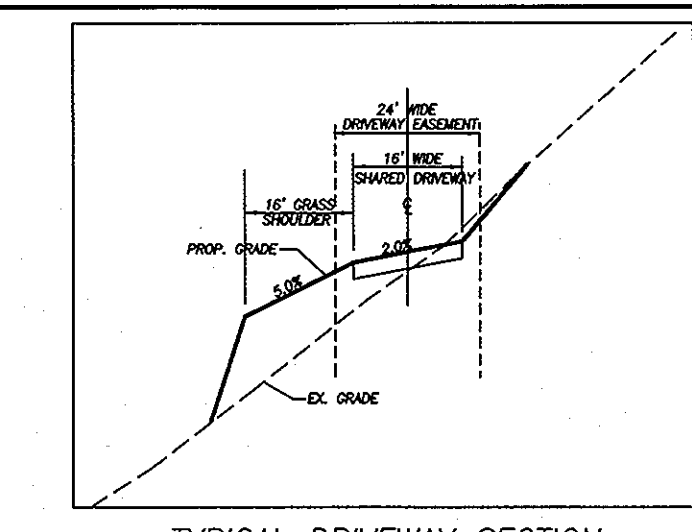
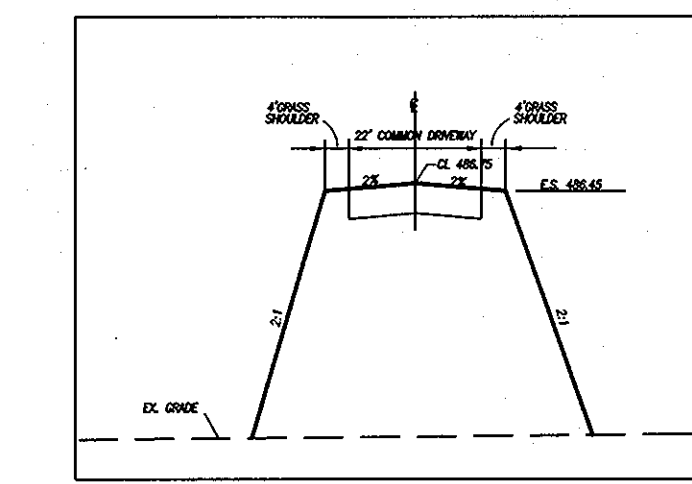


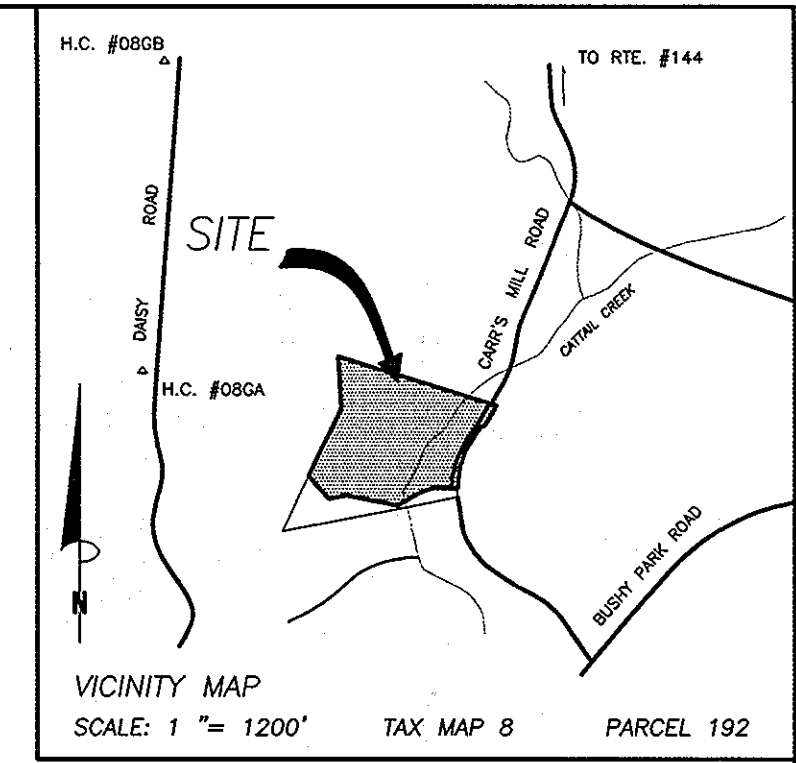
DRIVEWAY PLAN
SCALE: 1"=50'



TYPICAL DRIVEWAY SECTION
STA. 8+50 - 13+00
SCALE: HOR: 1"=20'
VERT: 1"=2'



TYPICAL DRIVEWAY SECTION
STA. 0+25 - 6+00
SCALE: HOR: 1"=20'
VERT: 1"=2'

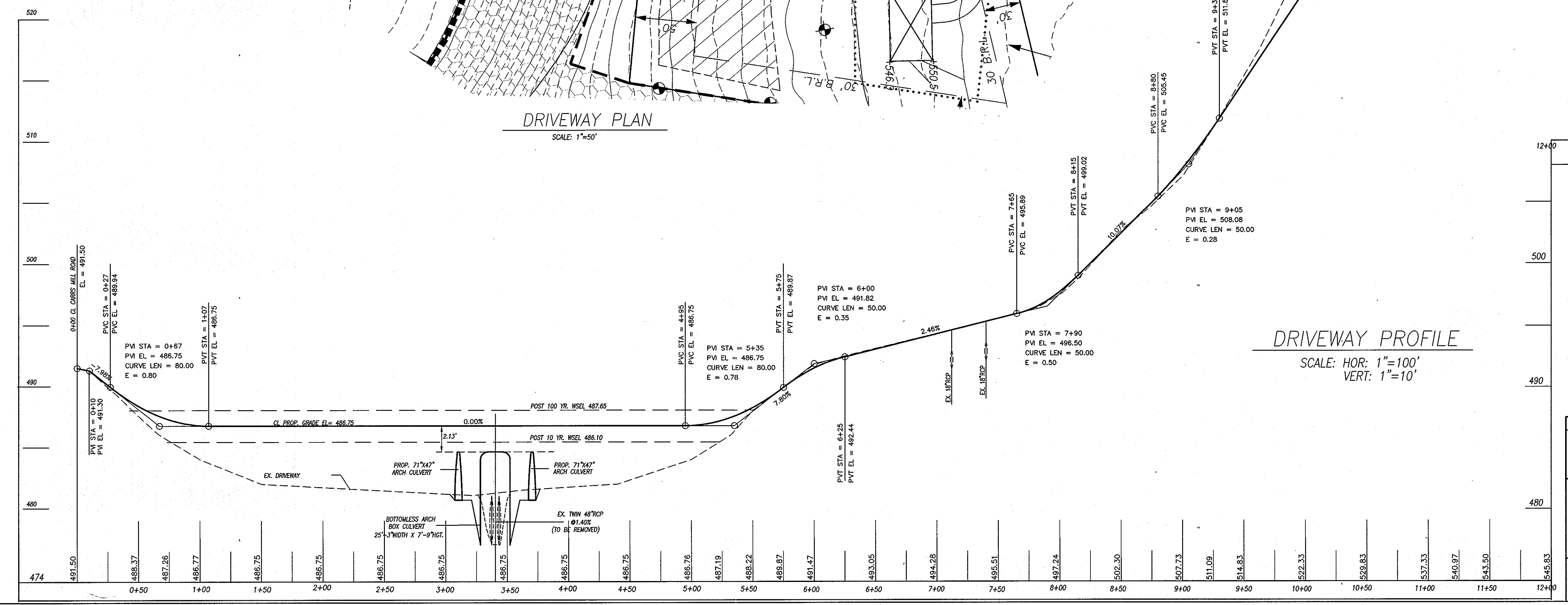


PROPOSED USE-IN-COMMON DRIVEWAY ESMT. CURVE DATA

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	TANGENT	CHORD	DIRECTION	CHORD
C3	257.04	142.91	31°51'16"	73.35	5' 76°32'56" W	141.07	
C4	284.07	159.59	31°51'16"	81.91	N 76°32'56" E	157.54	
C5	216.27	116.62	04°56'22"	9.41	S 63°03'29" W	116.61	

PROPOSED USE-IN-COMMON DRIVEWAY ESMT. LINE TABLE

LINE	BEARING	DISTANCE
L1	N87°31'26" W	105.50'
L2	S80°37'18" W	157.41'
L14	N80°37'18" E	157.41'
L15	S87°31'26" E	107.28'
L16	S08°43'13" W	24.07'
L17	N79°42'17" W	273.01'
L18	N52°47'48" W	48.67'
L19	N07°36'46" V	107.81'
L20	N14°35'12" W	146.84'
L21	N05°02'05" W	73.71'
L22	S74°35'27" W	45.62'
L23	N31°05'44" V	54.61'
L24	N22°21'38" E	218.03'
L25	S68°58'37" E	45.07'
L26	S29°21'38" W	141.67'
L27	S02°10'11" W	41.41'
L28	S31°05'44" E	44.20'
L29	S05°12'11" E	77.89'
L30	S14°35'12" E	146.33'
L32	S07°36'46" E	93.12'
L33	S56°47'48" E	39.76'
L34	S79°42'17" E	306.04'
L35	S24°26'21" E	25.08'



DRIVEWAY PROFILE
SCALE: HOR: 1"=100'
VERT: 1"=10'

OWNER:
JOYCE M. BLOOM
P.O. BOX 58
LISBON, MD. 21765
301-854-5019

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 12/10/08

 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 12/10/08

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-08.

