

**CURB & GUTTER LEGEND:**

- 3/4" Type A Curb & Gutter
- Ho. Co. Std. 7" Curb & Gutter
- Ho. Co. Rev. 7" Curb & Gutter
- Ho. Co. Std. 6" Curb & Gutter
- Ho. Co. Rev. 6" Curb & Gutter

**CURVE DATA**  
 PC 3415.00 TO PT. 5402.11  
 R = 220.00'  
 Δ = 49°43'48"  
 A = 187.11'  
 T = 39.62'  
 CHD = 181.52'

**CURVE DATA**  
 PC 0145.00 TO PT. 2415.00  
 R = 605.00'  
 Δ = 16°05'59"  
 A = 170.00'  
 T = 85.56'  
 CHD = 168.44'

Note: Contractor shall arrange to have existing utility poles relocated. Fire hydrants shall be relocated under water and sewer contract.

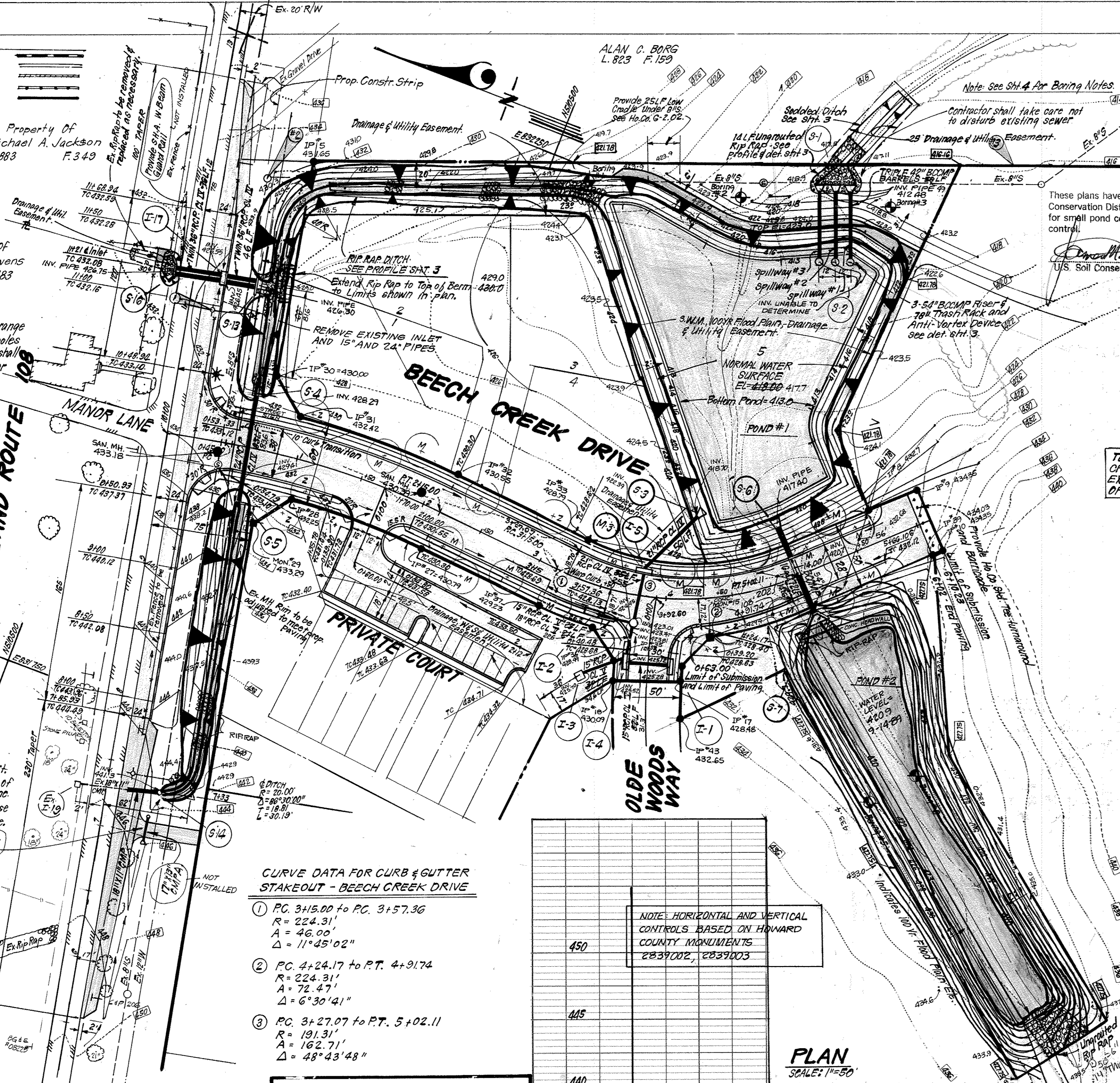
BM #1  
 B. 204 FH  
 EL: 433.88

BM #2 SMH  
 X in South Edge  
 EL = 431.46  
 INV = 421.10

BM #3  
 Top Conc. Monument

Property of  
 Charles F. Thompson,  
 ET UX  
 L. 174 F. 254

Construct 10' Wide Residential Bit. Driveway Entrance at Location of existing driveway. 1 1/2" Bit. Conc. Surface Courses 2" Bit. Conc. Base Course; 6" Bank Run Gravel Base. (Install 22 LF of 17" x 13" CMFPA, 0.064" thick, fully coated.

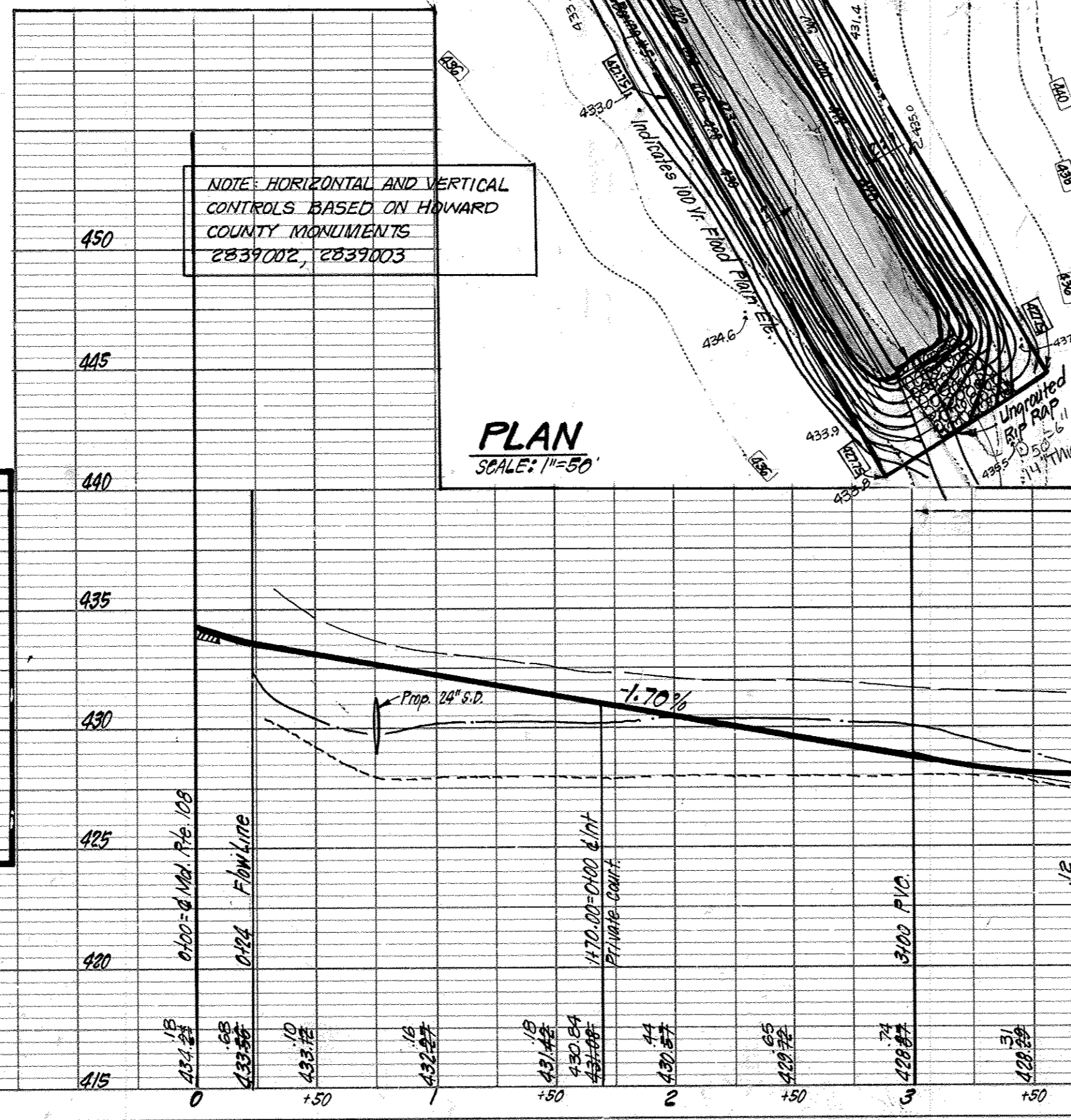
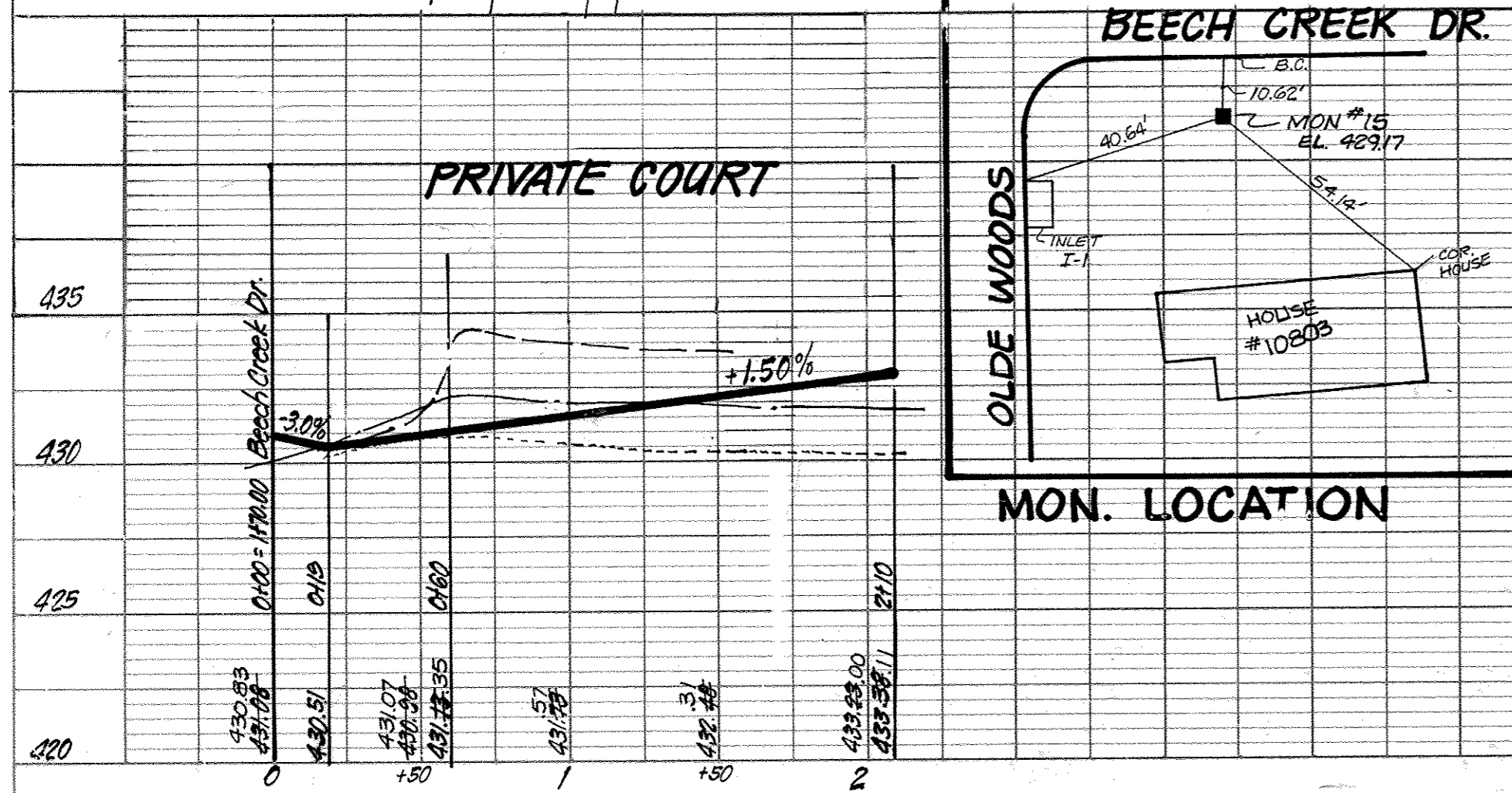


**CURVE DATA FOR CURB & GUTTER STAKEOUT - BEECH CREEK DRIVE**

- PC 3415.00 TO PC 3457.36  
 R = 224.31'  
 Δ = 46°00'  
 A = 11°45'02"
- PC 424.17 TO PT. 4+91.74  
 R = 224.31'  
 Δ = 72°47'  
 A = 6°30'41"
- PC 3+27.07 TO PT. 5+02.11  
 R = 191.31'  
 Δ = 162°71'  
 A = 48°43'48"

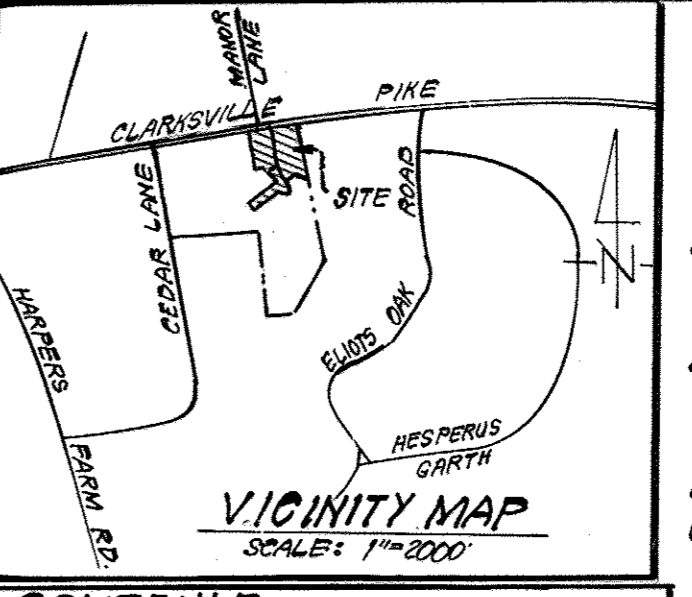
NOTE: HORIZONTAL AND VERTICAL CONTROLS BASED ON HOWARD COUNTY MONUMENTS 2839202, 2839203

PLAN SCALE: 1"=50'



**STREET LIGHT LEGEND:**

- 1-250 W.M. Mercury Vapor Pendant Type on 30 ft. galvanized Steel Pole
- 1-175 W.M. Mercury Vapor Lamp Post Top Fixture on 14 ft. aluminum pole



**PLANT SCHEDULE**

KEY	PLANT NAME	SIZE	QUAN.	REMARKS
(2)	Zelkova Serotina, Village Green	2 1/2" Cal Min.	9	B & B Heavy Heads
(M)	Acer rubrum Sunset	2 1/2" Cal Min.	16	B & B Heavy Heads

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

Approved: Howard J. C. D. Date: 12/10/85

TEST PITS TO BE DUG BY HAND AT ALL CROSSINGS TO VERIFY LOCATIONS OF EXISTING UTILITIES, WELL IN ADVANCE OF CONSTRUCTION

**DEVELOPER'S CERTIFICATE**

"I certify that all development and/or construction will be done according to these plans of development, pond construction and erosion and sediment control. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary. Deviation from this plan will not be made unless authorized by The Howard Soil Conservation District. I will provide the Howard Soil Conservation District with a red-lined 'as built' of the pond within 30 days of completion."

