

LOCATION PLAN SCA(E 1" = 600'

LOTS 1 thru 25 & PARCEL "A" ROAD CONSTRUCTION DRAWING HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS



GENERAL

48 HOURS PRIOR TO ANY EXCAVATION WORKS.

PRIOR TO PLACEMENT OF ANY ASPHALT.

(NAD 83) IGE1 AND 0012.

75 FT. OF A PERENNIAL STREAM.

NUMBER 95-NT-0848,

AND WATER QUALITY.

b. TOTAL AREA OF SUBDIVISION = 76.98 ACRES

e. PRELIMINARY PLAN WAS APPROVED ON 10-20-95

SPECIFICATIONS IF APPLICABLE.

DAYS PRIOR TO START OF WORK.

a. TAX MAP 10, PARCEL 27, 29, & 151

4. PROJECT BACKGROUND

P-95-24.

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARD AND SPECIFICATION OF THE HOWARD COUNTY PLUS MSHA STANDARDS AND

2. THE CONSTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS CONS-TRUCTION INSPECTION AT 410-313-1880 AT LEAST FIVE (5) WORKING

3. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST

c. NUMBER OF PROPOSED LOTS = 22 BUILDABLE, 3 OPEN SPACE, & 1 PRESERVATION PARCEL d. SKETCH PLAN WAS APPROVED ON DEC. 21, 1994 UNDER S-95-05

5. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES(MUTCD). ALL STREETS AND REGULATORY SIGNS SHALL BE IN PLACE

6. BOUNDARY AND TOPOGRAPHIC SURVEY PERFORMED BY JOHN MELLEMA, SR. INC.

7. HORIZONTAL AND VERTICAL DATUM ARE BASED ON MARYLAND STATE COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY CONTROL STA.

8. LIGHT POLES AND FIXTURES SHALL BE IN ACCORDANCE WITH THE LATEST

10. WETLANDS DELINATION WAS PERFORMED BY EXPLORATION RESEARCH, INC. ON AUGUST, 1994. 11. GEOTECHNICAL REPORT WAS PREPARED BY INVESTIGATIVE TESTING & ENGINEERING ON MARCH, 1995 AND HERBST & ASSOCIATES ON SEPTEMBER, 1995. 12. EXISTING UTILITIES ARE BASED ON HOWARD COUNTY AS BUILT PLANS AND

13. THIS PLAN IS SUBJECT TO WP-95-28 APPROVED ON NOV. 11, 1994 WHICH WAIVED THE REQUIREMENT of 16.116 (a)(1) & 16 (a)(2) PROHIBITING GRADING OR DISTURBANCE WITHIN 25 FT. OF A WETLAND OR WITHIN

14. 95% COMPACTION IN FILL SHALL BE IN ACCORDANCE WITH AASHTO T-180 REQUIREMENT. 15. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL

REQUIREMENT OF SECTION 16.1200 OF THE HOWARD COUNTY CC

FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT

SHOWN ON AN APPROVED ROAD DRAWING OR SITE DEVELOPMENT PL

HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED

16. DISTURBANCE OF WETLAND IS APPROVED UNDER PERMIT

THE TOPOGRAPHIC SURVEY BY JOHN MELLEMA, INC.

FOREST CONSERVATION EASEMENT ARE ALLOWED.

HOWARD COUNTY DESIGN MANUAL, VOLUME III, ROAD AND BRIDGES. 9. TWO (2) EXTENDED RETENTION PONDS ARE PROPOSED FOR WATER QUANTITY

NOTES

COVER SHEET

WOODFORD'S GRANT LOTS 1 THRU 25
TAX MAP 10, PARCEL 27, 29 & 151 3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DES : MLL DRN : JER CHK : MLL BY NO. REVISION

DEVELOPER :

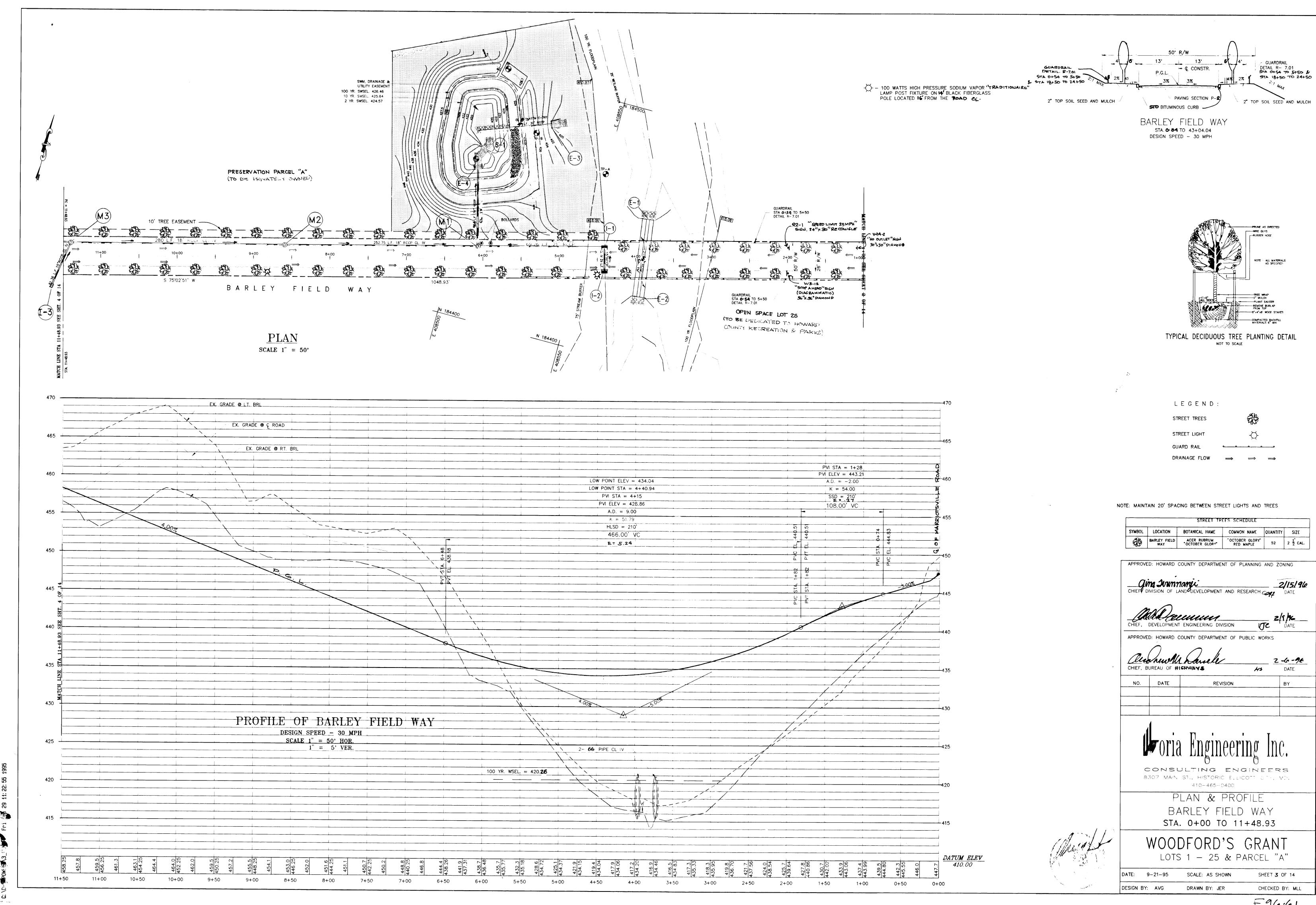
LAND DESIGN & DEVELOPMENT INC. 10805 HICKORY RIDGE ROAD COLUMBIA, MD. 21045

OWNER:

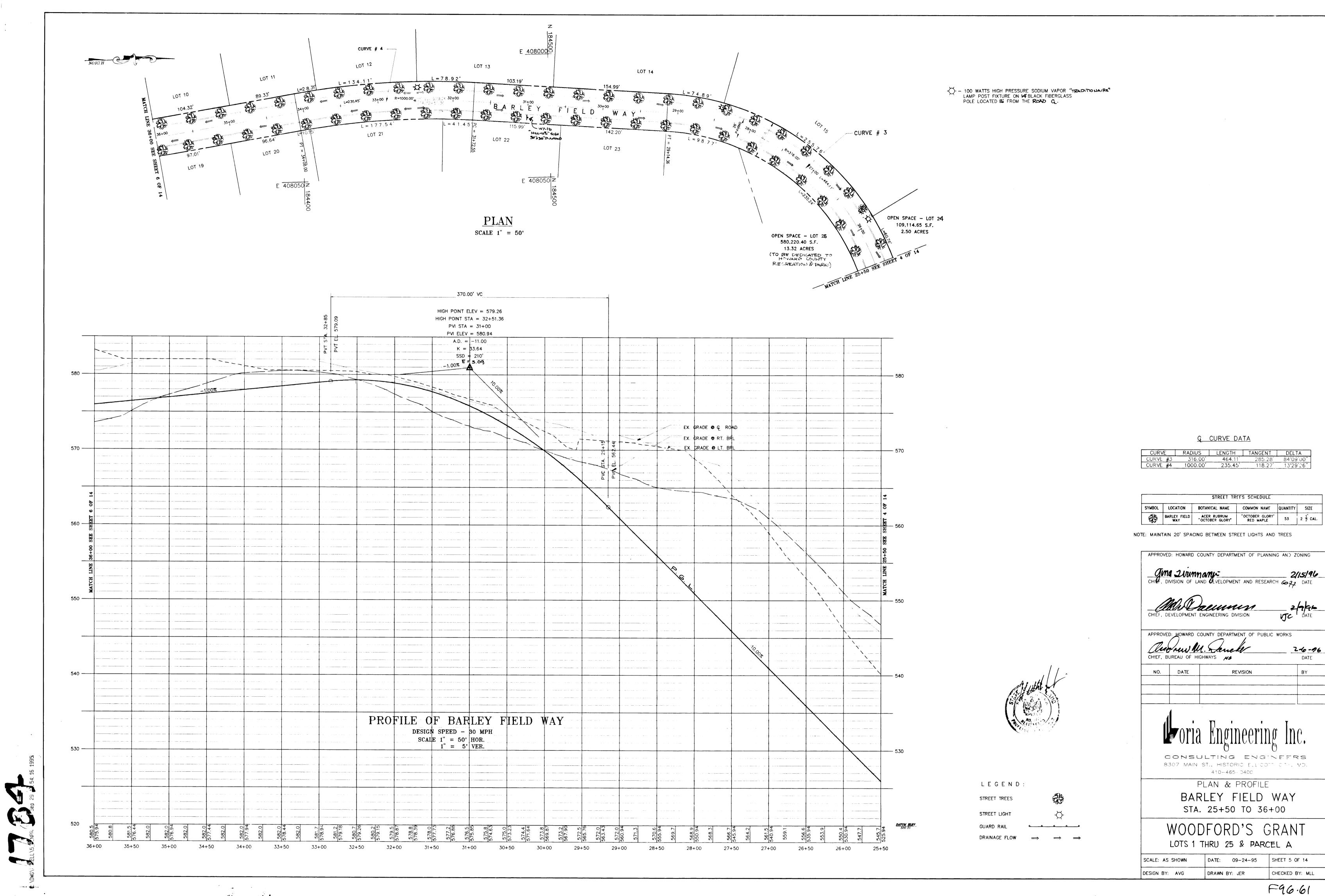
THOMAS POWELL 12905 FALLS ROAD COCKEYSVILLE, MD. 21030 SCALE AS SHOWN