DATE	REVISIONS
06/11/08	PER COMMENTS
09/04/08	PER COMMENTS
11/24/08	PER COMMENTS

SHARED DRIVEWAY PLAN AND PROFILE
BLOOM PROPERTY
LIBER 5899 FOLIO 450
SITUATED ON CARRS MILL ROAD
ELECTION DISTRICT NO. 4
HOWARD COUNTY, MARYLAND
SCALE: 1" = 50' MARCH 2008

VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 510 South Main Street, 20th Floor, Baltimore, Maryland 21201
 (301) 829-2890 (301) 831-5015 (410) 548-2751
 County File # F-07-123

MGWC 2.2: IMBRICATED RIPRAP

Right engineering techniques for bank stabilization

DESCRIPTION
Imbricated riprap is used to protect and stabilize embankment soils from the erosive forces of flowing water and piping forces resulting from groundwater seepage. A well-engineered imbricated riprap structure should consist of the following:

- a filter layer of gravel or cloth designed to prevent soil movement into or through the riprap layer while allowing water to drain from the embankment, and
- a stone wall of appropriate size and spacing to resist the shearing forces of channelized water and the lateral earth pressure of the embankment.

EFFECTIVE USES & LIMITATIONS
When properly designed and installed, imbricated riprap structures resist lateral earth pressures to some extent and can be an effective method of bank stabilization where soil conditions, water table and velocity, exposure, vegetation cover, and geologic conditions are such that the soil may erode under the design flow conditions and threaten infrastructure or personal property.

MATERIAL SPECIFICATIONS
Filter cloth should only be utilized when the bank material is a noncohesive material such as sand or gravel.

INSTALLATION GUIDELINES
Materials for imbricated riprap construction and installation should meet the following requirements:

- Filter:** Synthetic filter fabric may be used cautiously based on the 1994 MD Standards and Specifications for Soil Erosion and Sediment Control. Whenever possible, however, granular filters with a minimum thickness of 6 inches (15 cm) should be used with a gravel core as shown in Detail 2.2.

Table 2.2: Granular Filter Material Grading Specifications

Percent Less Than	U.S. Standard Sieve Size
100	1 1/2" (38 mm)
85 - 100	1" (25 mm)
60 - 100	1/2" (12.5 mm)
35 - 70	No. 10
20 - 50	No. 40
1 - 20	No. 200

• Top Riprap: The maximum diameter or weight of stone for top riprap should be based upon the bankfill stream channel velocity as detailed in the MGWC 2.1: Riprap and Figure 2.1.

• Imbricated Stone: Imbricated riprap should be angular and blocky in shape such that they are stackable and should be sufficiently large to resist displacement by both the design storm event and the one-specific lateral earth pressure. Therefore, the length of the longest axis of each stone should be the greater of 1/3 the height of the proposed wall and the size necessary to resist the design storm flow according to MGWC 2.1: Riprap. A typical minimum axis length is 24 inches (610 mm).

Approximate Cost (\$1999)
\$90 per linear ft.

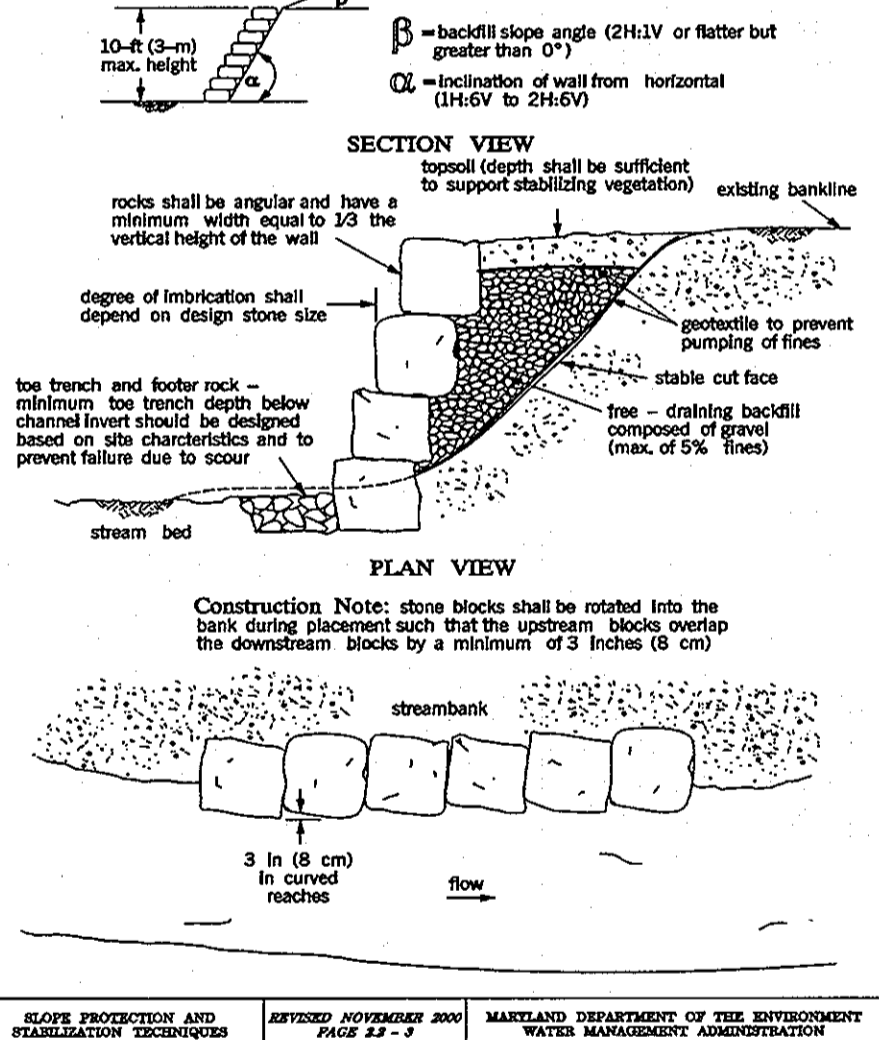
INSTALLATION GUIDELINES
All erosion and sediment control devices, including dewatering basins, should be implemented as the first order of business according to a plan approved by the WMA or local authority. The recommended construction procedure for imbricated riprap is as follows (refer to Detail 2.2):

- The stream should be diverted according to a WMA recommended procedure (see Section 1, Temporary Stream Construction Measures, Maryland's Guidelines to Waterway Construction), and the construction area should be dewatered.
- All excavation should be made in reasonably close conformity with the existing stream slope and bed. The slope of the cut face should be in the range of 1H:1V to 2H:1V. Loose material at the toe of the embankment should be excavated until a stable foundation is reached, usually within 2 to 3 feet (0.6 to 0.9 meters) of the surface. The subgrade should be smooth, firm, and free from protruding objects or voids that would effect the proper positioning of the first layer of stone.
- A graded granular filter or filter fabric should be placed on the face of the cut slope to prevent the migration of fine materials through the pavement. If filter fabric is used, it should be carefully and loosely placed on the prepared slope and secured. Adjacent strips should overlap a minimum of 8 inches (200 mm). If the filter fabric is torn or damaged, it should be repaired or replaced.
- The rock layers should be neatly stacked with staggered joints so that each stone rests firmly on two stones in the tier below. Additionally, smaller stones should be used to fill voids so that each rock rests solidly on the previous rock layer with minimal opportunity for movement. The top surface of the filter layer or stone face should be finished with Class III riprap sized according to MGWC 2.1: Riprap or additional imbricated stone. Two footer stones should be placed for channel location. The height of the imbricated structure is dictated by the rate of stone used, and the height should not exceed 3 times the length of the longest axis and should not be greater than 10 feet (3 meters).
- Placement of the granular backfill should occur concurrently with the stone placement. The backfill slope angle should be 2H:1V or flatter and should be greater than 6 degrees to facilitate drainage. Once all of the backfill is in place, it should be covered with a filter layer and a layer of topsoil sufficient to support a native vegetative cover.
- The disturbed sections of the channel, including the slopes and stream bed, should be stabilized with methods approved by the WMA.