Signature of Developer: L. EARL ARMIGER  
 Date: 3-21-85

**ENGINEER'S CERTIFICATE**

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

Signature of Engineer: G. W. Cox  
 Date: 3-21-85

**GENERAL NOTES**

- All storm drain and paving shall be constructed in accordance with the latest Details and Specifications of Howard County & Md. SHA.
- Types of Storm Drain Structures refer to the standard Details of Ho. Co. & Md. SHA.
- Trench compaction for Storm Drains, within Road or Street rights of way limits shall be in accordance with Howard Co. Design Manual Vol. II (Class C trench bedding to be used for all storm drain, unless shown otherwise.)
- Information concerning underground utilities was obtained from available records, but the contractor must determine the exact location and elevation of the mains by digging test pits, by hand, at all utility crossings, well in advance of construction.
- All utility companies shall be notified 24 hrs. in advance of construction.
- All traffic control devices, parking and signing to be done in accordance with the "Manual of Uniform Traffic Control Devices," 1978 Edition.
- Sag and Crest Vertical Curves were designed in accordance with Howard County Design Manual, Vol. III.
- Provide Concrete Sidewalk Ramps, Ho. Co. Std. Type A, R.4.01 where shown in plan.
- Design Speed: See Table Sht. 2
- Zoning: R.S.O.
- Contractor or Developer shall contact the construction inspection/survey Division 24 hrs. before commencing work at 792-7272.

APPROVED: Department of Public Works  
 Chief, Bureau of Engineering: [Signature]  
 APPROVED: Howard County Office of Planning & Zoning  
 Chief, Division of Land Development & Zoning Administration: [Signature] 12-11-85

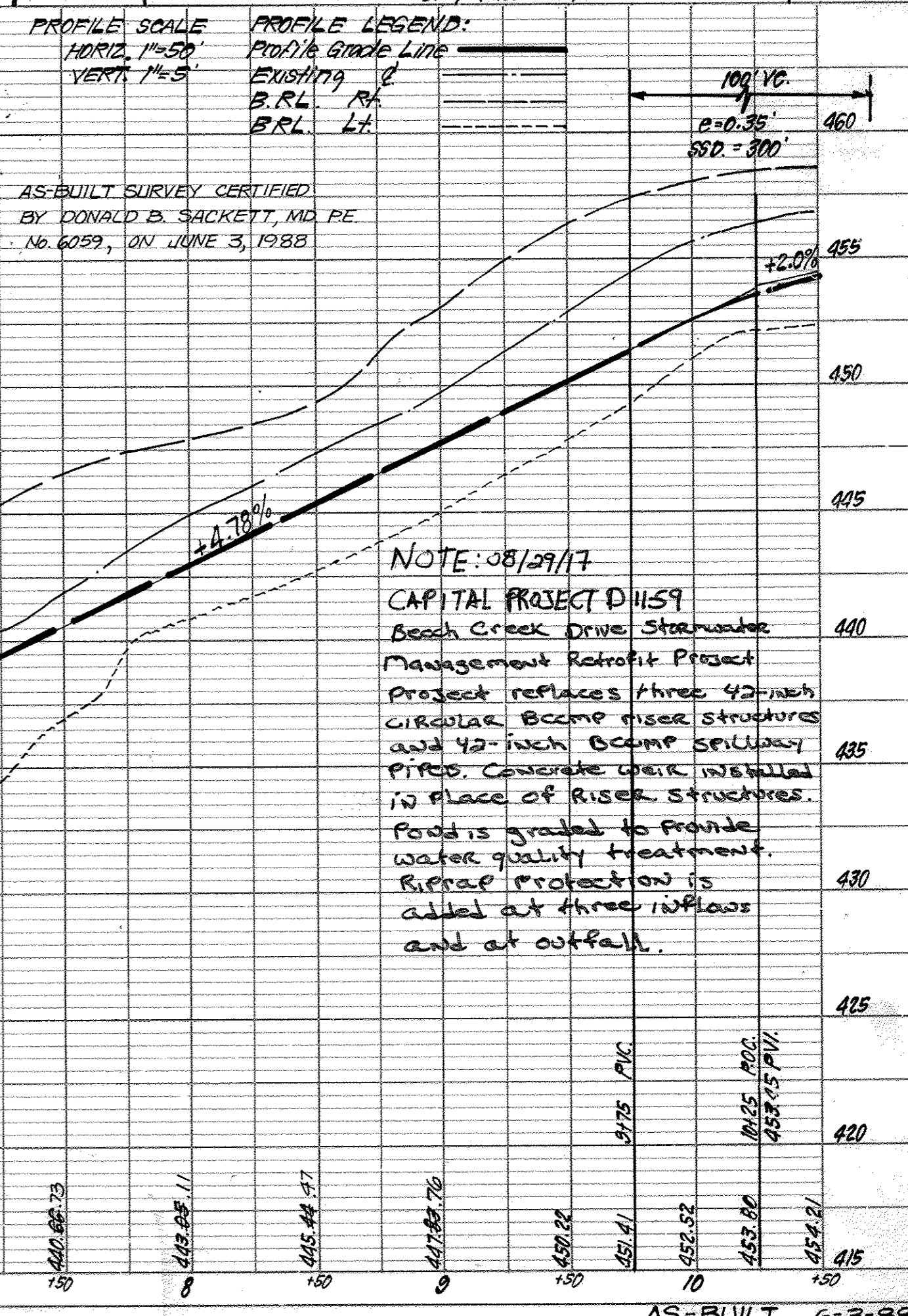
**CLARK · FINEFROCK & SACKETT**  
 ENGINEERS · PLANNERS · SURVEYORS  
 11315 LOCKWOOD DRIVE · SILVER SPRING MARYLAND 20904 · (301)593-3400

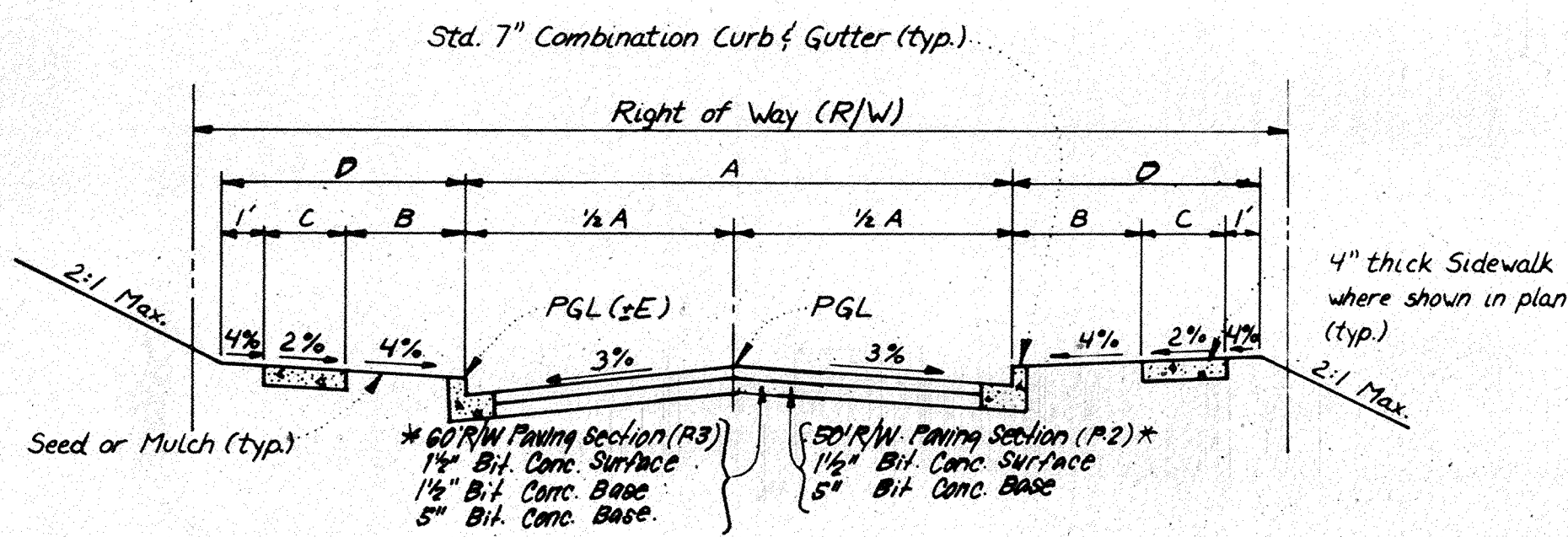
DESIGNED: JLS  
 DRAWN: KIW  
 CHECKED: JLS  
 DATE: 10-1-85

ROAD CONSTRUCTION PLANS  
**BEECH CREEK DRIVE**  
 SECTION ONE  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

FOR: BEECHCREEK ASSOCIATES  
 5967 Ducks Foot Lane  
 Ellicott City Md. 21043

SCALE: As Shown  
 DRAWING: 1057  
 JOB NO.: 84-128  
 FILE NO.: 84-128-D

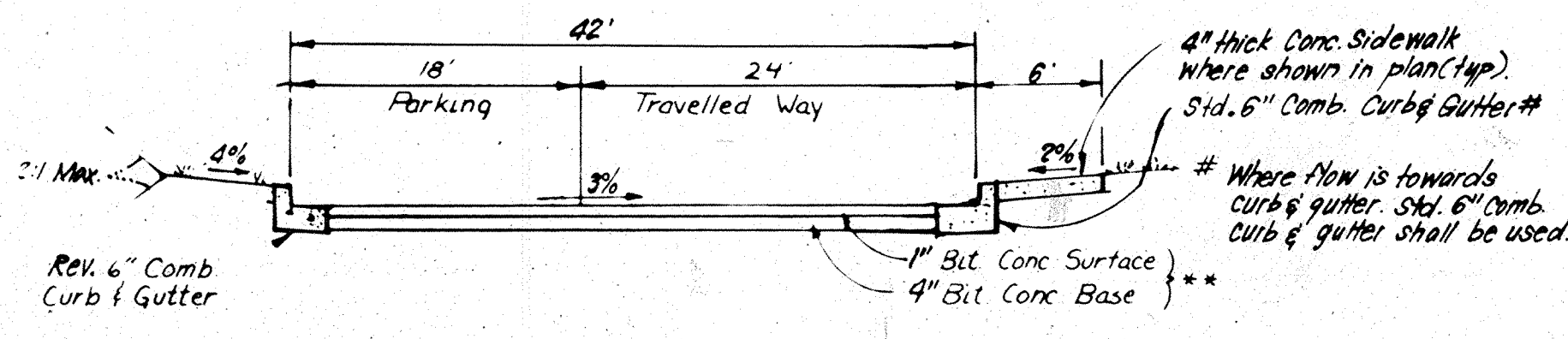




TYPICAL PAVING SECTION - PUBLIC ROADS  
NO SCALE

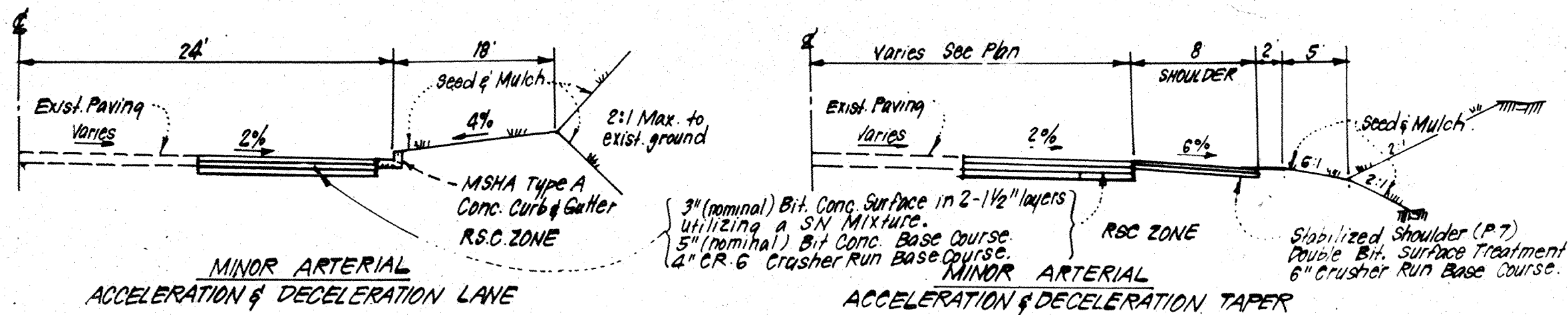
\* For Alternate Paving Section - See det. this sht.

STREET NAME & STATION	TYPE OF TRAFFIC	A	B	C	D	R/W	ZONING	DESIGN SPEED	E
Beech Creek Drive Sta. 0+54.48 to 3+15.00	MINOR COLLECTOR	30	6	4'	11'	60	RSC	35 mph	0.02
Beech Creek Drive Sta. 3+15.00 to 4+163.00	CUL DE SAC	28	4'	4'	9'	50	RSC	30 mph	1.13
Old Woods Way Sta. 0+00.00 to 0+163.10	LOCAL	30	4'	4'	9'	50	RSC	30 mph	1.10
Beech Creek Drive Sta. 3+15.00 to 5+02.11	TRANSITION	Varies	Varies	4'	Varies	Varies	RSC	35 mph	Varies

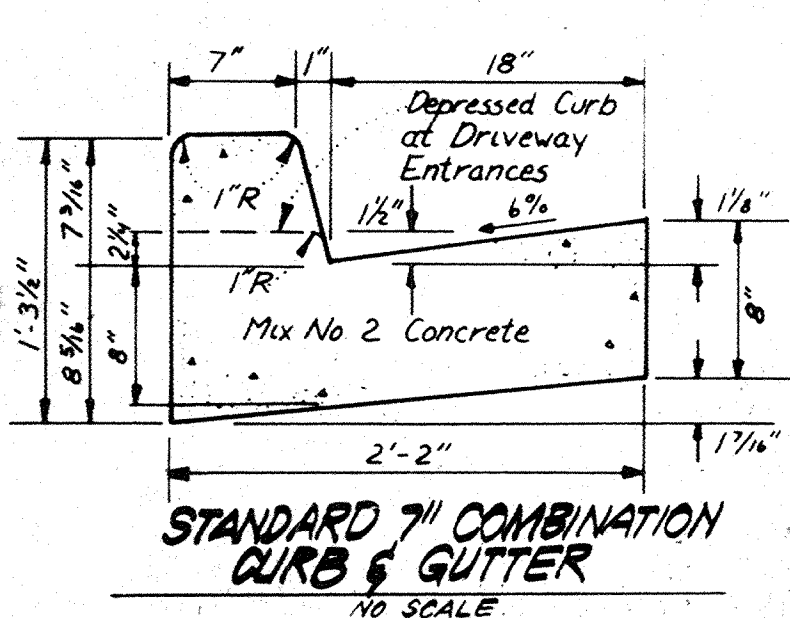


TYPICAL SECTION PRIVATE DRIVE & PARKING  
NO SCALE

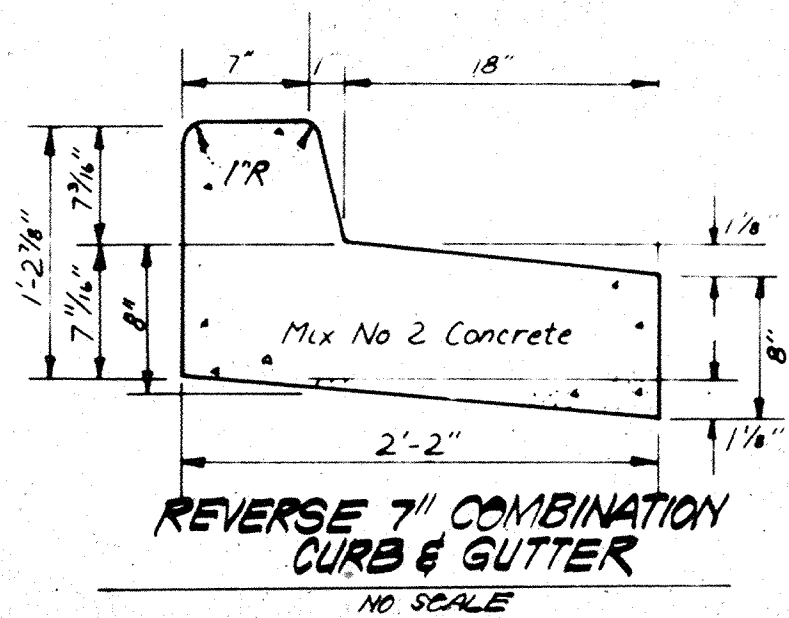
\*\* See Alternate Paving Section for Parking this sht.



