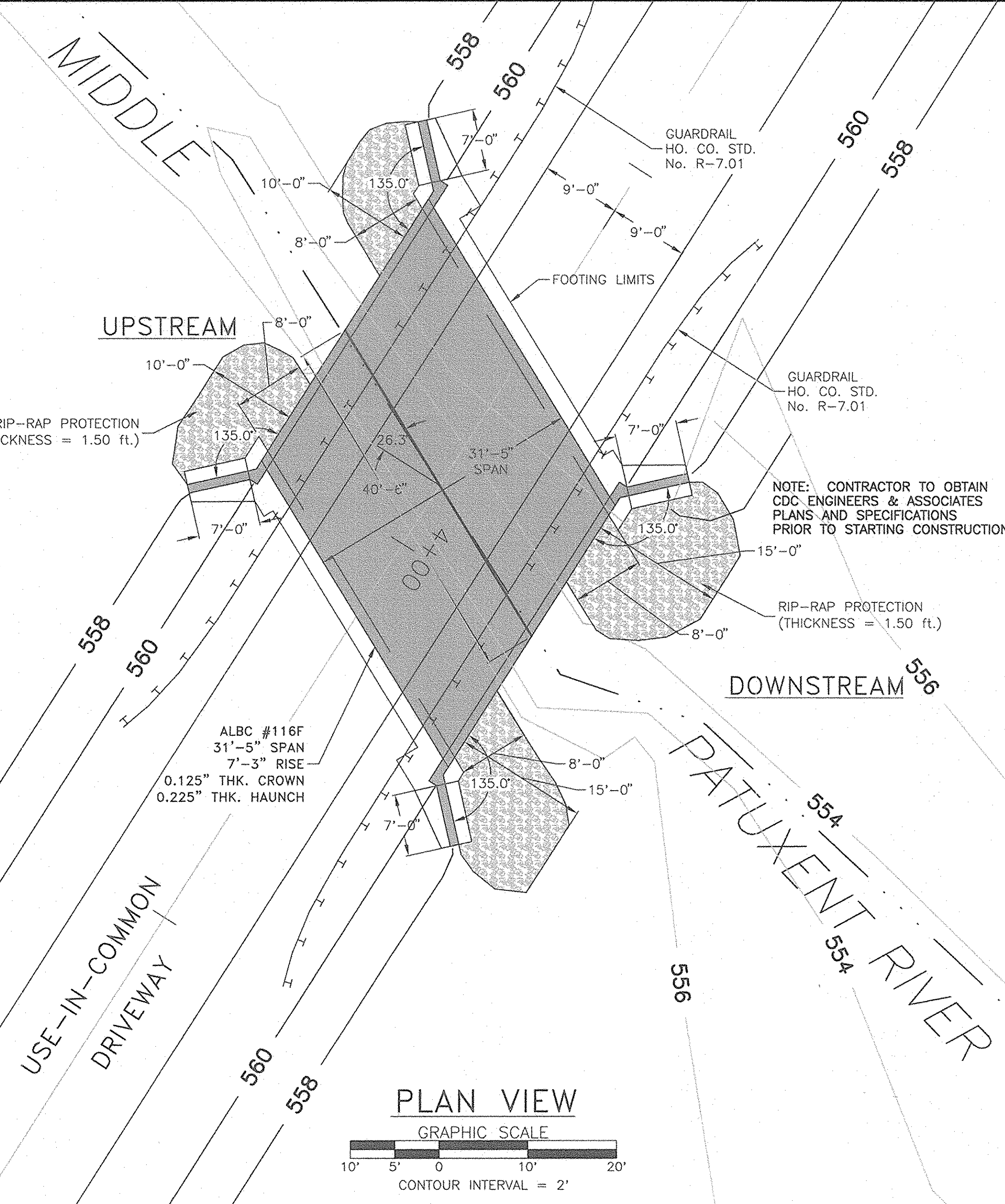
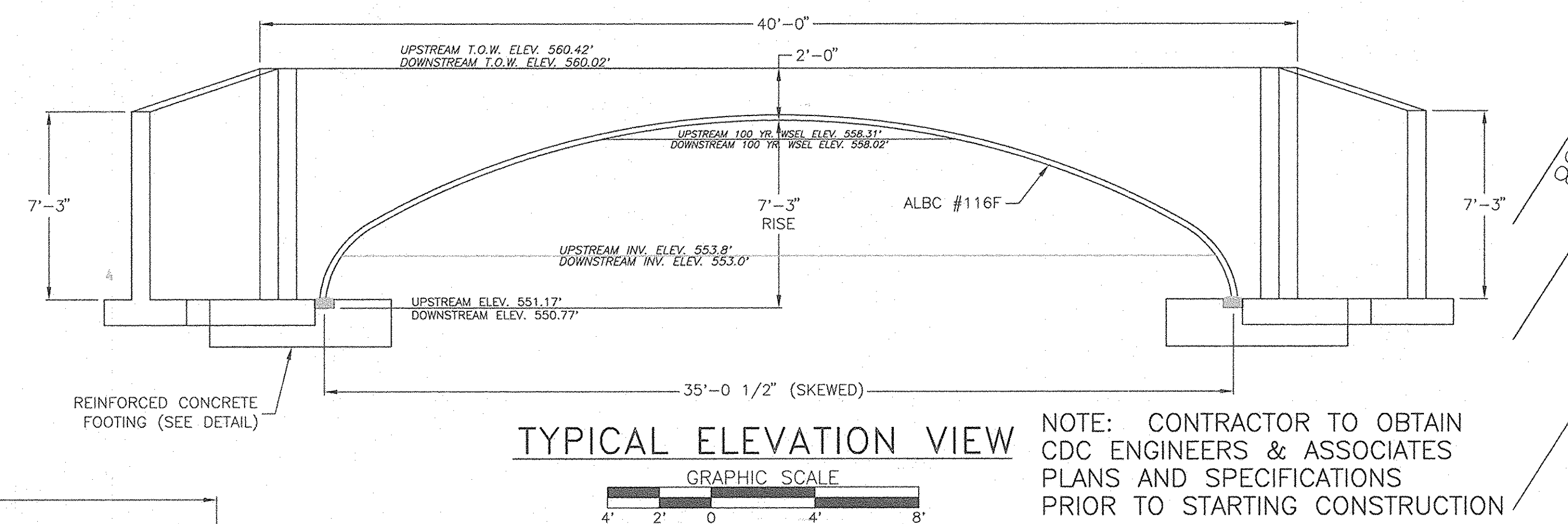
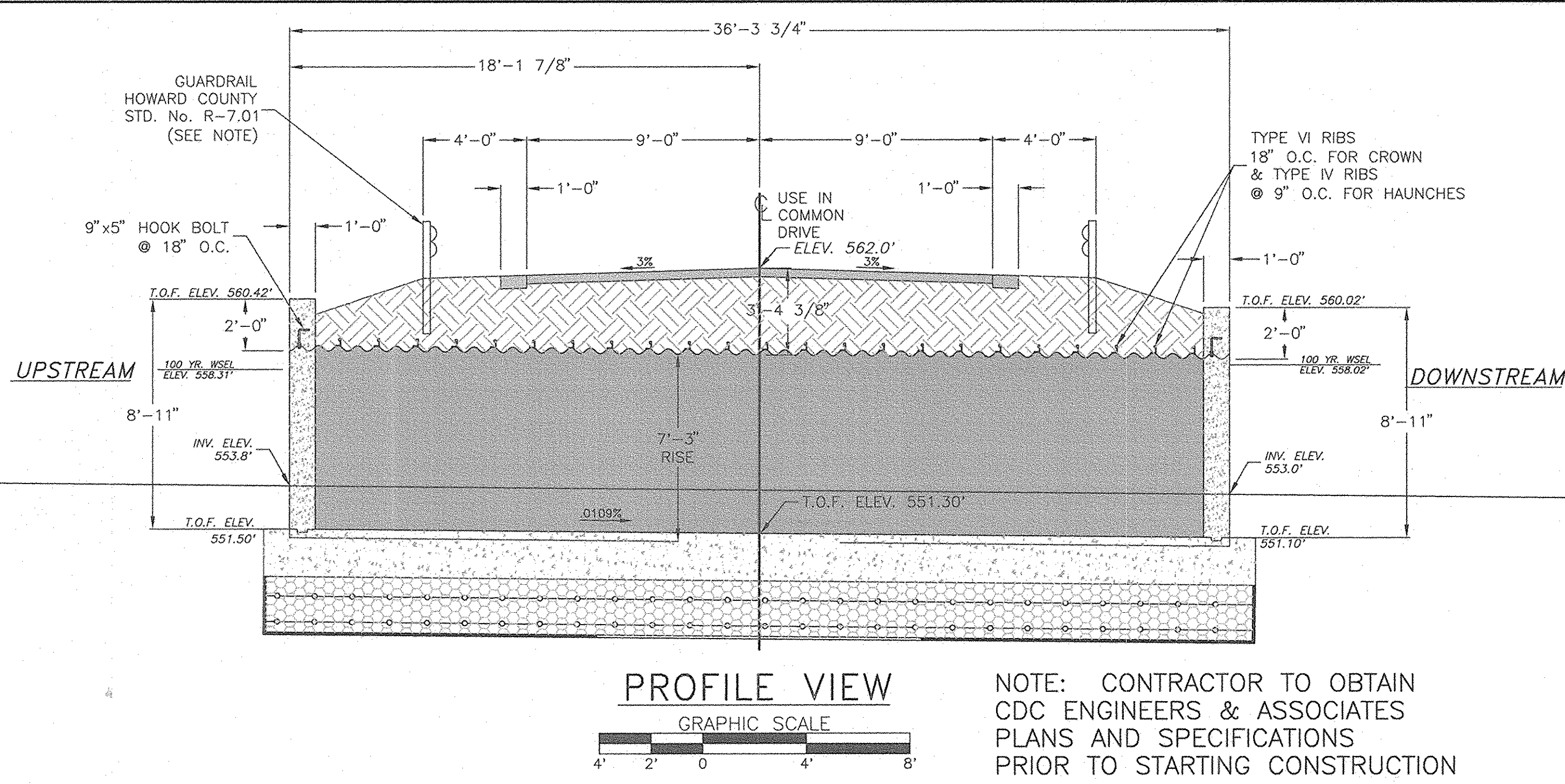
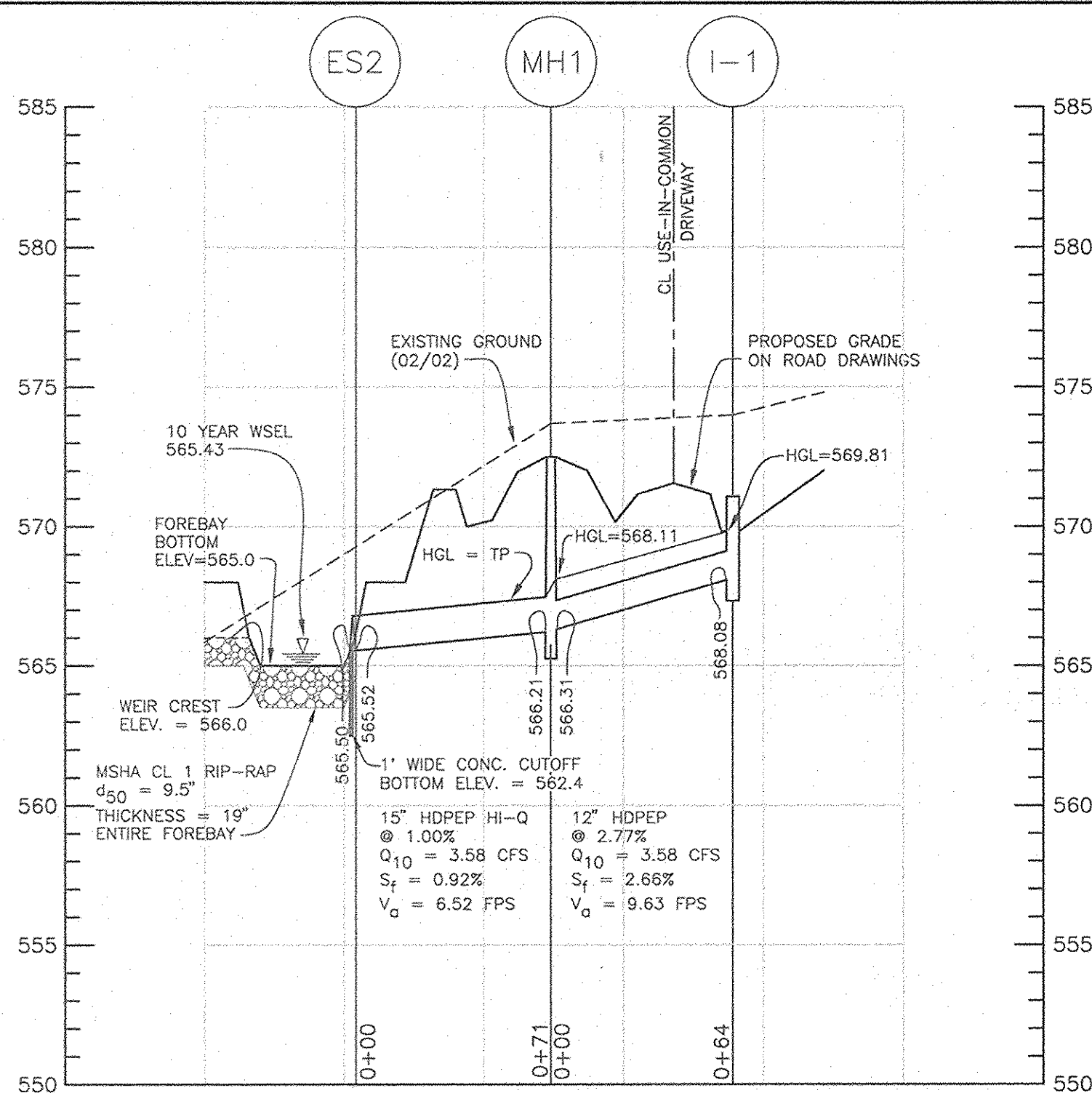
APPROVED: DEPARTMENT OF PUBLIC WORKS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cindy Harwood 2/16/04
CHIEF, DIVISION OF LAND DEVELOPMENT

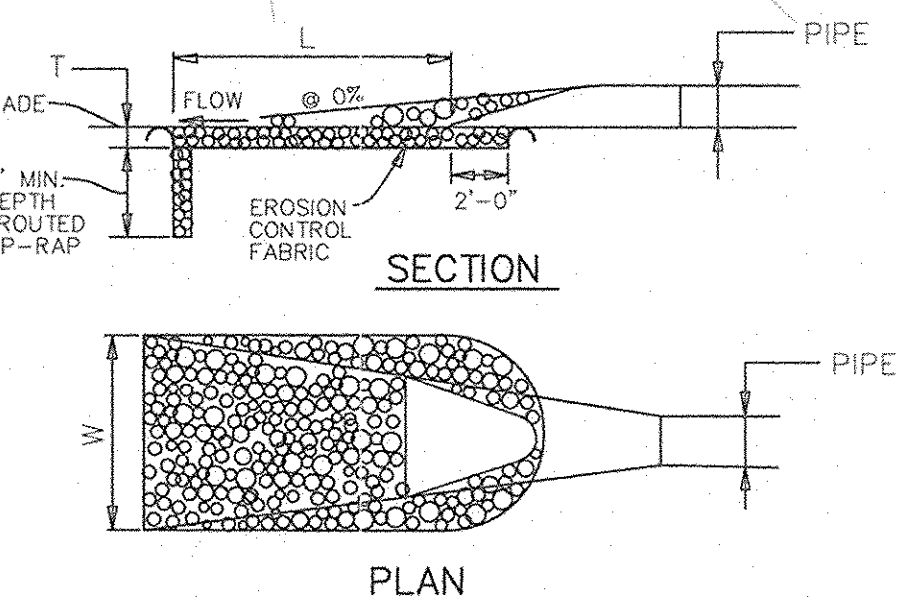
Mike Damman 2/16/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION

PLAN
SCALE: 1" = 50'



OUTLET PROTECTION DETAIL
NOT TO SCALE

STRUCTURE	D-50	LENGTH (L)	WIDTH (W)	THICKNESS (T)	SHA CLASS
ES1	9.5"	32'	10'	19"	I
ES2	9.5"	ENTIRE FOREBAY	19"	19"	I



APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] 3/18/04
CHIEF, DIVISION OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 3/18/04
CHIEF, DIVISION OF PLANNING AND ZONING

APPROVED: DEVELOPMENT ENGINEERING DIVISION
[Signature] 3/18/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION

PIPE SCHEDULE

RUN	LENGTH (LF)	DESCRIPTION	CLASSIFICATION
I-1 TO MH1	64	12" HDPEP	TYPE 'S'
MH1 TO ES2	71	15" HDPEP	TYPE 'S'
ES1 TO S1	45	30" ROCP	ASTM C-361(C-25)
HW1 TO HW2	40.5	31"-8" x 7'-4" AL. STRUCTURAL PLATE	SEE CDC ENGINEERS AND ASSOC. FOR PLANS AND SPECIFICATIONS.

STRUCTURE SCHEDULE

STRUCTURE	LOCATION	TOP ELEV.	INVERT IN	INVERT IN	INVERT OUT	TYPE	DETAIL REFERENCE	REMARKS
I-1	USE-IN-COMMON DRIVEWAY STA. 7+80.93 OS 21.0' L	571.08	-	569.75	568.08	K	SD-4.12, SD-4.13	OPEN ON 2 SIDES
MH1	USE-IN-COMMON DRIVEWAY STA. 7+86.46 OS 21.0' R	572.50	-	566.31	568.21	PRECAST	Q 5.12	
ES2	N 601,155.44 E 1,307,884.41	-	-	565.52	565.50	HOPE	-	SEE MANUFACTURE'S SPECS.
S1	N 601,263.40 E 1,307,825.23	567.50	-	564.00	564.00	PRECAST	-	
ES1	N 601,290.59 E 1,307,863.58	569.02	-	562.40	562.00	ASTM C-361	SD-5.52	CONC. END SECTION
HW1	N 601,382.56 E 1,308,111.17	560.02	-	-	553.0	CONTECH	#116F	SEE CDC ENGINEERS AND ASSOC. FOR PLANS AND SPECIFICATIONS.
HW2	N 601,417.18 E 1,308,990.15	560.42	-	-	553.8	CONTECH	#116F	SEE CDC ENGINEERS AND ASSOC. FOR PLANS AND SPECIFICATIONS.

NOTE: ELEVATIONS AND LOCATIONS FOR HEADWALLS, INLETS AND RISER ARE AT THE TOP CENTER OF THE STRUCTURE.