Note: The use of rock vanes (MGWC 1.1: Rock Vanes) should be considered to dissipate excessive toe velocities.

Maryland's Guidelines To Waterway Construction

DETAIL 2.2: IMBRICATED RIPRAP



MGWC 1.1: DEWATERING BASINS

Temporary measure for filtering sediment-laden water

DESCRIPTION
The work should consist of installing dewatering basins jointly with channel diversion measures to filter sediment-laden water from in-stream construction sites before the water re-enters the downstream reach.

EFFECTIVE USES & LIMITATIONS
Undersized dewatering basins will not adequately filter sediment-laden water from the construction site.

MATERIAL SPECIFICATIONS
Materials for dewatering basins should meet the following requirements:

- Riprap:** Riprap should be washed and have a diameter ranging from 4 to 6 inches (10 to 15 centimeters).
- Filter Cloth:** Filter cloth should be a woven or non-woven fabric consisting only of continuous chain polymeric filaments or yarns of polypropylene. The fabric should be inert to commonly encountered chemicals, hydrocarbons, ultraviolet light, and mold and should be retrenched.
- Straw Bales:** Straw bales should meet the criteria as specified in the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control.

INSTALLATION GUIDELINES
Due to the danger of overtopping by events greater than the design flow, dewatering basins require a vegetative buffer strip to filter sediment-laden overflows. A 50-foot (15-meter) minimum grass-covered buffer width is required for slopes less than 20 degrees (2:1) when right-of-way is not limited. For slopes greater than 20 degrees, basins should have a 100-foot (30-meter) minimum buffer width when practical.

All erosion and sediment control devices should be installed as the first order of business according to a plan approved by the Water Management Administration (WMA) or local authority. Dewatering basins should be constructed and followed (refer to Detail 1.1):

- Excavated channel and topsoil should be stored separately and replaced in their natural order. Additionally, the excavated sediments should be prevented from entering the waterway by using sediment perimeter controls or other measures.
- The dewatering basin should have a minimum depth of 3 feet (1 meter) where basin depth is measured from the top of the straw bales to the bottom of the excavation.
- Once the dewatering basin becomes filled to one-half of the excavated depth, accumulated sediment should be removed and disposed of in an approved area outside the 100-year floodplain unless otherwise authorized by the WMA.
- Sediment control devices should remain in place until all disturbed areas are stabilized and the inspecting authority approves their removal. All disturbed ground conditions should be returned to their original condition unless otherwise approved by the WMA or local authority.

TEMPORARY STREAM CONSTRUCTION MEASURES MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

MGWC 1.5: SANDBAG/STONE CHANNEL DIVERSION

Temporary measure for diverting in-channel construction sites

DESCRIPTION
The work should consist of installing sandbag or stone flow diversions for the purpose of erosion control when construction activities occur within the stream channel.

EFFECTIVE USES & LIMITATIONS
Diversions are used to isolate work areas from flow during the construction of in-stream projects. Diversions which have an insufficient flow capacity can fail and severely erode the disturbed channel section under construction. Therefore, in-channel construction activities should occur only during periods of low rainfall. This temporary measure may not be practical in large channels.

MATERIAL SPECIFICATIONS
Materials for sandbag and stone stream diversions should meet the following requirements:

- Riprap:** Riprap should be washed and have a minimum diameter of 6 inches (0.15 meters).
- Sandbags:** Sandbags should consist of materials which are resistant to stain, rot, radiation, tearing, and puncture and should be woven tightly enough to prevent leakage of the fill material (i.e., sand, fine gravel, etc.).
- Sheeting:** Sheeting should consist of polyethylene or other materials which are impervious and resistant to puncture and tearing.

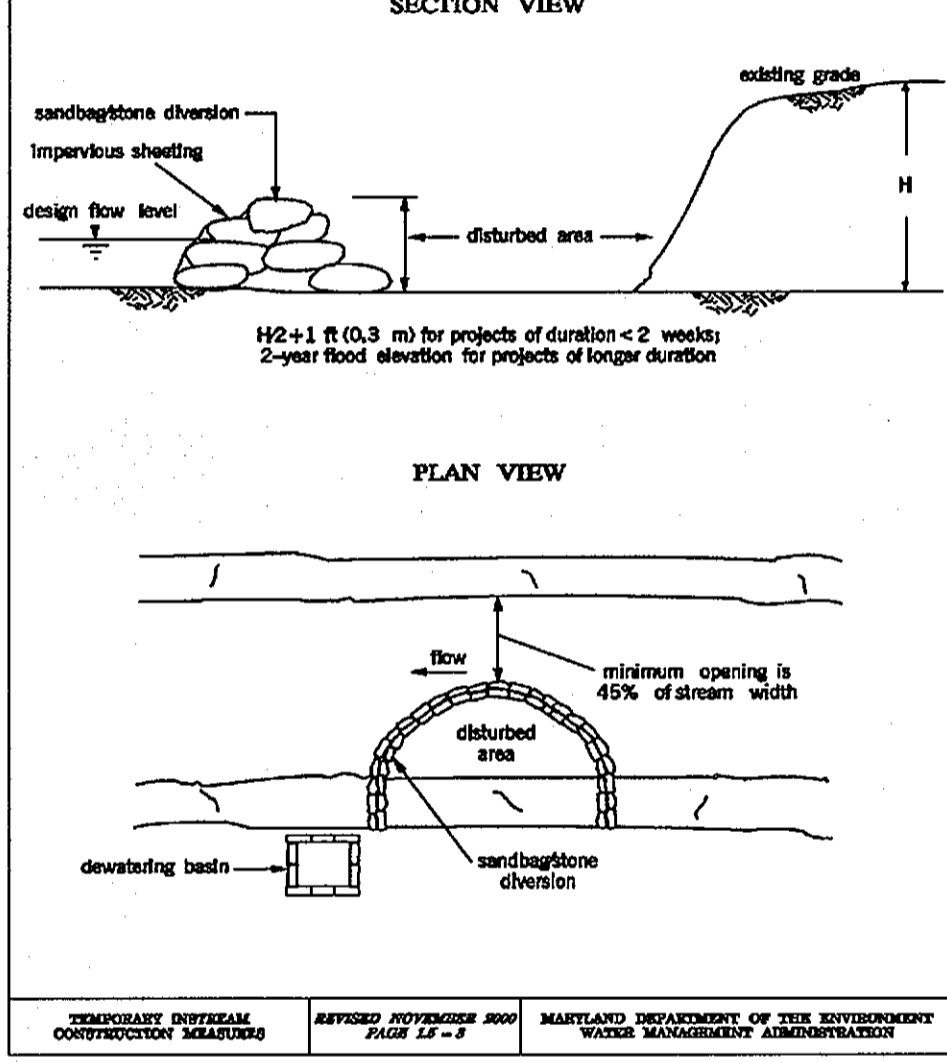
INSTALLATION GUIDELINES
All erosion and sediment control devices, including dewatering basins, should be implemented as the first order of business and according to a plan approved by the WMA or local authority. Installation should proceed from upstream to downstream during periods of low flow. If necessary, silt fence or straw bales should be installed around the perimeter of the work area.

Sandbag/stream diversions can be used independently or as components of other stream diversion techniques. Installation of this measure should proceed as follows (refer to Detail 1.5):

- The diversion structure should be installed from upstream to downstream.
- The height of the sandbag/stone diversion should be a function of the duration of the project in the stream reach. For projects with a duration less than 2 weeks, the height of the diversion should be one-half the streambank height, measured from the channel bed, plus 1 foot (0.3 meters) or bankfill height, whichever is greater. For projects of longer duration, the top of the sandbag or stone diversion should correspond to bankfill height. For diversion structures utilizing sandbags, the stream bed should be hand prepared prior to placement of the base layer of sandbags in order to ensure a water tight fit. Additionally, it may be necessary to prepare the bank in a similar fashion.
- All excavated material should be deposited and stabilized in an approved area outside the 100-year floodplain unless otherwise authorized by the WMA.
- Sediment-laden water from the construction area should be pumped to a dewatering basin.
- Sheeting on the diversion should be positioned such that the upstream portion covers the downstream portion with at least a 18-inch (0.45 meters) overlap.
- Sandbag or stone diversions should not obstruct more than 45% of the stream width. Additionally, bank stabilization measures should be placed in the restricted section if accelerated erosion and bank cover are observed during the construction time or if project time is expected to last more than 2 weeks.
- Prior to removal of these temporary structures, any accumulated sediment should be removed, deposited and stabilized in an approved area outside the 100-year floodplain unless authorized by the WMA.
- Sediment control devices are to remain in place until all disturbed areas are stabilized in accordance with an approved sediment and erosion control plan and the necessary authority approvals have been received.