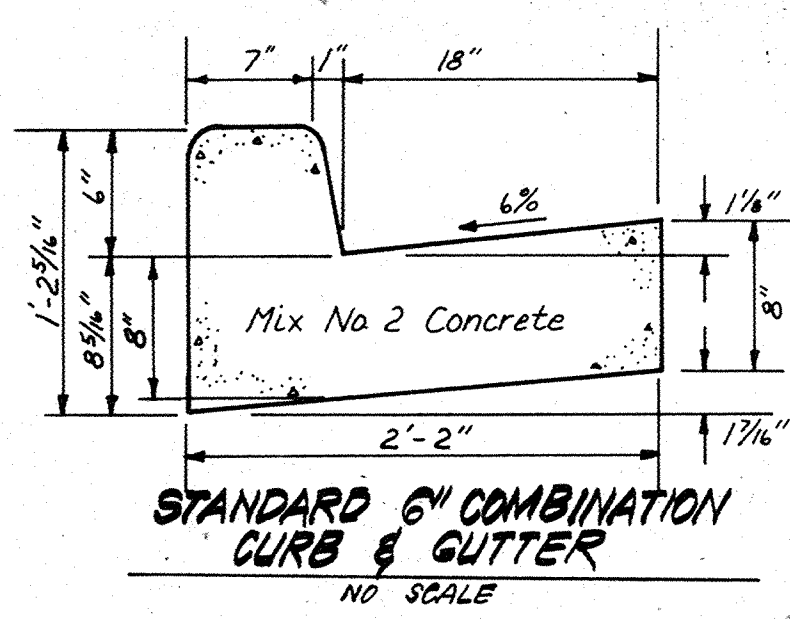
WIDENING ALONG ROUTE 108  
NO SCALE



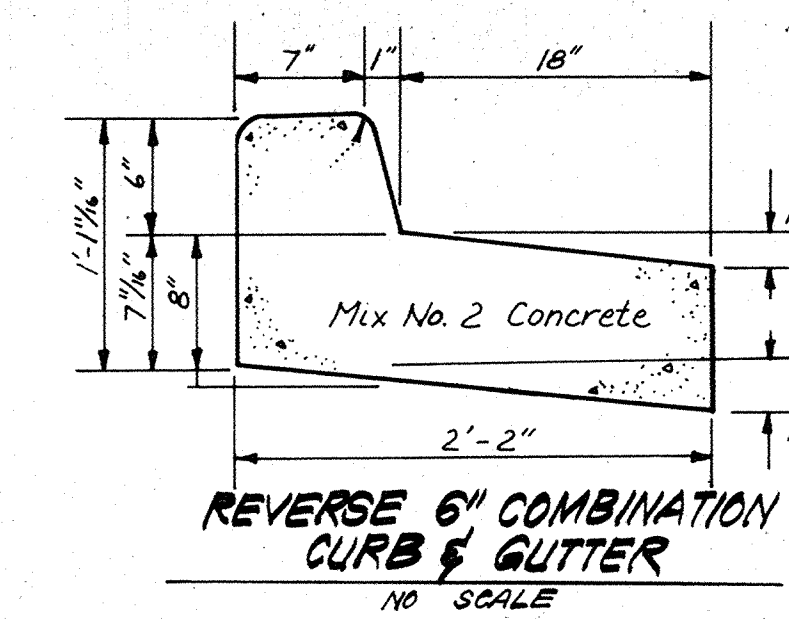
STANDARD 7" COMBINATION CURB & GUTTER  
NO SCALE



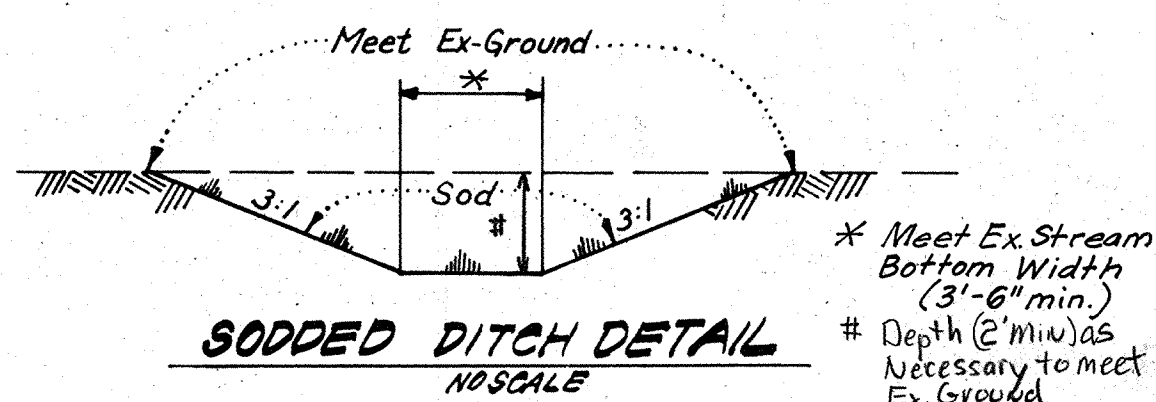
REVERSE 7" COMBINATION CURB & GUTTER  
NO SCALE



STANDARD 6" COMBINATION CURB & GUTTER  
NO SCALE



REVERSE 6" COMBINATION CURB & GUTTER  
NO SCALE



SODDED DITCH DETAIL  
NO SCALE

GENERAL SODDING NOTES:

1. Apply 10-10-10 Fertilizer @ 1000#/acre (25#/1000sf)
2. Apply Ground Agricultural Limestone @ 2000#/acre (50#/1000sf)
3. Incorporate both Lime and Fertilizer into soil by discing. Firm up after incorporation.
4. Lay sod to a tight fit. Roll to insure contact with underlying soil. Water as necessary for 1st 2 weeks, in summer, to ensure establishment.
5. All sod to be used must be certified by the state of Maryland.
6. Sod to be pegged and stapled.

Bituminous Conc. Surface	1/4"
Bituminous Conc. Base	2 1/4"
Prime.....	
8" Crusher Run Base (Placed in 2 Courses)	8"
or	6"
6" Dense Graded Stabilized Aggregate Base Course	

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

Bituminous Conc. Surface	1"
Bituminous Conc. Base	2"
Prime.....	
5" Crusher Run Base Course	5"
or	4"
4" Dense Graded Stabilized Aggregate Base Course	

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

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 at a Dept. 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 are deemed necessary."

J. Carl Ammer 10-2-85  
Signature of Developer/Builder Date

Reviewed for: Howard S.C.D.  
Name: Howard  
and meets technical requirements  
Signature: [Signature] Date: 12/10/85  
U.S. Soil Conservation Service

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

Approved: [Signature] Date: 12/10/85

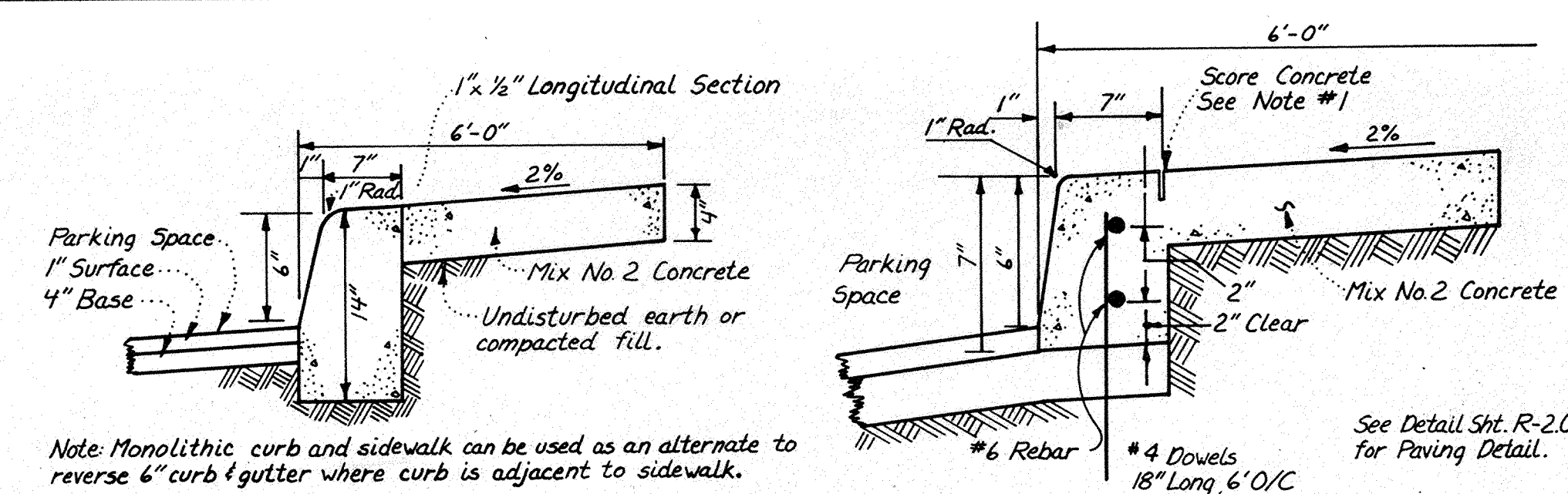
ENGINEER'S CERTIFICATE

"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."

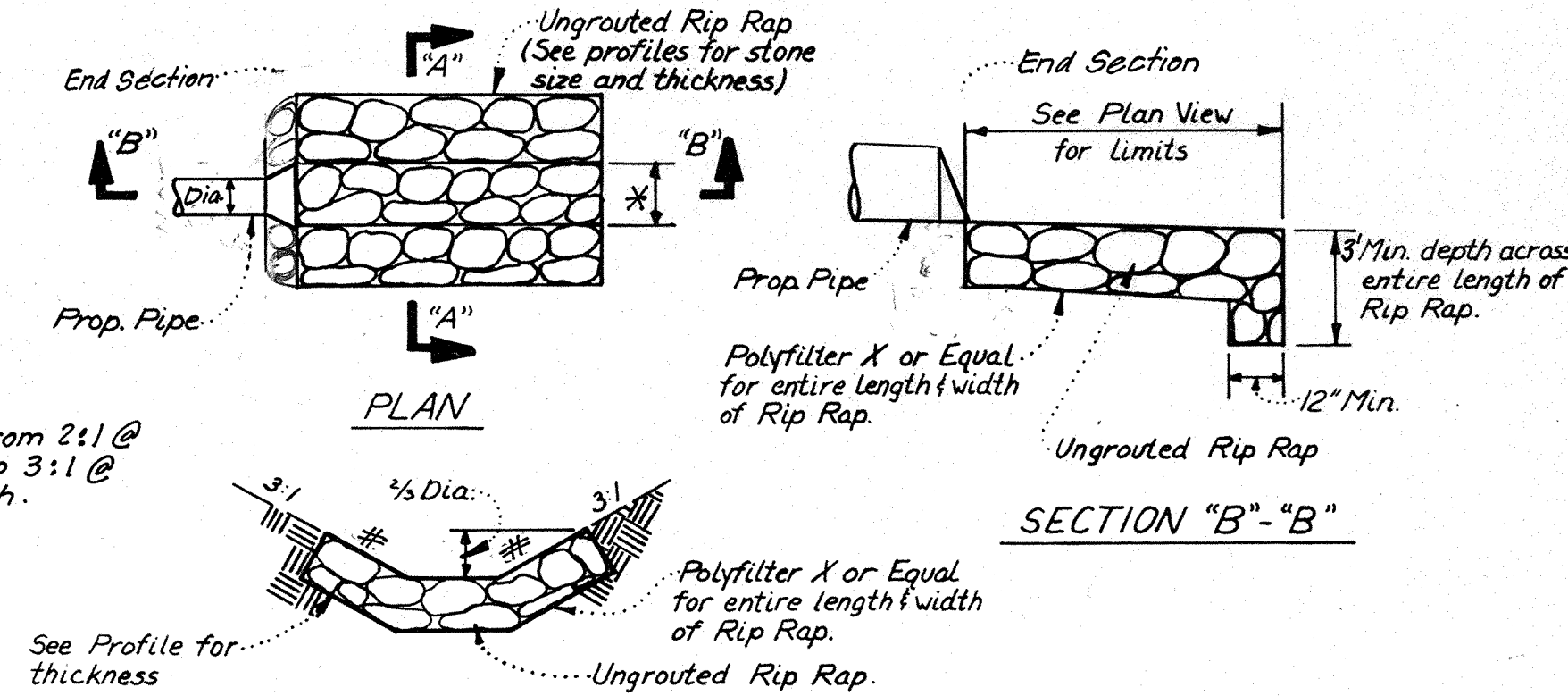
[Signature] Date: 10-3-85  
Professional Engineer

MONOLITHIC CURB & SIDEWALK - PRIVATE PARKING AREA  
NO SCALE

- Notes:
1. Longitudinal joint between sidewalk & curb shall be continuous and to a depth of 1/4 the thickness of the sidewalk or 1" longitudinal joints shall run from back edge of sidewalk continuous to the bottom face of curb to a depth of 1/4 the sidewalk thickness or 1" and spaced 5' apart.
  2. Provide 1/2" expansion joints at 15' intervals. In longitudinal joints to full cross-section.



ALTERNATE SECTION  
NO SCALE



UNGRADED RIP RAP PAVING DETAILS  
NO SCALE

APPROVED: DEPARTMENT OF PUBLIC WORKS  
[Signature] Date: 12-23-85  
Chief, Bureau of Engineering  
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
[Signature] Date: 12-11-85  
Chief, Division of Land Development & Zoning Administration

**CLARK · FINEFROCK & SACKETT**  
ENGINEERS · PLANNERS · SURVEYORS  
11315 LOCKWOOD DRIVE SILVER SPRING, MARYLAND 20904 (301) 593-3400

DESIGNED: JLS EP  
DRAWN: KIW  
CHECKED: JLS EP  
DATE: 10-1-85

ROAD CONSTRUCTION PLAN  
PAVING & DRAINAGE DETAILS

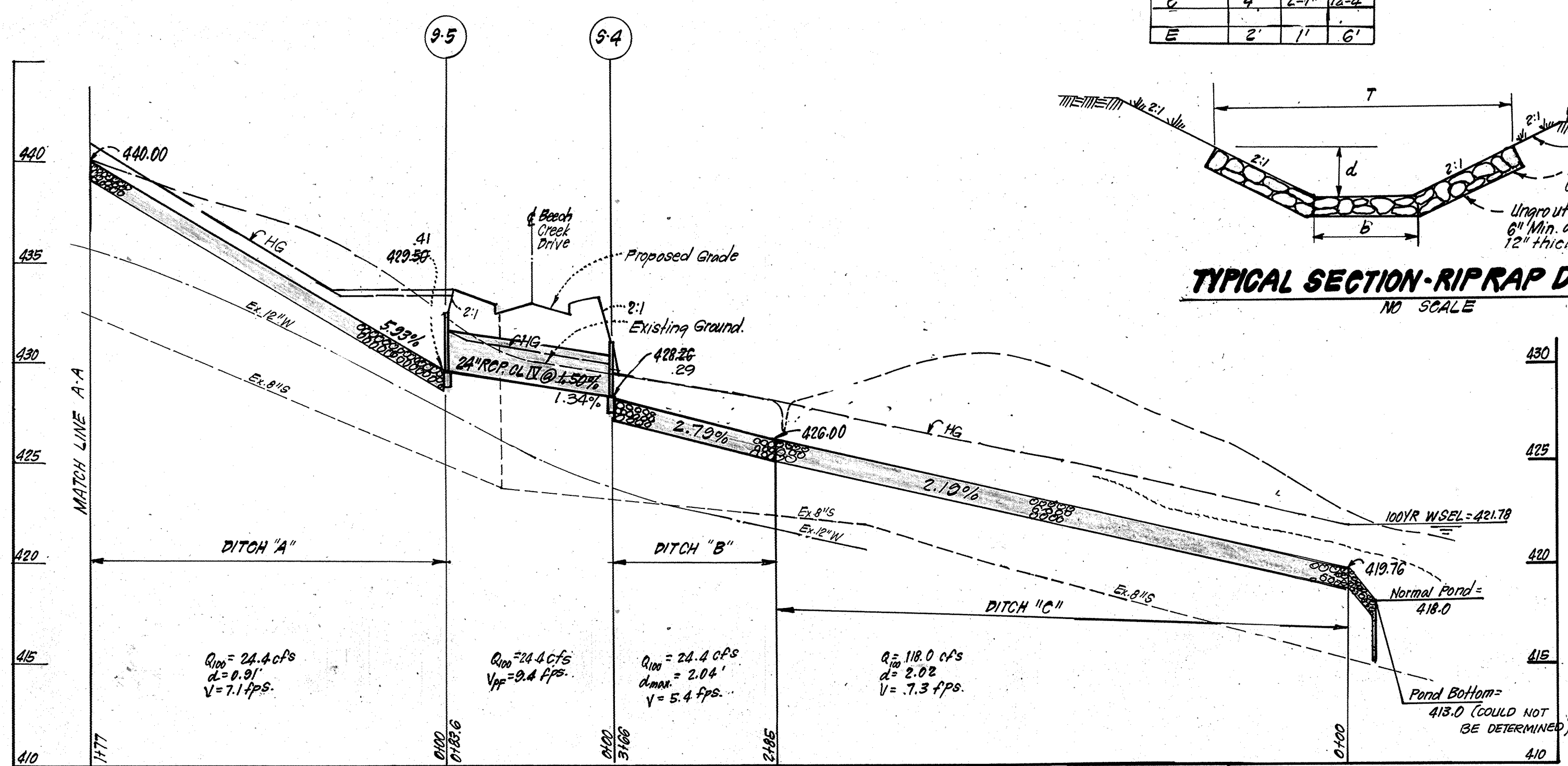
**BEECH CREEK**  
SECTION ONE  
5TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

