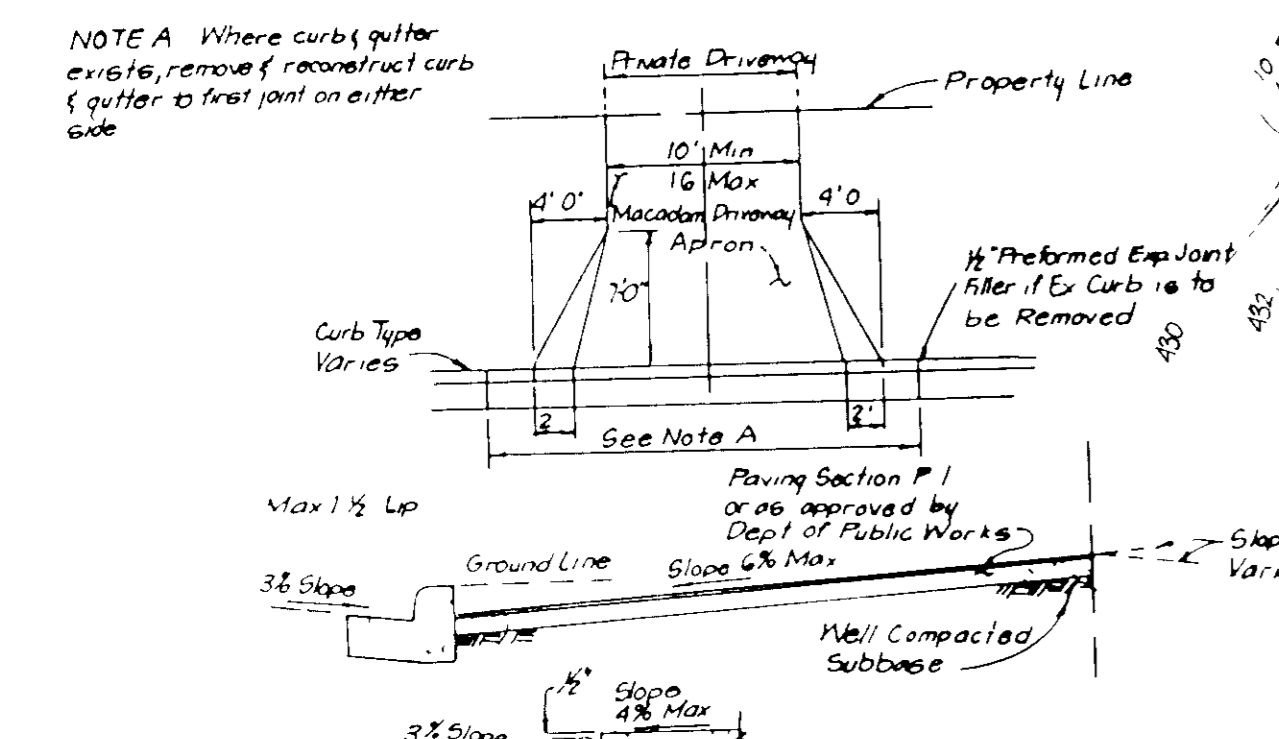


DRIVEWAY ABUTTING CLOSED SECTION WITH STD 7\"/>



DRIVEWAY ABUTTING CLOSED SECTION WITHOUT CONCRETE SIDEWALK

LOT #	TOTAL AREA	AREA OF CURVE > 25% GREATER	TOTAL BUILDABLE AREA
1	2,813.7	2,430.4	6,370.0
2	2,259.9	2,259.9	16,474.0
3	3,375.0	3,375.0	14,497.0
4	1,632.0	1,632.0	15,896.0
5	4,788.0	4,788.0	16,357.0
6	454.1	454.1	14,925.0
7	15,375.7	15,375.7	3,313.0

FOR CONTINUATION SEE SHEET 1 OF 2

FOR CONTINUATION SEE SHEET 2 OF 5

NOV. 7, 1988

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER: [Signature] DATE: 12-1-88
 APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING
 PLANNING DIRECTOR: [Signature] DATE: 12/2/88
 APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE
 STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DIRECTOR: [Signature] DATE: 11-29-88
 CHIEF BUREAU OF ENGINEERING

ZONING R 20
 BRIDGE WATER
 SECTION 1 AREA 1

ADDRESS CHART	
LOT No	STREET ADDRESS
7	3821
8	3825
9	3829
10	3833
11	3837
12	3841
13	3845
14	3849
15	3853
16	3857
17	3861
18	3865
19	3869
20	3873

CLARK • FINEPROCK & SACKETT INC.

SITE DEVELOPMENT PLAN
 LOTS 1 THRU 15 & 20 THRU 34
BRIDGE WATER
 SECTION 1 AREA 1
 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 PORTER & SULLIVAN
 3 Bethesda Metro Center - 50 to 900
 Bethesda, Maryland 20814

1" = 30'
 2 OF 5
 88 073
 88 073 X



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

Approved: *Howard S.C.D.*
Howard S.C.D.