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[Signature] 2/18/04
PROFESSIONAL ENGINEER

OWNER/DEVELOPER:
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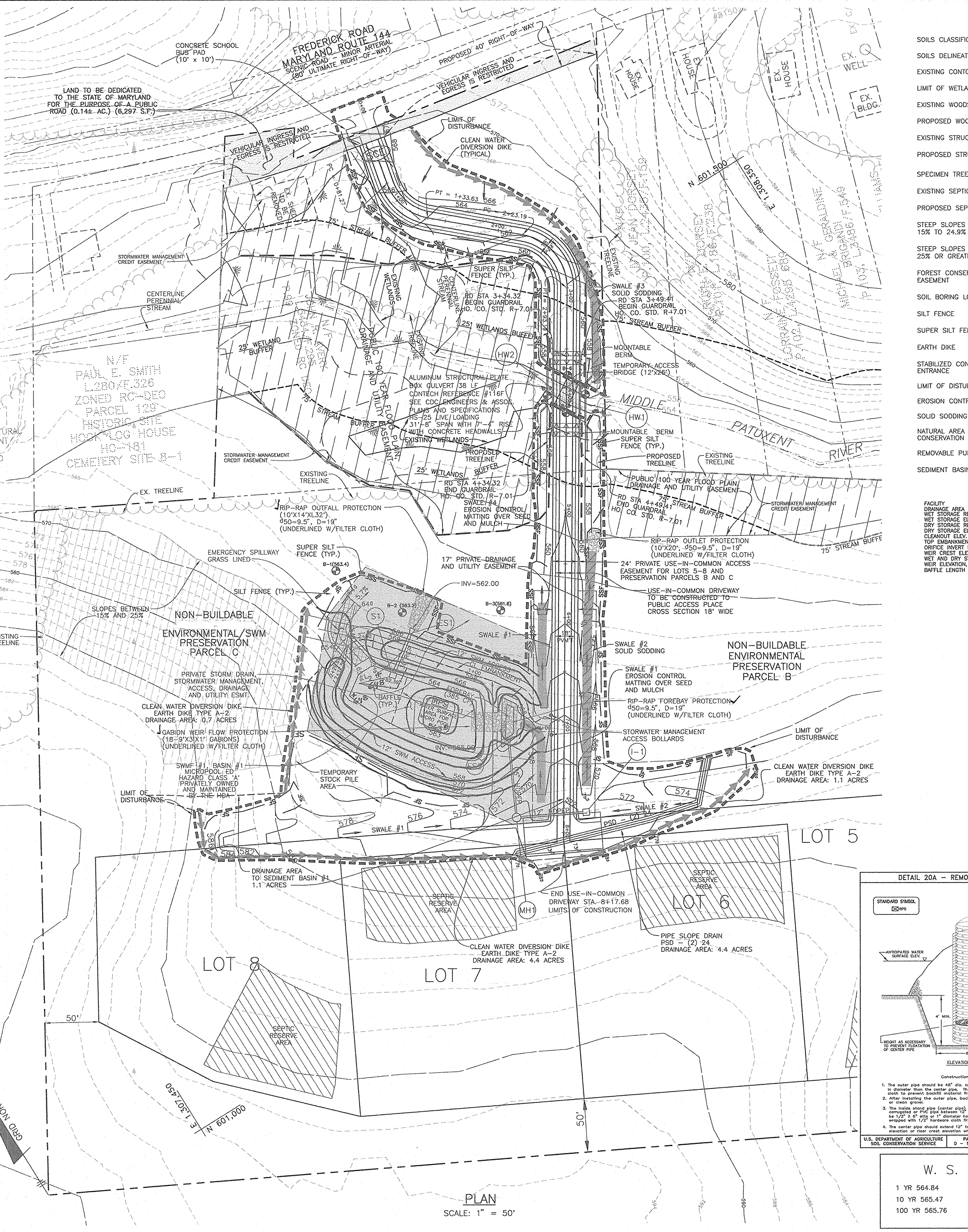
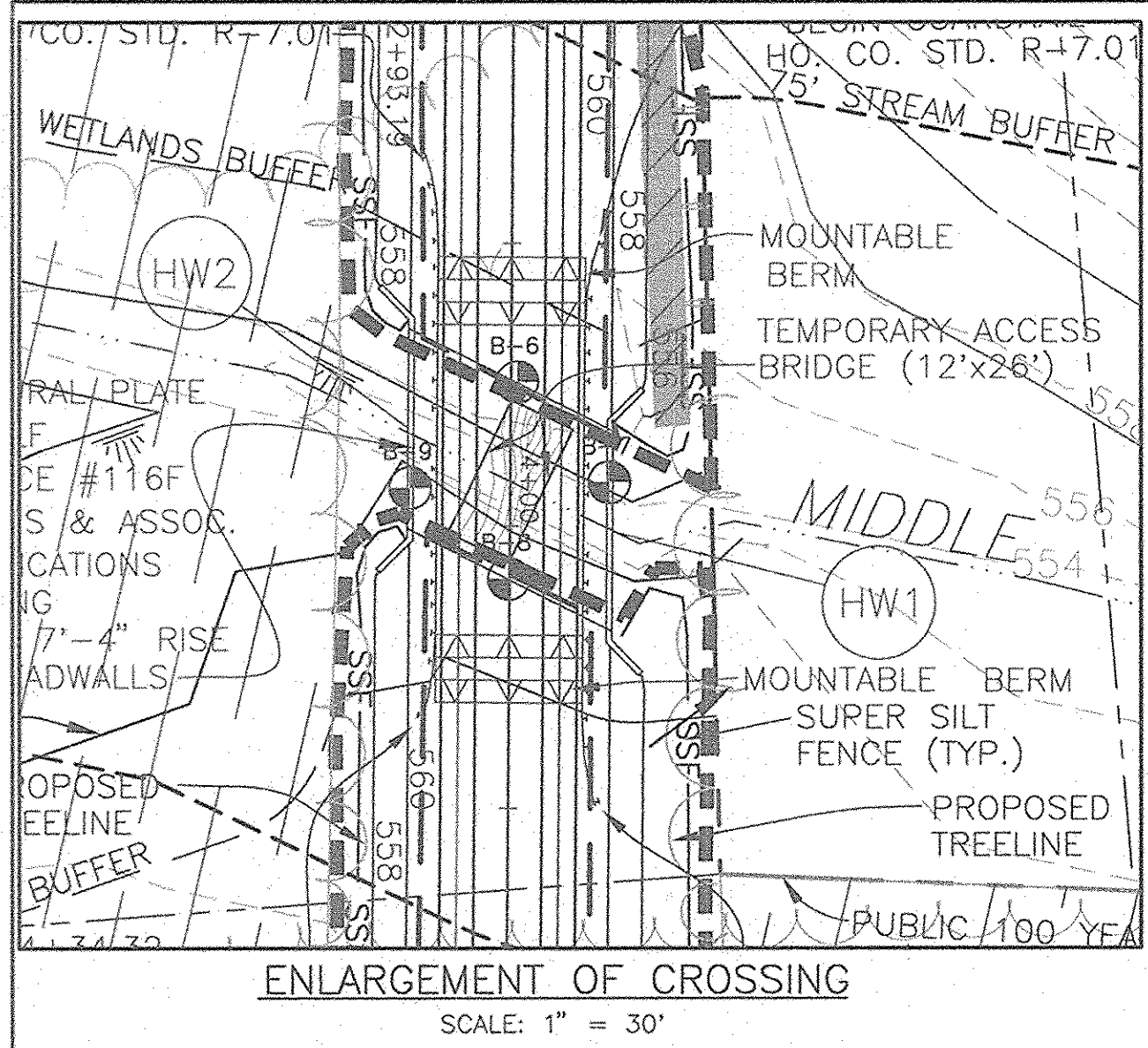
PROJECT:
AVERY PROPERTY
RESUBDIVISION OF LOT 3, PLAT No. 14285-14287, ADDING LOTS 4 THRU 8 AND PRESERVATION PARCELS A THRU C

LOCATION:
TAX MAP 8 - GRID 23
PARCELS 97 AND 99
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE:
STORM DRAIN PROFILES AND DETAILS

DATE: SEPTEMBER, 2003 PROJECT NO. 1523
DECEMBER, 2003

Design: MLV Draft: RPS Check: DAM SCALE: AS SHOWN DRAWING 4 OF 10



LEGEND

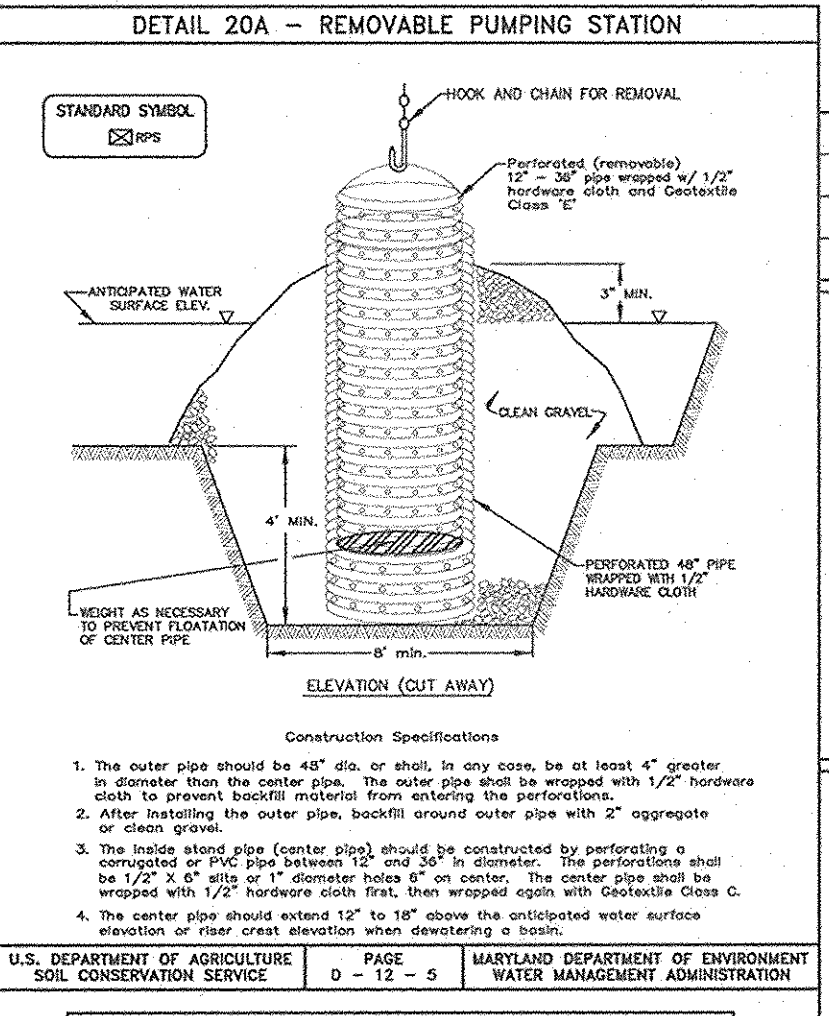
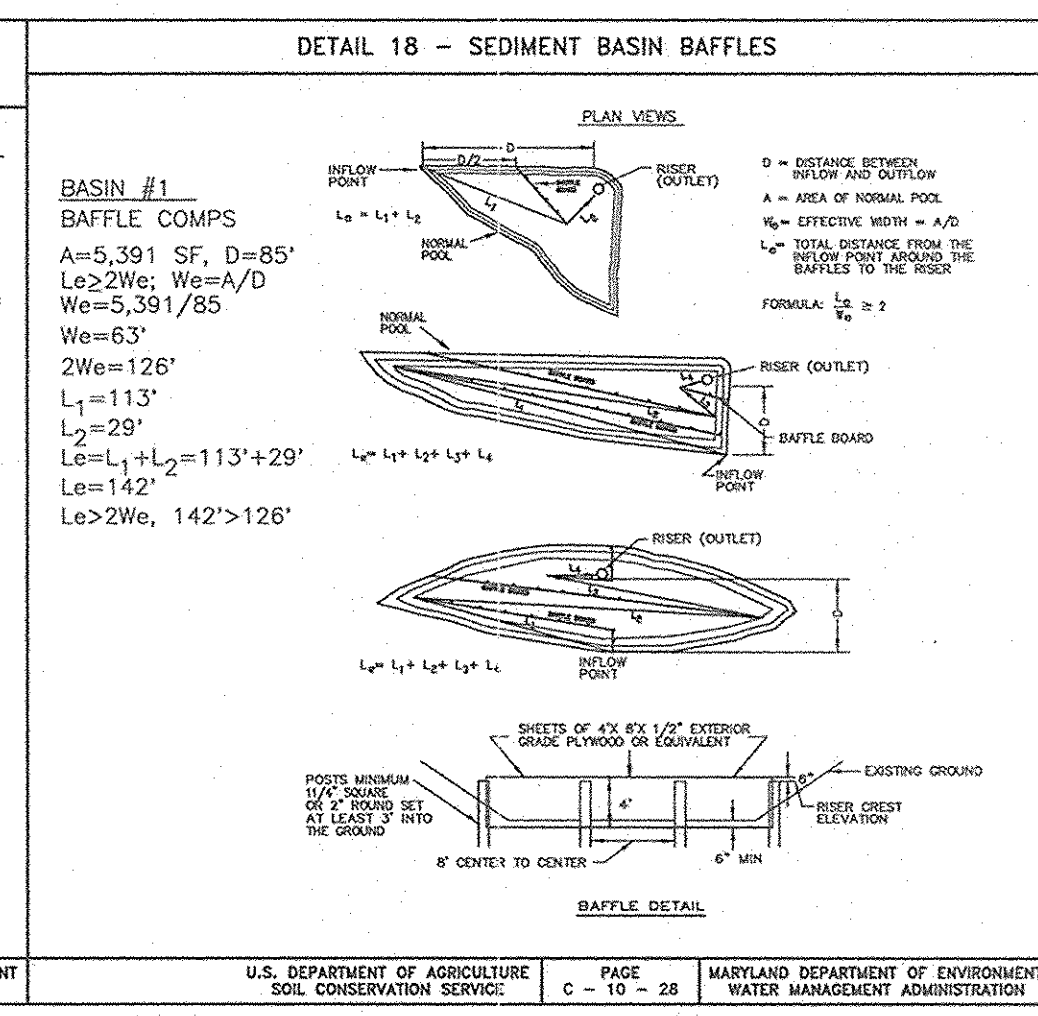
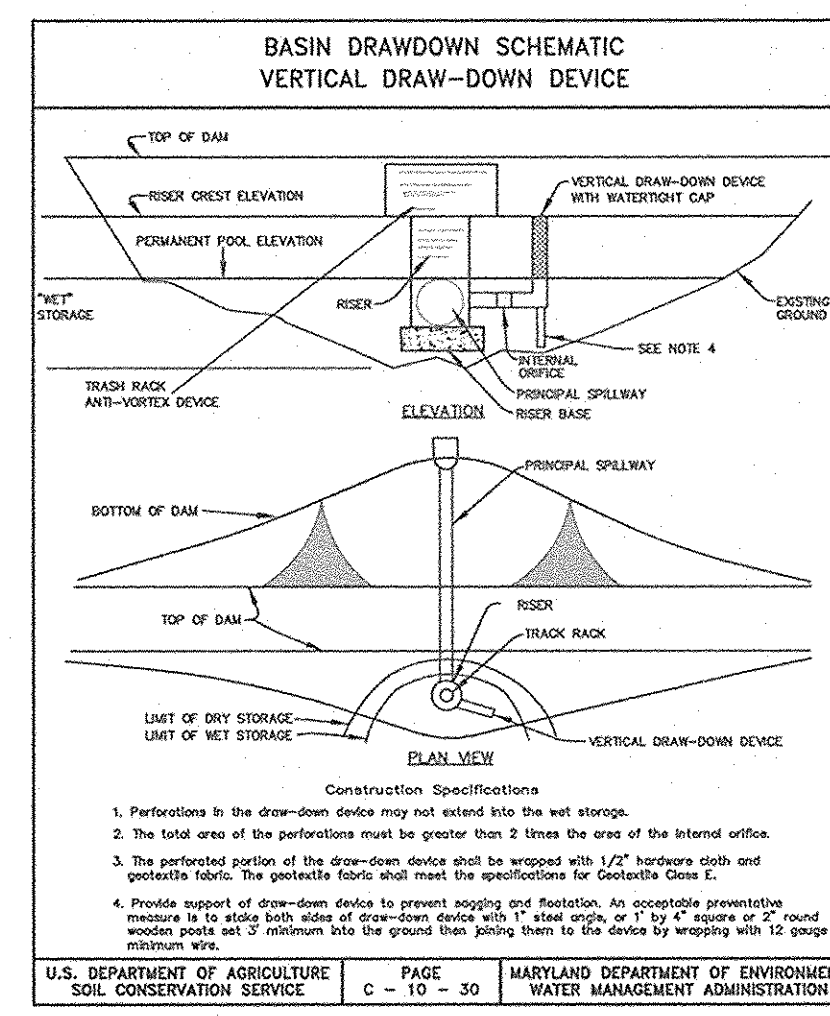
- SOILS CLASSIFICATION: AbC1
- SOILS DELINEATION: ---
- EXISTING CONTOURS: ---
- LIMIT OF WETLANDS: ---
- EXISTING WOODS LINE: ---
- PROPOSED WOODS LINE: ---
- EXISTING STRUCTURE: [Symbol]
- PROPOSED STRUCTURE: [Symbol]
- SPECIMEN TREE: [Symbol]
- EXISTING SEPTIC FIELD: [Symbol]
- PROPOSED SEPTIC FIELD: [Symbol]
- STEEP SLOPES 15% TO 24.9%: [Symbol]
- STEEP SLOPES 25% OR GREATER: [Symbol]
- FOREST CONSERVATION EASEMENT: [Symbol]
- SOIL BORING LOCATION: [Symbol]
- SILT FENCE: SF
- SUPER SILT FENCE: SSF
- EARTH DIKE: [Symbol]
- STABILIZED CONSTRUCTION ENTRANCE: [Symbol]
- LIMIT OF DISTURBANCE: [Symbol]
- EROSION CONTROL MATTING: [Symbol]
- SOLID SODDING: [Symbol]
- NATURAL AREA CONSERVATION EASEMENT: [Symbol]
- REMOVABLE PUMP STATION: [Symbol]
- SEDIMENT BASIN BAFFLE: [Symbol]

- SEDIMENT CONTROL NOTES**
- A minimum of 48 hours notice must be given to the Howard County Department of Inspections and Permits, Sediment Control Division prior to the start of any construction (410-313-1855).
 - 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.
 - Following initial soil disturbances or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 calendar days as to all other disturbed or graded areas on the project site.
 - 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".
 - 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. 50). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not recommended seeding dates do not allow for proper germination and establishment of grasses.
 - 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.
 - Site Analysis:
Total Area of Site: 34.88 acres±
Area to be Disturbed: 2.73 acres±
Area to be roofed or paved: 0.37 acres±
Area to be vegetatively stabilized: 2.36 acres±
Total Cut: 3,676 C.Y.
Total Fill: 2,192 C.Y. (ADJUSTED)
Offsite Waste/Borrow Area Location: *
 - Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
 - Additional sediment controls must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.
 - 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.
 - Trenches for the construction of utilities is limited to three pipe lengths or that which can be back filled and stabilized within one working day, whichever is shorter.
 - Quantities and estimates shown are for sediment control purposes only. Contractor shall prepare his/her own quantity estimates to his/her satisfaction.
* It is the responsibility of the contractor to identify the spoils/borrow site and notify and gain approval from the sediment control inspector of the site and it's grading permit number at the time of construction.