DATE: 10-1-85

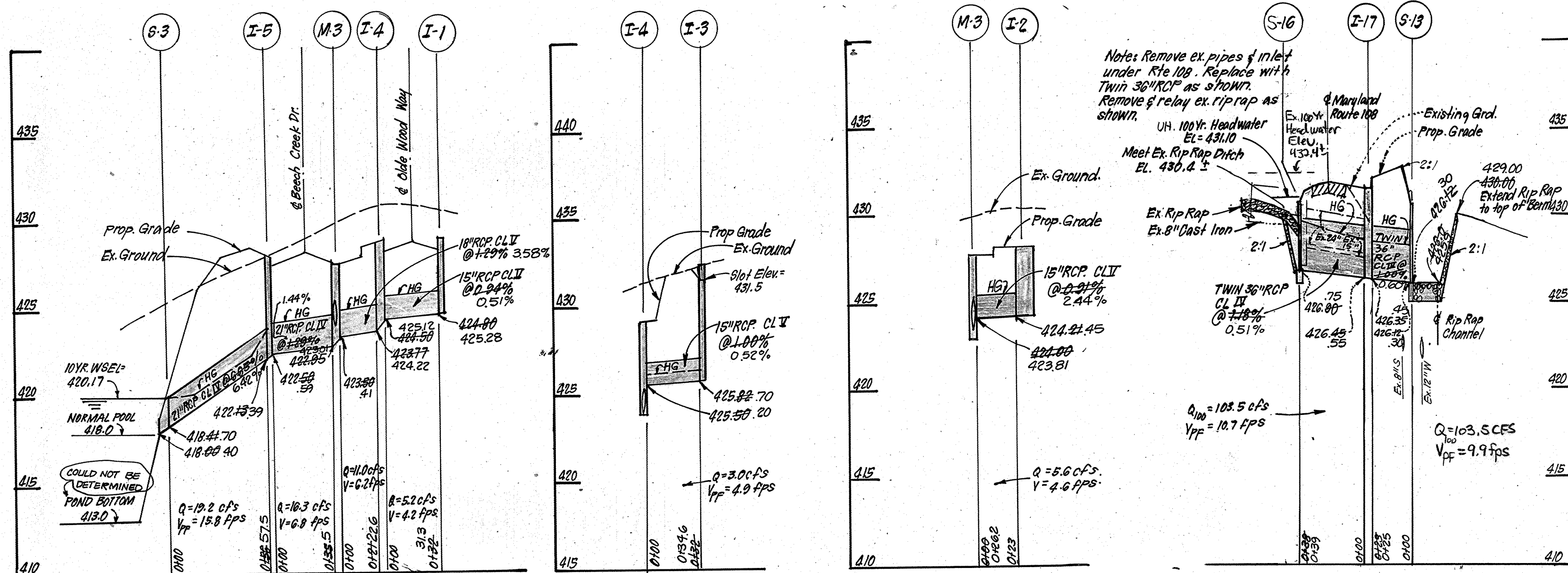
SCALE: AS SHOWN  
DRAWING: 2 OF 7  
JOB NO.: 84-128  
FILE NO.: 84-128-D

FOR: BEECH CREEK ASSOCIATES  
3967 Ducks Foot Lane  
Ellicott City, Md. 21043

DITCH	b	d	T
A	2'	1'	6"
B	2'	2'	10"
C	4'	2 1/2'	12 1/2"
E	2'	1'	6"



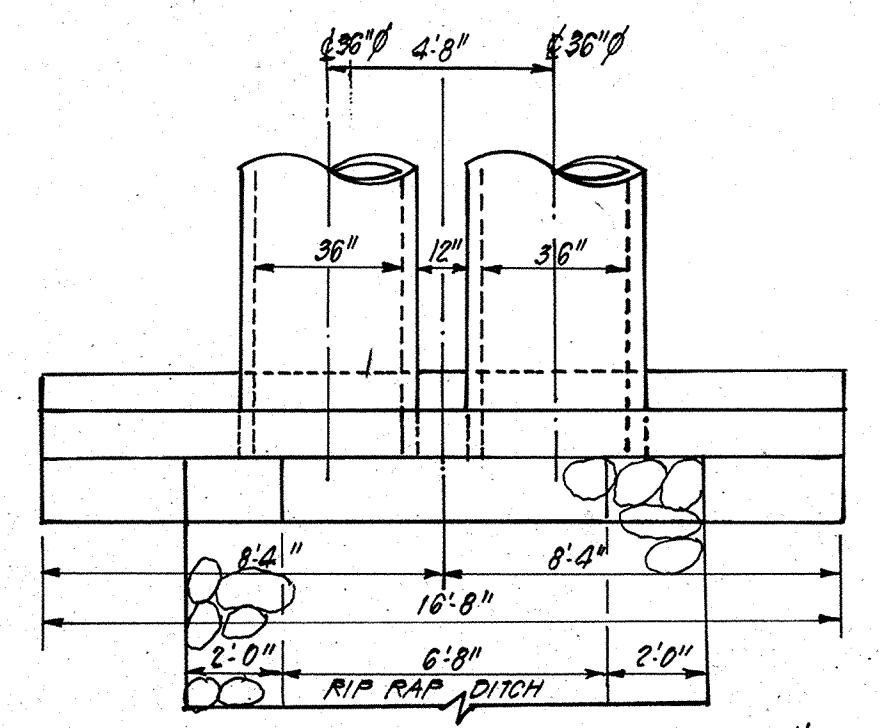
**RIP RAP DITCH & STORM DRAIN PROFILE**  
 SCALES: HORIZ. 1"=50'  
 VERT. 1"=5'



**STORM DRAIN PROFILES**  
 SCALES: HORIZ. 1"=50'  
 VERT. 1"=5'

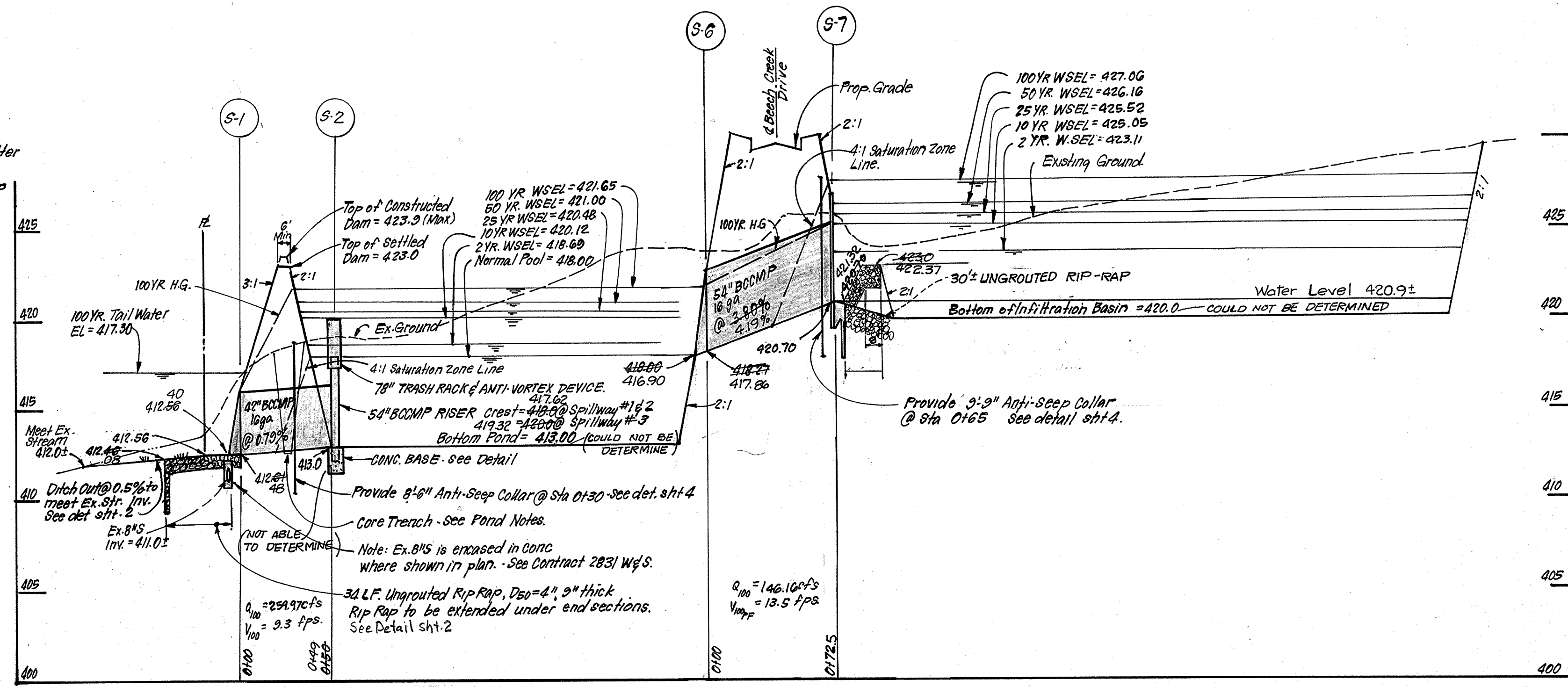
No.	TYPE	INV. IN	INV. OUT	TOP ELEVATION		REMARKS	LOCATION
				UPPER	LOWER		
S-1	Metal End Section	412.84	412.85	428.80	428.80	No. Co. Std. SD 5.61 Dia=22"	See Plan
I-5	A-10 Inlet	422.50	422.50	428.80	428.80	" " SD 4.02 W=2'6"	Inlet at 178.81 B.C.D.
S-3	Conc. End Section	418.44	418.44	416.90	416.90	" " SD 5.52 Dia=21"	See Plan
S-6	Metal End Section	418.47	418.47	416.90	416.90	" " SD 5.61 Dia=22"	" "
S-7	A End Wall	420.70	420.70	420.70	420.70	" " SD 5.11 Dia=22"	" "
S-4	Type E End Wall	429.50	429.50	428.25	428.25	" " SD 5.31 Dia=24"	" "
S-5	Type E End Wall	428.26	428.26	429.41	429.41	" " SD 5.31 Dia=24"	" "
S-12	Metal End Section	441.22	441.22	441.26	441.26	" " SD 2.63 18" x 11"	" "
S-13	C End Wall	426.43	426.43	426.43	426.43	See Detail	" "
S-16	F End Wall	426.50	426.50	426.50	426.50	SHA Std. MD 358.01	At Sta 11421 Rte 108 17' Lt.
I-17	Triple WR Inlet	426.43	426.43	427.66	431.55	MASHA Std. MD 371.08	Inlet 11421 Rte 108 20' Lt.
M-3	Shallow Brick MH	423.44	423.44	427.66	427.66	No. Co. Std. G-3.05 48" Dia	MH 3178.71 B.C.D. 20' Lt.
I-2	A-10 Inlet	424.81	424.81	428.15	428.15	" " SD 4.02 W=2'6"	Inlet at 148.86 B.C.D.
I-3	D Inlet	425.70	425.70	425.70	425.70	" " SD 4.11 2'6" Sq	See Plan
I-4	A-10 Inlet w/Def.	423.52	423.52	429.56	429.56	" " SD 4.02 W=2'6"	Inlet at 148.98 ONW 15' Lt.
I-1	A-10 Inlet w/Def.	424.24	424.24	429.20	429.20	" " SD 4.02 W=2'6"	Inlet at 147.70 ONW 15' Lt.

#71164  
 Provide End Section for each barrel  
 All inverts to be fully developed.  
 See No. Co. Std. SD 4.83 for Inlet Deflectors.  
 Modify dimensions to 7'-0". Use Case 2 Std. MD 358.03.

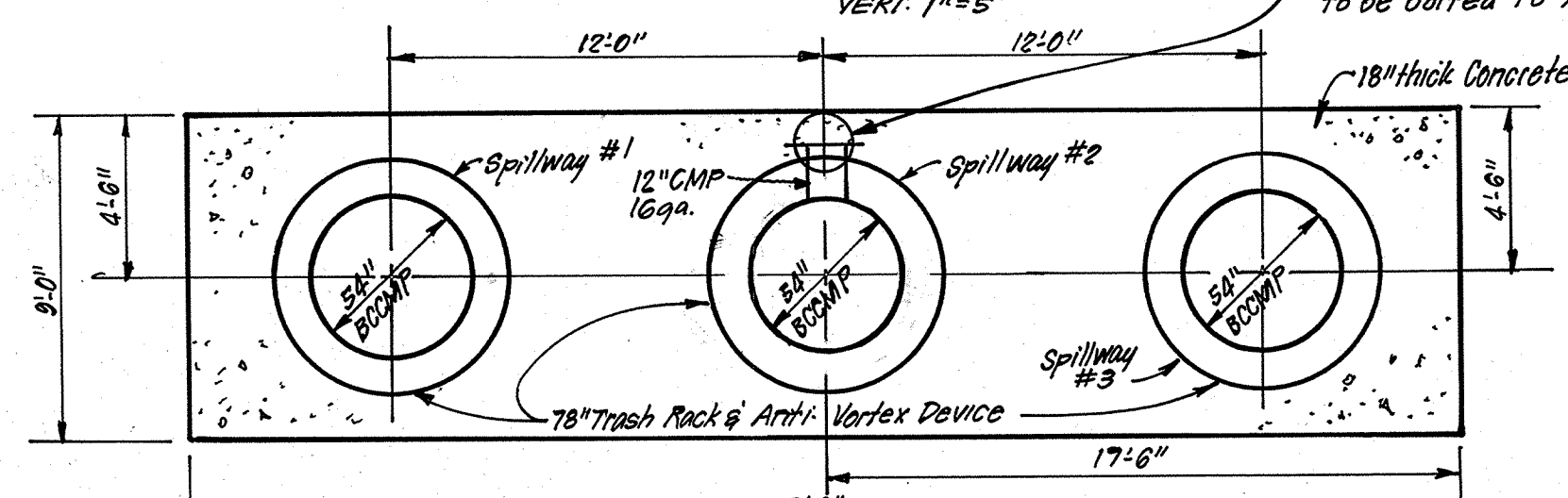


**DETAIL - STRUCTURE S-3**  
 SCALES: 1/2"=1'-0"

Note: All details and dimensions not shown are the same as Howard County Std. SD 5.21 for 36" pipe.



