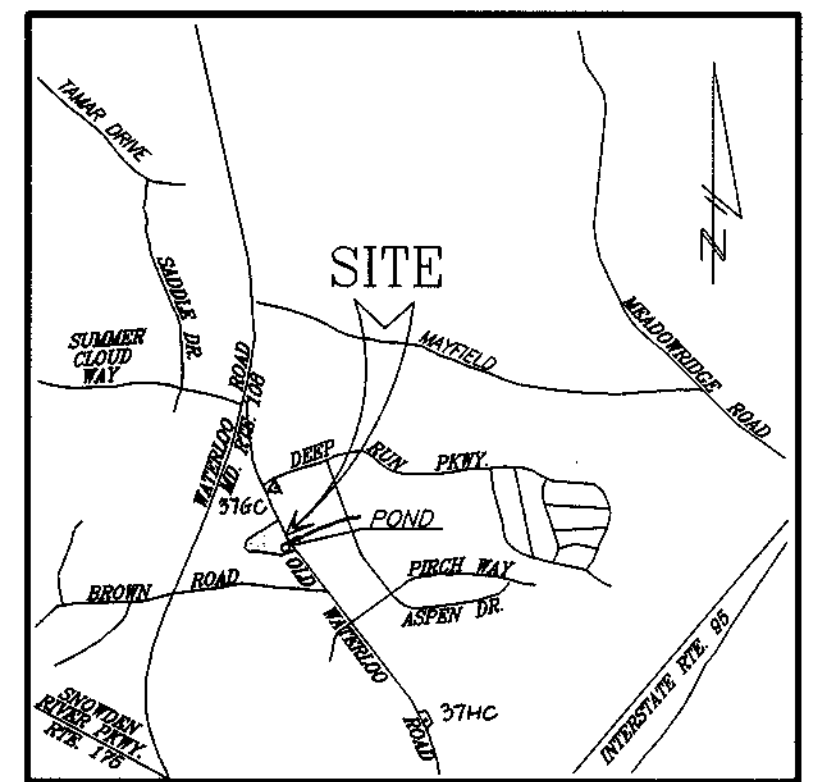
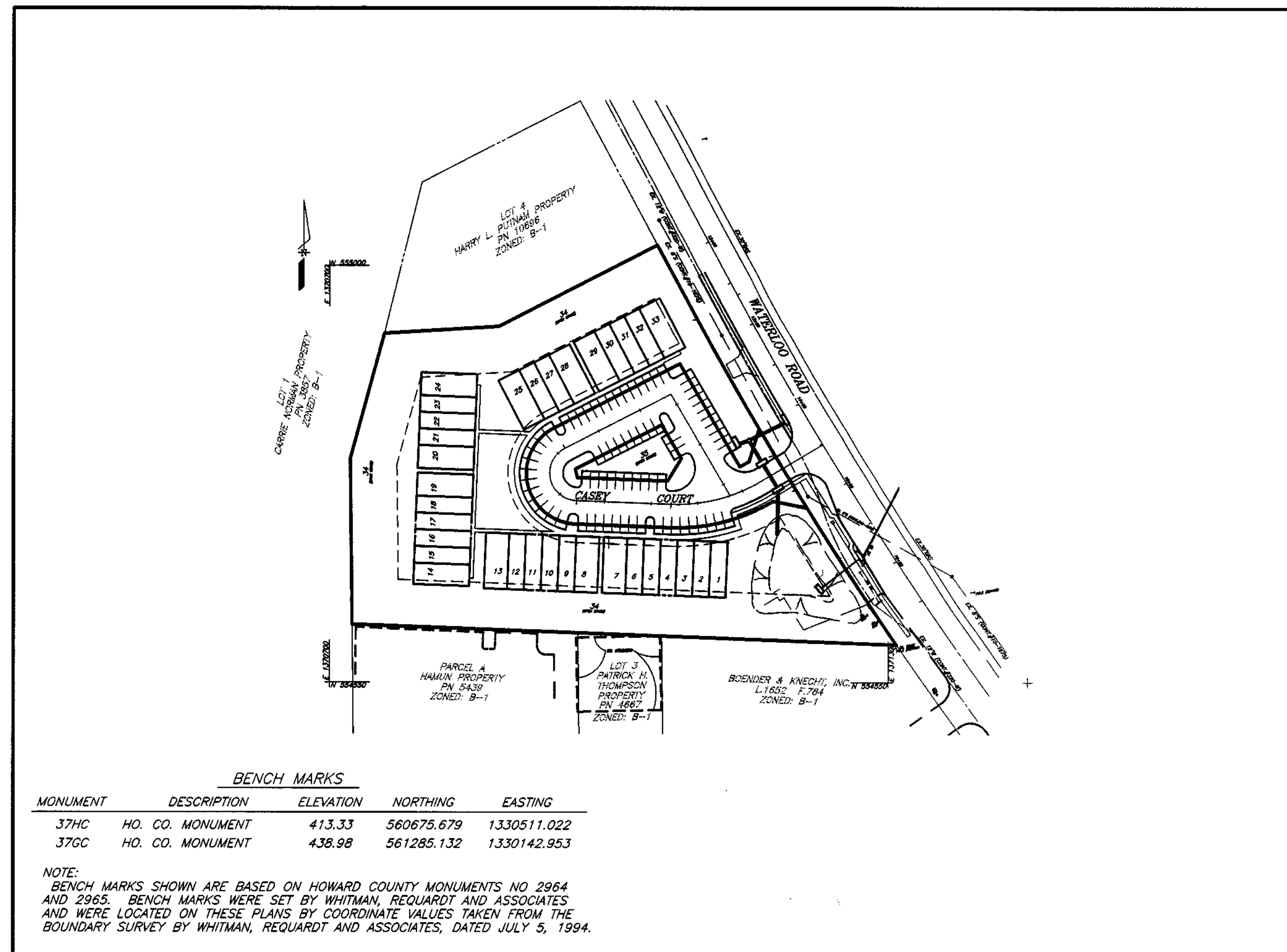


SHEET INDEX	
SHEET	DESCRIPTION
1	COVER SHEET
2	ROAD CONSTRUCTION PLAN AND PROFILES
3	STORM DRAIN PROFILES AND DETAILS
4	GRADING, SEDIMENT AND EROSION CONTROL PLAN
5	SEDIMENT AND EROSION CONTROL DETAILS
6	STORMWATER MANAGEMENT PLAN AND DETAILS
7	STORMWATER MANAGEMENT NOTES AND BORING LOGS
8	FOREST CONSERVATION AND LANDSCAPE PLAN
9	FOREST CONSERVATION AND LANDSCAPE SCHEDULES, NOTES, AND DETAILS

LARK BROWN CROSSING



VICINITY MAP
Scale: 1"=2000'



ROAD CONSTRUCTION PLANS LOTS 1-35

GENERAL NOTES:

- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
- The contractor shall notify the Department of Public Works/Bureau of Engineering, Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
- Project Background:
Zoning: RA-15
Total Tract Area: 3.8063 Ac
Number of Proposed lots: 33 Buildable, 2 Open Space
Preliminary Plan Reference: #P-98-09, approved January 9, 1998.
Other County File Nos.: S 97-04
- Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
- Topographic survey was field run at 2' contour intervals by Clark, Finefrock & Sackett, Inc., dated August 1997.
- Horizontal and vertical control based on Howard County Control Stations 37HC, elev. 413.33 and 37GC, elev. 438.98.
- Street lights will be required in this development in accordance with the Design Manual. Street light placement and the type of fixture and pole selected shall be in accordance with the latest Howard County Design Manual, Volume III (1993) and as modified by "Guidelines for Street Lights in Residential Developments (June 1993). The June 1993 policy includes guidelines for lateral and longitudinal placement. A minimum spacing of 20' shall be maintained between any street light and any tree.
- Public water and sewer are to be utilized.
Contract # 34-3524-D
Patapsco Drainage Area
- Stormwater Management for this project is being provided on site for quantity and quality. Quality and quantity control for this site is proposed by extended detention. The Stormwater Management Facility will be private and owned and maintained by the Lark Brown Crossing Homeowner's Association, Inc.
- The following studies were prepared and approved under S-97-04 and P-98-09:
a. Forest Stand Delineation by Wildman Environmental Services, 10/10/96
b. Wetland Delineation by Wildman Environmental Services, 10/10/96
c. Traffic Study by Lee Cunningham and Assoc., amended by letter for P-98-09 and dated November 27, 1996.
d. Geotechnical report by Herbst/Benson and Assoc. 9/9/97
- Existing utilities & improvements shown are taken from available records, where not visibly evident from field survey.
- Trench compaction for storm drains within the road or street rights of way limits shall be in accordance with Howard County Design Manual, Vol IV, Std. No. G-2.01
- All compacted fill shall be in accordance with AASHTO T-180 requirements.
- All fillet radii are 5 ft. unless indicated otherwise.
- Sag and crest vertical curves were designed in accordance with "Howard County Design Manual, Vol. III.
- Concrete sidewalk ramps shall be provided at all intersections and as indicated on the plans. The ramps shall conform to the Americans with Disabilities Act (ADA) 1992, and shall be constructed in accordance with "Howard County Design Manual", Vol. IV.
- Street tree locations shown are tentative and are to be used for bond purposes only. The final location and variety of trees may vary to accommodate field conditions and builder landscape program.
- Street trees shall be planted a minimum of five (5) feet from storm drain, waterline or sewer pipe manholes; also a minimum of twenty (20) feet from street lights.
- CA & E shall be notified prior to construction for any relocation of existing utility poles.
- The Forest Conservation Easements have been established to fulfill the requirements of Section 10.12.02 of the Howard County Forest Conservation Act. No clearing, grading or construction is permitted within the Forest Conservation Easements, except as shown on an approved road construction drawing or site development plan. However, forest management practices as defined in the Deed of Forest Conservation Easements are allowed.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 11-9-99
 CHIEF, BUREAU OF HIGHWAYS DATE

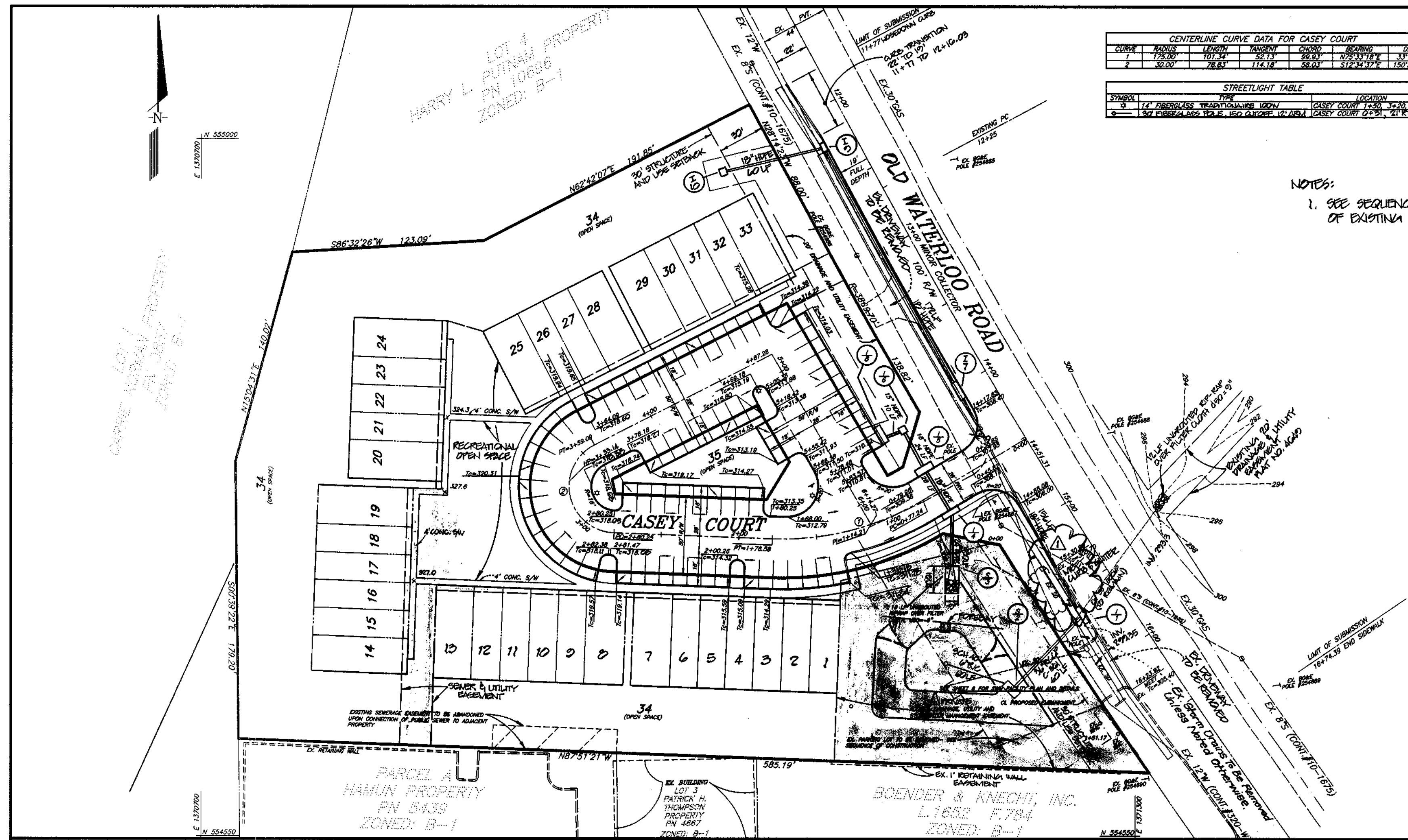
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Cathy Hamilton 12/2/98
 CHIEF, DIVISION OF LAND DEVELOPMENT TC DATE

William Demme 12/4/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



OWNER:
 LARK BROWN PARTNERSHIP
 10304 B BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21043

CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.		
DESIGNED	COVER SHEET	SCALE
TD	LOTS 1-35	AS SHOWN
DRAWN	LARK BROWN CROSSING	DRAWING
TD		1 of 10
CHECKED	TAX MAP 37, PARCELS 266, 515	JOB NO.
RS	SIXTH (6th) ELECTION DISTRICT	96-033
	HOWARD COUNTY, MARYLAND	FILE NO.
DATE	FOR: LARK BROWN PARTNERSHIP	96-033D
3/97	10304 B BALTIMORE NATIONAL PIKE	
	ELLICOTT CITY, MD 21043	
	PHONE: 410-461-1188	



CENTERLINE CURVE DATA FOR CASEY COURT

CURVE	PC	PT	PI	TS	ST	SC	CS	CL
1	172.00	187.50	180.00	172.00	187.50	180.00	172.00	187.50
2	300.00	285.00	285.00	300.00	285.00	285.00	300.00	285.00

LEGEND

CONTOUR INTERVAL: 2 FT.
 EXISTING CONTOUR: ---
 PROPOSED CONTOUR: - - -
 DIRECTION OF DRAINAGE: --->---
 EXISTING SEWER MAIN: ---
 EXISTING WATER MAIN: ---
 EXISTING STORM DRAIN: ---
 EXISTING TREES TO REMAIN: (Symbol)
 R1-1 "60x6" SIGN, 30"x30" OCCUPANCY

REVISION BLOCK

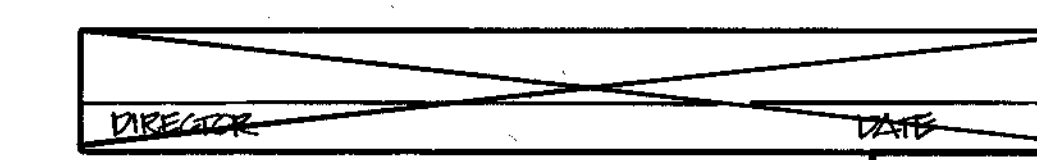
Number	Date	Revision
1	5-19-00	Remove "Jog" in Sidewalk

NOTES:
 1. SEE SEQUENCE OF CONSTRUCTION, SHEET 5, FOR REMOVAL OF EXISTING PARKING LOT AND STORM DRAINS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Thomas M. Savelle 11-9-98
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Chris Hamilton 12/1/95
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chris Hamilton 12/1/95
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

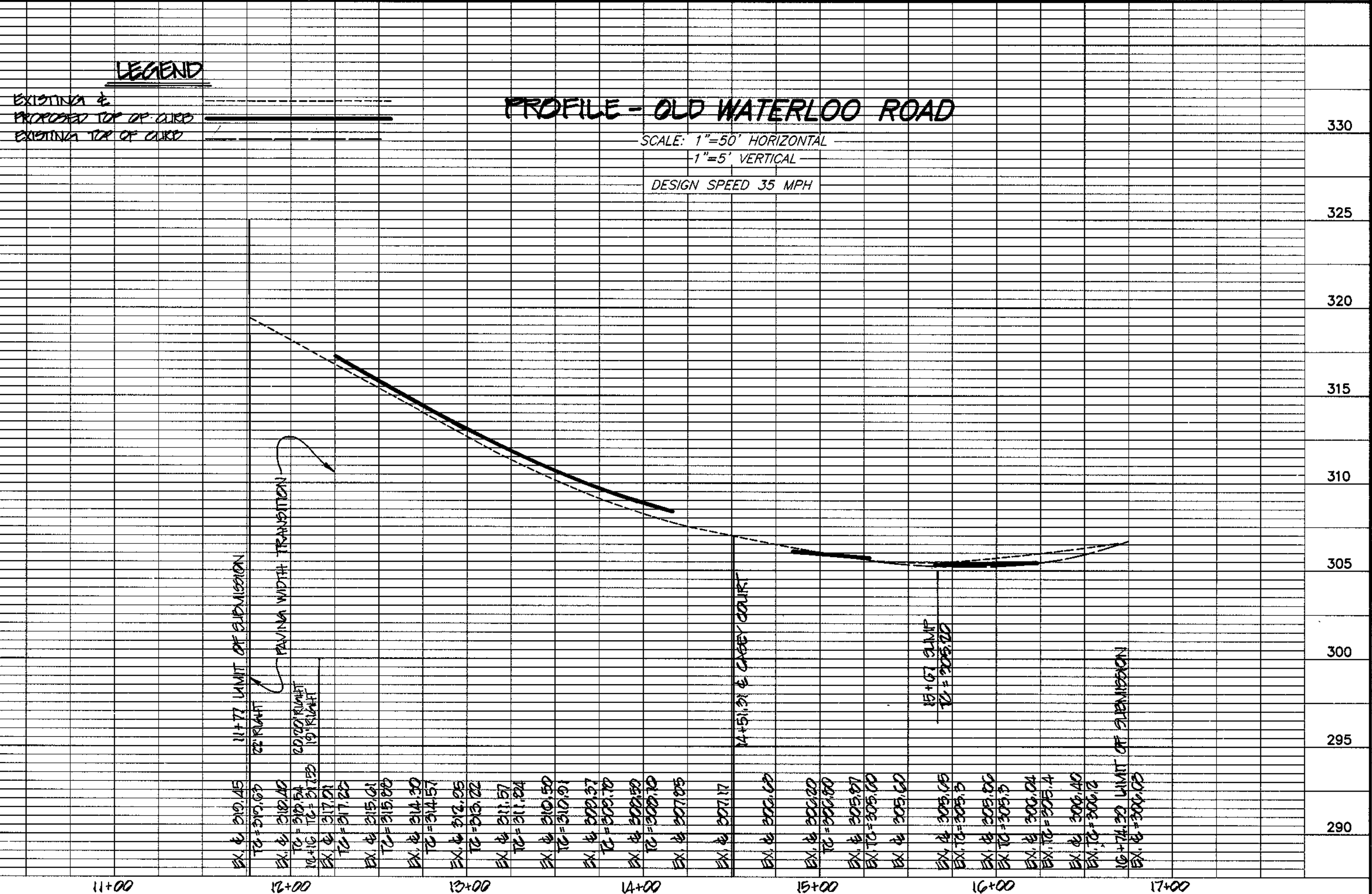
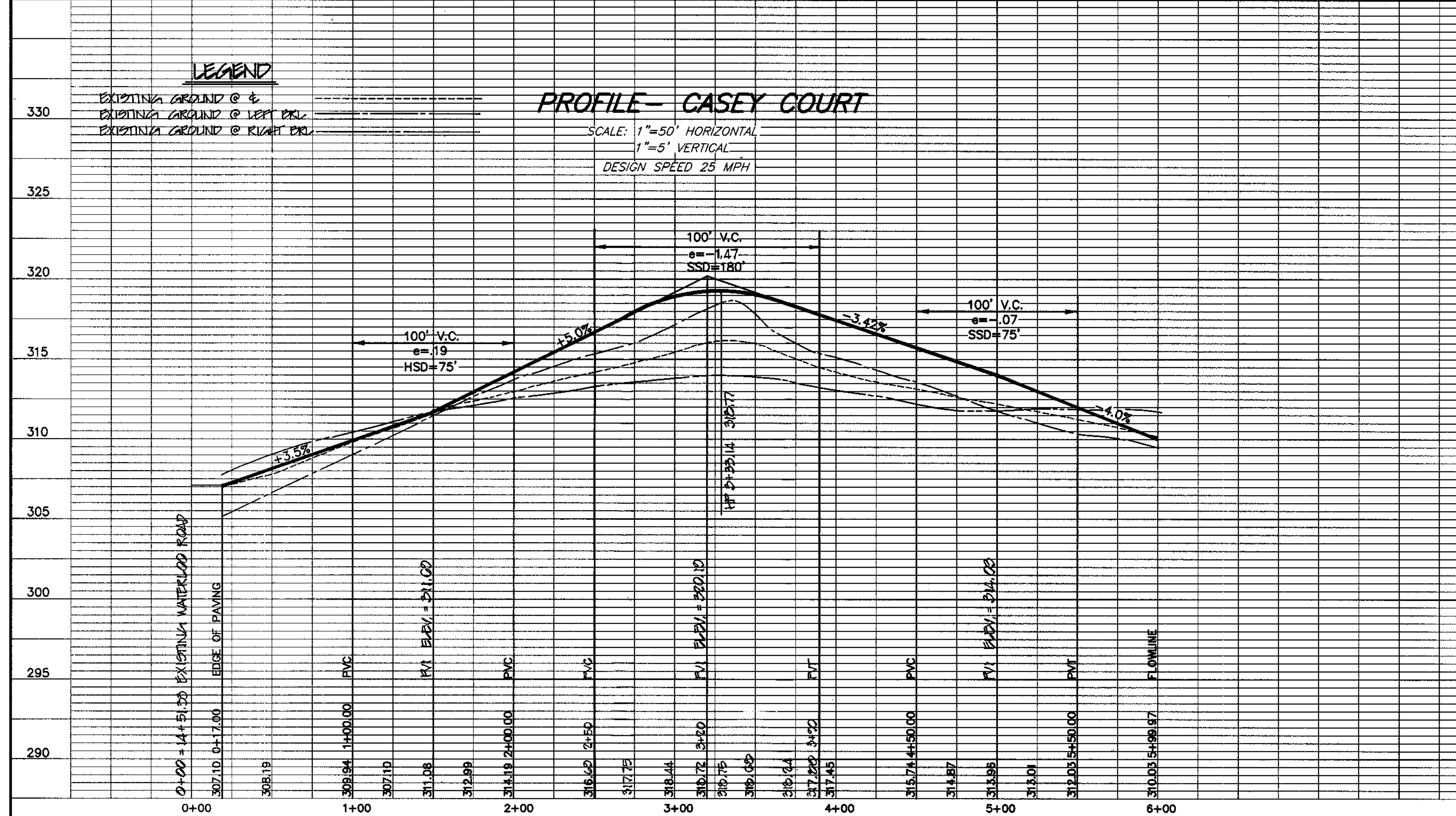


CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS

7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

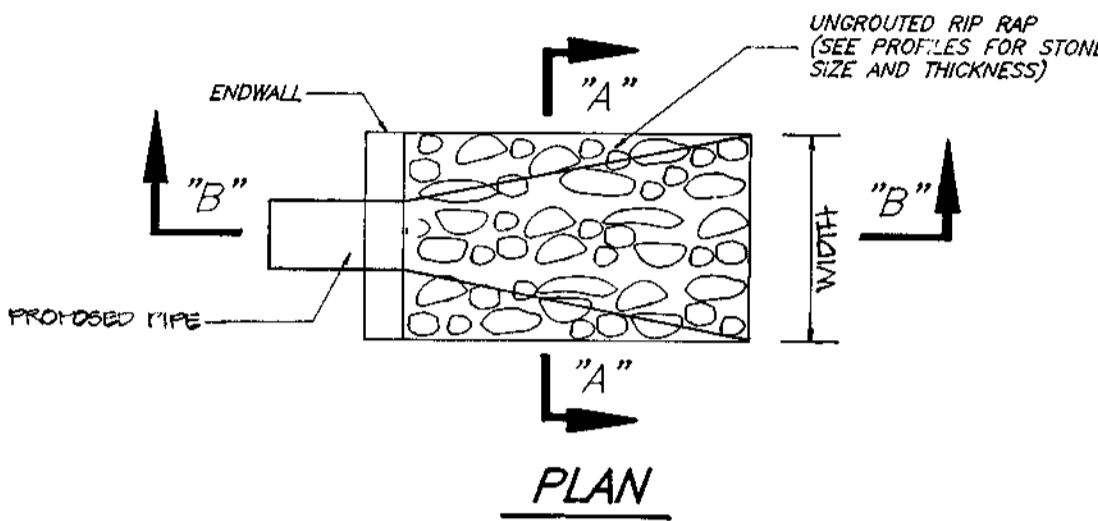
DESIGNED TD	ROAD PLAN AND PROFILE CASEY COURT AND OLD WATERLOO ROAD WIDENING LARK BROWN CROSSING	SCALE AS SHOWN
DRAWN TD	SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	DRAWING 2 of 9
CHECKED RS	FOR: LARK BROWN PARTNERSHIP 10304B BALTIMORE NATIONAL PIKE ELLCOTT CITY, MD 21043 PHONE: 410-461-1166	JOB NO. 96-033
DATE MAY, 1997		FILE NO. 96-033D

PLAN
 SCALE: 1"=50'



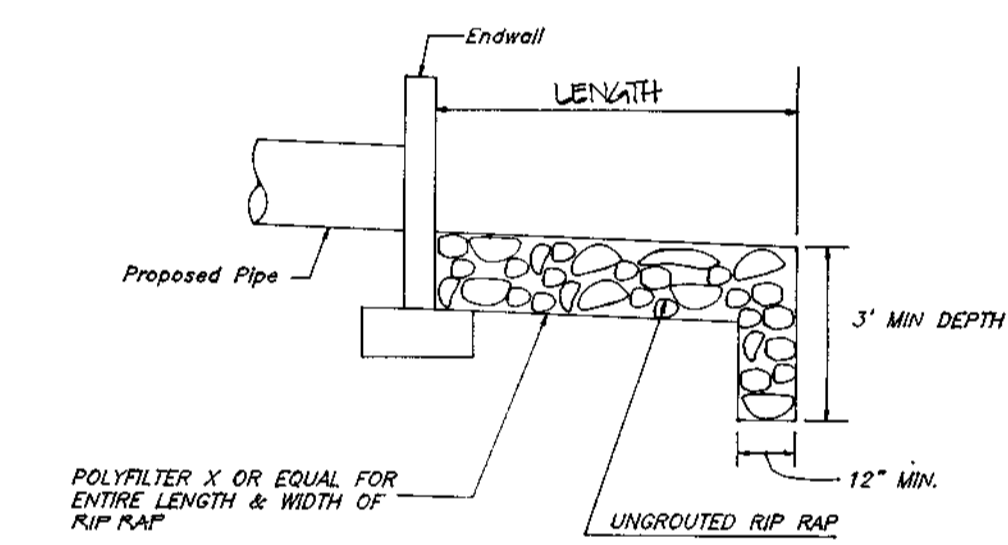
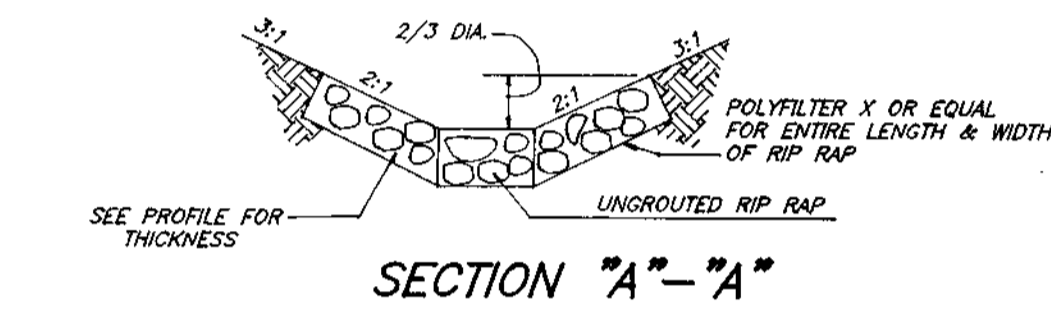
STRUCTURE SCHEDULE							
NO.	TYPE	INVERT		TOP ELEVATION		REMARKS	LOCATION
		IN	OUT	UPPER	LOWER		
I-1	A-10 INLET	204.95	204.85	305.20	305.20	HO. CO. STD. 4.41	WATERLOO ROAD 15+07
I-2	MODIFIED A-10	297.00	296.50	-	-	SEE SHEET G	N. 684627 E. 12711225
I-3	END SECTION 24" DIA.	-	-	307.37	-	HO. CO. STD. 5.21	N. 684722 E. 1271182
I-4	A-10 INLET	305.37	304.77	305.00	305.71	HO. CO. STD. 4.41	CASEY COURT 0+66.14 12' LT.
I-5	A-10 INLET	305.73	305.63	305.00	305.71	HO. CO. STD. 4.41	CASEY COURT 0+66.14 12' RT.
I-6	"D" INLET	305.73	305.61	305.33	-	HO. CO. STD. 4.11	CASEY COURT 5+71.88 48'30" 1/2" * *
I-7	A-5 INLET	305.10	305.00	302.90	302.55	HO. CO. STD. 4.40	WATERLOO ROAD 14+02.22 10' RT.
I-8	A-10 INLET	-	305.93	311.00	-	HO. CO. STD. 4.41	SEE PLAN
I-9	EXISTING END SECTION	-	295.30	-	-	SEE PLAN	SEE PLAN
I-9	A-5 INLET	307.60	307.50	317.43	317.13	HO. CO. STD. 4.40	WATERLOO ROAD 12+24.05 10' RT.
I-10	"D" INLET	-	309.00	315.43	-	HO. CO. STD. 4.11	WATERLOO ROAD 12+07.66 24' RT. *

* INLETS TO HAVE THROATS ALL FOUR SIDES



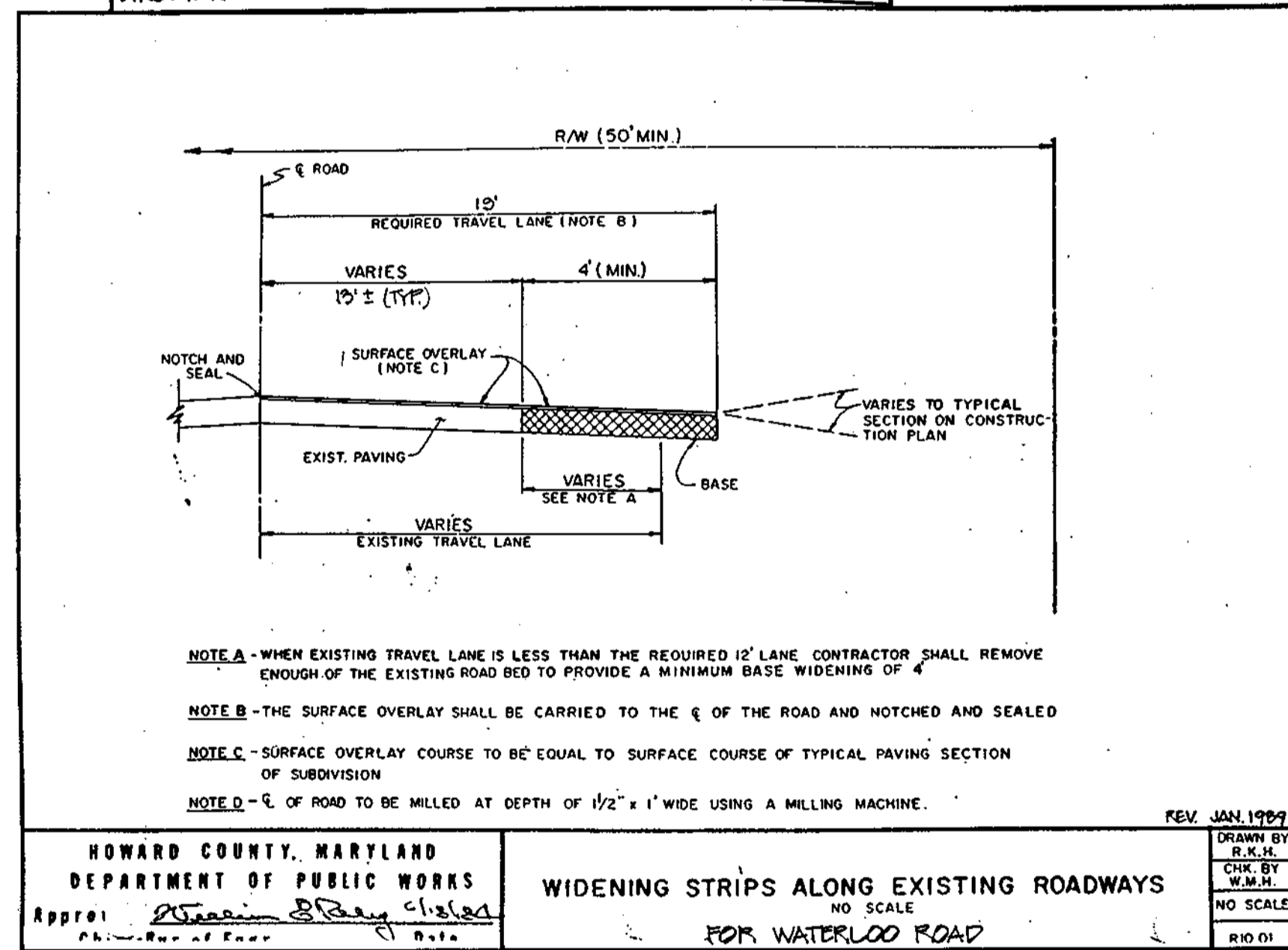
RIP-RAP TABLE		
STRUCTURE	WIDTH	LENGTH
S-1	6'	12'
S-3	9'	10'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS DATE 4/13/98
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 12/4/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 12/7/98
 APPROVED: DATE

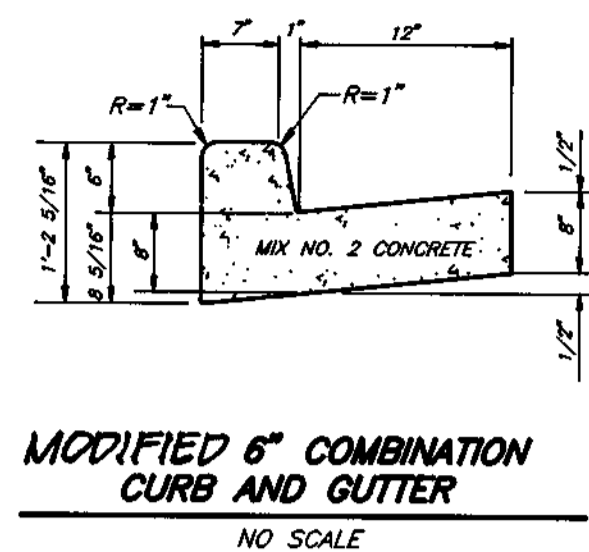
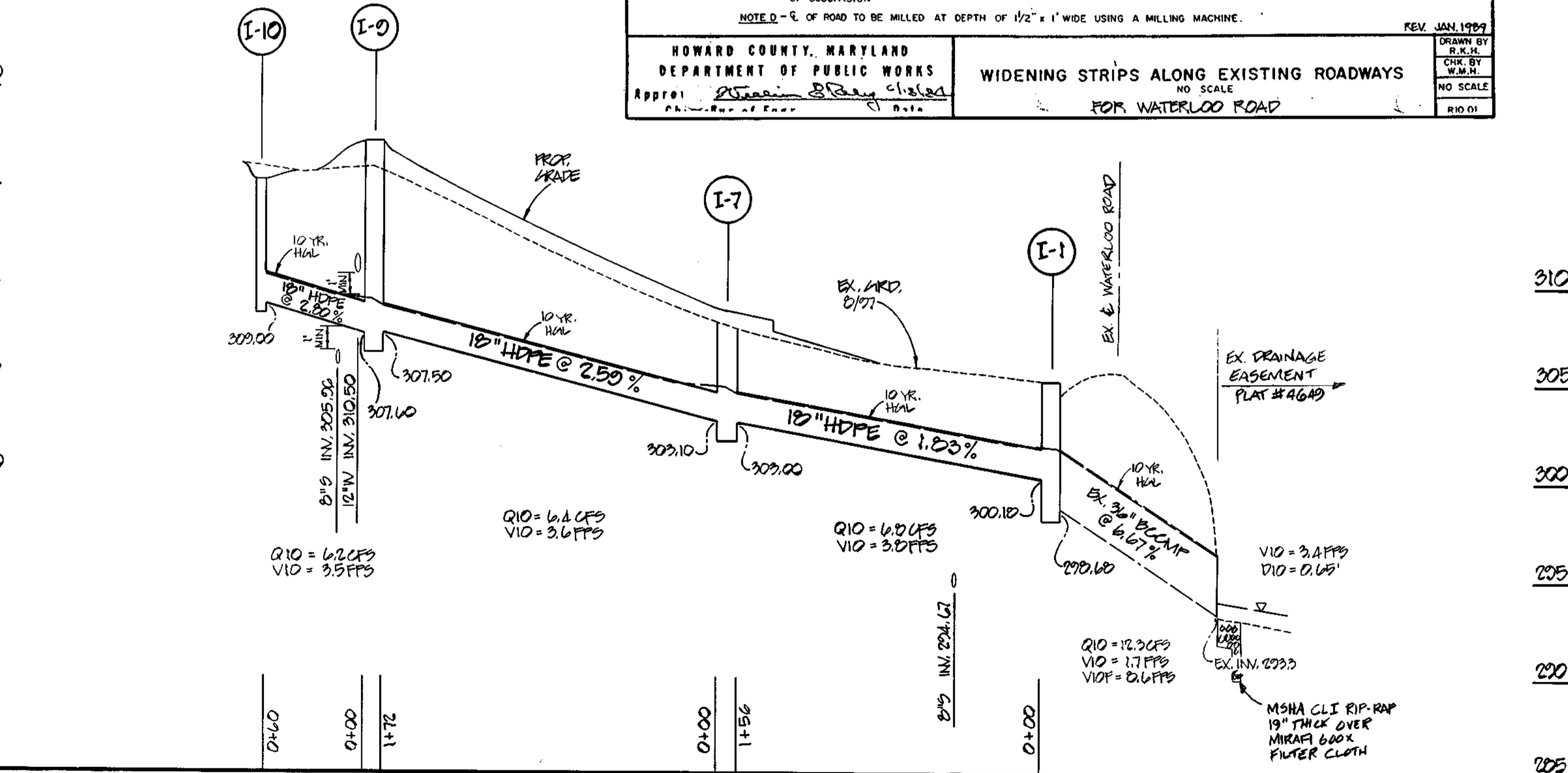


UNGRADED RIP RAP DETAIL

NOT TO SCALE

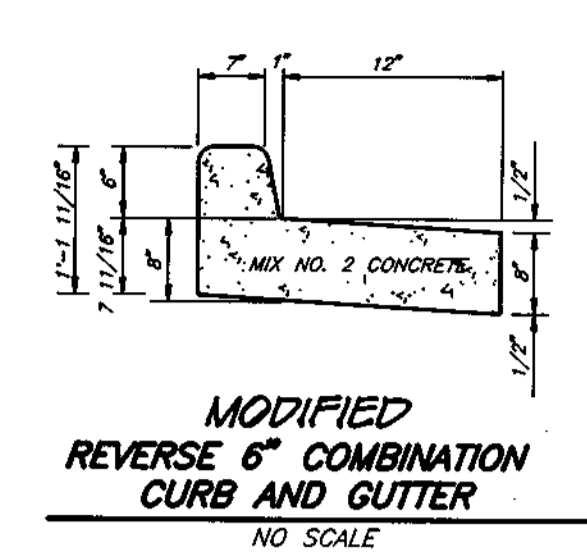


HOWARD COUNTY, MARYLAND
 DEPARTMENT OF PUBLIC WORKS
 WIDENING STRIPS ALONG EXISTING ROADWAYS
 FOR WATERLOO ROAD
 NO SCALE



MODIFIED 6" COMBINATION CURB AND GUTTER

NO SCALE

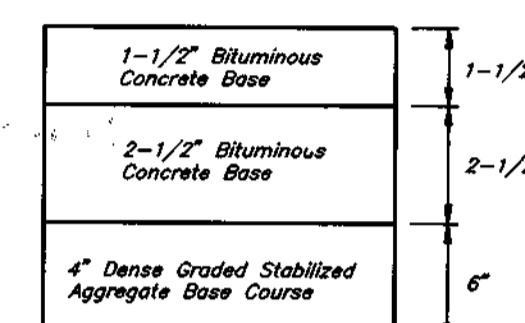


MODIFIED REVERSE 6" COMBINATION CURB AND GUTTER

NO SCALE

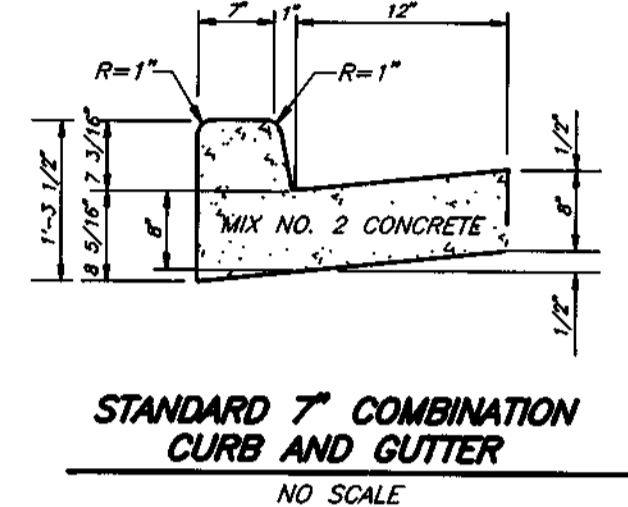
ALTERNATE PAVING SECTION FOR PARKING AREAS

NO SCALE (SECTION P-1)



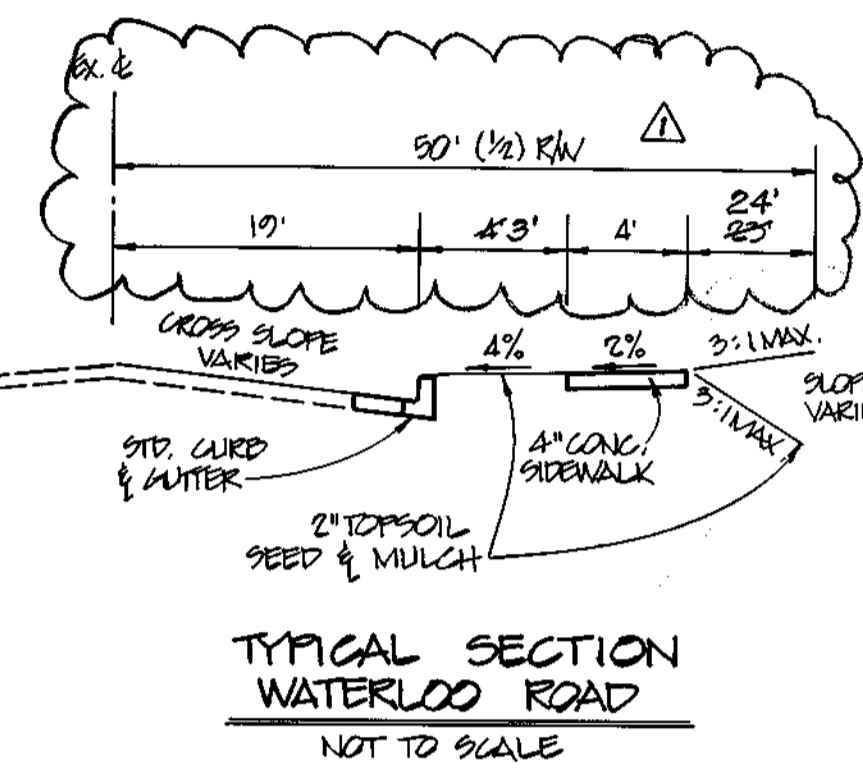
ALTERNATE PAVING SECTION FOR PUBLIC ROADS

NO SCALE (SECTION P-2)