- SEQUENCE OF CONSTRUCTION**
- | | |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DAY 1 | OBTAIN GRADING PERMIT AND WDE WETLAND AND WATERWAY PERMITS. |
| DAY 2 | CONTRACTOR TO IDENTIFY AND MARK ANY AND ALL HAZARDOUS CONDITIONS ON SITE. |
| DAY 3-4 | CLEAR AND GRUB FOR SEDIMENT CONTROL DEVICES BETWEEN FREDERICK RD AND THE STREAM CROSSING. |
| DAY 5-15 | INSTALL THE STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE AND EARTH DIKE. INSTALL TEMPORARY ACCESS BRIDGE FOR THE STREAM CROSSING IN ACCORDANCE WITH THE DETAIL. GRADE THE DRIVEWAY FROM FREDERICK ROAD TO THE STREAM CROSSING AND STABILIZE IN ACCORDANCE WITH THE TEMPORARY SEEDING NOTES. |
| DAY 16-20 | INSTALL SILT FENCE, SUPER SILT FENCE AND EARTH DIKE ON THE REMAINDER OF THE SITE. |
| DAY 20-23 | WITH PERMISSION FIRST RECEIVED FROM THE INSPECTOR TO PROCEED TO CLEAR AND GRUB THE REMAINDER OF THE SITE. |
| DAY 24-34 | INSTALL THE SEDIMENT BASIN. |
| DAY 35-44 | GRADE THE REMAINDER OF THE SITE. |
| DAY 45-46 | STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDING NOTES. |
| DAY 47-50 | INSTALL USE-IN-COMMON DRIVEWAY TO 18' CROSS-SECTION, SEE ROAD CONSTRUCTION DRAWING. |
| DAY 51-55 | FINAL GRADE REMAINDER OF SITE, PERMANENTLY STABILIZE, AND ADD SOIL STABILIZATION MATTING TO ALL SWALES, DITCHES AND CONCENTRATED FLOW AREAS. |
| DAY 57-60 | INSTALL REQUIRED LANDSCAPING AS SPECIFIED ON THE LANDSCAPE PLAN. UPON APPROVAL OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, CONVERT SEDIMENT BASIN TO PERMANENT STORMWATER MANAGEMENT FACILITY AND PLANT IN ACCORDANCE WITH THE SWALE LANDSCAPE PLAN. REMOVE ANY REMAINING SEDIMENT CONTROL DEVICES AND TREE PROTECTION FENCE AND PERMANENTLY STABILIZE. |

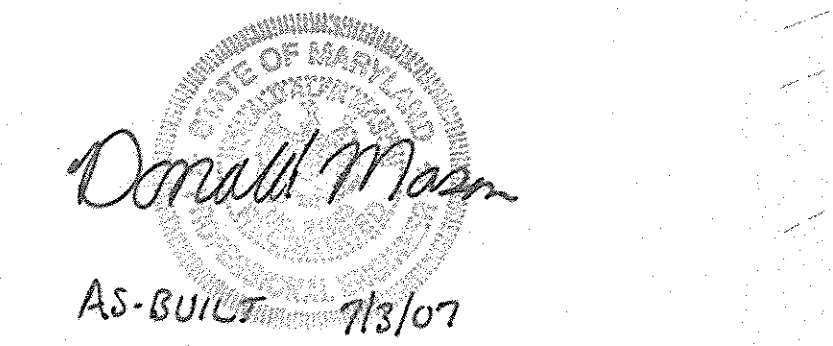
SEDIMENT BASIN DATA

FACILITY DRAINAGE AREA	81 AC
WET STORAGE RECD	3,960 CF
NET STORAGE ELEV.	564.0
DRY STORAGE RECD	3,960 CF
DRY STORAGE ELEV.	564.0
CLEAROUT ELEV.	564.0
TOP EMBANKMENT ELEV.	565.0
GRASS INVERT ELEV.	565.0
WEIR CREST ELEV.	565.0
NET AND DRY STORAGE PROVIDED BELOW FIRST WEIR ELEVATION, NO DISCHARGE FROM SITE.	
BAFFLE LENGTH	L1=113' L2=29' L3 TOTAL = 142'



W. S. ELEV.

1 YR 564.84	1 YR CLOGGED 565.05
10 YR 565.47	10 YR CLOGGED 565.51
100 YR 565.76	100 YR CLOGGED 565.86



ENGINEER'S CERTIFICATE
I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Donald Mason 2/19/04
ENGINEER - DONALD A. MASON, P.E. # 21443

DEVELOPER'S CERTIFICATE
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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 ALSO AUTHORIZE PERSONS ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Avery 2/19/04
OWNER

REVIEWED FOR HOWARD SOIL AND WEBS TECHNICAL REQUIREMENTS:
Jin Myung Lee 3/6/04
LISA - NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Avery 3/6/04
APPROVED: DEPARTMENT OF PUBLIC WORKS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 3/18/04
CHIEF, DIVISION OF LAND DEVELOPMENT

John R. Avery 3/16/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO. 1 DATE 7-3-07 REVISION REVISED PER AS-BUILT CONDITIONS

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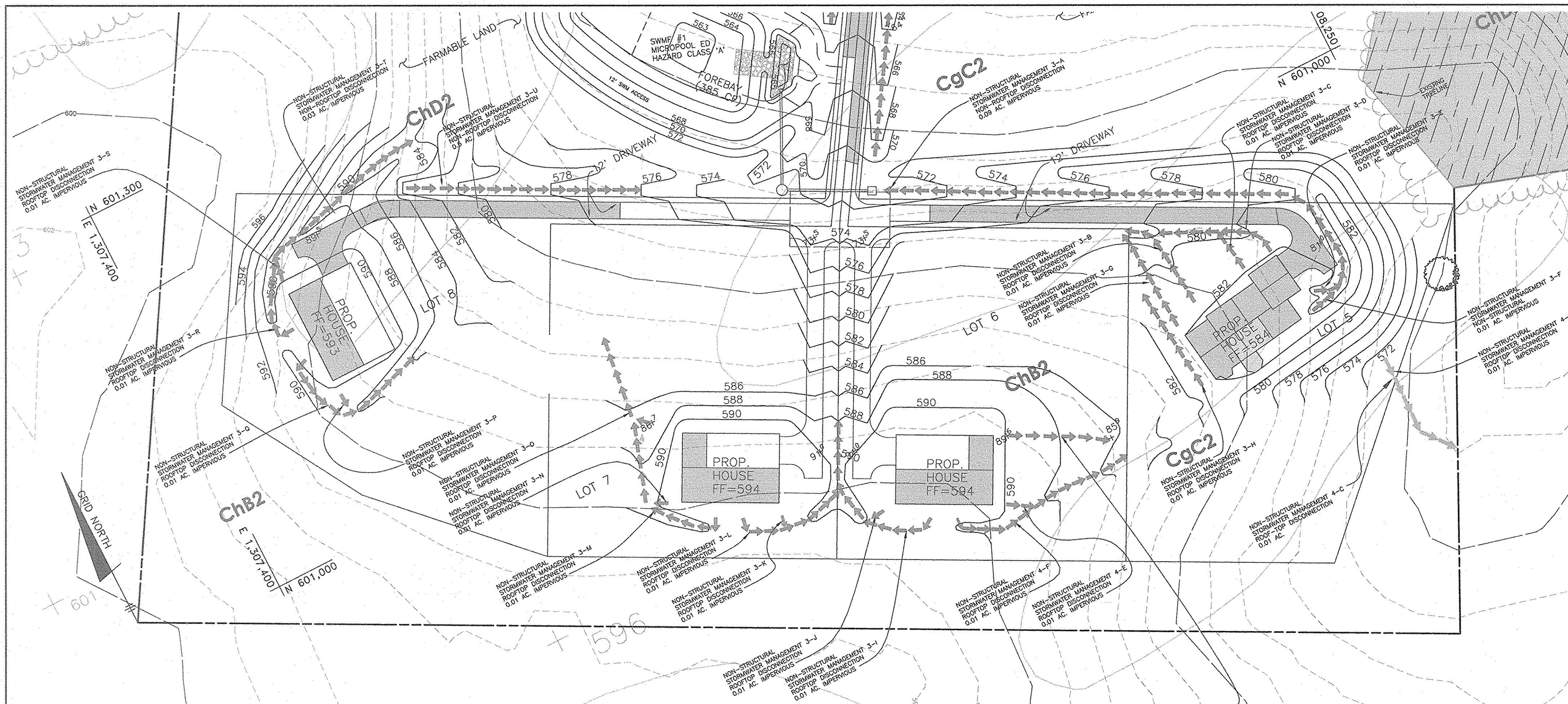
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PHONE: 410-368-3292

PROJECT: AVERY PROPERTY
RESUBDIVISION OF LOT 3, PLAT No. 14285-14287, ADDING LOTS 4 THRU 8 AND PRESERVATION PARCELS A THRU C

LOCATION: TAX MAP B - GRID 23
PARCELS 97 AND 99
4TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: GRADING, SEDIMENT AND EROSION CONTROL PLAN, NOTES AND DETAILS
DATE: SEPTEMBER 2003 PROJECT NO. 1523
DECEMBER, 2003

Design: JMC Draft: JMC/RPS Check: DAM SCALE: AS SHOWN DRAWING 5 OF 10



PLAN
SCALE: 1"=50'

SEDIMENT CONTROLS FOR THE GRADING SHOWN ON THIS PLAN SHEET ARE TO BE DESIGNED AND CONSTRUCTED UNDER A FUTURE GRADING PLAN TO BE FILED WITH HOWARD SOIL CONSERVATION DISTRICT

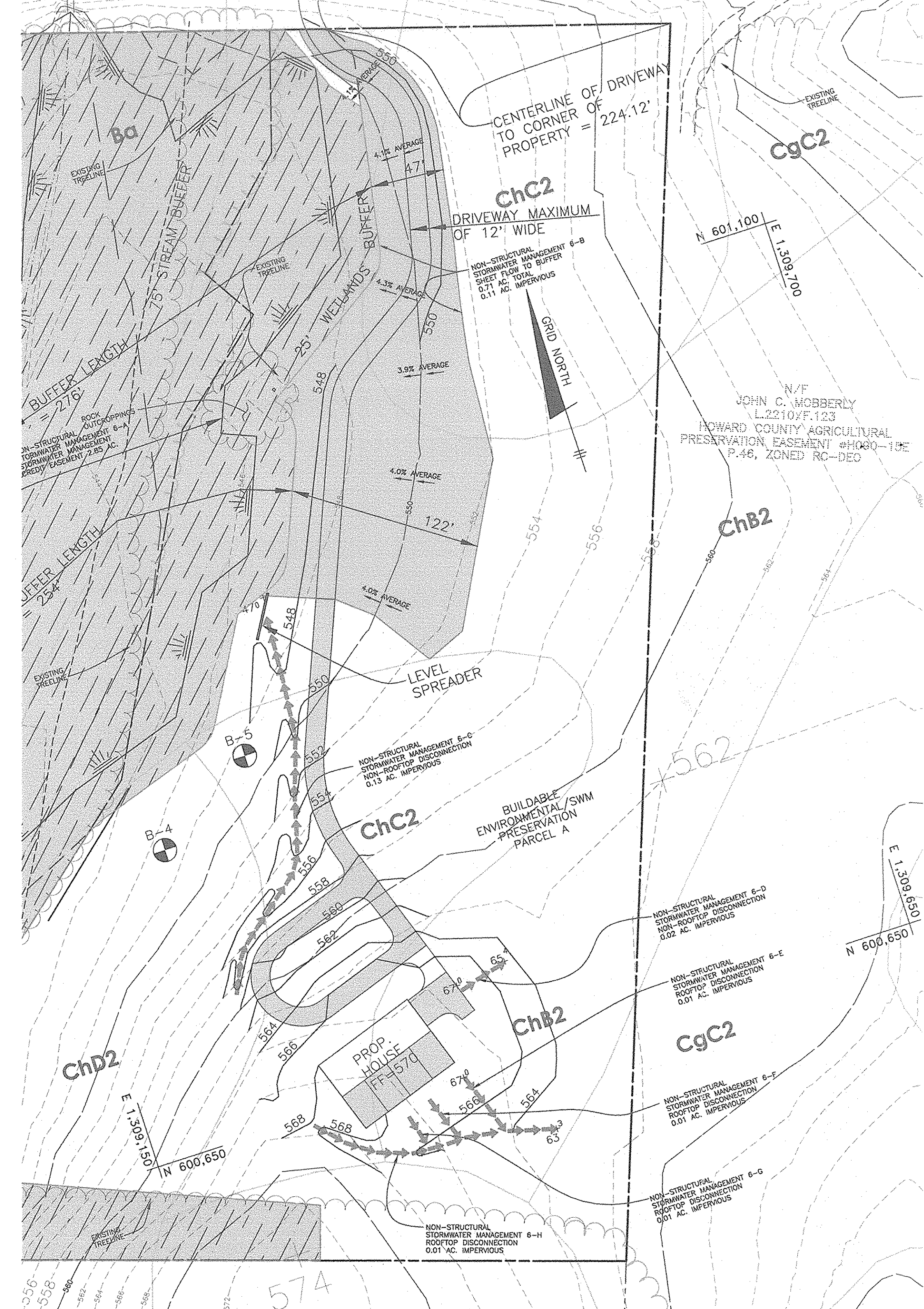
LEGEND

- SOILS CLASSIFICATION AbC1
- SOILS DELINEATION
- EXISTING CONTOURS 595, 600
- PROPOSED CONTOURS 600
- LIMIT OF WETLANDS
- EXISTING WOODS LINE
- PROPOSED WOODS LINE
- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- EXISTING WELL
- PROPOSED WELL
- SPECIMEN TREE
- NON-STRUCTURAL STORMWATER MANAGEMENT AREAS (CREDITS)

NON-STRUCTURAL STORMWATER MANAGEMENT SCHEDULE				
NON-STRUCTURAL STORMWATER MANAGEMENT DESIGNATION	DRAINAGE AREA DESIGNATION	TYPE	TOTAL DRAINAGE AREA (ACRES)	IMPERVIOUS COVERAGE (ACRES)
1-A	1	NATURAL AREA CONSERVATION	0.7	0.00
1-B	1	SHEET FLOW TO BUFFER	1.0	0.15
2-A	2	NATURAL AREA CONSERVATION	1.2	0.00
2-B	2	NATURAL AREA CONSERVATION	2.05	0.00
2-C	2	GRASS CHANNEL	NA	0.06
2-D	2	GRASS CHANNEL	NA	0.06
3-A	2	NON-ROOFTOP DISCONNECTION	NA	0.09
3-B	2	ROOFTOP DISCONNECTION	NA	0.01
3-C	2	ROOFTOP DISCONNECTION	NA	0.01
3-D	2	ROOFTOP DISCONNECTION	0.30	0.01
3-E	2	ROOFTOP DISCONNECTION	NA	0.01
3-F	2	ROOFTOP DISCONNECTION	NA	0.01
3-G	2	ROOFTOP DISCONNECTION	NA	0.01
3-H	2	ROOFTOP DISCONNECTION	NA	0.01
3-I	2	ROOFTOP DISCONNECTION	NA	0.01
3-J	2	ROOFTOP DISCONNECTION	NA	0.01
3-K	2	ROOFTOP DISCONNECTION	NA	0.01
3-L	2	ROOFTOP DISCONNECTION	NA	0.01
3-M	2	ROOFTOP DISCONNECTION	NA	0.01
3-N	2	ROOFTOP DISCONNECTION	NA	0.01
3-O	2	ROOFTOP DISCONNECTION	NA	0.01
3-P	2	ROOFTOP DISCONNECTION	NA	0.01
3-Q	2	ROOFTOP DISCONNECTION	NA	0.01
3-R	2	ROOFTOP DISCONNECTION	NA	0.01
3-S	2	ROOFTOP DISCONNECTION	NA	0.01
3-T	2	NON-ROOFTOP DISCONNECTION	NA	0.03
3-U	2	NON-ROOFTOP DISCONNECTION	NA	0.05
4-A	2	NATURAL AREA CONSERVATION	1.92	0.00
4-B	2	ROOF-TOP DISCONNECTION	NA	0.01
4-C	2	ROOF-TOP DISCONNECTION	NA	0.01
4-D	2	ROOF-TOP DISCONNECTION	NA	0.01
4-E	2	ROOF-TOP DISCONNECTION	NA	0.01
4-F	2	ROOF-TOP DISCONNECTION	NA	0.01
5-A	3	NATURAL AREA CONSERVATION	5.57	0.00
6-A	4	NATURAL AREA CONSERVATION	2.85	0.00
6-B	4	SHEET FLOW TO BUFFER	0.71	0.11
6-C	4	NON-ROOFTOP DISCONNECTION	NA	0.13
6-D	4	NON-ROOFTOP DISCONNECTION	NA	0.02
6-E	4	ROOFTOP DISCONNECTION	NA	0.01
6-F	4	ROOFTOP DISCONNECTION	NA	0.01
6-G	4	ROOFTOP DISCONNECTION	NA	0.01
6-H	4	ROOFTOP DISCONNECTION	NA	0.01