**STORM DRAIN PROFILE**  
 SCALES: HORIZ. 1"=50'  
 VERT. 1"=5'

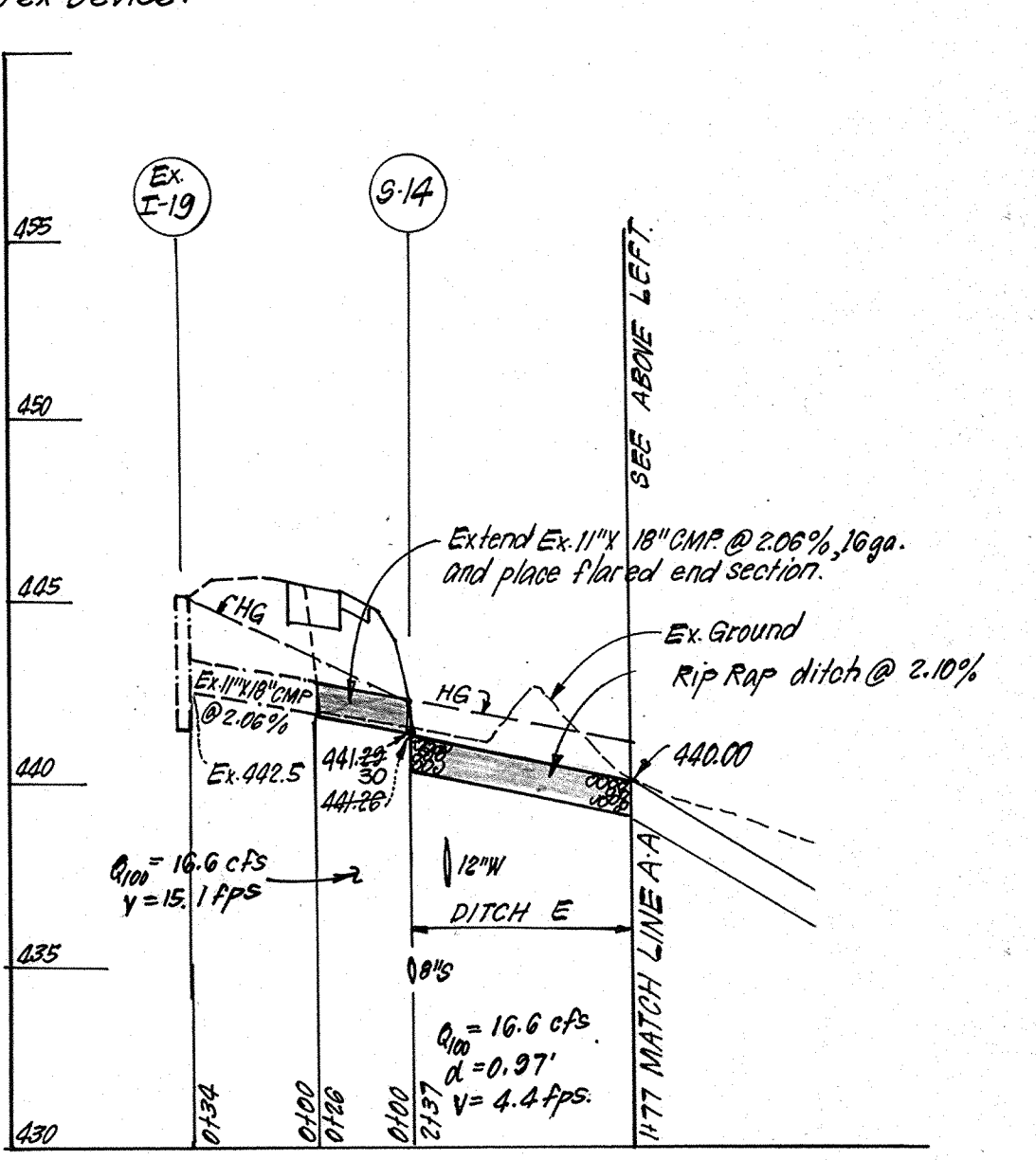


**CONCRETE BASE DETAIL**  
 NO SCALE

SIZE	TYPE	LENGTH
15"	RCP CL IV	87 LF
18"	RCP CL IV	21 LF
21"	RCP CL IV	91 LF
24"	RCP CL IV	83 LF
36"	RCP CL IV	123 LF
11" x 18"	CMPA 18ga	26 LF
13" x 17"	CMPA 18ga	22 LF
42"	BOCMP 18ga	156 LF
54"	BOCMP 18ga	72 LF

\* 2 1/2" x 1/2" Corrugations  
 # 3" x 1" Corrugations

**PIPE SCHEDULE**



**STORM DRAIN PROFILE**  
 SCALES: HORIZ. 1"=50'  
 VERT. 1"=5'

AS-BUILT SURVEY CERTIFIED BY  
 DONALD B. SACKETT, MD. P.E. No.  
 6059, ON 6-3-88

**DEVELOPER'S CERTIFICATE**

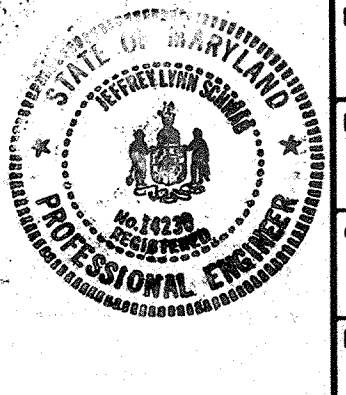
"I certify that all development and/or construction will be done according to these plans of development, pond construction and erosion and sediment control. I also authorize periodic on-site inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District. I will provide the Howard Soil Conservation District with a red-lined 'as built' of the pond within 30 days of completion."

Signature of Developer: *[Signature]* Date: 10-2-85

**ENGINEER'S CERTIFICATE**

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

Signature of Engineer: *[Signature]* Date: 10-3-85



No.	Rev.	Description	Date
1	1	Rev. S.D. profile remove rip-rap, rev'd WG EL's.	6/16/85

APPROVED: Department of Public Works

APPROVED: Howard County Office of Planning & Zoning

Signature: *[Signature]* Date: 12/1/85

Signature of Developer: *[Signature]* Date: 10-2-85

Signature of Engineer: *[Signature]* Date: 10-3-85

**CLARK • FINECROCK & SACKETT**  
 ENGINEERS • PLANNERS • SURVEYORS  
 11315 LOCKWOOD DRIVE SILVER SPRING, MARYLAND 20904 (301) 593-3400

DESIGNED: JLS  
 DRAWN: R/W  
 CHECKED: J.S.  
 DATE: 10-1-85

**ROAD CONSTRUCTION PLANS  
 PROFILES AND DETAILS**

**BEECH CREEK**

SECTION ONE  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

FOR: BEECH CREEK ASSOCIATES  
 3967 Bucks Foot Lane  
 Ellicott City, Md. 21043

SCALE: AS SHOWN  
 DRAWING: 3 OF 7  
 JOB NO: 84-128  
 FILE NO: 84-128-D

# STORM WATER MANAGEMENT POND NOTES

## I. 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 pond or 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.

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.

## II. EARTH FILL

### Material

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

### Placement

Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

### Compaction

The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction can be obtained with the equipment used.

Where a minimum required density is specified, each layer of fill shall be compacted as necessary to obtain that density and is to be certified by the Engineer.

### Cutoff Trench

Where specified, a cutoff trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be as shown on the drawings, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the trench shall be 1 to 1 or flatter. The backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four inches or greater over the structure or pipe.

## III. STRUCTURAL BACKFILL

Backfill material 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 compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four inches or greater over the structure or pipe.

## IV. PIPE CONDUITS

All pipes shall be circular in cross section.

### A. Corrugated Metal Pipe

1. 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 are commercially available: 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 - (Aluminized Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274-791 with watertight coupling bands or flanges.

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. Coupling bands, anti-seep collars, end sections, etc. must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. Aluminum surfaces that are to be in contact with concrete shall be primed with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be less than 9 and greater than 4.

2. 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. Watertight coupling bands or flanges shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to the completely watertight. Dimple bands are not considered to be watertight.

3. 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.

4. Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.

5. Backfilling shall conform to structural backfill as shown above.

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

## B. Reinforced Concrete Pipe

1. Materials - Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-361. An approved equivalent is AWA Specification C-301.

2. 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", or as shown on the drawings.

3. 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.

4. Backfilling shall conform to structural backfill as shown above.

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

C. For pipes of other materials, specific specifications shall be shown on the drawings.

## V. CONCRETE

### 1. Materials

a. Cement - Normal Portland cement shall conform to the latest ASTM Specification C-150.

b. Water - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.

c. Sand - The sand used in concrete shall be clean, hard, strong and durable and shall be well graded with 100 percent passing a one-quarter inch sieve. Limestone sand shall not be used.

d. Coarse Aggregate - The coarse aggregate shall be clean, hard, strong and durable, and free from clay or dirt. It shall be well graded with a maximum size of one and one-half (1-1/2) inches.

e. Reinforcing Steel - The reinforcing steel shall be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.

2. Design Mix - The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5-1/2 to 6 U.S. Gallons of water per 94 pound bag of cement. The proportion of materials for the trial mix shall be 1:2:3-1/2. The combination of aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

3. Mixing - The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes after all the ingredients, except the full amount of water, are in the mixer. The minimum mixing time is predicated on proper control of the speed of rotation of the mixer and of the introduction of the materials, including water, into the mixer. Water shall be added prior to, during, and following the mixer-charging operations. Excessive overmixing requiring the addition of water to preserve the required concrete consistency shall not be permitted. Truck mixing will be allowed provided that the use of this method shall cause no violation of any applicable provisions of the specifications given here.

4. Forms - The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping, and vibration without deflection from the prescribed lines. They shall be mortar-tight and constructed so that they can be removed without hammering or prying against the concrete.

The inside of forms shall be oiled with a non-staining mineral oil or thoroughly wetted before concrete is placed.

Forms may be removed 24 hours after the placement of concrete. All wire ties and other devices used shall be recessed from the surface of the concrete.

5. Reinforcing Steel - All reinforcing material shall be free of dirt, rust, scale, oil, paint or any other coatings. The steel shall be accurately placed and securely tied and blocked into position so that no movement of the steel will occur during placement of concrete.

6. Consolidating - Concrete shall be consolidated with internal type mechanical vibrators. Vibration shall be supplemented by spading and hand tamping as necessary to insure smooth and dense concrete along form surfaces, in corners, and around embedded items.

7. Finishing - Defective concrete, honeycombed areas, voids left by the removal of tie rods, ridges on all concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry-patching mortar.

8. Protection and Curing - Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least the first three (3) days. All concrete shall be kept continuously moist for at least ten (10) days after being placed. Moisture may be applied by spraying or sprinkling as necessary to prevent the concrete from drying. Concrete shall not be exposed to freezing during the curing period. Curing compounds may also be used.

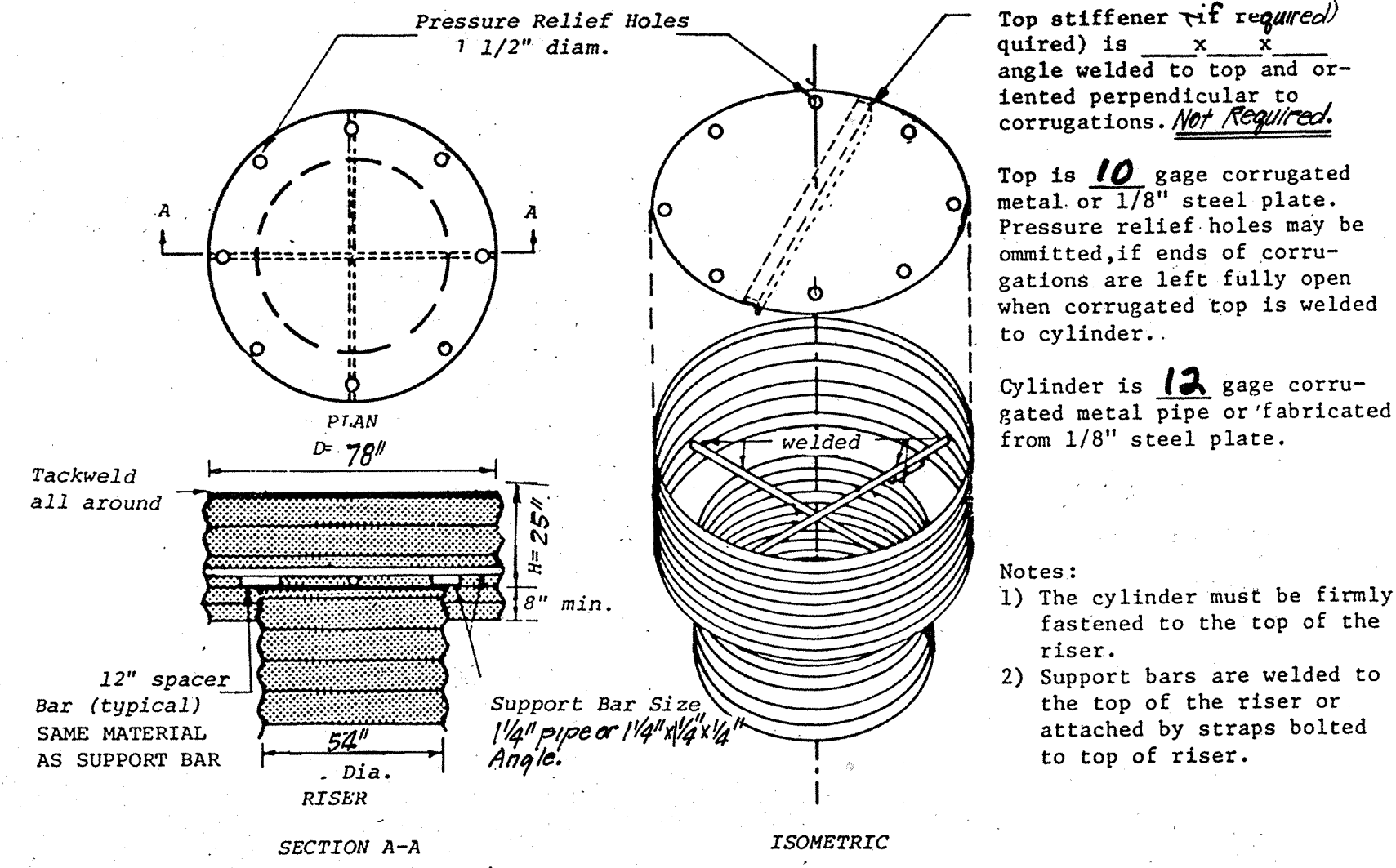
9. Placing Temperature - Concrete may not be placed at temperatures below 37° F with the temperature falling, or 34° with the temperature rising.

## VI. STABILIZATION

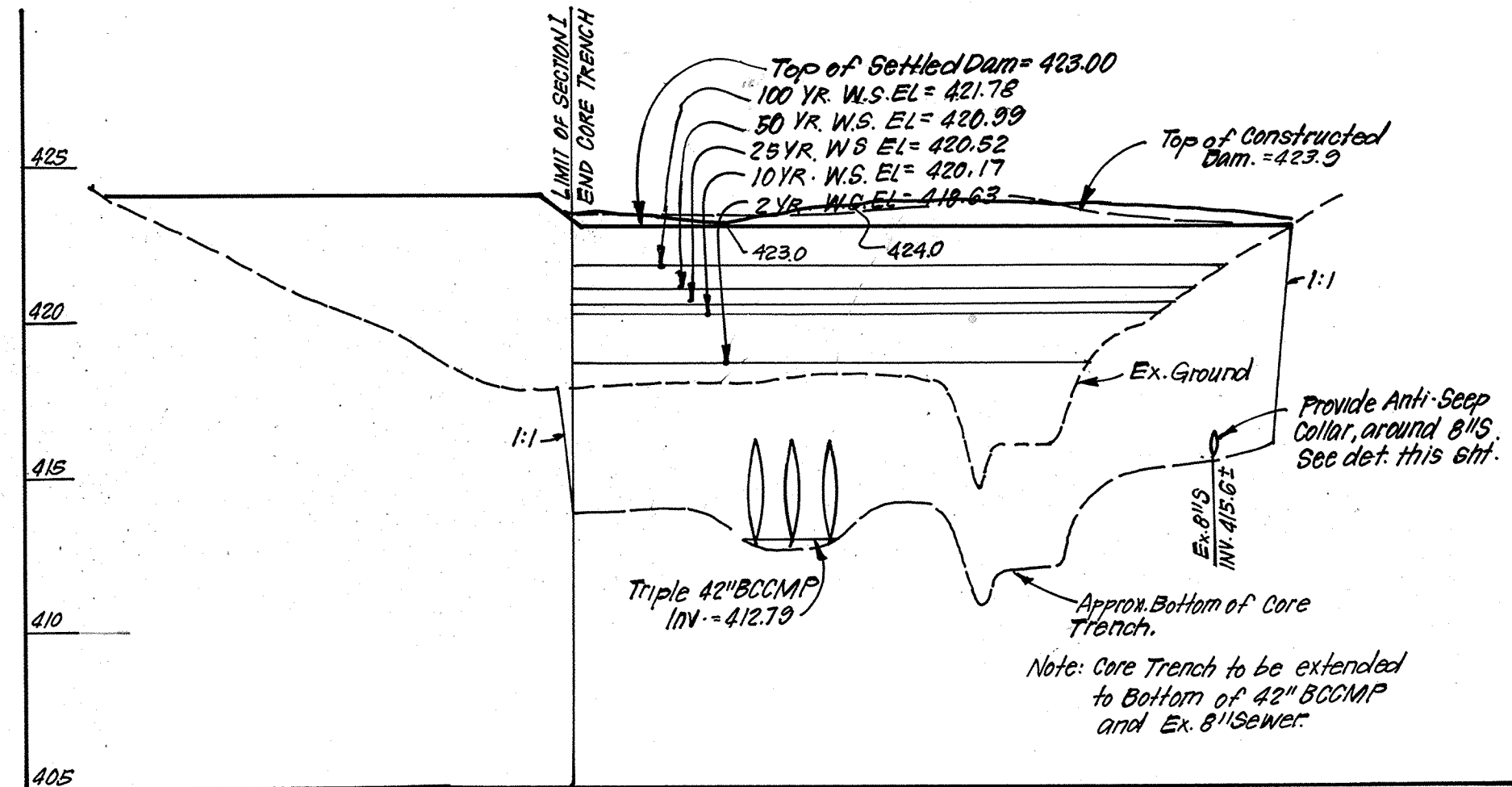
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching (if required) in accordance with the vegetative treatment specifications or as shown on the accompanying drawings.