Approved for Howard S.C.D.
Name: *John D. Sullivan*
Signature: *John D. Sullivan*
Date: *11/21/88*
U.S. Soil Conservation Service

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

U.S. Soil Conservation Service Date:

LEGEND
Stabilized Construction Entry
Limit of Disturbance
Silt Fence/Straw Bale Dike
Earth Dike
Contour Interval 2 FT
Existing Contour
Proposed Contour
Spot Elevation
Direction of Drainage
Walk out Basement
Trees to be Saved

TRAP #2
Drainage Area 2.0 Ac
Storage Required 3600 cf
Storage Provided 3600 cf
Weir Crest Elev 437.0
Cleanout Elev 435.0
Bottom Elev 433.0
Depth 4'
Bottom Dimensions 26' x 26'
Side Slope 1:1
Weir length 6'-8"

Nov. 7, 1988
com

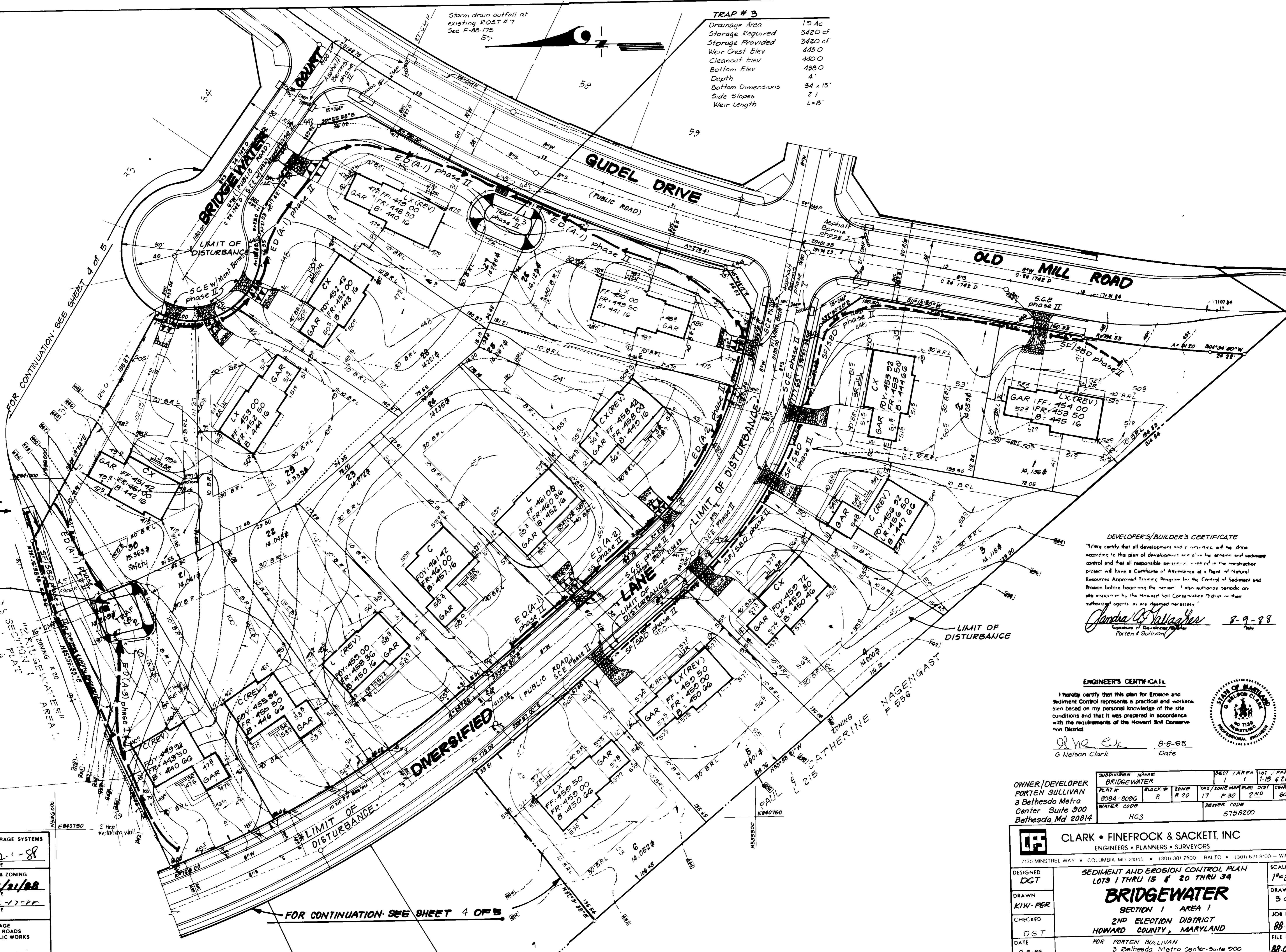
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER: *John D. Sullivan* DATE: *11-1-88*

APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING
PLANNING DIRECTOR: *John D. Sullivan* DATE: *11/21/88*

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE
STORM DRAINAGE SYSTEMS AND PUBLIC ROADS
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DIRECTOR: *John D. Sullivan* DATE: *11-29-88*

Storm drain outfall at existing ROST #7 See F-88-175

TRAP #3
Drainage Area 1.0 Ac
Storage Required 3420 cf
Storage Provided 3420 cf
Weir Crest Elev 443.0
Cleanout Elev 440.0
Bottom Elev 438.0
Depth 4'
Bottom Dimensions 34' x 13'
Side Slopes 2:1
Weir Length 6'-8"



DEVELOPER'S/BUILDER'S CERTIFICATE
I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance as a Part of Natural Resources 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 may be deemed necessary.