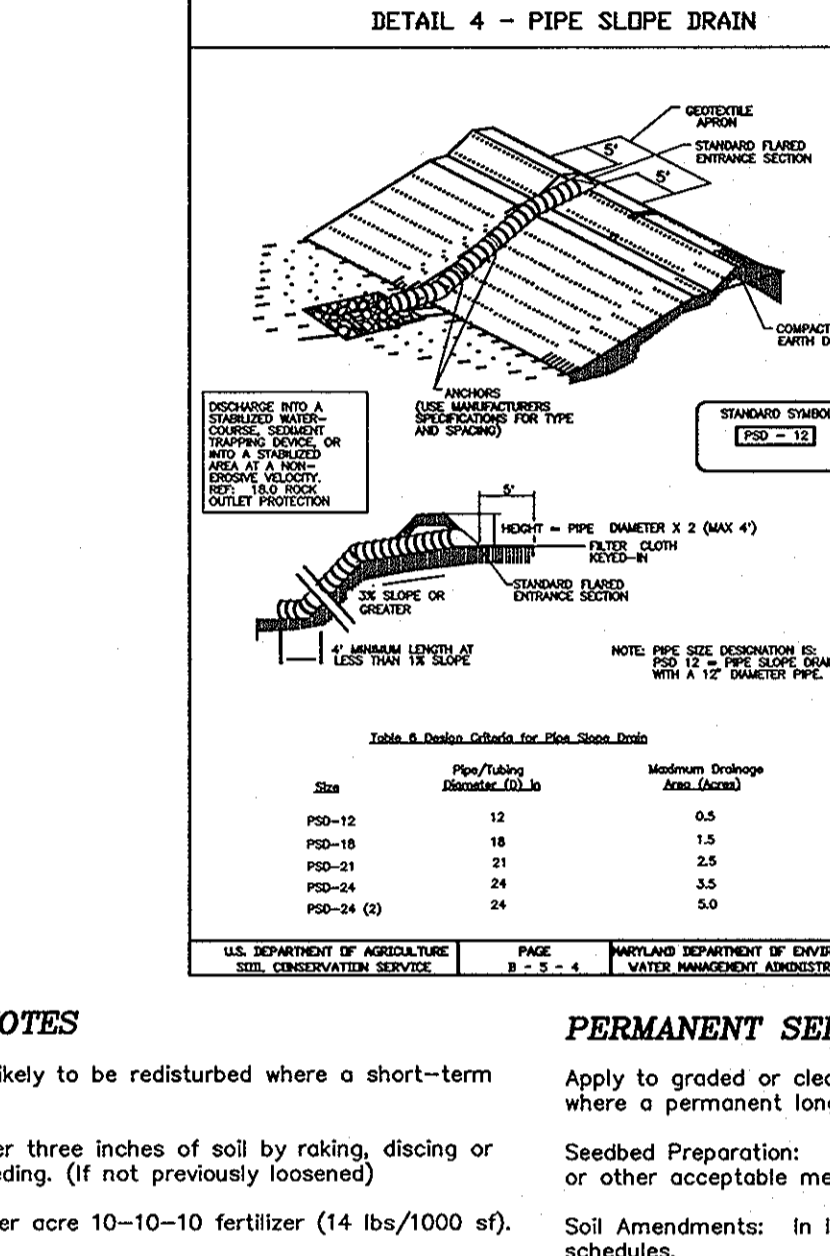
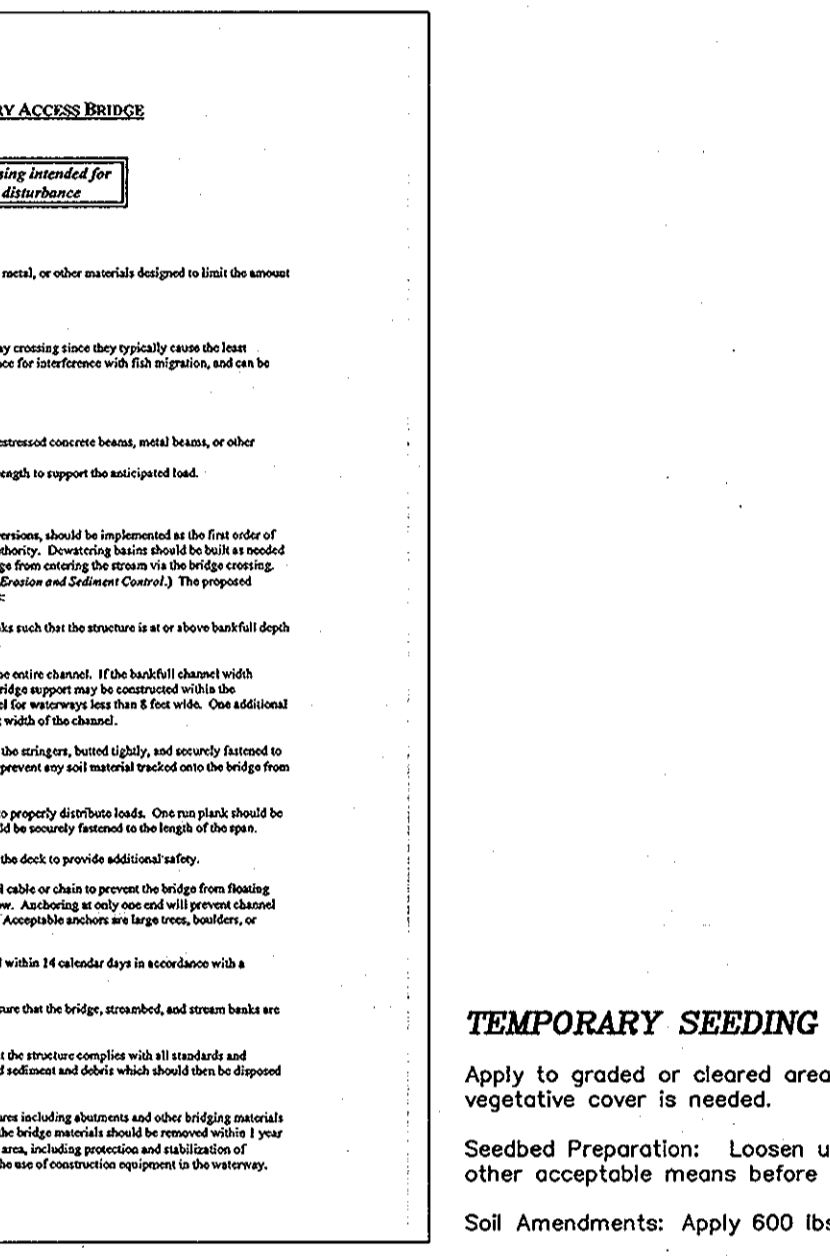
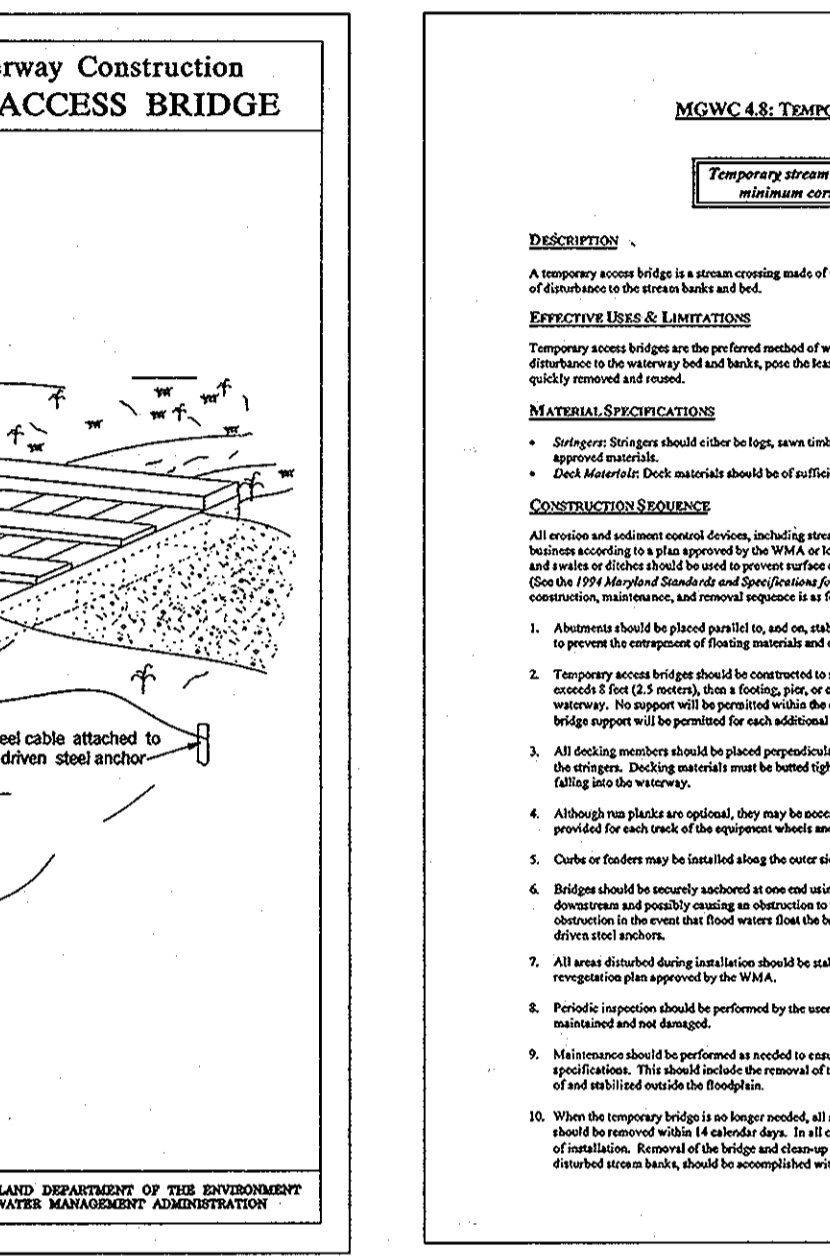
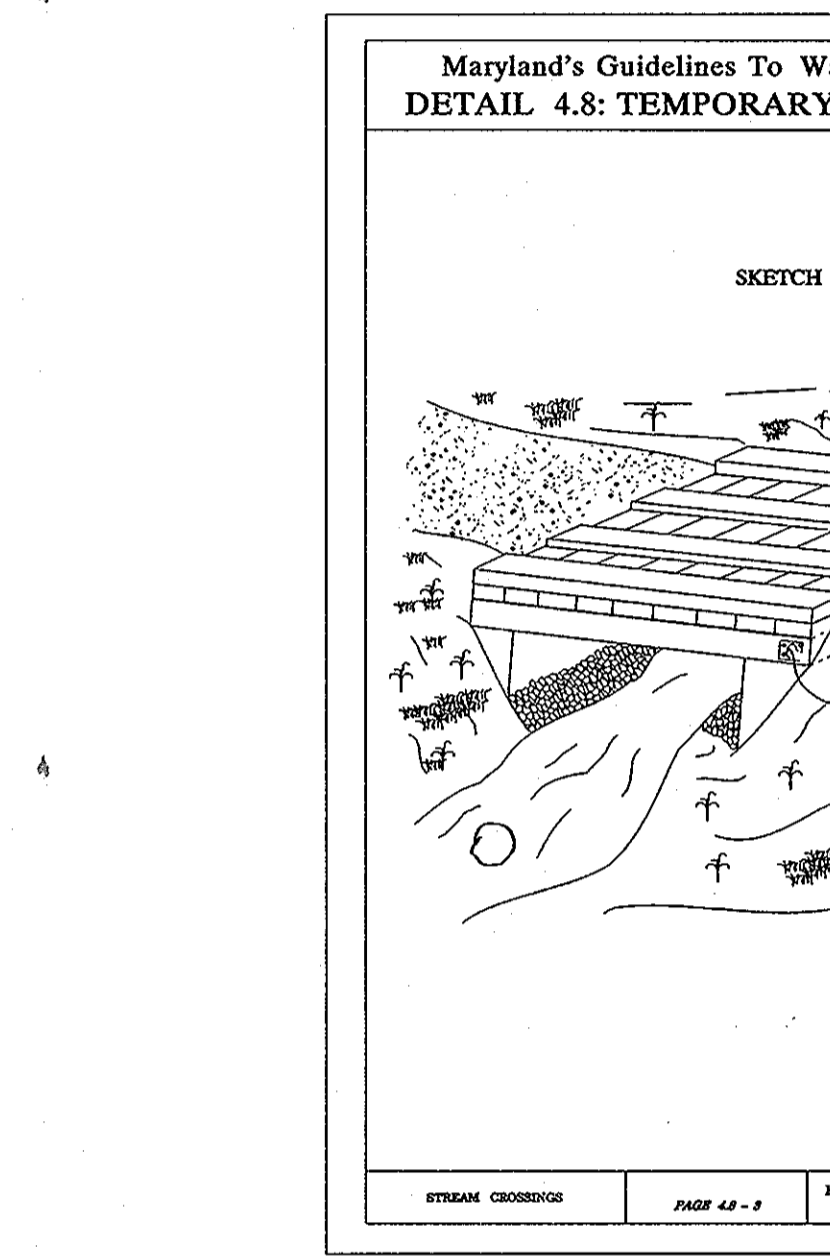
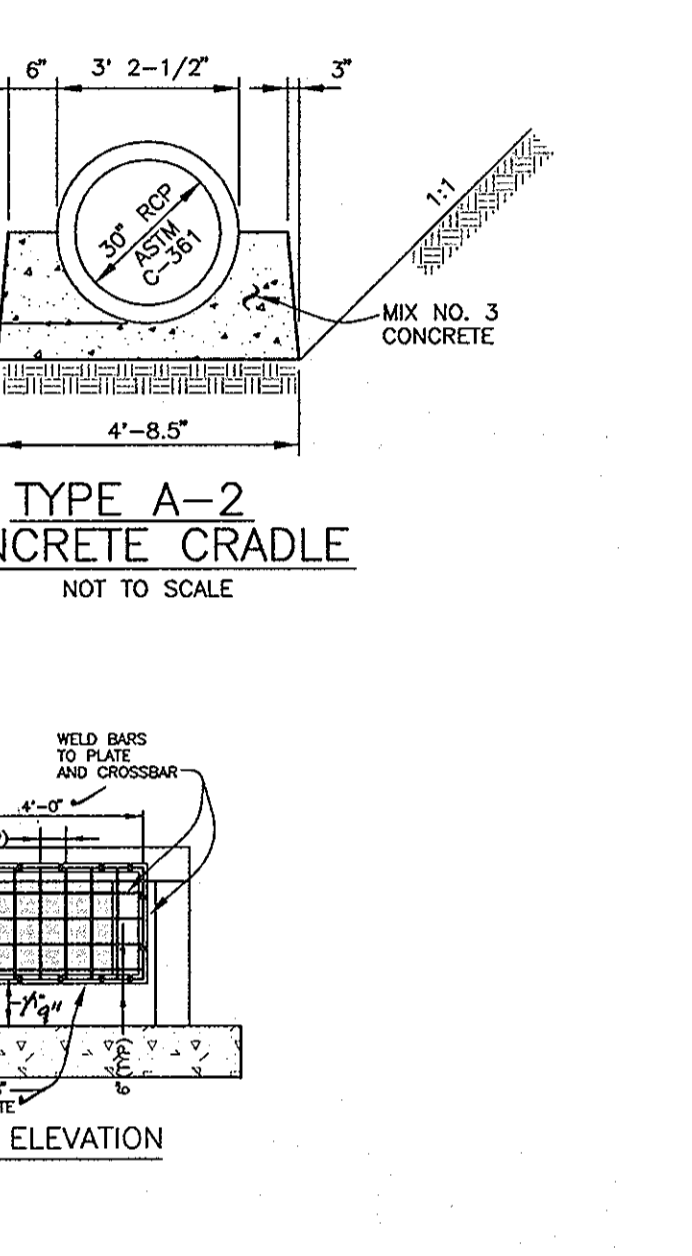
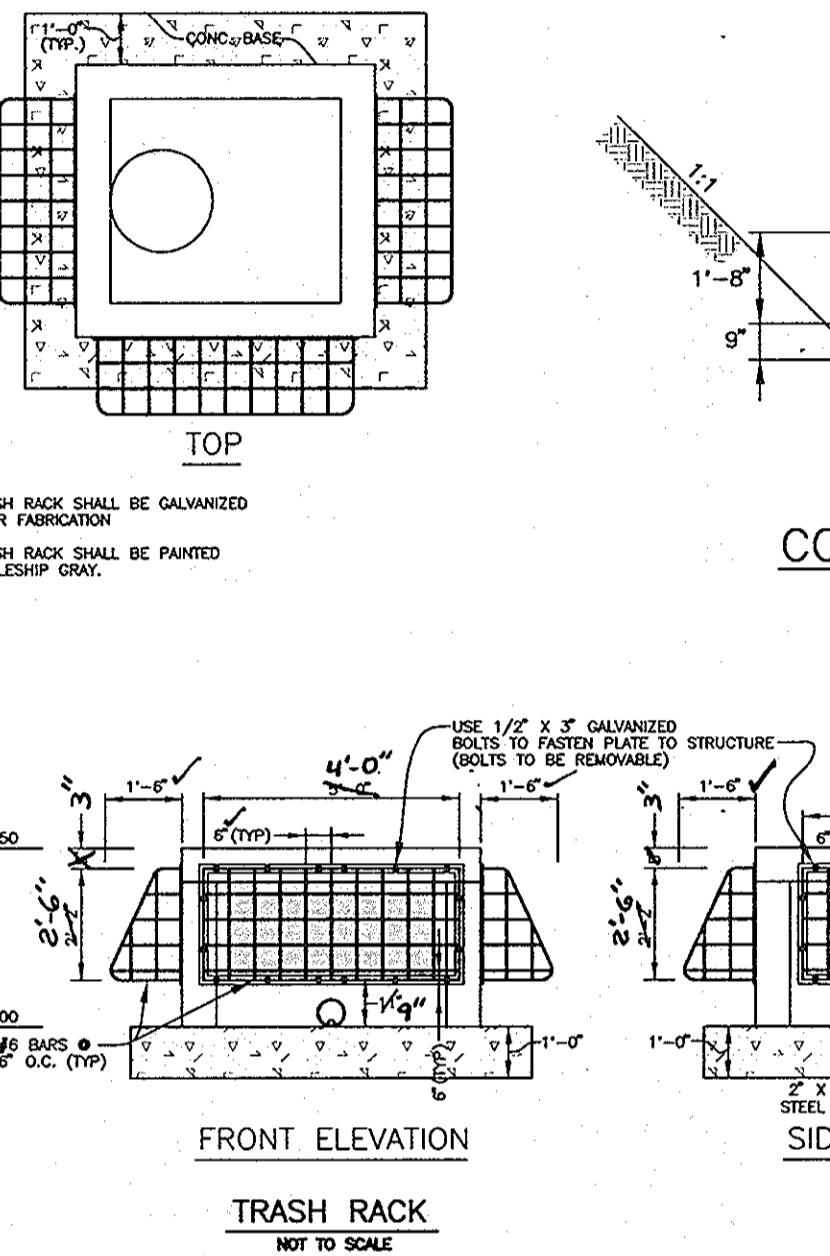
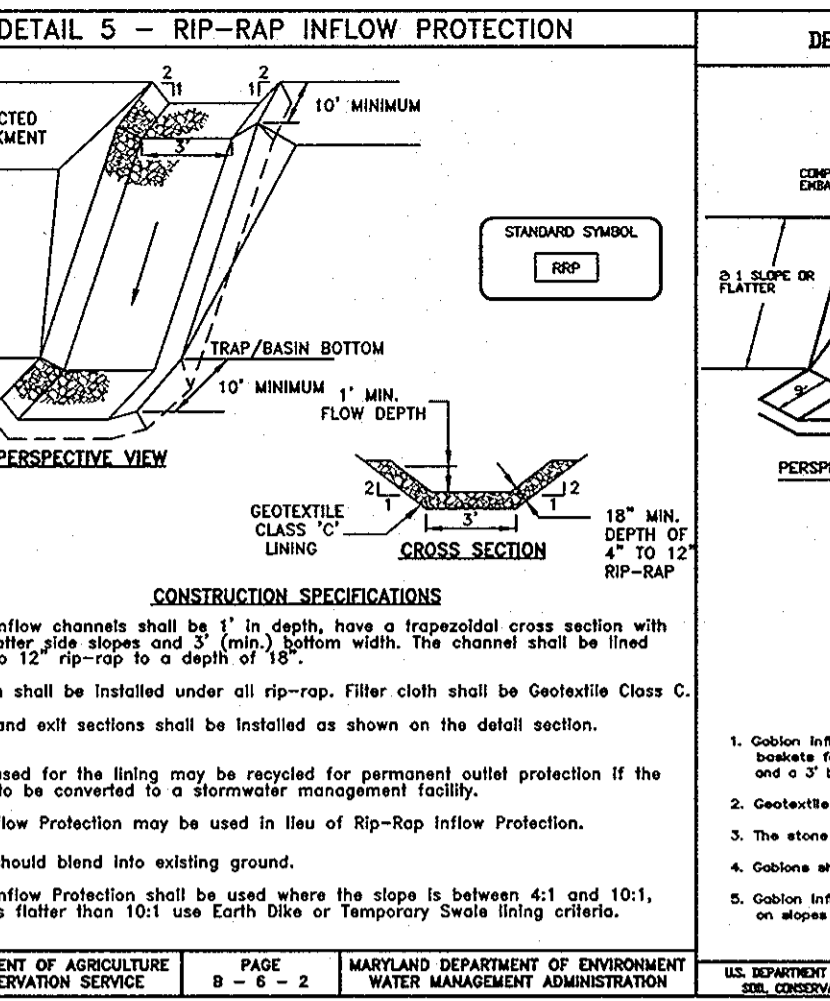
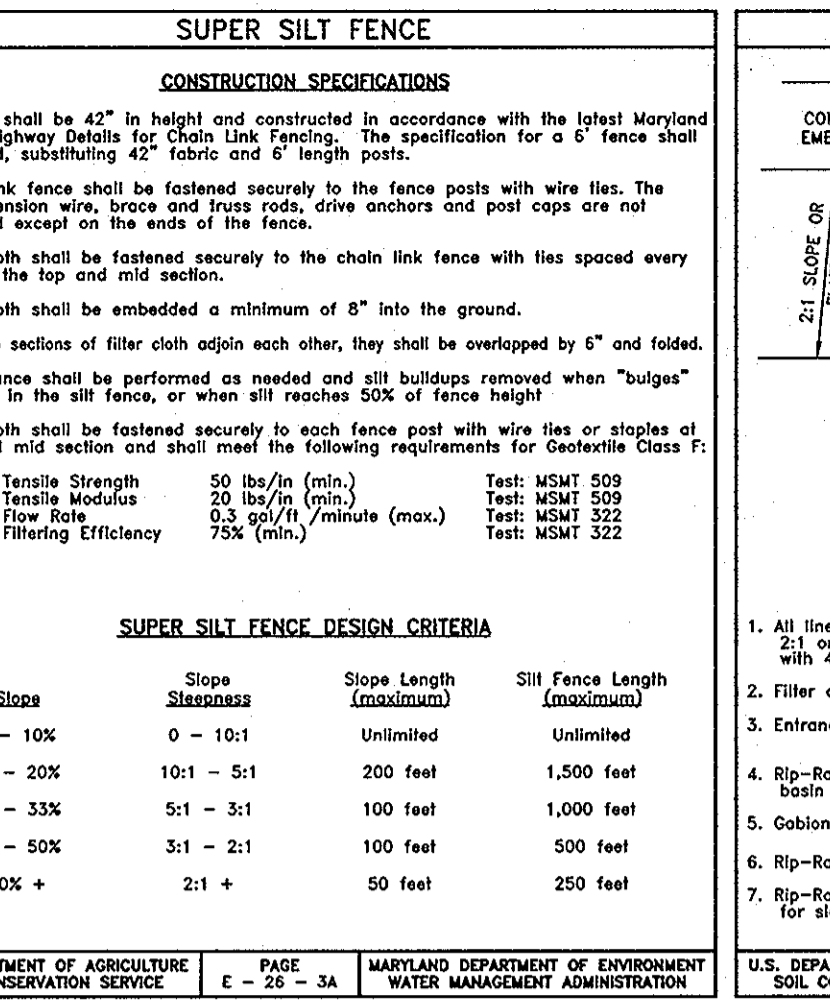
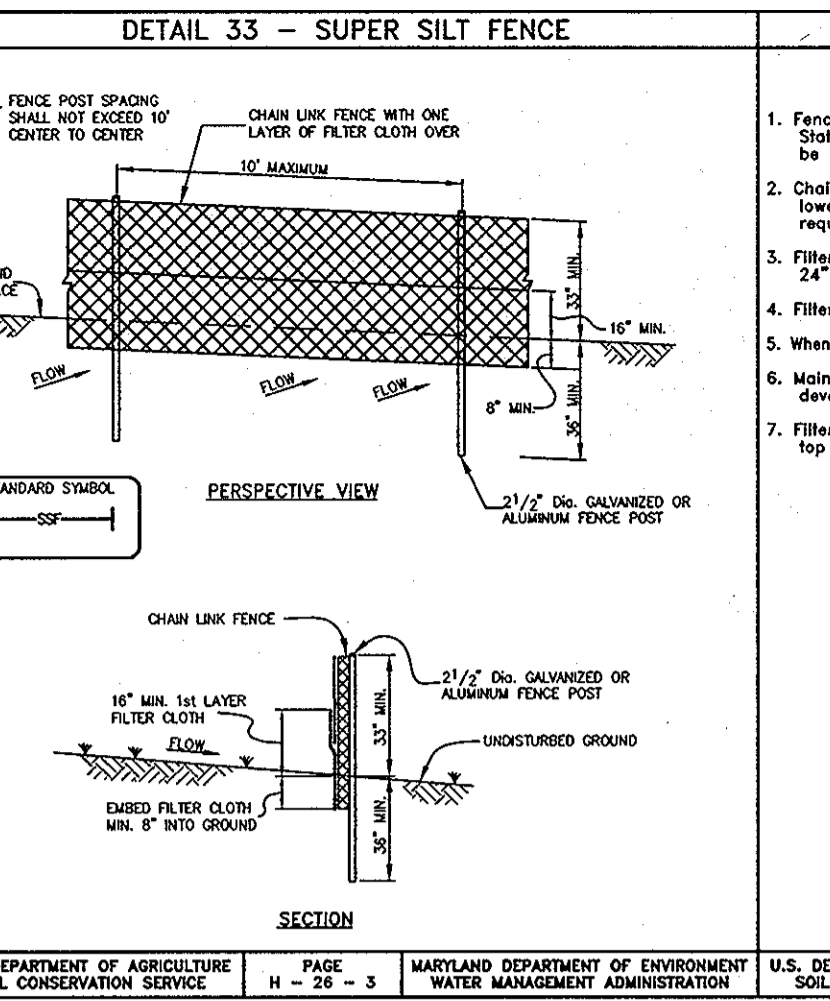
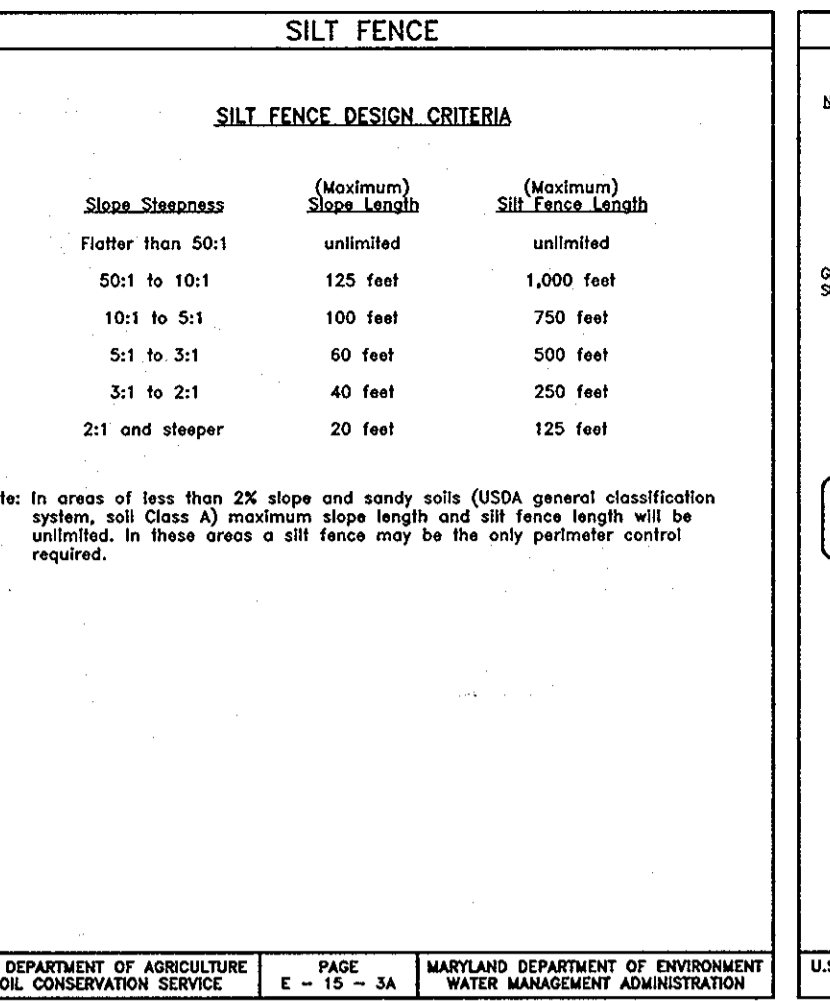
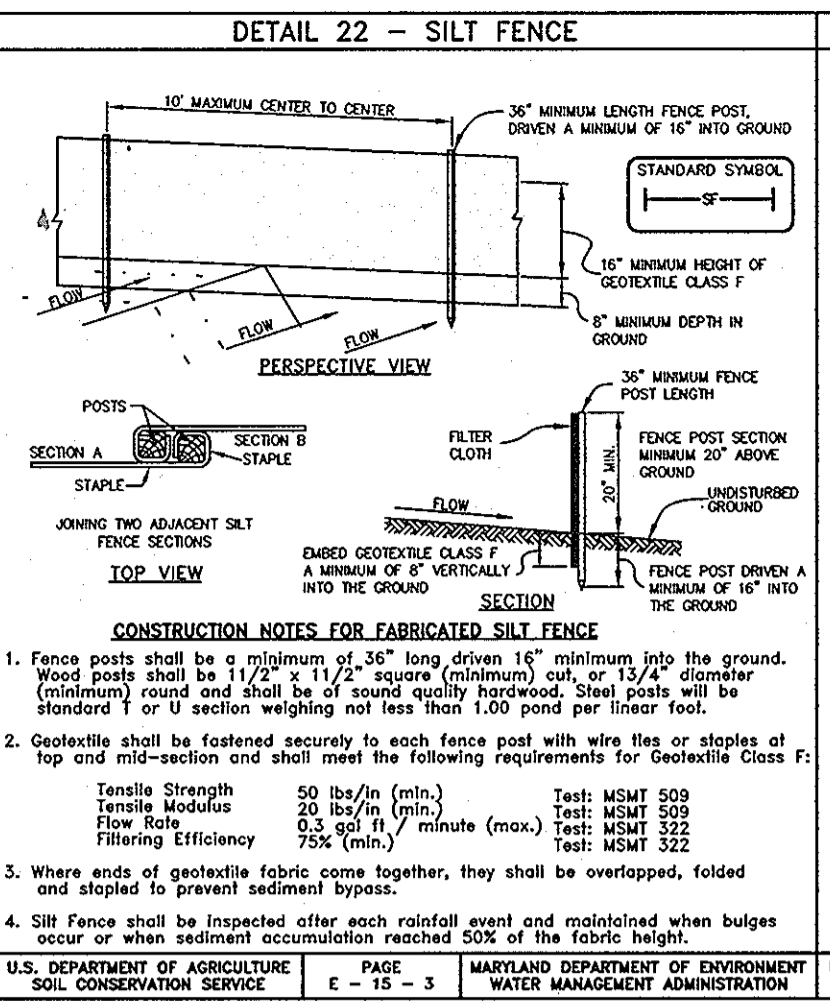
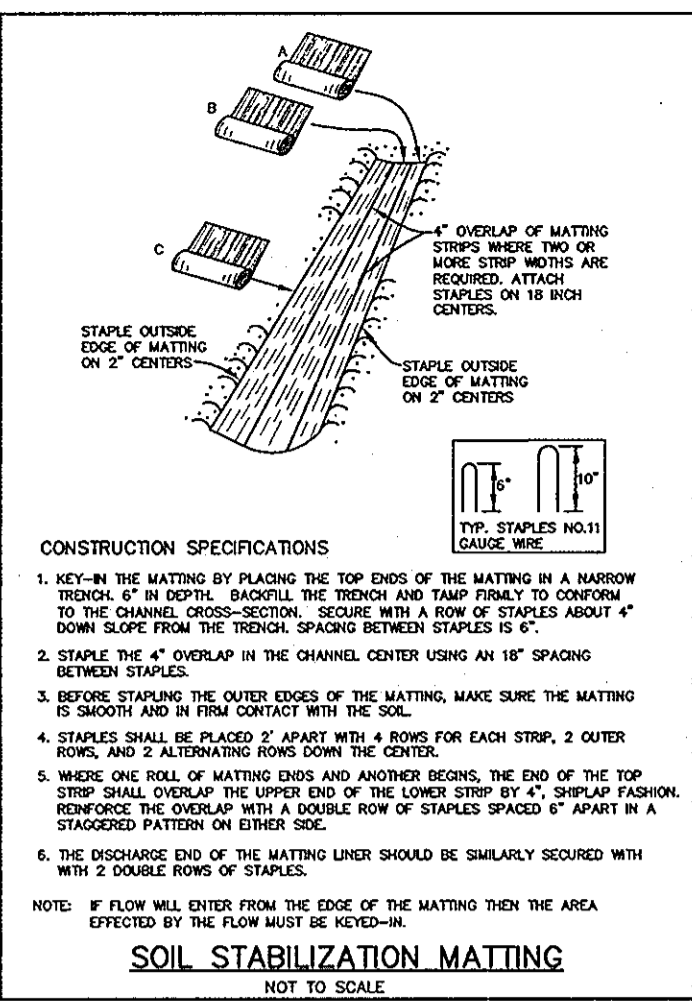
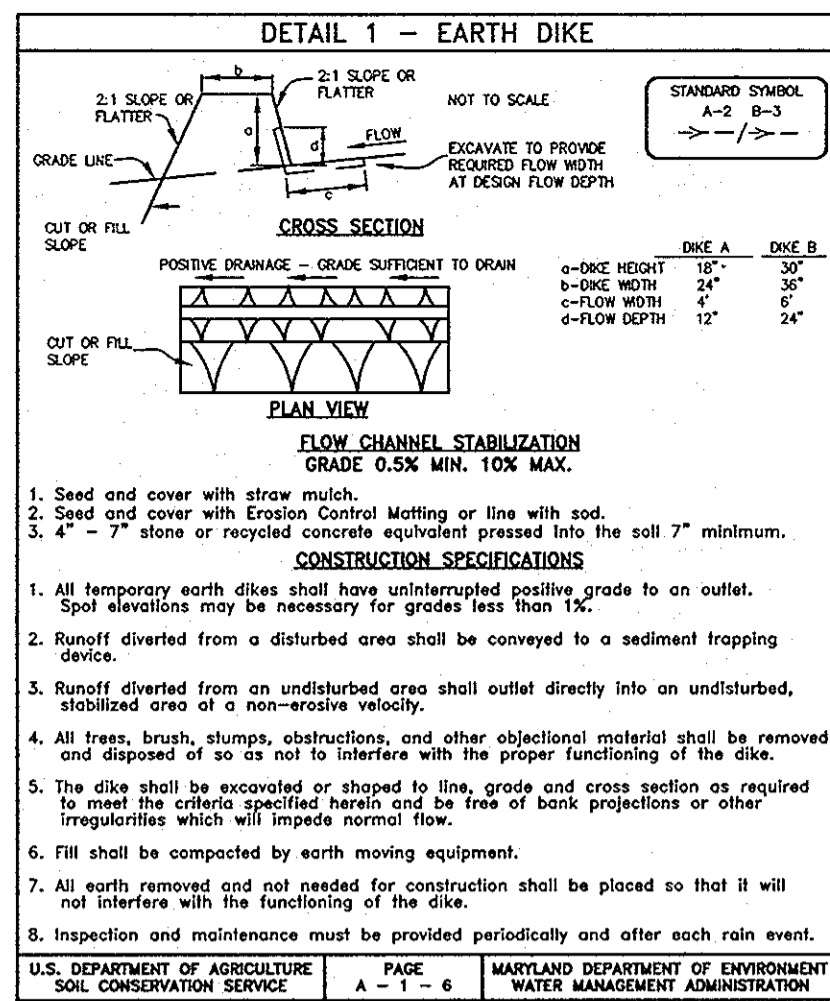
NON-STRUCTURAL PRACTICES SHOWN ON THIS PLAN SHALL BE COMPLIED WITH AT THE TIME OF INDIVIDUAL LOT GRADING