## VII. 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.



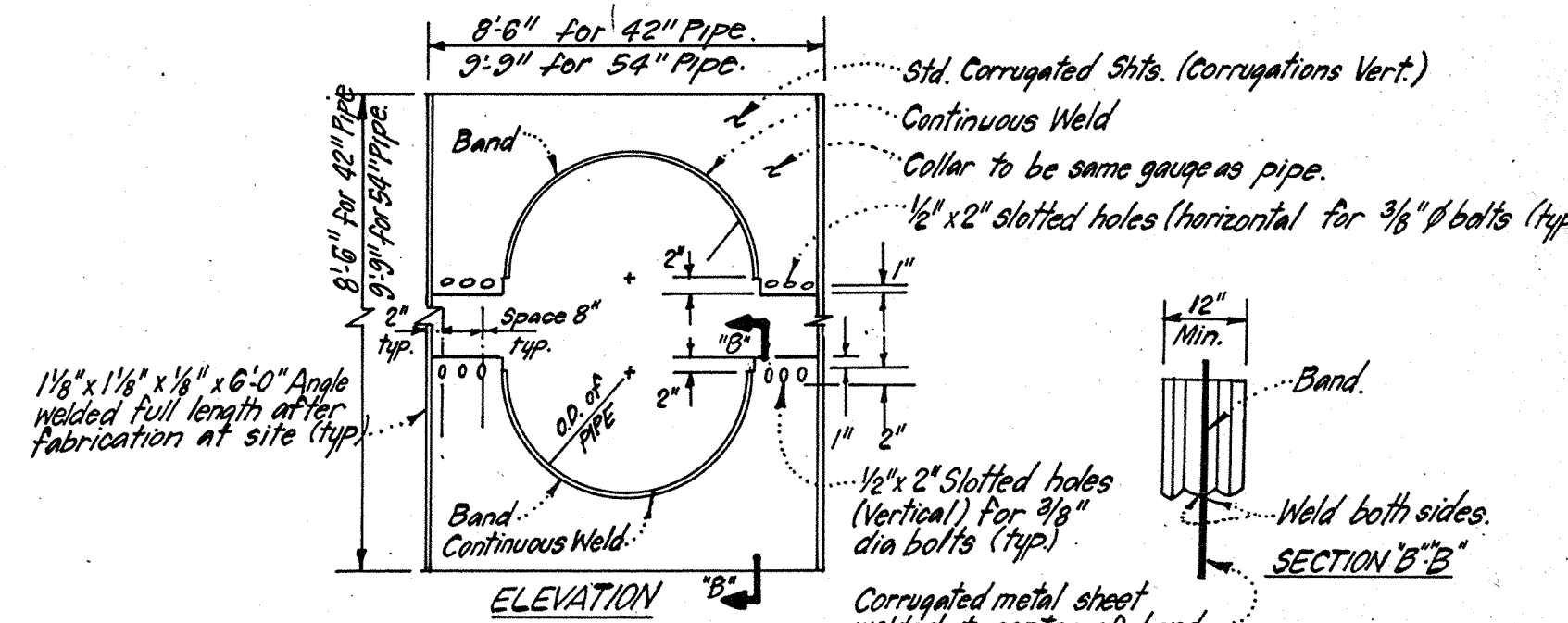
CONCENTRIC TRASH RACK & ANTI-VORTEX DEVICE  
NO SCALE



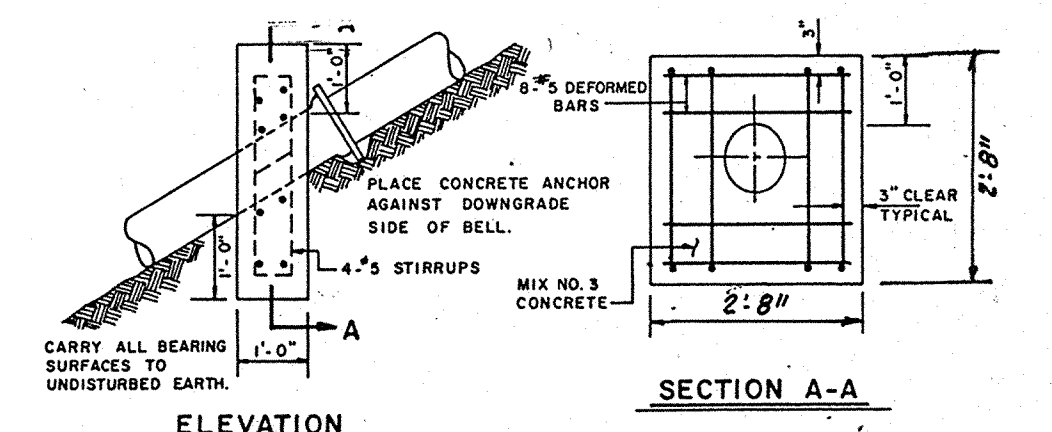
PROFILE ALONG & DAM  
(LOOKING UPSTREAM)  
SCALE: HORIZ. 1"=50'  
VERT. 1"=5'

TEST PIT NO.	DEPTH	DESCRIPTION	REMARKS
BORING #1	0'-0" to 1'-0"	TOPSOIL	Water @ 7'-6"
	1'-0" to 5'-0"	Light gray and Tan silty clay with trace of sand, fine gravel and roots (decomposed and not decomposed)	ML Shear strength $\phi = 200$ psf
	5'-0" to 8'-0"	Tan and brown clayey silty sand with root fragments (up to 4")	SM
	8'-0" to 13'-0"	Light gray micaceous silty silt with white and pinkish sand at 11'-6" (color change from light gray to dark gray @ 12')	ML
BORING #2	0'-0" to 1'-0"	TOPSOIL	Water @ 6'-0"
	1'-0" to 3'-0"	Brown micaceous sandy silty clay and some silty sand with trace of clay and organics	CL
	3'-0" to 6'-6"	Gray sandy silty micaceous clay and clayey silty sandy with decomposed roots and pieces (up to 2" x 1/2")	SM
	6'-6" to 7'-6"	Tan and gravel (angular)	SM
	7'-6" to 13'-0"	Brown micaceous sandy silt rock fragments, traces of roots	ML
BORING #3	0'-0" to 1'-0"	TOPSOIL	Water @ 4'-4"
	1'-0" to 3'-6"	Gray and tan micaceous clayey silty sand with roots	SM
	3'-6" to 5'-6"	Light brown micaceous silty sand	SM
	5'-6" to 9'-0"	Pink brown silty sand	SM
	9'-0" to 13'-0"	Brown red micaceous silty clay	ML
BORING #4	0'-0" to 1'-0"	TOPSOIL	Water @ 13'-0"
	1'-0" to 2'-0"	Gray and tan micaceous clayey silty sand with roots	SM
	2'-0" to 2'-6"	Tan sandy silty clay and clayey silty sand	ML
	2'-6" to 5'-0"	Tan micaceous silt with white sandy silt. Trace of roots (roots 1/2" and 4" long)	ML
	5'-0" to 13'-0"	Tan micaceous silt with white sandy silt. Trace of roots	ML
BORING #5	0'-0" to 1'-0"	TOPSOIL	Water @ 8'-0"
	1'-0" to 3'-6"	Brown clayey medium sandy silt	ML
	3'-6" to 5'-6"	Gray and brown micaceous clayey silt	ML
	5'-6" to 13'-0"	Pink brown silty sand with white colored granite, trace of roots, small pieces of roots @ 10"	SM

Note: Test Pit Data Prepared by Earth Engineering Sciences Inc.



CORRUGATED METAL ANTI-SEEP COLLAR DETAILS  
NO SCALE



ANTI-SEEP COLLAR FOR 8" S  
NO SCALE

AS-BUILT SURVEY CERTIFIED BY DONALD B. SACKETT, MD. P.E. NO. 6099, ON 6-3-88

## DEVELOPER'S CERTIFICATE

"I certify that all development and/or construction will be done according to these plans of development, pond construction and erosion and sediment control. I also authorize periodic on-site inspection by the Howard Soil Conservation District, or their authorized agents, as are deemed necessary. Deviation from this plan will not be made unless authorized by The Howard Soil Conservation District. I will provide the Howard Soil Conservation District with a red-lined "as built" of the pond within 30 days of completion."

*St. Carl Armigau* 10-2-85  
Signature of Developer Date

## ENGINEER'S CERTIFICATE

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

*William J. Schauf* 10-3-85  
Signature of Engineer Date



APPROVED: Department of Public Works

*John S. ...* 12-22-85  
Chief, Bureau of Engineering

APPROVED: Howard County Office of Planning & Zoning

*William M. ...* 12-11-85  
Chief, Division of Land Development & Zoning Administration

**CLARK - FINEFROCK & SACKETT**  
ENGINEERS - PLANNERS & SURVEYORS

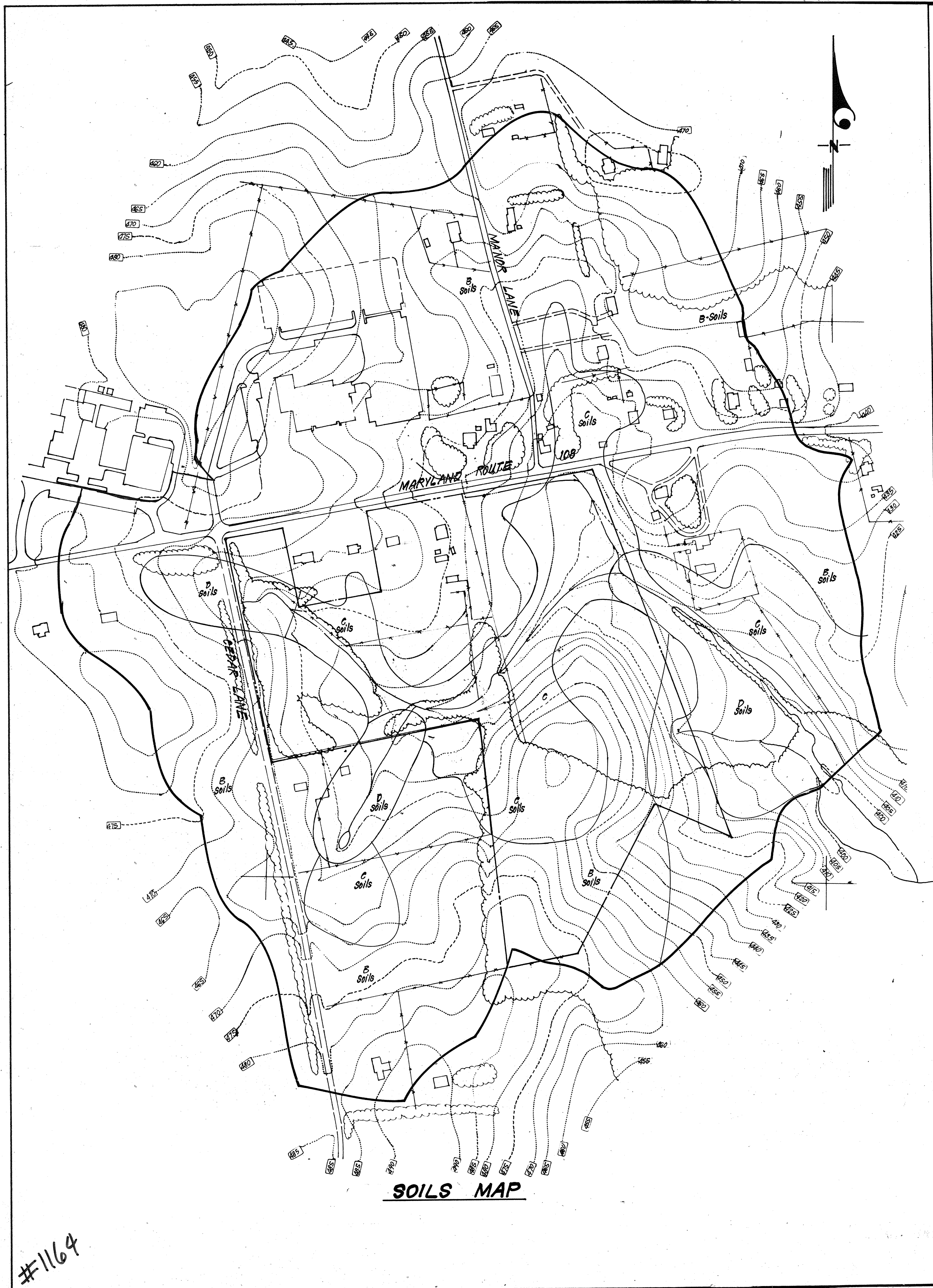
11315 LOCKWOOD DRIVE • SILVER SPRING, MARYLAND 20904 • (301) 593-3400

DESIGNED	JLS	SCALE	As Shown
DRAWN	JLS	DRAWING	40F7
CHECKED	JLS	JOB NO.	84-128
DATE	10-1-85	FILE NO.	84-128-2

FOR: BEECH CREEK ASSOCIATES  
5967 BUCKS FOOT LANE  
ELLICOTT CITY, MD. 21043

F-85-136 AS-BUILT 6-3-88

#1164



APPROVED: Department of Public Works  
*[Signature]* 12-22-85  
 Chief, Bureau of Engineering Date

APPROVED: Howard County Office of Planning & Zoning  
*[Signature]* 12-11-85  
 Chief, Division of Land Development and Zoning Administration Date

**CLARK • FINEROCK & SACKETT**  
 ENGINEERS • PLANNERS • SURVEYORS  
 11315 LOCKWOOD DRIVE SILVER SPRING, MARYLAND 20904 (301) 593-1400

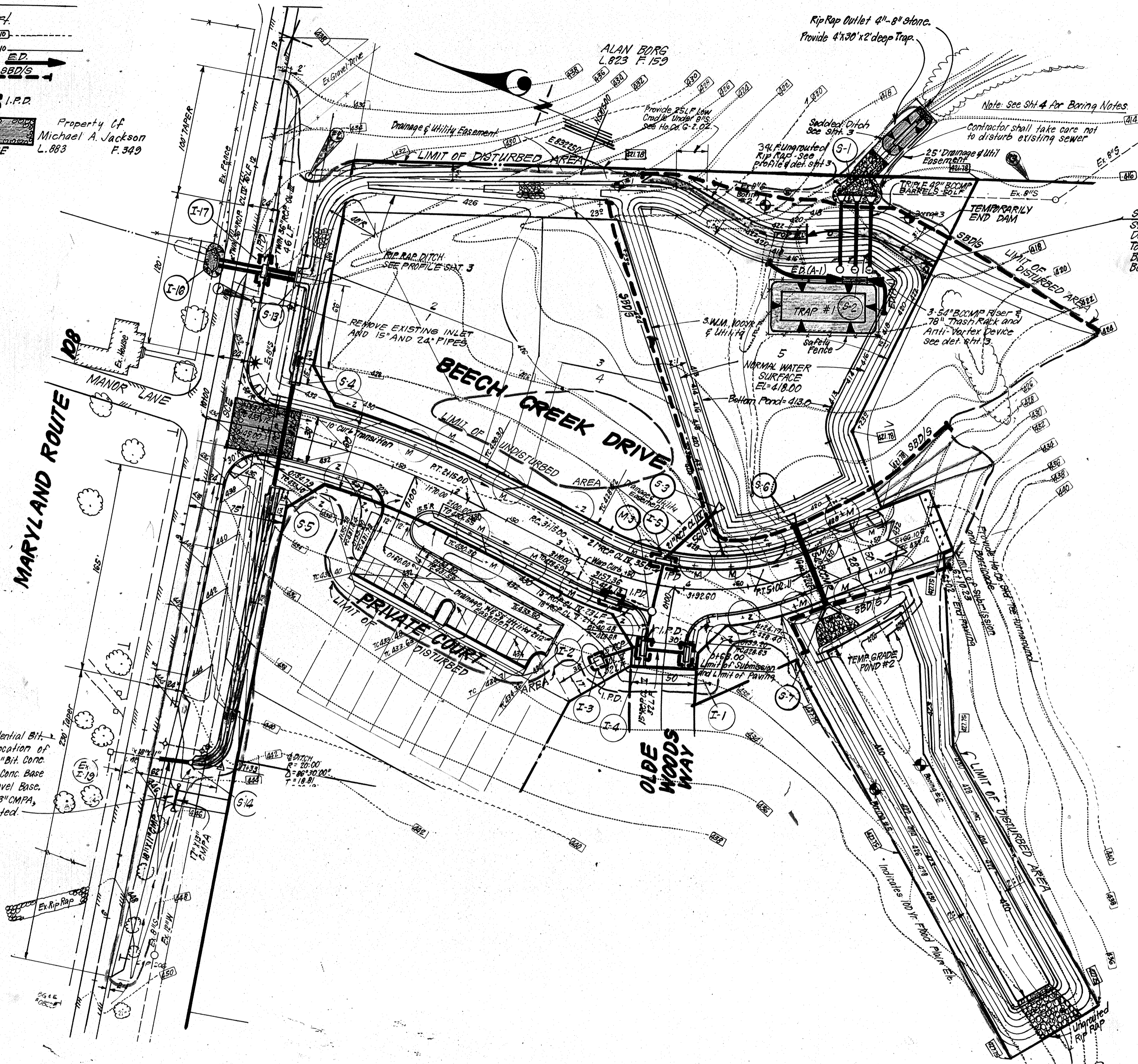
DESIGNED JLS	<b>ROAD CONSTRUCTION PLAN          DRAINAGE AREA MAP FOR          STORM DRAINAGE &amp; 100 YEAR FLOOD PLAIN</b>  <b>BEECH CREEK</b> SECTION ONE 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND FOR: BEECH CREEK ASSOCIATES 3967 Ducks Foot Lane Ellicott City, Md. 21043	SCALE 1"=200'
DRAWN K/W		DRAWING 5 OF 7
CHECKED JLS		JOB NO. 84-128
DATE 10-1-85		FILE NO. 84-128-D

#1164

**LEGEND:**

- 1. Contour Interval 2' F.
- 2. Existing Contour
- 3. Proposed Contour
- 4. Earth Dike
- 5. Straw Bale Dike or Silt Fence
- 6. Inlet Protection
- 7. Stabilized Construction Entrance.