Maryland's Guidelines To Waterway Construction

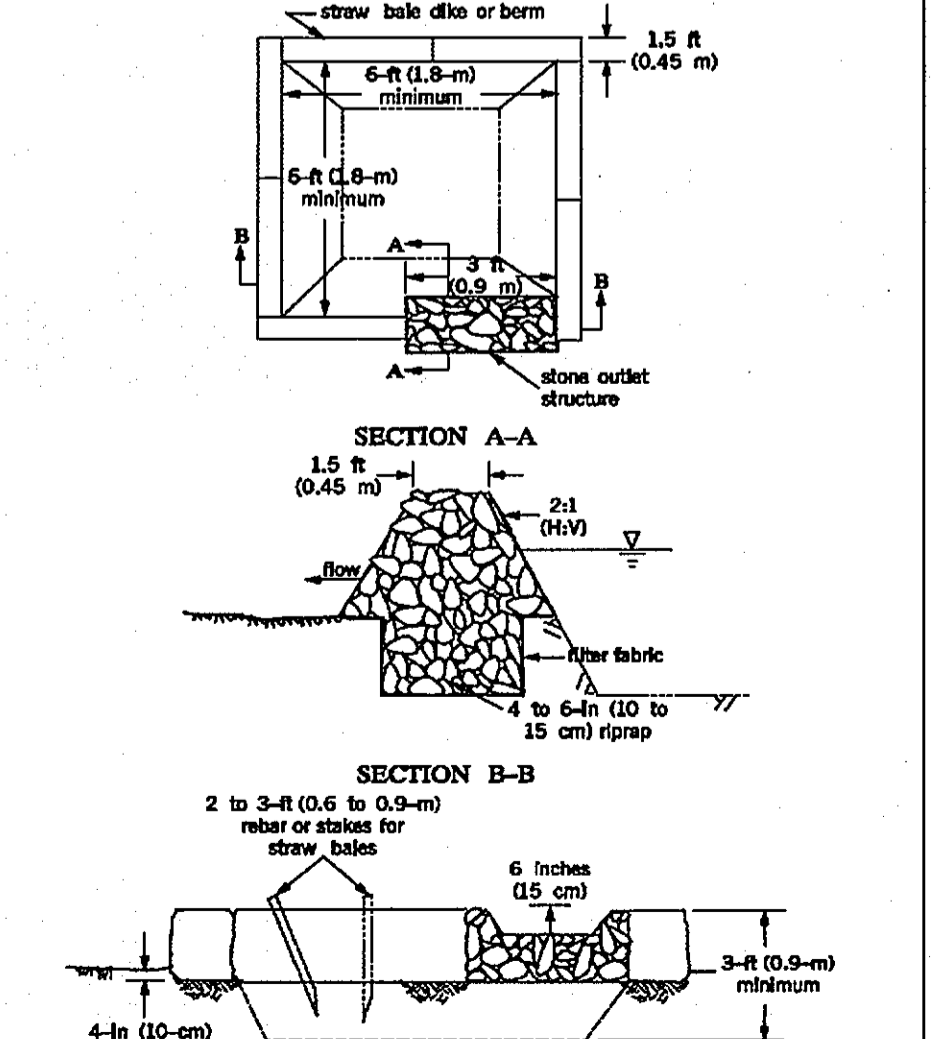
DETAIL 1.5: SANDBAG/STONE DIVERSION



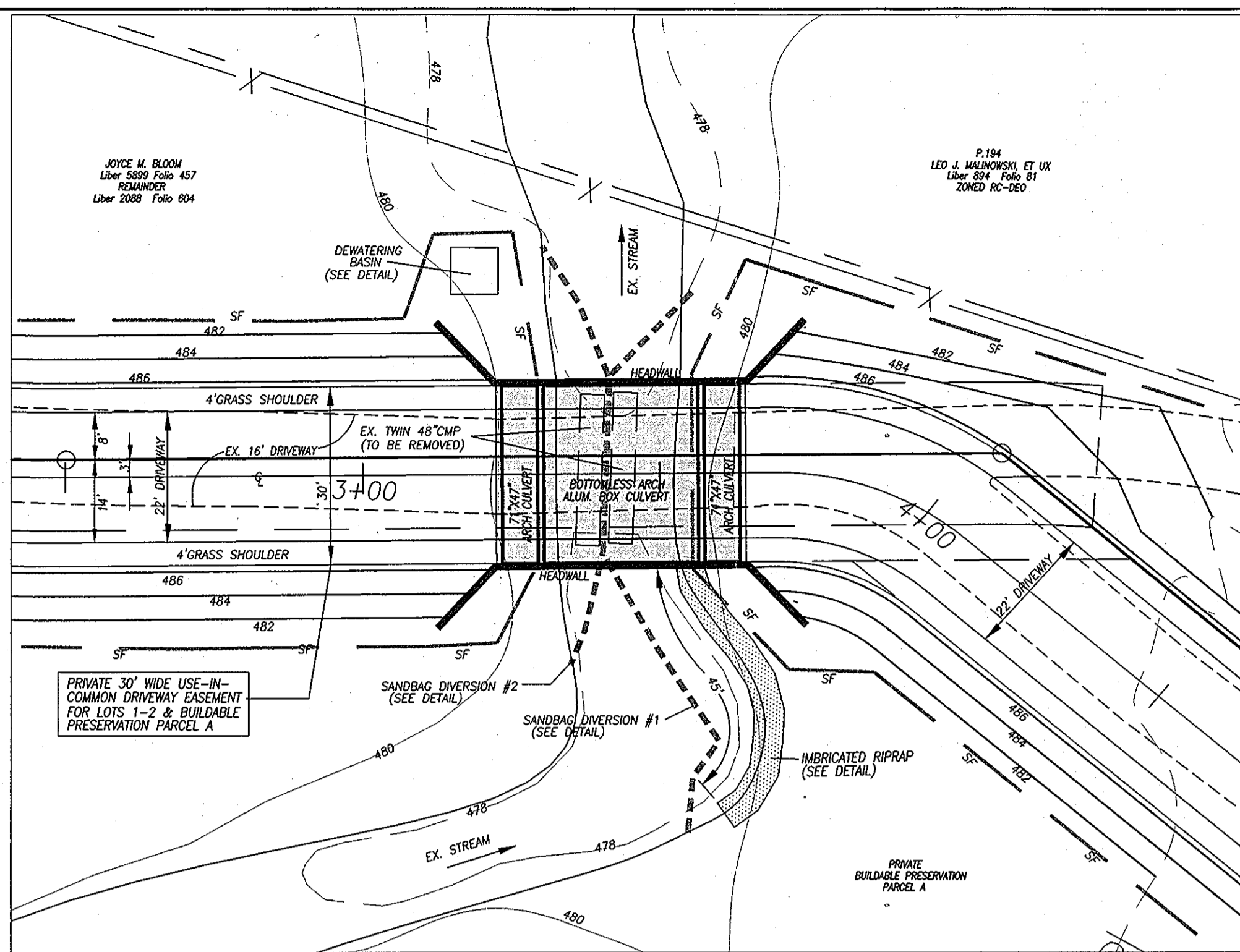
TEMPORARY STREAM CONSTRUCTION MEASURES MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