APPROVED: DEPARTMENT OF PUBLIC WORKS
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signatures and Dates]



PLAN
SCALE: 1"=50'

NO. DATE		REVISION	
BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 418 ELLICOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 FAX: 410-465-6644 E-MAIL: benchmark@cois.com			
OWNER/DEVELOPER:		PROJECT:	
JOHN R. & AUDREY L. AVERY 14331 FREDERICK ROAD COOKSVILLE, MD 21723 410-368-3292		AVERY PROPERTY RESUBDIVISION OF LOT 3, PLAT No. 14285-14287, ADDING LOTS 4 THRU 8 AND PRESERVATION PARCELS A THRU C LOCATION: TAX MAP B - GRID 23 PARCELS 97 & 99 4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND TITLE: NON-STRUCTURAL STORMWATER MANAGEMENT PLAN AND NOTES DATE: SEPTEMBER, 2003 PROJECT NO. 1523 DECEMBER, 2003 Design: JMC Draft: JMC Check: DAM SCALE: 1" = 50' DRAWING 6 OF 10	



OPERATION, MAINTENANCE AND INSPECTION NOTE

INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE CONDUCTED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA SCS STANDARDS AND SPECIFICATIONS FOR POND(S) (M3-70). THE POND OWNERS 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 OWNERS SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

AS-BUILT CERTIFICATION

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.