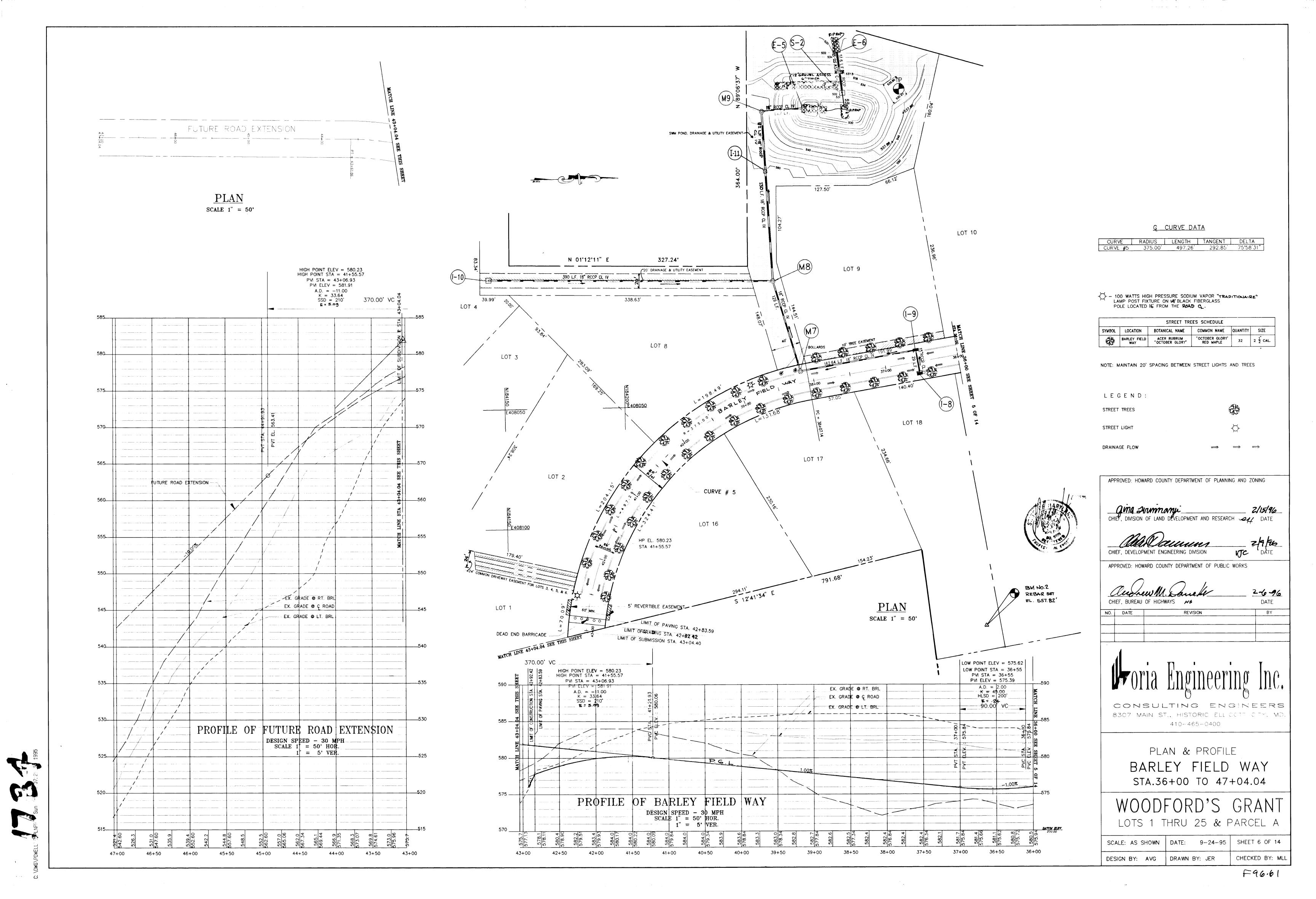
SHEET 1 OF 14

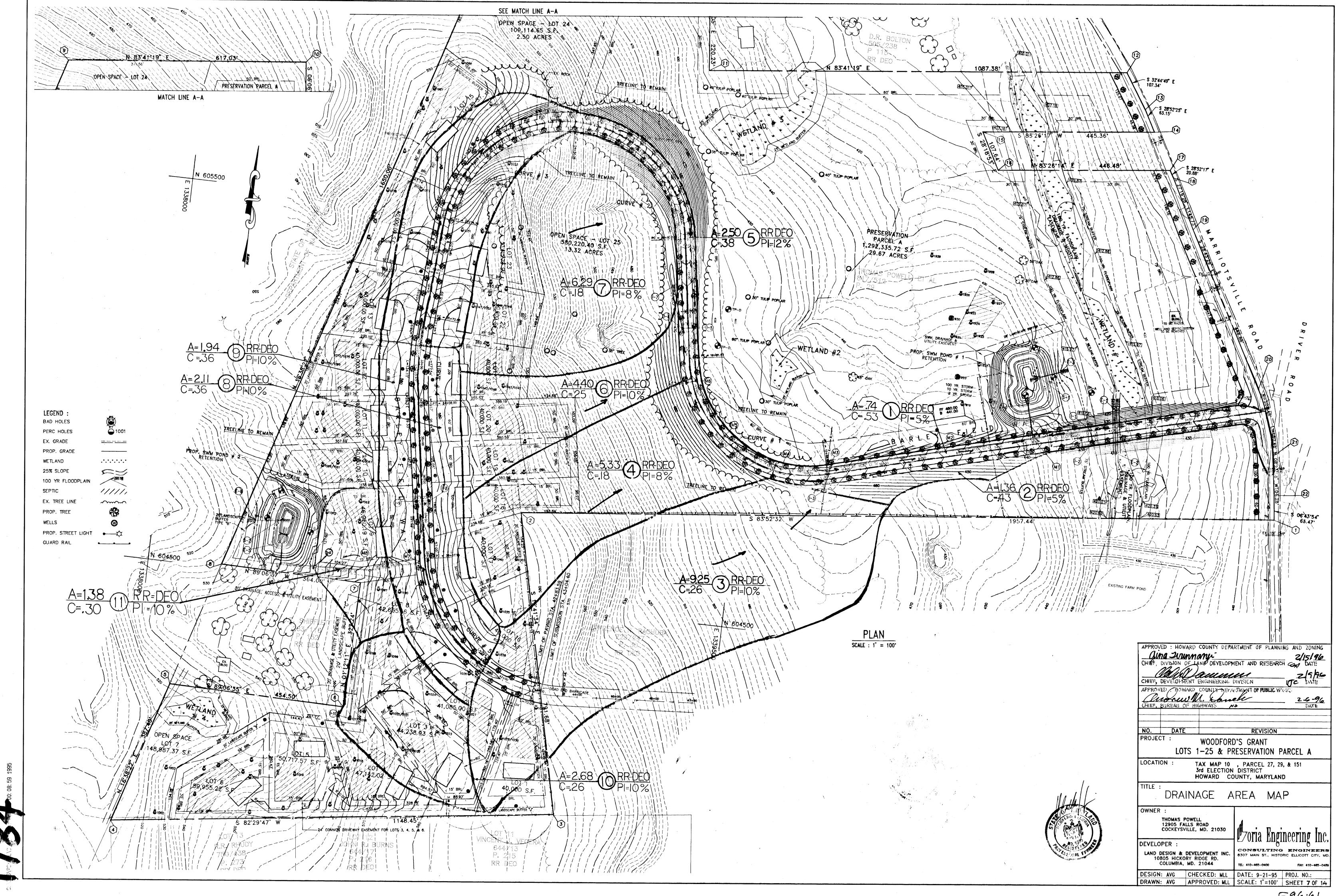
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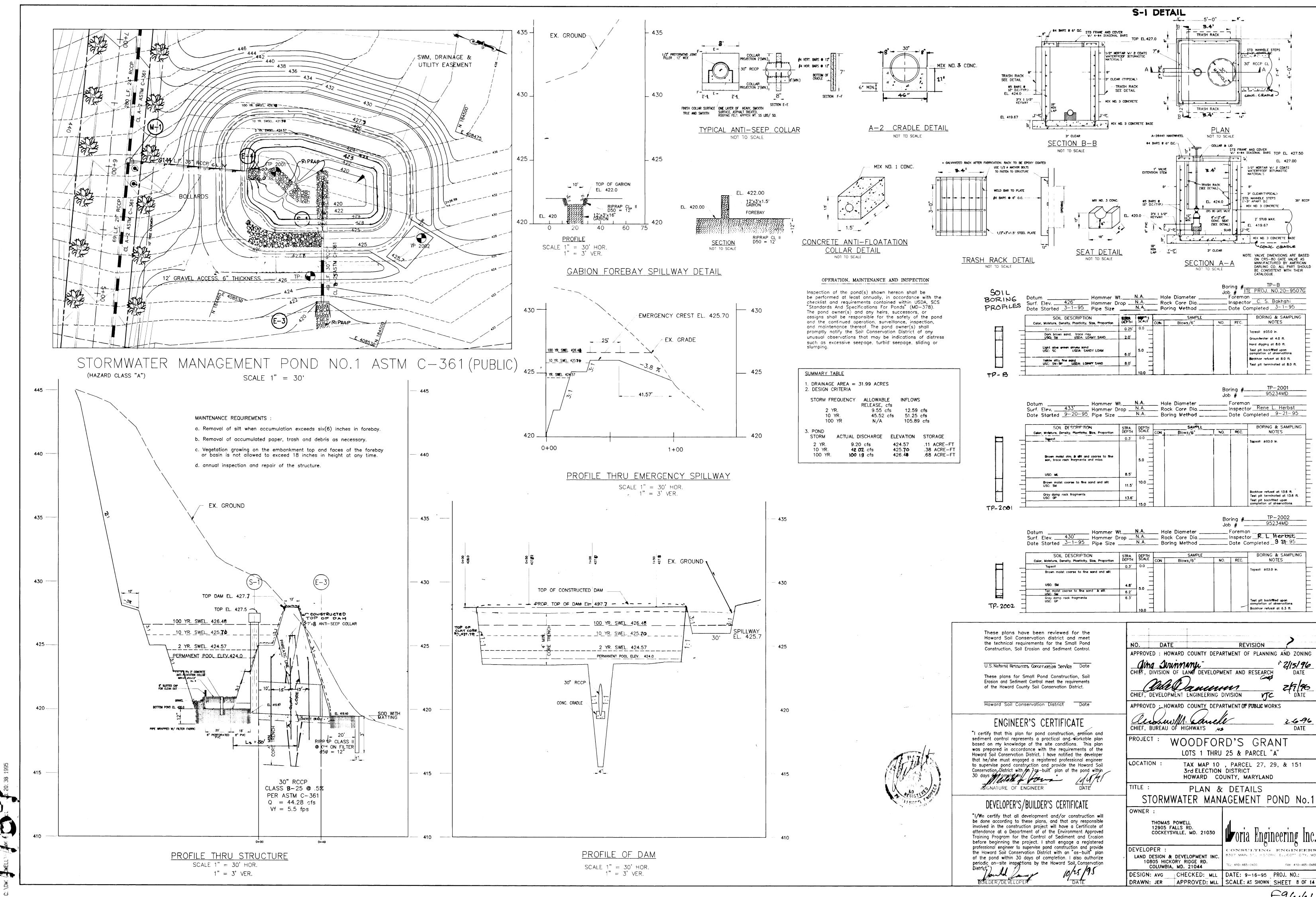