John D. Sullivan 8-9-88
Signature of Developer/Builder
Porten Sullivan

ENGINEER'S CERTIFICATE
I hereby certify that this plan for Erosion and Sediment 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.

G. Nelson Clark 8-8-88
G. Nelson Clark Date

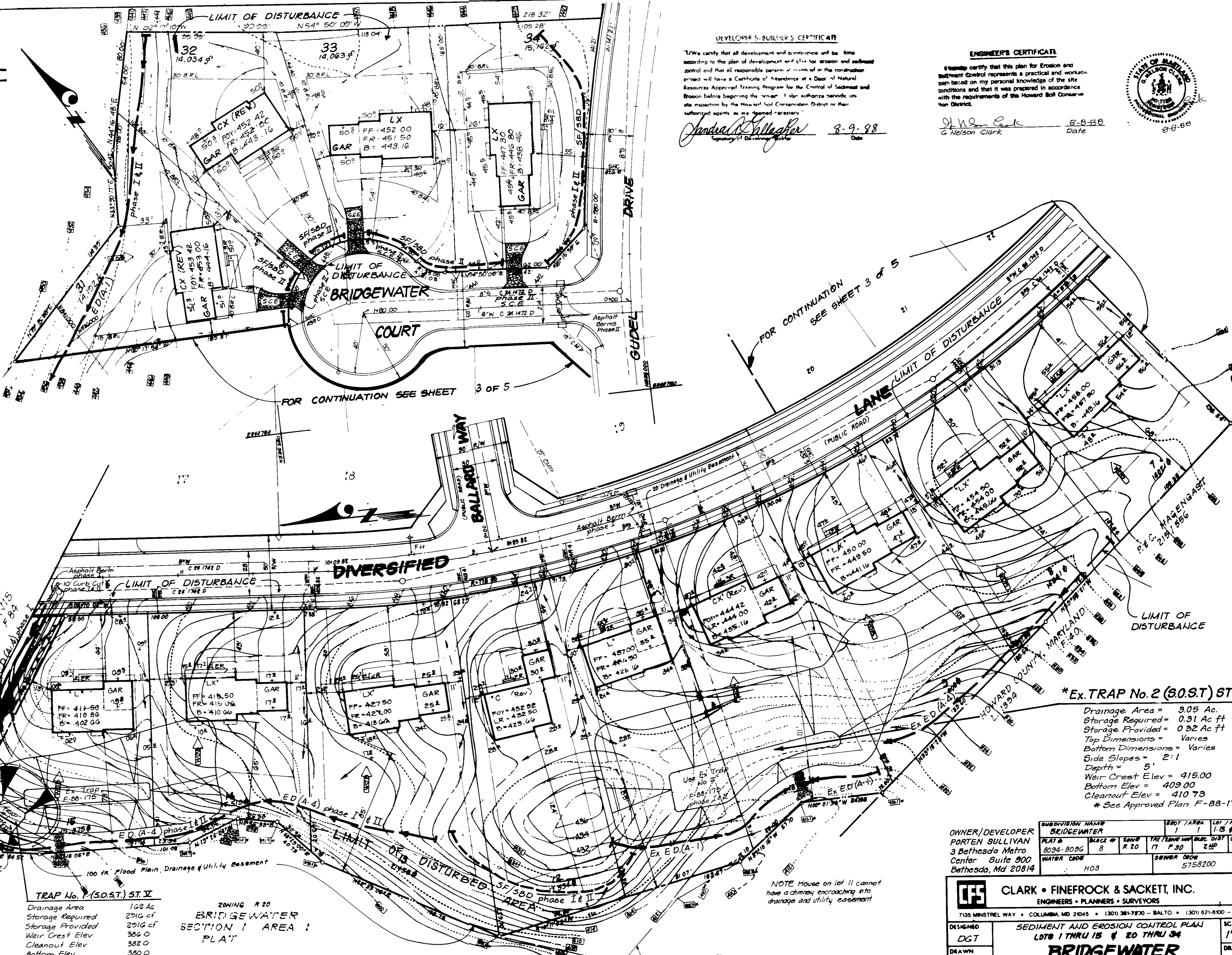


OWNER/DEVELOPER PORTEN SULLIVAN 3 Bethesda Metro Center Center Suite 300 Bethesda, Md 20814		SUBDIVISION NAME BRIDGEWATER		NET AREA LOT / PARCEL # 1 / 1-15 & 20-34	
PLAT # 8094-8096	BLOCK # 8	ZONE R 20	TAX/ZONE MAP FILE DIST P 30 2ND	CENSUS TR 6021	
WATER CODE H03			SEWER CODE 5758200		
CLARK • FINEFLOCK & SACKETT, INC ENGINEERS • PLANNERS • SURVEYORS 7135 MINSTREL WAY • COLUMBIA MD 21045 • (301) 381-7500 - BALTO • (301) 621-9100 - WASH					
DESIGNED DGT	SEDIMENT AND EROSION CONTROL PLAN LOTS 1 THRU 15 & 20 THRU 34				SCALE 1"=30'
DRAWN KIV-PER	BRIDGEWATER				DRAWING 3 of 5
CHECKED DGT	SECTION 1 AREA 1				JOB NO 88-073
DATE 8-8-88	2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND				FILE NO 88-073 SE
FOR PORTEN SULLIVAN 3 Bethesda Metro Center-Suite 300 Bethesda, MD 20814					

S.D.P. 89-32

LEGEND

- Stabilized Construction Entrance
- Limit of Disturbance
- Silt Fence / Straw Bale Dike
- Earth Dike
- Contour Interval
- Existing Contour
- Proposed Contour
- Spot Elevation
- Direction of Drainage
- Walk-Out Basement



DEVELOPER'S BUILDER'S CERTIFICATE

I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible persons involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents as required necessary.