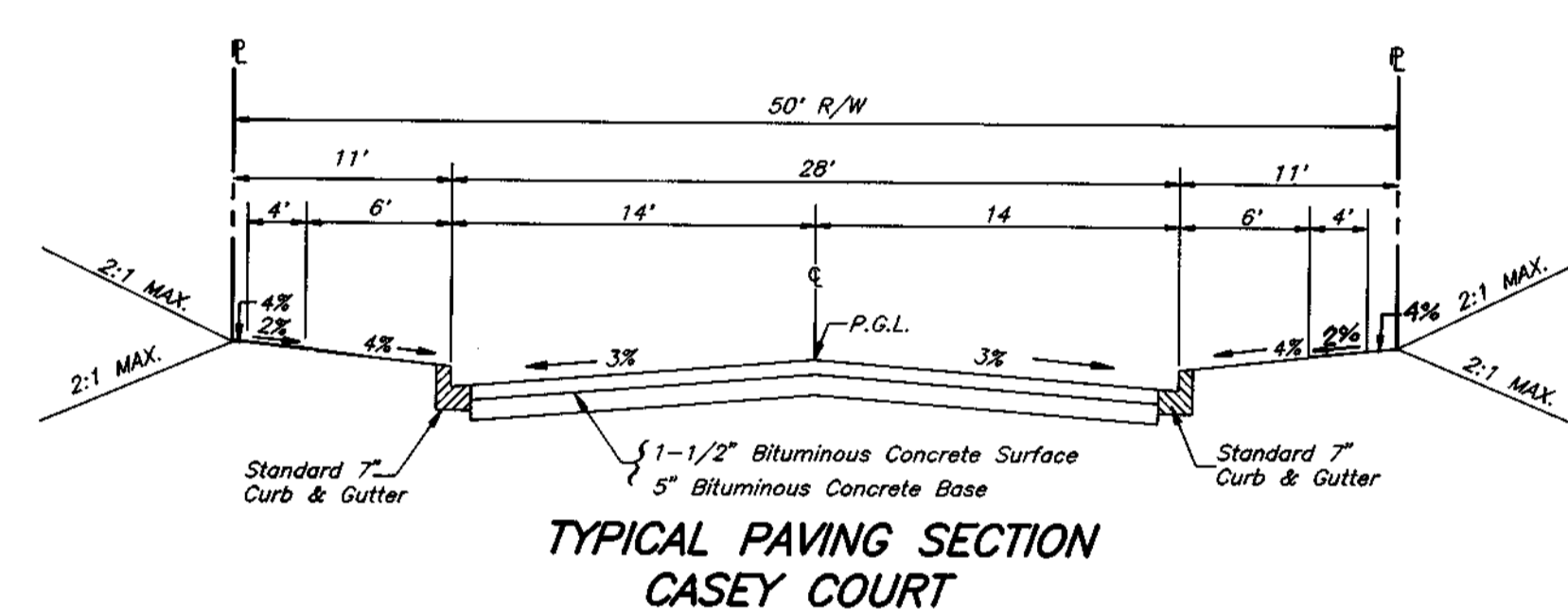
STANDARD 7" COMBINATION CURB AND GUTTER

NO SCALE



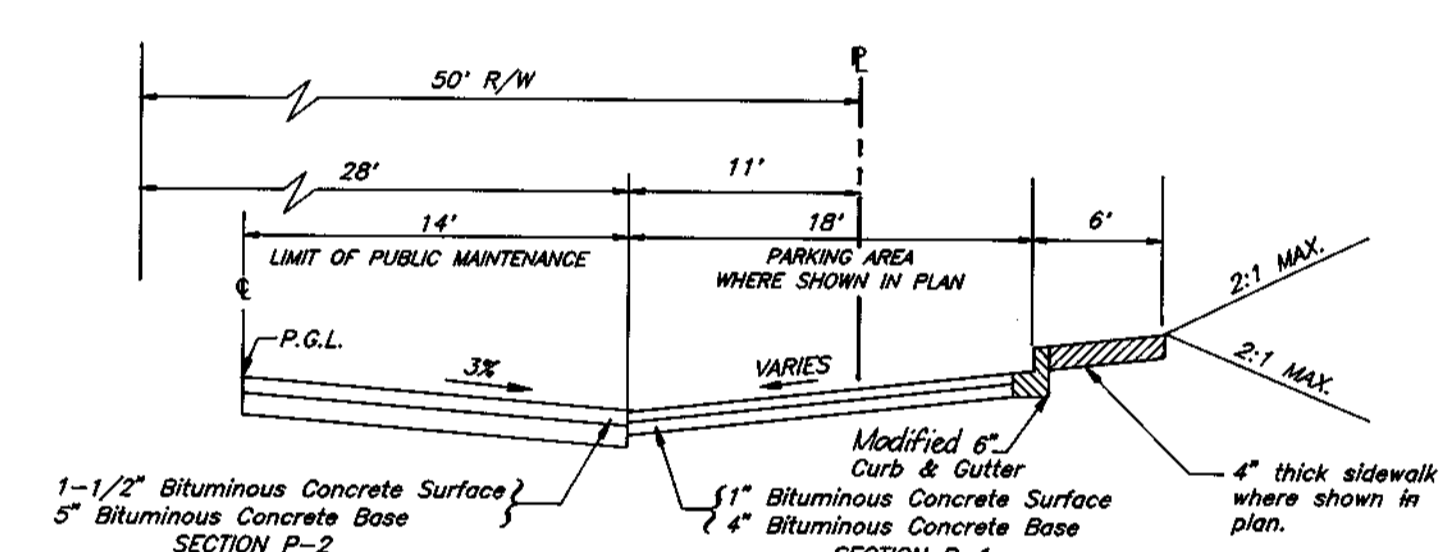
TYPICAL SECTION WATERLOO ROAD

NOT TO SCALE



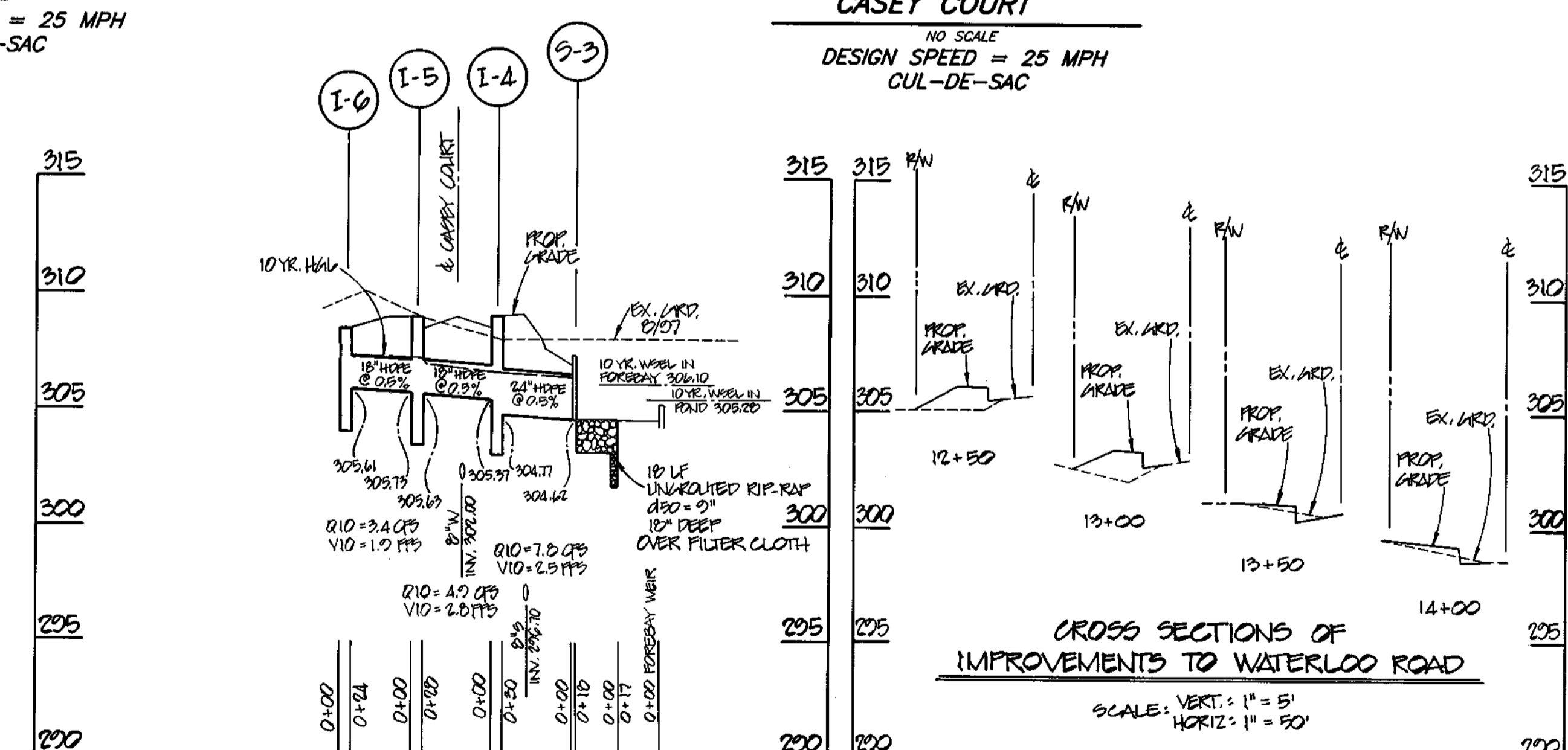
TYPICAL PAVING SECTION CASEY COURT

NO SCALE
 DESIGN SPEED = 25 MPH
 CUL-DE-SAC



TYPICAL PAVING SECTION CASEY COURT

NO SCALE
 DESIGN SPEED = 25 MPH
 CUL-DE-SAC



NOTE: ALL HOPE PIPES SHALL MEET MESA STANDARD

PROFILES
 SCALE: VERT. 1" = 5'
 HORIZ. 1" = 50'



CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 7135 MINISTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

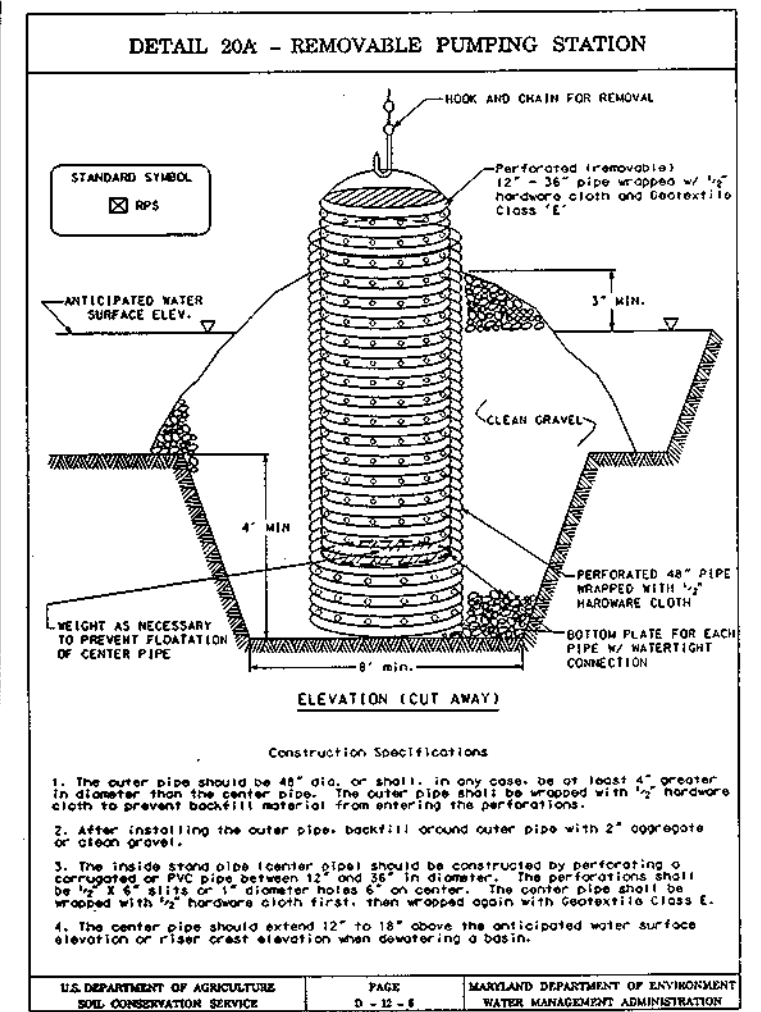
DESIGNED TD
 DRAWN ZAH
 CHECKED RS
 DATE M.A.P., 10/27

STORM DRAIN PROFILES & DETAILS
 LOTS 1-35
LARK BROWN CROSSING
 TAX MAP 37, GRID 20, PARCELS 206, 515
 SIXTH (6th) ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DPZ FILE REF: S-97-04, P. 02-02

SCALE AS SHOWN
 DRAWING 2 OF 2
 JOB NO. 96-033
 FILE NO. 96-033-D

Number	Date	Revision
1	5-19-00	Waterloo Road Typical Section

REVISION BLOCK



DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and construction will be done according to the plan of development and 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 or their authorized agents, as are deemed necessary.

Joseph Frullo
NAME

10-20-98
DATE

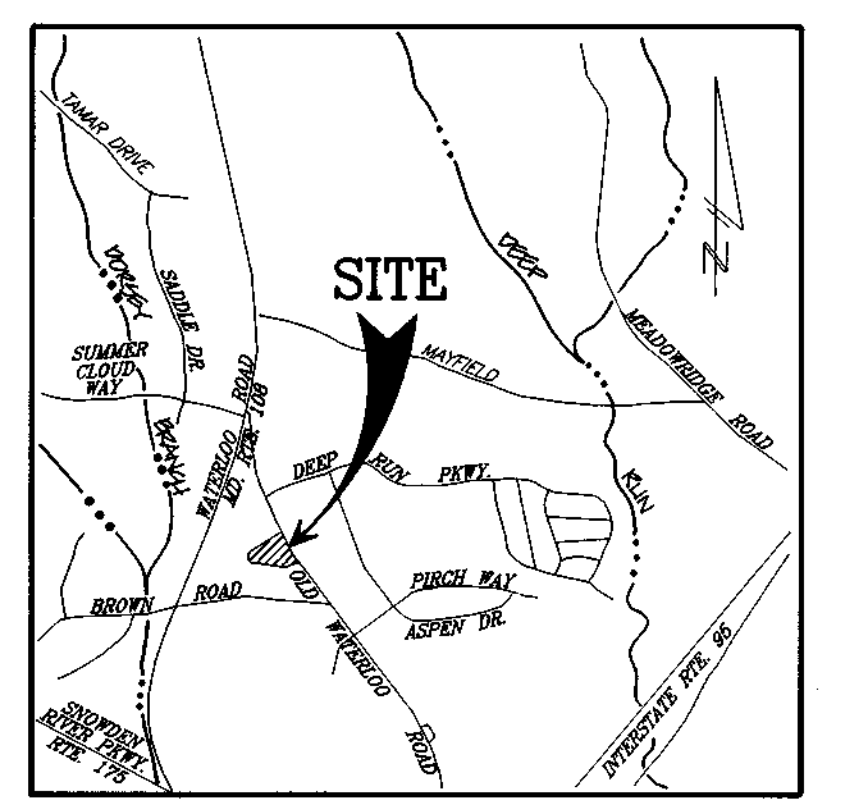
ENGINEER'S CERTIFICATE

I hereby 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.

John A. ...
NAME

10-20-98
DATE

- ### LEGEND
- TREE PROTECTION FENCE
 - RFP-RAP INFLOW PROTECTION
 - EARTH DIKE
 - STABILIZED CONSTRUCTION ENTRANCE
 - EROSION CONTROL MATTING
 - LIMIT OF DISTURBANCE
 - REMOVABLE PUMP STATION
 - SUPER SILT FENCE
 - SILT FENCE
 - AT GRADE INLET PROTECTION
 - CURB INLET PROTECTION



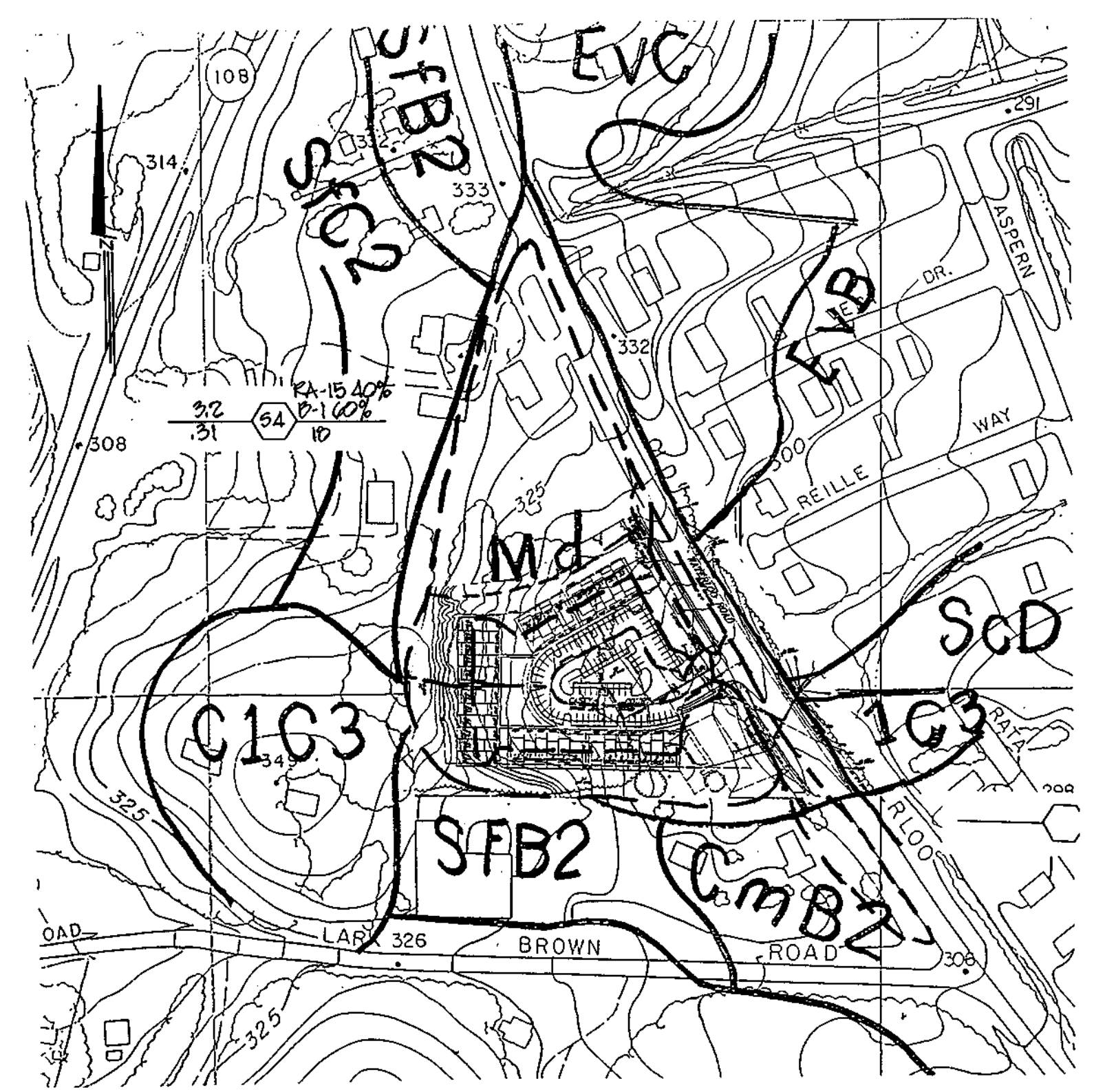
Reviewed for HOWARD S.C.D. and meets Technical Requirements

Cheryl Sumner 10/23/98
Signature Date
U.S. Natural Resources Conservation Service



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

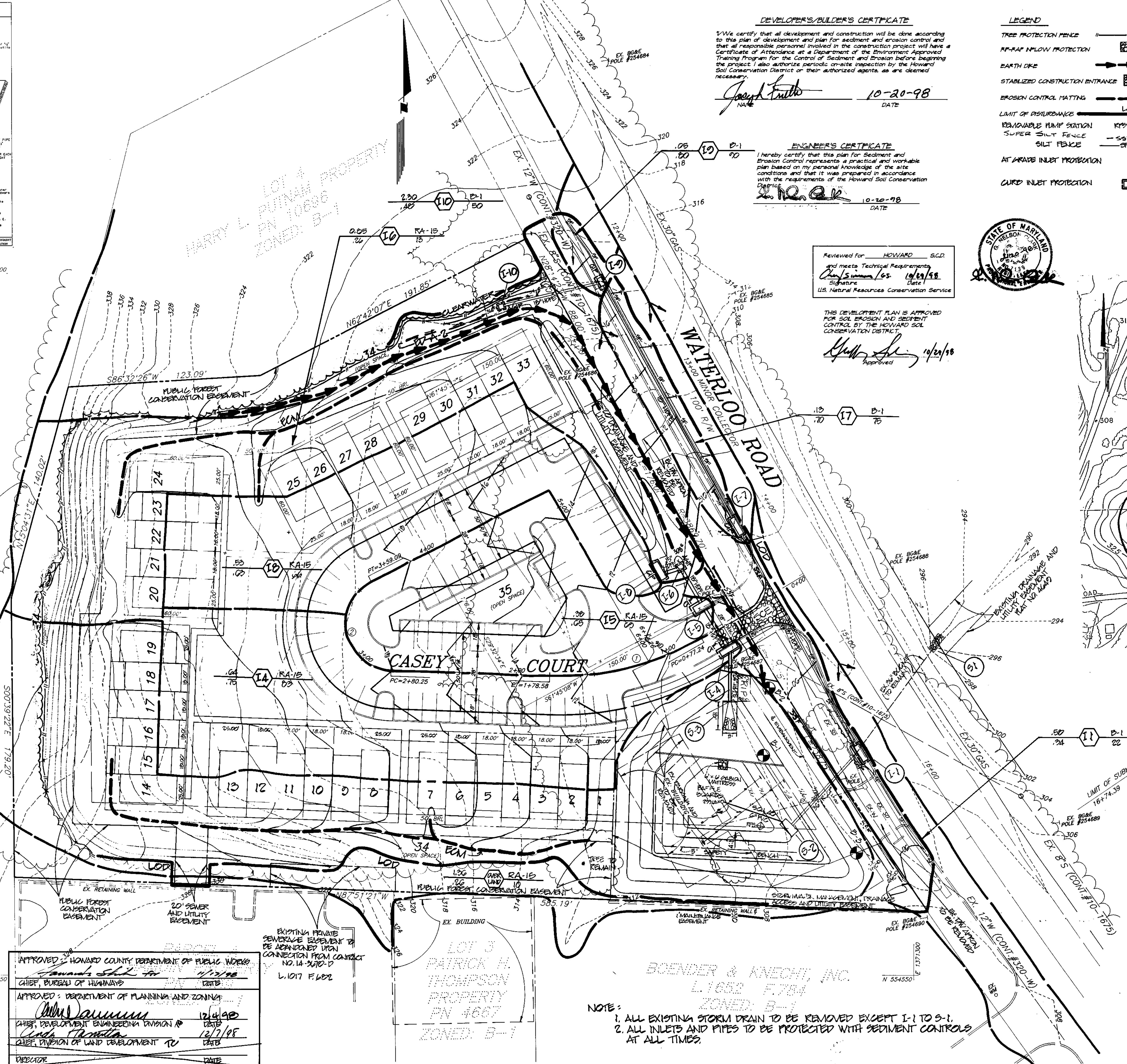
John A. ... 10/23/98
Approved



SEDIMENT BASIN #1

DRAINAGE AREA:	3.516 ACRES
WET VOLUME REQUIRED:	6408 CF
WET VOLUME PROVIDED:	6524 CF ELEV 301.4
DRY VOLUME REQUIRED:	6400 CF
DRY VOLUME PROVIDED:	11,161 CF
BOTTOM ELEVATION:	299.65
WEIR CREST:	304.5
DEWATERING CRIFICE INVERT:	299.65
2 YEAR EXISTING Q:	4.0 CFS
2 YEAR PROPOSED Q:	3.0 CFS
2 YEAR WEIR:	304.97
CLEAR IT ELEVATION:	301.5

NOTE: TRACKER IS TO INSURE THAT THE CURB FUNCTIONS BETWEEN STORMS.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Thomas Hill 11/17/98
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
John A. ... 12/4/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION

John A. ... 12/7/98
CHIEF, DIVISION OF LAND DEVELOPMENT

EXISTING PRIVATE SEWERAGE EASEMENT TO BE ABANDONED UPON CONNECTION FROM CONTRACT NO. 14-2070-D L.1017 F.682

LOT 3 PATRICK H. THOMPSON PROPERTY PN 4667 ZONED: B-1

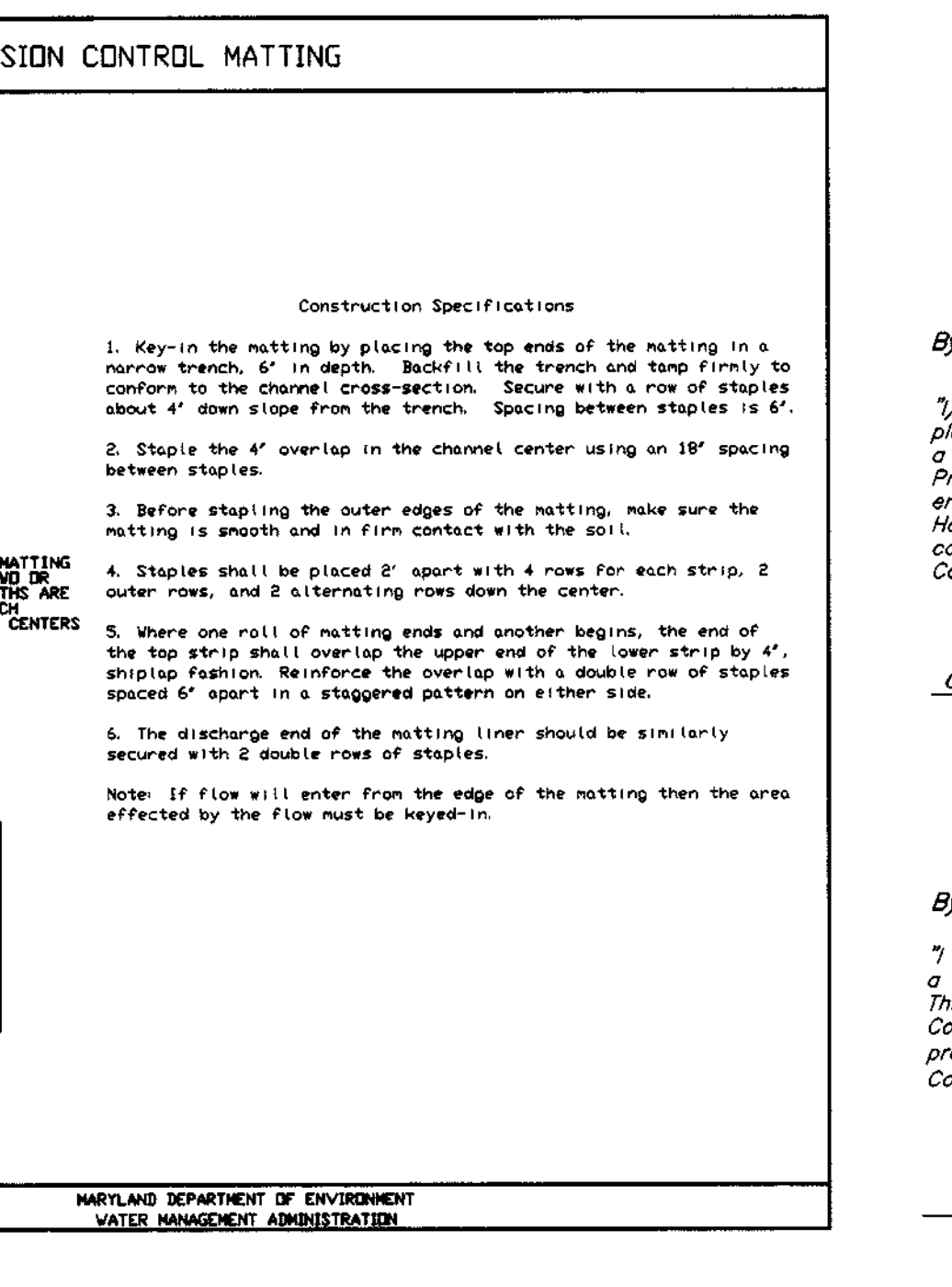
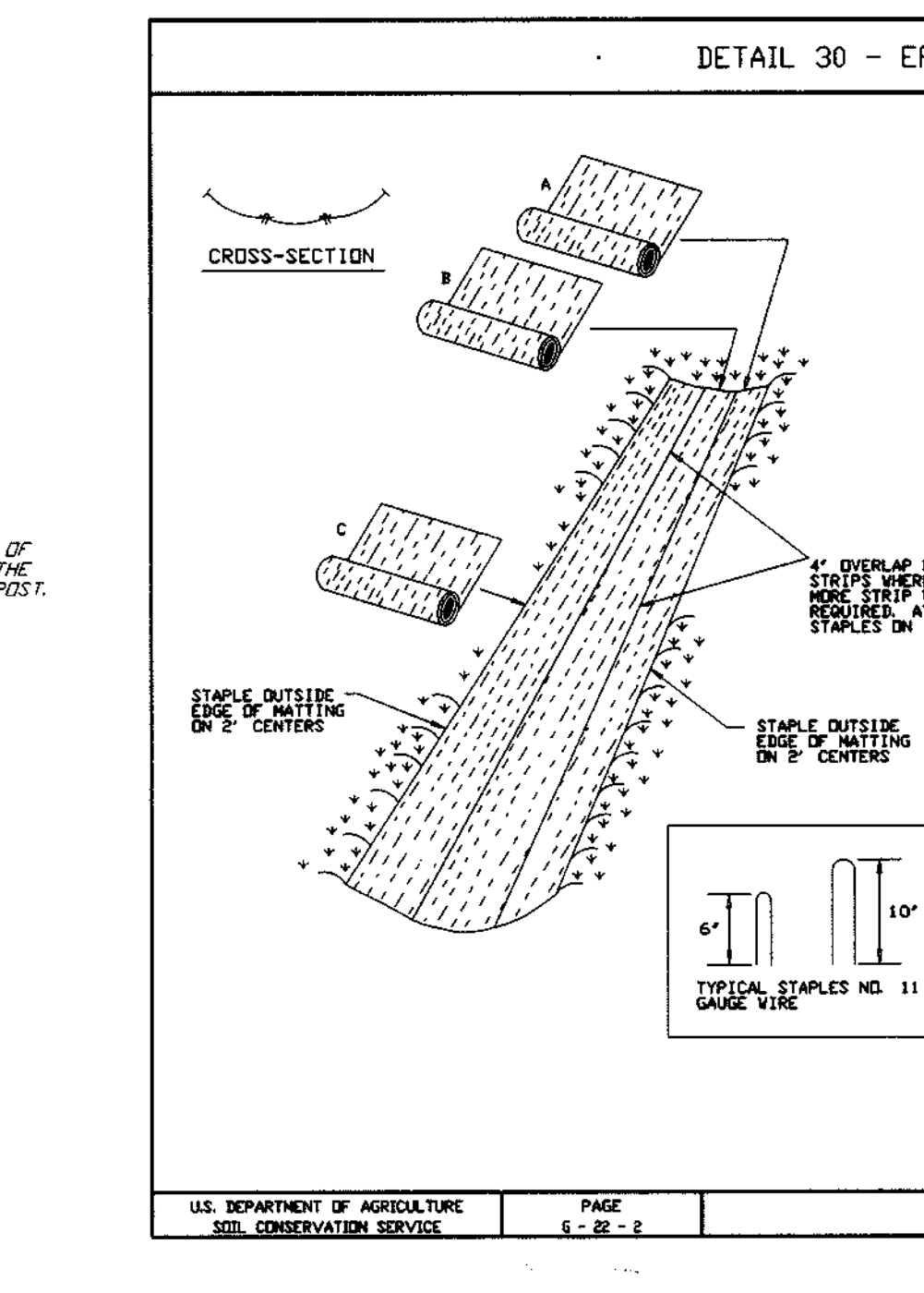
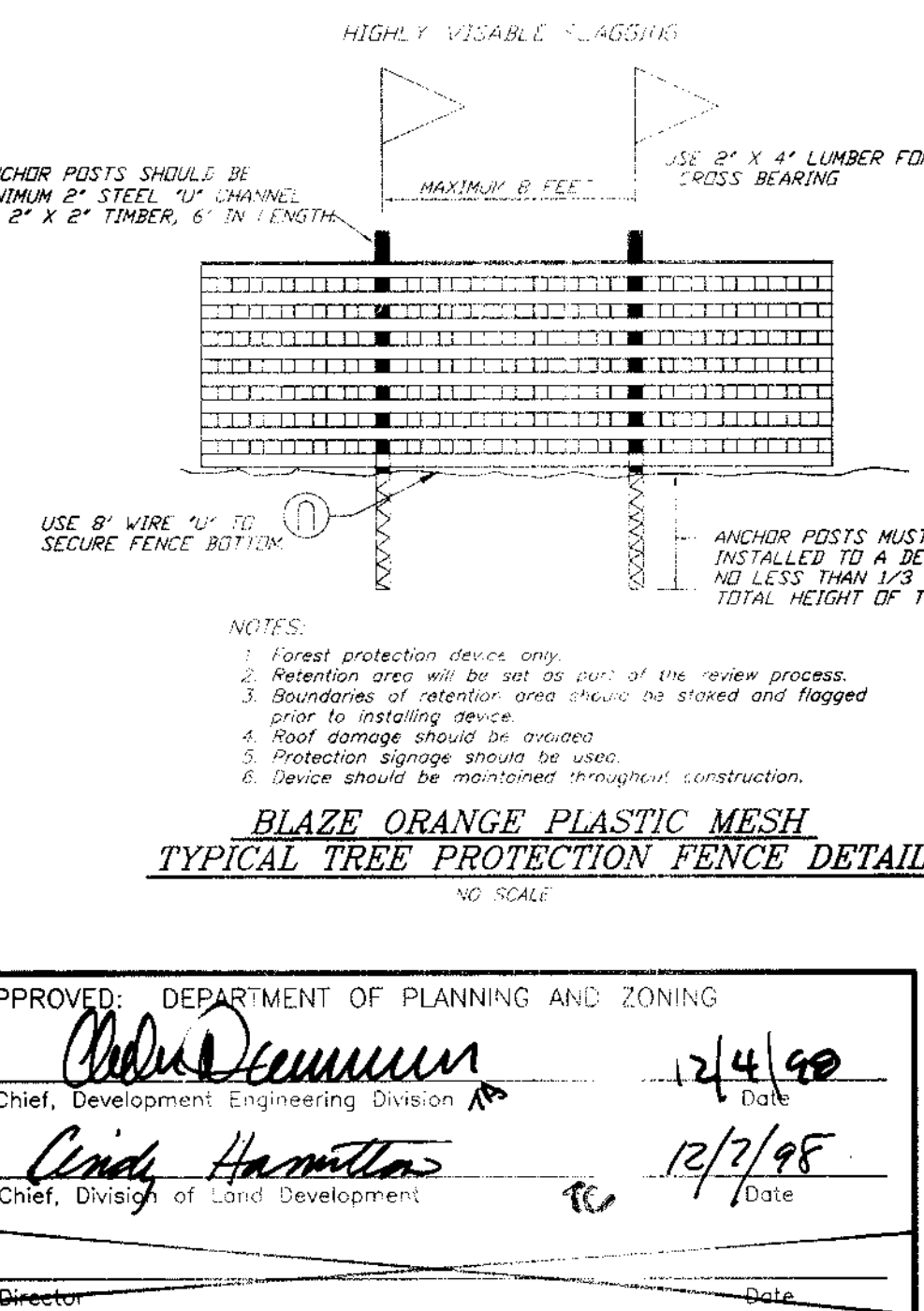
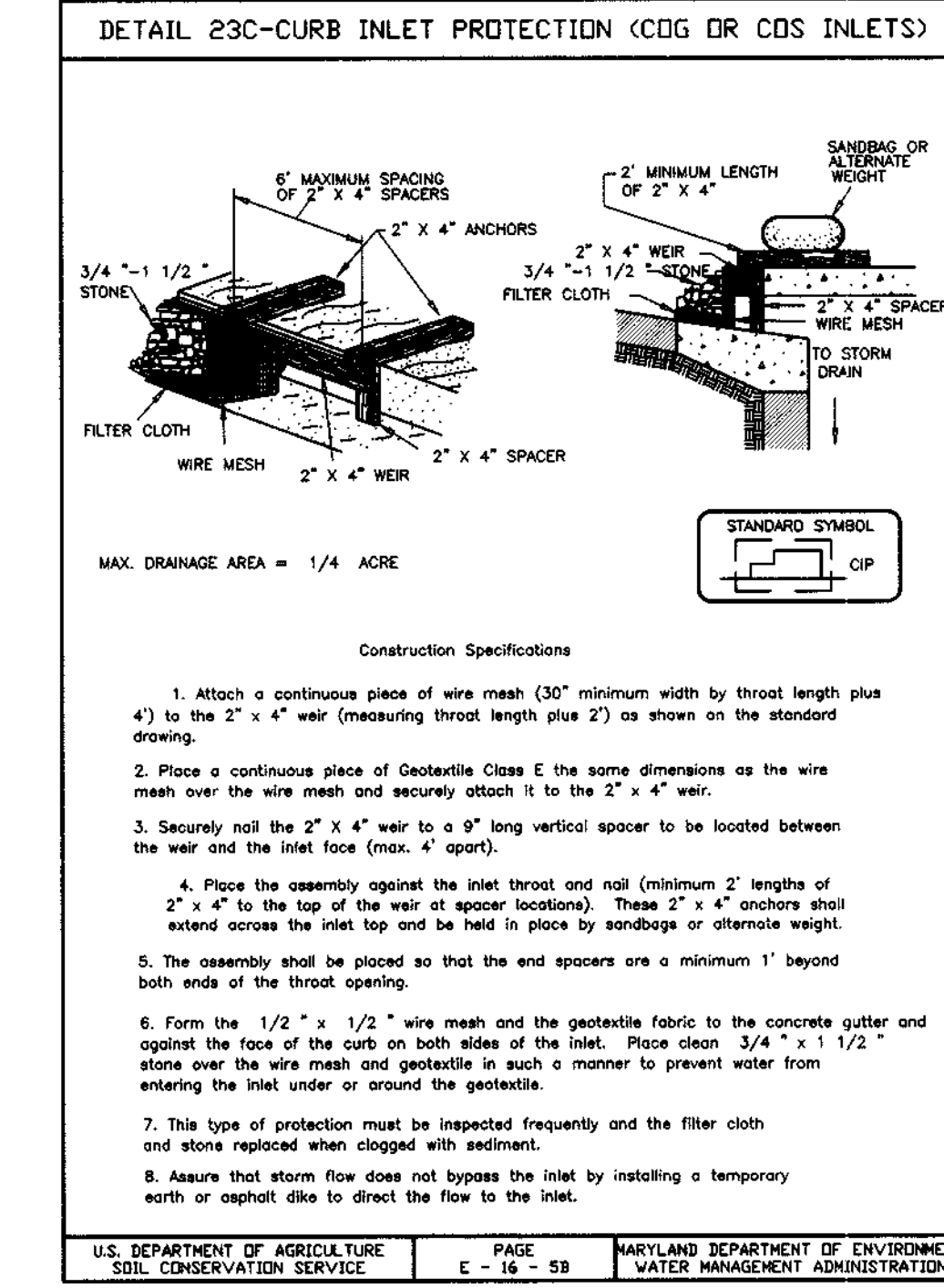
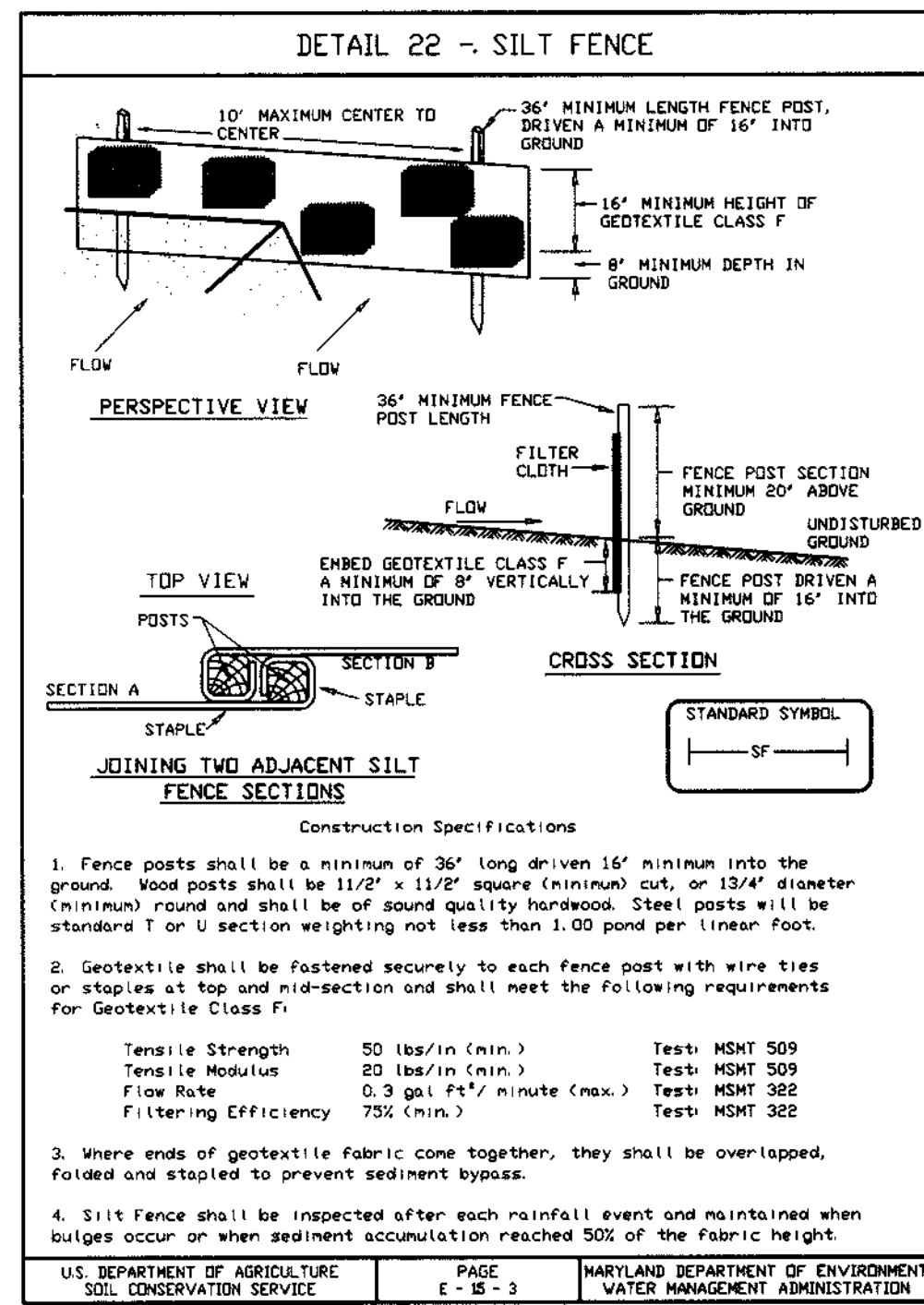
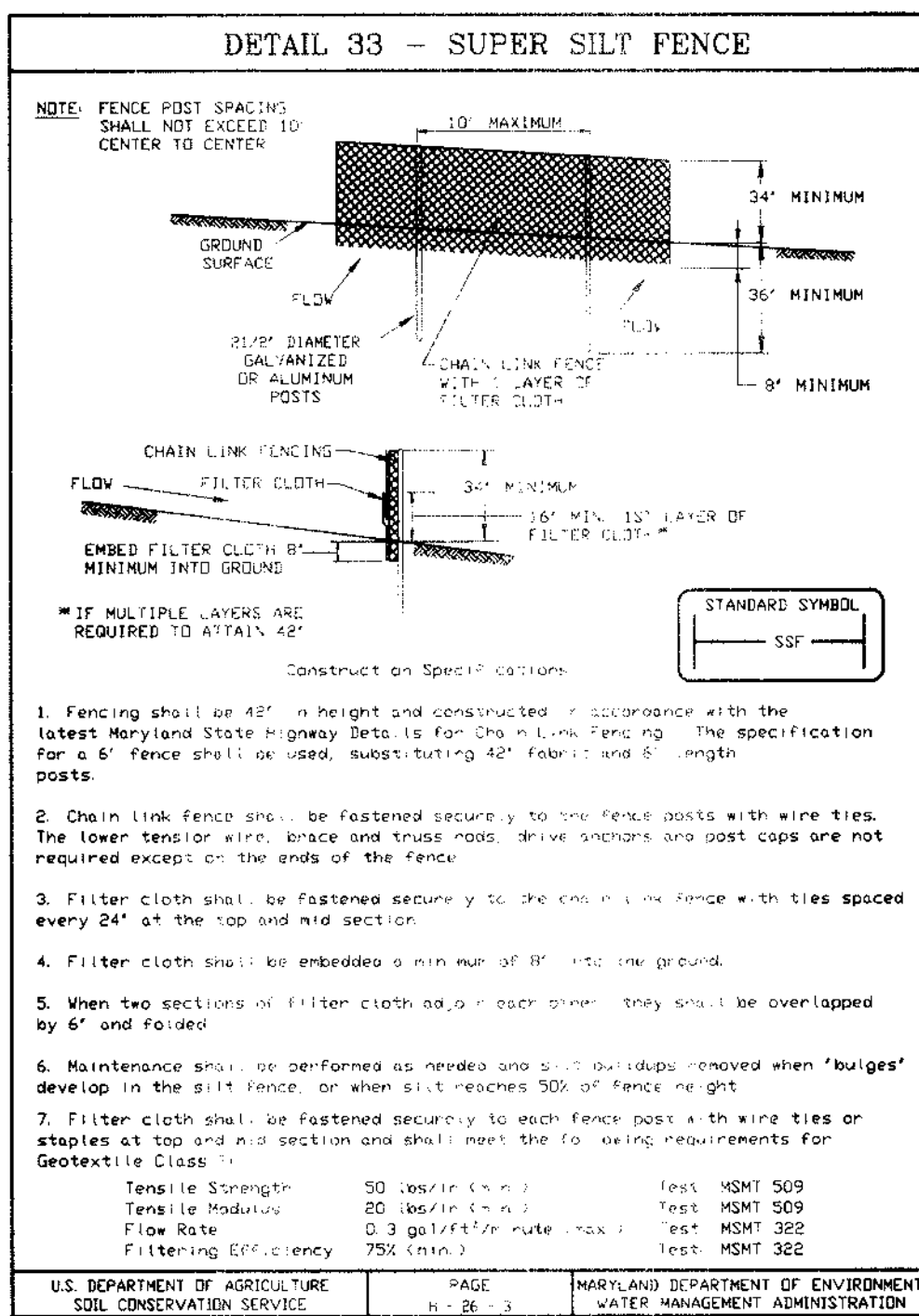
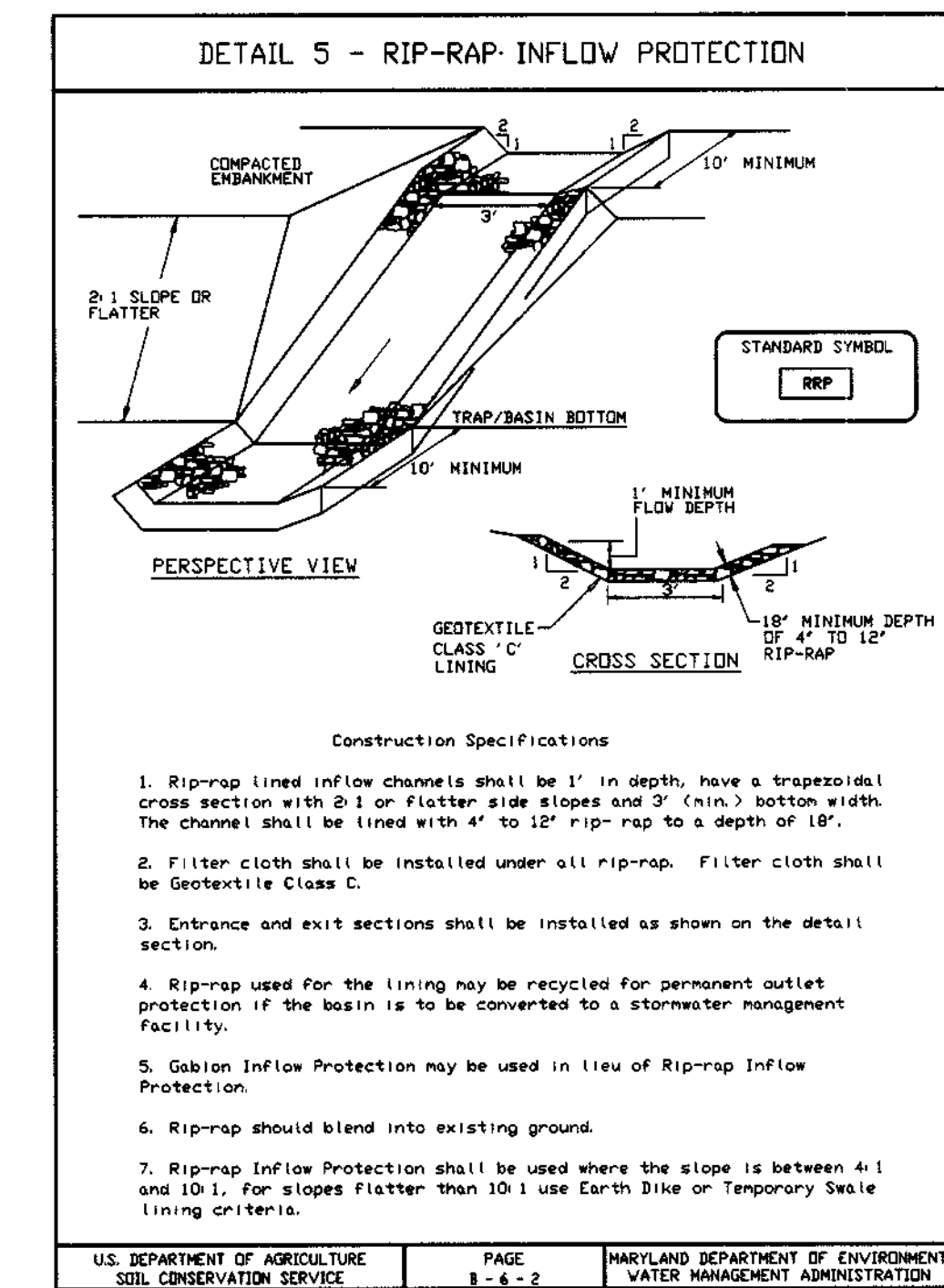
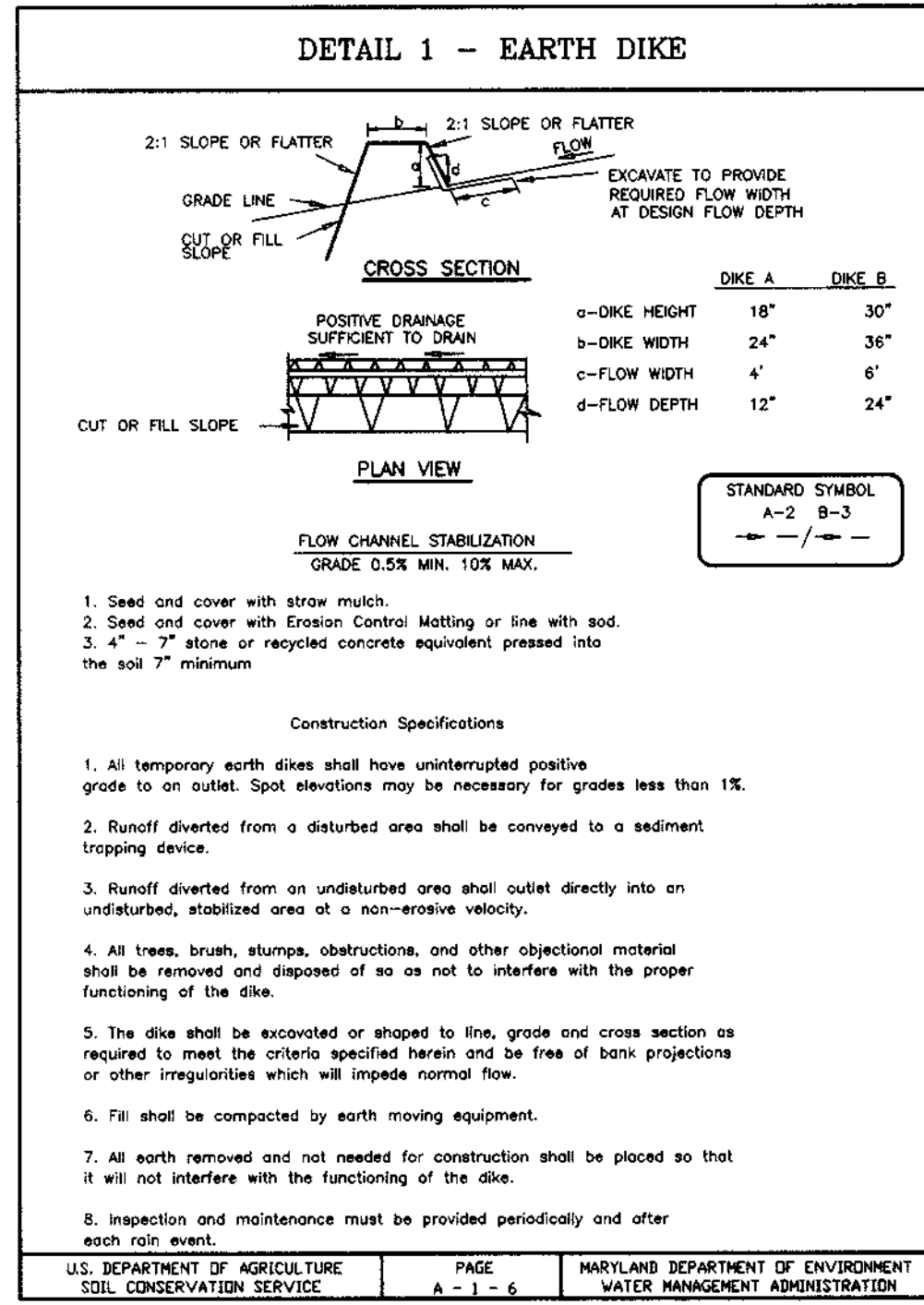
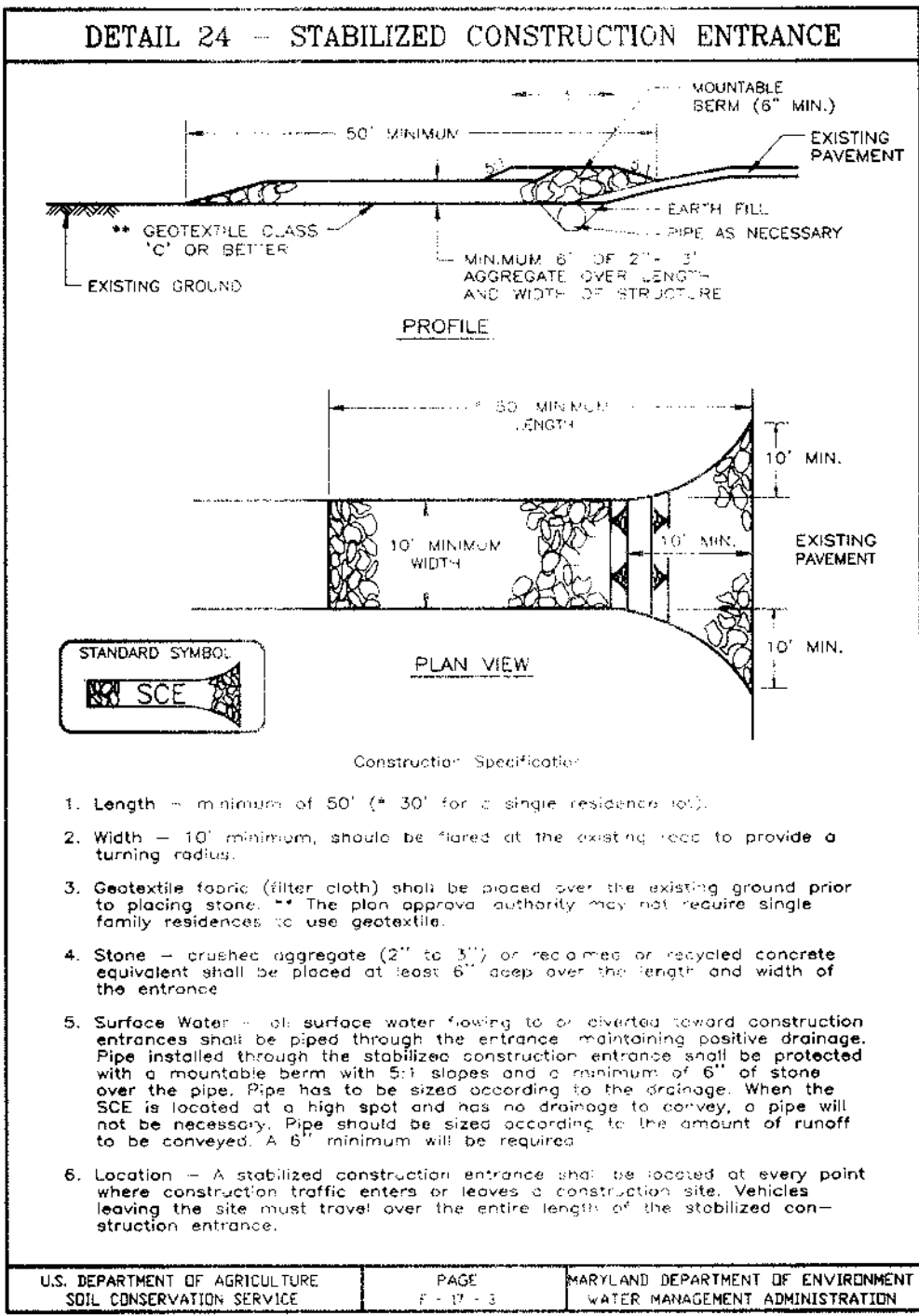
NOTE:
1. ALL EXISTING STORM DRAIN TO BE REMOVED EXCEPT I-1 TO S-1.
2. ALL INLETS AND PIPES TO BE PROTECTED WITH SEDIMENT CONTROLS AT ALL TIMES.

CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS

7135 MINTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO. • (301) 621-8100 - WASH.

DESIGNED TD	GRADINA, SEDIMENT & EROSION CONTROL PLAN LOTS 1-35	SCALE 1" = 30'
DRAWN BLP	LARK BROWN CROSSING TAX MAP 37, GRID 20, PARCELS 266,515	DRAWING 4 OF 9
CHECKED RB	SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 98-033
DATE MAR. 1998	DP2 FILE REF: S-97-04	FILE NO. 98-033-3E

OWNER: LARK BROWN PARTNERSHIP
C/O FINEFROCK & SACKETT CONSTRUCTION GROUP, INC.
10305 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21043



21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Definition: Topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose: To provide a suitable soil medium for vegetation growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies:

- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
- For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications:

- Topsoil salvaged from the existing site may be used provided that it meets the standards set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the vegetative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or a soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textures, subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 and 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, johnsongrass, nutgrass, poison ivy, thistle, or others as specified.
 - Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedure:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas under 5 acres:
 - On soil meeting topsoil specifications, obtain test results indicating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - pH sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No soil or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- Topsoil Application
 - When topsoiling, maintain normal erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Sill Fence and Sediment Traps and Basins.
 - Grades on the areas to be topsoiled, which have been previously established, shall be topsoiled, about 4" - 8" higher in elevation.
 - Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 2". Spreading shall be performed in such a manner that seeding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
 - Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS REQUIRED.

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following schedules:

- 1) Follow-up - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) 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 the time of seeding, apply 400 lbs. per acre 30-0-0 urea-form fertilizer (9 lbs./1000 sq.ft.).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and apply 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

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. per acre (1.4 lbs./1000 sq.ft.) of Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.5 lbs./1000 sq.ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by applying 2 tons per acre 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 sq.ft.) of unrotted small grain straw immediately after seeding. Another mulch immediately after application using much 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

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not 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 bushels per acre of annual ryegrass (3.2 lbs./1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.7 lbs./1000 sq.ft.). For the period November 1 thru February 28, protect site by applying 2 tons per acre 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 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor straw immediately after application using much 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.

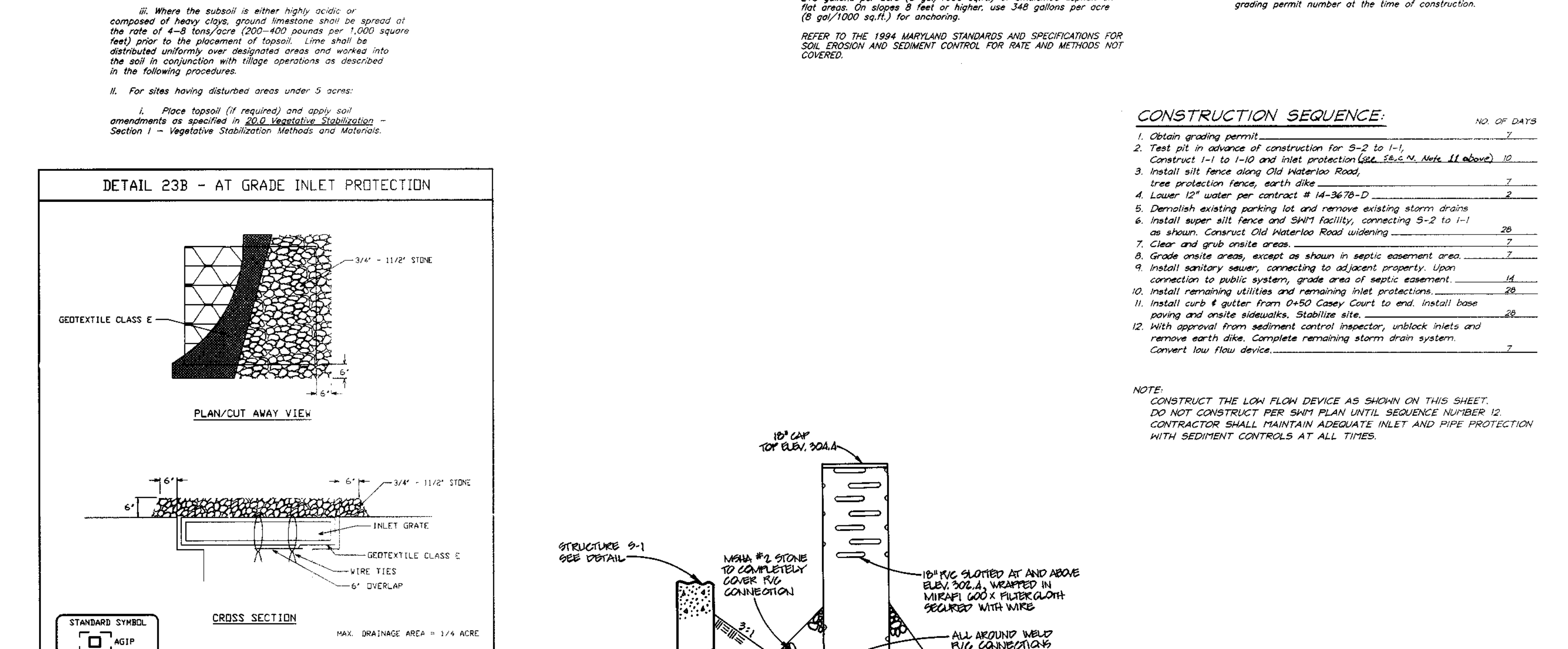
REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEDIMENT AND EROSION CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspection, Licenses and Permits, Sediment Control Division prior to the start of any construction (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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
- Following initial soil disturbance 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 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shall be fenced and warning signs posted around their perimeters in accordance with 106.1, Chapter 2 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All sediment control structures 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 seedings, sod, temporary seeding, and mulching (See G).
- Temporary stabilization with mulch alone can only be done when 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 Division.
- SITE ANALYSIS:**

Total Area of Site:	3.81 ACRES
Area Disturbed:	1.24 ACRES
Area to be seeded or paved:	0.75 ACRES
Area to be vegetatively stabilized:	2.56 ACRES
Total Cut:	2,000 Cubic Yards
Cost \$/CY:	N/A
Offsite Waste/Borrow Area Location:	N/A
- 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 control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval 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 received.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.
- The total amount of earth fence = 140 LF
- The total amount of super silt fence = 475 LF
- The total amount of silt dike = 335 LF

* It is the responsibility of the contractor to identify the spoil/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.



By The Developer:

I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

Joseph Tull
Signature of Developer
10-20-98
Date

By The Engineer:

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

Howard S.D.
Signature of Engineer
10-20-98
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Howard S.D.
CHEF, BUREAU OF HIGHWAYS
11/19/98
DATE

Cheryl Simms
U.S. Natural Resources Conservation Service
11/24/98
Date

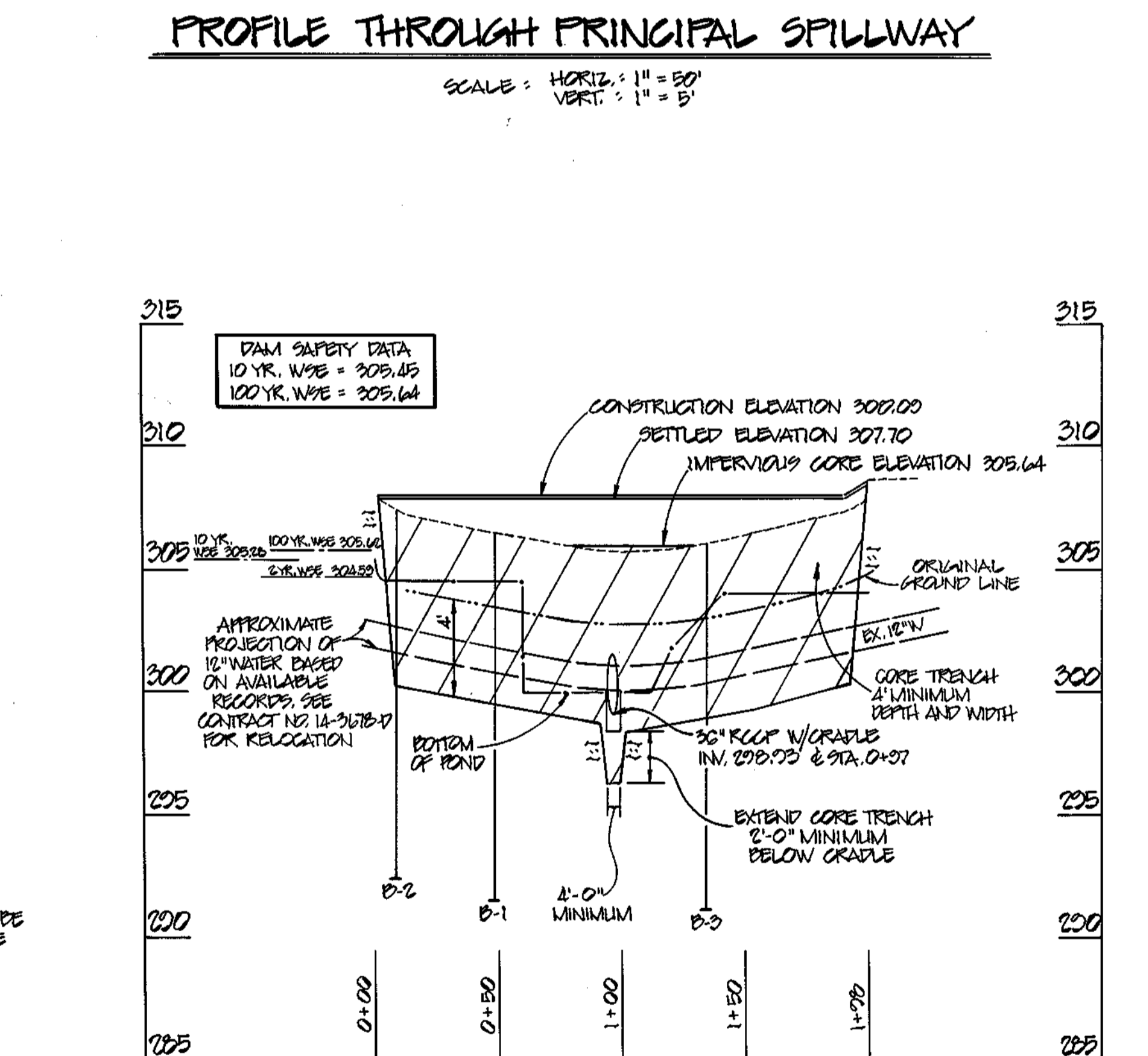
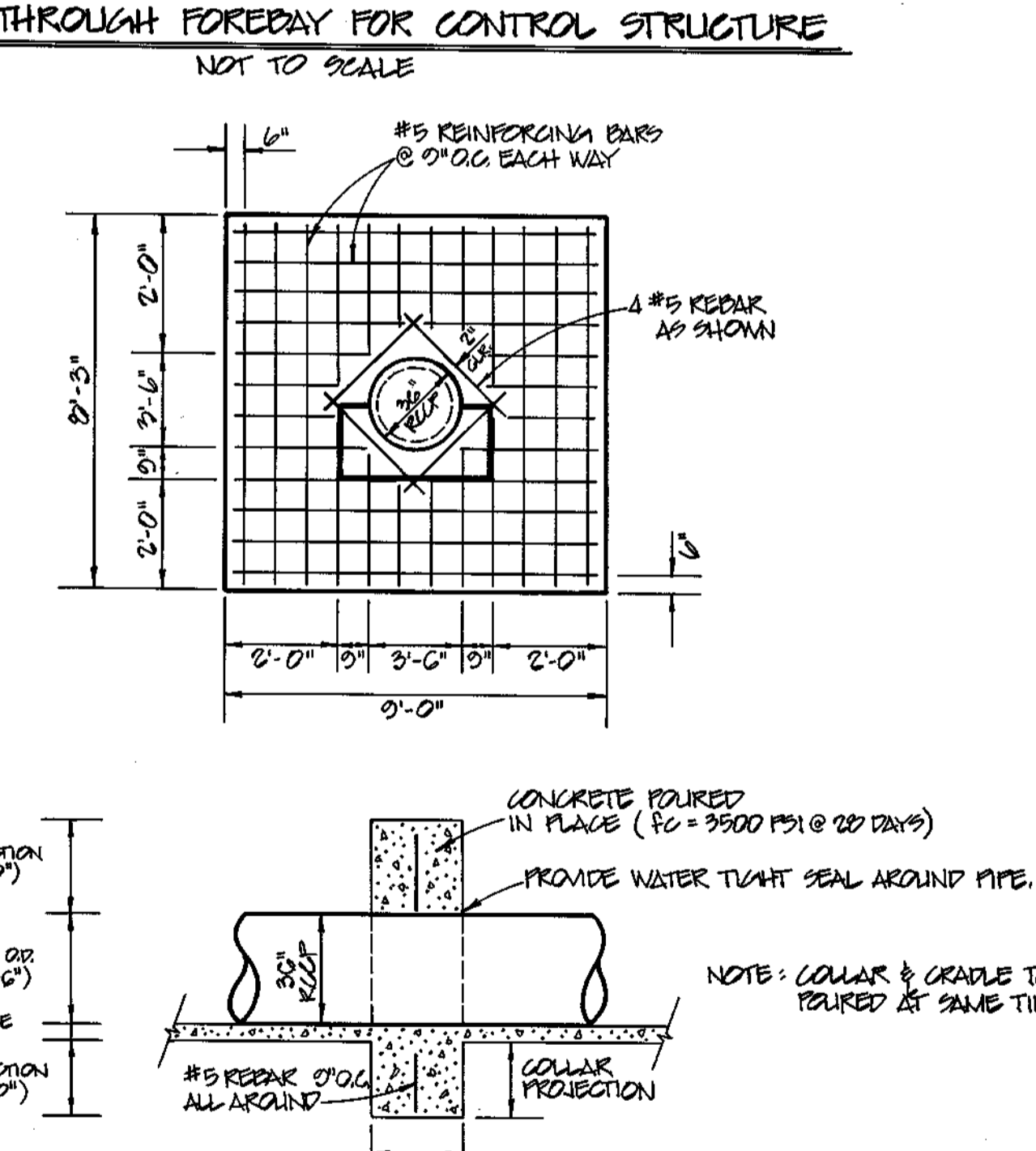
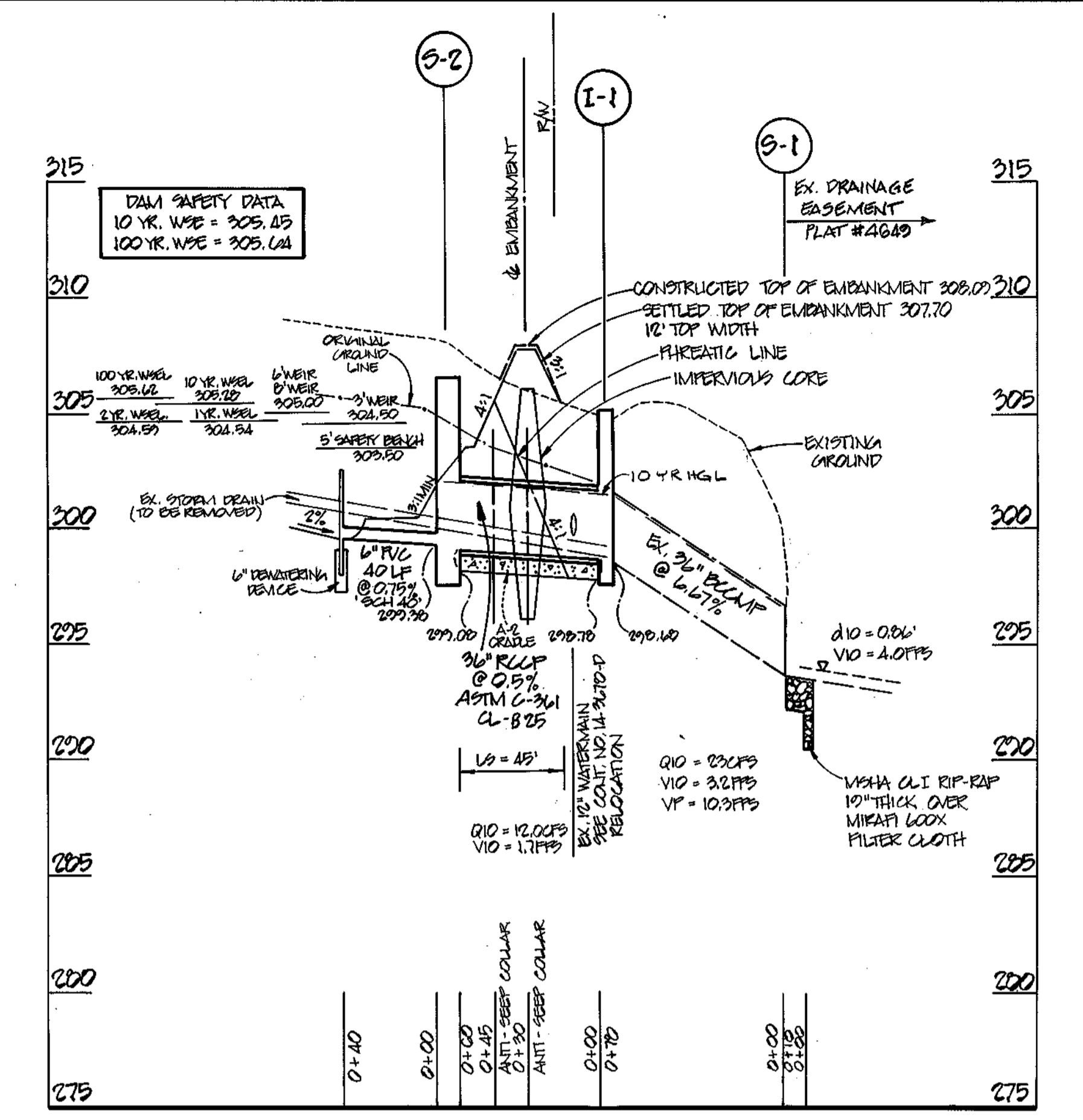
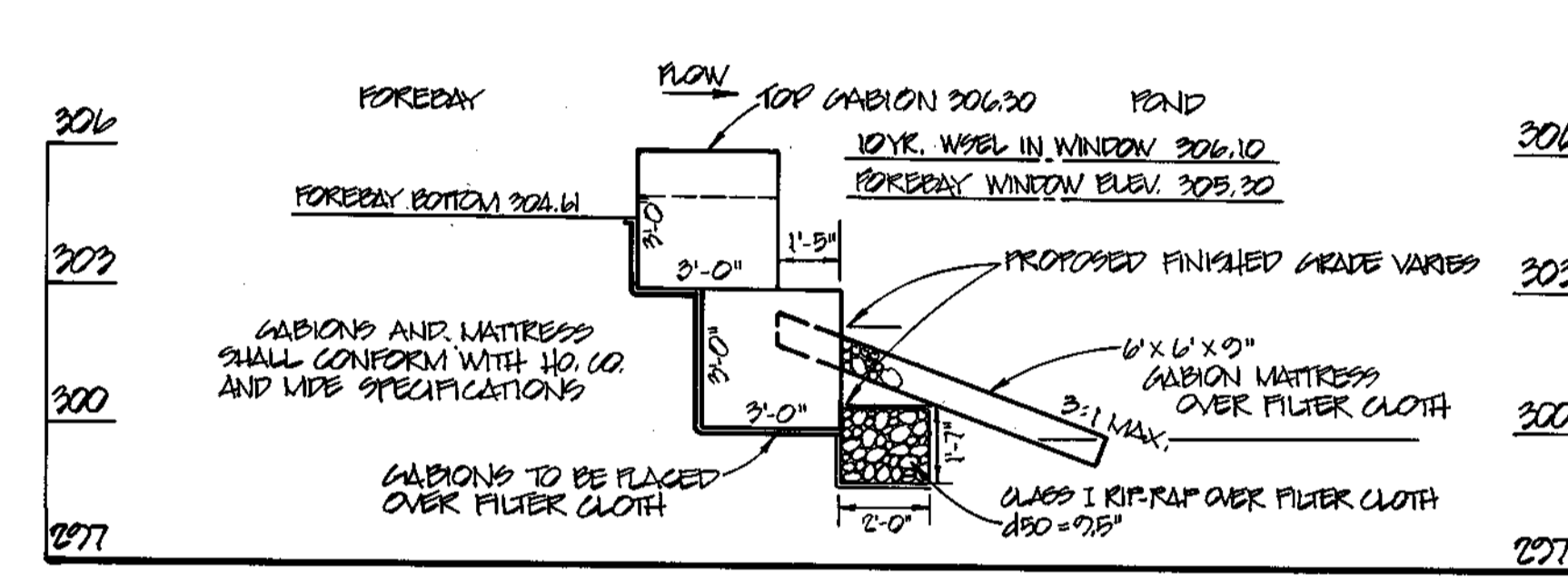
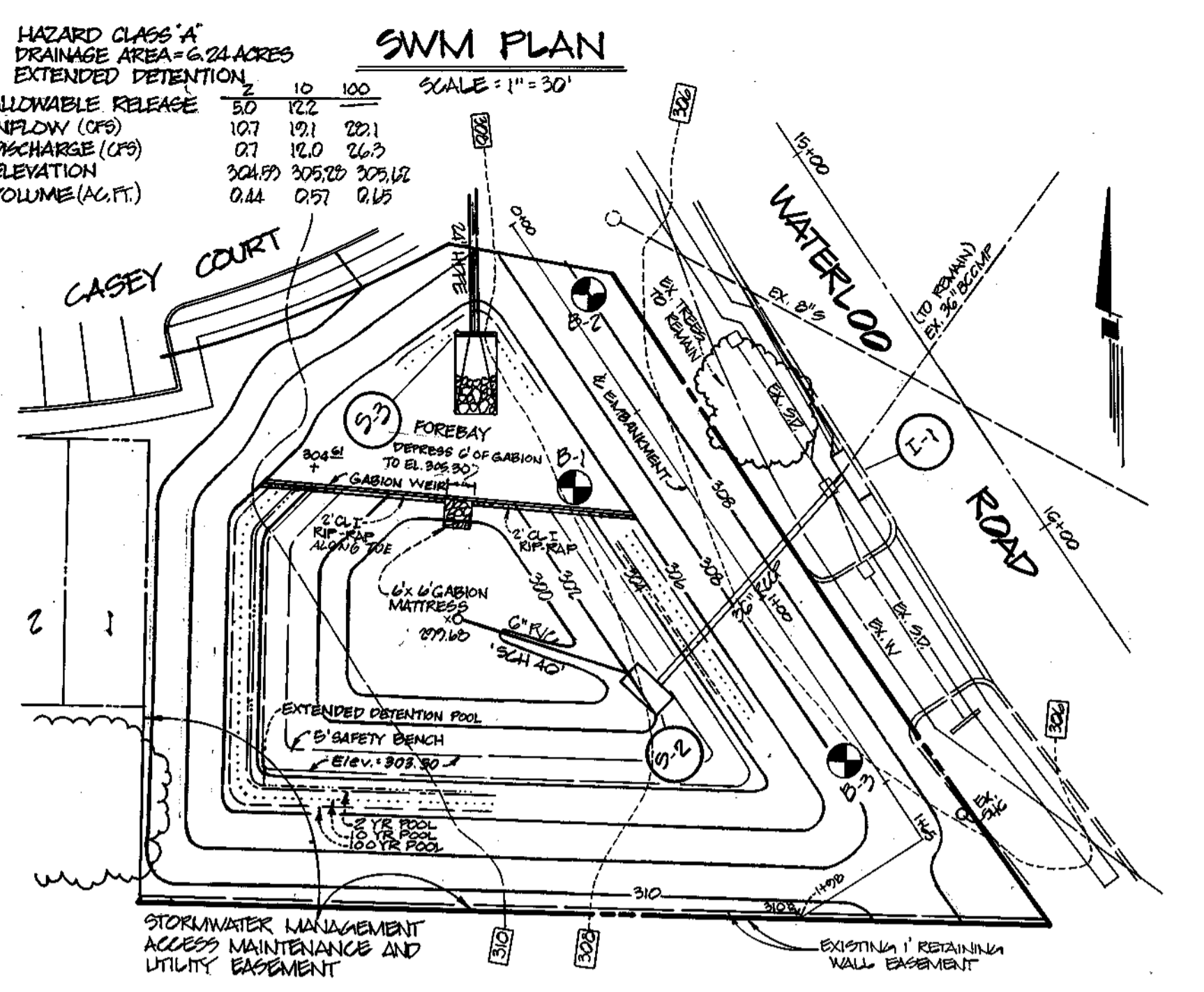
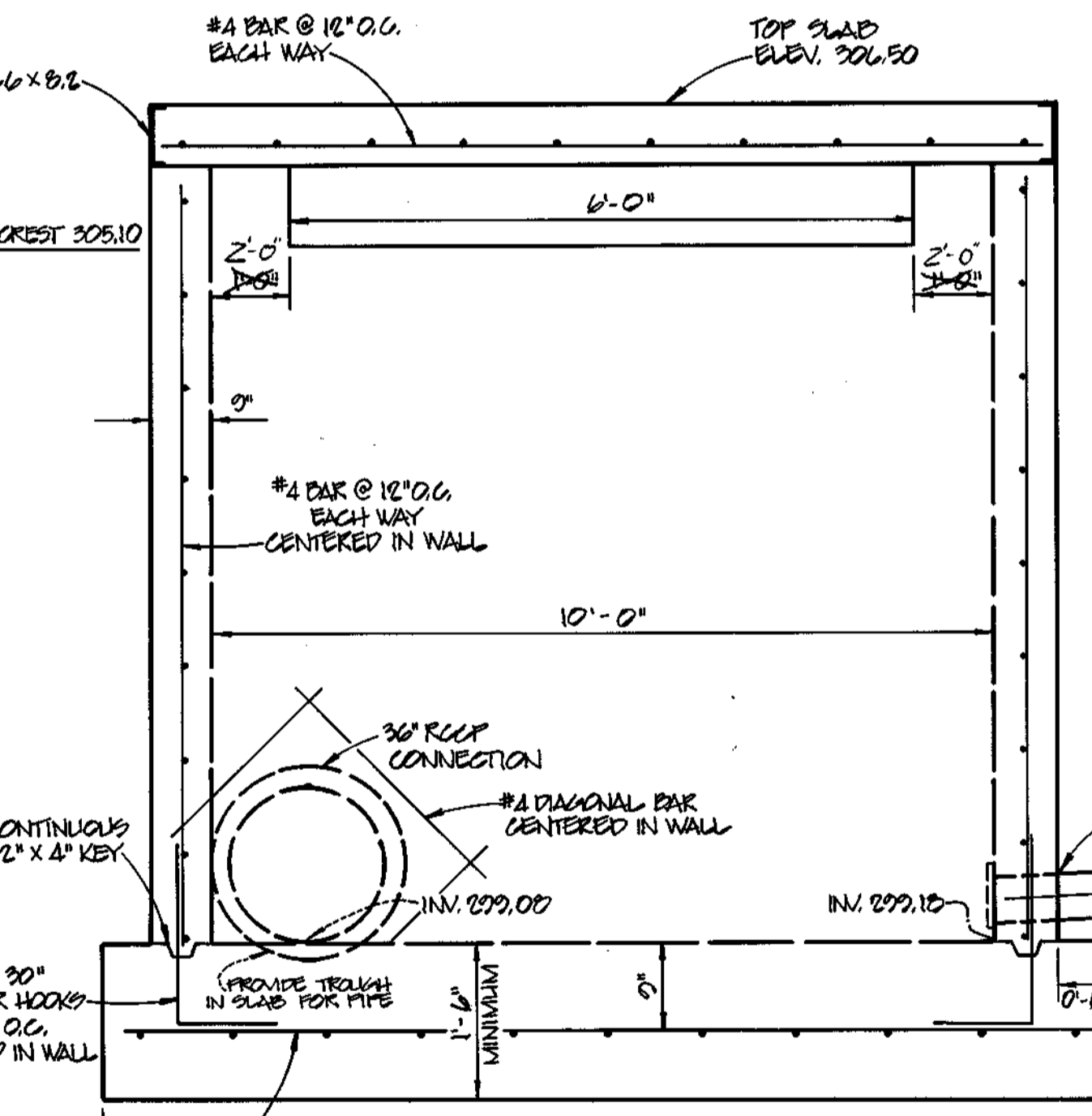
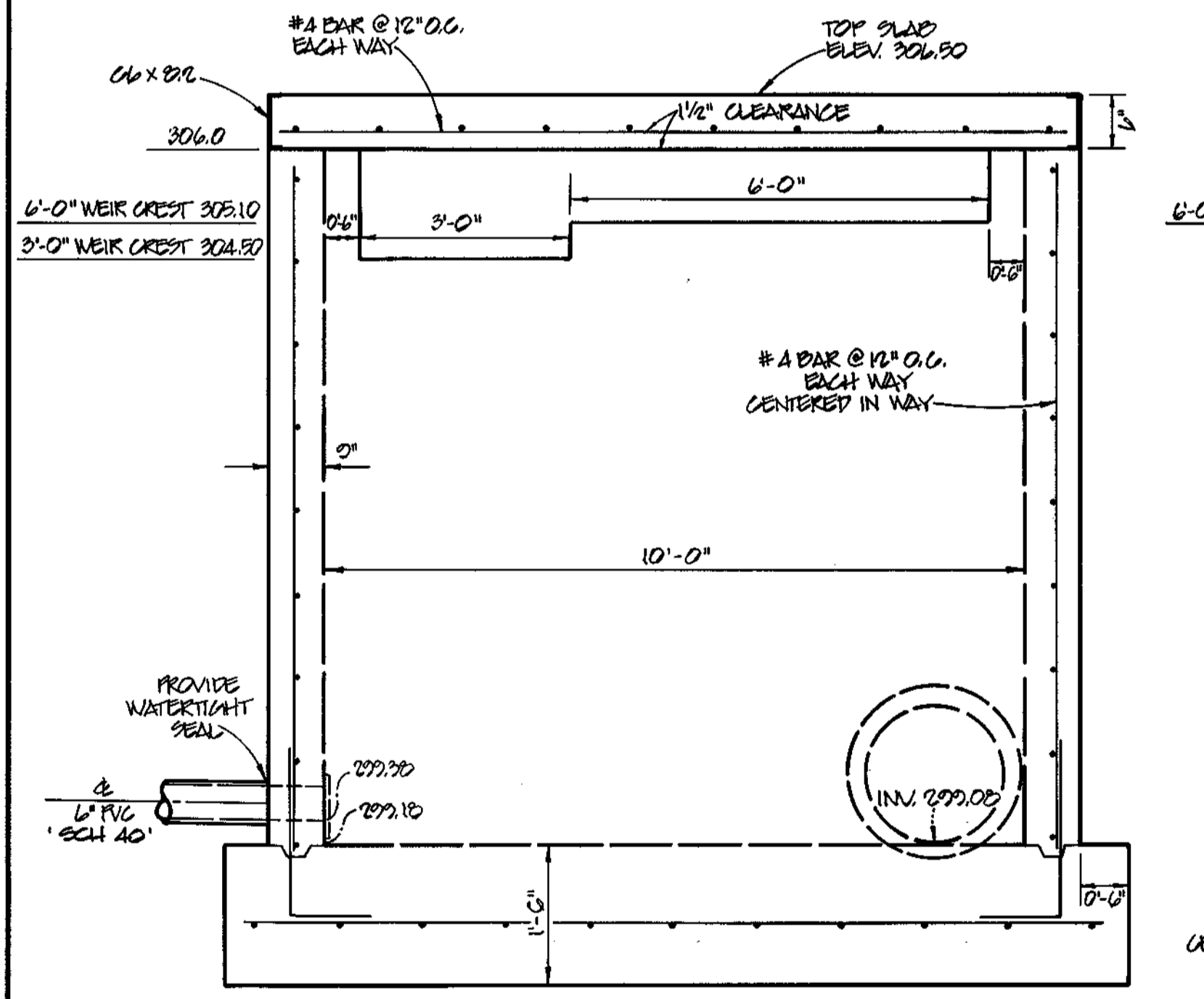
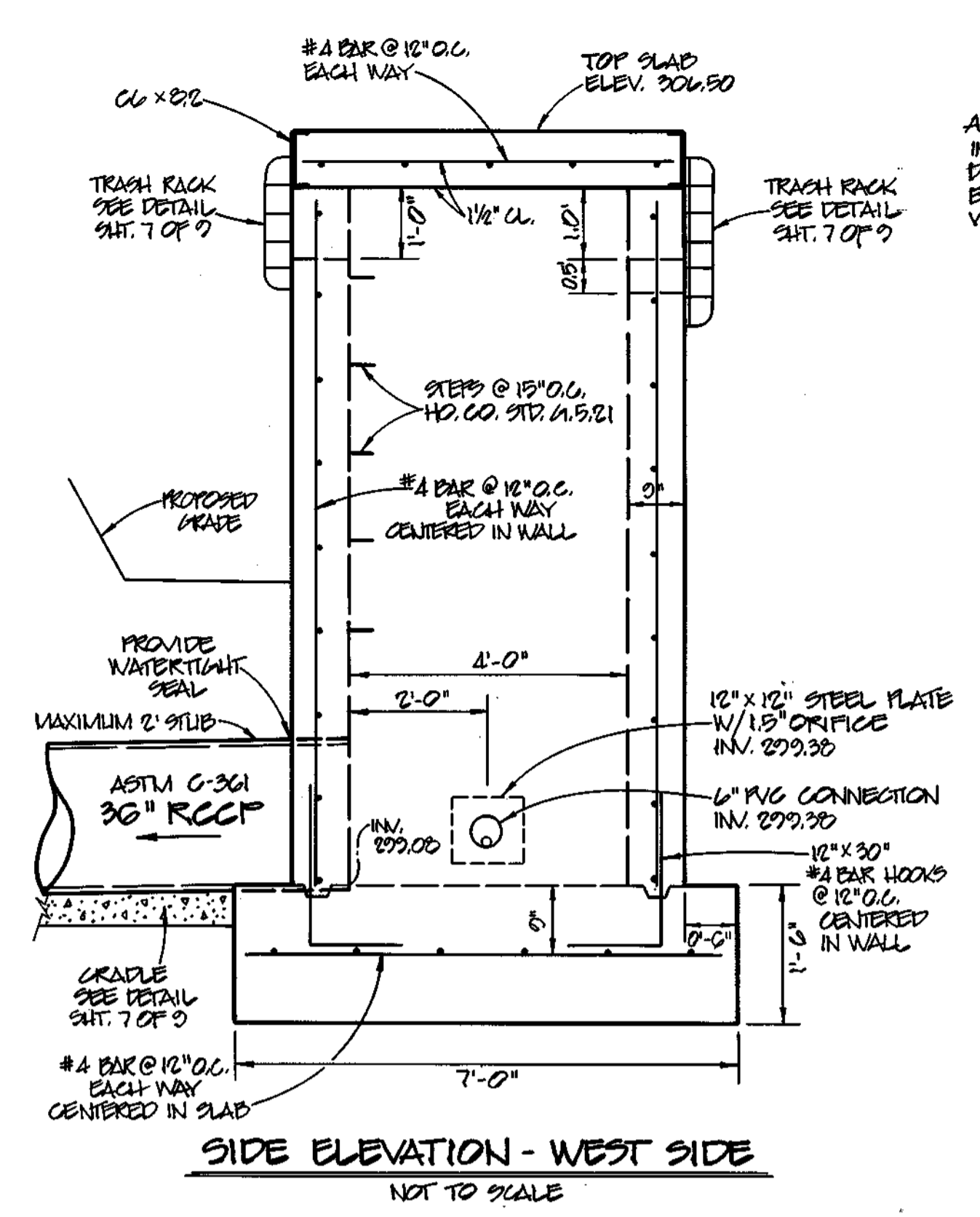
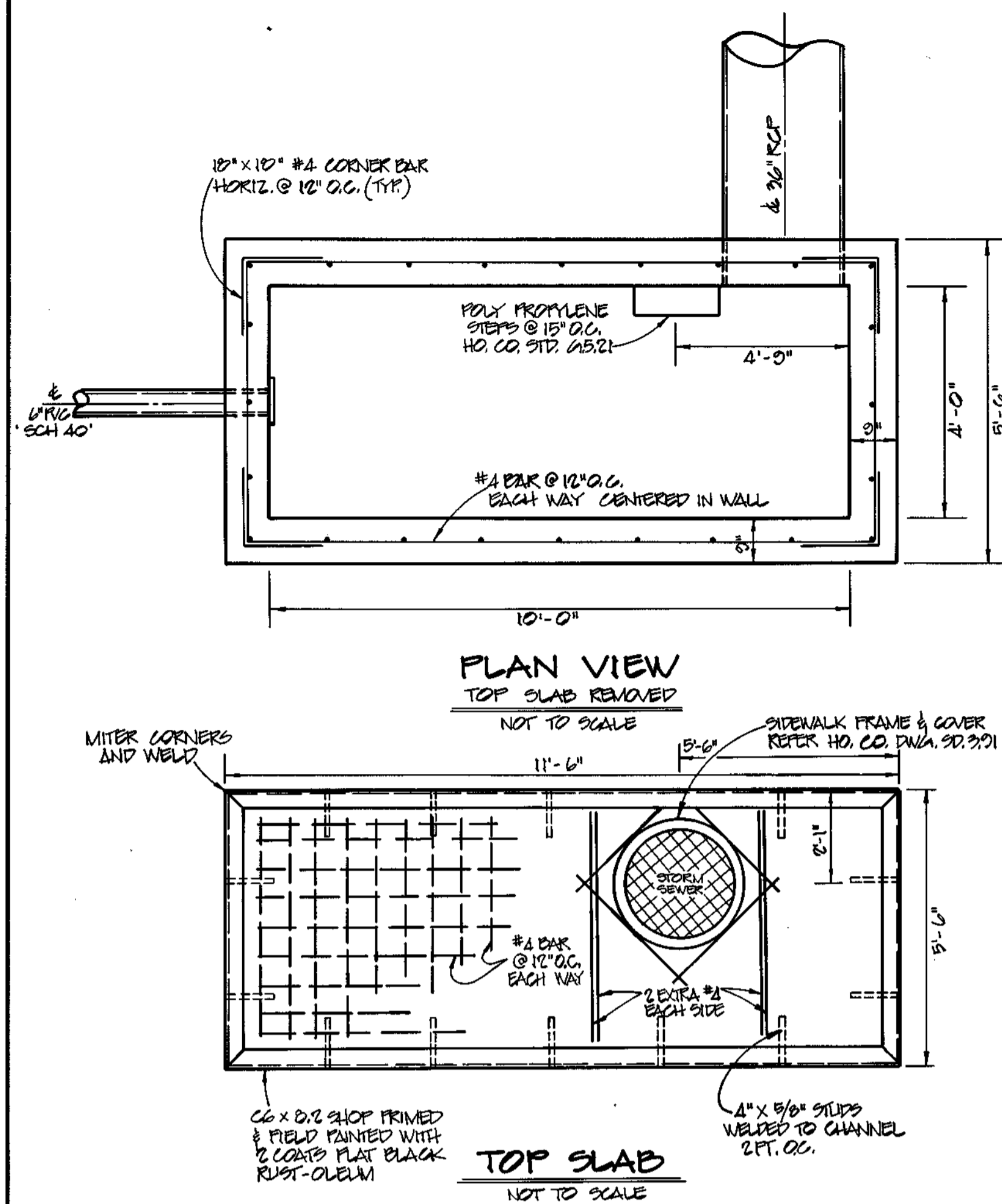
These plans have been reviewed for the Howard Soil Conservation District and meet technical requirements for small pond construction, soil erosion and sediment control.