Maryland's Guidelines To Waterway Construction

DETAIL 1.1: DEWATERING BASINS

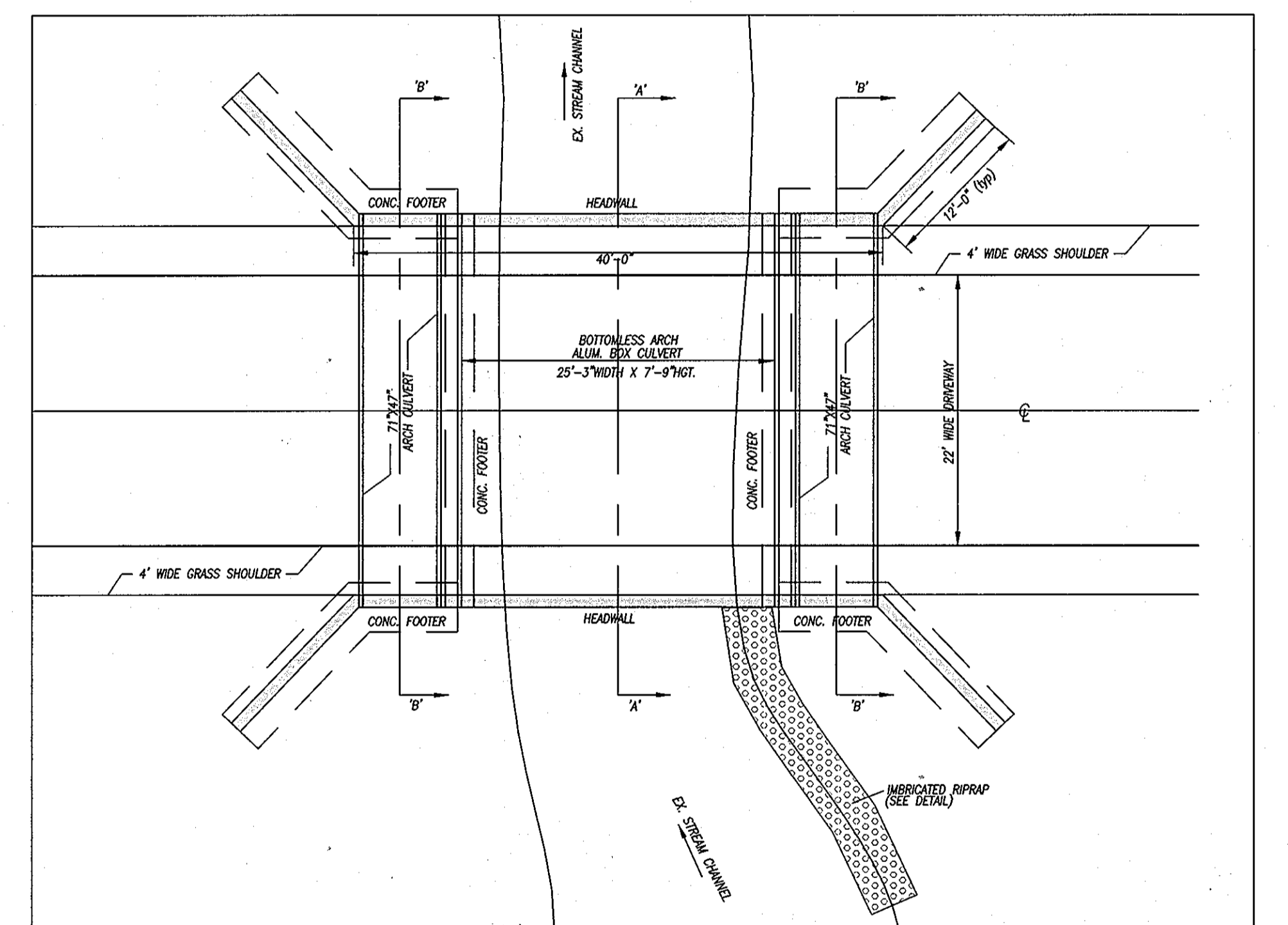


TEMPORARY STREAM CONSTRUCTION MEASURES MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



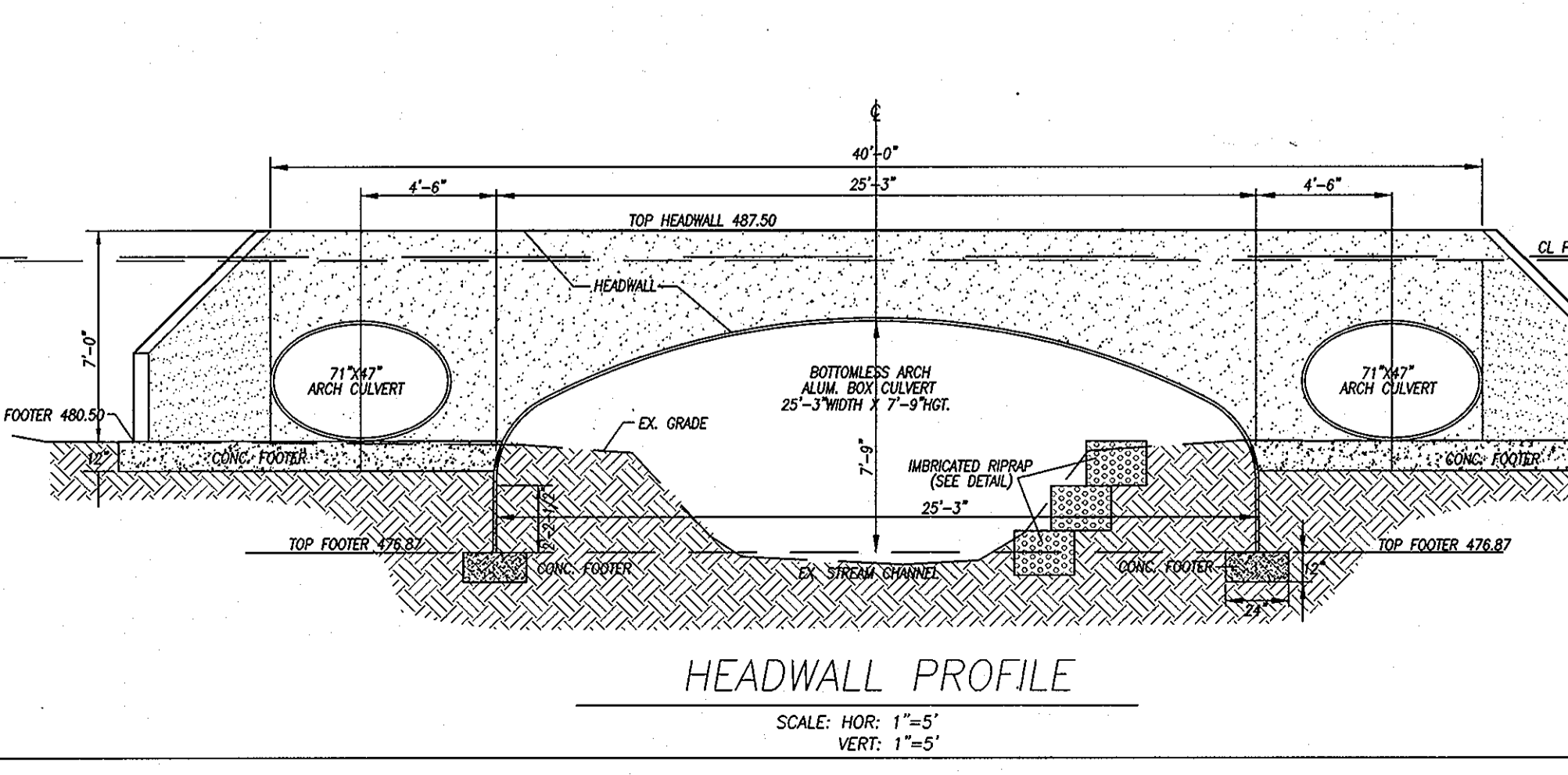
STREAM CROSSING DETAIL

SCALE: 1"=20'



HEADWALL DETAIL

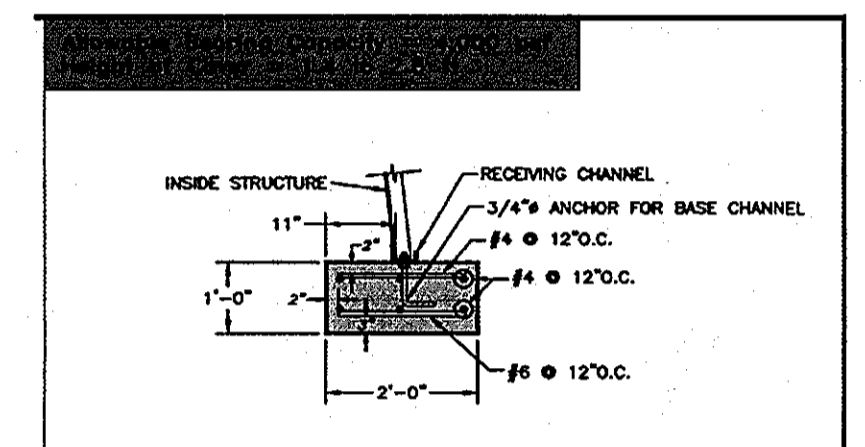
SCALE: 1"=10'



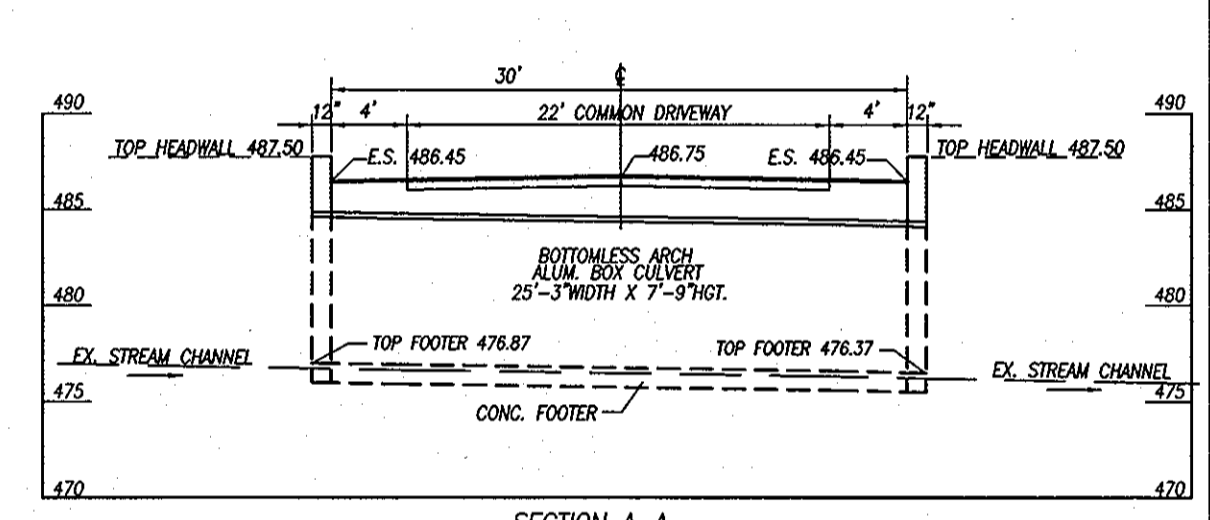
SCALE: HOR: 1"=5' VERT: 1"=5'