Jandra D. Gallagher 8-9-88
 Date

ENGINEER'S CERTIFICATE

I hereby certify that this plan for Erosion and Sediment 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.

G. Nelson Clark 8-8-88
 Date



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

Approved *Howard S.C.D.* Date 11/21/88
 Howard S.C.D.

Reviewed for *Howard S.C.D.*
 Name
 Signature
 Date
 U.S. Soil Conservation Service

Provide temporary swale for drainage from roadway Phase I & II

*** Ex. TRAP No. 2 (S.O.S.T) ST-V**

Drainage Area = 3.05 Ac.
 Storage Required = 0.31 Ac ft
 Storage Provided = 0.32 Ac ft
 Top Dimensions = Varies
 Bottom Dimensions = Varies
 Side Slopes = 2:1
 Depth = 5'
 Weir Crest Elev = 415.00
 Bottom Elev = 409.00
 Clearout Elev = 410.73
 * See Approved Plan F-88-175

NOV. 7, 1988

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

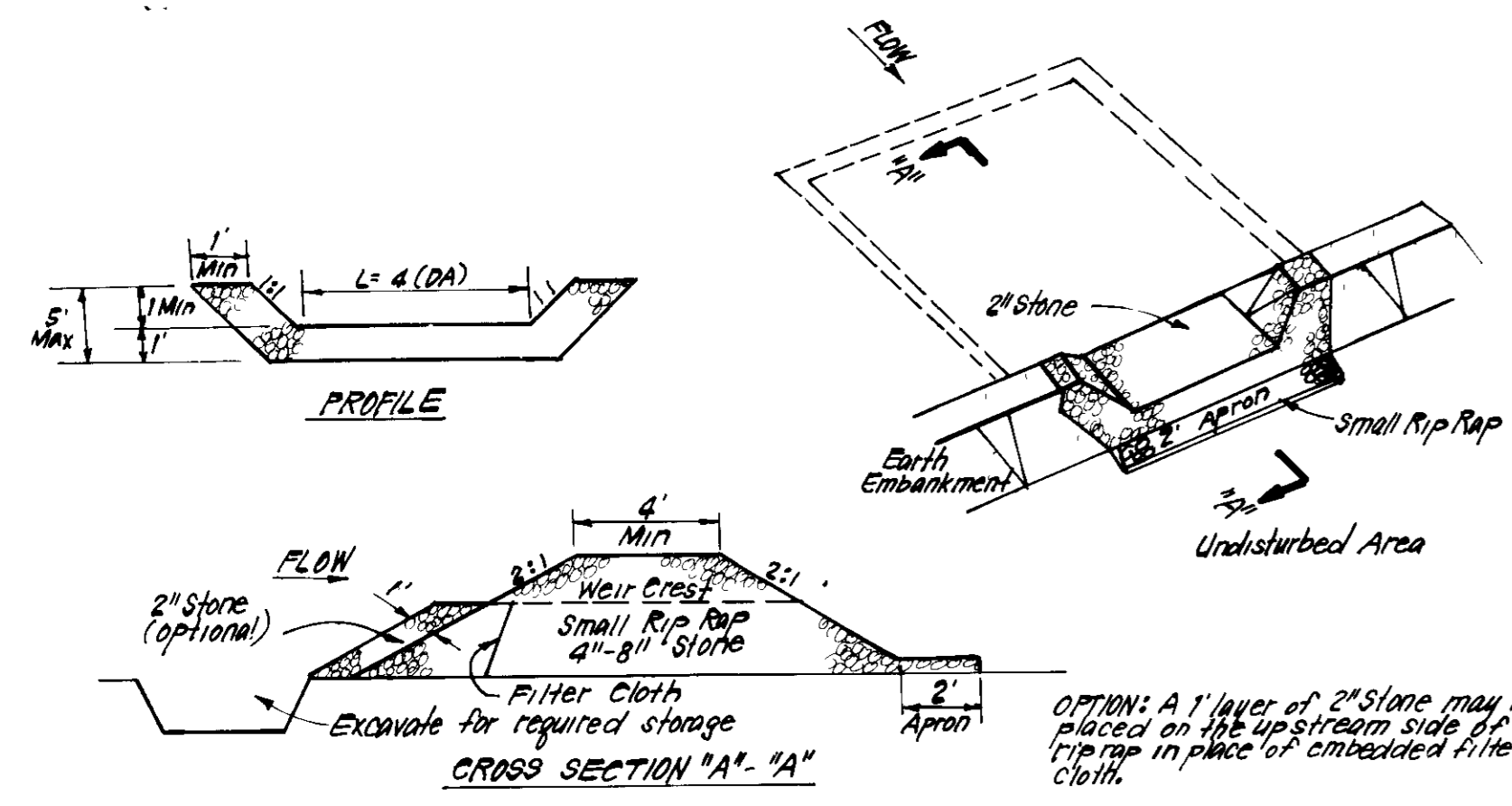
TRAP No. 1 (S.O.S.T) ST-V

Drainage Area 162 Ac
 Storage Required 2916 cf
 Storage Provided 2916 cf
 Weir Crest Elev 354.0
 Cleanout Elev 352.0
 Bottom Elev 350.0
 Depth 4'
 Bottom Dimensions 15' x 15'
 Side Slopes 2:1
 Weir Length L=7'

ZONING R 20
BRIDGEWATER SECTION 1 AREA 1 PLAN

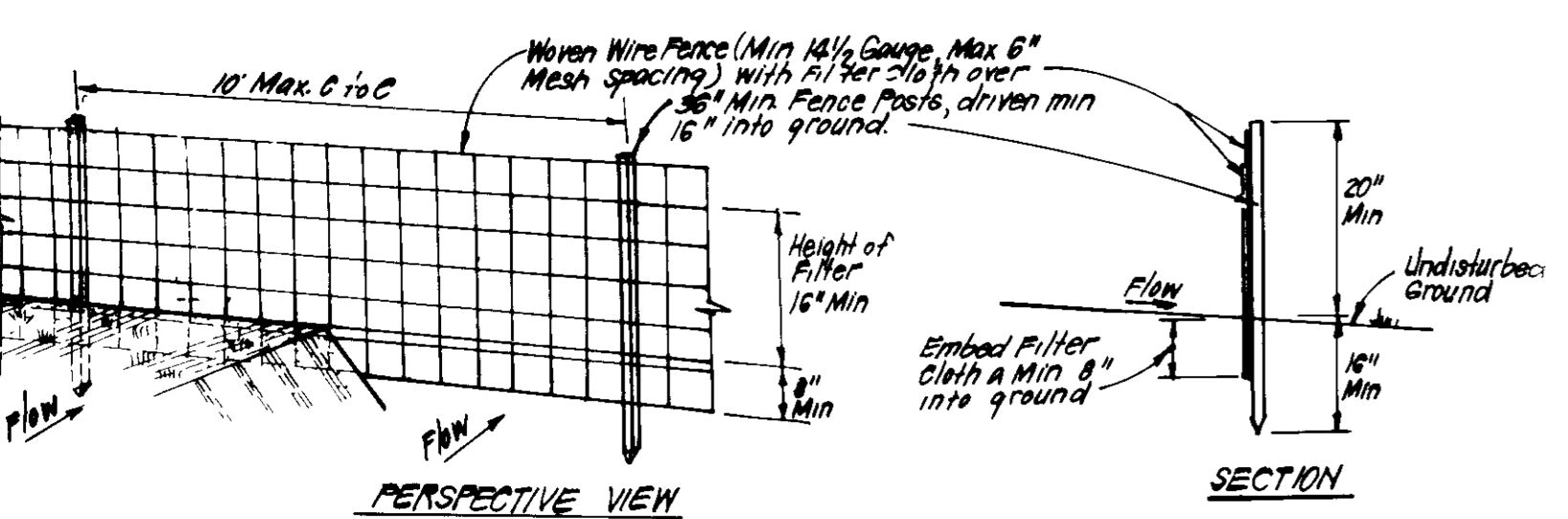
OWNER/DEVELOPER PORTEN SULLIVAN 3 Bethesda Metro Center Suite 900 Bethesda, Md 20814	SUBDIVISION NAME BRIDGEWATER	SHEET / AREA 1 / 1.5	LOT / PARCEL NO. 1.5 & 20.34