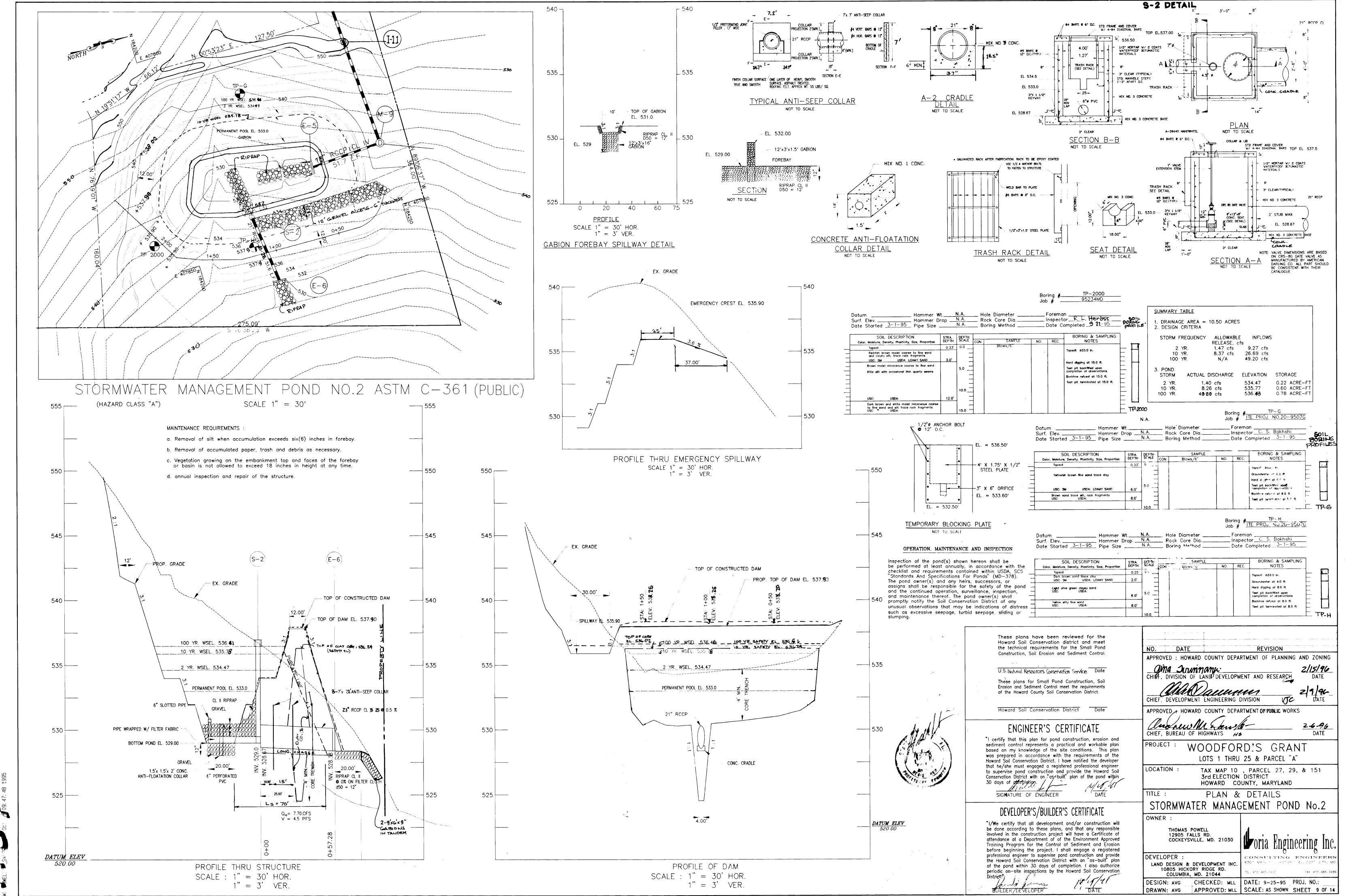
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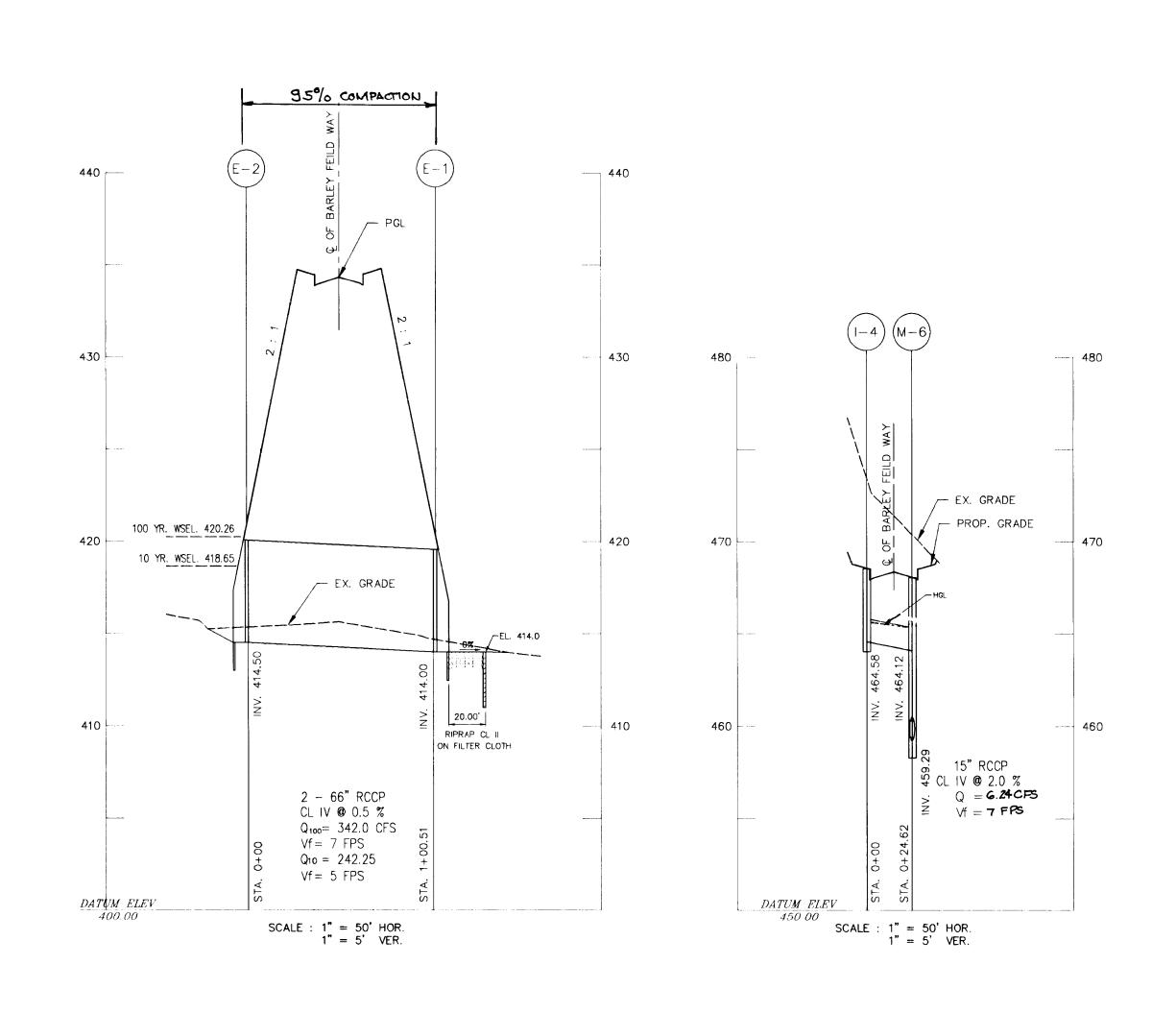