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS

7135 MINTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

DESIGNED	TD	SEDIMENT AND EROSION CONTROL	SCALE
DRAWN	TD	DETAIL SHEET	NO SCALE
CHECKED	TD	LARK BROWN CROSSING	DRAWING
DATE	MAR 1998	LOTS 1-35	5 OF 9
		SIXTH (6th) ELECTION DISTRICT	JOB NO.
		HOWARD COUNTY, MARYLAND	96-033
		FOR: LARK BROWN LLP	FILE NO.
		1304B BALTIMORE NATIONAL PIKE	96-033-LS
		ELICOTT CITY, MARYLAND 21043	



These plans have been reviewed for the Howard Soil Conservation District and meet technical requirements for small pond construction, soil erosion and sediment control.

Chief, Department of Planning and Zoning
12/4/98

Chief, Development Engineering Division
12/7/98

Chief, Division of Land Development
12/7/98

Chief, Bureau of Highways
11/2/98

By The Developer:

We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an 'as-built' plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

Signature of Developer
4-7-98

APPROVED: DEPARTMENT OF PLANNING AND ZONING
12/4/98

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
11/2/98

By The Engineer:

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an 'as-built' plan of the pond within 30 days of completion.

Signature of Engineer
10-20-98

APPROVED: DEPARTMENT OF PLANNING AND ZONING
12/4/98

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
11/2/98

By The Engineer:

I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an 'as-built' plan of the pond within 30 days of completion.

Signature of Engineer
10-20-98

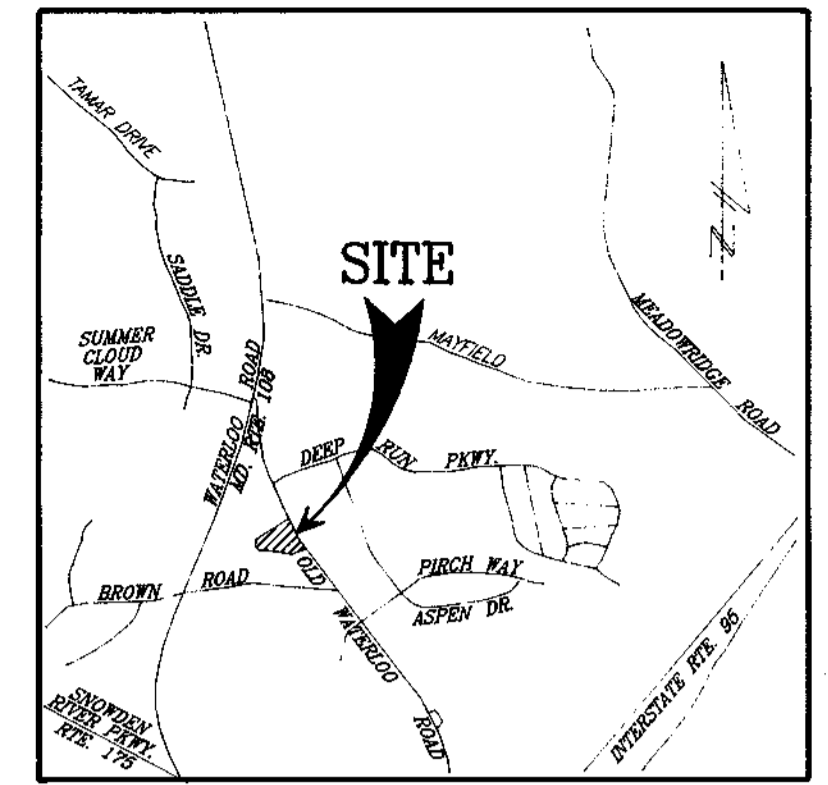
CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS

7135 MINTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

DESIGNED	TD	SCALE	AS SHOWN
DRAWN	BLP	DRAWING	6 OF 9
CHECKED	RS	JOB NO.	96-033
DATE	MAR. 1998	FILE NO.	96-033-D

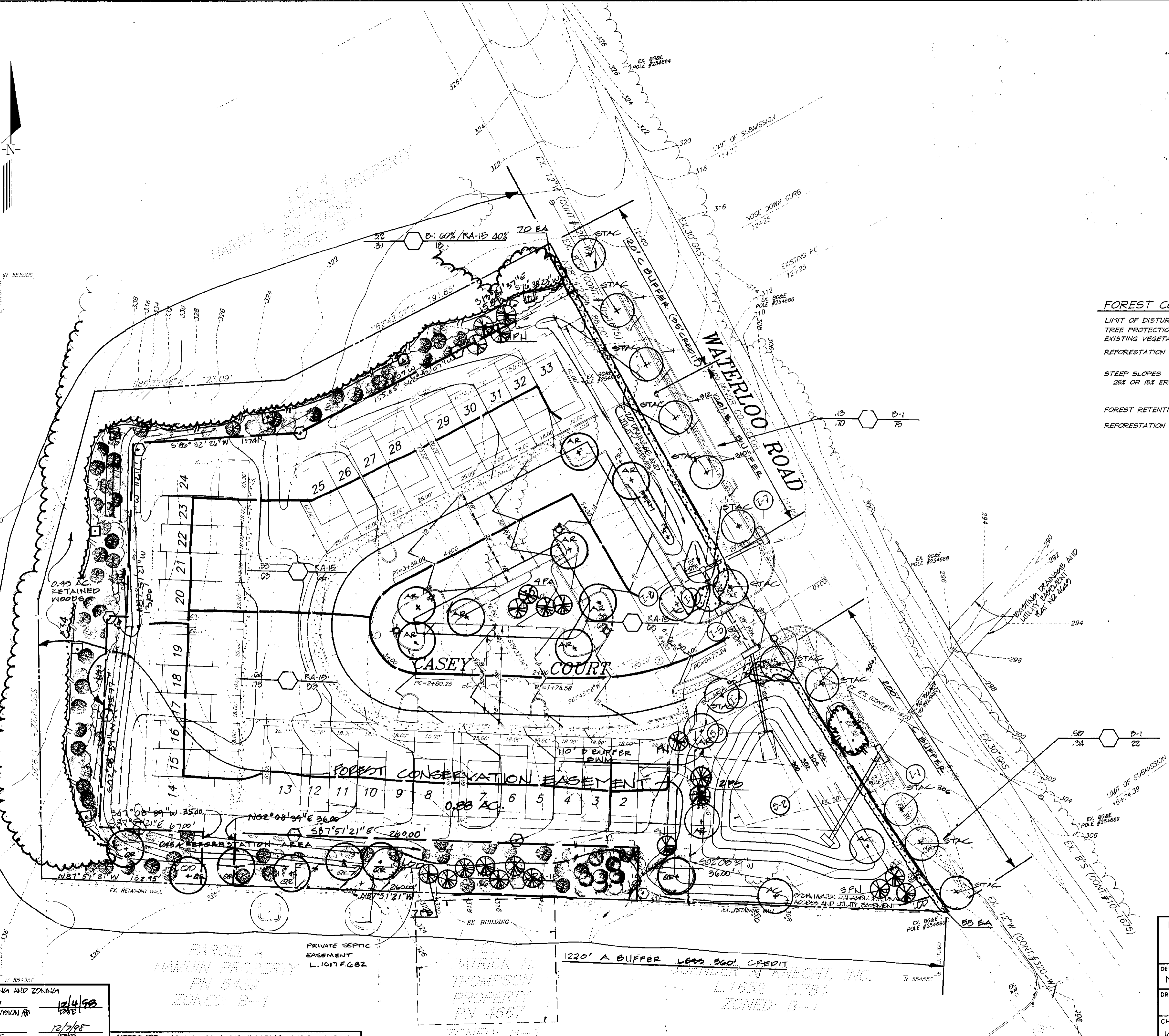
SWM PLAN AND DETAILS
LOTS 1-35
LARK BROWN CROSSING
TAX MAP 37, GRID 20, PARCELS 266, 515
SIXTH (6th) ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

FOR: LARK BROWN LLP
C/O FIRETTI CONSTRUCTION GROUP, INC.
10204 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21043



VICINITY MAP
Scale: 1"=2000'

- FOREST CONSERVATION LEGEND**
- LIMIT OF DISTURBED AREA — LOD
 - TREE PROTECTION FENCE —
 - EXISTING VEGETATION TO BE SAVED —
 - REFORESTATION AREA —
 - STEEP SLOPES
25% OR 15% ERODIBLE SOILS —
 - FOREST RETENTION SIGN —
 - REFORESTATION SIGN —



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 12/4/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 12/7/98
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 1/13/99
 CHIEF, BUREAU OF HIGHWAYS
 DATE

1220' A BUFFER LESS 600' CREDIT
 L.1652 F.784
 ZONED: B-1

CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD. 21045 • (410) 381-7500 - BALTO • (301) 621-8100 - WASH.		
DESIGNED MHH	FOREST CONSERVATION & LANDSCAPE PLAN LOTS 1-35 LARK BROWN CROSSING TAX MAP 37, GRID 20, PARCELS 206,515 SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND DP2 FILE REF: S-97-04	SCALE 1" = 30'
DRAWN BLH/MHM		DRAWING 8 OF 9
CHECKED WHT		JOB NO. 98-033
DATE MAR, 1999	OWNER: LARK BROWN PARTNERSHIP C/O FIRETI CONSTRUCTION GROUP, INC. 13008 BAITING NATIONAL PIKE ELLICOTT CITY, MARYLAND 21043	FILE NO. 98-033-LS Sht. 1 of 2

APPENDIX G
FOREST CONSERVATION WORKSHEET

FOREST CONSERVATION GENERAL NOTES:

- 1 WORK RELATED TO THIS FOREST CONSERVATION PLAN SHALL BE PERFORMED ONLY BY A LANDSCAPE CONTRACTOR EXPERIENCED IN REFORESTATION/FORESTATION PRACTICES.
- 2 THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16-120 OF THE HOWARD COUNTY CODE FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- 3 THE FOREST STAND DELINEATION WAS PREPARED BY:

PLANT MATERIAL STANDARDS:

- 1 PLANTS SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERMEN.
- 2 ALL LISTED PLANTS SHALL BE CONTAINERIZED STOCK WITH MINIMUM CALIPER OR HEIGHTS AS INDICATED.
- 3 NO ROOT PRUNING OR TOP PRUNING SHALL BE DONE AT THE JOB SITE.

PLANTING PROCEDURES:

- 1 REFER TO PLANTING & MAINTENANCE CALENDAR FOR APPROPRIATE PLANTING AND MAINTENANCE SEASONS.
- 2 THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING AND BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE CAUSED BY SAME.
- 3 PLANTING SHOULD COMMENCE WITHIN 24 HOURS OF DELIVERY OF PLANT MATERIAL TO THE SITE AND BE COMPLETED WITHIN ONE WEEK OF SAME.
- 4 UNPLANTED STOCK SHALL BE KEPT COOL, MOIST AND PROTECTED FROM SUN AND WIND AT ALL TIMES AND ONLY THAT WHICH CAN BE PLANTED IN ONE DAY SHALL BE BROUGHT TO THE FIELD.
- 5 PLANTING CONTAINERIZED STOCK:
 - A ALL REFORESTATION/FORESTATION PLANTING SHALL BE IN A RANDOM PATTERN AVOIDING THE APPEARANCE OF STRAIGHT ROWS.
 - B REMOVE THE PLANT EITHER BY CUTTING OR INVERTING THE CONTAINER. USE A KNIFE OR SHARP BLADE TO MAKE A 4 TO 5" CUTS THE LENGTH OF THE ROOT BALL, AND LOOSEN THE ROOTS FROM THE OUTSIDE OF THE ROOT BALL. SET THE PLANT STRAIGHT AND IN THE CENTER ON THE PIT.
 - C BACKFILL THE SIDES OF THE PIT WITH LOCAL SOIL MIXTURE AND TAMP FIRMLY AS THE PIT IS BEING FILLED.
 - D MAKE SURE THE PLANT REMAINS UPRIGHT DURING THE BACKFILLING PROCEDURE. TREES SHALL NOT HAVE MORE THAN 10% LEAN FOLLOWING BACKFILLING.
 - E LEFTOVER SOIL FROM THE PLANTING PIT EXCAVATION SHALL BE RAKED AROUND THE PLANT BEING CAREFUL NOT TO ALTER THE EXISTING GRADE SIGNIFICANTLY. A SAUGER SHALL NOT BE FORMED AROUND THE PLANT.
 - F WATER THE PLANT THOROUGHLY UNTIL SOIL IS SATURATED, EVEN IF IT IS RAINING.
 - G REMOVE TAGS, LABELS, STRINGS, ETC. FROM THE PLANT.
 - H APPLY SHREDED HARDWOOD BARK MULCH TO A DEPTH OF ONE INCH OVER THE ENTIRE PIT.
 - I FERTILIZE ONLY IN ACCORDANCE WITH RECOMMENDATIONS BASED ON A STATE LABORATORY SOIL TEST.

GUARANTEE AND REPLACEMENT:

- 1 THE LANDSCAPE CONTRACTOR SHALL MAINTAIN AND GUARANTEE THAT THE PLANTINGS SHALL BE HEALTHY AND VIGOROUS FOR A PERIOD OF ONE YEAR.
- 2 AT THE END OF THE WARRANTY PERIOD, THE OWNER'S REPRESENTATIVE SHALL MAKE AN INSPECTION OF THE PLANTINGS. ANY PLANTS THAT ARE NOT SUFFICIENTLY VIGOROUS OR THAT SHOW DIEBACK OF MORE THAN 25% SHALL BE REMOVED FROM THE SITE AND REPLACED IN MANNER AND KIND AT NO ADDITIONAL COST TO THE OWNER.

CONSTRUCTION PERIOD PROTECTION & MANAGEMENT:

- 1 THE CONSTRUCTION PERIOD EXTENDS FROM APPROVAL OF THE PROPOSAL UNTIL COMPLETION OF ALL SITE IMPROVEMENTS AND RELEASE OF DEVELOPERS AGREEMENTS AND BONDS.
- 2 ALL APPLICABLE CONSTRUCTION ACTIVITIES SHALL CONFORM TO THE TERMS AND CONDITIONS OF THE APPROVED SEDIMENT AND EROSION CONTROL PLAN.
- 3 TREE PROTECTION FENCING AND TEMPORARY SIGNAGE SHALL BE INSTALLED ALONG TREE SAVE AREAS THAT ARE WITHIN 50' OF ANY CONSTRUCTION ACTIVITIES AND IN ACCORDANCE WITH THE APPROVED SEDIMENT AND EROSION CONTROL PLAN.
- 4 PLACE PROTECTIVE FENCING & SIGNAGE AROUND SPECIMEN TREES AS SHOWN ON THE PLAN (IF APPLICABLE).
- 5 VEHICLES, EQUIPMENT, MACHINERY, DEBRIS, TEMPORARY STRUCTURES AND/OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL NOT BE PERMITTED IN THE RETENTION AREAS.
- 6 THE REFORESTATION/FORESTATION SHALL BE CLEARLY MARKED BY PERMANENT SIGNAGE AT 100' INTERVALS AS SHOWN ON THE PLAN. IF IT IS DETERMINED TO BE NECESSARY, CERTAIN SEGMENTS OF THE REFORESTATION/FORESTATION EDGES MAY BE ENCLOSED BY POSTS AND SMOOTH WIRE FENCE. THE FENCE SHALL BE OF SUFFICIENT CONSTRUCTION TO IMPEDE ENTRY AND MARKED APPROPRIATELY WITH CONSPICUOUS MARKERS AND/OR SIGNAGE.
- 7 ALL TEMPORARY FENCING SHALL BE REMOVED AT THE END OF CONSTRUCTION PERIOD WITH THE APPROVED SEDIMENT AND EROSION CONTROL PLAN.
- 8 SUMMARY OF CONSTRUCTION PERIOD SEQUENCE:
 - A OBTAIN GRADING PERMIT.
 - B INSTALL TEMPORARY TREE PROTECTION FENCING AND SIGNAGE ALONG LIMITS OF DISTURBANCE AND AROUND SPECIMEN TREES.
 - C PROCEED WITH CLEARING, GRADING, STABILIZATION OR CONSTRUCTION IN ACCORDANCE WITH APPROVED PLANS.
 - D AFTER COMPLETED CONSTRUCTION, REMOVE TEMPORARY TREE PROTECTION DEVICES.
 - E INSTALL PLANTINGS.
 - F PLACE PERMANENT PROTECTIVE DEVICES, I.E. SIGNAGE AND FENCING AS DEEMED NECESSARY.
 - G INITIATE POST CONSTRUCTION PROTECTION AND MANAGEMENT PROGRAM.

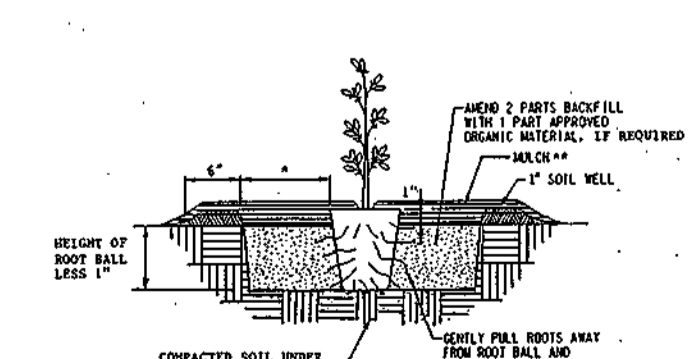
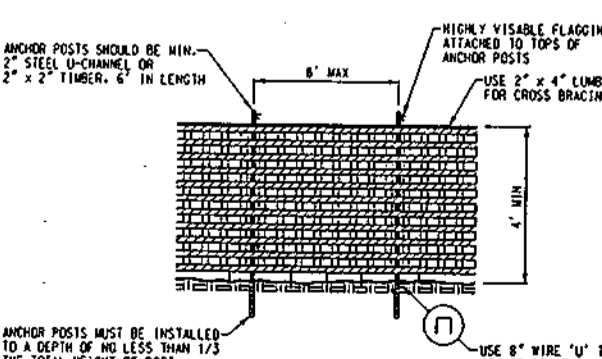
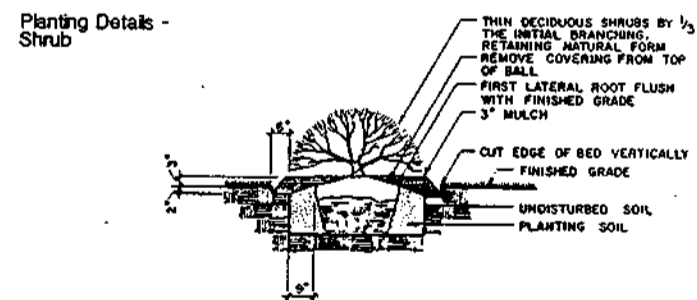
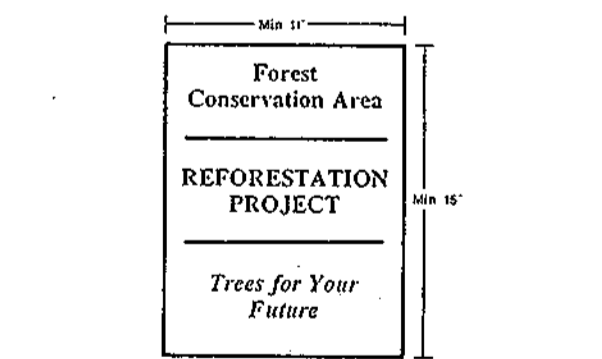
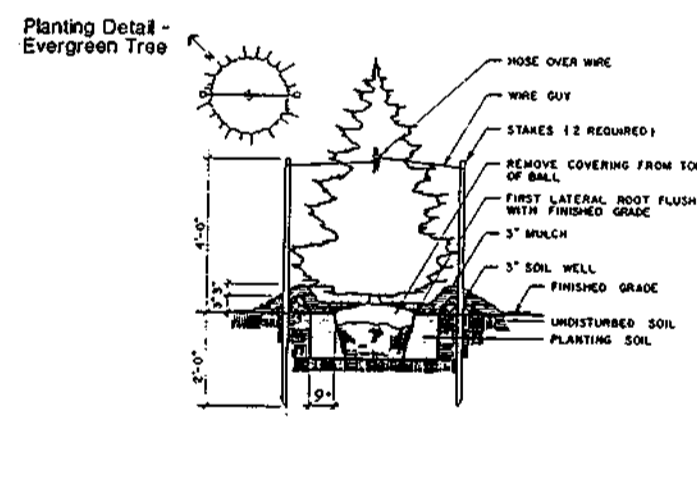
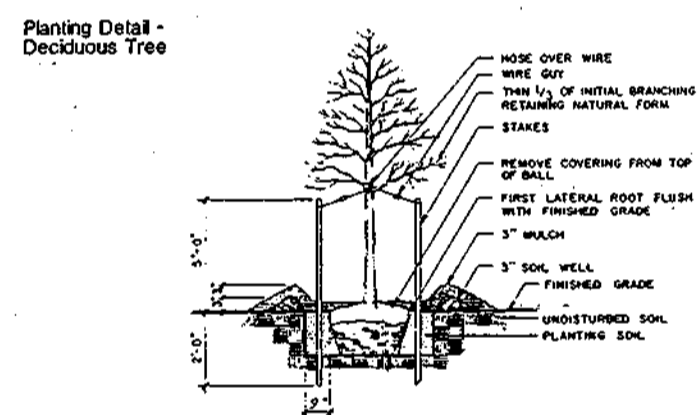
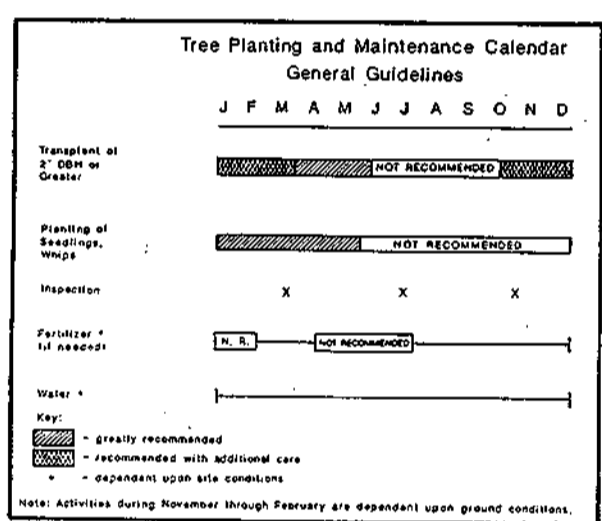
POST-CONSTRUCTION PROTECTION & MANAGEMENT:

- 1 THE POST-CONSTRUCTION PERIOD FOR WHICH THE OWNER IS RESPONSIBLE IS A 2 YEAR PERIOD DURING WHICH INSPECTIONS AND FOREST MANAGEMENT PRACTICES GUARANTEE SHORT-TERM SURVIVAL OR REPLACEMENT OF FOREST RESOURCES RETAINED OR CREATED UNDER THIS PLAN. THE PERIOD ENDS WITH THE RELEASE OF MAINTENANCE AGREEMENTS AND BONDS.
- 2 TWO INSPECTIONS PER YEAR BY A QUALIFIED PROFESSIONAL AT BEGINNING AND END OF THE GROWING SEASON, ARE RECOMMENDED IN ORDER TO TAKE REMEDIAL STEPS AS NECESSARY.
- 3 IF, AFTER ONE YEAR THE POSSIBILITY EXISTS THAT THE ORIGINAL PLANTING WILL NOT MEET SURVIVAL STANDARDS, THE APPLICANT MAY CHOOSE TO ESTABLISH REINFORCEMENT PLANTINGS. IF PLANT MORTALITY OR REFORESTATION/FORESTATION EXCEEDS 10% OF PLANTED MATERIALS AT THE END OF THE FIRST GROWING SEASON, SUCH MATERIAL SHOULD BE REPLACED TO BRING THE TOTAL NUMBER OF TREES TO 90% OF THE ORIGINAL TOTAL. SUCH MATERIAL SHALL BE INSTALLED BY THE BEGINNING OF THE SECOND GROWING SEASON. IF AT THE END OF THE SECOND GROWING SEASON, SURVIVAL RATE DROPS BELOW 75%, SUCH MATERIAL AS NEEDED TO GUARANTEE A 75% SURVIVAL RATE BY THE END OF THE SUBSEQUENT YEAR SHALL BE INSTALLED.
- 4 AT THE END OF THE POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD, THE DESIGNATED RESPONSIBLE PROFESSIONAL SHALL CONVEY TO THE ADMINISTRATOR OF HOWARD COUNTY FOREST CONSERVATION PROGRAM CERTIFICATION THAT ALL FOREST CONSERVATION AREAS HAVE REMAINED INTACT OR HAVE BEEN RESTORED TO THE APPROPRIATE CONDITION, AND THAT THE STIPULATED SURVIVAL RATES ARE IN PLACE.

	ACRES (100 AC)
I. BASIC SITE DATA	
GROSS SITE AREA	3.81
AREA WITHIN 100 YEAR FLOODPLAIN	0.15
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE)	0.15
NET TRACT AREA	3.66
LAND USE CATEGORY (R-R1D, R-RMD, R-S, C-10, I)	
II. INFORMATION FOR CALCULATIONS	
A. NET TRACT AREA	3.66
B. REFORESTATION THRESHOLD (20% x A)	0.73
C. AFFORESTATION MINIMUM (15% x A)	0.55
D. EXISTING FOREST ON NET TRACT AREA	1.77
E. FOREST AREAS TO BE CLEARED	1.89
F. FOREST AREAS TO BE RETAINED	0.39
IV. REFORESTATION CALCULATIONS	
A. NET TRACT AREA	3.66
B. REFORESTATION THRESHOLD (20% x A)	0.73
D. EXISTING FOREST ON NET TRACT AREA	1.77
E. FOREST AREAS TO BE CLEARED	1.89
F. FOREST AREAS TO BE RETAINED	0.39
G. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD (D - B, IF F is less than B, Alternate 1)	1.01
H. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD (B - F, if applicable)	0.41
I. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD (F - B, Retention Credit, if applicable)	
2. Clearing below the threshold	
If forest areas to be retained are less than the reforestation threshold (if F is less than B), the following calculations apply:	
REFORESTATION FOR CLEARING ABOVE THRESHOLD G x 1/4	0.25
REFORESTATION FOR CLEARING BELOW THRESHOLD H x 2	0.82
TOTAL REFORESTATION REQUIRED (G x 1/4) + (H x 2)	1.07
Since clearing occurs below the threshold, no forest retention credit is possible.	

FOREST CONSERVATION IS BASED ON MASS GRADING THE ENTIRE SITE TO THE LIMITS SHOWN.

PROPOSED FOREST CONSERVATION TABULATION	
1 EXISTING FOREST TO BE PROTECTED	0.36 AC.
2 PROPOSED REFORESTATION AREA	0.45 AC.
ON-SITE	0.45 AC.
OFF-SITE (To be determined prior to plat signature)	0.02 AC.
TOTAL REFORESTATION REQUIRED	1.07 AC.
3 TOTAL ON-SITE FOREST CONSERVATION EASEMENT	0.80 AC.



1. IN PLACE ORANGE OR BLUE PLASTIC MESH FENCE FOR FOREST PROTECTION DEVICE. ONLY CONSTRUCTION PLAN REVIEW PROCESS.

2. MACHINERY OR RETENTION AREA SHALL BE CLEARLY MARKED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.

3. MACHINERY OR RETENTION AREA SHALL BE CLEARLY MARKED AND PLACES FENCE TO INCLUDE TREE POSTS.

4. HARD CHANGE TO CRITICAL ROOT ZONE. DO NOT CHANGE OR REMOVE LARGE ROOTS WITH INSTALLING POSTS.

5. PROTECTIVE SIGNAGE IS REQUIRED.

6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

PLASTIC MESH TREE PROTECTION FENCE
NO SCALE

1. ON FLAT TO MODERATELY SLOPING SITES, THE PLANT PIT IS 30\"/>

2. ON STEEP SLOPES OR UNUSUAL SITES, THE PLANT PIT IS 2.0\"/>

3. THE DIAMETER OF THE ROOT BALL & THE SOIL WELL IS 10\"/>

4. HOLE DEPTH FOR SEEDLINGS IS ONE INCH.

5. HOLE DEPTH FOR LARGER STOCK IS TWO INCHES.

REFORESTATION DETAIL - CONTAINER PLANT
NO SCALE

SCHEDULE D - STORMWATER MANAGEMENT AREA LANDSCAPING		
LINEAR FEET OF PERIMETER		110/B
NUMBER OF TREES REQUIRED		
Shade Trees	1:50	2
Evergreen Trees	1:40	2
CREDIT FOR EXISTING VEGETATION (No, Yes and %)		
CREDIT FOR OTHER LANDSCAPING (No, Yes and %)		
NUMBER OF TREES PROVIDED		
Shade Trees		2
Evergreen Trees		2
Other Trees (2:1 substitution)		

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH PROVISION OF SECTION 16-124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED (SCHEDULES A, B & D) TREES \$5000 IN THE AMOUNT OF \$12,750 IS PART OF THE DEVELOPERS AGREEMENT.

STREET TREES ARE BONDED UNDER THE ROAD CONSTRUCTION PLAN.

SCHEDULE A - PERIMETER LANDSCAPE EDGE				
CATEGORY	ADJ TO ROADWAYS	ADJ TO PER. PROPERTIES	TOTALS	
LANDSCAPE TYPE	E	A	C	
LINEAR FEET OF ROADWAY	120'	1220'	320'	
FRONTAGE/PERIMETER				
CREDIT FOR EX. VEGETATION	NO	YES, 660'	YES, 35'	
CREDIT FOR BERM	NO	NO	NO	
NUMBER OF TREES REQ.		(660') 11	(285') 7	
Shade Trees	3			21
Evergreen Trees	na	na	14	14
Shrubs	30	na	na	30
NUMBER OF PLANTS PROV.			1 PROP. & 2 EXIST.	14
Shade Trees	3	8	4	
Evergreen Trees		7	*	11
Shrubs	30		80	110

* DUE TO SITE RESTRICTIONS, I.E. EMBANKMENT AND ABOVEGROUND UTILITIES A HEDGE PLANTING IS PROPOSED ADJACENT TO THE STORMWATER MANAGEMENT POND AND UTILITY EASEMENT.

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF PARKING SPACES	76
NUMBER OF TREES REQUIRED (1:10 SPACES)	8**
NUMBER OF TREES PROVIDED	
Shade Trees	6
Other Trees (2:1 substitution)	4

** SATISFIES STREET TREE REQUIREMENT

SCHEDULE C - RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING	
NUMBER OF DWELLING UNITS	33
NUMBER OF TREES REQUIRED (1:1 DU SFA; 1:3 DU APTS)	33
NUMBER OF TREES PROVIDED	
Shade Trees	33***
Other Trees (2:1 substitution)	

*** TO BE PROVIDED UNDER SDP

PLANT SCHEDULE

KEY	QUANT	PLANT NAME	SIZE	REMARKS
SHADE TREES				
AC	3	ACER CAMPESTRE Hedge Maple	2 - 2 1/2" Cal. 8 - 10' Ht.	B&B Heavy
AR	10	ACER RUBRUM 'RED SUNSET' Red Sunset Maple	2 1/2 - 3" Cal. 12 - 14' Ht.	B&B Heavy
QR	7	QUERCUS RUBRA Red Oak	2 1/2 - 3" Cal. 12 - 14' Ht.	B&B Heavy
EVERGREEN TREES				
PA	4	PICEA ABIES Norway Spruce	6 - 8' Ht.	B&B Heavy
PN	9	PINUS NIGRA Austrian Pine	6 - 8' Ht.	B&B Heavy
PS	8	PINUS STROBUS Eastern White Pine	6 - 8' Ht.	B&B Heavy
SHRUBS				
EA	125	EUONYMUS ALATUS 'COMPACTA' Dwarf Winged Euonymus	18 - 24" Ht. at four feet on center	B&B or Container
STREET TREES				
STAC	13	ACER CAMPESTRE Hedge Maple	2 - 2 1/2" Cal. 8 - 10' Ht.	B&B Heavy
REFORESTATION				
	25	ACER RUBRUM Red Maple	6 - 12" Ht. Container	11' on center in a random pattern
	25	CARYA TOMENTOSA Mockernut Hickory	6 - 12" Ht. Container	11' on center in a random pattern
	25	QUERCUS RUBRA Red Oak	6 - 12" Ht. Container	11' on center in a random pattern
	25	RHUS GLABRA Smooth Sumac	6 - 12" Ht. Container	11' on center in a random pattern
	25	ROBINIA PSEUDOACACIA Black Locust	6 - 12" Ht. Container	11' on center in a random pattern
	25	SASSAFRAS ALBIDUM Sassafras	6 - 12" Ht. Container	11' on center in a random pattern
6 LB.S		SYLVIA NATIVE NURSERY FIELD AND FORES' SEED MIX		Combine both mixes and hydroseed between trees on cultivated and raked soil.
12 LB.S		SYLVIA NATIVE NURSERY MEADOW SEED MIX		Wildflowers and Grasses

- NOTES:
1. LANDSCAPE PLANTING SPECIFICATIONS SHALL BE AS PER THE LCA LANDSCAPE SPECIFICATION GUIDELINES, 4TH EDITION, 1993.
 2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
 3. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Howard Shull Jr. 11/27/98
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chad J. Hamilton 12/4/98
 Chief, Development Engineering Division

Candy Hamilton 12/7/98
 Chief, Division of Land Development

CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS

7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

DESIGNED	MJM	SCALE	NO SCALE
DRAWN	MJM	DRAWING	9 OF 9
CHECKED		JOB NO.	96-033
DATE	MAR. 1998	FILE NO.	96-033-L3

FOR: LARK BROWN LLP
 10804B BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21048

10-2-98

APPENDIX G
FOREST CONSERVATION WORKSHEET

FOREST CONSERVATION GENERAL NOTES:

- 1 WORK RELATED TO THIS FOREST CONSERVATION PLAN SHALL BE PERFORMED ONLY BY A LANDSCAPE CONTRACTOR EXPERIENCED IN REFORESTATION/AFFORESTATION PRACTICES.
- 2 THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.120 OF THE HOWARD COUNTY CODE FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- 3 THE FOREST STAND DELINEATION WAS PREPARED BY:

PLANT MATERIAL STANDARDS:

- 1 PLANTS SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE "AMERICAN STANDARD FOR NURSERY STOCK" PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- 2 ALL LISTED PLANTS SHALL BE CONTAINERIZED STOCK WITH MINIMUM CALIPER OR HEIGHTS AS INDICATED.
- 3 NO ROOT PRUNING OR TOP PRUNING SHALL BE DONE AT THE JOB SITE.

PLANTING PROCEDURES:

- 1 REFER TO PLANTING & MAINTENANCE CALENDAR FOR APPROPRIATE PLANTING AND MAINTENANCE SEASONS.
- 2 THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING AND BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE CAUSED BY SAME.
- 3 PLANTING SHOULD COMMENCE WITHIN 24 HOURS OF DELIVERY OF PLANT MATERIAL TO THE SITE AND BE COMPLETED WITHIN ONE WEEK OF SAME.
- 4 UNPLANTED STOCK SHALL BE KEPT COOL, MOIST AND PROTECTED FROM SUN AND WIND AT ALL TIMES AND ONLY THAT WHICH CAN BE PLANTED IN ONE DAY SHALL BE BROUGHT TO THE FIELD.
- 5 PLANTING CONTAINERIZED STOCK:
 - A ALL REFORESTATION/AFFORESTATION PLANTING SHALL BE IN A RANDOM PATTERN AVOIDING THE APPEARANCE OF STRAIGHT ROWS.
 - B REMOVE THE PLANT EITHER BY CUTTING OR INVERTING THE CONTAINER.
 - C USE A KNIFE OR SHARP BLADE TO MAKE A TO 5" CUTS THE LENGTH OF THE ROOT BALL, AND LOOSEN THE ROOTS FROM THE OUTSIDE OF THE ROOT BALL.
 - D SET THE PLANT STRAIGHT AND IN THE CENTER ON THE PIT.
 - E BACKFILL THE SIDES OF THE PIT WITH LOCAL SOIL MIXTURE AND TAMP FIRMLY AS THE PIT IS BEING FILLED.
 - F MAKE SURE THE PLANT REMAINS ERECT DURING THE BACKFILLING PROCEDURE.
 - G TREES SHOULD NOT HAVE MORE THAN 10% LEAN FOLLOWING BACKFILLING.
 - H LEFTOVER SOIL FROM THE PLANTING PIT EXCAVATION SHALL BE RAKED AROUND THE PLANT BEING CAREFUL NOT TO ALTER THE EXISTING GRADE SIGNIFICANTLY.
 - I A SAUCER SHALL NOT BE FORMED AROUND THE PLANT.
 - J RAINING. THE PLANT THOROUGHLY UNTIL SOIL IS SATURATED, EVEN IF IT IS RAINING.
 - K REMOVE TAGS, LABELS, STRINGS, ETC. FROM THE PLANT.
 - L APPLY SHREDDED HARDWOOD BARK MULCH TO A DEPTH OF ONE INCH OVER THE ENTIRE PIT.
 - M FERTILIZE ONLY IN ACCORDANCE WITH RECOMMENDATIONS BASED ON A STATE LABORATORY SOIL TEST.

GUARANTEE AND REPLACEMENT:

- 1 THE LANDSCAPE CONTRACTOR SHALL MAINTAIN AND GUARANTEE THAT THE PLANTINGS SHALL BE HEALTHY AND VIGOROUS FOR A PERIOD OF ONE YEAR.
- 2 AT THE END OF THE WARRANTY PERIOD, THE OWNER'S REPRESENTATIVE SHALL MAKE AN INSPECTION OF THE PLANTINGS. ANY PLANTS THAT ARE NOT SUFFICIENTLY VIGOROUS OR THAT SHOW DIE-BACK OF MORE THAN 25% SHALL BE REMOVED FROM THE SITE AND REPLACED IN MANNER AND KIND AT NO ADDITIONAL COST TO THE OWNER.

CONSTRUCTION PERIOD PROTECTION & MANAGEMENT:

- 1 THE CONSTRUCTION PERIOD EXTENDS FROM APPROVAL OF THE PROPOSAL UNTIL COMPLETION OF ALL SITE IMPROVEMENTS AND RELEASE OF DEVELOPER AGREEMENTS AND BONDS.
- 2 ALL APPLICABLE CONSTRUCTION ACTIVITIES SHALL CONFORM TO THE TERMS AND CONDITIONS OF THE APPROVED SEDIMENT AND EROSION CONTROL PLAN.
- 3 TREE PROTECTION FENCING AND TEMPORARY SIGNAGE SHALL BE INSTALLED ALONG TREE SAVE AREAS THAT ARE WITHIN 50' OF ANY CONSTRUCTION ACTIVITIES AND IN ACCORDANCE WITH THE APPROVED SEDIMENT AND EROSION CONTROL PLAN.
- 4 PLACE PROTECTIVE FENCING & SIGNAGE AROUND SPECIFIC TREES AS SHOWN ON THE PLAN, (IF APPLICABLE).
- 5 VEHICLES, EQUIPMENT, MACHINERY, DEBRIS, TEMPORARY STRUCTURES AND/OR EXCESSIVE PAVED TRAFFIC SHALL NOT BE PERMITTED IN THE RETENTION AREAS.
- 6 THE REFORESTATION/AFFORESTATION SHALL BE CLEARLY MARKED BY PERMANENT SIGNAGE AT 100' INTERVALS AS SHOWN ON THE PLAN. IF IT IS DETERMINED TO BE NECESSARY, CERTAIN SEGMENTS OF THE REFORESTATION/AFFORESTATION EDGES MAY BE ENCLOSED BY POSTS AND SMOOTH WIRE FENCE. THE FENCE SHALL BE OF SUFFICIENT CONSTRUCTION TO IMPEDE ENTRY AND MARKED APPROPRIATELY WITH CONSPICUOUS MARKERS AND/OR SIGNAGE.
- 7 ALL TEMPORARY FENCING SHALL BE REMOVED AT THE END OF CONSTRUCTION PERIOD WITH THE APPROVED SEDIMENT AND EROSION CONTROL PLAN.
- 8 SUMMARY OF CONSTRUCTION PERIOD SEQUENCE:
 - A OBTAIN GRADING PERMIT.
 - B INSTALL TEMPORARY TREE PROTECTION FENCING AND SIGNAGE ALONG LIMITS OF DISTURBANCE AND AROUND SPECIMEN TREES.
 - C PROCEED WITH CLEARING, GRADING, STABILIZATION OR CONSTRUCTION IN ACCORDANCE WITH APPROVED PLANS.
 - D AFTER COMPLETED CONSTRUCTION, REMOVE TEMPORARY TREE PROTECTION DEVICES.
 - E INSTALL PLANTINGS.
 - F PLACE PERMANENT PROTECTIVE DEVICES, I.E. SIGNAGE AND FENCING AS DEEMED NECESSARY.
 - G INITIATE POST CONSTRUCTION PROTECTION AND MANAGEMENT PROGRAM.

POST-CONSTRUCTION PROTECTION & MANAGEMENT:

- 1 THE POST-CONSTRUCTION PERIOD FOR WHICH THE OWNER IS RESPONSIBLE IS A 2 YEAR PERIOD DURING WHICH INSPECTIONS AND FOREST MANAGEMENT PRACTICES GUARANTEE SHORT-TERM SURVIVAL OR REPLACEMENT OF FOREST RESOURCES RETAINED OR CREATED UNDER THIS PLAN. THE PERIOD ENDS WITH THE RELEASE OF MAINTENANCE AGREEMENTS AND BONDS.
- 2 TWO INSPECTIONS PER YEAR BY A QUALIFIED PROFESSIONAL AT BEGINNING AND END OF THE GROWING SEASON, ARE RECOMMENDED IN ORDER TO TAKE REMEDIAL STEPS AS NECESSARY.
- 3 IF, AFTER ONE YEAR THE POSSIBILITY EXISTS THAT THE ORIGINAL PLANTING WILL NOT MEET SURVIVAL STANDARDS, THE APPLICANT MAY CHOOSE TO ESTABLISH REINFORCEMENT PLANTINGS. IF PLANT MORTALITY OR REFORESTATION/AFFORESTATION EXCEEDS 10% OF PLANTED MATERIALS AT THE END OF THE FIRST GROWING SEASON, SUCH MATERIAL SHOULD BE REPLACED TO BRING THE TOTAL NUMBER OF TREES TO 90% OF THE ORIGINAL TOTAL. SUCH MATERIAL SHALL BE INSTALLED BY THE BEGINNING OF THE SECOND GROWING SEASON. IF AT THE END OF THE SECOND GROWING SEASON, SURVIVAL RATE DROPS BELOW 75%, SUCH MATERIAL AS NEEDED TO GUARANTEE A 75% SURVIVAL RATE BY THE END OF THE SUBSEQUENT YEAR SHALL BE INSTALLED.
- 4 AT THE END OF THE POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD, THE DESIGNATED RESPONSIBLE PROFESSIONAL SHALL CONVEY TO THE ADMINISTRATOR OF HOWARD COUNTY FOREST CONSERVATION PROGRAM CERTIFICATION THAT ALL FOREST CONSERVATION AREAS HAVE REMAINED INTACT OR HAVE BEEN RESTORED TO THE APPROPRIATE CONDITION, AND THAT THE STIPULATED SURVIVAL RATES ARE IN PLACE.