PLAT # 8094-8096	SCALE # R 20	DATE 7 P. 30	2ND EDITION 2ND
WATER CODE H03	SUMMER CODE 5758200		

CLARK • FINEPROCK & SACKETT, INC. ENGINEERS • PLANNERS • SURVEYORS		SCALE 1"=30'
DESIGNED DGT	SEDIMENT AND EROSION CONTROL PLAN LOTS 1 THRU 15 & 20 THRU 34	
DRAWN KIW-PER	BRIDGEWATER	
CHECKED DGT	SECTION 1 AREA 1	
DATE 8-8-88	2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
	FOR: PORTEN SULLIVAN 3 Bethesda Metro Center - Suite 900 Bethesda, Maryland 20814	JOB NO 88-073
		FILE NO 88-073 SE



- CONSTRUCTION SPECIFICATIONS:**
1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The soil area shall be compacted.
 2. The fill material for the embankment shall be free of roots and other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
 3. All cut and fill slopes shall be 2:1 or flatter.
 4. The stone used in the outlet shall be small rip-rap 4"-8" along with 1" thickness of 2" aggregate placed on the up-grade side on the small rip-rap or embedded filter cloth in the rip-rap.
 5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap.
 6. The structure shall be inspected after each rain and repairs made as needed.
 7. Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
 8. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