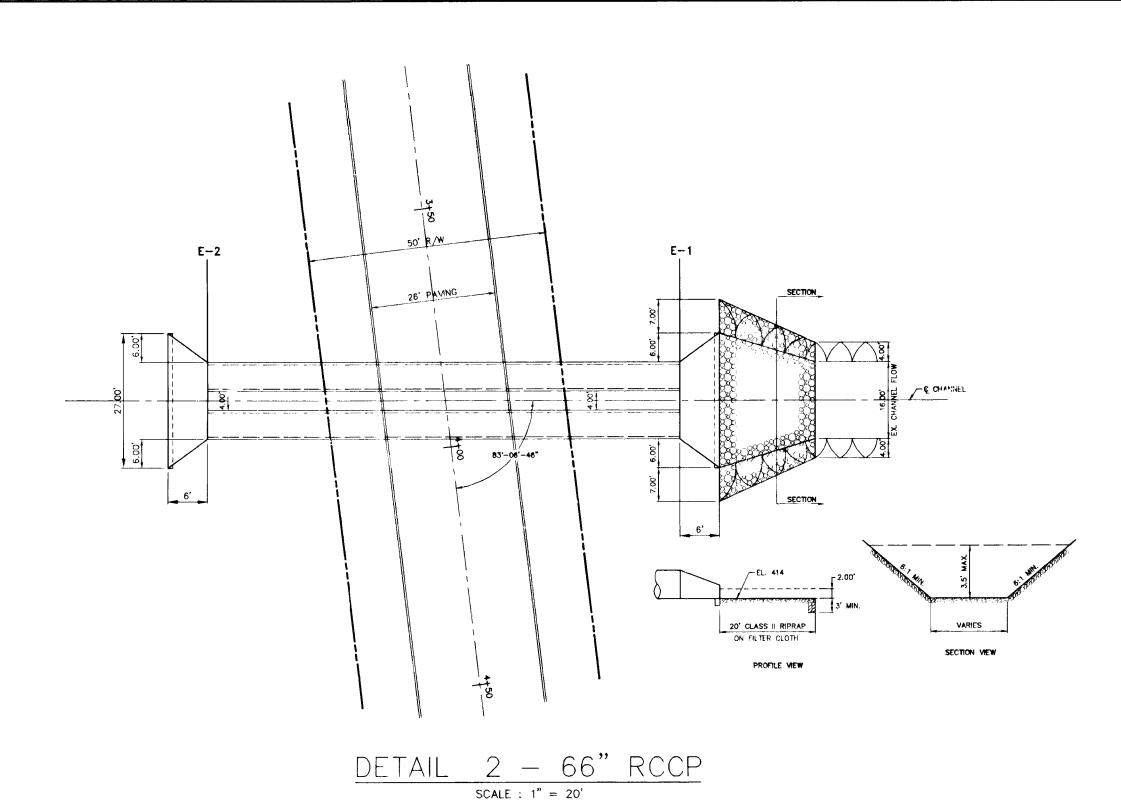


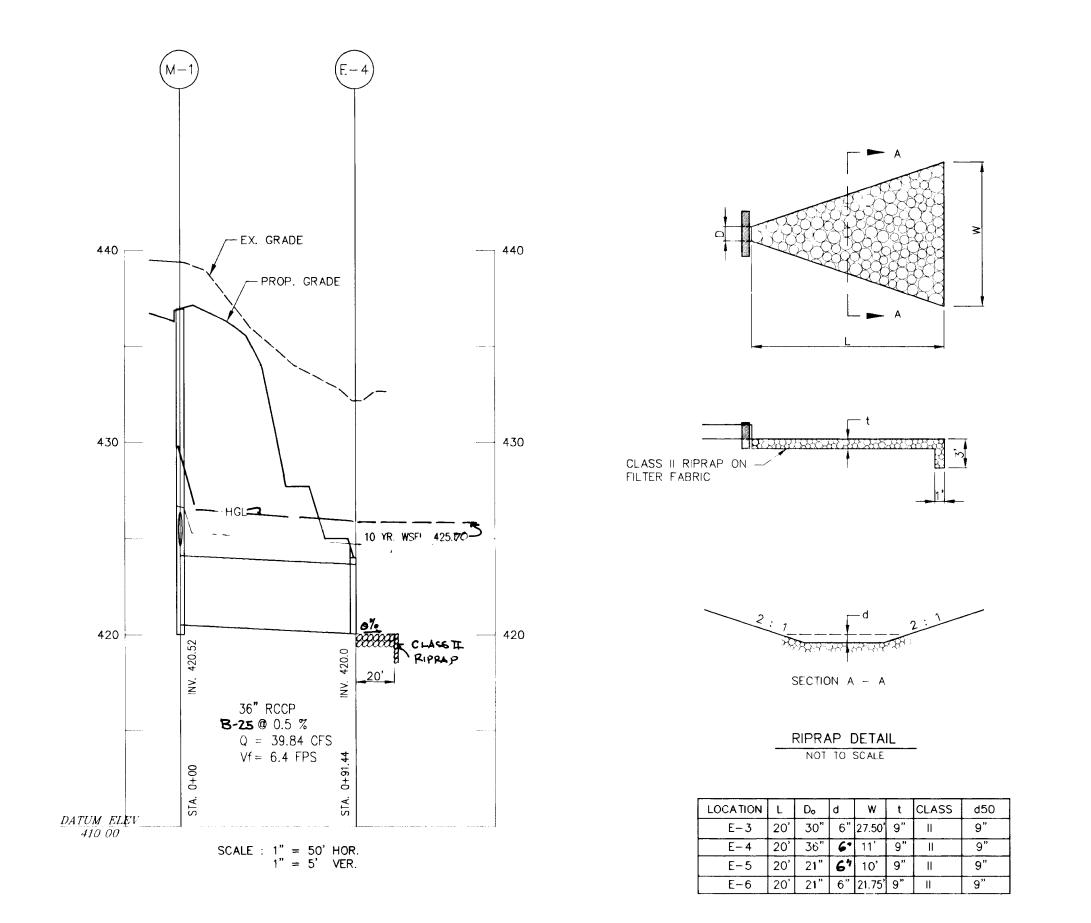






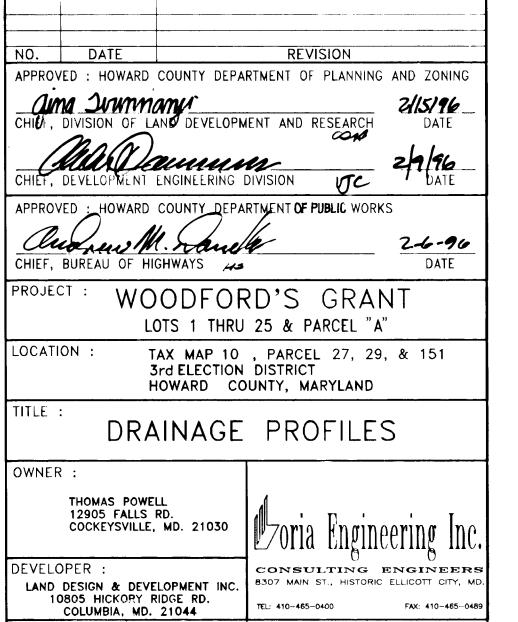




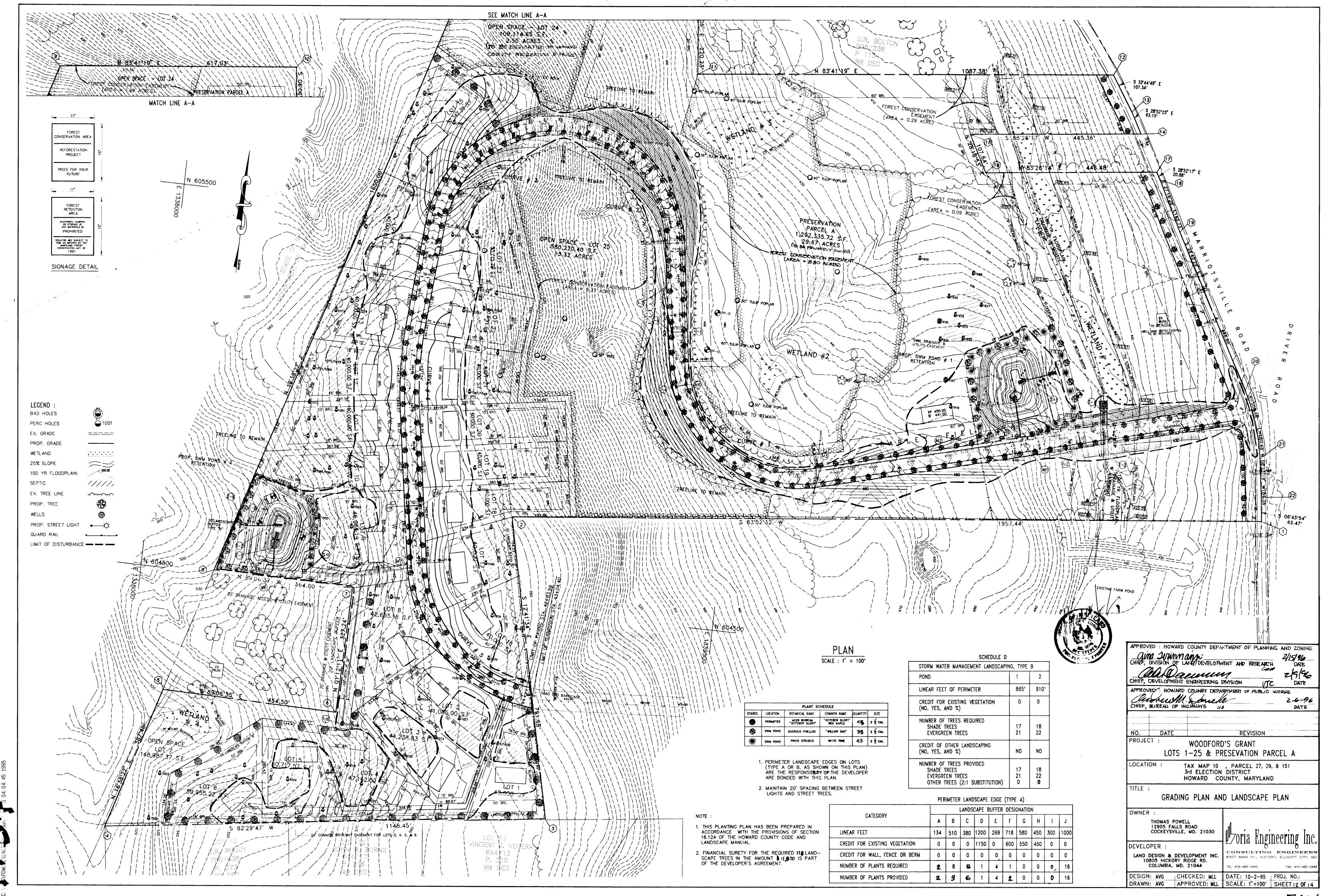




		3 1	RUCTU	, K L	SCHEDUL	- L
NUMBER	TYPE	INVERT IN	INVERT OUT	TOP EL.	REMARKS	LOCATION
I - 1	A-10	429.93	429.73	434.23	HOWARD COUNTY SD 4.02 W=2'-6"	STA 4+40.94 OF BARLEY FIELD WAY 14.92' RIGHT
1-2	A-10		430.22	434.23	HOWARD COUNTY SD. 4.02 W=2'-6"	STA 4+40.94 OF BARLEY FIELD WAY 14.92' LEFT
1-3	K-INLET		454.27	459.75	HOWARD COUNTY SD. 4.13 W=2'-6"	STA 11+61.13 OF BARLEY FIELD WAY 39.44' LEFT
I -4	A-10		464.58	468.58	HOWARD COUNTY SD 4.02 W=2'-6"	STA 16+17.85 OF BARLEY FIELD WAY 14.92' LEFT
1-5	A-10	461.06	460.86	466.54	HOWARD COUNTY SD 4.02 W=2'-6"	STA 17+58.33 OF BARLEY FIELD WAY 14.92' RIGHT
I-6	A-10	461.55	461.35	466.54	HOWARD COUNTY SD 4.02 W=2'-6"	STA 17+58.33 OF BARLEY FIELD WAY 14.92' LEFT
1-7	K-INLET		462.67	466.87	HOWARD COUNTY SD 4.13 DEPRESSED	STA 18+72 OF BARLEY FIELD WAY 34.80' RIGHT
I8	A-10	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	571.51	575.80	HOWARD COUNTY SD 4.02 W=2'-6"	STA 36+55 OF BARLEY FIELD WAY 14.92' LEFT
1-9	A-10	571.22	571.02	575.83	HOWARD COUNTY SD 4.02 W=2'-6"	STA 36+55 OF BARLEY FIELD WAY 14.92' RIGHT
I-10	K-INLET	A	560.0	563.00	HOWARD COUNTY SD 4.13 W=2'-6"	N 184143.997, E 407996.014
M-1	STD MH	424.75 E 425.00 W	420.52	436.72	HOWARD COUNTY G. 5.13	STA 6+05.24 OF BARLEY FIELD WAY 16' RIGHT
M-2	STD MH	439.75	439.55	446.80	HOWARD COUNTY G. 5.12	STA 8+57.99 OF BARLEY FIELD WAY 16' RIGHT
M-3	STD MH	451.08 W 450.50 S	449.30	458.08	HOWARD COUNTY G. 5.12	STA 11+38.00 OF BARLEY FIELD WAY 17' RIGHT
M-4	STD MH	453.42	453.22	462.87	HOWARD COUNTY G. 5.12	STA 12+71.82 OF BARLEY FIELD WAY 8' RIGHT
M-5	STD MH	456.50	455.30	469.16	HOWARD COUNTY SD 5.12	STA 14+48.81 OF BARLEY FIELD WAY 8' RIGHT
M-6	STD MH	464.12 S 459.49 E	459.29	468.08	HOWARD COUNTY SD 5.12	STA 16+17.85 OF BARLEY FIELD WAY 10.12' RIGHT
M-7	STD MH	570.21	570.00	577.26	HOWARD COUNTY SD 5.12	STA 38+15 OF BARLEY FIELD WAY 16' RIGHT
M-8	STD MH	558.38 558.41	555.00	565.49	HOWARD COUNTY SD 5.12	N 184263.487, E 407998.523
M-9	STD MH	536.23	529.27	542.30	HOWARD COUNTY SD 5.12	N 184260.254, E 407927.854
E-1	TYPE A ENDWALL		414.00	421.00	HOWARD COUNTY SD 5.11	STA. 3+95 OF BARLEY FIELD WAY 50.25' LEFT
E-2	TYPE A ENDWALL	414.50		421.00	HOWARD COUNTY SD 5.11	STA. 3+85 OF BARLEY FIELD WAY 50.25' RIGHT
E-3	TYPE C ENDWALL	405.66		423.66	HOWARD COUNTY SD 5.21	N 184179.416, E 408524.360
E-4	CONCRETE END SECTION		420.06			N 184459.278, E 408500.606
E-5	CONCRETE END SECTION		529.00			N 184275.906, E 407926.947
E-6	CONCRETE END SECTION	angan ang ang ang ang ang ang ang ang an	529.00			N 184292.353, E 407903.931
S-1	SEE PLAN	420	419.67		SEE PLAN	N 184478.266, E 408508.612
S-2	SEE PLAN	529	528.67		SEE PLAN	N 184294.048, E 407919.560
I-11	K-INLET	542.86	542.56	549.00	HOWARD COUNTY SD 4.13	N184247.942, E 407,809.716



DESIGNED: MLL CHECKED: MLL DATE: 10-23-95 PROJ. NO.:
DRAWN: AVG APPROVED: MLL SCALE: AS SHOWN SHEET 11 OF 14



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

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, unless

Soil Amendments: In lieu of soil test recommendations, use 1) Preferred - apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding.harrow or disc into upper three inches of soil. at time of seeding, apply 400lbs per acre 30-0-0 ureaform fertilizer (9lbs

/1000 sq. ft.).

2) Acceptable - apply 2 tons per acre dolomitic limestone(92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. harrow or disc into upper three inches of soil one of the following schedules.

Seeding - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 tall fescue, for the period May 1 thru July 31, seed with 60 lbs Kentucky 31 tall fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass, during the period of October 16 thru 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

Mulching - Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/100 sq ft) 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 sq ft) of emulsified asphalt on flat areas. on slopes 8 feet or higher