Donald Maan
ENGINEER
PE NO. 21443
DATE 7/3/02

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFICATION 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.

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Donald Maan
ENGINEER - DONALD A. MASON, P.E. # 21443
DATE 2/18/04

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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 ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

John B. Avery
DATE 2/19/04

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

John B. Avery
DATE 3/1/04

USDA - NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

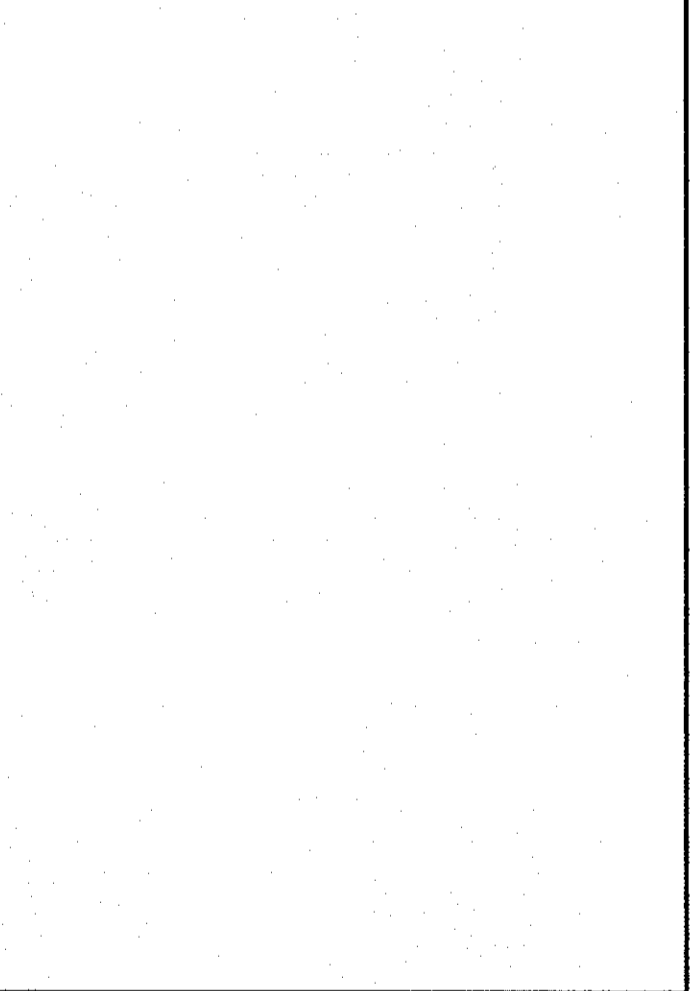
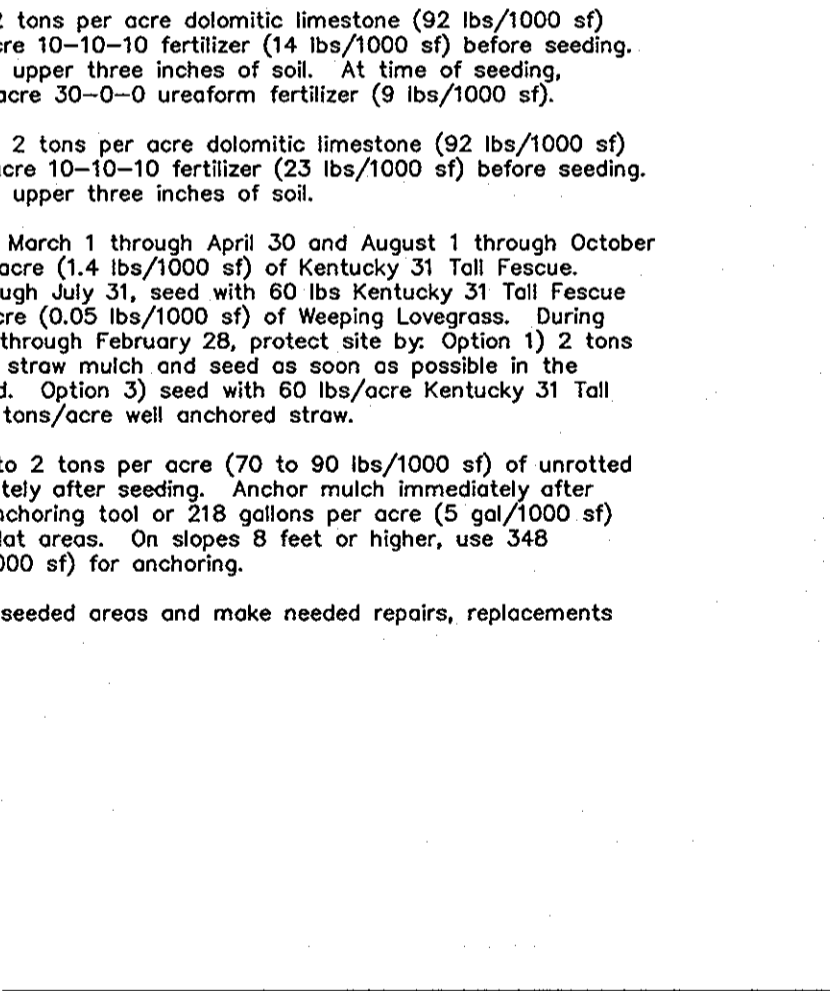
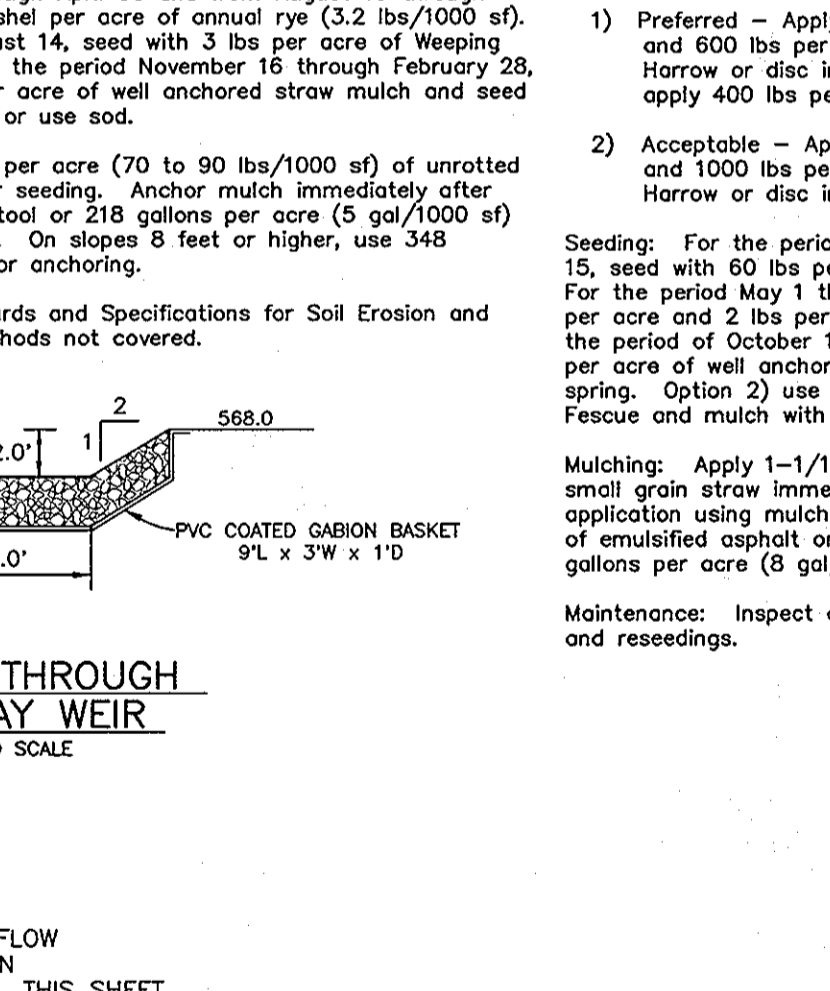
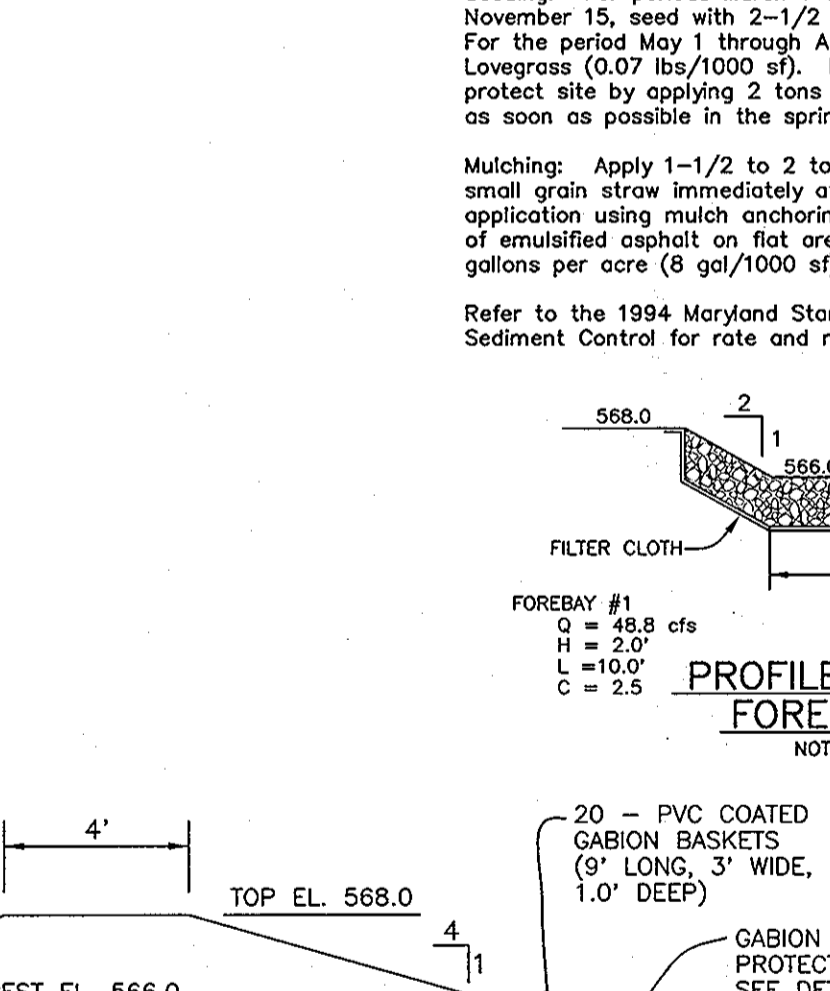
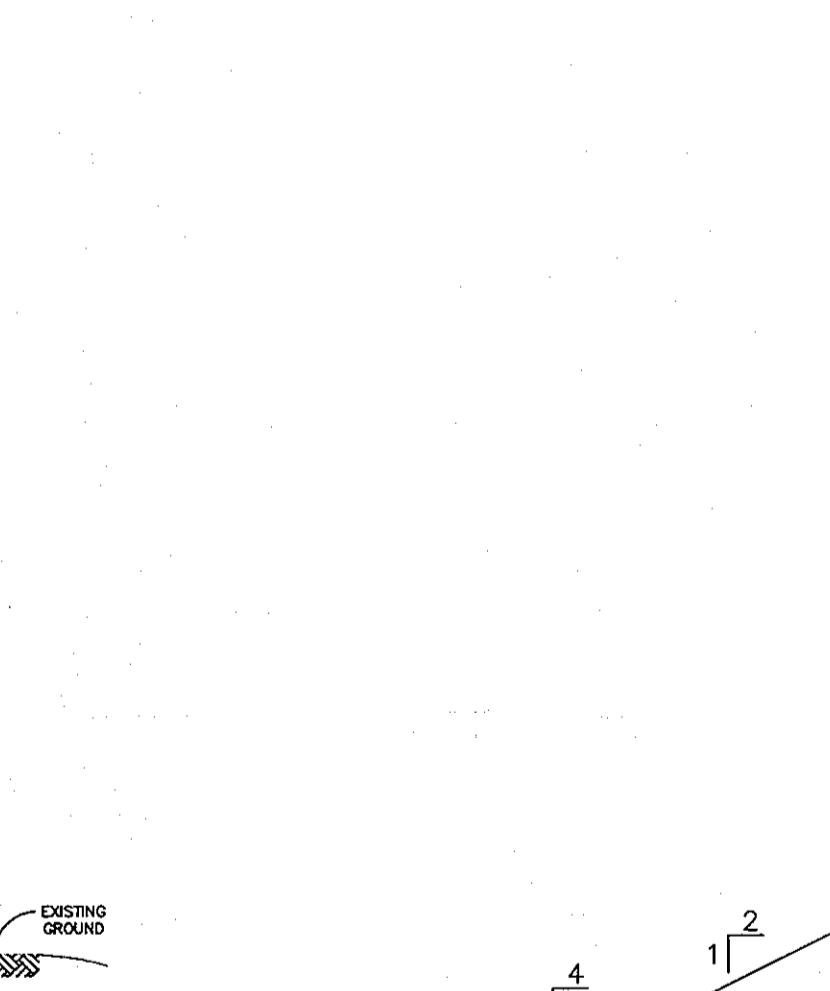
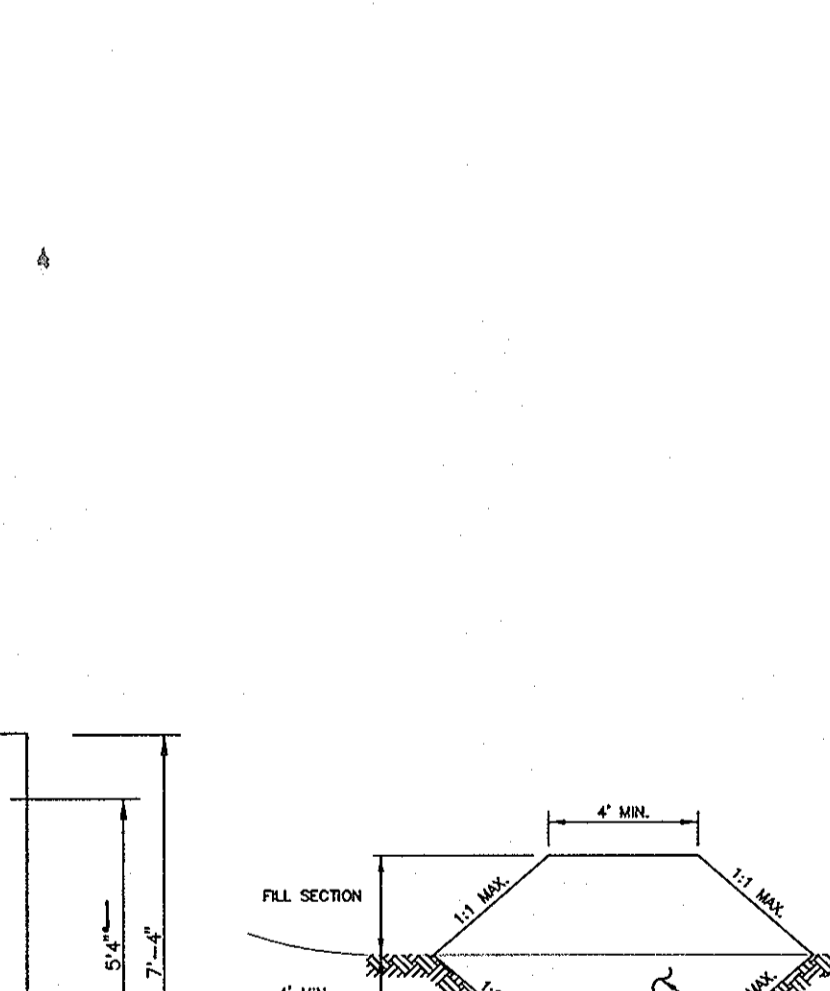
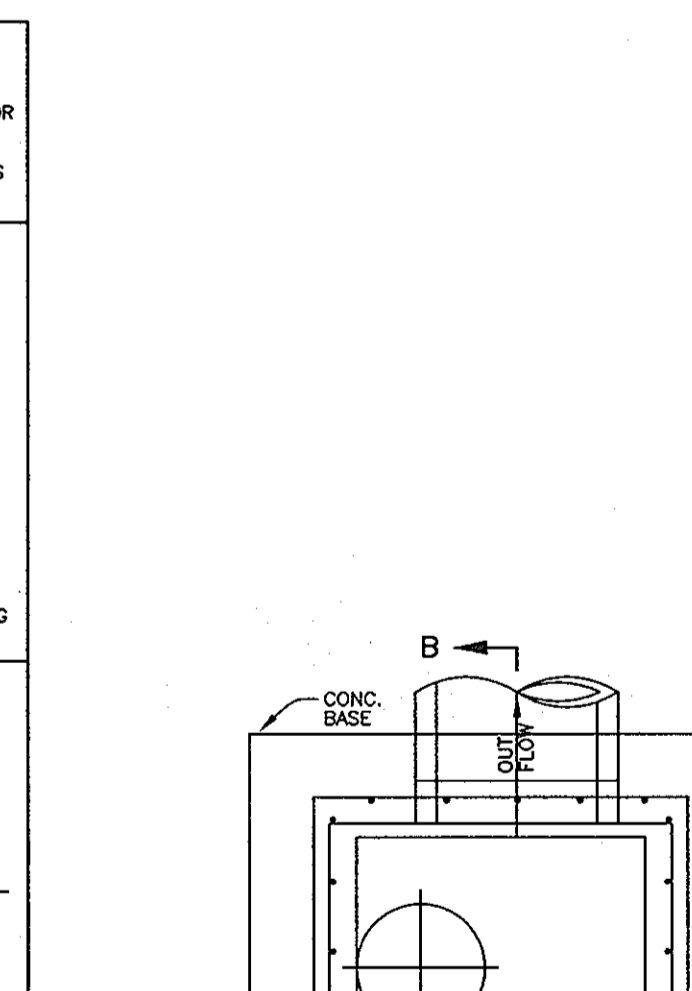
John B. Avery
DATE 3/1/04

APPROVED: DEPARTMENT OF PUBLIC WORKS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Cathy Hambrick
DATE 3/14/04

John B. Avery
DATE 2/16/04



TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding. (If not previously loosened)

Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sf).

Seeding: For periods March 1 through April 30 and from August 15 through November 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs/1000 sf). For the period May 1 through August 14, seed with 3 lbs per acre of Weeping Lovegrass (0.07 lbs/1000 sf). For the period November 16 through February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sf) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sf) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sf) for anchoring.