SEQUENCE OF CONSTRUCTION FOR STREAM CROSSING

1. INSTALL SANDBAG DIVERSION #1 ACCORDING TO MGWC 1.5 SPECIFICATIONS TO DIVERT THE STREAM FLOW AWAY FROM THE RIGHT CULVERT AND BANK.
2. REMOVE RIGHT CULVERT AND INSTALL FOOTER FOR BOX CULVERT, DEWATER AS NECESSARY.
3. INSTALL GABION BANK STABILIZATION PER MGWC 2.3, STABILIZE ANY DISTURBED AREA AND REMOVE SANDBAG DIVERSION #1.
4. INSTALL SANDBAG DIVERSION #2 ACCORDING TO MGWC 1.5 SPECIFICATIONS, TO DIVERT THE STREAM FLOW AWAY FROM THE REMAINING CULVERT AND LEFT BANK.
5. REMOVE REMAINING CULVERT AND INSTALL SECOND FOOTER FOR BOX CULVERT, DEWATER AS NECESSARY AND STABILIZE ALL DISTURBED AREAS.
6. REMOVE SANDBAG DIVERSION #2.
7. INSTALL ALUMINUM BOX CULVERT AND HEADWALLS. (COMPLETE DESIGN AND INSTALLATION TO BE PERFORMED BY CONTECH BRIDGE SOLUTIONS INC.)

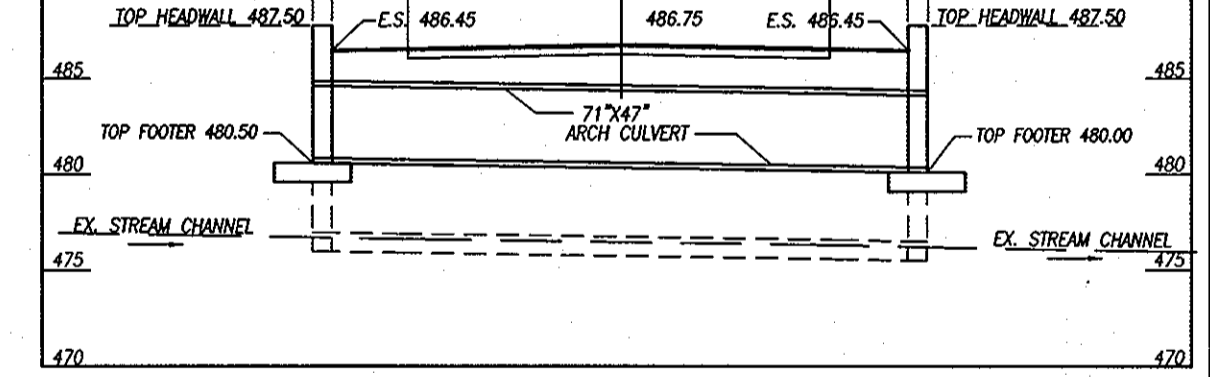


DESIGN OF FOOTINGS for Aluminum Box Culverts



SECTION A-A

SCALE: HOR: 1"=10' VERT: 1"=1'



SECTION B-B

SCALE: HOR: 1"=10' VERT: 1"=1'

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION 12/10/08
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT 12/10/08
DATE

OWNER:
JOYCE M. BLOOM
P.O. BOX 58
LISBON, MD. 21765
301-854-5019

PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 108336, Expiration Date: 3-12-09.

DATE REVISIONS

CULVERT DETAILS
BLOOM PROPERTY
LIBER 5899 FOLIO 450
SITUATED ON CARRS MILL ROAD
ELECTION DISTRICT No. 4
HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN MARCH 2008

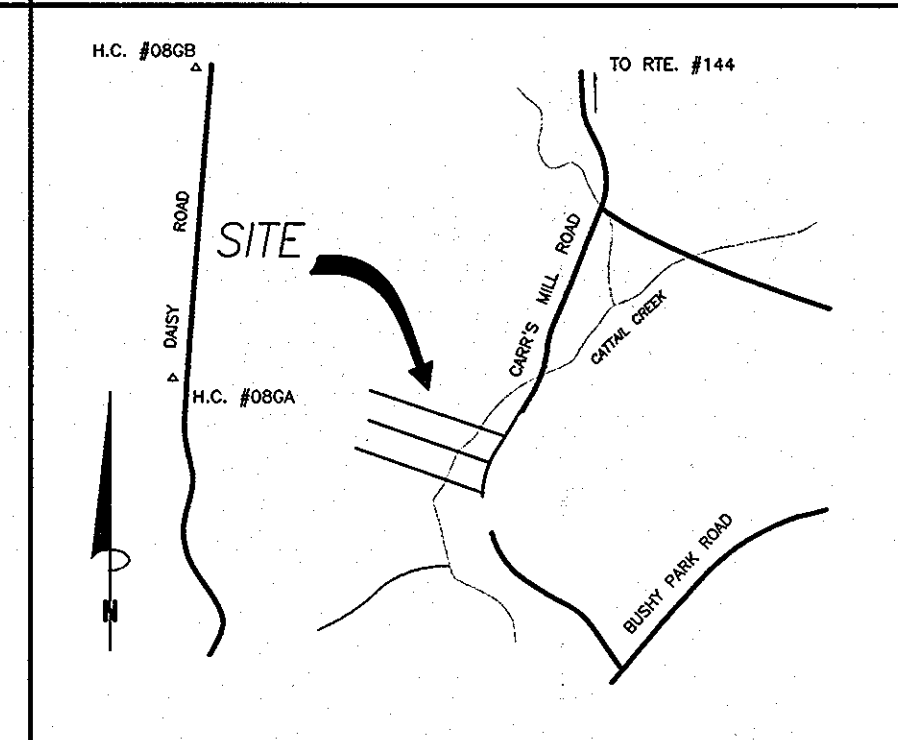
VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
3150 Greenleaf Street, P.O. Box 526 Mount Airy, Maryland 21771
(301) 829-2880 (301) 8611-5615 (410) 548-2761
County File # F-07-123

SHEET 2 OF 3

F07123

KEY	A. TYPE OF COMMUNITY	B. AREA* (1/10 Acre)	C. SOIL INFORMATION**			D. EXISTING VEGETATION (Dominant Species and Approx. %)	E. STAND CHARACTERISTICS			F. FOREST AREA IN SENSITIVE ENVIRONMENTS (Acres)	G. HABITAT VALUE
			1. Soil Types	2. Typical forest cover for soil type	3. Woodland Suitability Index		1. Size (Diam)	2. Age	3. General Condition		
F	STREAM VALLEY FOREST	14,589 AC±	Co	HARDWOODS	4	MAPLE (Red,Silver)	6-10"	30-50	AVERAGE	2,113.3 AC±	AVERAGE
			ChB2	HARDWOODS	30	MAPLE (Red,Silver)	6-10"	30-50	AVERAGE		
			GIB2	HARDWOODS	30	MAPLE (Red,Silver)	6-10"	30-50	AVERAGE		
			GIC2	HARDWOODS	30	MAPLE (Red,Silver)	6-10"	30-50	AVERAGE		
			GIC3	HARDWOODS	30	MAPLE (Red,Silver)	6-10"	30-50	AVERAGE		
			GID3	HARDWOODS	31	MAPLE (Red,Silver)	6-10"	30-50	AVERAGE		
										2,113.3 AC± TOTAL SENSITIVE AREA	