use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

Maintenance - Inspect all seeded areas and make needed repairs replacements and reseedings temporary seeding notes sq ft), for the period november 16 thru 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.

TEMPORARY SEEDING NOTES Apply to graded or cleared areas likely to be redisturbed

where a short-term vegetative cover is needed. Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, unless previously loosened.

Soil amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft). Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs/1000 sq ft), for the period May 1 thru August 14.

seed with 3 lbs per acre of weeping lovegrass (.07lbs/1000 sq. ft.) Mulching: apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small arain straw immediately after seeding. anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. on slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring, refer to the 1983 Maryland Standards and Specifications For Soil Erosion and Sediment Control for rate and methods not covered.

STANDARD AND SPECIFICATION FOR VEGETATIVE STABILIZATION WITH SOD

- 1. Class of turfgrass sod shall be Maryland 🗣 🗸 rginia state certified, or Maryland or Virginia state approved sod.
- 2. SOD shall be machine cut at a uniform soil thickness of 3/4 inch, plus or minus 1/4 inch, at the time of cutting measurement or thickness shall exclude top growth and thatch.
- 3. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
- 4. Individual pieces of sod shall be cut to the suppliers width and length. maximum allowable deviation from standard widths and lengths shall be 5 percent, broken pads and torn or uneven ends
- 5. SOD shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
- 6. SOD shall be harvested, delivered and installed within a period of 36 hours, sod not transplanted within this period shall be inspected and approved prior to its installation. SITE PREPARATION

Fertilizer and lime application rates shall be determined by soil tests. Under unusual circumstances where there is unsufficient time for a complete soil test, fertilizer and lime materials may be applied in amounts shown under b, below.

- a. Prior to Sodding, the surface shall be cleared of all trash, debris, and of all roots, brush, wire, grade stakes, and other objects that would interfere with planting, fertilizing or maintenance operations
- b. Where the soil is acid or composed of heavy clays, ground limestone shall be spread at the rate of 2 tons/acre or 100 pounds per 1,000 square feet. in all soils 1,000 pounds per acre or 25 pounds per 1,000 square feet of 10-10-10 fertilizer or equivalent shall be uniformly applied and mixed into the top 3 inches of soil with the required lime.
- c. All areas receiving sod shall be uniformly fine graded. hardpacked earth shall be scarified prior to placement of sod. STANDARD SEDIMENT CONTROL NOTES:
- 1) A minimum of 48 hours notice must be given to the Howard County Office of Inspection and Permits 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 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control
- 3. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures. dikes. perimeter slopes and all slopes areater 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 1983 maryland standards and specifications for soil erosion and sediment control for permanent seedings (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 germination and establishment of grasses.
- 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
- 7. Site analysis: total area of site area disturbed area to be roofed or paved area to be vegetatively stabilized

offsite waste/borrow area location

76.98 acres 23.86 acres 4.67 acres 19.19 **35,000.00** acres cu. yds 35,000.00 cu. yds

- 8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same
- 9. Additional sediment controls must be provided, if deemed necessary by the Howard County DPW 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.