STONE OUTLET SEDIMENT TRAP (S.O.S.T.) ST.V.
NO SCALE



- CONSTRUCTION SPECIFICATIONS:**
1. Woven wire fence to be fastened securely to fence posts with wire ties or staples.
 2. Filter cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid section.
 3. When 2 sections of filter cloth adjoin each other they shall be overlapped by 6" and folded.
 4. Maintenance shall be performed as needed and material removed when "bushes" develop in silt fence.
- POSTS:** Steel, either T or U Type or 2" diameter wood
- FENCE:** Woven Wire, 14 Gauge, 6" Max Mesh Opening
- FILTER CLOTH:** Filter, Miraflex, or Approved Synthetic, T100N or Miraflex 100X
- PREFABRICATED UNIT:** Geotexts, Envirofence, or Approved equal

SILT FENCE DETAIL (S)
NO SCALE

Reviewed for Howard County
Name: [Signature]
Signature: [Signature]
Date: 11-21-88
U.S. Soil Conservation Service

Approved for Howard County
Name: [Signature]
Signature: [Signature]
Date: 11-21-88
U.S. Soil Conservation Service

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
DATE: 12-1-88

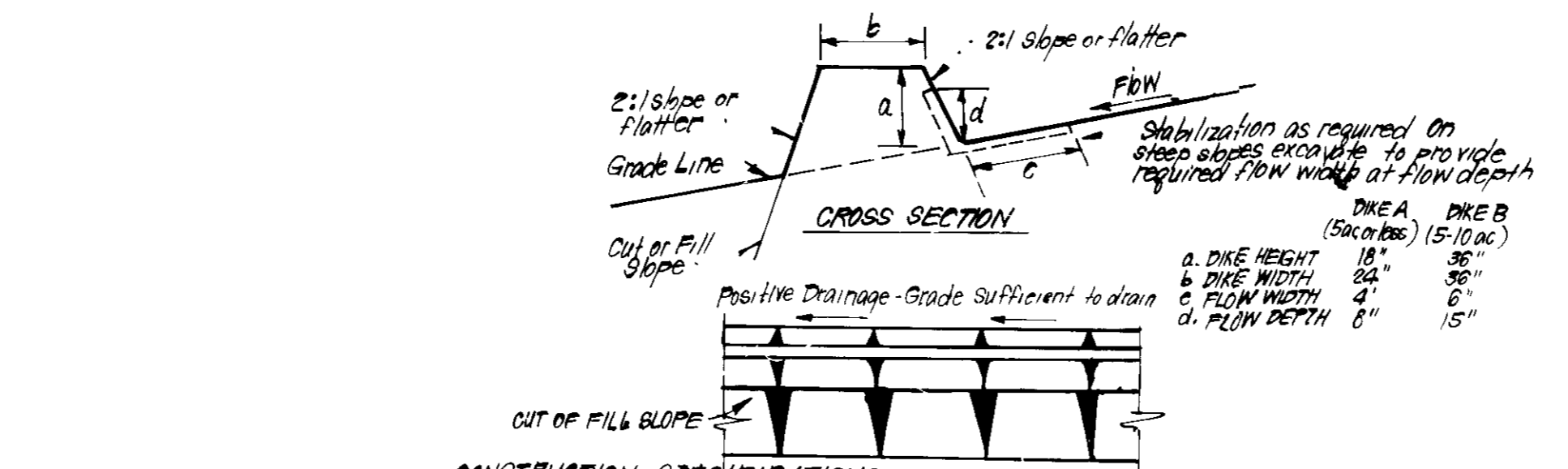
APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING
DATE: 12/21/88

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 11-29-88

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
DATE: 12-1-88

APPROVED HOWARD COUNTY OFFICE OF PLANNING & ZONING
DATE: 12/21/88

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE: 11-29-88



- CONSTRUCTION SPECIFICATIONS:**
1. All dikes shall be compacted by earth-moving equipment.
 2. All dikes shall have positive drainage to an outlet.
 3. Top width may be wider and side slopes may be flatter if desired, to facilitate crossing by construction traffic.
 4. Final location should be adjusted as needed to utilize a stabilized safe outlet.
 5. Earth dikes shall have an outlet that discharges with a minimum of erosion. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike are not adequately stabilized.
 6. Stabilization shall be: (A) in accordance with standard specifications for seed and straw mulch or straw mulch if not in seeding season, (B) flow channel as per chart below.