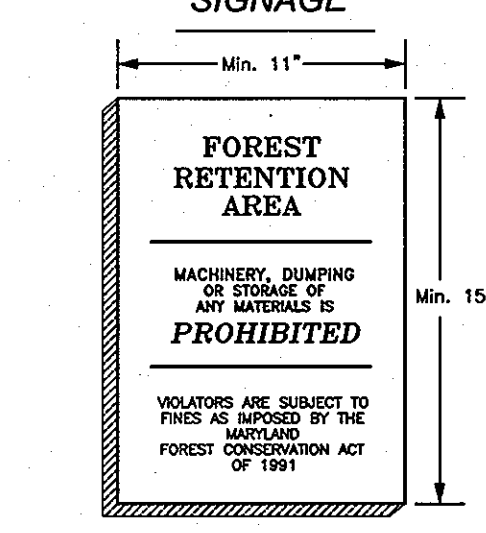
*AREA MEASURED TO THE NEAREST 1/10 ACRE
** SOURCE: HOWARD COUNTY SOIL SURVEY, USDA
WETLAND AREA 0.2387 AC±
WETLAND BUFFER 0.6286 AC±
>25% SLOPE 1.246 AC±



LANDSCAPE NOTES

- Plants shall conform to current American Standards for Nursery Stock by American Association of Nurserymen (AAN), particularly with regards to site, growth, and size of ball and density of branch structure. Contractor to ensure conformance to national and local building codes and ordinances.
- All plants (B&B or container) shall be properly identified by weatherproof labels securely attached hereto before delivery to the project site. Labels shall identify plants by name, species, and size. Labels shall not be removed until the final inspection by the owners representative.
- Any material and/or work may be rejected by the owners representative if it does not meet the requirements of the specifications, the contractor shall remove all rejected materials from the site.
- The contractor shall furnish all plants in quantities and sizes to complete the work as specified in plant schedule. The landscape contractor shall be responsible to verify all plant quantities on the plans prior to commencement of work. Quantities in the plant schedule are for the contractors convenience only and do not constitute the final count.
- Substitutions in plant species or size shall not be permitted except with the written approval of the owners representative.
- Plants shall be located as shown on the drawings and by scaling or as designated in the field by the owners representative. Tree locations to be field adjusted as required to maintain 10' minimum clearance from all utilities, street lights, and driveways. All locations are to be approved by the owners representative before excavation. The contractor shall note that in the case of a discrepancy between the scaled and figured dimensions shown on these plans, the figured dimension shall govern.
- The location of existing utilities shown hereon are approximate only. Contractor shall excavate to verify the existence, location, and depth of any utilities (constructed and existing) and shall notify the engineer of any discrepancies prior to the beginning of all work, excavation, grading, landscaping, etc.
- Contractor shall locate and mark all underground utility lines and irrigation systems prior to excavating plant beds or pits. All utility easement areas where no planting shall take place shall also be marked on the site, prior to locating and digging the tree pits. If utility lines are encountered in excavation of tree pits, other locations for the trees shall be selected by the owners representative. Such changes shall be made by the contractor without additional compensation. No changes of location shall be made without the approval of the owners representative. Any utility (whether shown or not) damaged due to construction shall be repaired immediately. The contractor shall be responsible for removing or replacing any existing fences, driveways, etc., damaged or removed by the contractor during construction. All offsite disturbed areas shall be returned to their original condition.
- All equipment and tools shall be placed so as not to interfere or hinder pedestrian and vehicular traffic flow.
- During planting operations, excess and waste materials shall be promptly and frequently removed from the site.
- All tree pits are to be excavated to a minimum depth to allow the tree root ball to be a minimum of 4" higher than finish grade. The tree root ball is to rest on undisturbed soil, or a compacted bed must be prepared for the tree root ball to rest on which will not subside causing the tree to sink below finish grade. All tree pits are to be a minimum of 12" larger on every side of the trees root ball.
- The topsoil to be used to fill the tree pits is to be plant specific. The topsoil for trees shall consist of a maximum of 2/3 existing topsoil from the site, which is cleaned and free of clay, a minimum of 1/3 organic material. These materials are to be mixed prior to backfilling when planting.
- The contractor is responsible to ensure that all tree pits are well drained. The landscape contractor, without cost to the owner, will replace all plant material which is affected by poor drainage.
- All lawn areas are to be seeded with grass seed appropriate for the sunlight conditions which exist on the site.
- All lawn areas are to be tilled to a depth of 8" and all foreign material removed which will inhibit the healthy growth of the lawn. All old grass and grass roots are to be removed from the site. New topsoil of a minimum 4" is to be placed over the areas to be seeded. The grass areas are to be fine graded to ensure that no undulations occur on the lawn. The lawns are to be graded in such a way as to appear perfectly well tailored and even. The lawn topsoil is to be rolled and lightly irrigated prior to placing of the seed. The seed is not to be laid on frozen or soaked soil.
- Existing trees are to be protected during the preparation of the lawn areas. The roots of the trees are to be undisturbed during the cleaning of the topsoil.
- All plants are to be handled with the best care and attention to ensure that the plants are not bruised, broken, torn, or damaged in any way which will affect the plants general appearance and well being.
- All trees are to be planted with the accepted standards of the American Association of Nurserymen. The trees are to be properly watered and backfilled during planting. All care must be taken to ensure that the trees are upright, a tree's best side is exposed to the point of greatest visibility.
- The trees must be staked in accordance with acceptable nursery practice to ensure that they are secure in the ground and will grow straight and uniform. The trees are to be wrapped if the contractor deems it necessary to protect the trees from sun scald or insect attack.
- Contractor is to provide a 1-year guarantee for all plant material and other work done on site.
- Quantities as shown on the plan shall govern over plant list quantities. Contractor to verify plant list totals with quantities shown on plan.
- Plant material source: Within 100 mile radius of Maryland if possible.
- VanMar Associates, Inc. is not responsible for the contractor's utilization of men, materials, equipment, or safety measures in performance of any work for this construction. The contractor assumes all responsibility for performing the work correctly and in conformance with all code requirements.
- Should the contractor discover discrepancies between the plans and field conditions, the "work" shall be stopped immediately and the engineer notified immediately to resolve the situation. Should the contractor make field corrections or adjustments without notifying the engineer, then the contractor assumes all responsibility for those changes.
- It is the intent of these plans and specifications to provide 100% completed work and this shall be the project scope. It shall be distinctly understood that failure to notify the engineer of discrepancies found on these plans and specifications, specifically and work which would naturally and/or normally be required to complete the project shall not relieve the contractor of his responsibility to perform such work.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual.
- At the time of installment, all shrubs and other plantings herewith listed and approved for this site, shall be of the proper height requirements and size in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocation of required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to applicable plans and certificates.
- Financial surety for the required landscaping has been posted with the Grading Permits in the amount of \$11,400 for:
29 Shade Trees @ \$300 each = \$8,700
38 Evergreen Trees @ \$150 each = \$5,700
Total = \$14,400

FOREST RETENTION SIGNAGE

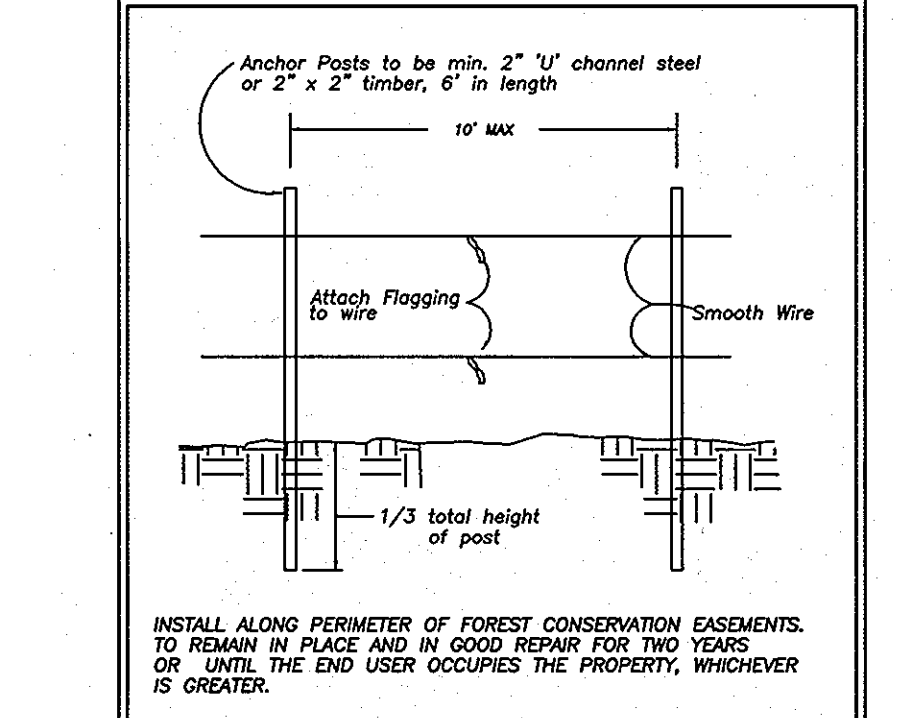


- NOTES:
- Forest conservation easement signage to be installed using 2" x 2" timber, 6' in length and installed to a depth of no less than 1/3 of the total height of post.
 - Signage may be installed on corner posts used for support of Tree Protection Fence, and post may remain after construction is complete and mesh is removed.
 - Boundaries of Retention area should be staked and flagged prior to installing device.
 - Space Signs 100' O.C.