General Notes

- 1) Refer to "1983 Maryland Standards and Specifications for soil erosion and sediment control for standard details and detailed specifications of each practice specified herein.
- 2) With the approval of the sediment control inspector, minor field adjustments can and will be made to insure the control of any sediment. changes in sediment control practices require prior approval of the sediment control inspector and the county soil conservation district.
- 3) At the end of each working day, all sediment control practices will be inspected and left in operational condition.
- 4) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a.) seven calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and (b.) fourteen days as to all other disturbed or graded areas on the project site.
- 5) Any change to the grading proposed on this plan requires re-submission to county soil conservation district for approval.
- 6) Dust control will be provided for all disturbed areas. refer to 1983 Maryland Standards and Specifications for soil erosion and sediment control, pp 62.01 and 62.02 for acceptable methods and specifications for
- 7) Any variation from the sequence of operations stated on this plan reauires the approval of the sediment control inspector and the county

soil conservation district prior to the initiation of the change.

the following item may be used as applicable:

- 8) Excess cut or borrow material shall go to or come from, respectively, a site with an approved sediment control plan.
- 9) Refer to "Maryland's guidelines to waterworks construction" by the Water Resources Administration (WRA), dated January, 1986 for standard details and detailed specifications of each practice specified herein for waterway construction
- . All dikes shall be compacted by earth-moving equipment. All dikes shall have positive drainage to an outlet.
- Top width may be wider and side slopes may be flatter if desired to facilitate crossing by construction traffic. 4. Field location should be adjusted as needed to utilize a stabilized
- safe outlet. 5. Earth dikes shall have an outlet that functions with a minimum of erosion, runoff shall be conveyed to a sediment trapping device such
- as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike are not adequately stabilized. 6. Stabilization shall be: (a) In accordance with standard specifications for seed and straw mulch or straw mulch if not in seeding season, (b) Flow channel as per the chart below

II. GENERAL NOTES FOR PONDS: SITE PREPARATION :

Area under the borrow areas, embankment, and structural works shall be cleared, grubbed and the top soil stripped to remove all trees, vegetation, roots or the other objectionable material. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. Areas covered by the pond or reservoir will be cleared of all trees.

brush, logs, fences, rubbish and other objectionable materials unless otherwise designated on the plans. Trees, brush, and stump shall be cut approximately level with the ground surface.

All cleared and grubbed material shall be disposed of outside the limits of the dam and reservoir as directed by the owner or his authorized representative. When specified, a sufficient quality of top soil will be stockpiled in a suitable location for use on the embankment and other designated areas.

EARTH FILL

The fill material shall be taken from approved designated borrow area or areas. It shall be free of roots, stumps, wood, rubbish over-size stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased above the design elevation(including freeboard) as shown on the plans

Area on which fill is to be placed shall be scarified prior to placement of the fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous material shall be placed in the downstream portions of 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 thread track of the equipment or compaction shall be achieve by aluminum 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 can be obtain with the equipment used.

Cut-off Trench Where specified, a cut-off trench shall be excavated along or parallel to the center line 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 a minimum

STRUCTURE BACKFILL

permeability.

Backfill adjacent to pipes or structures shall be of the type and quality conforming to the 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

PIPE CONDUITS

Corrugated metal pipe Materials -(steel pipe) - This pipe and its appurtenance shall be

galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 type A with water tight coupling bands. Any bituminous coating damaged of otherwise removed shall be placed with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of .01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used: Nexon. Plasti-Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and

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. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

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

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. Antiseep collars shall be connected to the pipe in such manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connection shall used 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 band width. The following type connection are acceptable for pipe less than 48" makes diameter: flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with o-ring gaskets having a minimum diameter of 1/2" areater than the corrugated depth. Pipes 48" in diameter and larger shall be connected by a 24" long annular corrugated bands using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24". Helically corrugated pipe shall have either continuously welded seams or have lock seams.

Bedding — The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

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

REINFORCED CONCRETE PIPE:

C - 302.

materials — Reinforced concrete pipe shall have bell and spigot joints with rubber gasket and shall equal or exceed ASTM Desig nation C-361. An approved equivalent is AWWA specification

Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the

Laying pipe — Bell and spigot pipe shall be placed with the bell end upstream. joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.

Backfilling shall conform to "Structure Backfill".

Other details (anti-seep collar, valves, etc.) shall be as shown on the drawings.

POLYVINYL CHLORIDE (PVC) PIPE

Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Joints and connections to anti-seep collars shall be completely

Beddina — The pipe shall be firmly and uniformly bedded through out its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

Concrete shall meet the requirements of Maryland Department of ransportation, State Highway Administration Standard Specification for Construction and Materials, Section 608, Mix No. 3.

All rock shall be dense, sound, and free from cracks, seams, and other defects conductive to accelerated weathering. The rock fragments shall be angular to subrounded in shape. The least dimension of an individual rock fragment shall be not less than one third the greatest dimension of the fragments.

The rock shall have the following properties

- 1. Bulk specific gravity (saturated surface—dry basis) not less than
- Absorption not more than three percent Soundness: Weight loss in five cycles not more than 20 percent when sodium sulfate is used.

Bulk specify aravity and absorption shall be determined according to ASTM C 127. The test for soundness shall be performed according The riprop shall be placed to the required thickness in one operation.

The rock shall be delivered and placed in a manner that will insure the riprop in place shall be reasonable homogeneous with the larger uniformly distributed and firmly in contact one to another with the smaller rock s filling the voids between the larger rocks. Filter cloth shall be under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration for Construction and materials, Section 919.12.

CARE OF WATER DURING CONSTRUCTION:

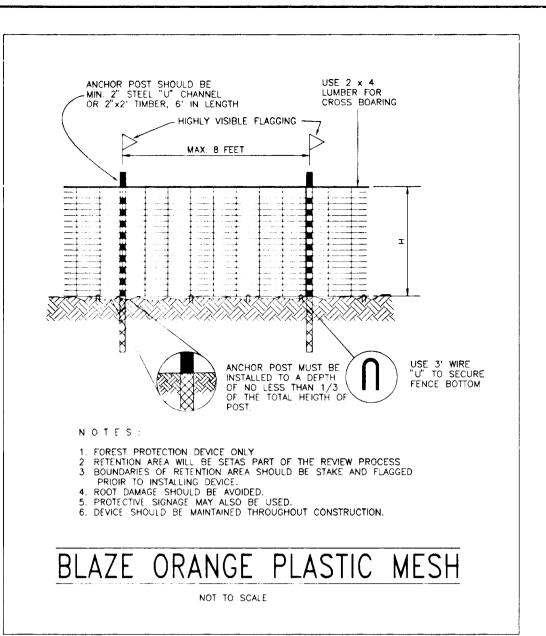
All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels and streams diversions necessary to protect the areas to be occupied by the permanent works the contractor shall also furnnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required by the Engineer for constructing each part of the work. After having served their porpuse, all temporary protective works shall be removed or leveled and araded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full floww can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placeing and compacting of material in required excavations, the water level at the loacation being refilled shall be maintained below the bottm of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

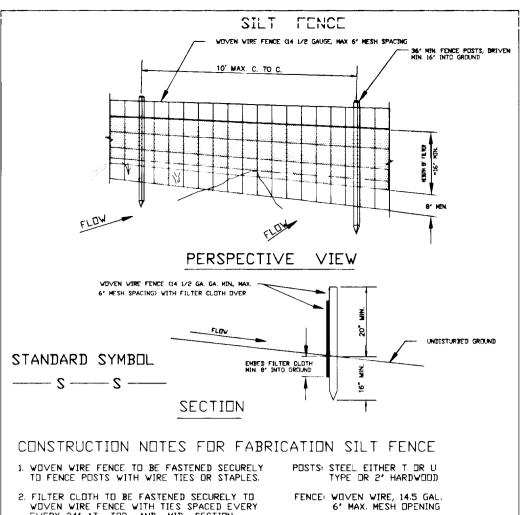
STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

EROSION AND SEDIMENT CONTROL:

Construction operation 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. Contruction plans shall detail erosion and sediment control measures to be employed during the construction process.