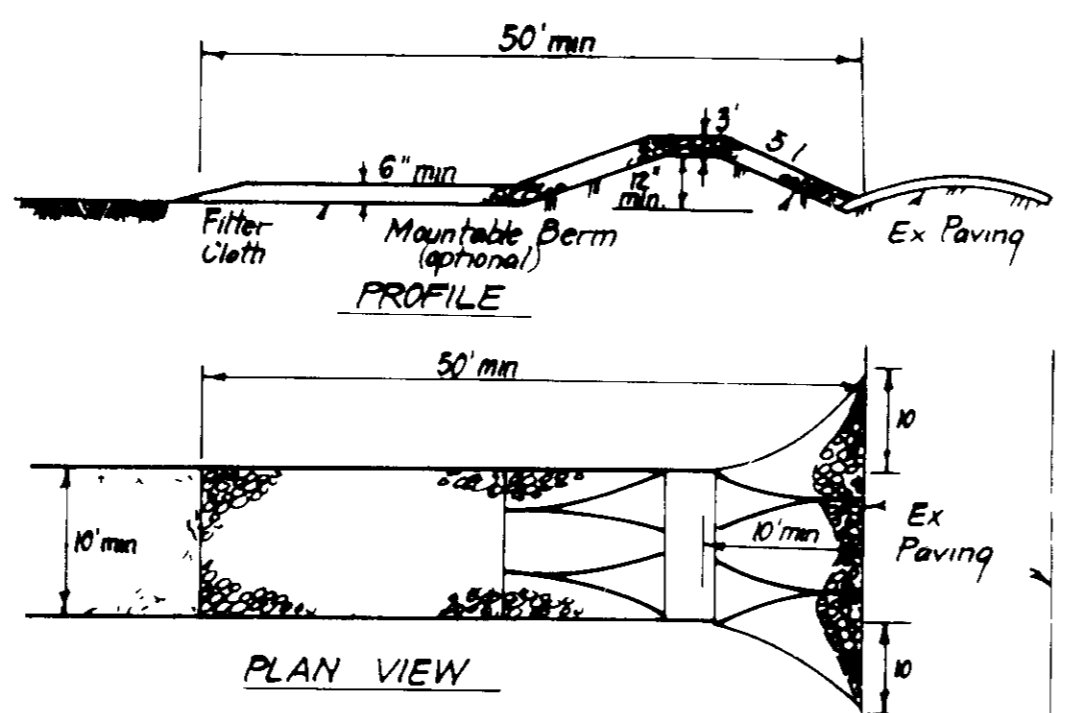
TYPE OF TREATMENT	FLOW CHANNEL - STABILIZATION	
	CHANNEL GRADE	DIKE A
1.	0.5 - 3.0%	Seed & Straw Mulch
2.	3.1 - 5.0%	Seed & Straw Mulch
3.	5.1 - 8.0%	Seed & Straw Mulch
4.	8.1 - 20.0%	Lined Rip Rap 4"-8" Stone

DIKE B (Slopes) (5-10%)
a. DIKE HEIGHT 18" 36"
b. DIKE WIDTH 24" 36"
c. FLOW WIDTH 4' 6'
d. FLOW DEPTH 6" 15"

A Stone to be 2" Stone, or recycled concrete equivalent, in a layer at least 3" thick and be pressed into soil with construction equipment.
B Rip Rap to be 4" in a layer at least 8" thick, pressed into soil.
C Approved equivalents can be substituted for any of the above materials.

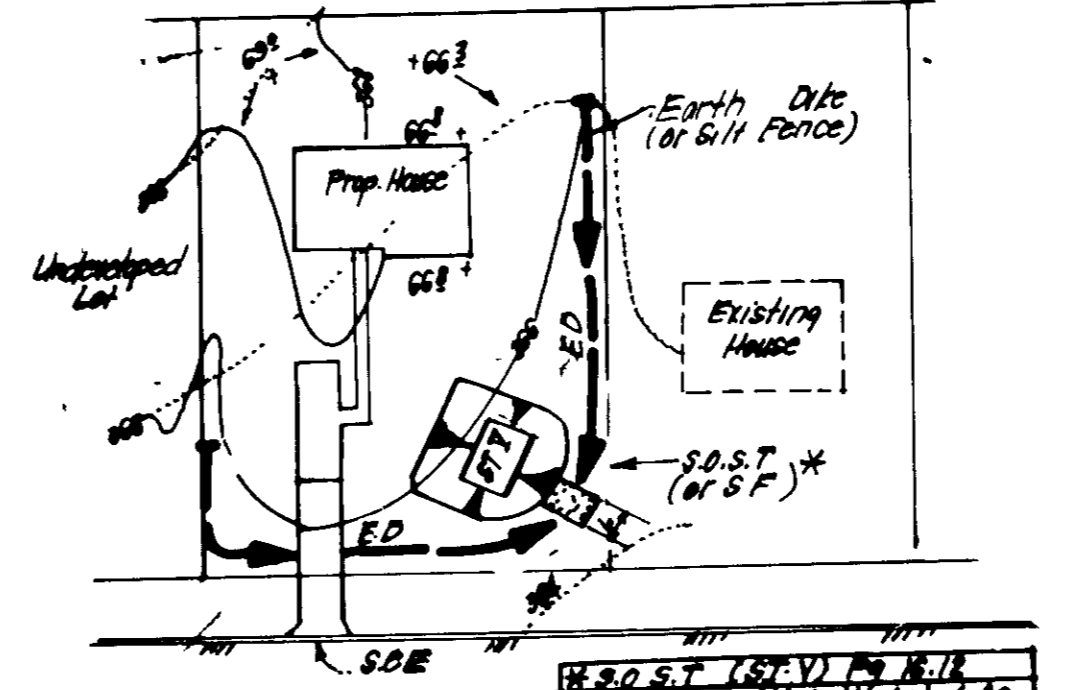
7. Periodic inspection and Required Maintenance must be provided after each rain.