Property of  
Michael A. Jackson  
L. 883 F. 349



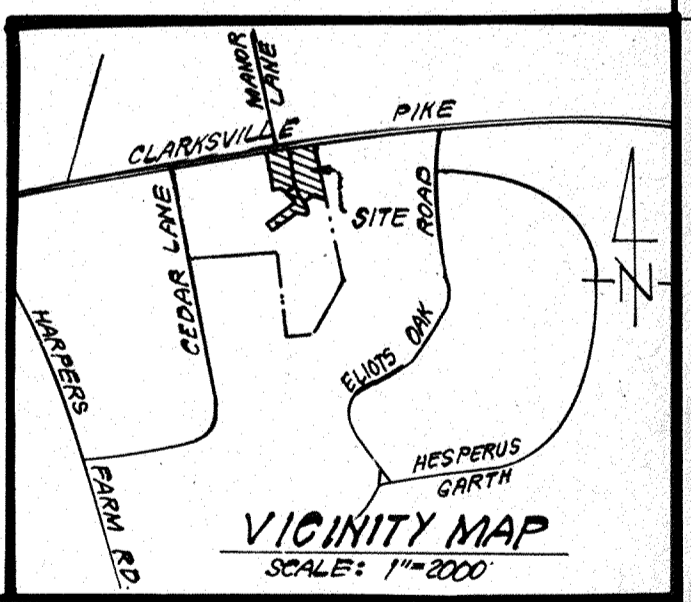
Construct 10' Wide Residential Bit-Driveway Entrance at Location of existing driveway. 1 1/2" Bit. Conc. Surface Courses 2" Bit. Conc. Base Surface; 6" Bank Run Gravel Base. Install 22 LF of 17"x13" CMPA, 0.264" thick, fully coated.

S987 (S7-V) TRAP #1  
Storage Provided = 3000 cu ft  
Depth = 4'  
Top of Stone Crest = 415.0  
Bottom Elev. = 410.0  
Bottom Dimensions = 67' x 22'

**CONSTRUCTION SEQUENCE:**

No. of Days	
2	1. Obtain Grading Permit.
2	2. Install S.C.E. and SBD'S Below Pond.
14	3. Construct Core Trench and Triple Spillway and Dam for Pond #1 to limits shown & immediately stabilize.
14	4. Construct Trap #1 and Complete Dam. Stream to be diverted through trap and through slide gate on spillway # 2.
30	5. Construct storm drainage and ditches and install SBD'S where shown.
14	6. Rough Grade Pond #1 and immediately stabilize.
14	7. Clear & Rough Grade remainder of site except Pond #2. Temp. Grade Pond #2 as shown.
30	8. Construct Utilities.
60	9. Fine grade & construct paving.
14	10. Stabilize all disturbed areas on-site in accordance w/ stds. & specs.
14	11. Upon approval of HSCD and the sediment control inspector, remove sediment control measures and stabilize.
14	12. After all disturbed areas in Future Sections 2 and 3 have been stabilized, rough grade Pond #2 and immediately stabilize.

\* Disturbance in the existing stream channel to be kept at a minimum.



Reviewed for... Howard... S.C.D.  
Name  
and meets Technical Requirements  
Signature Date  
U.S. Soil Conservation Service  
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

**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 at a Dept. 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 are deemed necessary."

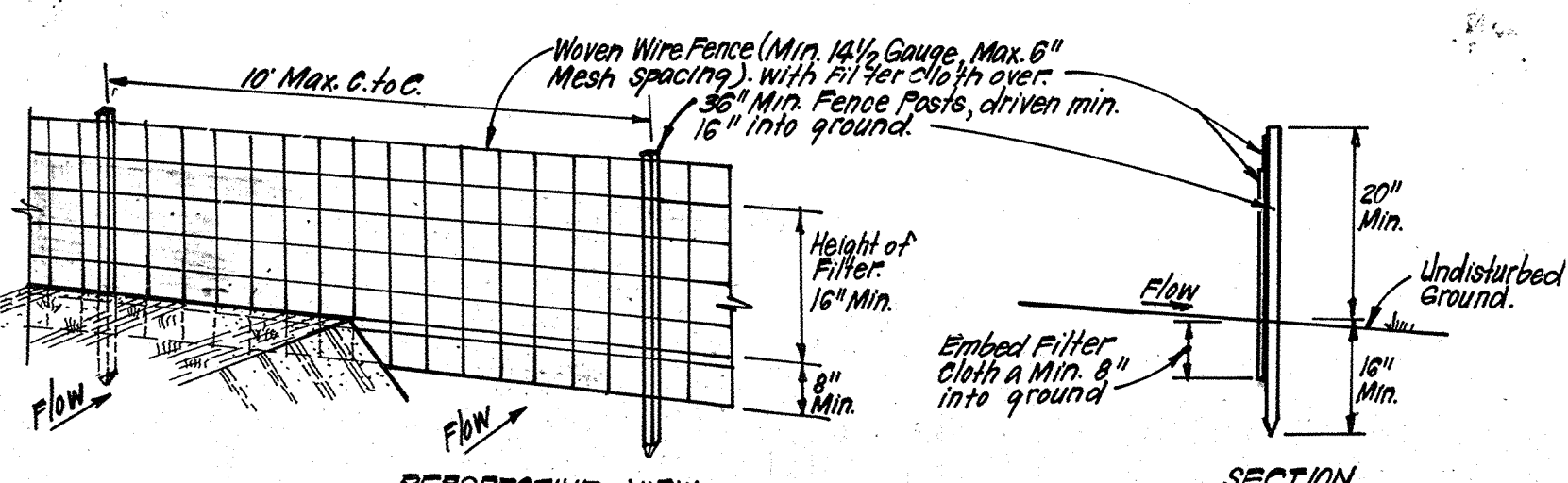
**ENGINEER'S CERTIFICATE**  
I hereby certify that this plan for Erosion and Sediment Control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.



APPROVED: Department of Public Works  
Chief Bureau of Engineering  
APPROVED: Howard County Office of Planning & Zoning  
John W. Munchman  
Chief Division of Land Development & Zoning Administration

**CLARK · FINEFROCK & SACKETT**  
ENGINEERS · PLANNERS · SURVEYORS  
11315 LOCKWOOD DRIVE • SILVER SPRING MARYLAND 20904 • (301)593-3400

DESIGNED JLS	ROAD CONSTRUCTION PLANS SEDIMENT & EROSION CONTROL PLAN	SCALE As Shown
DRAWN K/W		DRAWING 60F7
CHECKED JMS		JOB NO. 84-128
DATE 10-1-85		FILE NO. 84-128-D
		FOR: BEECHCREEK ASSOCIATES 3967 DUCKS FOOT LANE ELICOTT CITY MD 21043

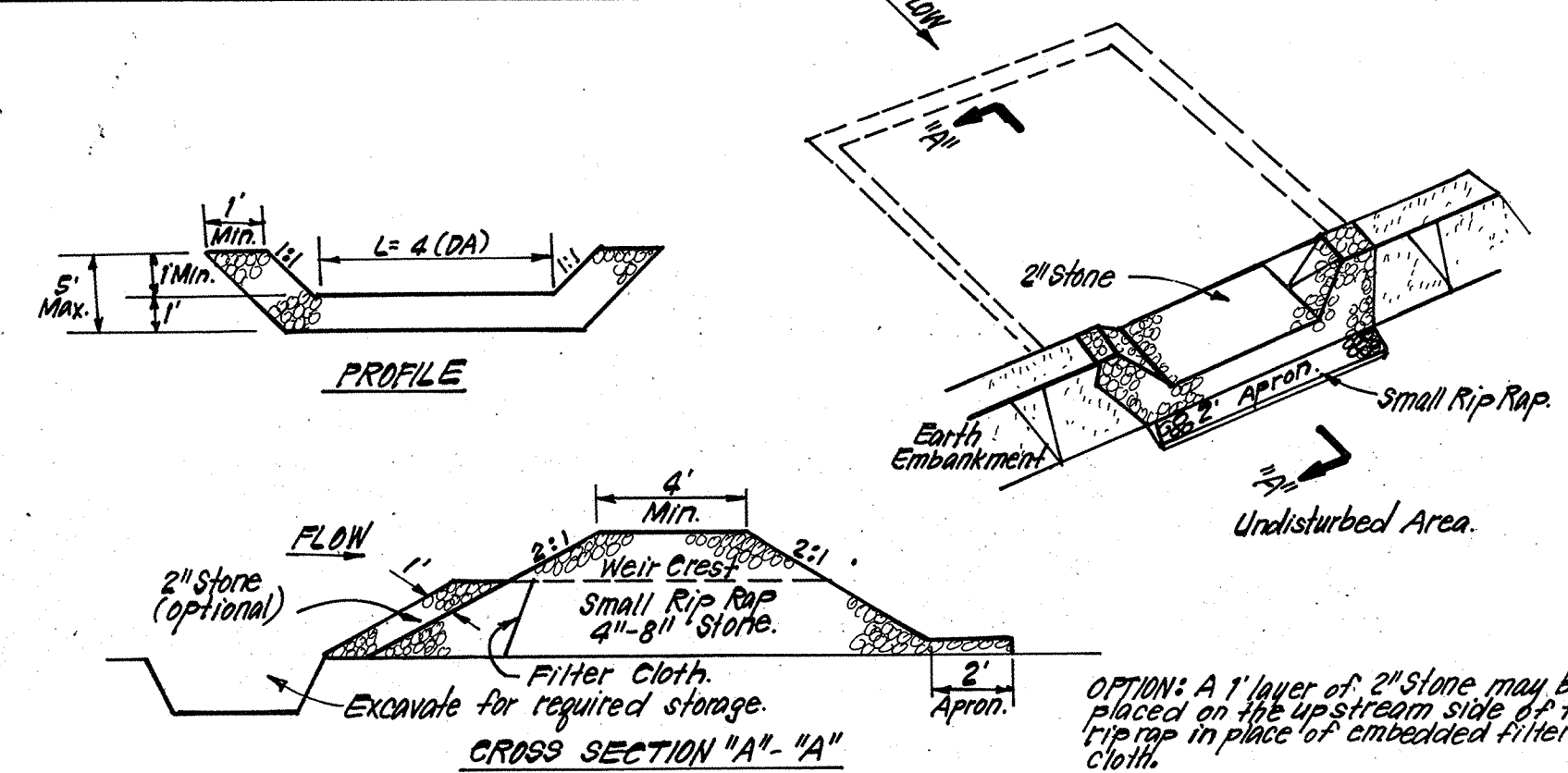


**CONSTRUCTION SPECIFICATIONS:**

- Woven wire fence to be fastened securely to fence posts with wire ties or staples.
- Filter cloth to be fastened securely to woven wire fence with ties spaced every 24" at top and mid section.
- When 2 sections of filter cloth adjoin each other they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and material removed when "bridges" develop in silt fence.

**POSTS:** Steel either T or U Type or 2" Hardwood  
**FENCE:** Woven Wire, 14 1/2 Gauge  
**MAX. MESH OPENING:** 6"  
**FILTER CLOTH:** Filter X, Mirafix 100X, Slablinks, T140N or Approved Equal.  
**PREFABRICATED UNIT:** Geo-Fab, Envirofence, or Approved Equal.

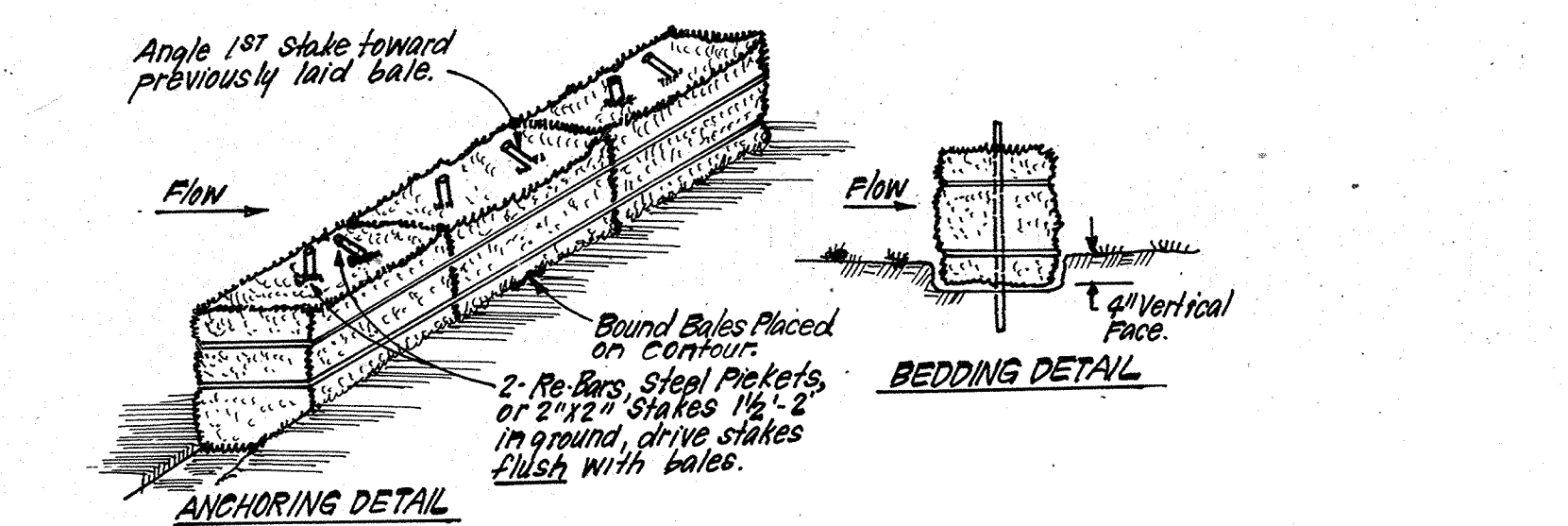
**SILT FENCE DETAIL (S)**  
NO SCALE



**CONSTRUCTION SPECIFICATIONS:**

- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The area shall be compacted.
- 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.
- All cut and fill slopes shall be small rip rap 4"-9" 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.
- The stone used in the outlet shall be restored to its original dimensions when the sediment has accumulated to 1/2 the design depth of the trap.
- 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.
- The structure shall be inspected after each rain and repairs made as needed.
- Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
- The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