WOVEN WIRE FENCE WITH TIES SPACED EVERY EVERY 24' AT TOP AND MID SECTION. 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY FILTER CLOTH: FILTER X, MIRAFI 100 X, STABI SIX INCHES AND FOLDED. LINKA T 140 N DR APPROVED EQUAL

PREFABRICATED UNIT: GEDFAB,

APPROVED EQUAL

4. MAINTENANCE SHALL BE PERFORMED AS NEEDED

AND MATERIAL REMOVED WHEN "BULGES DEVELOP IN THE SILT FENCE.

These plans have been reviewed for the

Howard Soil Conservation district and meet

the technical requirements for the small pond

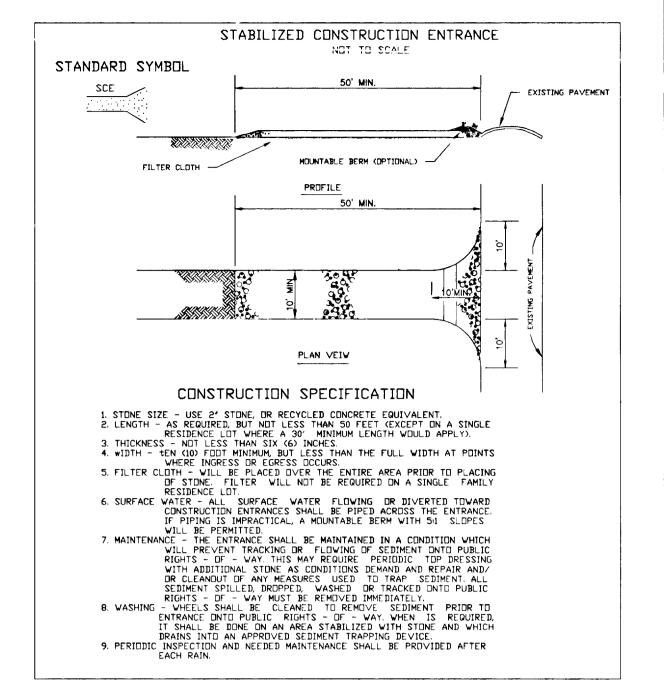
These plans for small pond construction, soil and

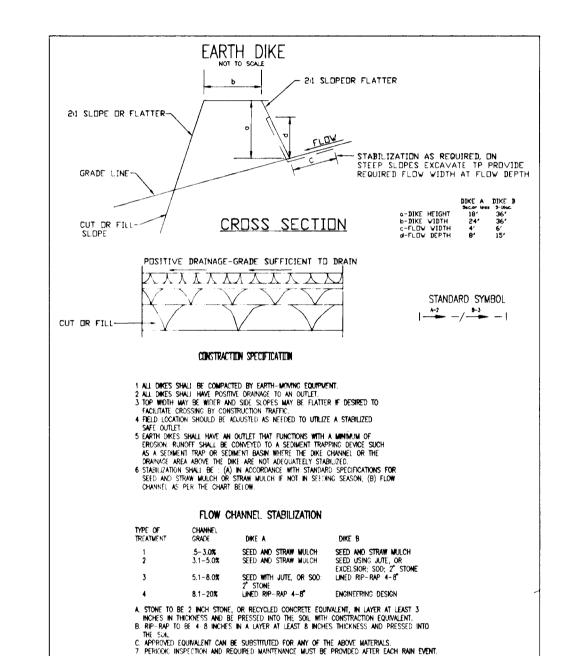
sediment control meet the requirements of the Howard

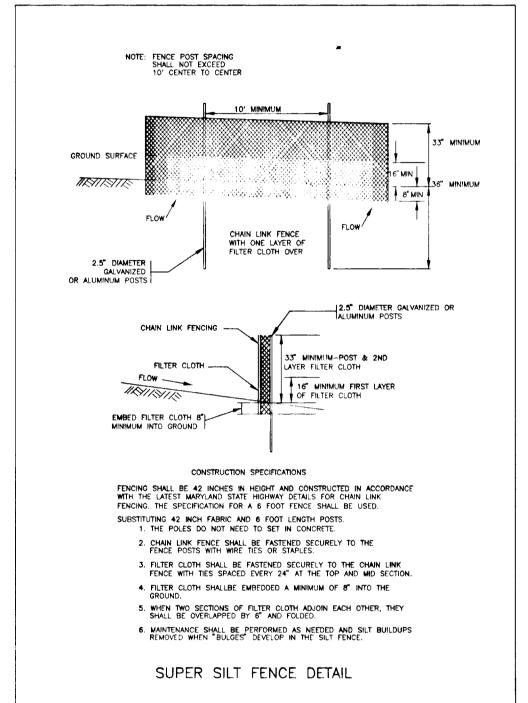
construction, soil erosion and sediment Control.

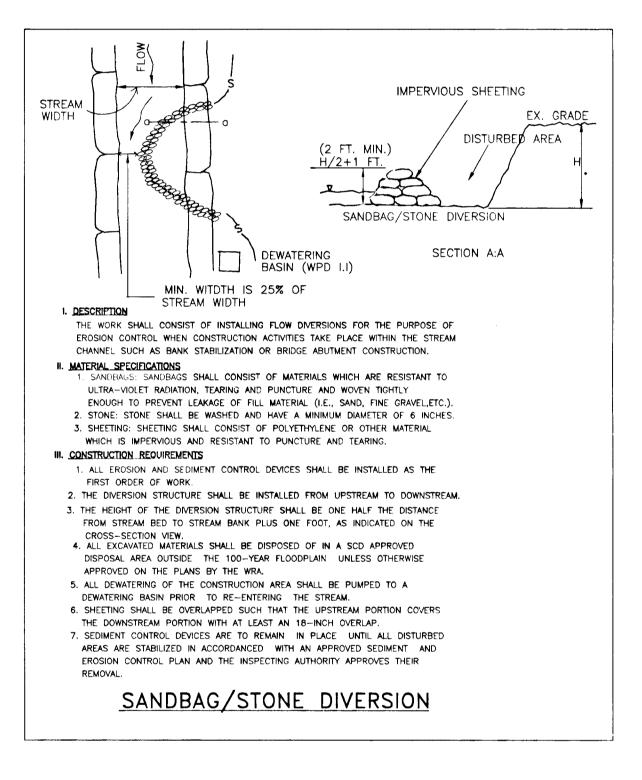
Patricia Engla Ila

Soil Conservation District.











10/26/95

according to these plans, and that any responsible personnel involved in the construction project will have a certificate of attendance at a department of natural resources approved training program for the control of sediment and erosion before beginning the project. i will provide the Howard Soil Conservation District with an "AS BUILT" plan

" I certify that all development and /or construction will be done

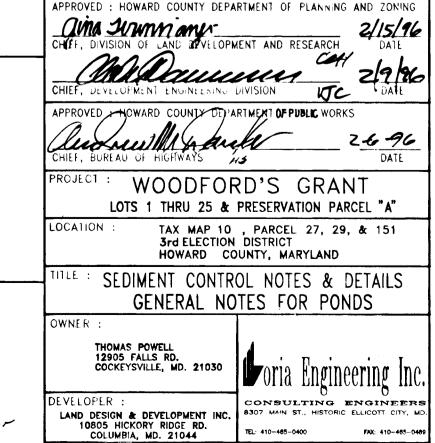
of the pond within 30 days of completion, i also authorize periodic

on-site inspection by the Howard Soil Conservation District. DEVELOPER'S SIGNATURE

ENGINEER'S CERTIFICATE

DEVELOPER'S CERTIFICATE

" I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with an "AS-BUILT" plan of the pond within 30 days of completion.



DESIGN: AVG | CHECKED: MLL | DATE: 9-27-95 | PROJ. NO.: DRAWN: AVG APPROVED: MLL SCALE: AS SHOWN SHEET 14 OF 14

TEL: 410-465-0400 FAX: 410-465-048