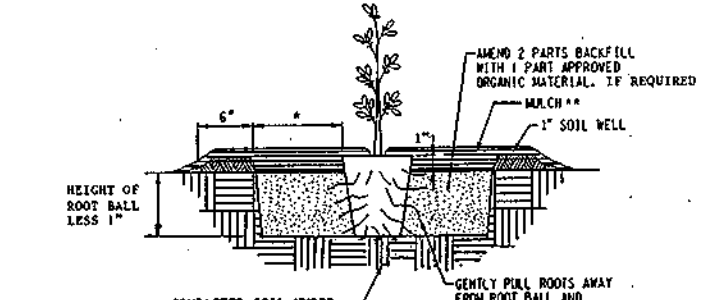
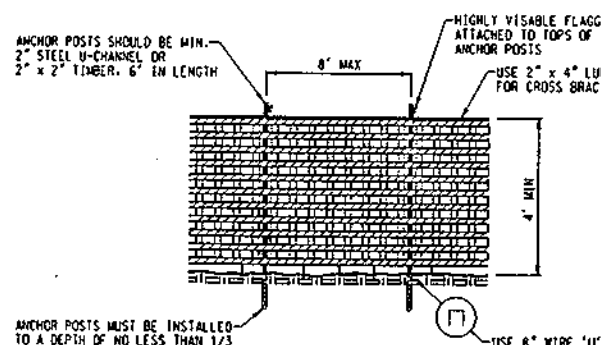
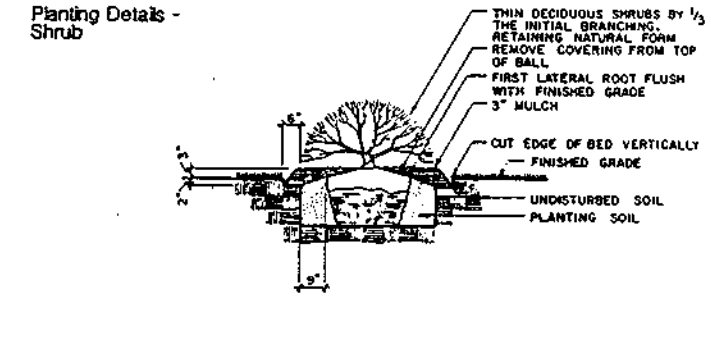
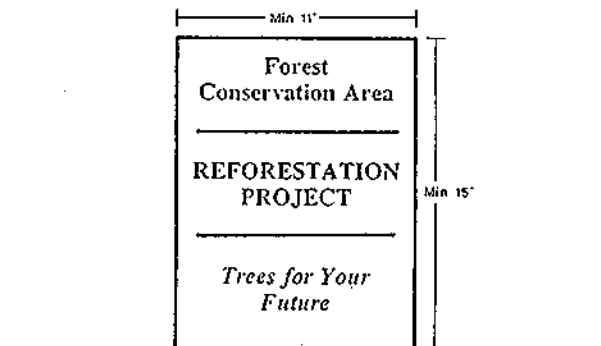
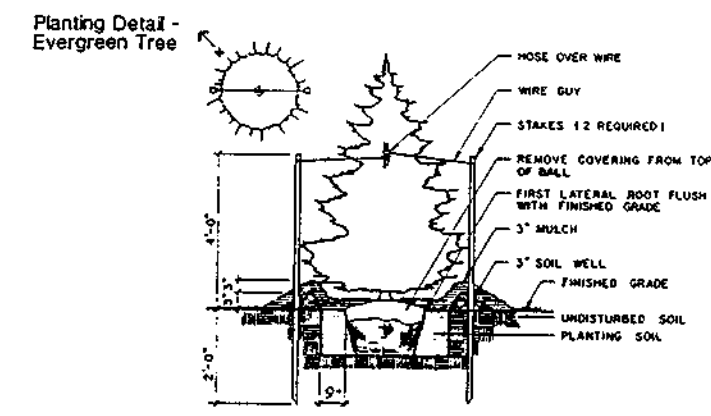
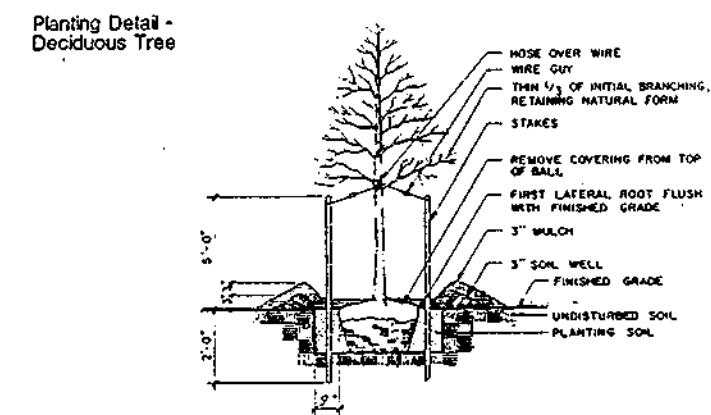
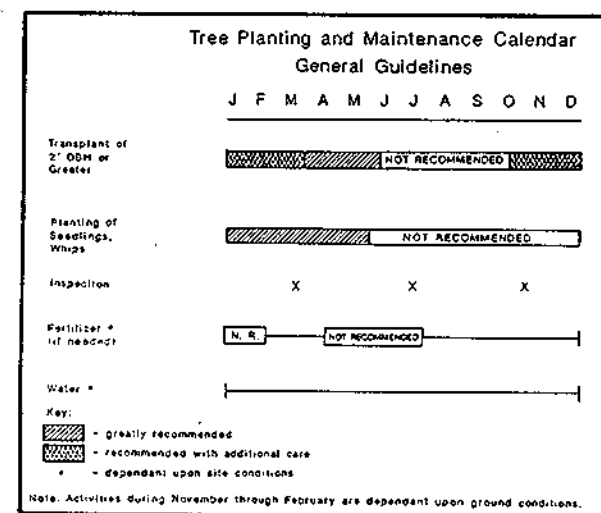
I. BASIC SITE DATA		ACRES (150 AC)
GROSS SITE AREA		3.81
AREA WITHIN 100 YEAR FLOODPLAIN		0.16
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE)		3.81
NET TRACT AREA		
LAND USE CATEGORY (R-RLD, R-RMD, R-S, CVO, I)		

II. INFORMATION FOR CALCULATIONS		
A. NET TRACT AREA		3.81
B. REFORESTATION THRESHOLD (1.20 % x A)		0.46
C. AFFORESTATION MINIMUM (1.5 % x A)		0.57
D. EXISTING FOREST ON NET TRACT AREA		1.77
E. FOREST AREAS TO BE CLEARED		1.84
F. FOREST AREAS TO BE RETAINED		0.39

IV. REFORESTATION CALCULATIONS		
A. NET TRACT AREA		3.81
B. REFORESTATION THRESHOLD (1.20 % x A)		0.46
C. EXISTING FOREST ON NET TRACT AREA		1.77
D. FOREST AREAS TO BE CLEARED		1.84
E. FOREST AREAS TO BE RETAINED		0.39
F. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD (D - B, if F equals or is greater than B, Alternate 1)		1.38
G. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD (D - B, if F is less than B, Alternate 2)		0.46
H. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD (D - F, if applicable)		0.46
I. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD (F - B, Retention Credit, if applicable)		

FOREST CONSERVATION IS BASED ON MASS GRADING THE ENTIRE SITE TO THE LIMITS SHOWN.

PROPOSED FOREST CONSERVATION TABULATION		
1	EXISTING FOREST TO BE PROTECTED	0.36 AC.
2	PROPOSED REFORESTATION AREA	
	ON-SITE	0.45 AC.
	OFF-SITE (To be determined prior to plat signature)	0.62 AC.
	TOTAL REFORESTATION REQUIRED	1.07 AC.
3	TOTAL ON-SITE FOREST CONSERVATION EASEMENT	0.80 AC.



SCHEDULE D - STORMWATER MANAGEMENT AREA LANDSCAPING			
LINEAR FEET OF PERIMETER		110/B	
NUMBER OF TREES REQUIRED			
Shade Trees	1:50	2	2
Evergreen Trees	1:40	2	3
CREDIT FOR EXISTING VEGETATION (No, Yes and %)			1
CREDIT FOR OTHER LANDSCAPING (No, Yes and %)			
NUMBER OF TREES PROVIDED			
Shade Trees		1	1
Evergreen Trees		4	2
Other Trees (2:1 substitution)			3

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH PROVISION OF SECTION 16-124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED (SCHEDULES A, B & D) TREES & SHRUBS IN THE AMOUNT OF \$12,950 IS PART OF THE DEVELOPERS AGREEMENT.

STREET TREES ARE BONDED UNDER THE ROAD CONSTRUCTION PLAN.

SCHEDULE A - PERIMETER LANDSCAPE EDGE				S.T.E.	
CATEGORY	ADJ TO ROADWAYS	ADJ TO PER. PROPERTIES	TOTALS		
LANDSCAPE TYPE	E 120'	A 1220'	C 320'		
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER					
CREDIT FOR EX. VEGETATION	NO	YES, 100%	YES, 65%		
CREDIT FOR BERM	NO	NO	NO		
NUMBER OF PLANTS REQ.					
Shade Trees	3	(200)	(255)	12	12 } = 215
Evergreen Trees	na	3	6	13	
Shrubs	30	na	na	30	
NUMBER OF PLANTS PROV.					
Shade Trees		4	7	7	7 } = 33
Evergreen Trees		27	27	13	
Shrubs		30	12	12	

* DUE TO SITE RESTRICTIONS, I.E. EMBANKMENT AND ABOVEGROUND UTILITIES A HEDGE PLANTING IS PROPOSED ADJACENT TO THE STORMWATER MANAGEMENT POND AND UTILITY EASEMENT.

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING				S.T.E.	
NUMBER OF PARKING SPACES		76			
NUMBER OF TREES REQUIRED (1:10 SPACES)		8**			
NUMBER OF TREES PROVIDED					
Shade Trees		6			6 } = 6
Other Trees (2:1 substitution)		4			

** SATISFIES STREET TREE REQUIREMENT

SCHEDULE C - RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING			
NUMBER OF DWELLING UNITS		33	
NUMBER OF TREES REQUIRED (1 DU SFA, 1:3 DU APTS)		33	
NUMBER OF TREES PROVIDED			
Shade Trees		33***	
Other Trees (2:1 substitution)			

*** TO BE PROVIDED UNDER SDP

PLANT SCHEDULE KEY	QUANT	PLANT NAME	SIZE	REMARKS
SHADE TREES				
AR	11	ACER RUBRUM 'RED SUNSET' Red Sunset Maple	2 1/2 - 3" Cal. 12 - 14' Ht.	B&B Heavy
EVERGREEN TREES				
PS	25	PINUS STROBUS Eastern White Pine	8 - 10' Ht.	B&B Heavy
SHRUBS				
EA	125	EUONYMUS ALATUS 'COMPACTA' Dwarf Winged Euonymus	18 - 24" Ht. at four feet on center	B&B or Container
STREET TREES				
STAC	12	ACER CAMPESTRE Hedge Maple	2 - 2 1/2" Cal. 8 - 10' Ht.	B&B Heavy
REFORESTATION				
	25	ACER RUBRUM Red Maple	6 - 12" Ht. Container	11' on center in a random pattern
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6 L.B.S		SYLVIA NATIVE NURSERY FIELD AND FORES' SEED MIX Grasses and Legumes		Combine both mixes and hydroseed between trees on cultivated and raked soil.
12 L.B.S		SYLVIA NATIVE NURSERY MEADOW SEED MIX Wildflowers and Grasses		

- NOTES:
1. LANDSCAPE PLANTING SPECIFICATIONS SHALL BE AS PER THE LCA LANDSCAPE SPECIFICATION GUIDELINES, 4TH EDITION, 1993.
 2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
 3. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.



CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA, MARYLAND 21046 • (301) 621-8100 WASH. AG-BUILT

DESIGNED	MHM	SCALE	NO SCALE
DRAWN	MHM	DRAWING	LARK BROWN CROSSING
CHECKED	MHM	JOB NO.	9 OF 9
DATE	9-26-00	FILE NO.	96-033-LS

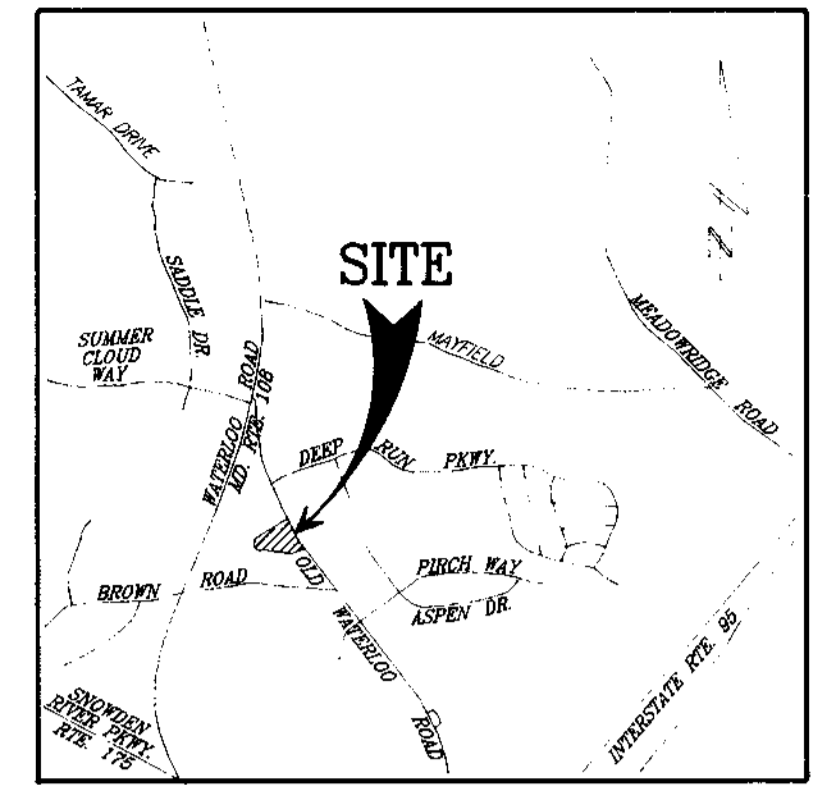
FOR: LARK BROWN LLP
10304B BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21048

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
11/27/98
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
12/4/98
Chief, Development Engineering Division

APPROVED: DEPARTMENT OF PLANNING AND ZONING
12/7/98
Chief, Division of Land Development

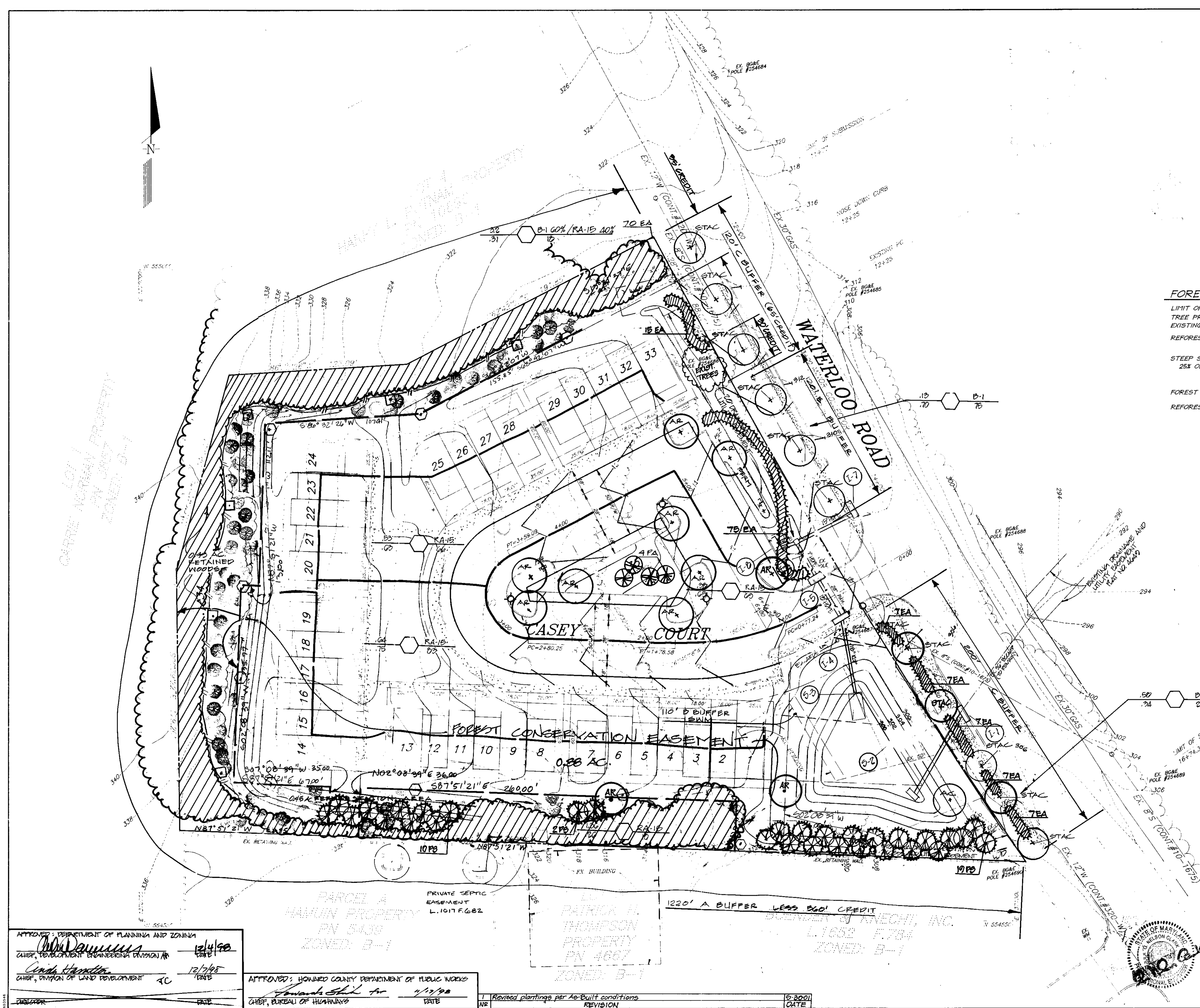
REV.	PLANTINGS PER AG-BUILT CONDITIONS	DATE
1	REV. PLANTINGS PER AG-BUILT CONDITIONS	9-20-01



VICINITY MAP
Scale: 1" = 2000'

FOREST CONSERVATION LEGEND

- LIMIT OF DISTURBED AREA — LOD
- TREE PROTECTION FENCE
- EXISTING VEGETATION TO BE SAVED
- REFORESTATION AREA
- STEEP SLOPES
25% OR 15% ERODIBLE SOILS
- FOREST RETENTION SIGN
- REFORESTATION SIGN



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development

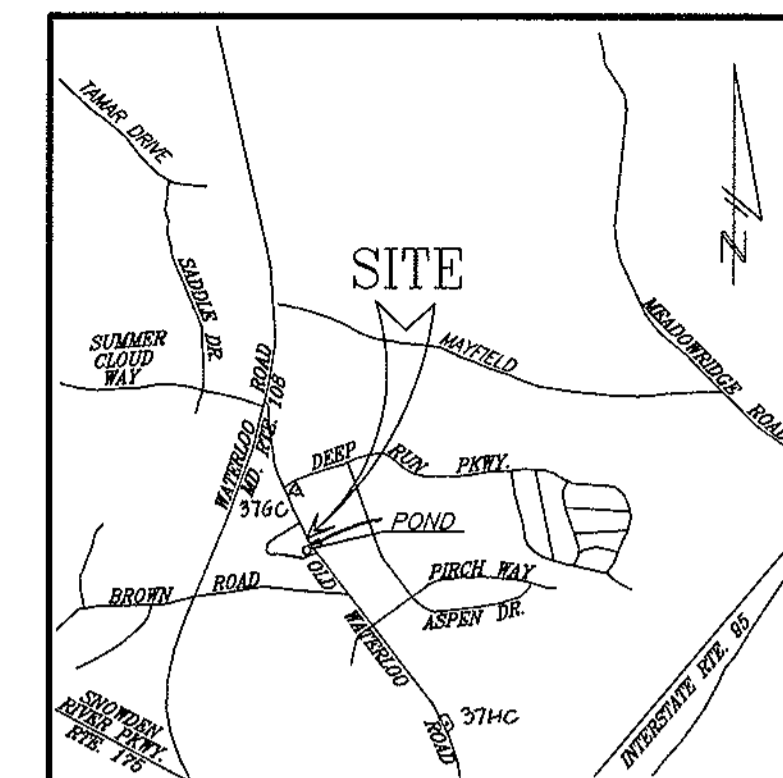
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways

Revised plantings per As-Built conditions
 REVISION DATE

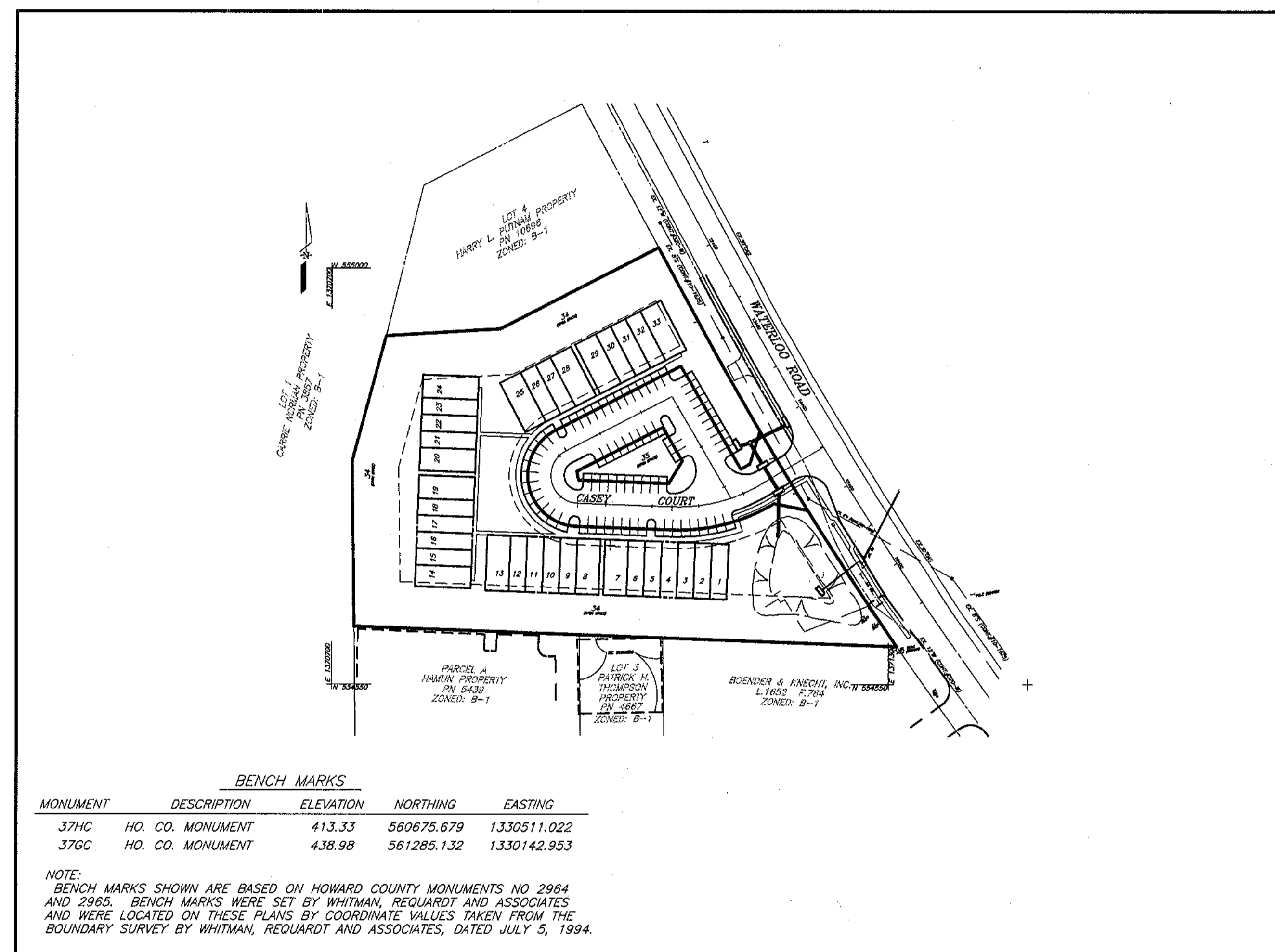
CLARK • FINEROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD 21046 • BALTO • (301) 621-8100 WASH		
DESIGNED M/H/M	AS-BUILT FOREST CONSERVATION & LANDSCAPE PLAN LOTS 1-35	SCALE 1" = 30'
DRAWN B/LP/M/M	LARK BROWN CROSSING TAX MAP 37, GRID 20, PARCELS 206,515 SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	DRAWING 8 OF 9
CHECKED W/H/T	DPZ FILE REF: S-97-04	JOB NO. 96-033
DATE MAG/PPB 9-26-00	OWNER: LARK BROWN PARTNERSHIP C/O FRETTE CONSTRUCTION GROUP, INC. 13308 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21043	FILE NO. 96-033-LS Sht. 1 of 2

SHEET INDEX	
SHEET	DESCRIPTION
1	COVER SHEET
2	ROAD CONSTRUCTION PLAN AND PROFILES
3	STORM DRAIN PROFILES AND DETAILS
4	GRADING, SEDIMENT AND EROSION CONTROL PLAN
5	SEDIMENT AND EROSION CONTROL DETAILS
6	STORMWATER MANAGEMENT PLAN AND DETAILS
7	STORMWATER MANAGEMENT NOTES AND BORING LOGS
8	FOREST CONSERVATION AND LANDSCAPE PLAN
9	FOREST CONSERVATION AND LANDSCAPE SCHEDULES, NOTES, AND DETAILS

LARK BROWN CROSSING



VICINITY MAP
Scale: 1"=2000'



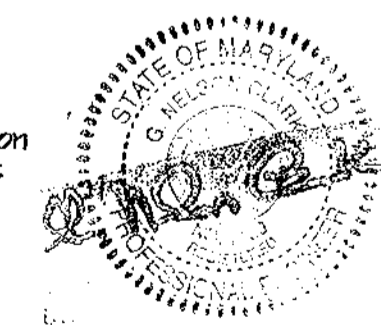
BENCH MARKS				
MONUMENT	DESCRIPTION	ELEVATION	NORTHING	EASTING
37HC	HO. CO. MONUMENT	413.33	560675.679	1330511.022
37GC	HO. CO. MONUMENT	438.98	561285.132	1330142.953

NOTE: BENCH MARKS SHOWN ARE BASED ON HOWARD COUNTY MONUMENTS NO. 2964 AND 2965. BENCH MARKS WERE SET BY WHITMAN, REQUARDT AND ASSOCIATES AND WERE LOCATED ON THESE PLANS BY COORDINATE VALUES TAKEN FROM THE BOUNDARY SURVEY BY WHITMAN, REQUARDT AND ASSOCIATES, DATED JULY 5, 1994.

ROAD CONSTRUCTION PLANS LOTS 1-35

GENERAL NOTES:

- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
- The contractor shall notify the Department of Public Works/Bureau of Engineering, Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
- Project Background:
Zoning: RA-15
Total Tract Area: 3.8063 Ac
Number of Proposed lots: 33 Buildable, 2 Open Space
- Preliminary Plan Reference: #P-98-09, approved January 9, 1998.
- Other County File Nos.: S 97-04
- Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
- Topographic survey was field run at 2' contour intervals by Clark, Finefrock & Sackett, Inc., dated August 1997.
- Horizontal and vertical control based on Howard County Control Stations 37HC, elev. 413.33 and 37GC, elev. 438.98.
- Street lights will be required in this development in accordance with the Design Manual. Street light placement and the type of fixture and pole selected shall be in accordance with the latest Howard County Design Manual, Volume III (1993) and as modified by "Guidelines for Street Lights in Residential Developments (June 1993)". The June 1993 policy includes guidelines for lateral and longitudinal placement. A minimum spacing of 20' shall be maintained between any street light and any tree.
- Public water and sewer are to be utilized.
Contract # 34-3524-D
Patapsco Drainage Area
- Stormwater Management for this project is being provided on site for quantity and quality. Quality and quantity control for this site is proposed by extended detention. The Stormwater Management facility will be private and owned and maintained by the Lark Brown Crossing Homeowners' Association, Inc.
- The following studies were prepared and approved under S-97-04 and P-98-09:
a. Forest Stand Delineation by Wildman Environmental Services, 10/10/96
b. Wetland Delineation by Wildman Environmental Services 10/10/96
c. Traffic Study by Lee Cunningham and Assoc., amended by letter for P-98-09 and dated November 27, 1996.
d. Geotechnical report by Herbst/Benson and Assoc. 9/9/97
- Existing utilities & improvements shown are taken from available records, where not visibly evident from field survey.
- Trench compaction for storm drains within the road or street rights of way limits shall be in accordance with Howard County Design Manual, Vol IV, Std. No. G-2.01
- All compacted fill shall be in accordance with AASHTO T-180 requirements.
- All fillet radii are 5 ft. unless indicated otherwise.
- Sag and crest vertical curves were designed in accordance with "Howard County Design Manual, Vol. III.
- Concrete sidewalk ramps shall be provided at all intersections and as indicated on the plans. The ramps shall conform to the Americans with Disabilities Act (ADA) 1992, and shall be constructed in accordance with "Howard County Design Manual", Vol. IV.
- Street tree locations shown are tentative and are to be used for bond purposes only. The final location and variety of trees may vary to accommodate field conditions and builder landscape program.
- Street trees shall be planted a minimum of five (5) feet from storm drain, waterline or sewer pipe manholes; also a minimum of twenty (20) feet from street lights.
- DATE shall be notified prior to construction for any relocation of existing utility poles.
- The Forest Conservation Easements have been established to fulfill the requirements of Section 10-100 of the Howard County Forest Conservation Act. No clearing, grading or construction is permitted within the Forest Conservation Easements, except as shown on an approved road construction drawing or site development plan. However, forest management practices as defined in the Deed of Forest Conservation Easement are allowed.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 11-9-99
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Cindy Hamata 12/7/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

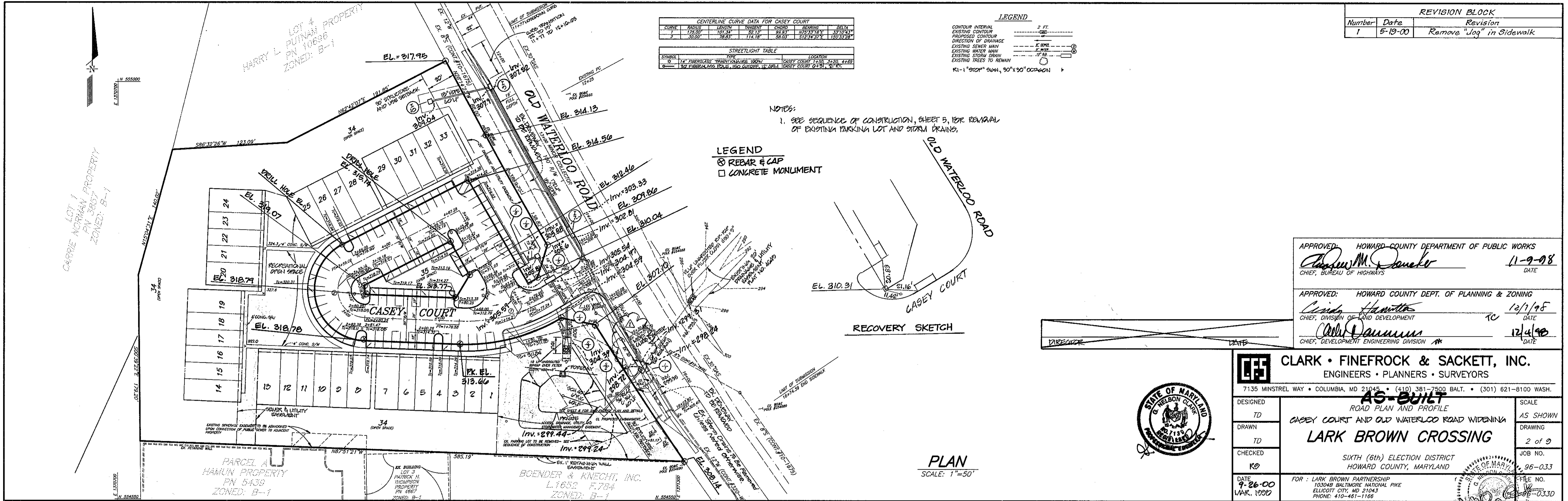
Alfred Damun 12/4/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

 DIRECTOR DATE



OWNER:
 LARK BROWN PARTNERSHIP
 10304 B BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21043

CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.		
DESIGNED	COVER SHEET	SCALE
TD	LOTS 1-35	AS SHOWN
DRAWN		DRAWING
TD	LARK BROWN CROSSING	1 of 10
CHECKED	TAX MAP 37, PARCELS 266, 515	JOB NO.
RS	SIXTH (6th) ELECTION DISTRICT	96-033
DATE	HOWARD COUNTY, MARYLAND	FILE NO.
9-26-00		96-033D
3/97	FOR: LARK BROWN PARTNERSHIP 10304 B BALTIMORE NATIONAL PIKE ELLICOTT CITY, MD 21043 PHONE: 410-461-1186	



REVISION BLOCK

Number	Date	Revision
1	5-19-00	Remove "Log" in Sidewalk

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
James M. Daneker 11-9-98
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Chris Hamilton 12/1/95
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chris Hamilton 12/4/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS

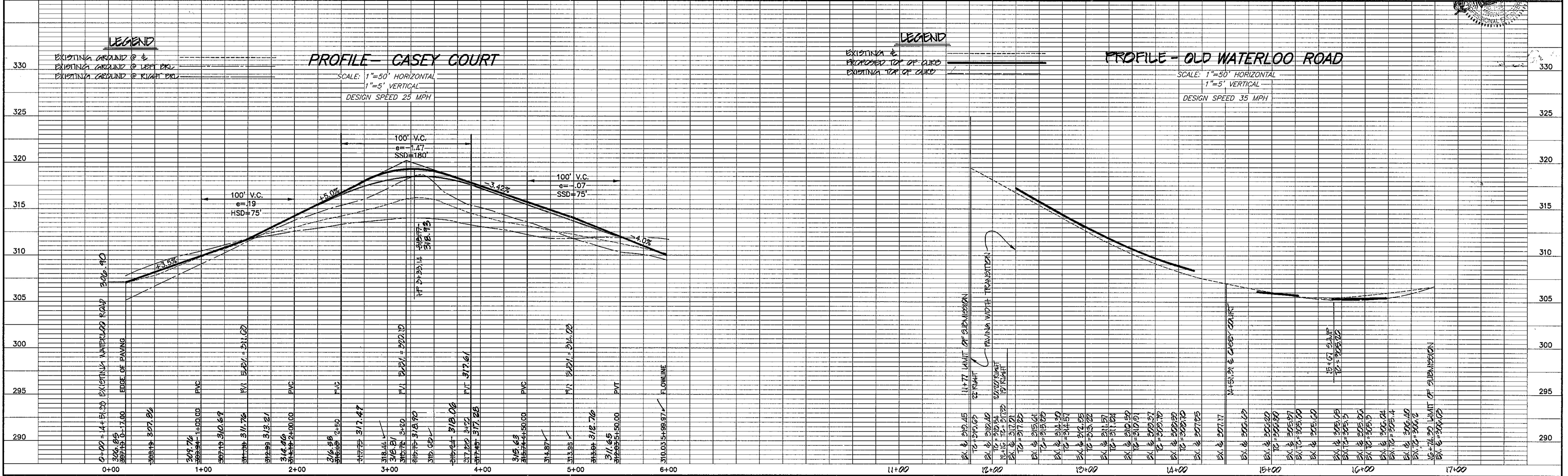
7135 MINSTREL WAY • COLUMBIA, MD 21045 • (410) 381-7500 BALT. • (301) 621-8100 WASH.

AS-BUILT
 ROAD PLAN AND PROFILE
LARK BROWN CROSSING

SIXTH (6th) ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

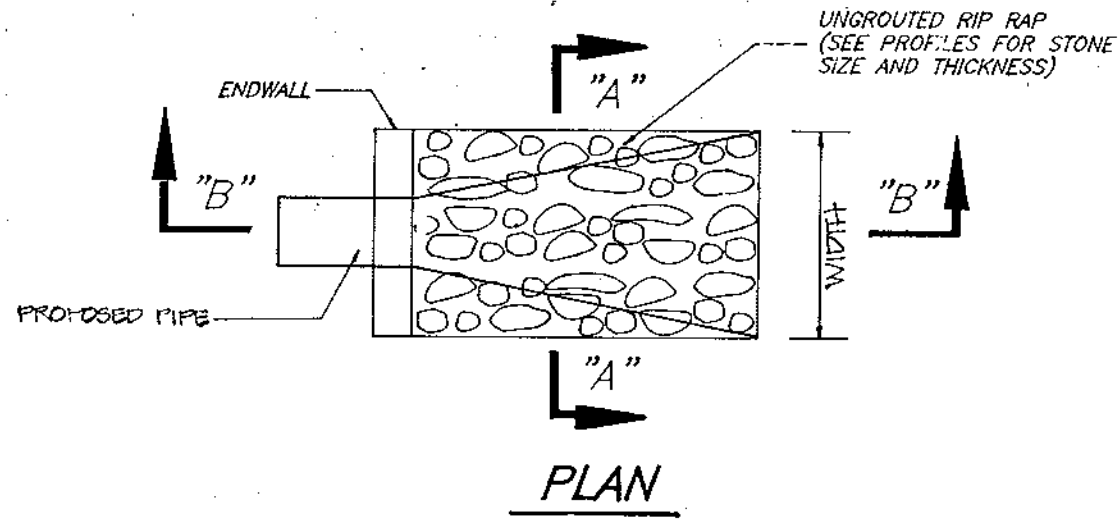
DATE: 9-26-00
 WAK, 10007

FOR: LARK BROWN PARTNERSHIP
 10304B BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MD 21043
 PHONE: 410-461-1166



STRUCTURE SCHEDULE							
NO.	TYPE	INVERT		TOP ELEVATION		REMARKS	LOCATION
		IN	OUT	UPPER	LOWER		
I-1	A-10 INLET	298.72	298.72	305.20	305.20	HO. CO. STD. 4.11	WATERLOO ROAD 15+07
S-2	MODIFIED A-10	294.44	294.44	307.64	307.64	SEE SHEET 6	N. 854627 E. 1371225
S-3	END SECTION 24" DIA.	304.97	304.97	307.37	307.37	HO. CO. STD. 5.21	N. 854722 E. 1371182
I-4	A-10 INLET	302.97	302.97	307.77	307.77	HO. CO. STD. 4.11	CARRY COURT 0+00.14 14' LT.
I-5	A-10 INLET	303.59	303.59	307.39	307.39	HO. CO. STD. 4.11	CARRY COURT 5+71.82 14' RT.
I-6	"D" INLET	303.51	303.51	309.33	309.33	HO. CO. STD. 4.11	CARRY COURT 5+71.82 14' RT.
I-7	A-B INLET	303.33	303.33	309.00	309.00	HO. CO. STD. 4.10	WATERLOO ROAD 12+02.00 10' RT.
I-8	A-10 INLET	303.88	303.88	311.00	311.00	HO. CO. STD. 4.11	SEE PLAN
S-1	EXISTING END SECTION	307.90	307.90	309.30	309.30	SEE PLAN	SEE PLAN
I-9	A-B INLET	307.90	307.90	309.30	309.30	HO. CO. STD. 4.10	WATERLOO ROAD 12+24.05 10' RT.
I-10	"D" INLET	-	-	309.00	309.00	HO. CO. STD. 4.11	WATERLOO ROAD 12+07.66 24' RT.