EARTH DIKE DETAIL (E.D.)
NO SCALE



- CONSTRUCTION SPECIFICATIONS:**
1. Stone size - Use 2" stone, or reclaimed or recycled concrete equivalent.
 2. Length - As required, but not less than 50 feet (exception a single residence lot where a 30 foot minimum length would apply).
 3. Thickness - Not less than six (6) inches.
 4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
 5. Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
 6. Surface Water - All surface water flowing or overland toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
 7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any openings used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
 8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
 9. Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE (SCE)
NO SCALE



* NOTE: Single lot detail can not be utilized if any two lots sharing common property lines are to be stabilized at the same time or on any lots showing a sediment trap.

SINGLE LOT SEDIMENT CONTROL PLAN
NO SCALE

DEVELOPER/BUILDER'S CERTIFICATE

I/We certify that all development and construction will be done according to the plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training Program for the Control of Sediment and Soil Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard County Soil Conservation District or their authorized agents as may be deemed necessary.

Signature: [Signature]
Date: 8-9-88

ENGINEER'S CERTIFICATE

I hereby certify that this plan for Erosion and Sediment 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 County Soil Conservation District.

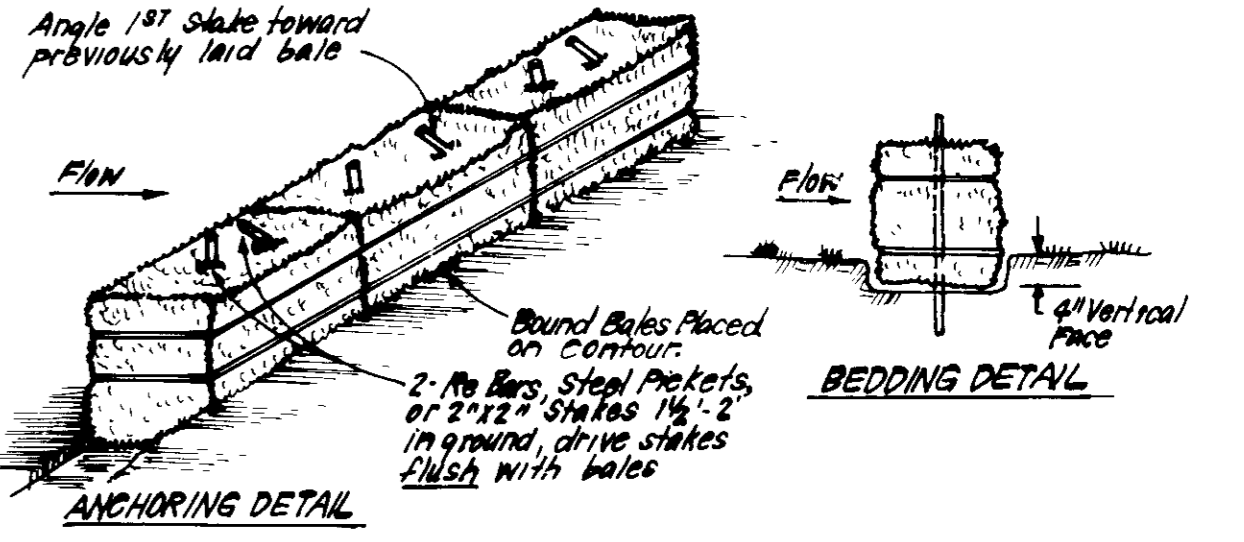
Signature: [Signature]
Date: 8-8-88

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, discing 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 time of seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq ft).
 - 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq ft) before seeding. Harrow or disc into upper three inches of soil.
- Seeding -** For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (0.5 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 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. 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.
- Inspection -** Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

- Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.
- Seedbed Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, 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 25 bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.
- 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 mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.
- Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.



- CONSTRUCTION SPECIFICATIONS:**
1. Bales shall be placed at the top of a slope or on the contour and in a row with ends tightly abutting the adjacent bales.
 2. Each bale shall be embedded in the soil a min of 4" and placed so the bindings are horizontal.
 3. Bales shall be securely anchored in place by either 2 slakes or re bars driven thru the bale. The 18" slake in each bale shall be driven toward the previously laid bale at an angle to force the bales together. Slakes shall be driven flush with the bales.
 4. Inspection shall be frequent and repair/replacement shall be made promptly as needed.
 5. Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

STRAW BALE DIKE DETAIL (SBD)
NO SCALE

Subdivision Name	BRIDGEWATER	Sect./Area	1/1	Lots	1-15 & 20-34
Plot No.	8094-8096	Block No.	8	Zone	R-20
Water Code	H03	Sever Code	5758200	Elec. Dist.	Census Tr 6021

CLARK • FINEFROCK & SACKETT, INC
ENGINEERS • PLANNERS • SURVEYORS
7135 MINTREL WAY • COLUMBIA MD 21045 • (301) 381-7500 - BALTO • (301) 81-8100 - WASH

DESIGNED: DGT
DRAWN: PER
CHECKED: DGT
DATE: 8-8-88

SEDIMENT AND EROSION CONTROL PLAN
LOTS 1 THRU 15 & 20 THRU 34
BRIDGEWATER
SECTION 1 AREA 1
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
FOR: PORTEN & SULLIVAN
3 Bethesda Metro Center - Suite 200
Bethesda Maryland 20814

SCALE: 5 of 5
JOB NO: 88-075
FILE NO: 88-075 SE

S O F 30-32