FOREST CONSERVATION NOTES:

- The number of trees in the existing woods exceeds the 100 stem per acre threshold as defined in the Forest Conservation Manual.
- 100 year floodplain exists on-site per VanMar and Associates, Inc. Floodplain study dated July, 2007.
- Stabilize all disturbed areas as directed by inspectors.
- For tree pruning and care methods please refer to the National Arborist Standards, latest edition.
- Forest Conservation obligation to be fulfilled by the retention of 3.66 AC± of existing forest, in permanent forest easements. Financial surety for Forest Conservation is not required because this is a minor subdivision fulfilling its obligation exclusively through retention.

PROTECTIVE FENCING DETAIL



F-07-0123

FOREST CONSERVATION WORKSHEET

VERSION 1.0

NET TRACT AREA:

A. Total tract area	16.88
B. Area within 100 year floodplain	6.84
C. Area to remain in agricultural production	0.00
D. Net tract area	10.03

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)

Input the number "1" under the appropriate land use zoning, and limit to only one entry.

ARA	MDR	IDA	HDR	MPD	QIA
0	1	0	0	0	0

E. Afforestation Threshold: 20% x D = 2.01
F. Conservation Threshold: 25% x D = 2.51

EXISTING FOREST COVER:

G. Existing forest cover (excluding floodplain)	8.27
H. Area of forest above afforestation threshold	6.26
I. Area of forest above conservation threshold	5.76

BREAK EVEN POINT:

J. Forest retention above threshold with no mitigation	3.66
K. Clearing permitted without mitigation	4.61

PROPOSED FOREST CLEARING:

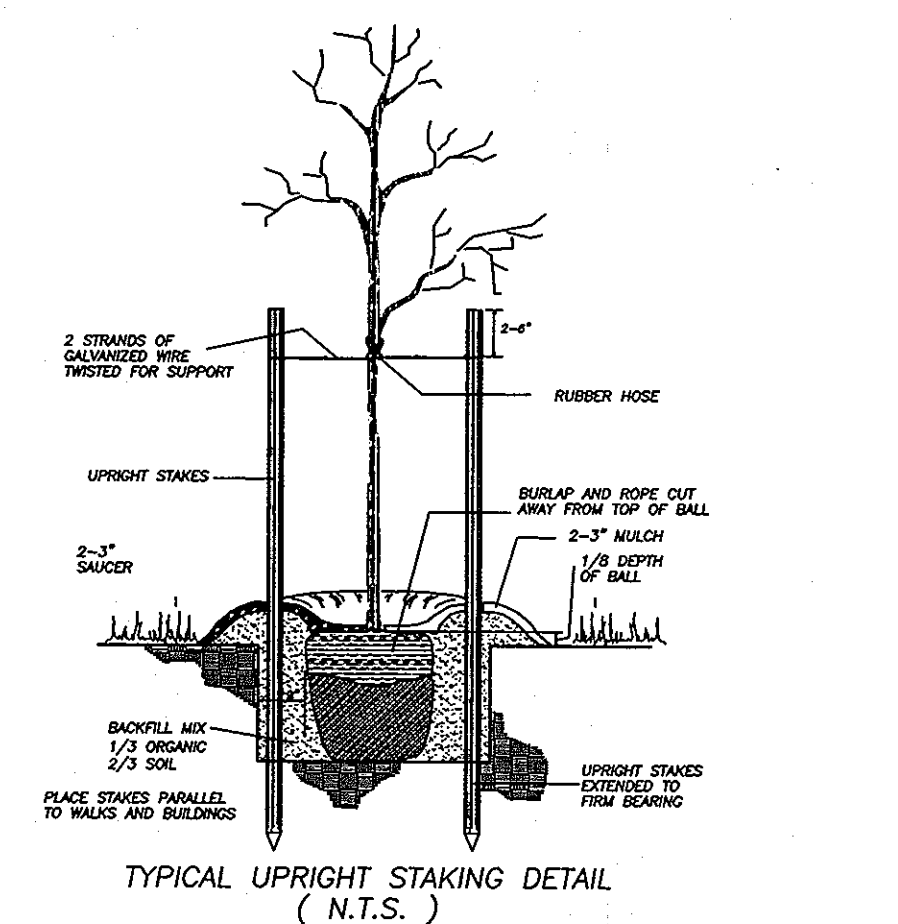
L. Total area of forest to be cleared	4.61
M. Total area of forest to be retained	3.66

PLANTING REQUIREMENTS:

N. Reforestation for clearing above conservation threshold	1.15
O. Reforestation for clearing below conservation threshold	0.00
Q. Credit for retention above conservation threshold	1.15
R. Total reforestation required	0.00
S. Total afforestation required	0.00
T. Total reforestation and afforestation required	0.00



SOIL TYPE	SYMBOL	LAND CAPABILITY	Kw	SLOPE %	HYDRIC?	HYDROLOGIC SOIL GROUP
Chester Silt Loam	ChB2	Iiw-7	>.35	3-8%	NO	B
Codorus Silt Loam	Co	Ile-4	≤.35	0-3%	YES	C
Glenelg Loam	GIB2	Ile-4	>.35	3-8%	NO	B
Glenelg Loam	GIC2	Ille-4	>.35	8-15%	NO	B
Glenelg Loam	GIC3	Ive-3	>.35	8-15%	NO	B
Glenelg Loam	GID3	Ive-2	>.35	15-25%	NO	B



SCHEDULE A
PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS					ADJACENT TO PERIMETER PROPERTIES					TOTAL
	#1=NONE	#2=NONE	#3=B	#4=B	#5=B	#1=NONE	#2=NONE	#3=B	#4=B	#5=B	
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	621.15'	413.38'	657.21'	834.87'	1084.16'						
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	YES, 171'	YES, 181'	YES, 1684'	NO	NO	NO	NO	NO	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
NUMBER OF PLANTS REQUIRED			466'	654'							
SHADE TREES	0	0	10	13	0	0	0	0	0	0	23
EVERGREEN TREES	0	0	13	17	0	0	0	0	0	0	30
SHRUBS	0	0	0	0	0	0	0	0	0	0	0
NUMBER OF PLANTS PROVIDED			10	13							
SHADE TREES	0	0	10	13	0	0	0	0	0	0	23
EVERGREEN TREES	0	0	13	17	0	0	0	0	0	0	30
SHRUB	0	0	0	0	0	0	0	0	0	0	0
OTHER TREES (2:1 SUBSTITUTION)	0	0	0	0	0	0	0	0	0	0	0
SHRUBS (10:1 SUBSTITUTION)	0	0	0	0	0	0	0	0	0	0	0
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)											

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chris Hart 12/10/08
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

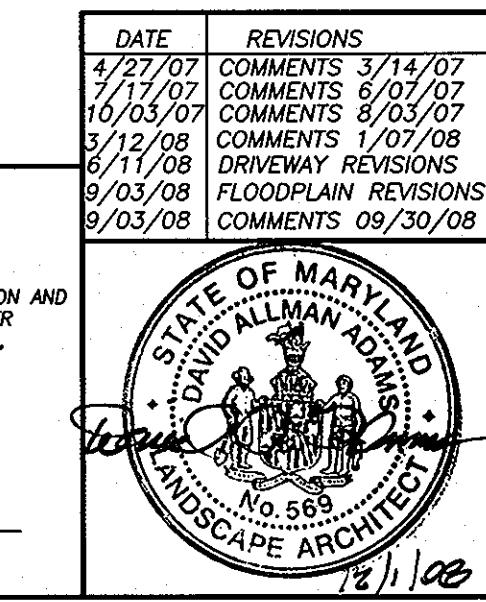
John Deane 12/10/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

SYMBOL	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	SPACING
○	23	Platanus x acerifolia	London Planetree	2-2.5" CAL	B&B	AS SHOWN
●	30	Pinus strobus		6-8" HT	B&B	AS SHOWN

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 SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

John M. Deane 12/10/08
DATE



FOREST CONSERVATION PLAN/
LANDSCAPE PLAN/TOPOGRAPHY/SOILS
BLOOM PROPERTY
LIBER 5899 FOLIO 450
SITUATED ON CARRS MILL ROAD
ELECTION DISTRICT No. 4
HOWARD COUNTY, MARYLAND
SCALE: 1" = 100' JANUARY, 2007

VANMAR ASSOCIATES, INC. SHEET 3 OF 3
Engineers Surveyors Planners
310 South Main Street P.O. Box 328 Mount Airy, Maryland 21771
(301) 923-2899 (301) 851-5015 (410) 548-2751