* INLETS TO HAVE THROATS ALL FOUR SIDES



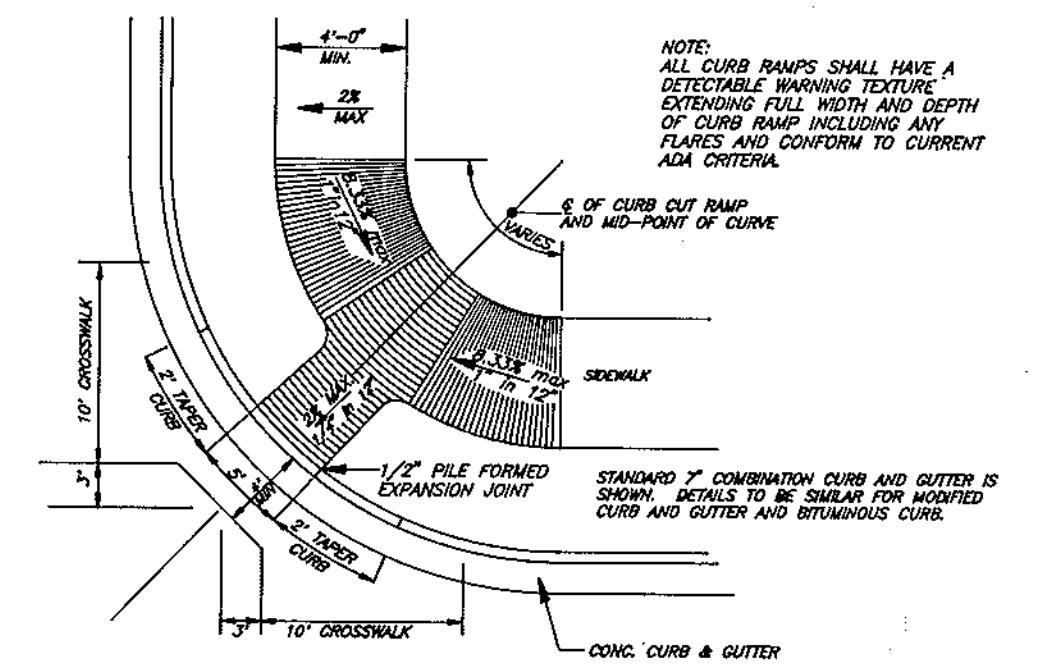
RIP-RAP TABLE		
STRUCTURE	WIDTH	LENGTH
S-1	6'	12'
S-3	7'	12'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS DATE 11/13/99
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 12/4/99
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 12/7/98

MODIFIED 6" COMBINATION CURB AND GUTTER
NO SCALE

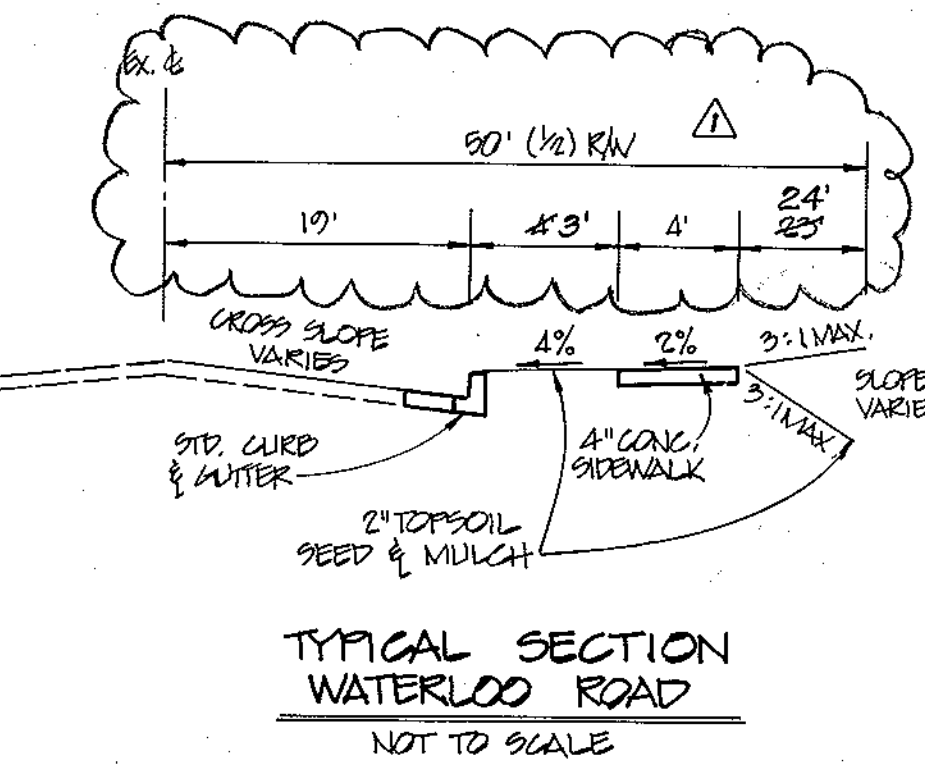
MODIFIED REVERSE 6" COMBINATION CURB AND GUTTER
NO SCALE

ALTERNATE PAVING SECTION FOR PARKING AREAS
NO SCALE (SECTION P-1)

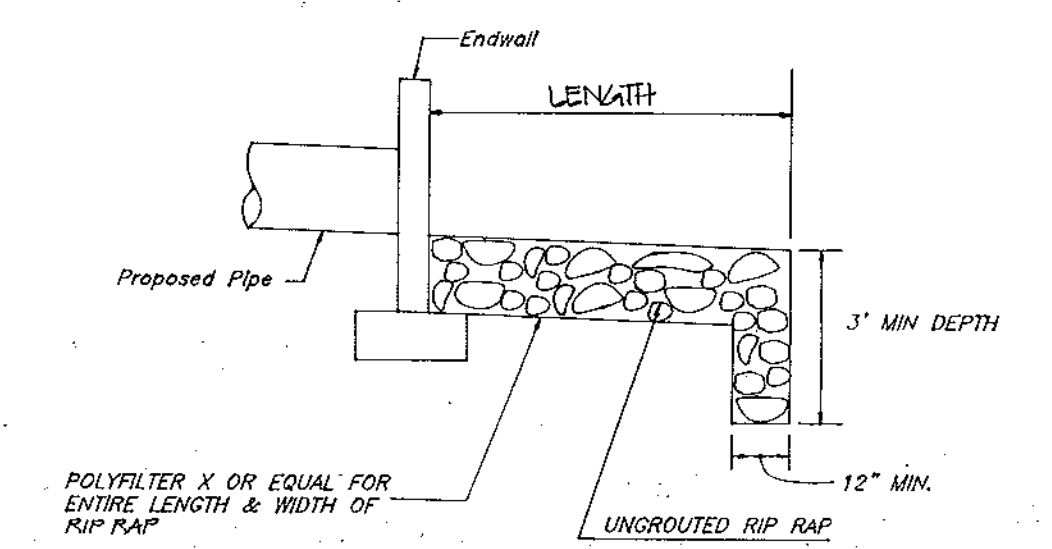
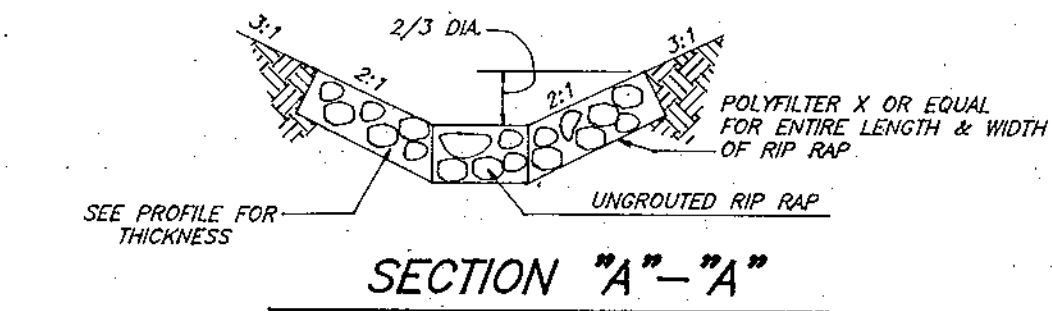
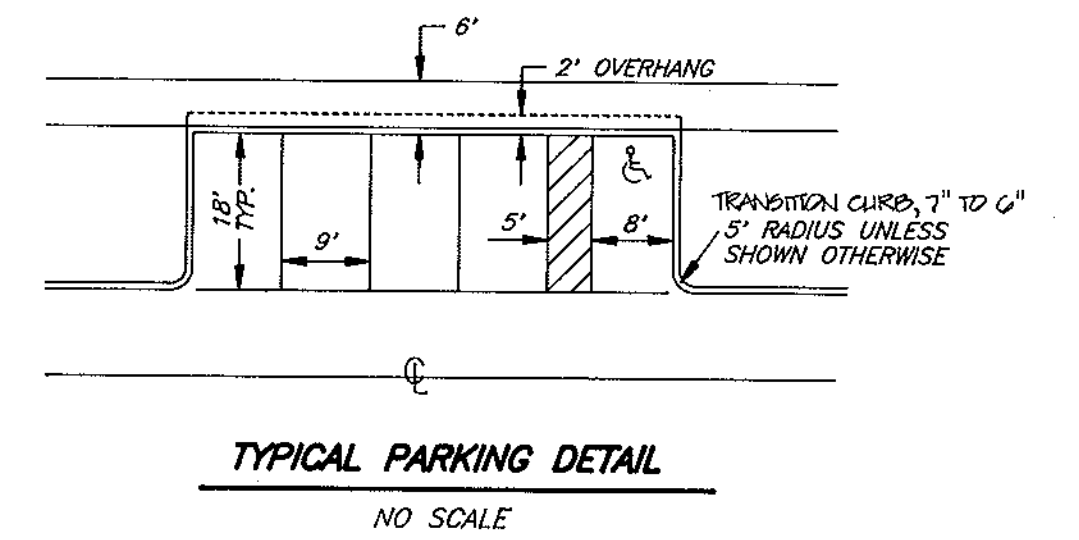


CURB / SIDEWALK RAMP - HO. CO. STANDARD TYPE "A"
NO SCALE

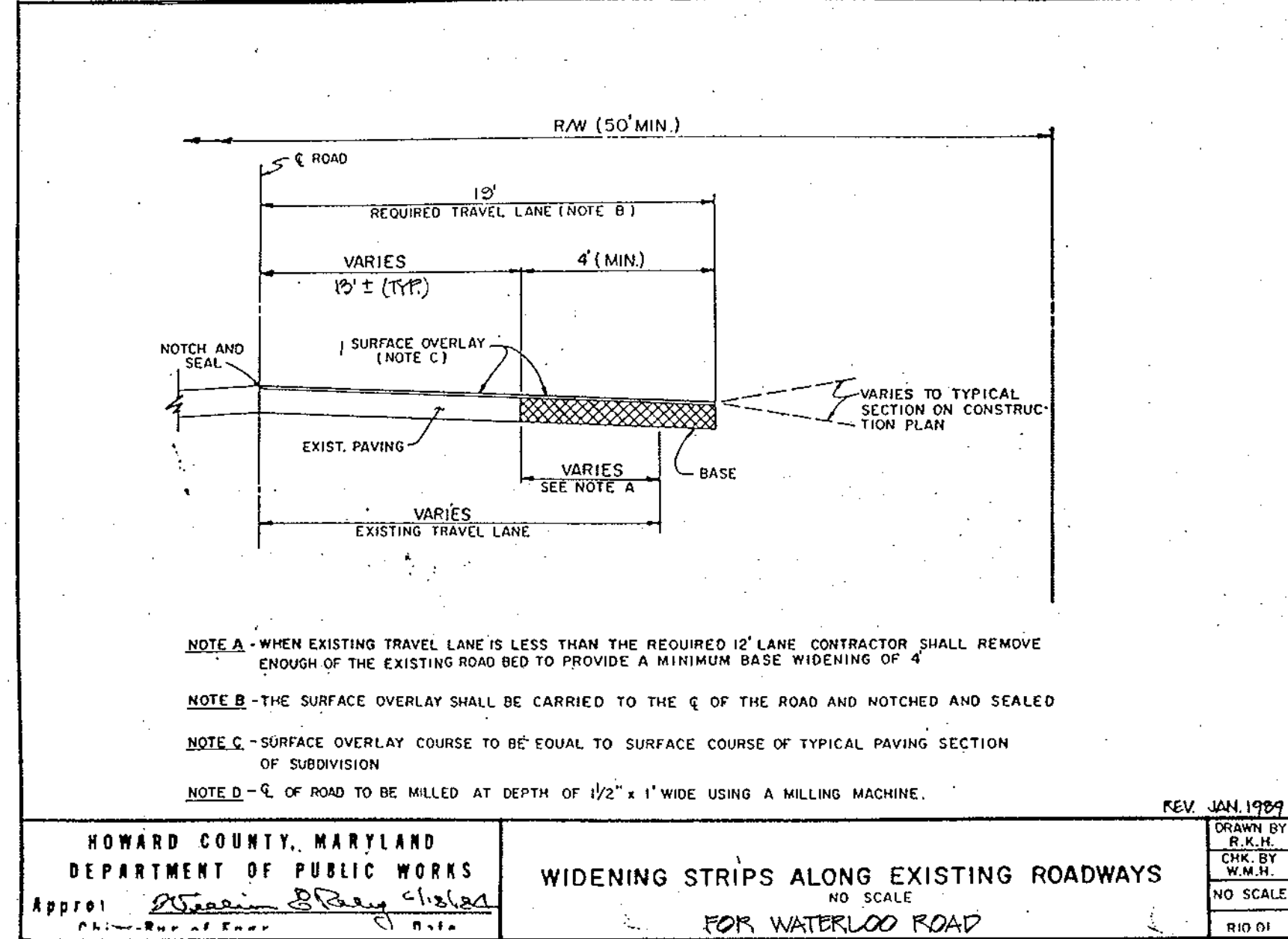
STANDARD 7" COMBINATION CURB AND GUTTER
NO SCALE



ALTERNATE PAVING SECTION FOR PUBLIC ROADS
NO SCALE (SECTION P-2)

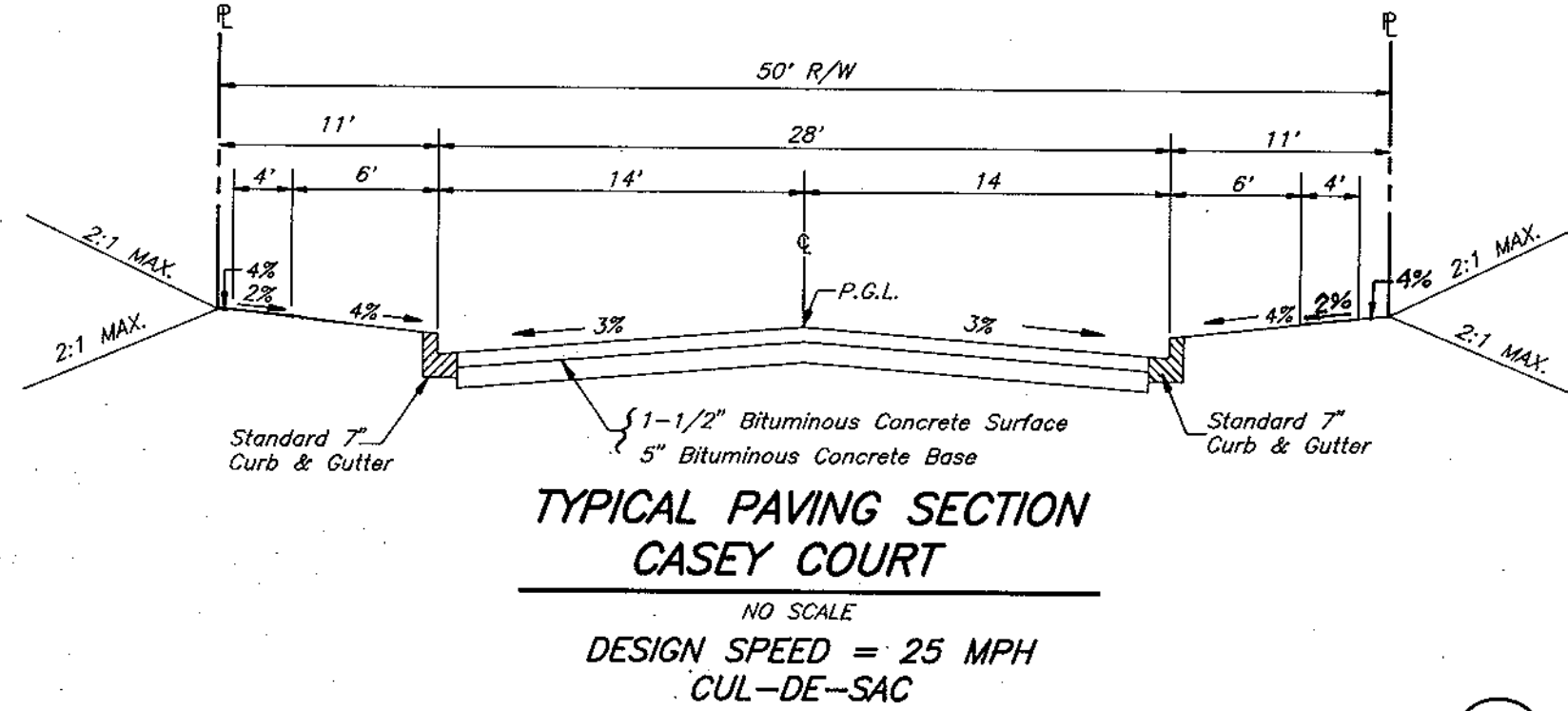


UNGRouted RIP RAP DETAIL
NOT TO SCALE

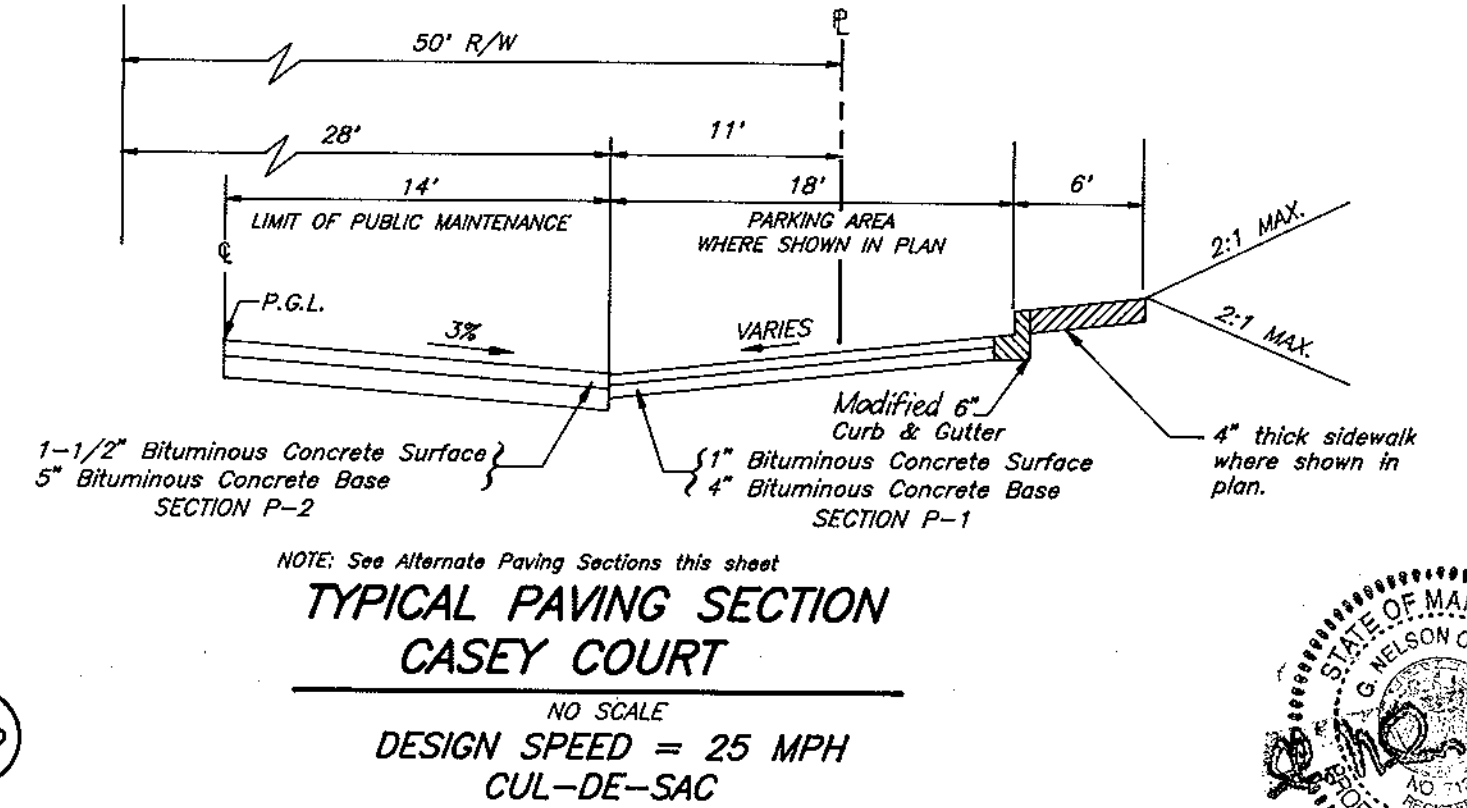


NOTE A - WHEN EXISTING TRAVEL LANE IS LESS THAN THE REQUIRED 12' LANE CONTRACTOR SHALL REMOVE ENOUGH OF THE EXISTING ROAD BED TO PROVIDE A MINIMUM BASE WIDENING OF 4'
 NOTE B - THE SURFACE OVERLAY SHALL BE CARRIED TO THE E OF THE ROAD AND NOTCHED AND SEALED
 NOTE C - SURFACE OVERLAY COURSE TO BE EQUAL TO SURFACE COURSE OF TYPICAL PAVING SECTION OF SUBDIVISION
 NOTE D - E OF ROAD TO BE MILLED AT DEPTH OF 1/2" x 1' WIDE USING A MILLING MACHINE.

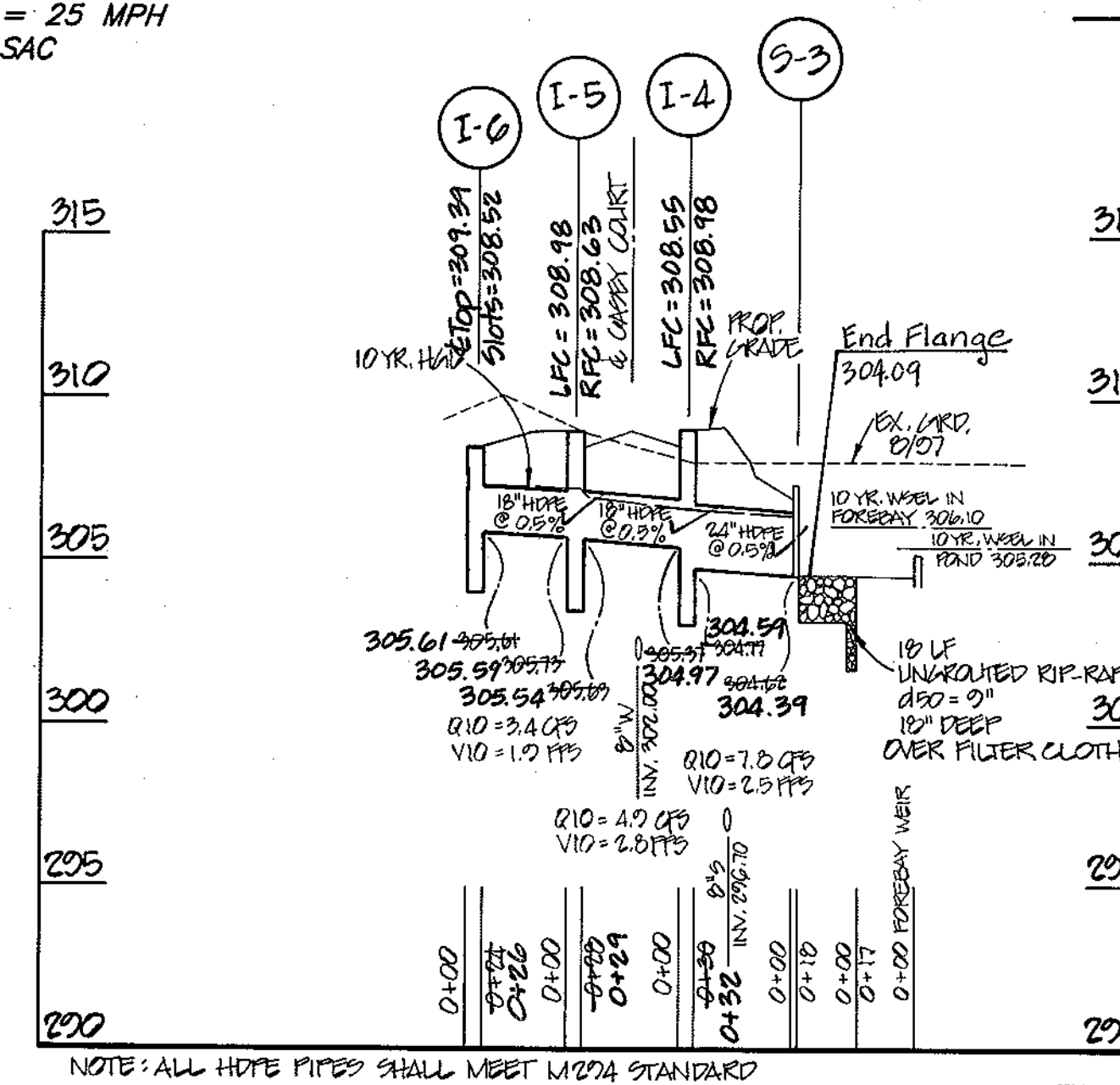
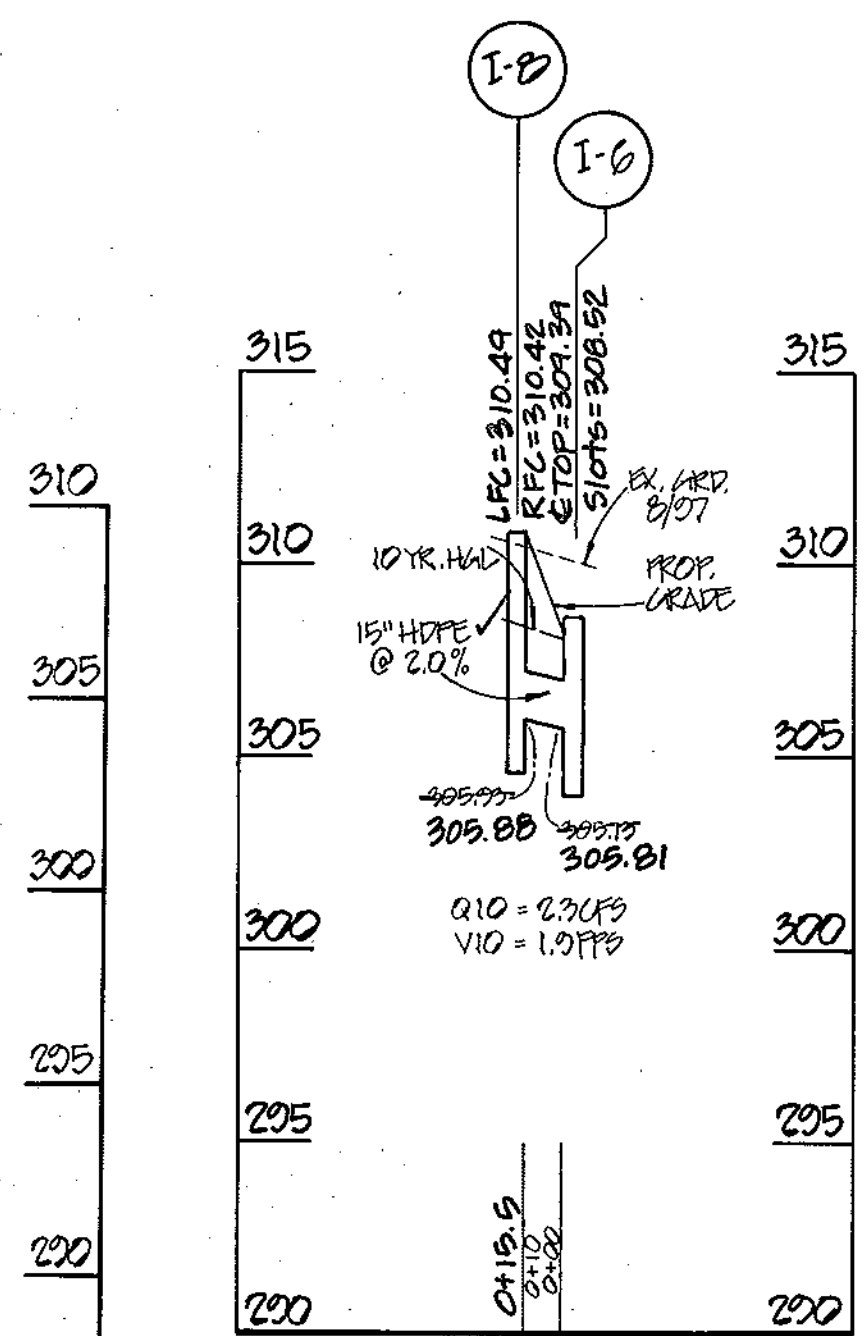
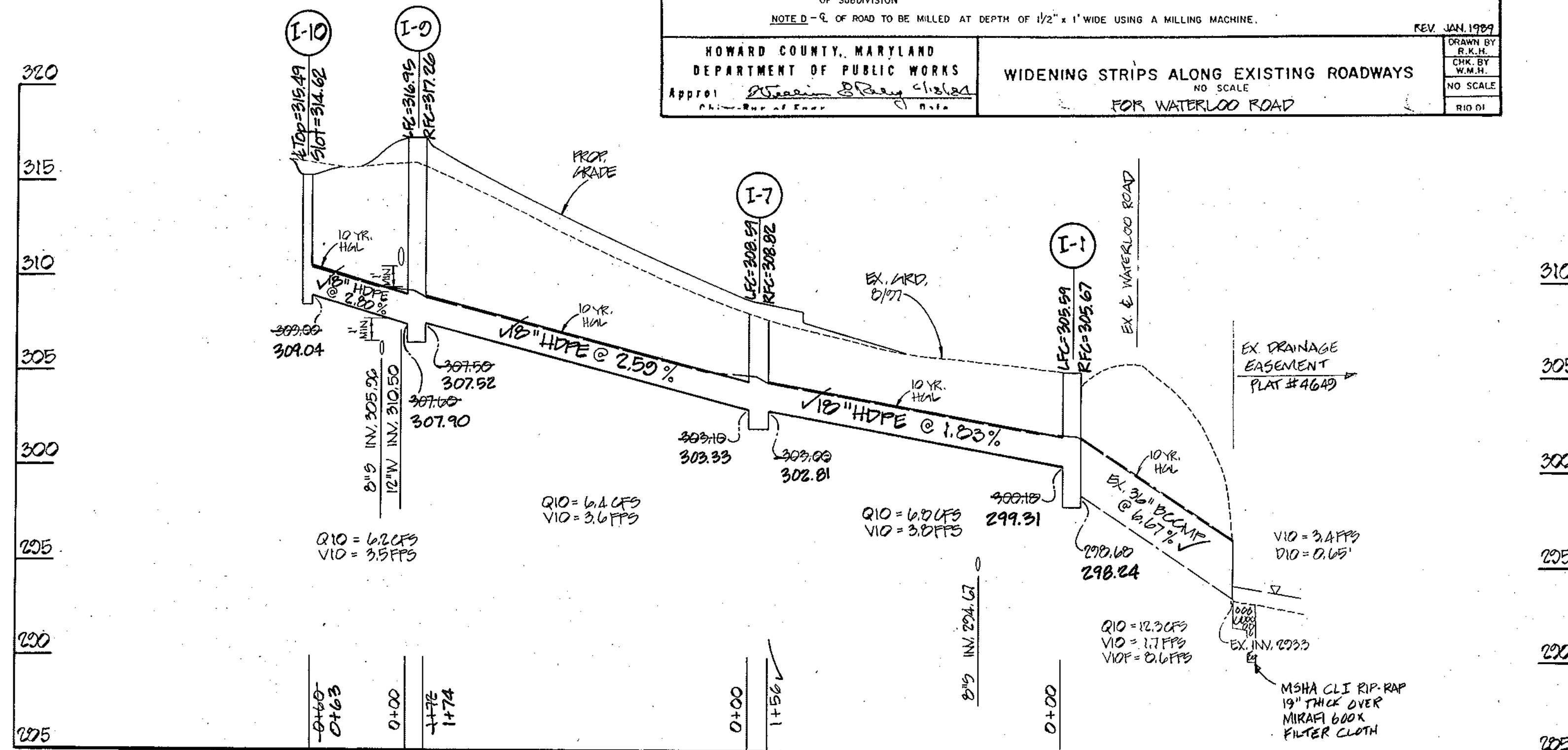
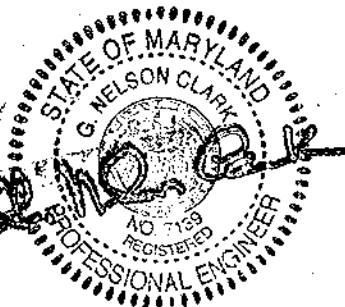
HOWARD COUNTY, MARYLAND
 DEPARTMENT OF PUBLIC WORKS
 WIDENING STRIPS ALONG EXISTING ROADWAYS
 FOR WATERLOO ROAD
 NO SCALE
 REV. JAN 1999



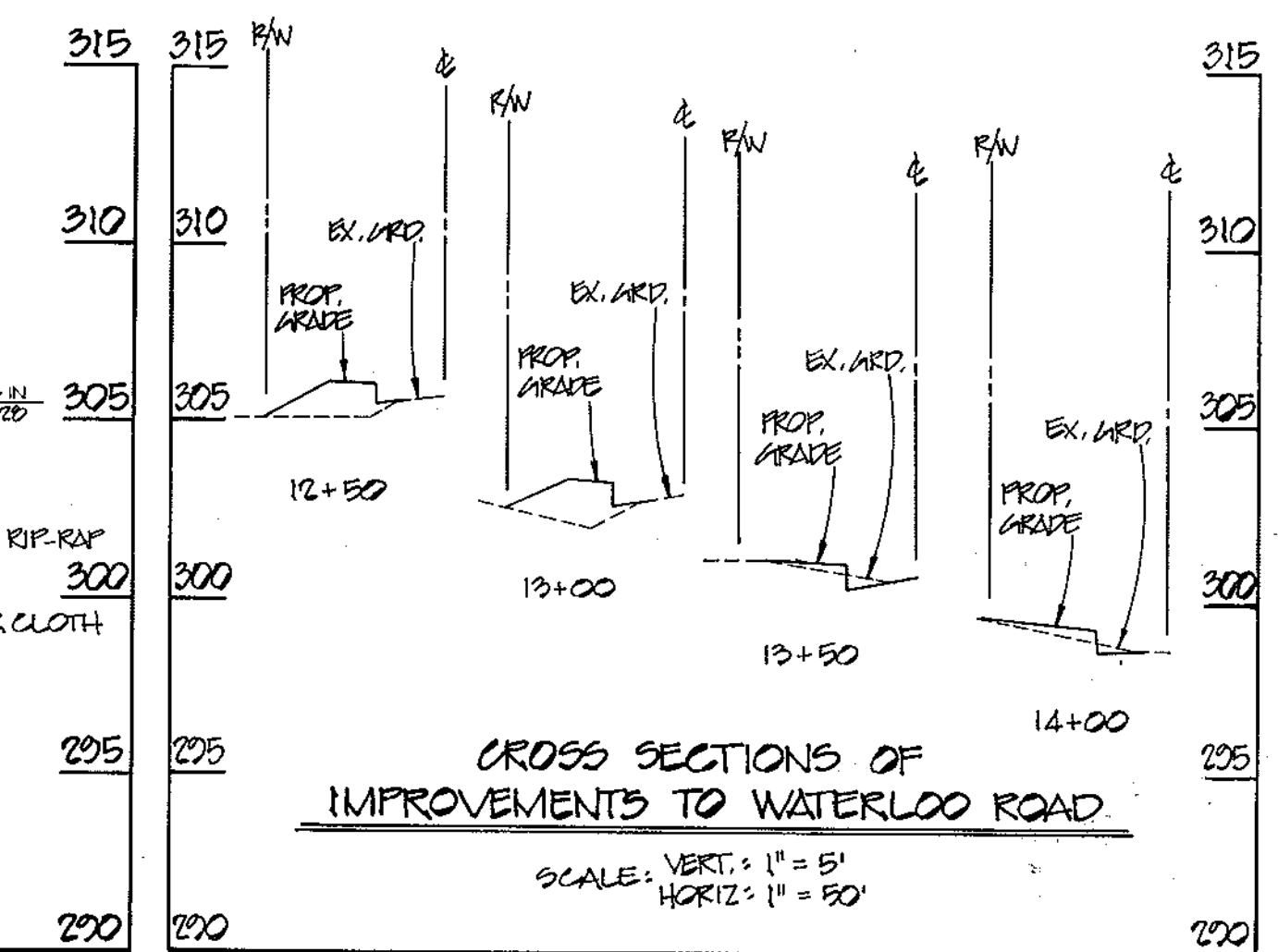
TYPICAL PAVING SECTION CASEY COURT
NO SCALE
DESIGN SPEED = 25 MPH
CUL-DE-SAC



TYPICAL PAVING SECTION CASEY COURT
NO SCALE
DESIGN SPEED = 25 MPH
CUL-DE-SAC



PROFILES
SCALE: VERT. 1" = 5'
HORIZ. 1" = 50'



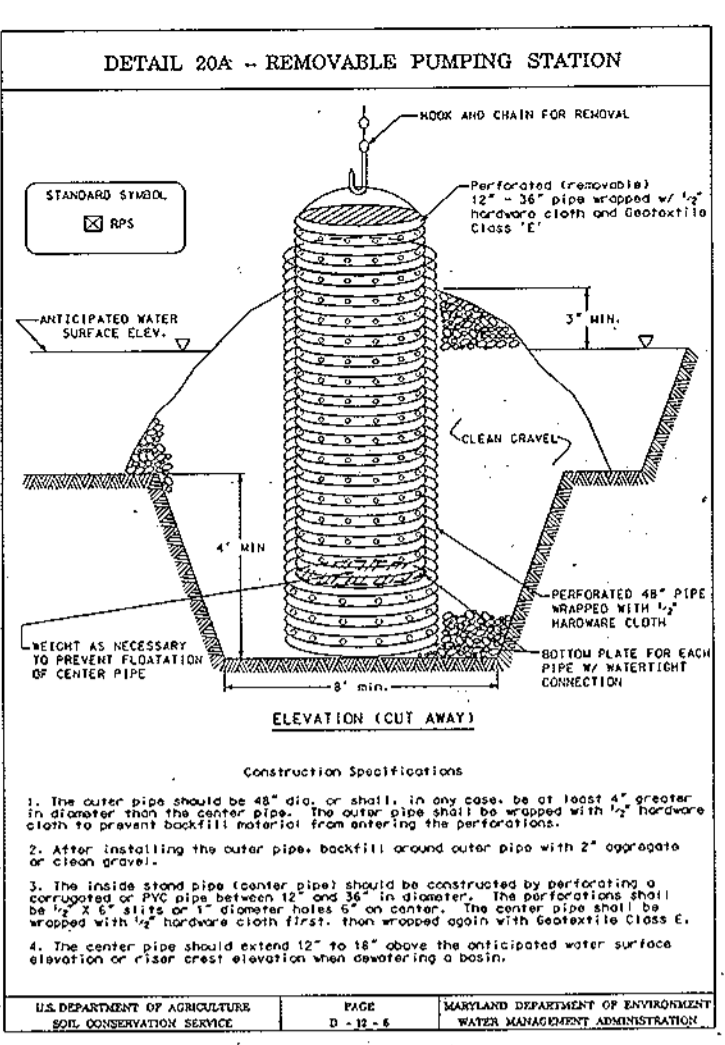
CROSS SECTIONS OF IMPROVEMENTS TO WATERLOO ROAD
SCALE: VERT. 1" = 5'
HORIZ. 1" = 50'

Number	Date	Revision
1	5-19-00	Waterloo Road Typical Section

CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 7135 MINSTREL WAY • COLUMBIA, MD 21046 • (301) 621-8100 FAX
AS-BUILT
 DESIGNED TO: STOP/DRAIN PROFILES & DETAILS
 DRAWN BY: ZAH
 CHECKED BY: [Signature]
 DATE: MAY 1999
 7-26-00

LARK BROWN CROSSING
 TAX MAP 37, GRID 20, PARCELS 200,515
 SIXTH (6th) ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DPZ FILE REF. S-97-04, P. 32-20
 OWNER: LARK BROWN PARTNERSHIP
 C/O FRETTE CONSTRUCTION GROUP, INC.
 103045 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21043

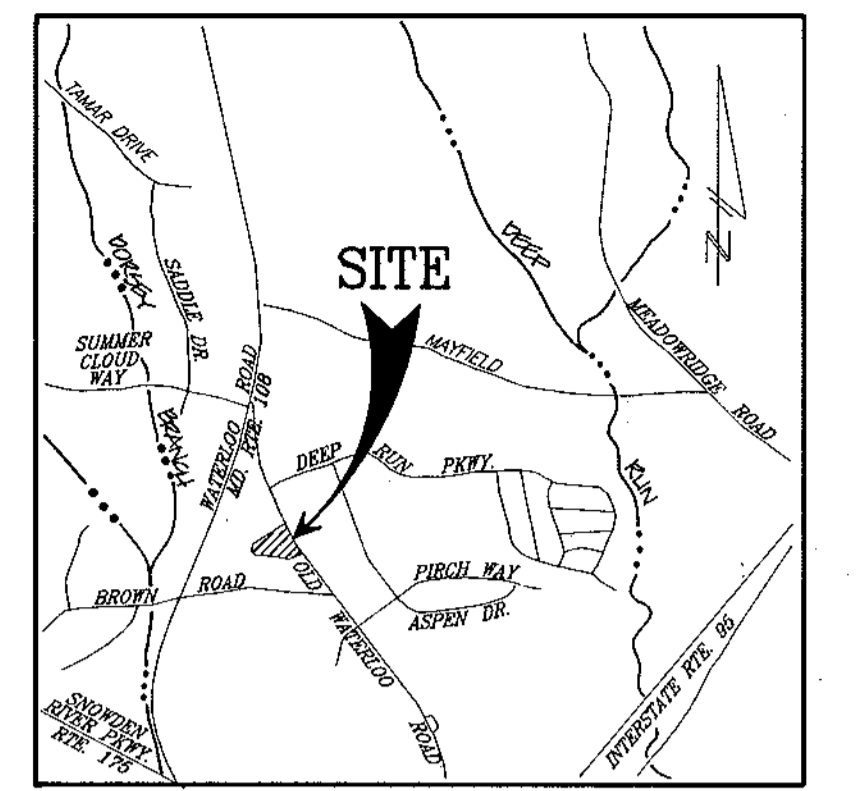
SCALE AS SHOWN
 DRAWING 2 OF 2
 JOB NO. 96-033
 FILE NO. 96-033-D



DEVELOPER'S/BUILDER'S CERTIFICATE
 I/We certify that all development and construction will be done according to the plan of development and 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 onsite inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.
Joseph Smith 10-20-98
 NAME DATE

ENGINEER'S CERTIFICATE
 I hereby 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.
John A. ... 10-20-98
 DATE

- LEGEND**
- TREE PROTECTION FENCE
 - RP-RAP MLOW PROTECTION
 - EARTH DKE
 - STABILIZED CONSTRUCTION ENTRANCE
 - EROSION CONTROL MATTING
 - LIMIT OF DISTURBANCE
 - REMOVABLE PUMP STATION
 - SUPER SILT FENCE
 - SILT FENCE
 - AT GRADE INLET PROTECTION
 - CURB INLET PROTECTION

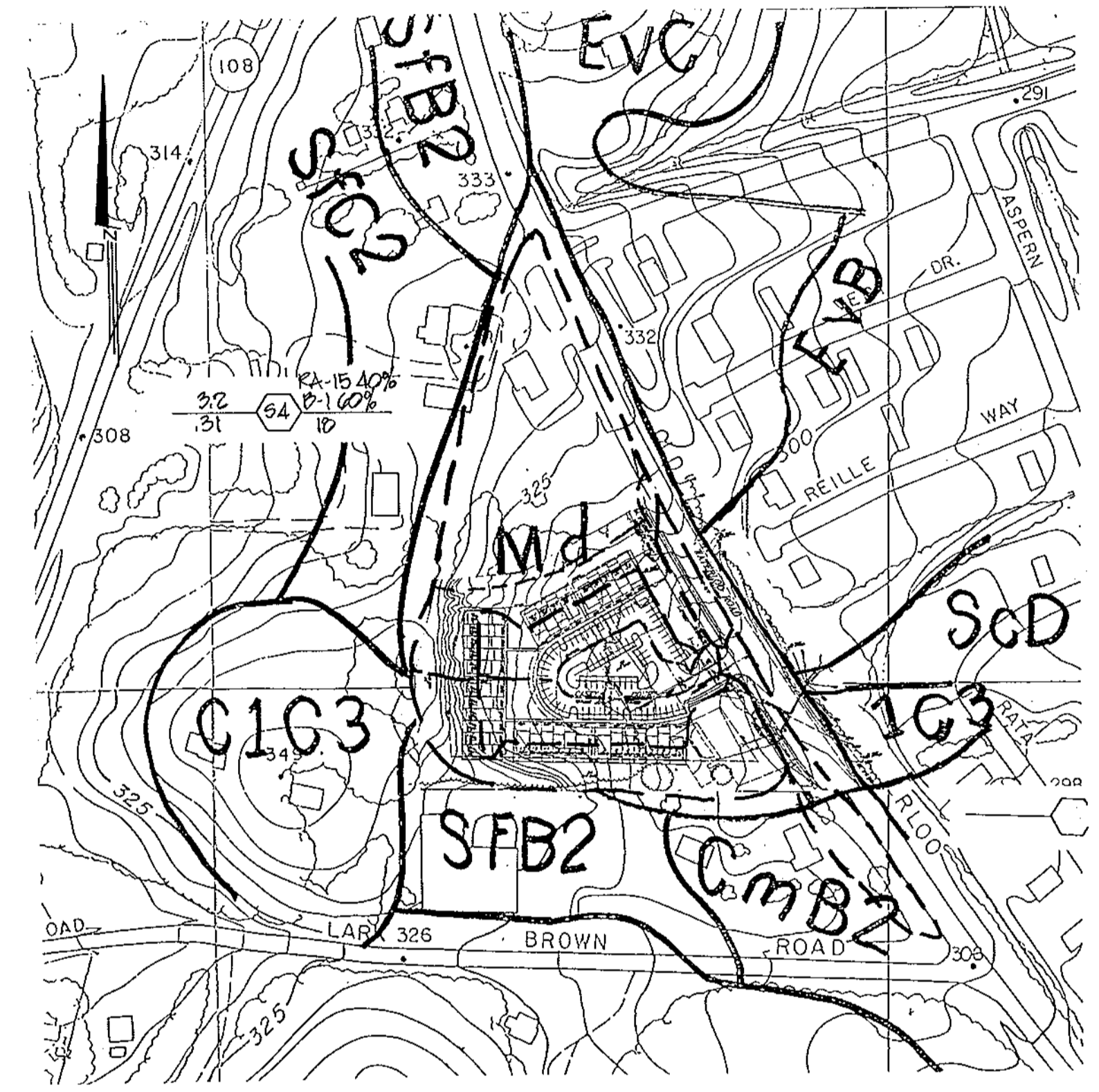


VICINITY MAP
 Scale: 1" = 200'

Reviewed for HOWARD S.C.D. and meets Technical Requirements
Chris ... 10/21/98
 Signature Date
 U.S. Natural Resources Conservation Service



THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John ... 10/21/98
 Approved



DRAINAGE AREA MAP
 SCALE: 1" = 200'

SEDIMENT BASIN #1

DRAINAGE AREA:	3.56 ACRES
WET VOLUME REQUIRED:	6400 CF
WET VOLUME PROVIDED:	6534 CF ELEV. 302.4
DRY VOLUME REQUIRED:	6400 CF
DRY VOLUME PROVIDED:	11,161 CF
BOTTOM ELEVATION:	299.65
WEIR CREST:	302.5
DEWATERING GRITCE INVERT:	299.65
2 YEAR EXISTING Q:	4.0 CFS
2 YEAR PROPOSED Q:	9.2 CFS
2 YEAR WSEL:	302.97
CLEARING ELEVATION:	301.5

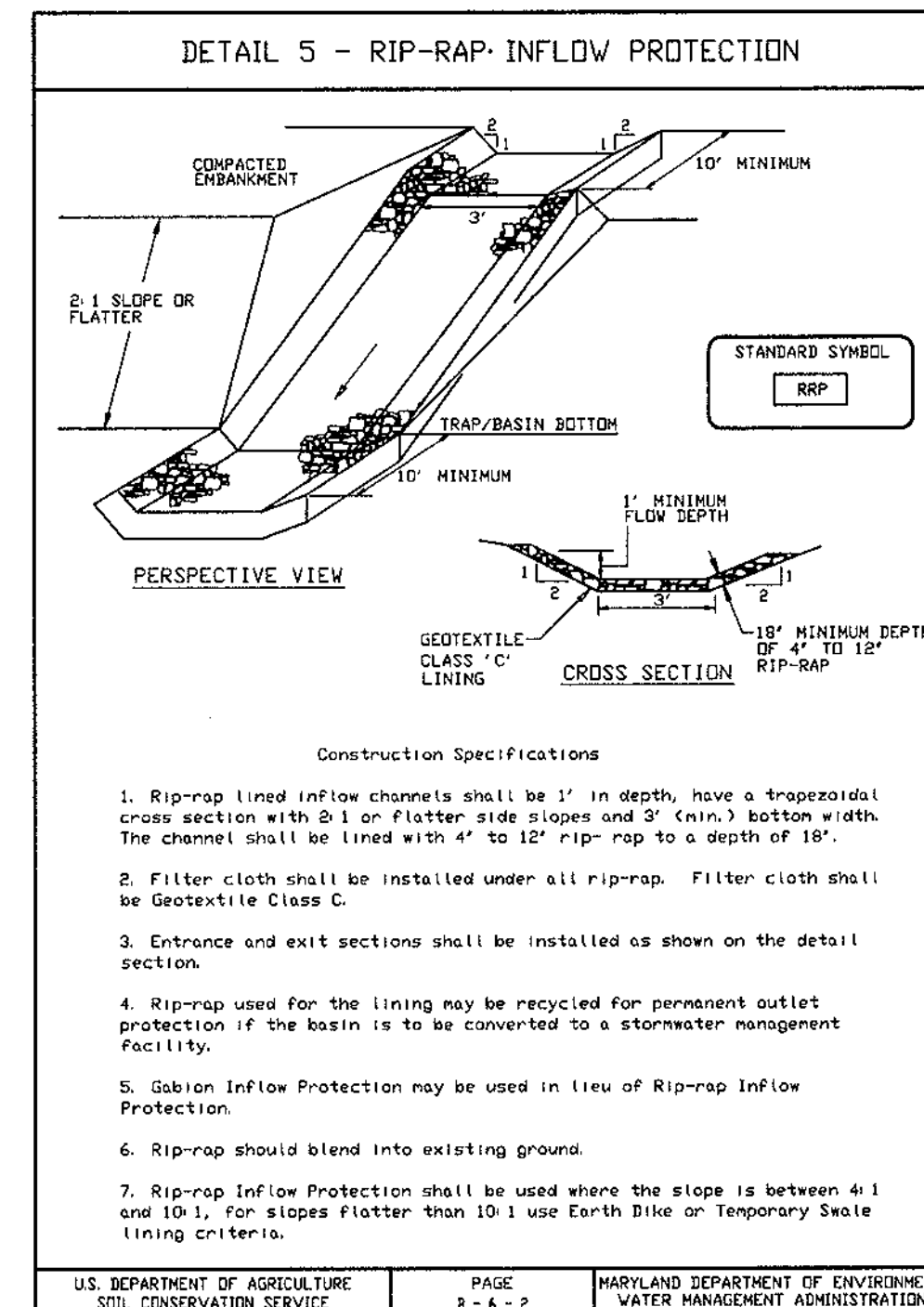
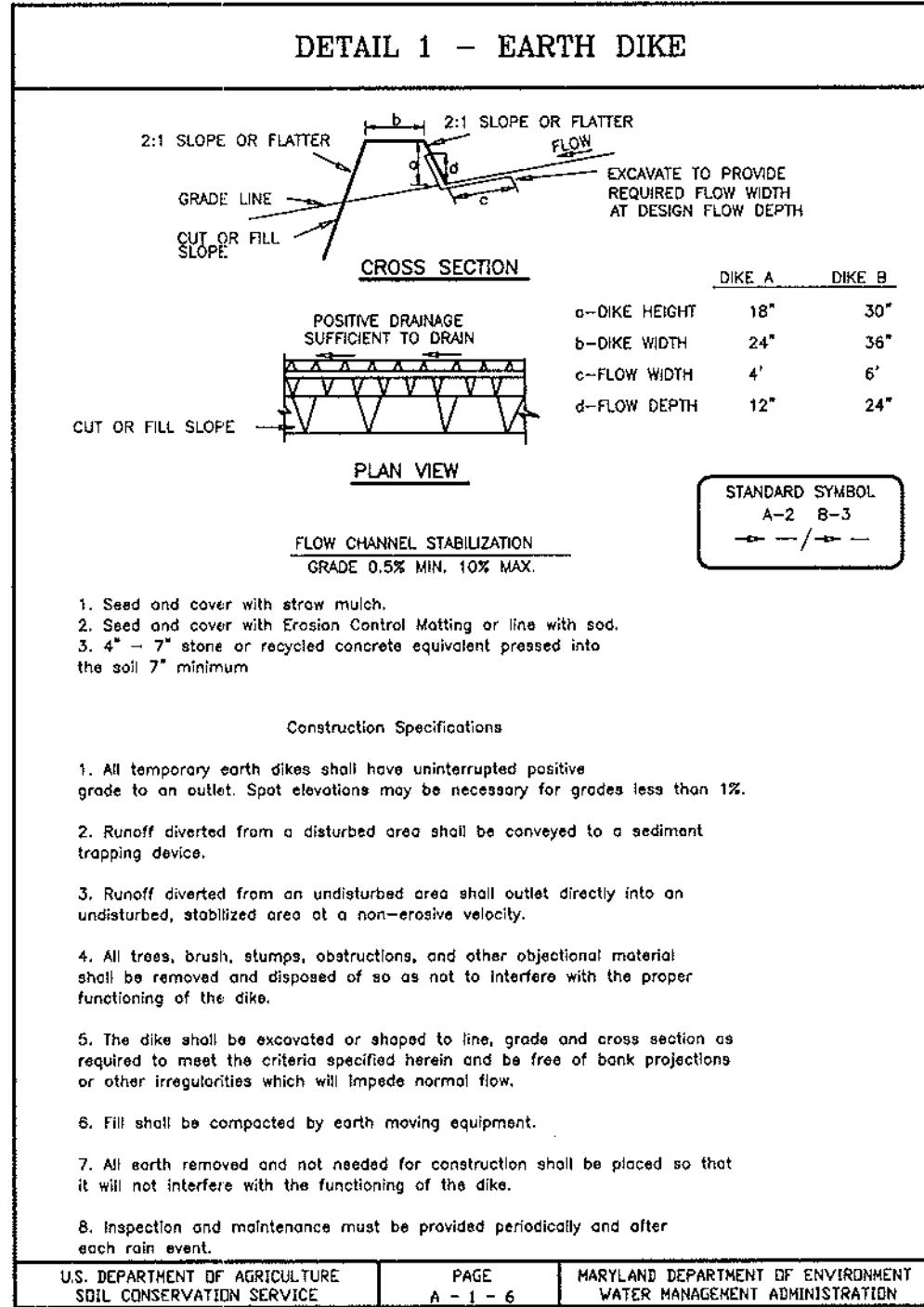
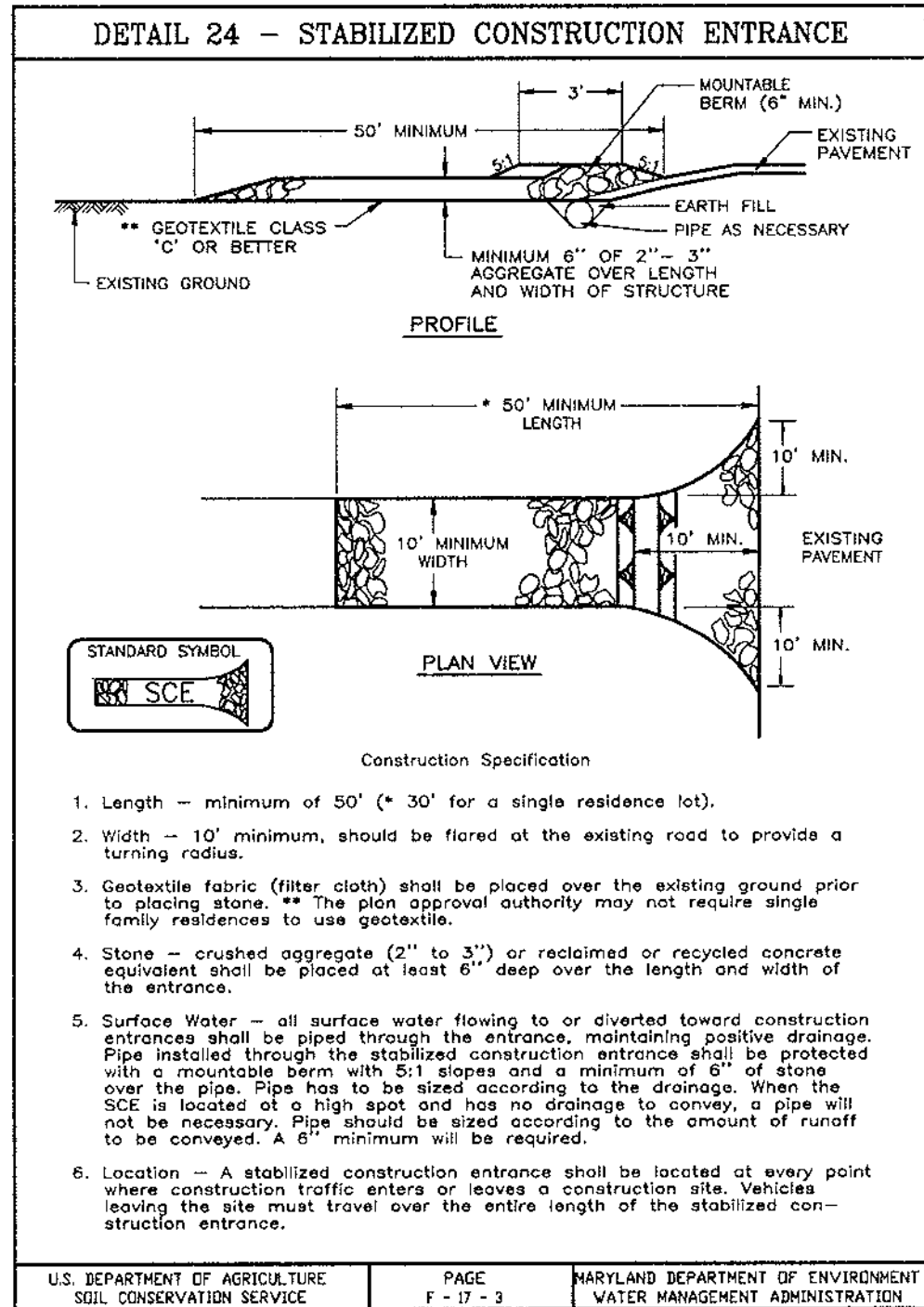
CONTRACTOR IS TO INSURE THAT THE SFC/C WATERWAY IS IN GOOD FUNCTION BETWEEN STORMS.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Joseph Smith 11/27/98
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
John ... 12/4/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
Chris ... 12/7/98
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR DATE

NOTE:
 1. ALL EXISTING STORM DRAIN TO BE REMOVED EXCEPT I-1 TO I-1.
 2. ALL INLETS AND PIPES TO BE PROTECTED WITH SEDIMENT CONTROLS AT ALL TIMES.

CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 7135 MISTREL WAY • COLUMBIA, MD 21046-7500 • BALTO. • (301) 621-8100 • WASH.
AS-BUILT
 DESIGNED: GRADING, SEDIMENT & EROSION CONTROL PLAN
 TD
 DRAWN: LARK BROWN CROSSING
 BLP
 CHECKED: TAX MAP 37, GRID 20, PARCELS 200,515
 RB
 DATE: SIXTH (6th) ELECTION DISTRICT
 9-26-00
 OWNER: LARK BROWN PARTNERSHIP
 120 FIRST CONSTRUCTION GROUP, INC.
 10304B BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21143



21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

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

Purpose
To provide a suitable soil medium for vegetable growth. Soils of concern have low moisture content, low nutrient levels, low pH, and/or toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies
I. This practice is limited to areas having 2:1 or flatter slopes where:
a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
c. The original soil to be vegetated contains material toxic to plant growth.
d. The soil is so acidic that treatment with limestone is not feasible.

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

Construction and Material Specifications
I. Topsoil salvaged from the existing site may be used provided it meets the standards set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the appropriate soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.
II. Topsoil Specifications - Soil to be used as topsoil must meet the following:
1. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or a soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 3% by volume of cinders, stones, slag, coarse fragments, gravel, shells, roots, trash, or other materials larger than 1" and 1/2" in diameter.
2. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, johnsongrass, nutgrass, poison ivy, thistle, or others as specified.
III. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-6 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
IV. For sites having disturbed areas under 5 acres:
1. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following schedules:
1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) 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 the time of seeding, apply 400 lbs. per acre 10-10-10 urethane fertilizer (9 lbs./1000 sq.ft.).
2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and apply 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

SEEDING: For 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 (0.5 lbs./1000 sq.ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by applying 2 tons per acre well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use seed, 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 sq. ft.) of untreated 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.

SEDIMENT AND EROSION CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department where a PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.

3. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within:
a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and slopes greater than 3:1
b) 14 days as to all other disturbed or graded areas on the project site.

4. All sediment traps/basins shown shall be fenced and warning signs posted around their perimeters in accordance with Vol. I, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5. All disturbed areas must be stabilized within the time period specified above, in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings, soil, temporary seedings, and temporary stabilization with mulch alone can only be done when recommended seeding rates 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 Inspector.

7. SITE ANALYSIS:
Total Area of Site: 1.43 Acres
Area to be reseeded or paved: 0.75 Acres
Area to be vegetatively stabilized: 2.88 Acres
Total Cut: 7,000 Cubic Yards
Total Fill: 1,000 Cubic Yards
Off-site Water/Borrow Area Location: N/A

8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

9. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.

10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of the construction of all sediment control structures and before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

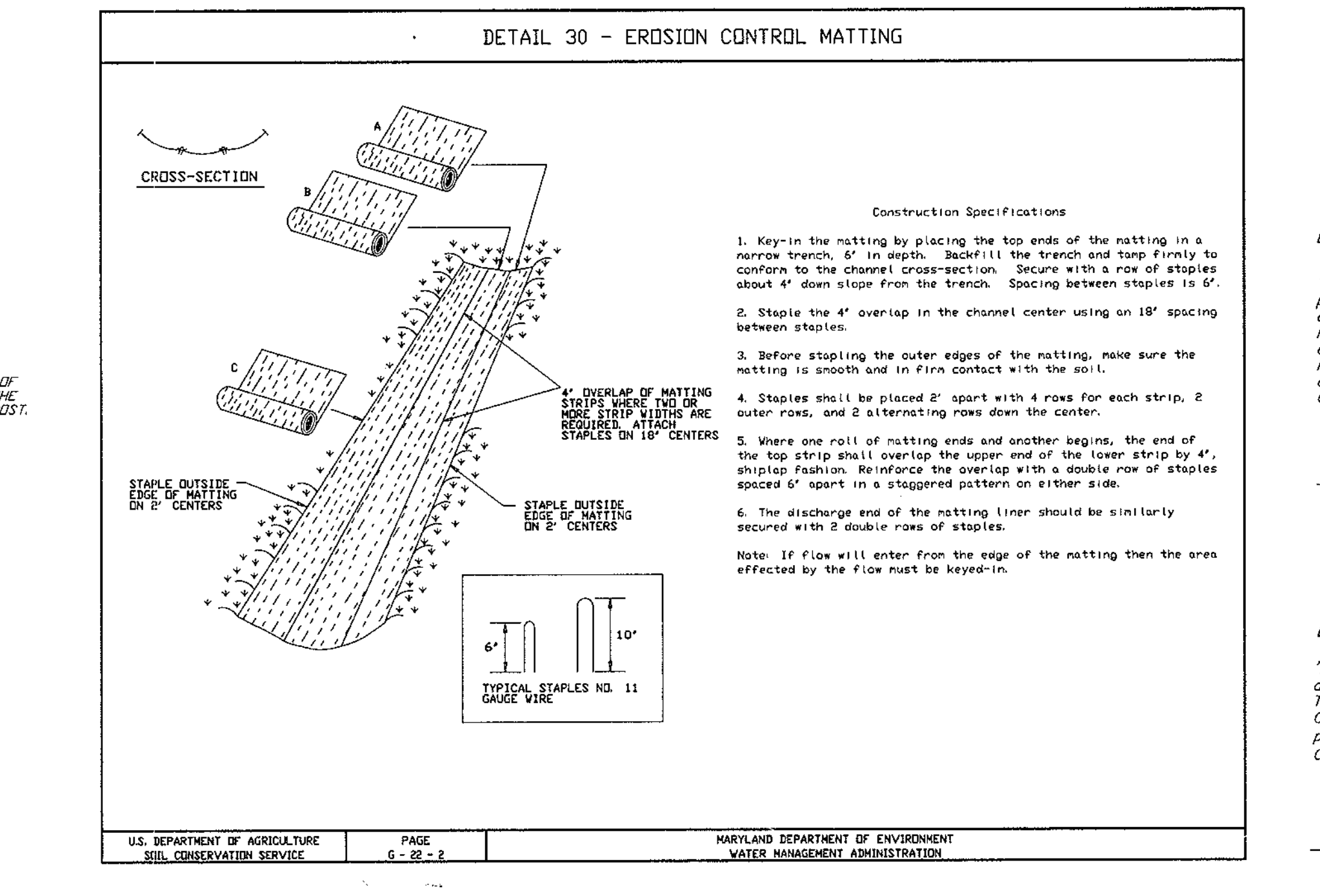
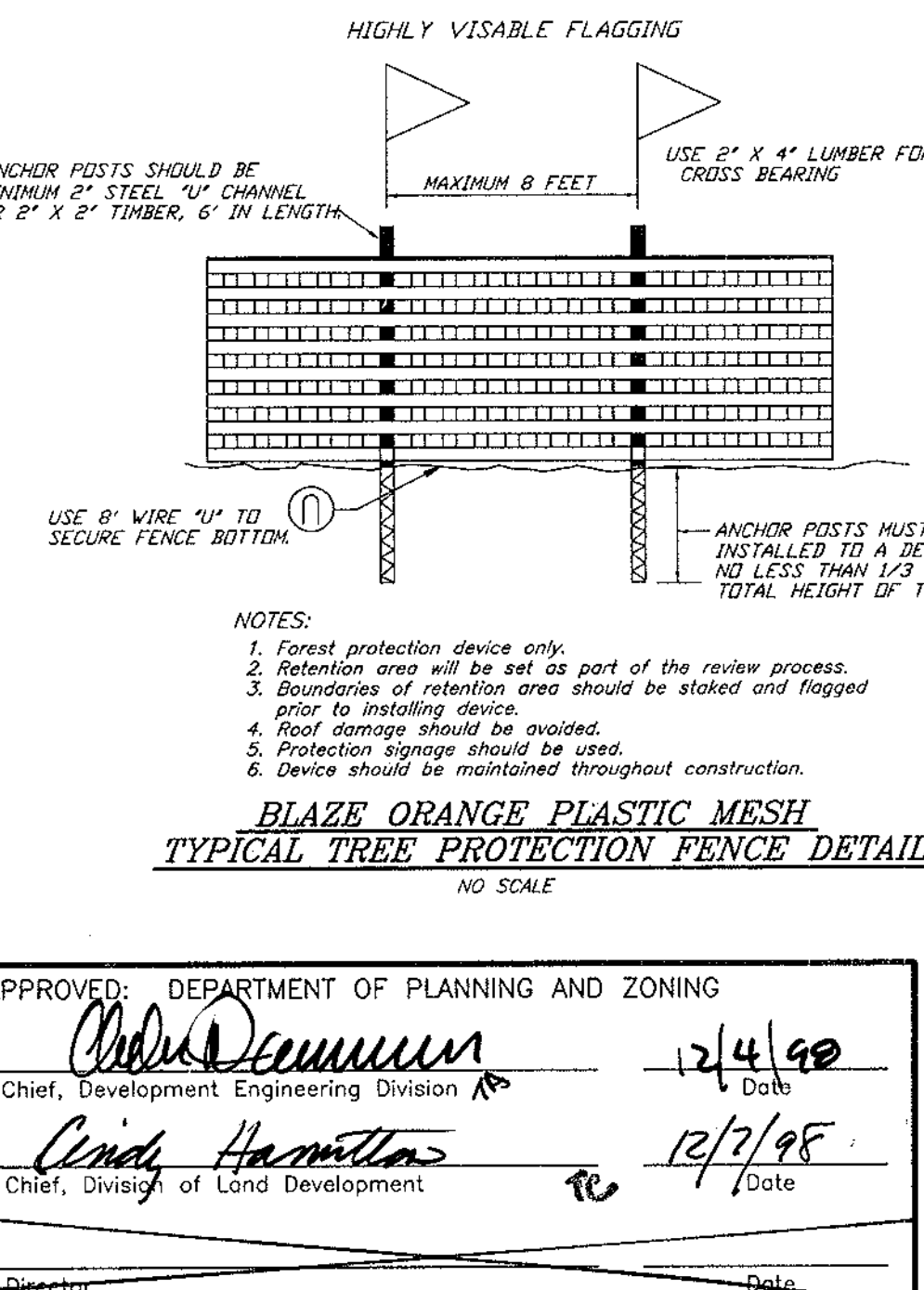
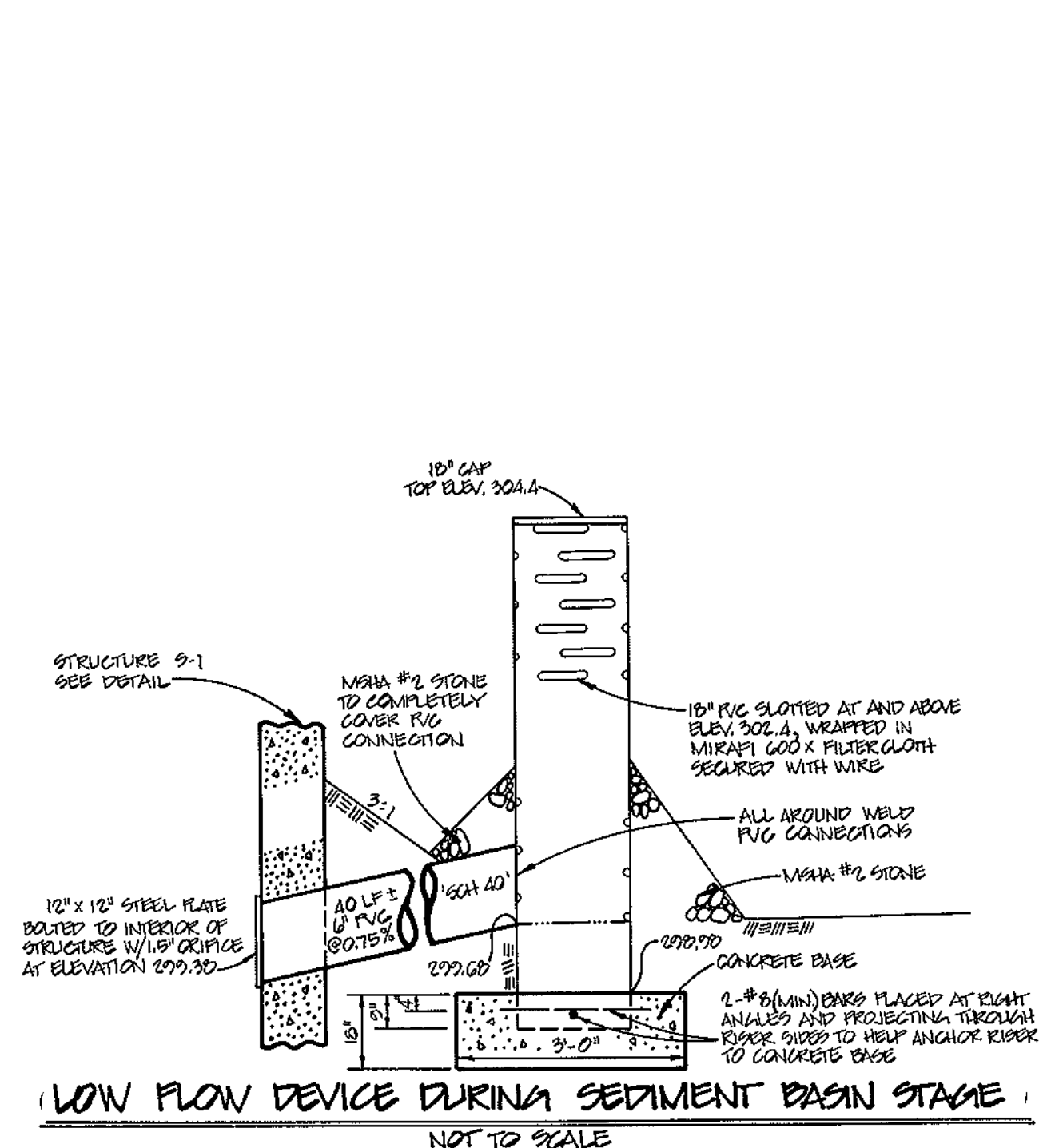
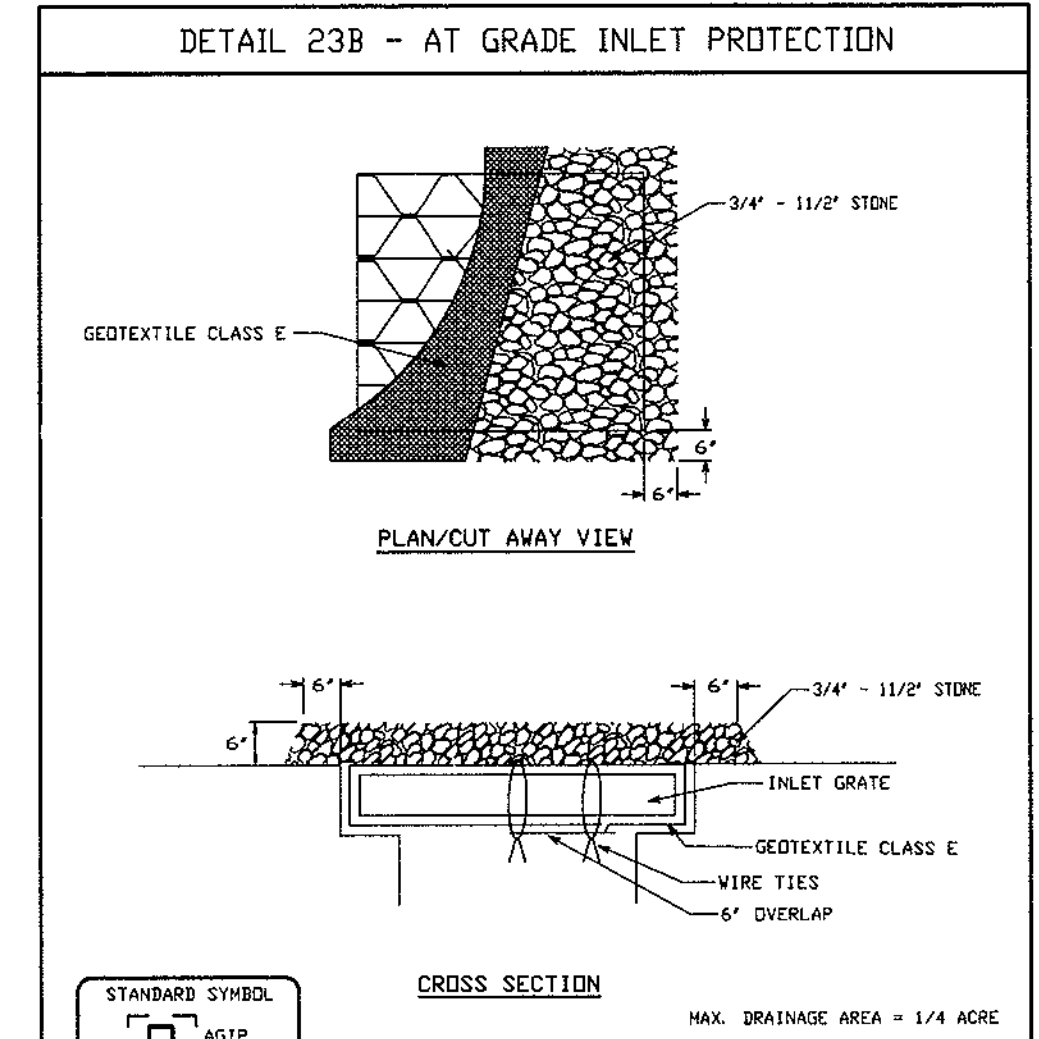
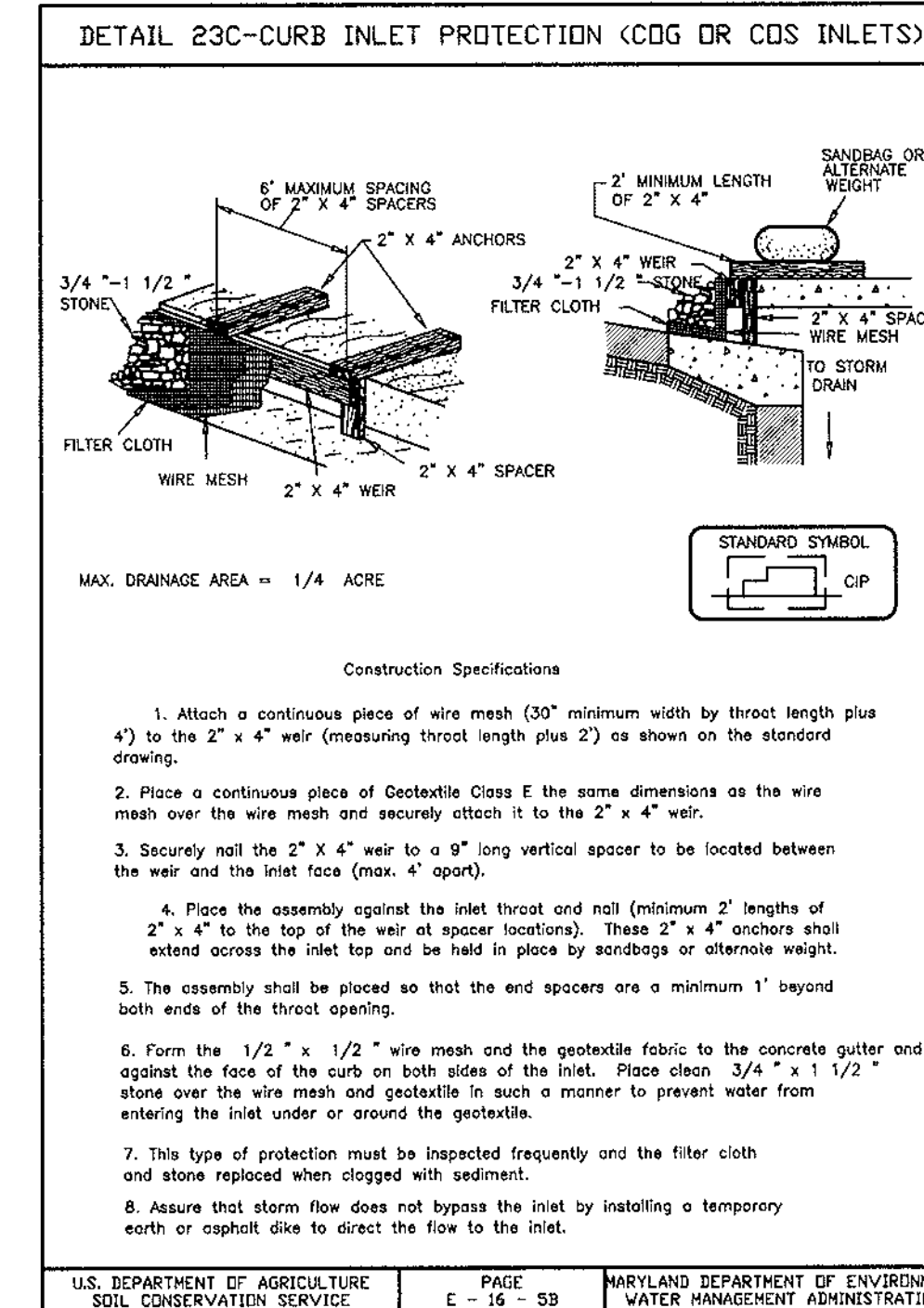
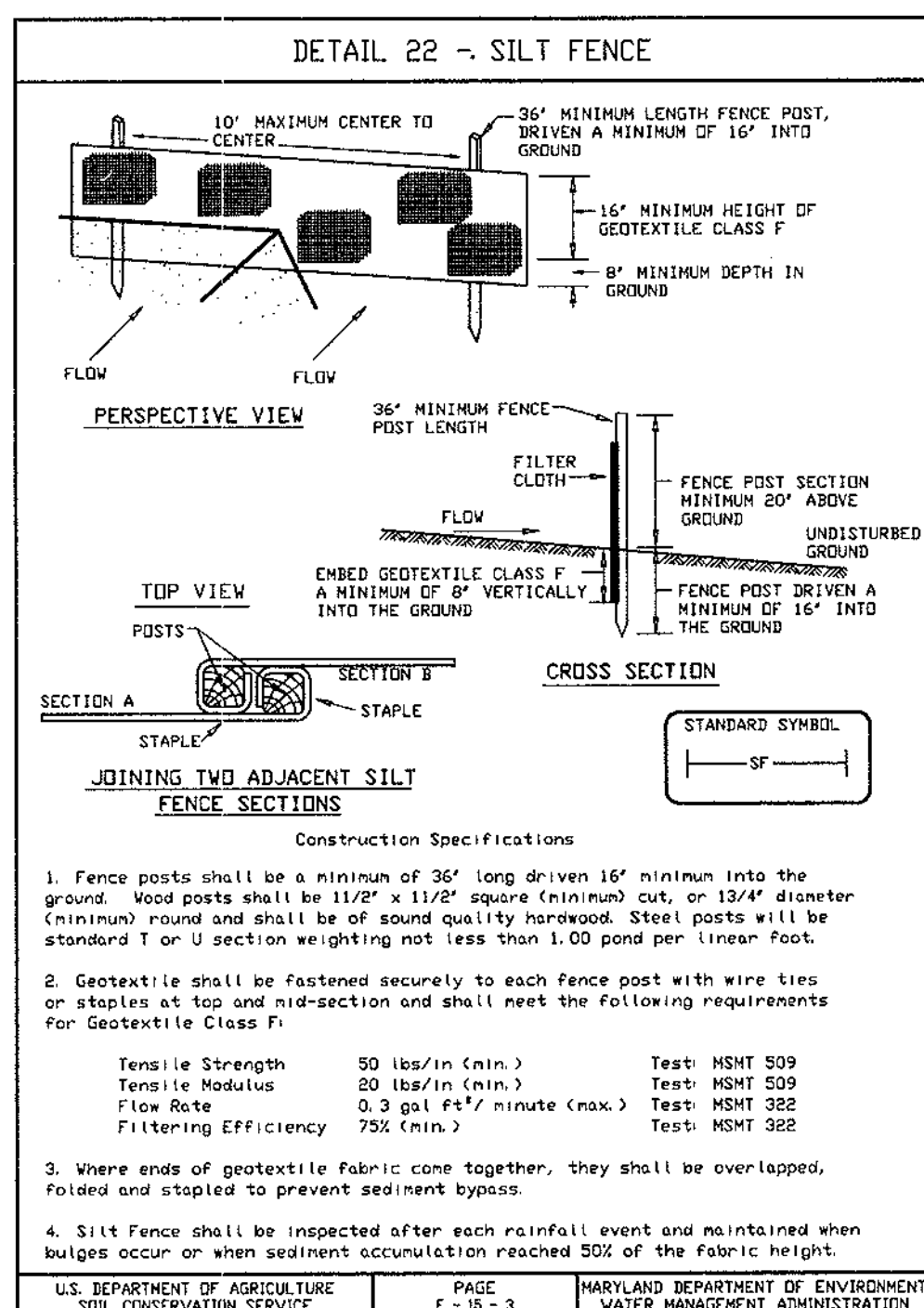
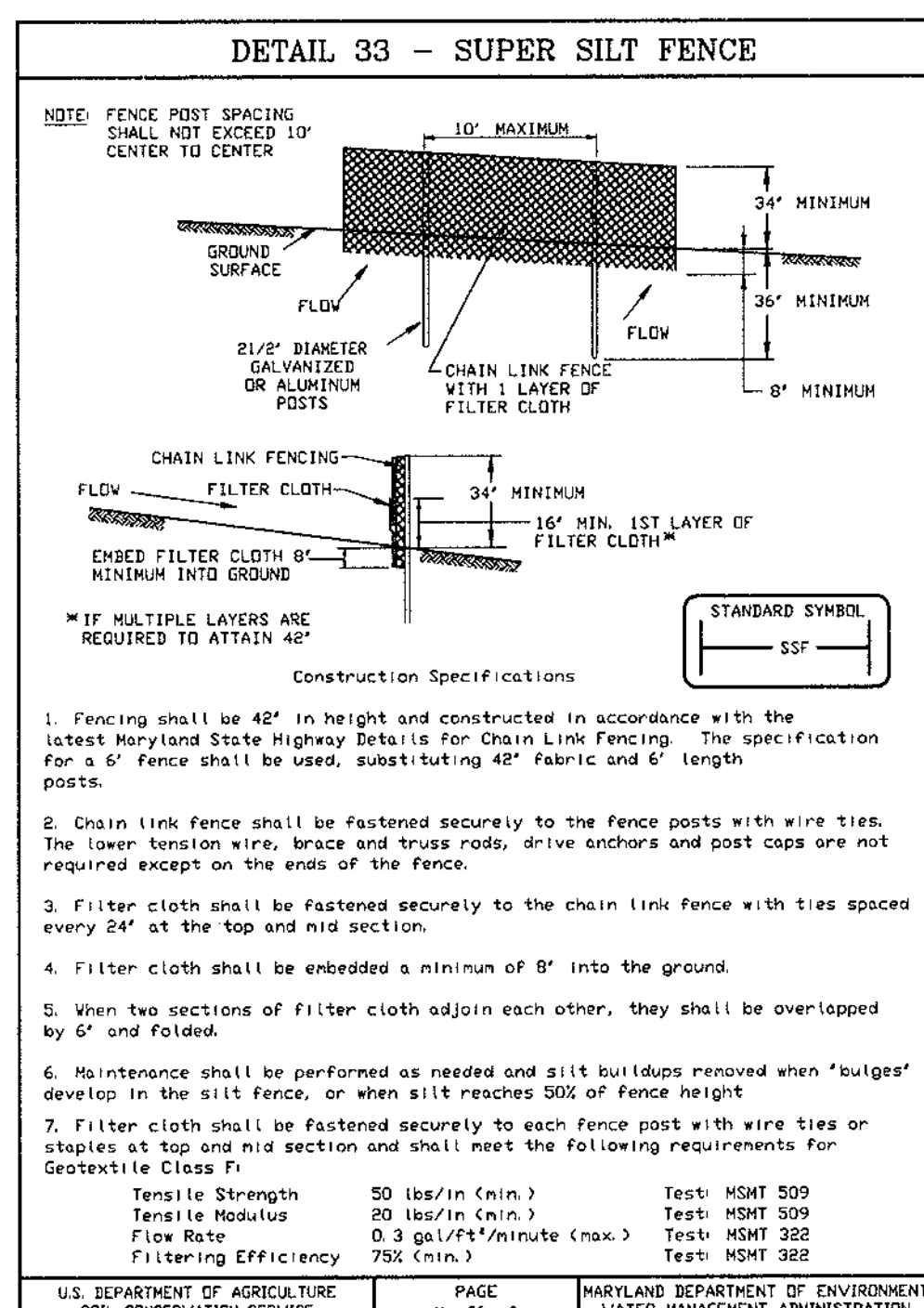
11. Trenches for the construction of utilities in limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.

12. The total amount of silt fence = 140 LF

13. The total amount of super silt fence = 415 LF

14. The total amount of earth dike = 450 LF

*It is the responsibility of the contractor to identify the spoil/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.



By The Developer:
I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

Signature of Developer: [Signature]
Date: 10-20-98

By The Engineer:
I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

Signature of Engineer: [Signature]
Date: 10-20-98

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature]
DATE: 11/3/98
CHIEF, BUREAU OF HIGHWAYS

These plans have been reviewed for the Howard Soil Conservation District and meet technical requirements for small pond construction, soil erosion and sediment control.