Refer to the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control for rate and methods not covered.

PERMANENT SEEDING NOTES

Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding. (If not previously loosened)

Soil Amendments: In lieu of soil test recommendations, use on the following schedules.

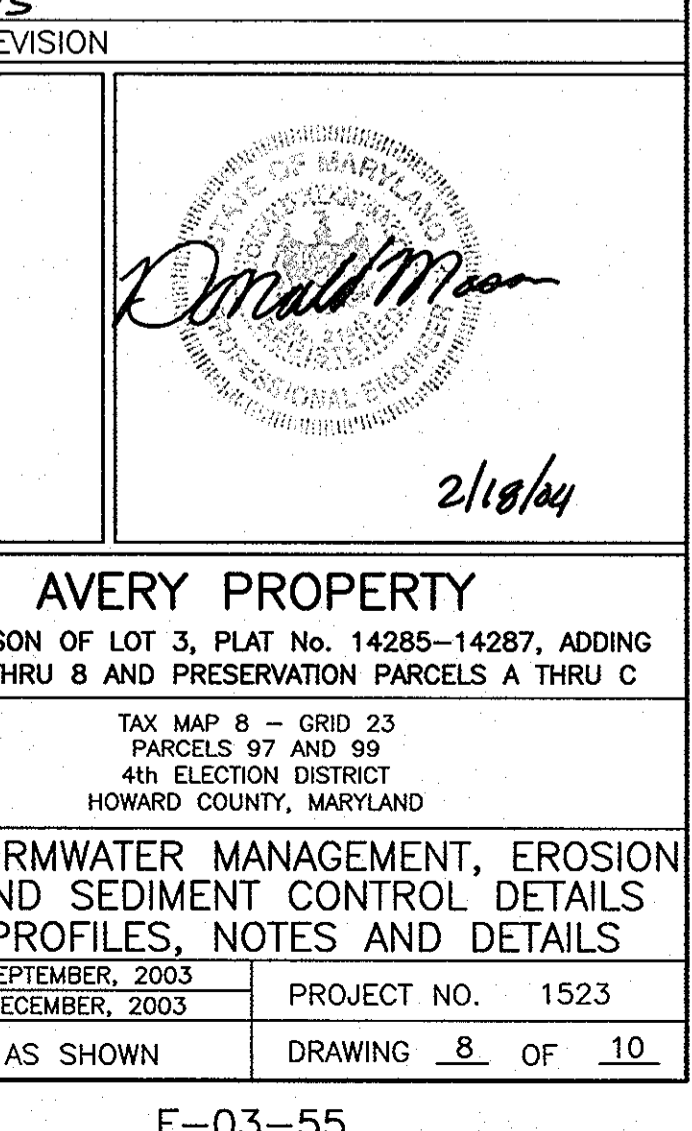
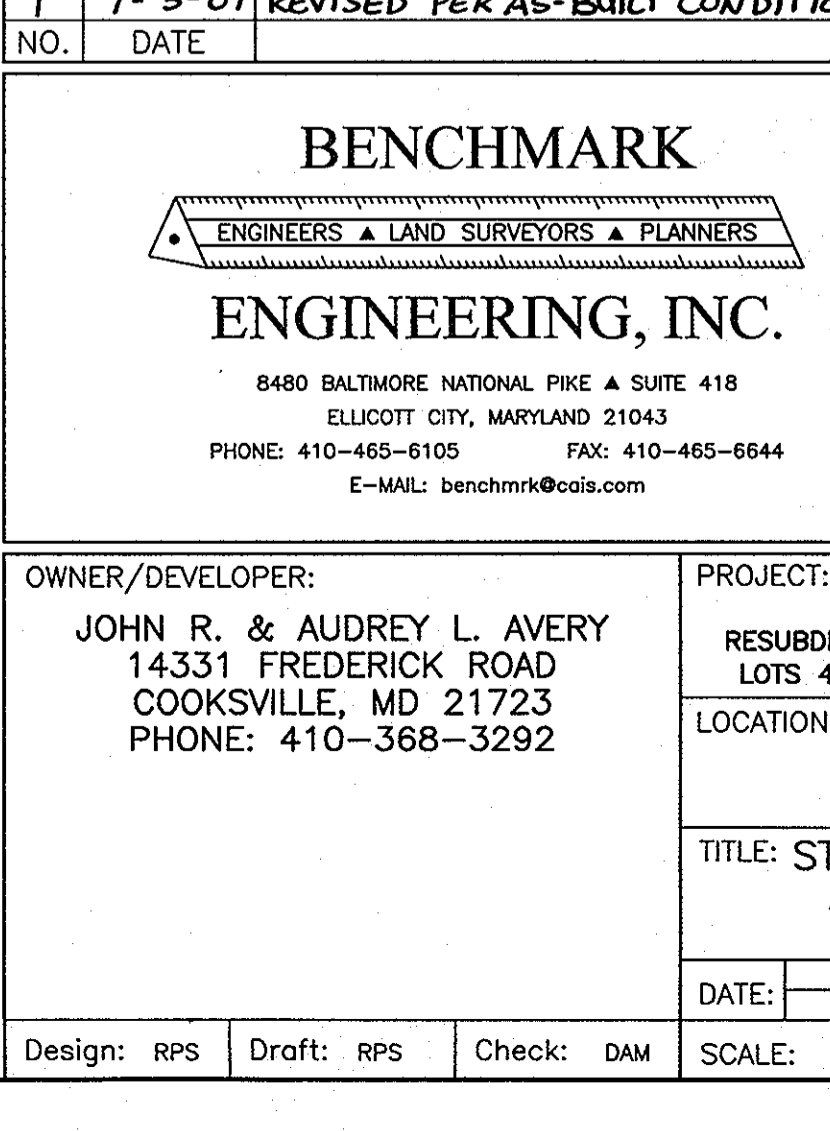
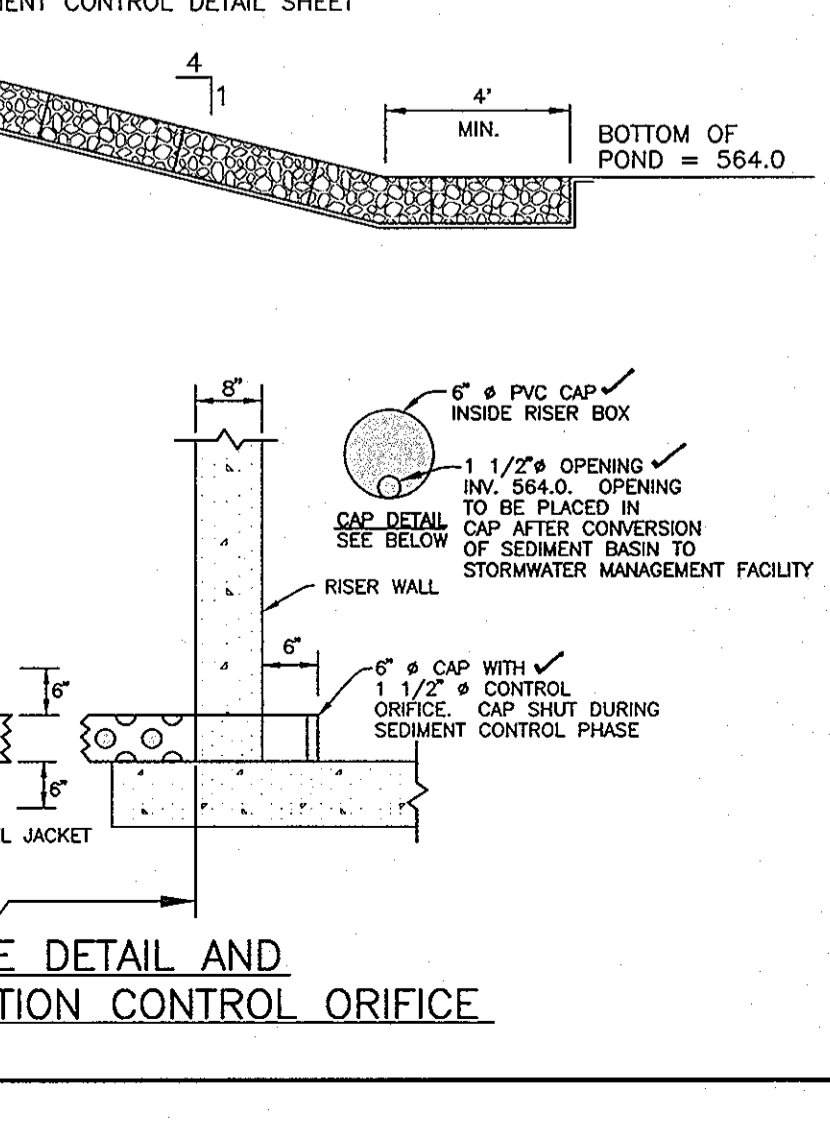
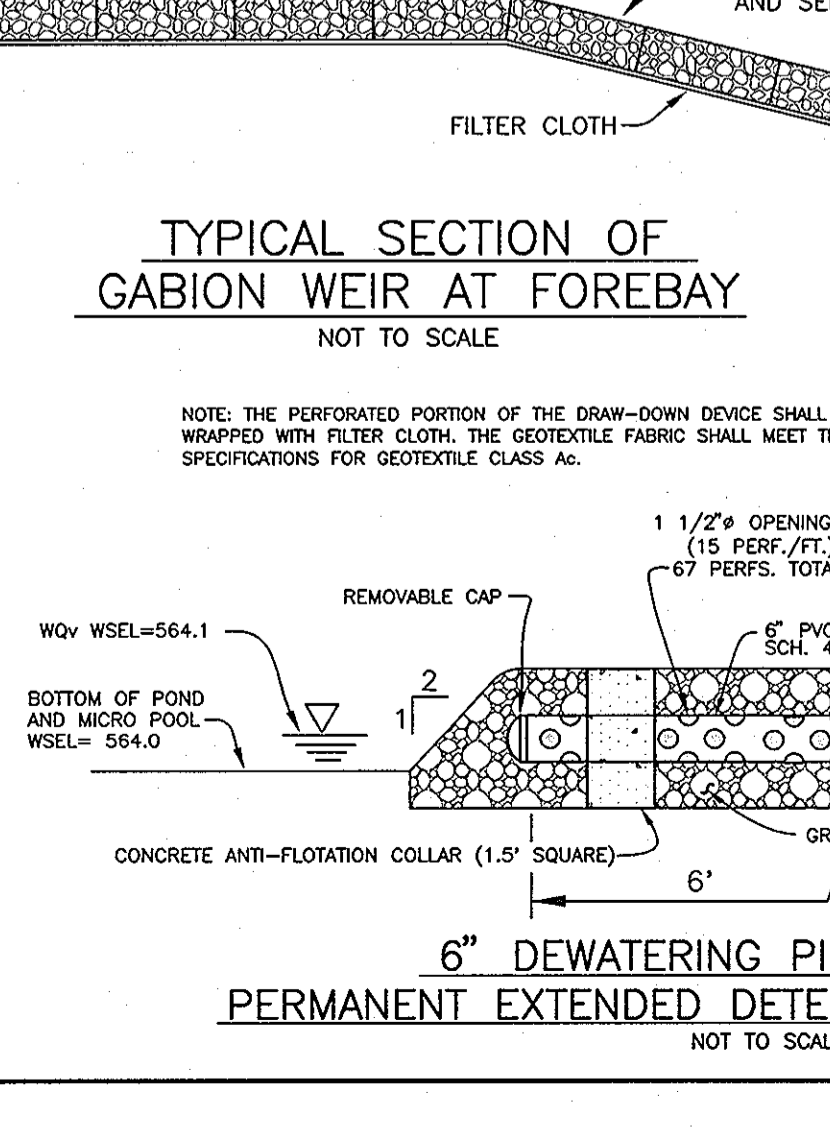
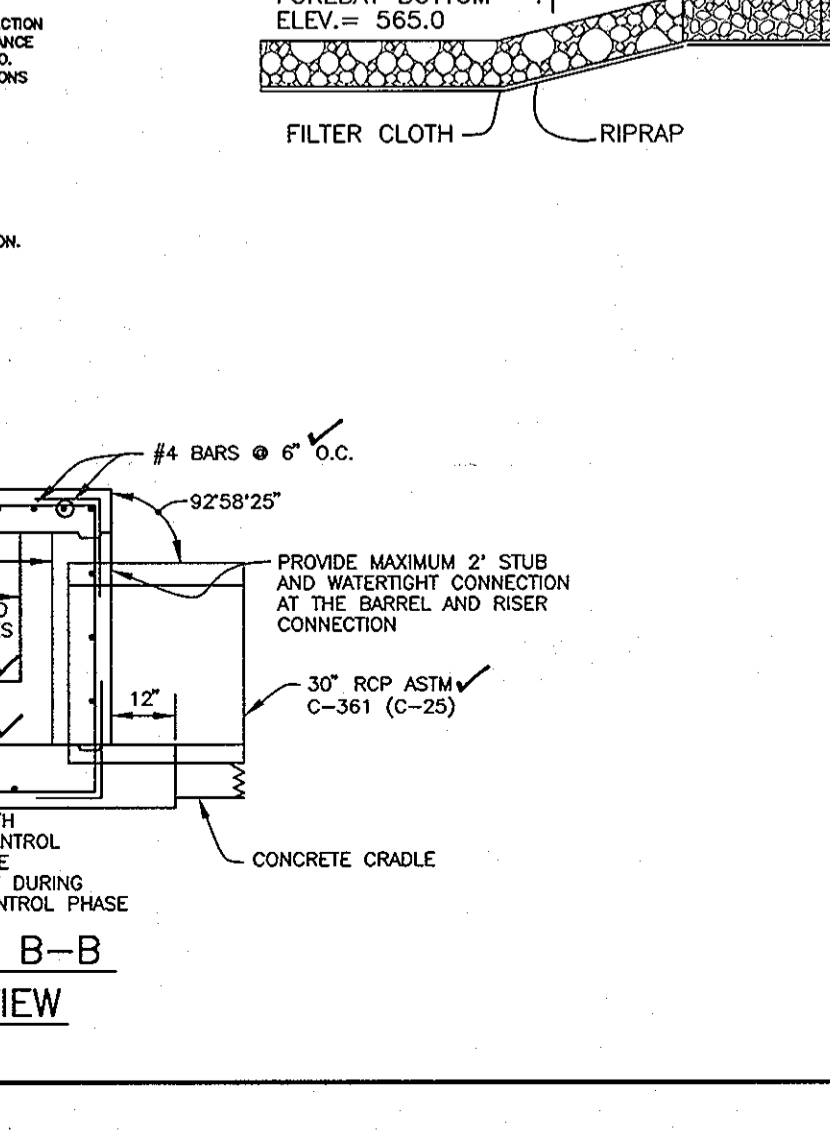
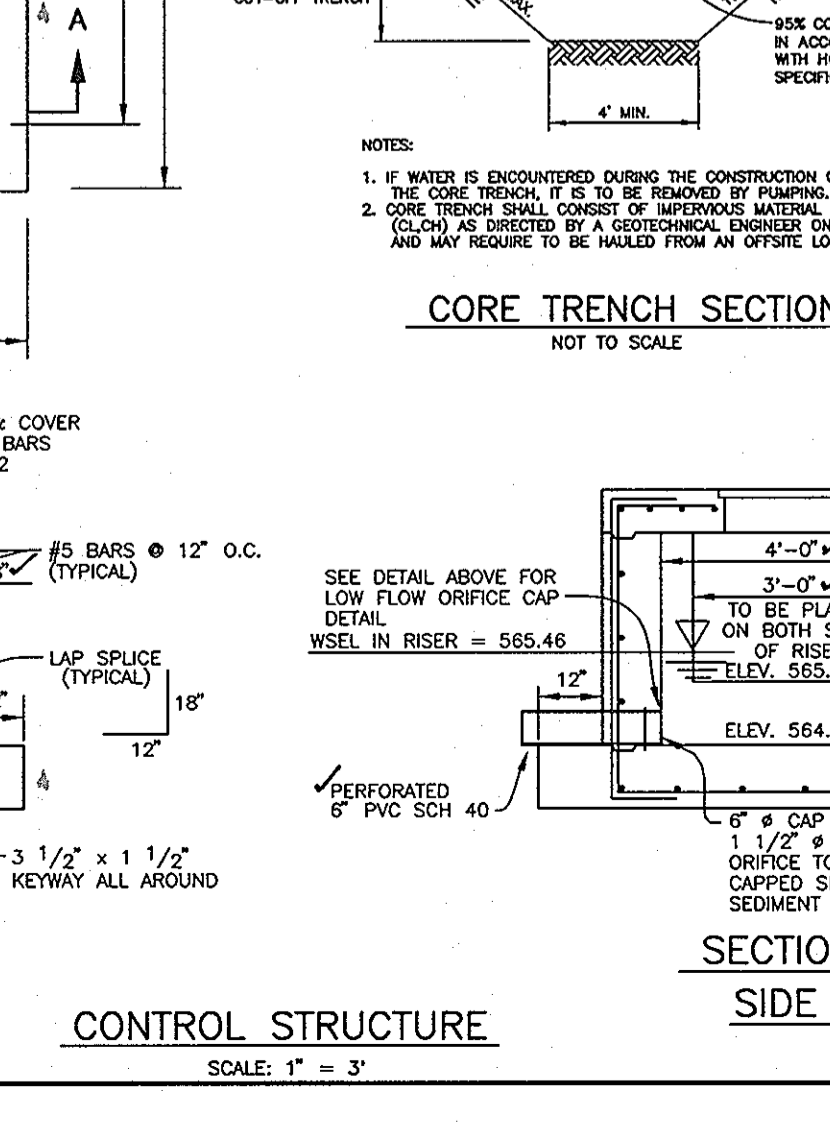
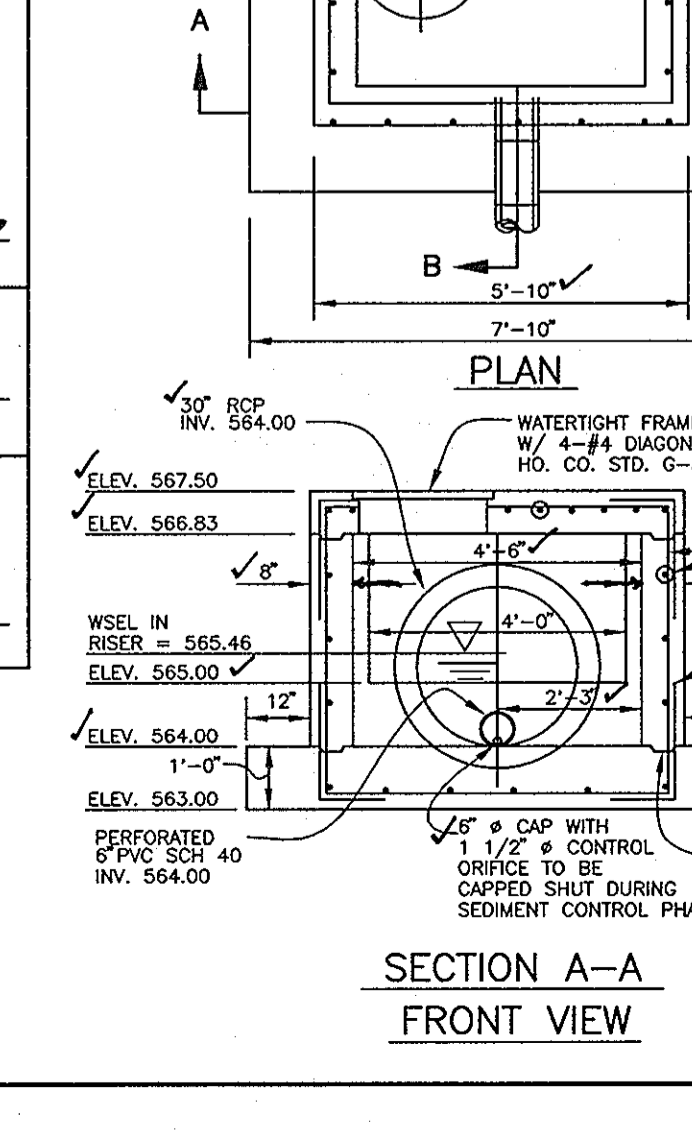
1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sf) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sf) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sf).