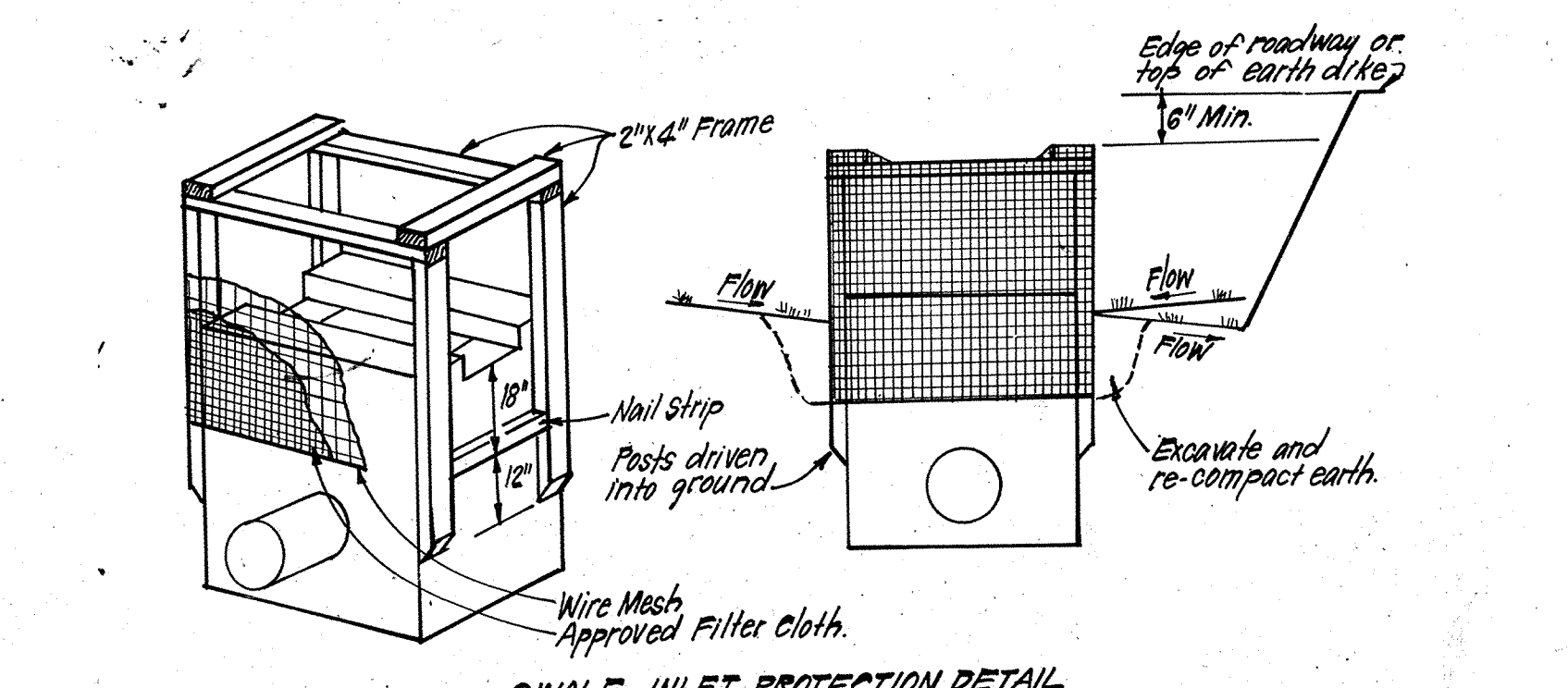
**STONE OUTLET SEDIMENT TRAP (S.O.S.T.) STV**  
NO SCALE



**CONSTRUCTION SPECIFICATIONS:**

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

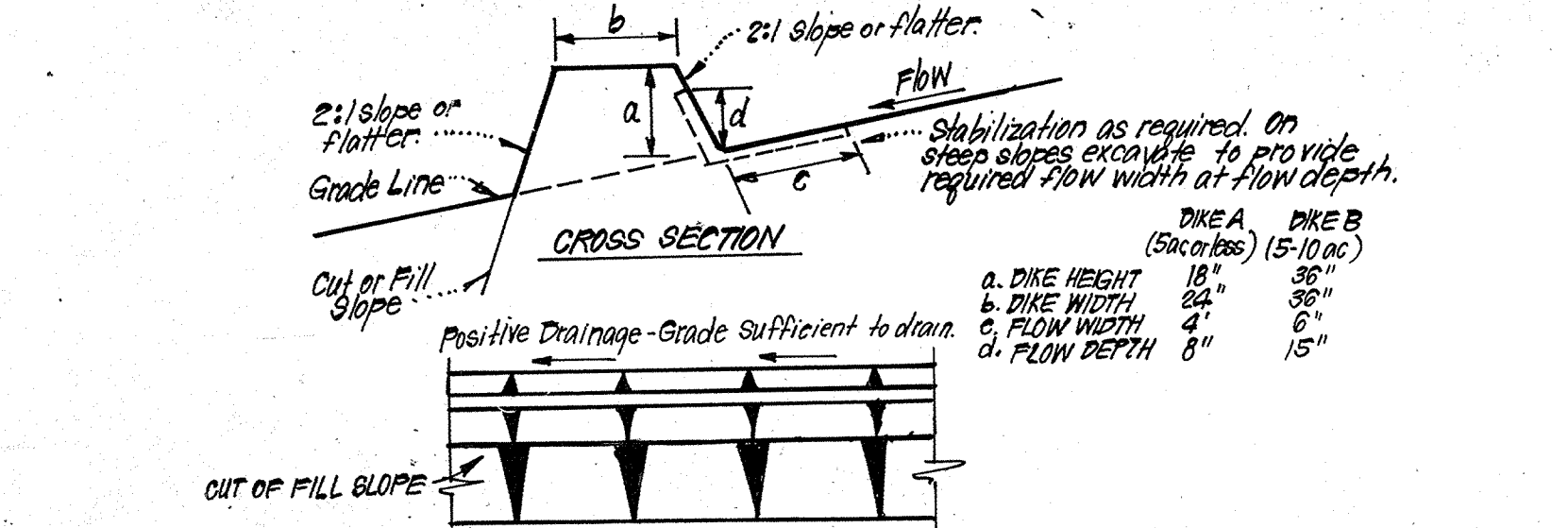
**STRAW BALE DIKE DETAIL (SBD)**  
NO SCALE



**CONSTRUCTION SPECIFICATIONS:**

- All dikes shall be compacted by earth-moving equipment.
- All dikes shall have positive drainage to an outlet.
- Top width may be wider and side slopes may be flatter if desired, to facilitate crossing by construction equipment.
- Final location should be adjusted as needed to utilize a stabilized safe outlet.
- Earth dikes shall have an outlet that functions with a minimum of erosion. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike are not adequately stabilized.
- 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.

**SWALE INLET PROTECTION DETAIL**  
**CURB INLET PROTECTION DETAIL**



**FLOW CHANNEL STABILIZATION**

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	0.5 - 3.0%	Seed & Straw Mulch	Seed or Straw Mulch
2	3.1 - 5.0%	Seed & Straw Mulch	Seed, Wattle, or Excelsior Spd, 2" Stone
3	5.1 - 8.0%	Seed, Wattle, or Spd, 2" Stone	Lined Rip Rap 4"-8" Stone
4	8.1 - 20.0%	Lined Rip Rap 4"-8" Stone	Engineering Design

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"-8" in a layer at least 3" thick, pressed into soil.  
 C. Approved equivalents can be substituted for any of the above materials.

**EARTH DIKE DETAIL (E.D.)**  
NO SCALE

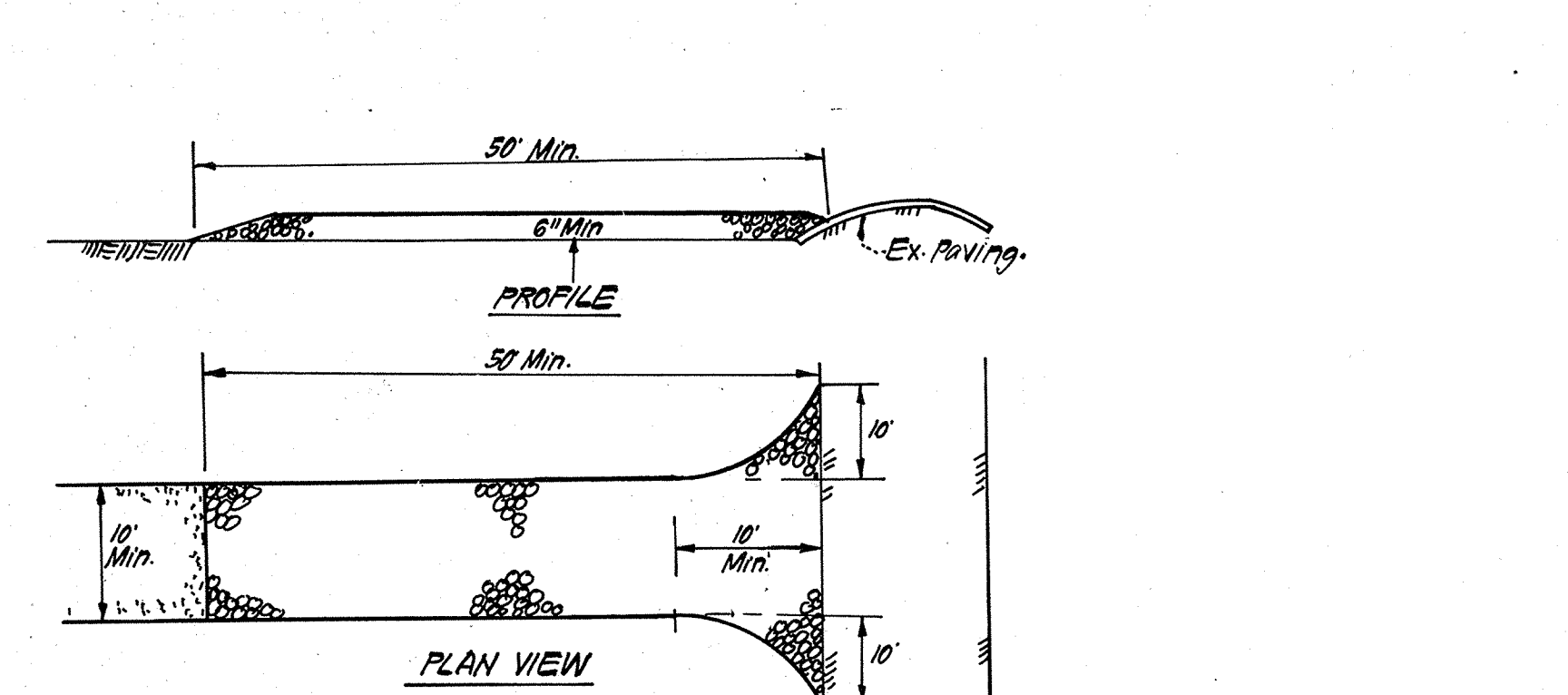
Reviewed for: *[Signature]* S.C.D.  
 and meets Technical Requirements  
*[Signature]* 12/10/85  
 Signature Date  
 U.S. Soil Conservation Service

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

*[Signature]* 12/10/85  
 Approved Date

**SEDIMENT CONTROL NOTES**

- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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 shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52.) Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:  
 Total Area of Site: 8.74 Acres  
 Area Disturbed: 5.85 Acres  
 Area to be roofed or paved: 0.87 Acres  
 Area to be vegetatively stabilized: 4.98 Acres  
 Total Cut: 18,380 Cu. yds  
 Total Fill: 10,500 Cu. yds  
 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 DPW sediment control inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- If houses are to be constructed on an "As-Sold" basis, at random, Single Lot Sediment Control as shown below shall be implemented. N/A
- All pipes to be blocked at the end of each day (see detail below).
- The total amount of straw bale dikes/silt fence equals 1050 L.F.



**CONSTRUCTION SPECIFICATIONS:**

- Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
- Length - As required, but not less than 50 feet (except on a simple residence lot) where a 150' min. length would apply.
- Thickness - Not less than 6".
- Width - Ten foot min, but not less than the full width at point where ingress or egress occur.
- Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a simple residence lot.
- Surface Water - All surface water, flowing or diverted toward construction entrances shall be piped across the entrance.
- 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 cleanup of any measures used to trap sediment. All equipment spilled or tracked onto public rights-of-way must be removed immediately.
- 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.
- Periodic inspection and needed maintenance shall be provided after each rain.

**STABILIZED CONSTRUCTION ENTRANCE (S.C.E.)**  
NO SCALE

**DEVELOPER'S/BUILDER'S CERTIFICATE**

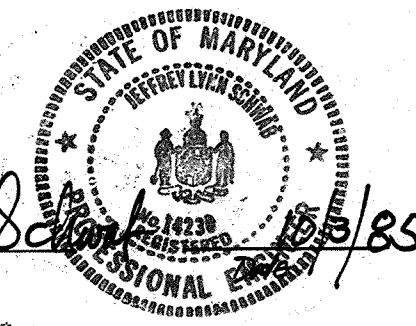
"I/We certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Dept. of Natural Resources Approved Training 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 are deemed necessary."

*[Signature]* 10-2-85  
 Signature of Developer/Builder 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.

*[Signature]* 12/10/85  
 Signature of Engineer Date



**PERMANENT SEEDING NOTES**

- Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
- Seeded Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.
- Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules:
- Prefarred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square 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).
  - 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 (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 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.

**Maintenance -** 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.

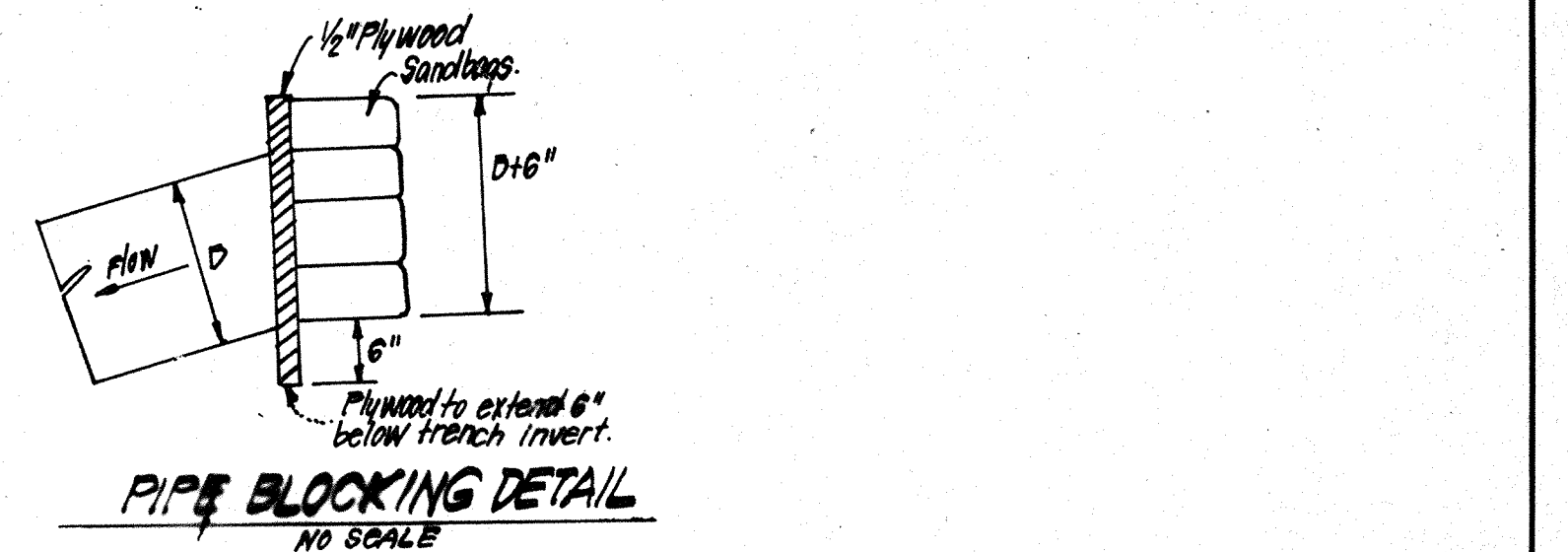
**Seeded Preparation:** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding.

**Soil Amendments:** Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft)

**Seeding:** For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.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.



**PIPE BLOCKING DETAIL**  
NO SCALE

APPROVED: Department of Public Works  
*[Signature]* 12-23-85  
 Chief, Bureau of Engineering  
 APPROVED: Howard County Office of Planning & Zoning  
*[Signature]* 12/1/85  
 Chief, Division of Land Development & Zoning Administration

**CLARK · FINEFROCK & SACKETT**  
 ENGINEERS · PLANNERS · SURVEYORS  
 11315 LOCKWOOD DRIVE • SILVER SPRING MARYLAND 20904 • (301)593-3400

DESIGNED: JLS  
 DRAWN: R/W  
 CHECKED: J/S  
 DATE: 10-1-85

SCALE: AS SHOWN  
 DRAWING: 70F7  
 JOB NO.: 84-128  
 FILE NO.: 84-128-D

**BEECH CREEK**  
 SECTION ONE  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

FOR: BEECHCREEK ASSOCIATES  
 3967 Ducks Foot Lane  
 Ellicott City, Md. 21043