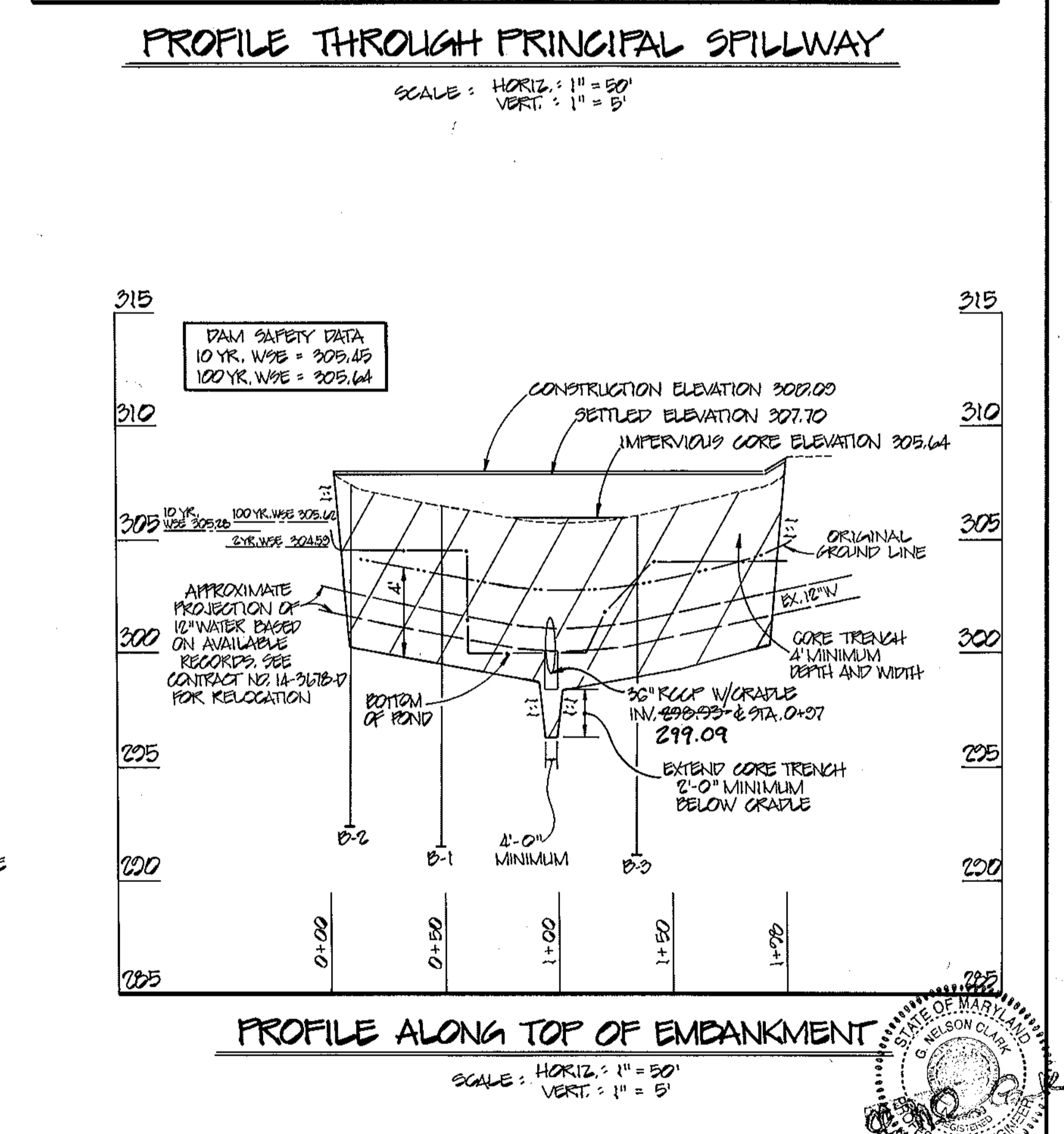
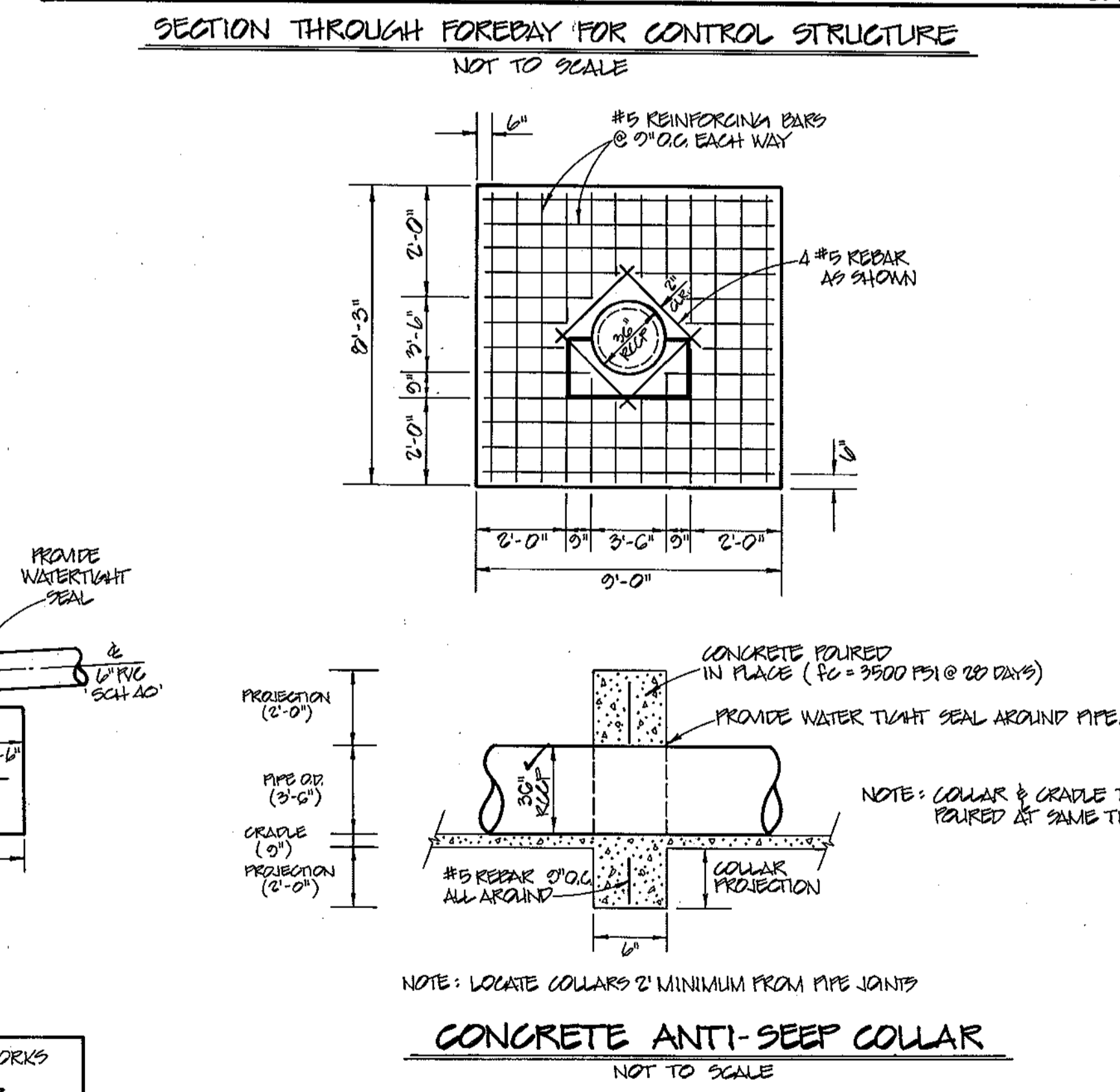
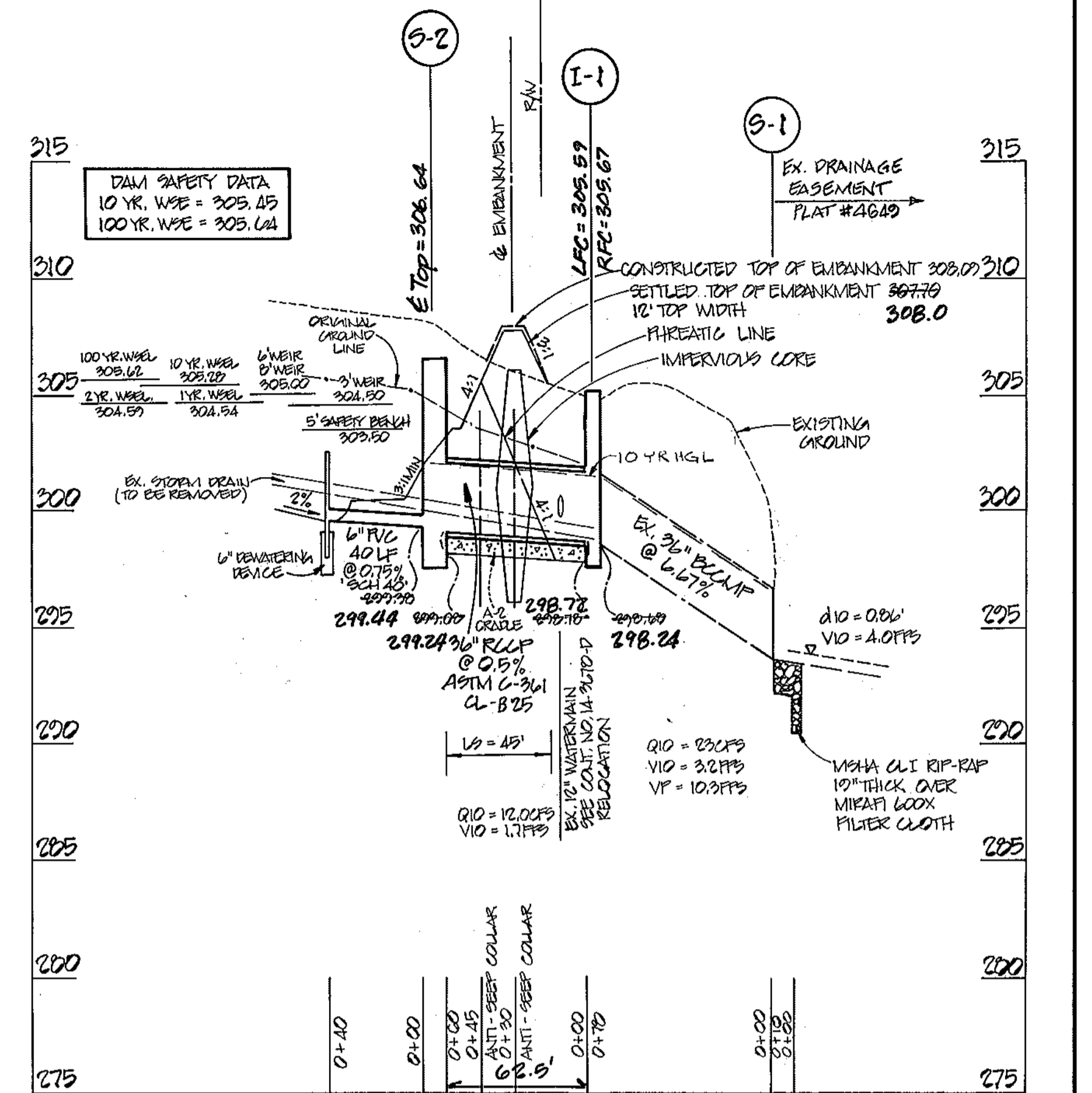
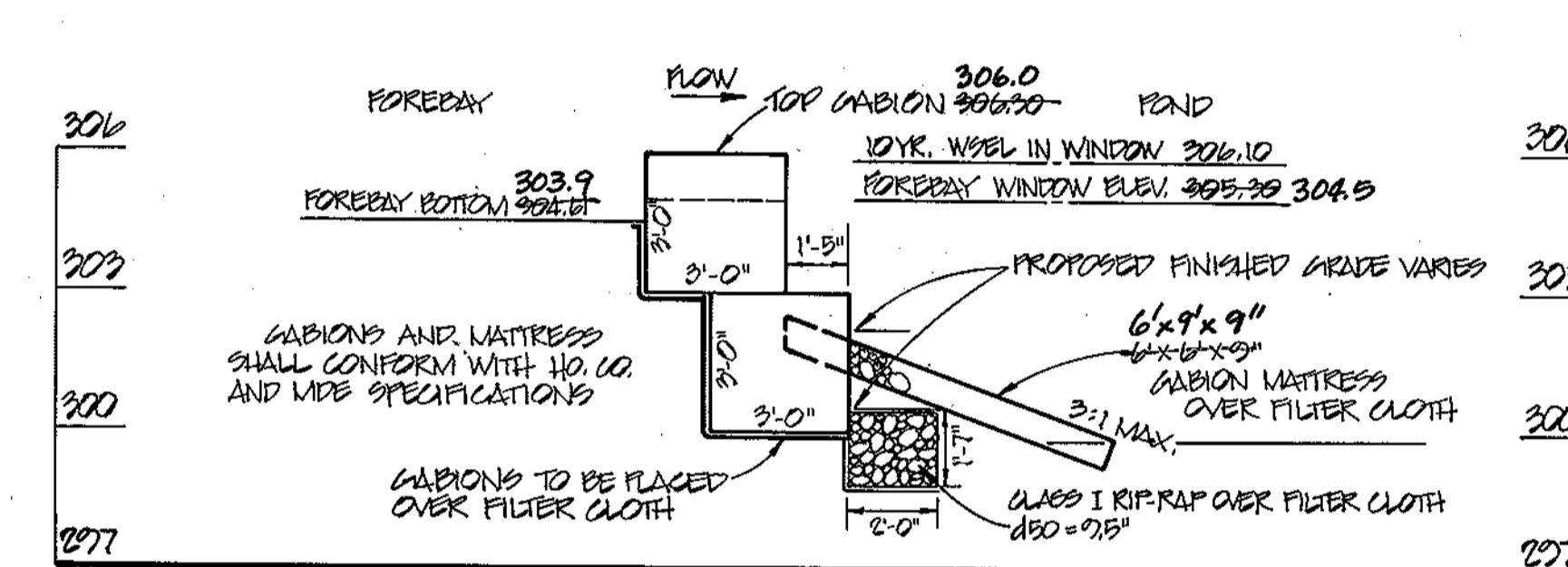
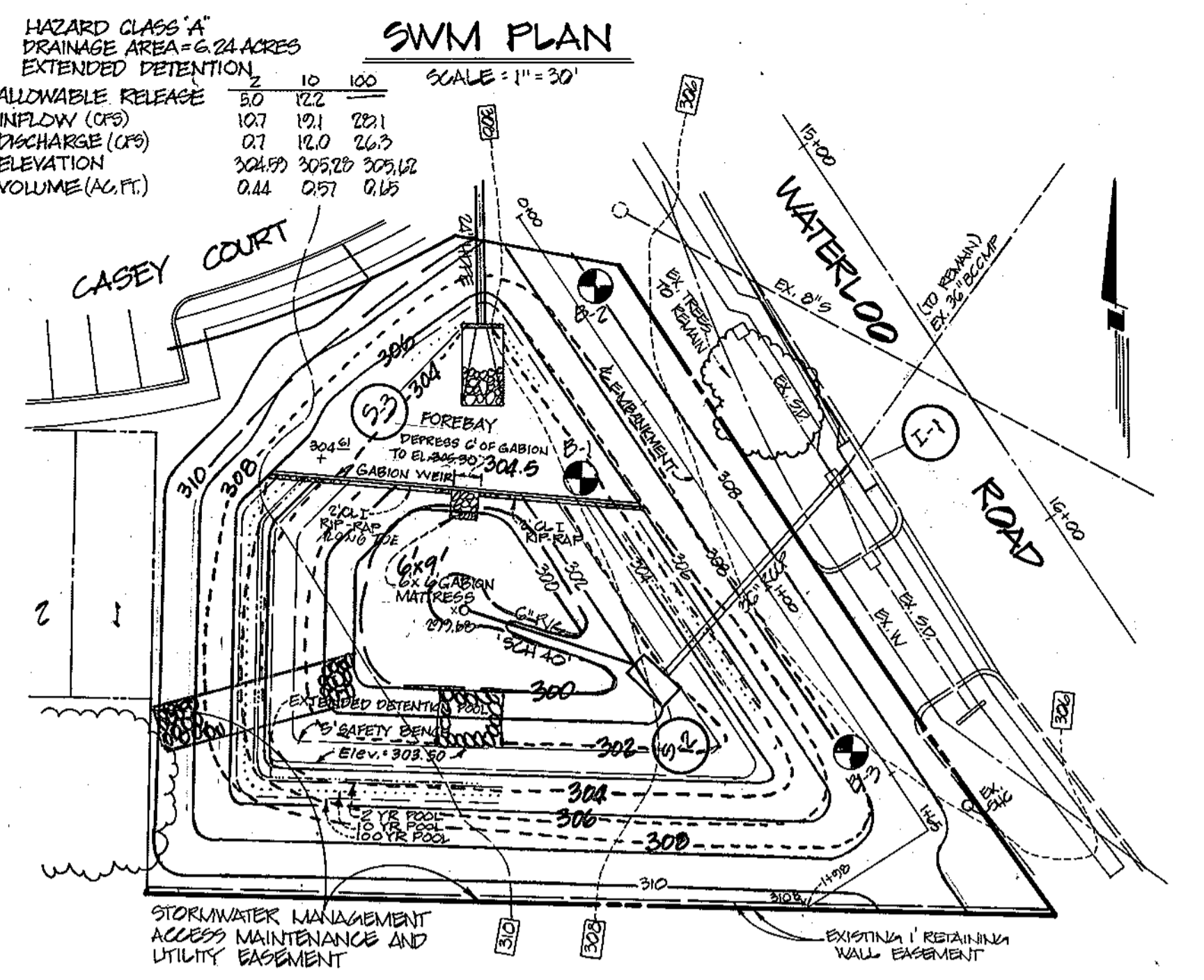
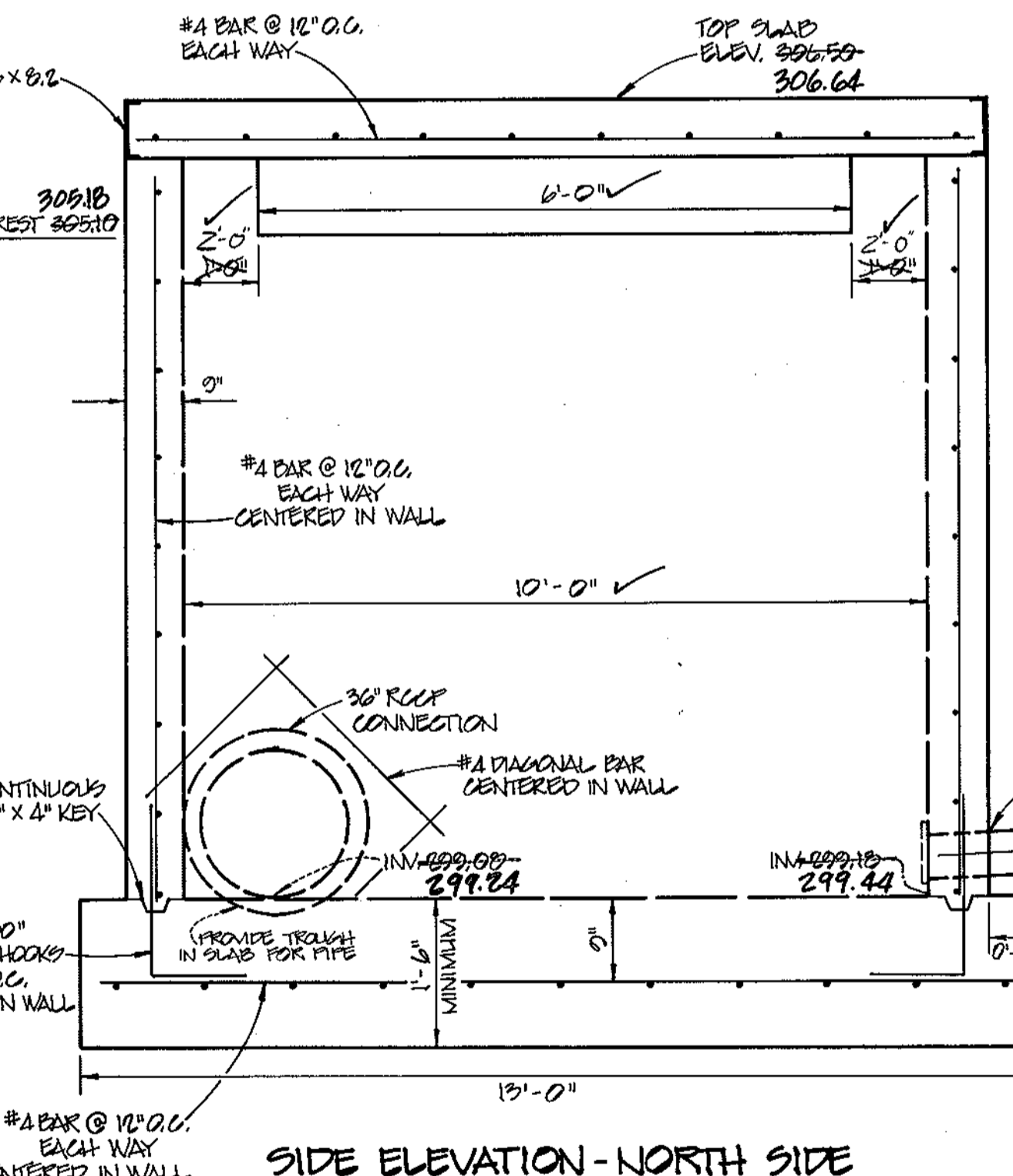
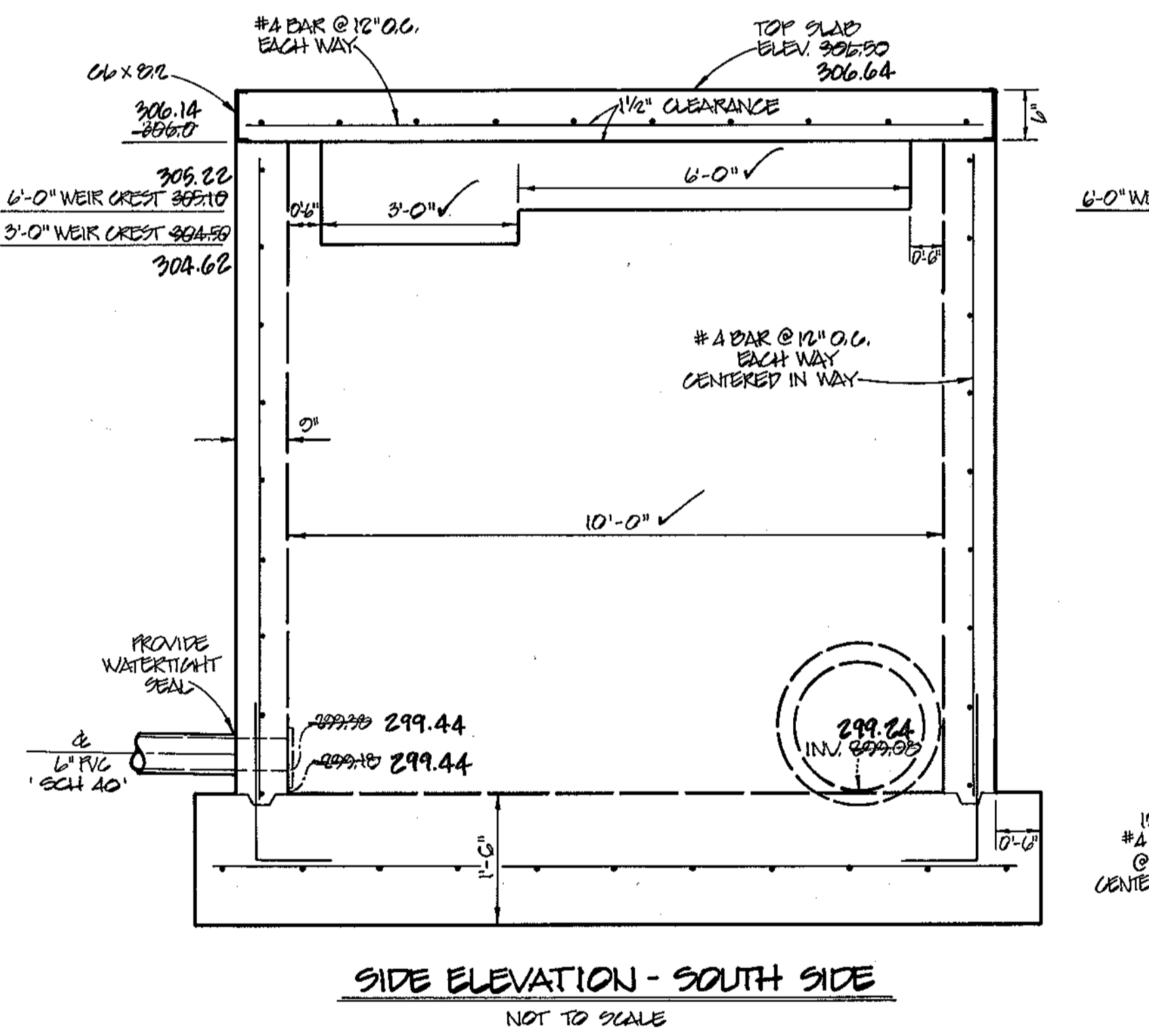
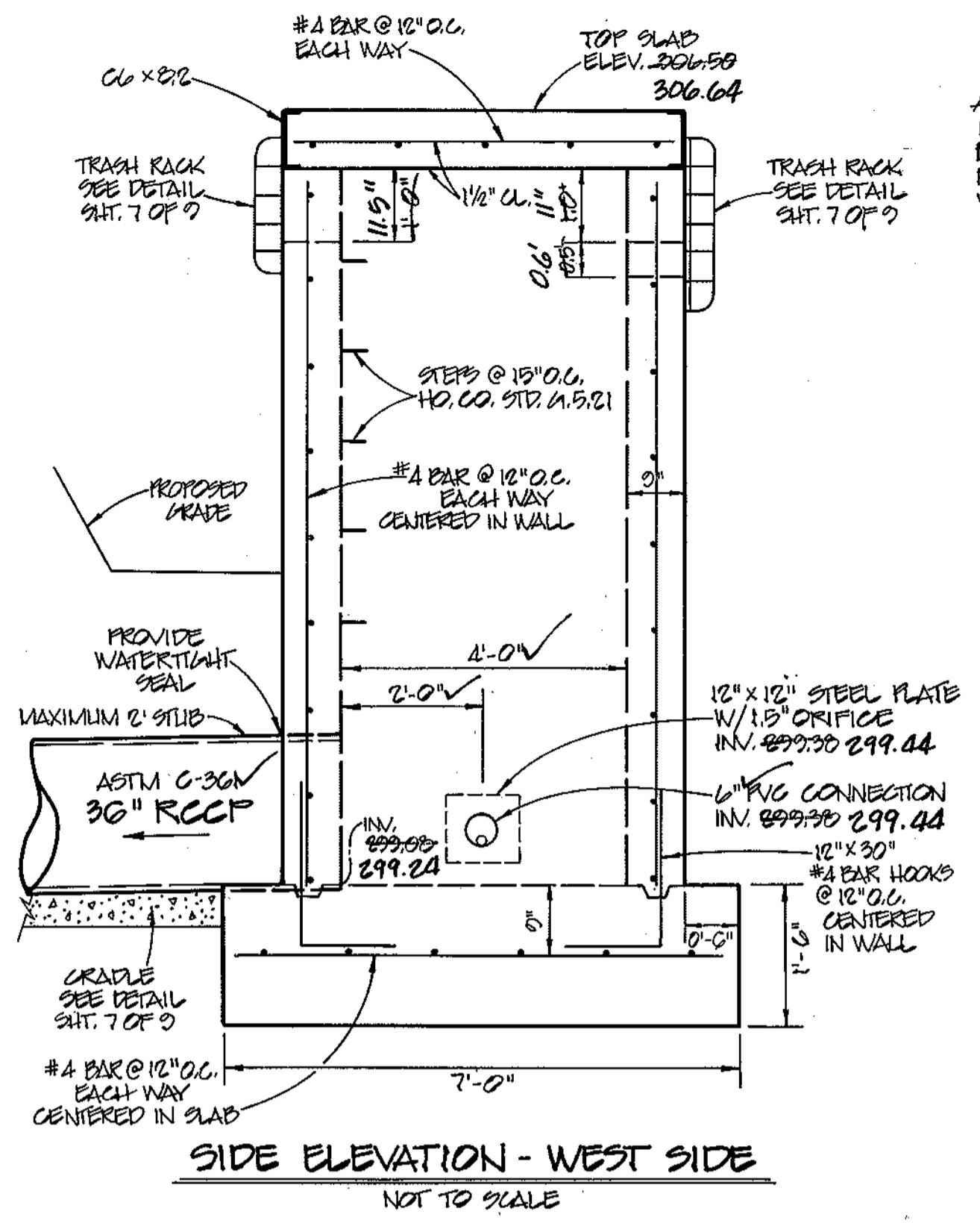
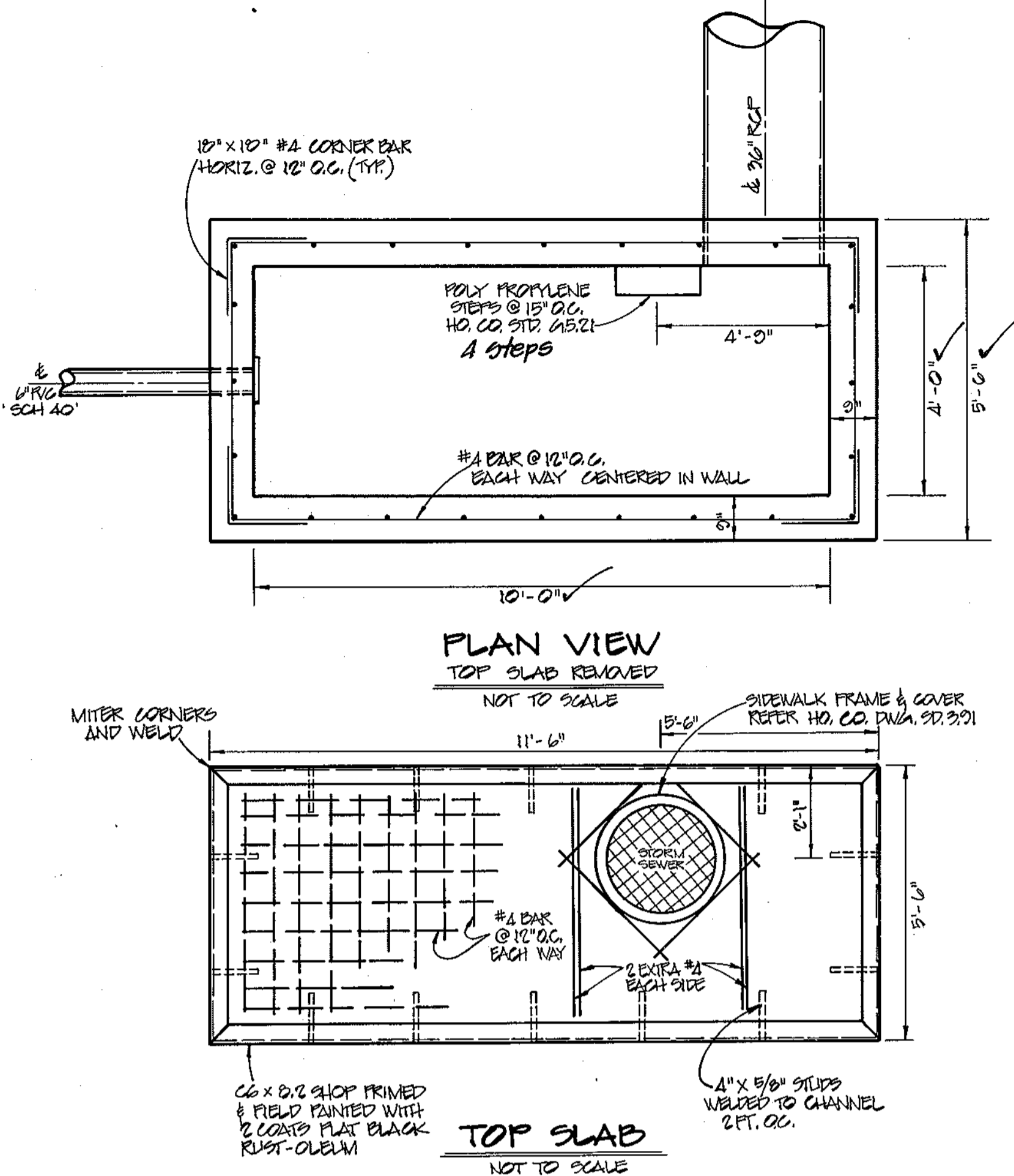
[Signature]
U.S. Natural Resources Conservation Service
DATE: 10/29/98

CLARK • FINEFROCK & SACKETT, INC.
ENGINEERS • PLANNERS • SURVEYORS
7135 MINSTREL WAY • COLUMBIA, MARYLAND 21046 • (301) 621-8100 FAX

DESIGNED: TD
DRAWN: TD
CHECKED: TD
DATE: 9-26-00 MAR. 1998

SCALE: NO SCALE
DRAWING: LARK BROWN CROSSING
JOB NO.: 5 OF 9
96-033
FILE NO.: 96-033-LS

FOR: LARK BROWN LLP
103040 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21048



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 12/4/98

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 11/17/98

By The Developer:
 I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

Approved: *Joseph Smith* 10/29/98
 Howard S.C.D. Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 12/4/98

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 11/17/98

By The Developer:
 I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

Approved: *Joseph Smith* 10/29/98
 Howard S.C.D. Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 12/4/98

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 11/17/98

By The Developer:
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Approved: *Joseph Smith* 10/29/98
 Howard S.C.D. Date

By The Engineer:
 I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

Joseph Smith
 Signature of Engineer
 10-20-98
 Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 12/4/98

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
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Approved: *Joseph Smith* 10/29/98
 Howard S.C.D. Date

CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS

7135 MINSTREL WAY • COLUMBIA, MD 21046 • BALTO. • (301) 621-8100 WASH.

AS-BUILT

DESIGNED: SWM PLAN AND DETAILS
 TD: LOTS 1-35
 DRAWN: LARK BROWN CROSSING
 BLP: TAX MAP 37, GRID 20, PARCELS 266, 515
 CHECKED: SIXTH (6th) ELECTION DISTRICT
 RS: HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN
 DRAWING: 6 OF 9
 JOB NO.: 96-033
 FILE NO.: 96-033-D

DATE: 9-26-98
 MAR. 1998
 FOR: LARK BROWN LLP
 C/O FRETTE CONSTRUCTION GROUP, INC.
 10304 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21043

POND SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-37B. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

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

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6" frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled

so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driving equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Pipe Conduits

All pipes shall be circular in cross section.

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

Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 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 M-246.

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 bands, anti-seep collars, and 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. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 24" in diameter: flanges on both ends of the pipe, a 12" wide standard tap 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" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long annular corrugated band 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 with internal caulking or a neoprene bead.

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 on the drawings.

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

Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.

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 drawings.

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."

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for 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 watertight.

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 on the drawings.

Concrete

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

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications 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 stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent, that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sums from which the water shall be pumped.

Stabilization

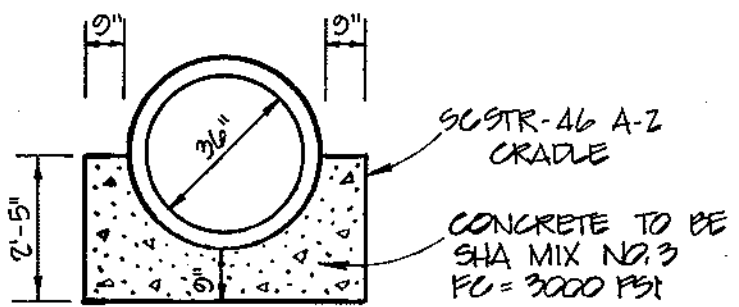
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service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

Erosion and Sediment Control

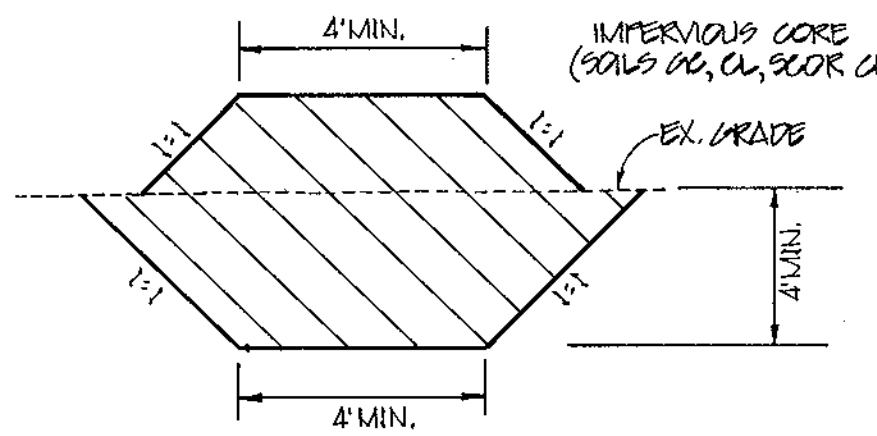
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

**HOME OWNERS' ASSOCIATION
MAINTENANCE SCHEDULE FOR SWM FACILITY**

- A. Forebay is to be inspected once after each major storm or every month. Trash to be removed as necessary.
- B. Facility is to be inspected once a month and excessive growth cut or mowed as required. No growth above 18" allowed during growing season. Bottom to be mowed as needed.
- C. Pond slopes, top/bench are to be mowed once every month during growing season.
- D. Trash to be removed after each major storm or every month, and during regular mowing operations.
- E. An annual inspection of the pond is to be done.
- F. Remove sediment from forebay area when depth exceeds 4".
- G. Corrective maintenance is to be done as needed if the pond is found to be unfunctional, water does not drain within 60 hours. Inspections should be performed during wet weather to determine if the pond is functioning properly.
- H. Visible signs of erosion in the pond as well as rip-rap outlet area shall be repaired as soon as it is noticed.



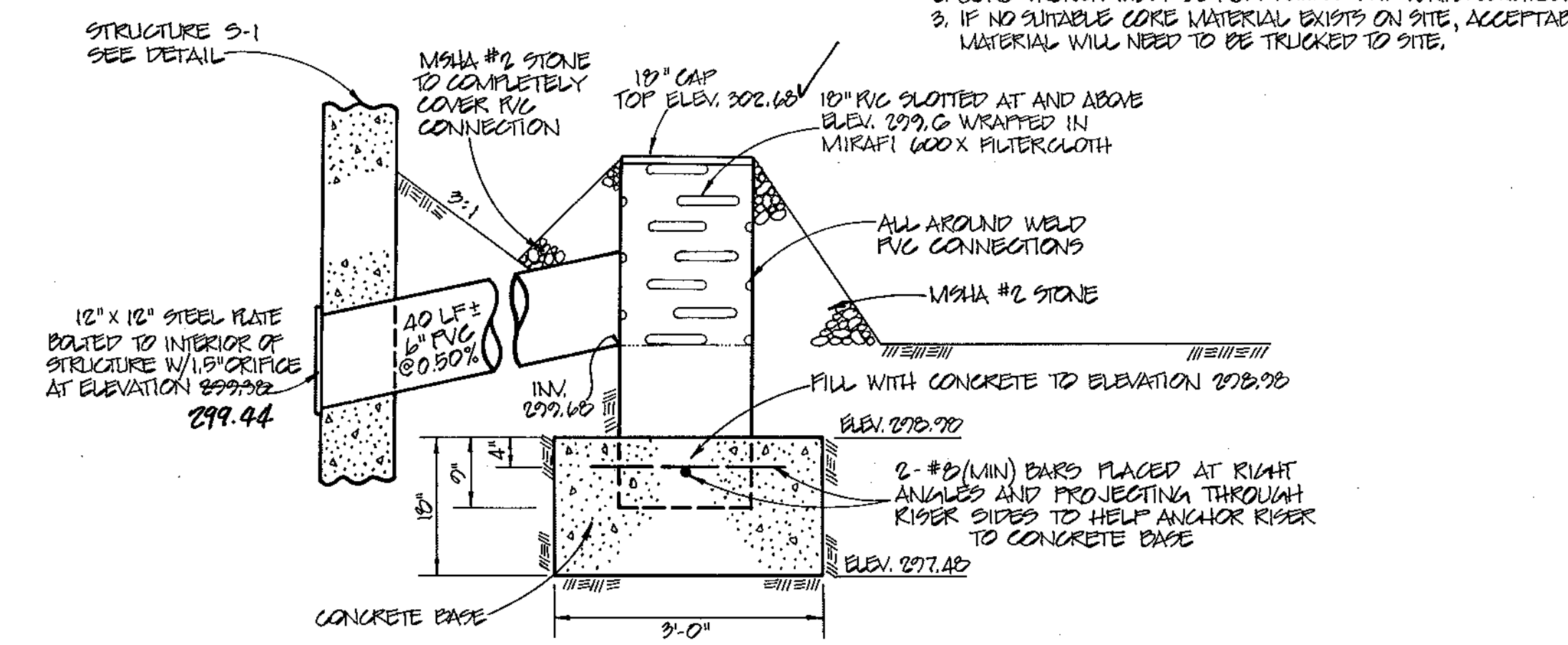
**CRADLE DETAIL
NOT TO SCALE**



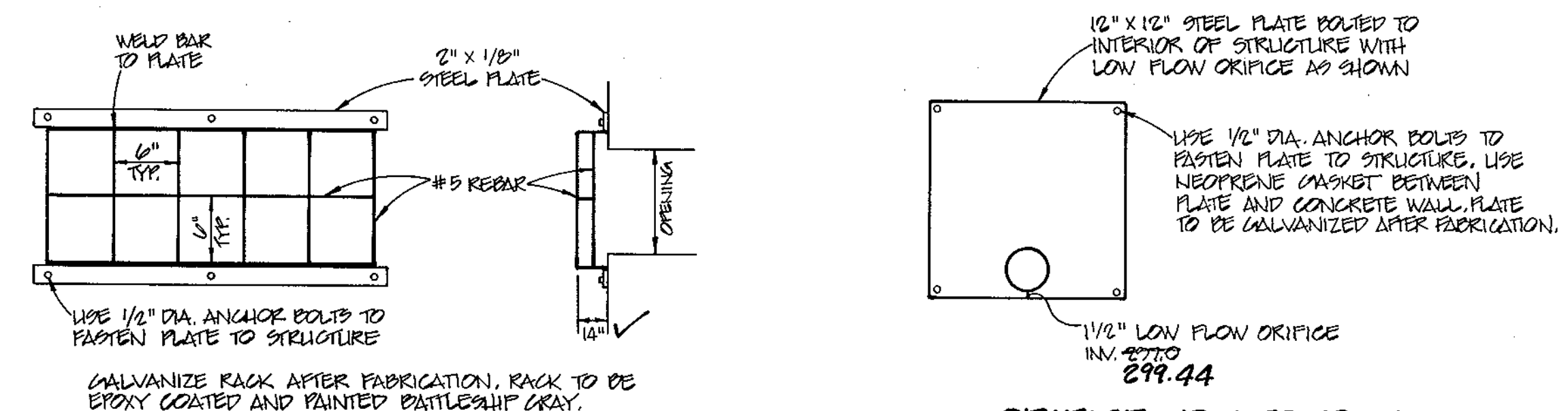
**IMPERVIOUS CORE & CORE TRENCH DETAIL
NOT TO SCALE**

- NON-ROUTINE MAINTENANCE**
- 1. STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
 - 2. SEDIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE. INTERFERENCE WITH THE FUNCTION OF THE RISER, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, OR WHEN DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

- NOTES:**
- 1. CORE TRENCH TO BE A MINIMUM OF 4' BELOW EXISTING GRADE OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
 - 2. CORE TRENCH MUST BE KEPT FLOWED DRY DURING CONSTRUCTION.
 - 3. IF NO SUITABLE CORE MATERIAL EXISTS ON SITE, ACCEPTABLE MATERIAL WILL NEED TO BE TRUCKED TO SITE.



**PERMANENT LOW-FLOW DEVICE
NOT TO SCALE**



**TRASH RACK DETAIL
NOT TO SCALE**

**ORIFICE PLATE DETAIL
NOT TO SCALE**

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Edward Smith 11/17/98
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
John Damico 12/4/98
 CHIEF, DEVELOPMENT ENVIRONMENTAL DIVISION DATE

John Damico 12/7/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

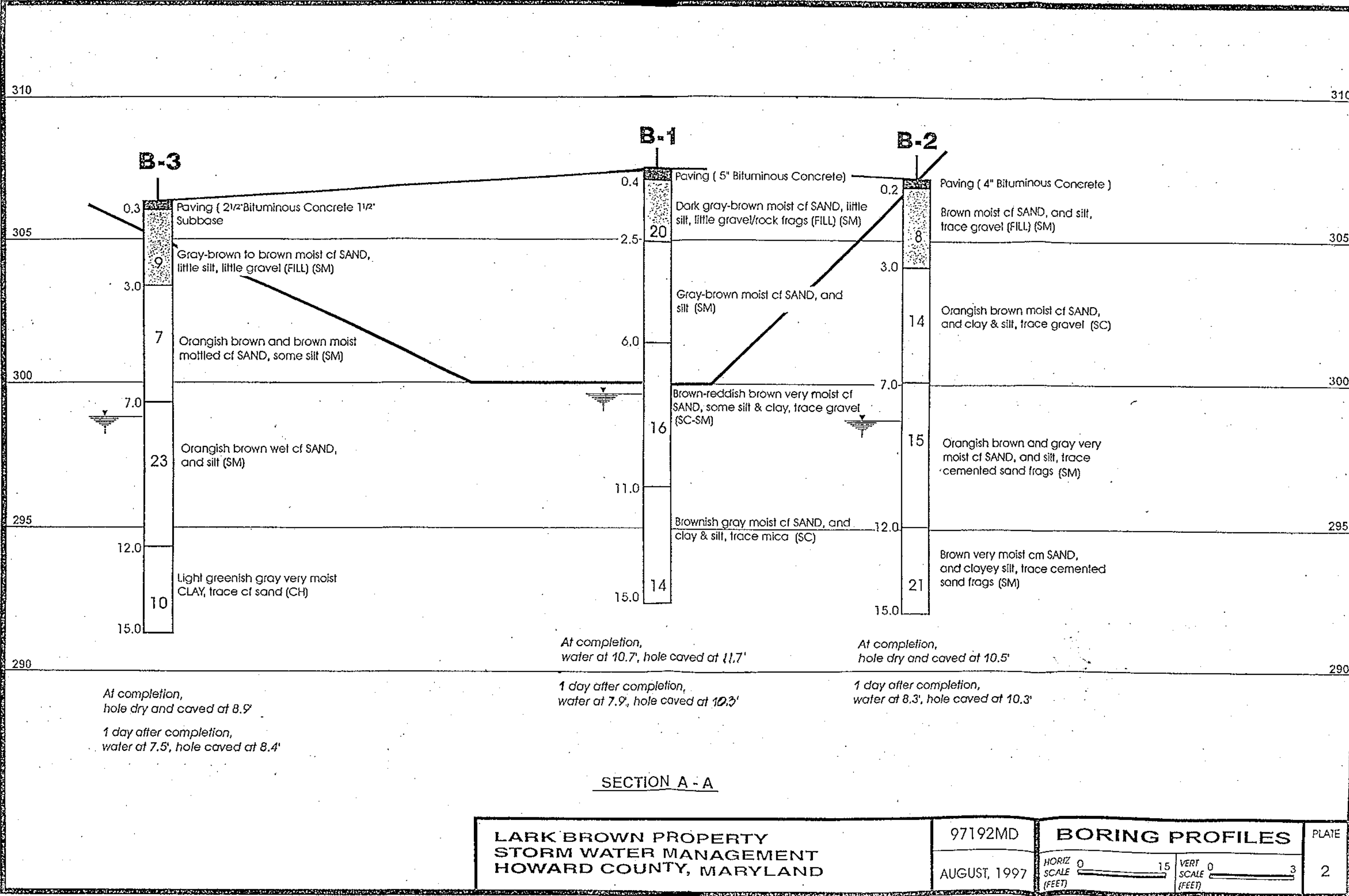
DIRECTOR DATE

These plans have been reviewed for the Howard Soil Conservation District and meet technical requirements for small pond construction, soil erosion and sediment control.

Carl Simms 10/29/98
 US Natural Resources Conservation Service Date

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Approved: *John Smith* 10/29/98
 Howard S.C.D. Date



LARK BROWN PROPERTY STORM WATER MANAGEMENT HOWARD COUNTY, MARYLAND		97192MD	BORING PROFILES	PLATE
		AUGUST, 1997	HORIZ SCALE 0 15 FEET	VERT SCALE 0 3 FEET
				2

By The Developer:

"I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

Joseph Smith 10-20-98
 Signature of Developer Date

By The Engineer:

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

John Smith 10-20-98
 Signature of Engineer Date



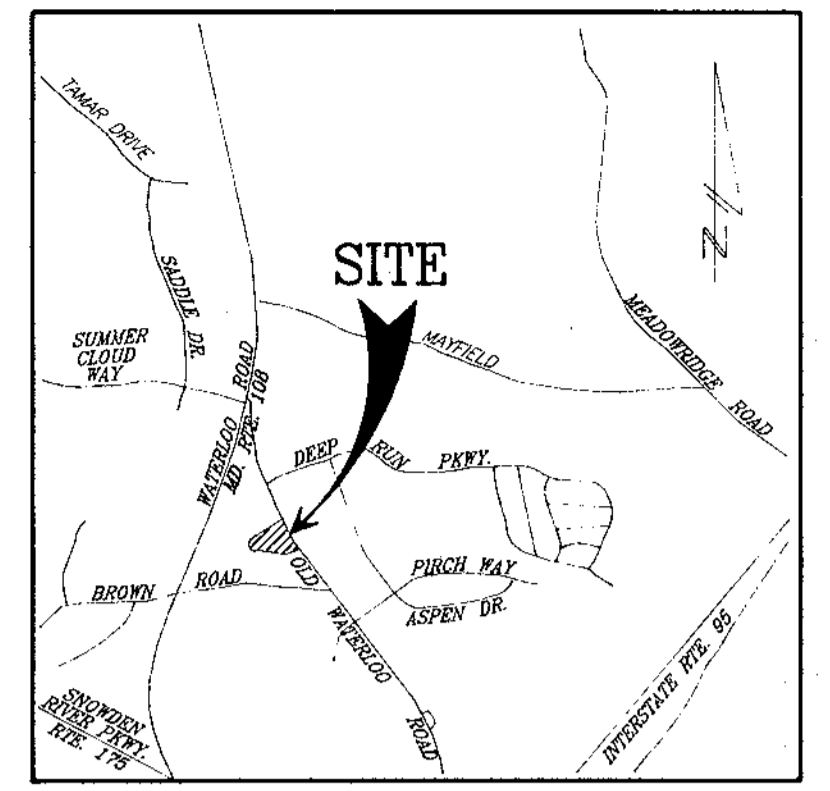
CLARK • FINEFROCK & SACKETT, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 7135 MINSTREL WAY • COLUMBIA, MARYLAND 21046 • (301) 621-8100 WASH. D.C.

AS-BUILT

DESIGNED	TD	SCALE	AS SHOWN
DRAWN	BLP	DRAWING	7 OF 9
CHECKED	RS	JOB NO.	96-033
DATE	9-26-00 MAR. 1998	FILE NO.	96-033-D

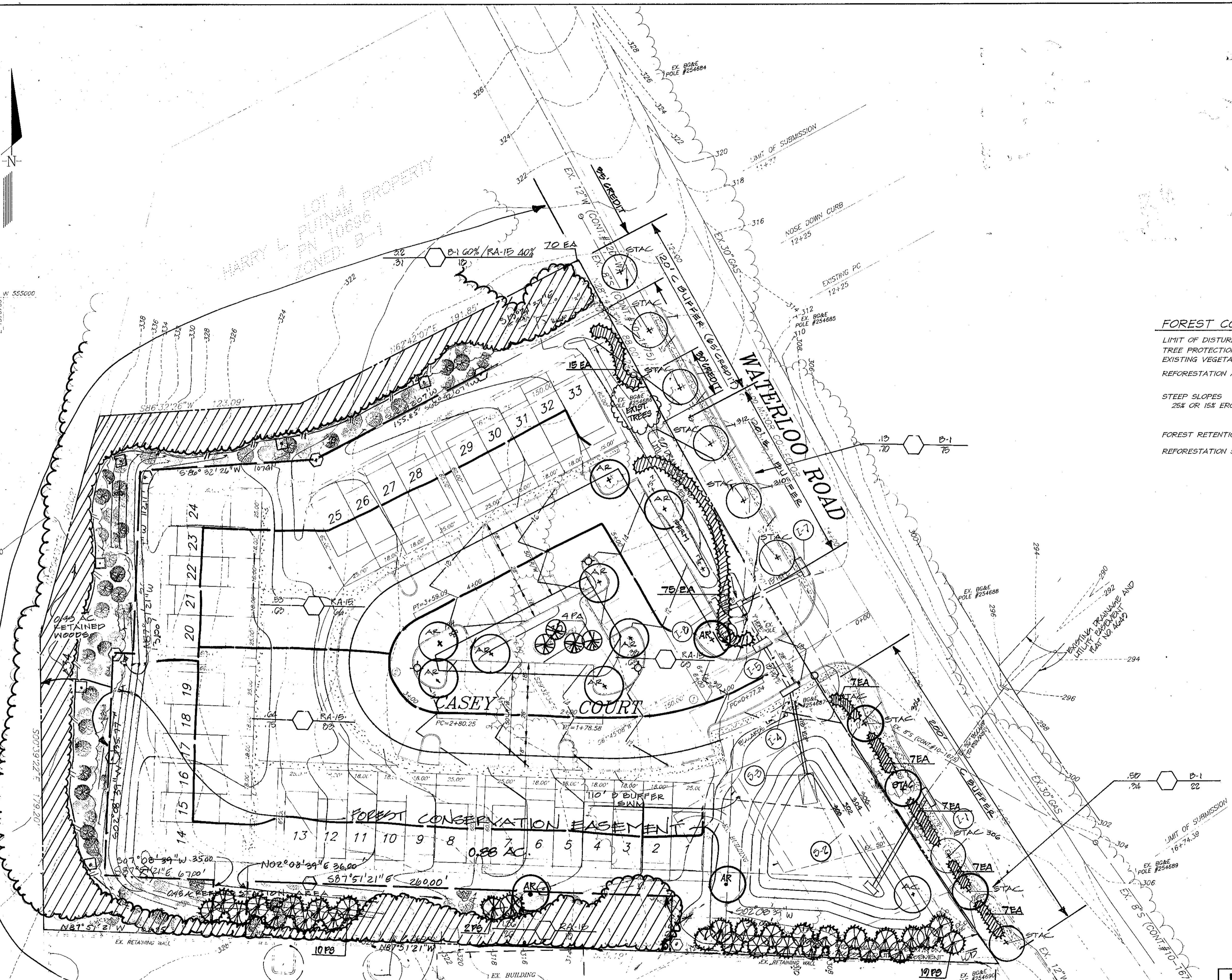
LARK BROWN CROSSING
 TAX MAP 37, GRID 20, PARCELS 266, 515
 SIXTH (6TH) ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

FOR: LARK BROWN PARTNERSHIP
 10304B BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21043



VICINITY MAP
Scale: 1"=2000'

- FOREST CONSERVATION LEGEND**
- LIMIT OF DISTURBED AREA ——— LOD ———
 - TREE PROTECTION FENCE [Symbol]
 - EXISTING VEGETATION TO BE SAVED [Symbol]
 - REFORESTATION AREA [Symbol]
 - STEEP SLOPES
25% OR 15% ERODIBLE SOILS [Symbol]
 - FOREST RETENTION SIGN [Symbol]
 - REFORESTATION SIGN [Symbol]



APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 12/4/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 12/7/98
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DIRECTOR DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 4/12/98
 CHIEF, BUREAU OF HIGHWAYS
 DATE

1 Revised plantings per As-Built conditions
 REVISION
 5-30-01
 DATE

CLARK • FINEFROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA, MD 21046 • BALTO. • (301) 621-6100 WASH.		
DESIGNED MHM	AS-BUILT FOREST CONSERVATION & LANDSCAPE PLAN LOTS 1-33	SCALE 1" = 30'
DRAWN BLH/MM	LARK BROWN CROSSING TAX MAP 37, GRID 20, PARCELS 200,515 SIXTH (6th) ELECTION DISTRICT HOWARD COUNTY, MARYLAND	DRAWING 8 OF 9
CHECKED WHT	DPZ FILE REF: S-97-04	JOB NO. 96-033
DATE MAR 1998 9-26-00	OWNER: LARK BROWN PARTNERSHIP C/O FINETTI CONSTRUCTION GROUP, INC. 10304B BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21143	FILE NO. 96-033-LS Sht. 1 of 2