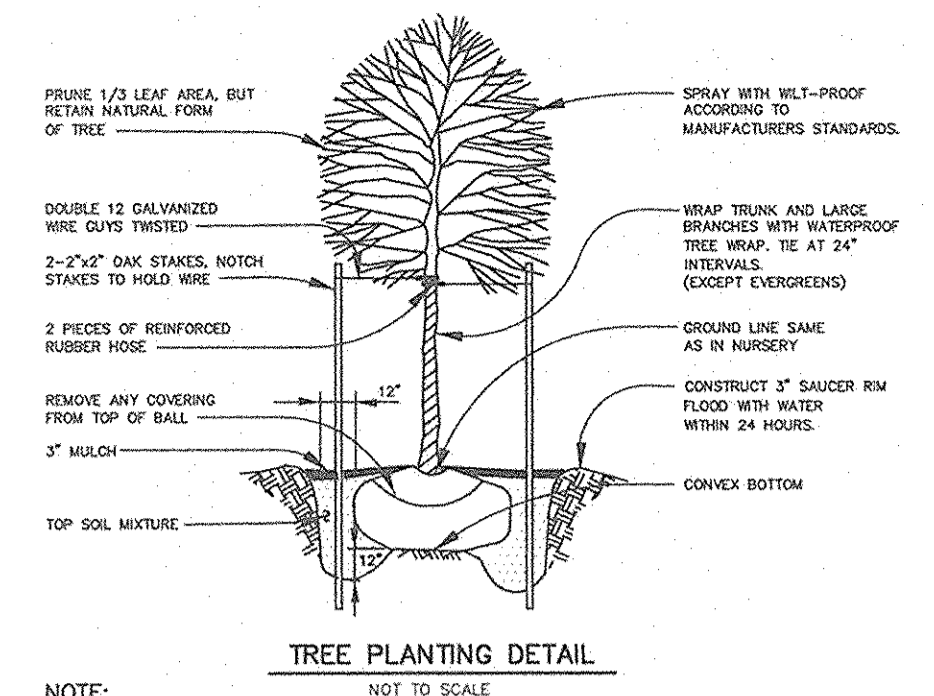
2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sf) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sf) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the periods March 1 through April 30 and August 1 through October 15, seed with 60 lbs per acre (1.4 lbs/1000 sf) of Kentucky 31 Tall Fescue. For the period May 1 through July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (0.05 lbs/1000 sf) of Weeping Lovegrass. During the period of October 16 through February 28, protect site by Option 1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option 2) use sod. Option 3) seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sf) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sf) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sf) for anchoring.

Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseedings.





- NOTE:
- TREES SHOULD BE PLANTED A MINIMUM OF 6 FEET FROM THE EDGE OF PAVING AND MUST BE A MINIMUM OF 5 FEET FROM ANY STORM DRAIN.
 - TREES MUST BE PLANTED A MINIMUM OF 5 FEET FROM AN OPEN SPACE ACCESS STRIP AND 10 FEET FROM A DRIVEWAY.
 - SEE TREE PLANTING DETAIL - THIS SHEET.
 - THE DEVELOPER SHALL BE RESPONSIBLE FOR STREET TREES, STORMWATER MANAGEMENT FACILITY PERIMETER PLANTING AND PRESERVATION OF THE PERIMETER VEGETATION AS SHOWN ON THESE PLANS. SWM PLANTING SHOWN TO ENSURE ADEQUATE AREA TO PLANT.
 - NO STREET TREES ARE REQUIRED FOR THIS SUBDIVISION PER SECTION 16.124(e)(2) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AS NO ROAD IMPROVEMENTS ARE PROPOSED.
 - LOT 4 IS EXEMPT FROM LANDSCAPING REQUIREMENTS BECAUSE IT CONTAINS AN EXISTING DWELLING.
 - FINANCIAL LANDSCAPING SURETY FOR THE REQUIRED 64 SHADE TREES AND 19 EVERGREEN TREES IN THE AMOUNT OF \$22,050.00 IS PART OF THE DEVELOPER'S AGREEMENT.
 - THIS LANDSCAPING PLAN IS PREPARED IN CONFORMANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

PLAN
SCALE: 1" = 100'

PERIMETER AND SWM PLANTING LIST			
SYMBOL	QUANTITY	NAME	REMARKS
	64	FRAXINUS PENNSYLVANICA Yatromy (Palmore Green Ash)	2 1/2" MIN. CAL. B&B FULL HEAD
	19	PINUS STROBUS (Eastern White Pine)	6'-8" ht. UNSHEARED

SCHEDULE D SWM AREA LANDSCAPING	
LINEAR FEET OF PERIMETER	745
BUFFER TYPE	B
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO
LINEAR FEET OF REQUIRED PLANTING	745
NUMBER OF TREES REQUIRED	
SHADE TREES	15
EVERGREEN TREES	19
NUMBER OF TREES PROVIDED	
SHADE TREES	15
EVERGREEN TREES	19
OTHER TREES (2:1 SUBSTITUTE)	

SCHEDULE A PERIMETER LANDSCAPE EDGE		
CATEGORY	① TYPE A	② ADJACENT TO PERIMETER PROP.
LANDSCAPE TYPE		
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	1,973'	2131'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES, 1,188' ①	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO
NUMBER OF PLANTS REQUIRED	785 L.F.	2131 L.F.
SHADE TREES	13	36
EVERGREEN TREES	0	0
OTHER TREES (2:1 SUBSTITUTE)	-	-
SHRUBS	-	-
NUMBER OF PLANTS PROVIDED		
SHADE TREES	13	36
EVERGREEN TREES	0	0
OTHER TREES (2:1 SUBSTITUTE)	-	-
SHRUBS (NO.1 SUBSTITUTE)	-	-
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)		

① EXISTING WOODS WITH WIDTH 20' OR GREATER.

APPROVED: DEPARTMENT OF PUBLIC WORKS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE: 3/18/04

DATE: 3/16/04

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 LETTER OF NOTICE OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DEVELOPER: JOHN AVERY DATE: 2/19/04

NO.	DATE	REVISION

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS

ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
E-MAIL: benchmrk@cois.com

2/16/04

OWNER/DEVELOPER: JOHN R. & AUDREY L. AVERY 14331 FREDERICK ROAD COOKSVILLE, MD 21723 PHONE: 410-368-3292	PROJECT: AVERY PROPERTY RESUBDIVISION OF LOT 3, PLAT No. 14285-14287, ADDING LOTS 4 THRU 8 AND PRESERVATION PARCELS A THRU C
LOCATION: TAX MAP 8 - GRID 23 PARCELS 97 AND 99 4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: LANDSCAPE PLAN
DATE: SEPTEMBER, 2003 DECEMBER, 2003	PROJECT NO. 1523
Design: JMC Draft: JMC Check: DAM	SCALE: AS SHOWN DRAWING 9 OF 10

APPENDIX E
FOREST CONSERVATION WORKSHEET

I. BASIC SITE DATA

GROSS SITE AREA	37.0*
AREA WITHIN 100 YEAR FLOOD PLAIN	7.2
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE)	29.8
NET TRACT AREA	0
LAND USE CATEGORY (R-RLD, R-RMD, R-S, C/I/O, I)	RMD

* GROSS SITE AREA INCLUSIVE OF AVERY PROPERTY, LOTS 1-3 AND DORSEY, PARCEL 99.

II. INFORMATION FOR CALCULATIONS

A. NET TRACT AREA	29.8
B. REFORESTATION THRESHOLD (25% x A)	7.5
C. AFFORESTATION MINIMUM (20% x A)	6.0
D. EXISTING FOREST ON NET TRACT AREA	6.0
E. FOREST AREAS TO BE CLEARED	0
F. FOREST AREAS TO BE RETAINED (RETENTION)	6.0

III. DETERMINING REQUIREMENTS: AFFORESTATION OR REFORESTATION

1. **Reforestation**
If existing forest areas equal or exceed the afforestation minimum (if D equals or is more than C), and clearing of forest areas is proposed, reforestation requirements may apply.
GO TO SECTION IV

2. **Afforestation**
If existing forest areas are less than the afforestation minimum (if D is less than C), afforestation requirements apply.
GO TO SECTION V

LEGEND

	EXISTING GRADES
	PROPOSED CONTOURS
	SOILS LINE
	EXISTING TREELINE
	PROPOSED TREELINE
	LIMIT OF SUBMISSION
	FOREST CONSERVATION EASEMENT
	STEEP SLOPES (25% OR GREATER)
	STEEP SLOPES (15% TO 24.99%)



SOILS LEGEND

MAP SYMBOL	SOIL GROUP	SOIL TYPE
Ba	D	BAILE SILT LOAM
CgB2	B	CHESTER GRAVELLY SILT LOAM, 3 TO 8 % SLOPES, MODERATELY ERODED
CgC2	B	CHESTER GRAVELLY SILT LOAM, 8 TO 15 % SLOPES, MODERATELY ERODED
ChB2	B	CHESTER SILT LOAM, 3 TO 8 % SLOPES, MODERATELY ERODED.
ChC2	B	CHESTER SILT LOAM, 8 TO 15 % SLOPES, MODERATELY ERODED.
ChD2	B	CHESTER SILT LOAM, 15 TO 25 % SLOPES, MODERATELY ERODED.
Ha	D	HATBORO SILT LOAM
ME	B	MANOR LOAM, 25 TO 45 % SLOPES

* INDICATES HYDRIC SOILS
TAKEN FROM SOILS SURVEY, ISSUED JULY 1968, MAP NO. 7

PLAN
SCALE: 1" = 100'

FCP SEQUENCE OF CONSTRUCTION

- SEDIMENT CONTROL AND TREE PROTECTION DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH GENERAL CONSTRUCTION PLAN FOR SITE. SITE SHALL BE GRADED IN ACCORDANCE WITH THE GENERAL CONSTRUCTION PLANS.
- REMOVE HAZARDOUS TREES (DEAD, DISEASED OR THOSE SUBJECT TO WIND THROWS) ALONG THE EDGE OF THE FOREST RETENTION AREAS AS WELL AS WITHIN OTHER TREE SAVE AREAS.
- SIGNAGE SHALL BE INSTALLED AS PER THE FOREST PROTECTION DEVICES SHOWN ON THE FOREST CONSERVATION PLAN.

FCP NOTES:

- ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
- FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO PROTECTIVE LAND COVENANTS.
- LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.
- THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNTY DPZ.
- NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
- TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. THE FENCING SHALL BE PLACED ALONG ALL FCE BOUNDARIES WHICH OCCUR WITHIN 25 FEET OF THE PROPOSED LIMITS.
- PERMANENT SIGNAGE SHALL BE PLACED 50-100' APART ALONG THE BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS. SIGNS SHALL BE MOUNTED ON A PERMANENT WOOD POST OR METAL STAKE. FCE SIGNS SHALL NOT BE ATTACHED TO TREES.
- THE FOREST CONSERVATION OBLIGATION FOR THIS SUBDIVISION WILL BE FULFILLED BY RETENTION OF 11.2 ACRES OF EXISTING FOREST IN A FOREST CONSERVATION EASEMENT. 6.0 ACRES OF THIS RETENTION IS WITHIN THE NTA, WHICH IS GREATER THAN THE REQUIRED BREAK-EVEN POINT FOR THIS PROJECT PROVIDED UNDER F-00-34.

FOREST RETENTION AREA

MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS **PROHIBITED**

VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE HOWARD COUNTY FOREST CONSERVATION ACT OF 1992

PROTECTIVE TECHNIQUE LEGEND

- X—X—X TEMPORARY FENCING (SEE DETAIL)
- ▲ PERMANENT SIGNAGE

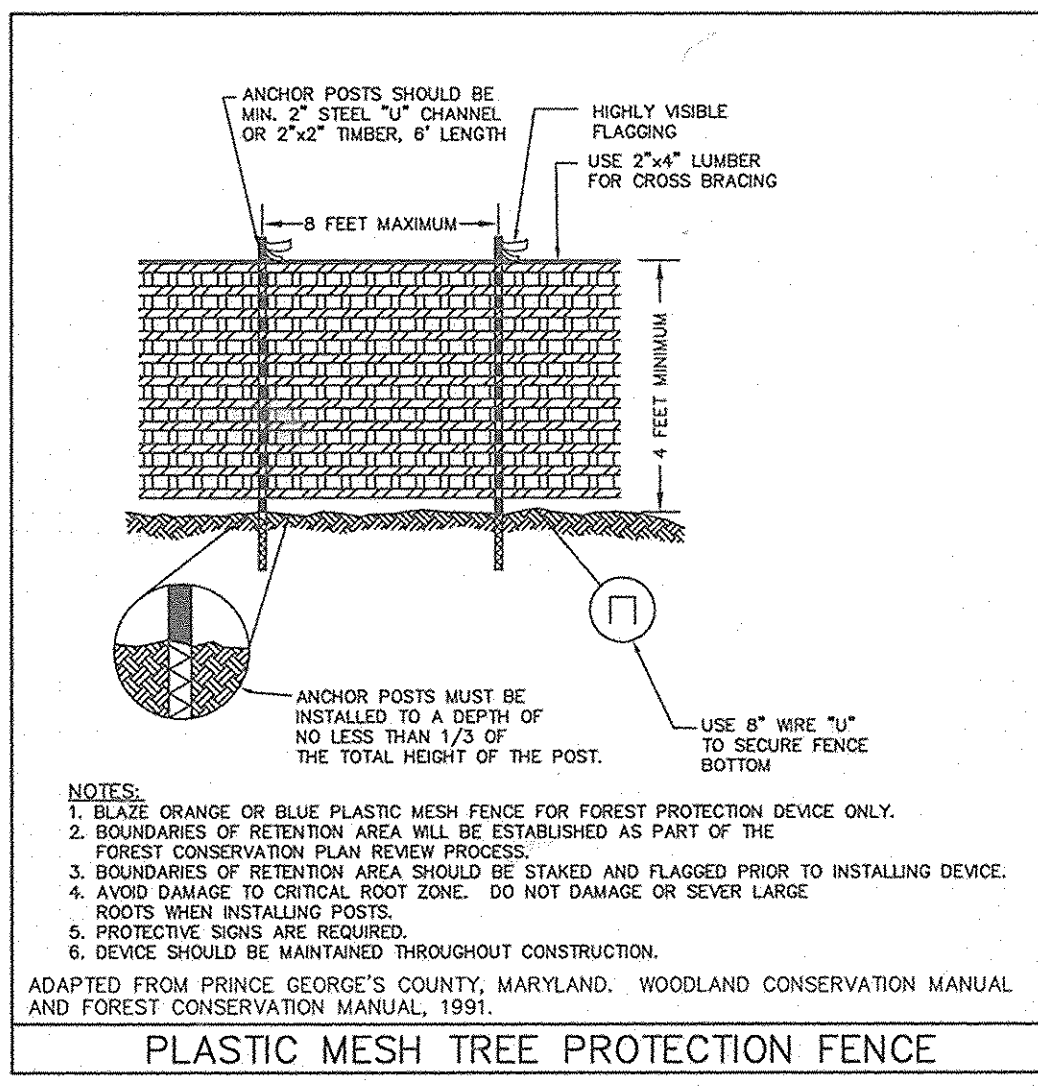
FOREST DATA

	ACRES
GROSS AREA:	37.0*
FLOODPLAIN:	7.2
NET TRACT AREA (NTA):	29.8
EXISTING FOREST (NTA):	6.0
AFFORESTATION THRESHOLD:	6.0
REFORESTATION THRESHOLD:	7.5
FOREST TO BE CLEARED (NTA):	0
FOREST TO BE RETAINED (NTA):	6.0
FOREST TO BE RETAINED IN FCE:	11.2

* GROSS AREA INCLUSIVE OF AVERY PROPERTY LOTS 1-3 AND DORSEY, PARCEL 99.

FOREST CONSERVATION TABULATION

DESIGNATION	TYPE	ACREAGE
1	RETENTION	11.2 (6.0 NTA)
TOTAL	ALL RETENTION	11.2 (6.0 NTA)



Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS

MD DNR Qualified Professional
USACOE Wetland Delinitor
Certification # WDCP93MD0610044B3

P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752
John P. Canoles

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE # SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-8105 FAX: 410-465-8644
E-MAIL: benchmark@eol.com

Donald Man

OWNER/DEVELOPER:
JOHN R. & AUDREY L. AVERY
14331 FREDERICK ROAD
COOKSVILLE, MD 21723
PHONE: 410-368-3292

PROJECT:
AVERY PROPERTY
RESUBDIVISION OF LOT 3, PLAT No. 14285-14287, ADDING LOTS 4 THRU 8 AND PRESERVATION PARCELS A THRU C

LOCATION:
TAX MAP 8 - GRID 23
PARCELS 97 AND 99
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE:
FOREST CONSERVATION NOTES, DETAILS AND PLAN

DATE: SEPTEMBER, 2003 PROJECT NO. 1523
DECEMBER, 2003

Design: JMC Draft: JMC Check: DAM SCALE: AS SHOWN DRAWING 10 OF 10

APPROVED: DEPARTMENT OF PUBLIC WORKS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Candy Hamstra 3/1/04
CHIEF, DIVISION OF LAND DEVELOPMENT

John P. Canoles 3/16/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION