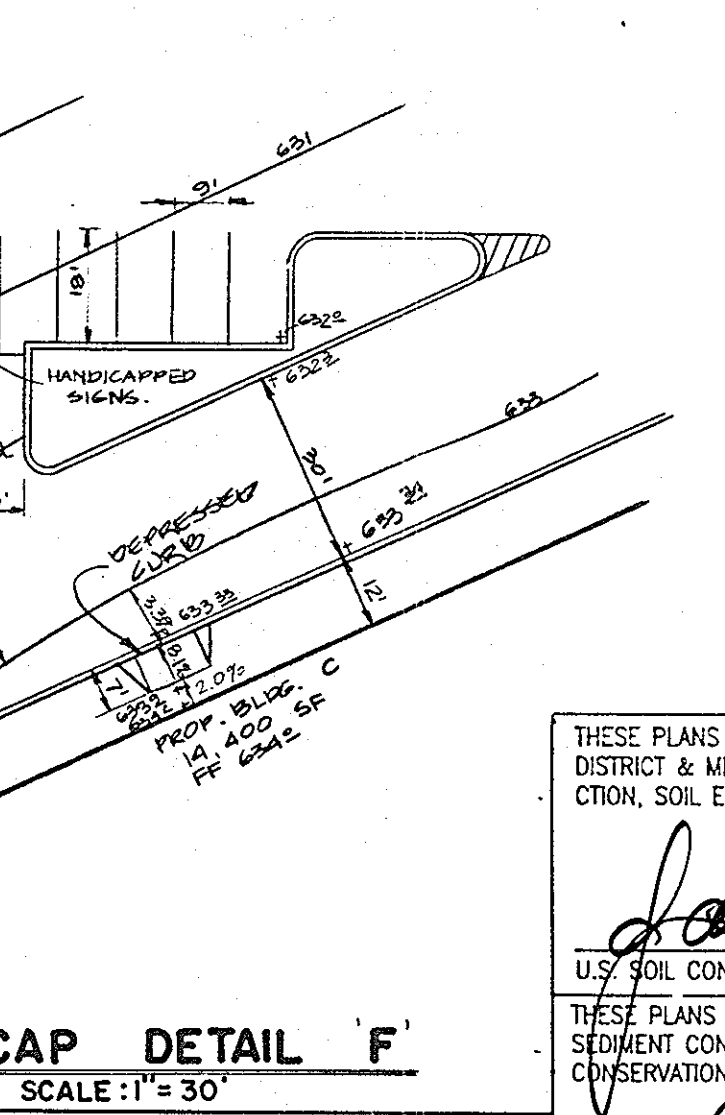


*** NOTE:** HANDICAPPED SIGNS TO BE PLACED ON BLDG. IF APPLICABLE AND PER THE MARYLAND BLDG. CODE FOR THE HANDICAPPED AND AGED.



THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT & MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

James M. Selma 7/22/88
U.S. SOIL CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.

Stephen L. Fisher 7/22/88
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

Joyce Boyd 8-17-88
COUNTY HEALTH OFFICER

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING.

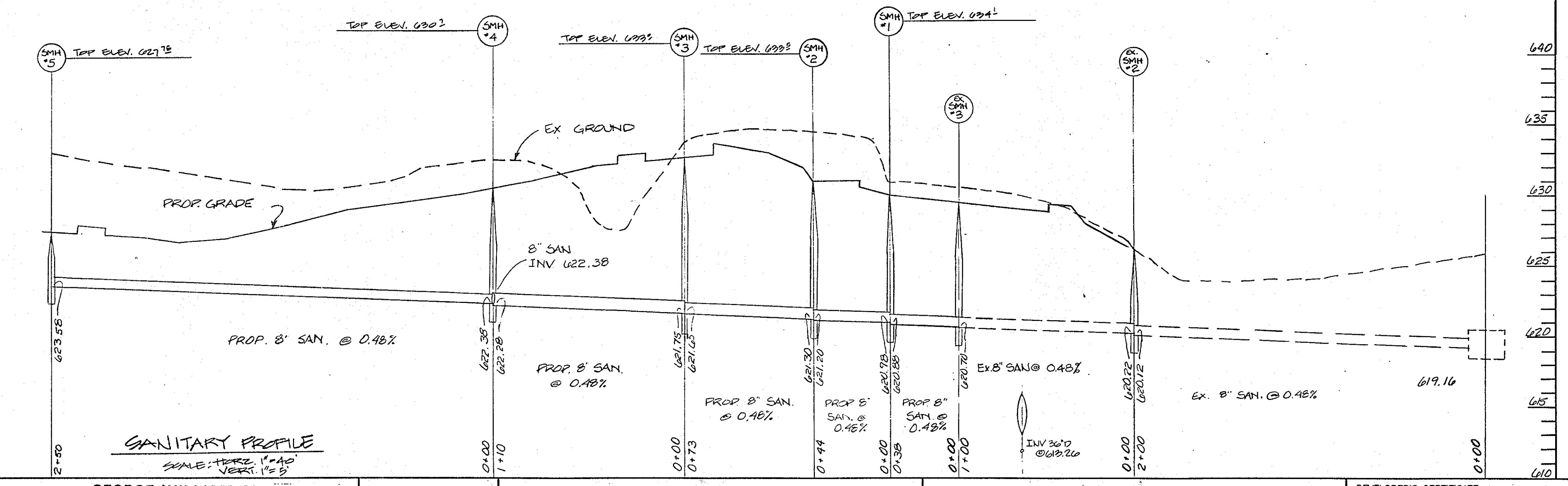
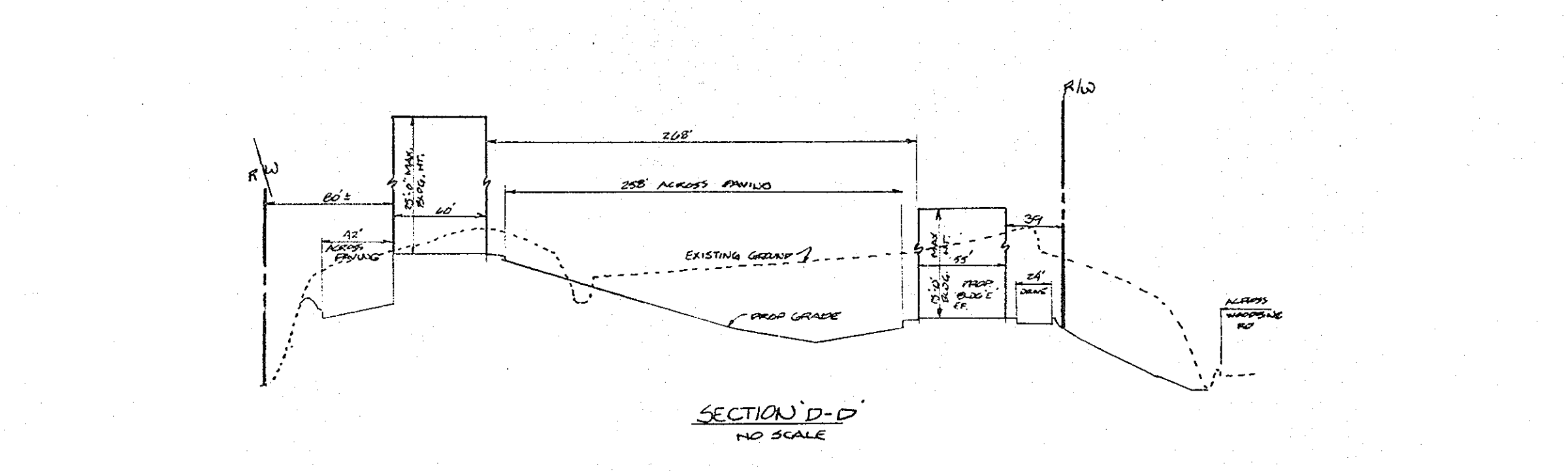
Jim Hines 9-8-88
DIRECTOR

Janet J. L. Taylor 9-1-88
CHIEF DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT

APPROVED: FOR SEWER DRAINAGE AND PRIVATE SEWERAGE, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

James M. Selma 8-29-88
DIRECTOR

James M. Selma 8-29-88
CHIEF BUREAU OF ENGINEERING



RESERVED PARKING (with wheelchair symbol)

STANDARD R7-8 RESERVE PARKING SIGN

\$50 FINE

50 Fine Sign

Sign to utilize an aluminum blank 6" x 12" x 0.080 inch thick with two single post mounting holes.

The text and border shall be standard green to match that on R7-8 and the background shall be reflective white. Text shall be in 3" characters.

Sign shall be mounted directly below the standard R7-8 reserved parking for handicapped sign. Its bottom edge shall be no less than 7 feet above ground. If the sign is placed against a building, structure, or other location where vehicle or pedestrian traffic is not obstructed the bottom edge of sign shall be at least 6 feet but not more than 10 feet above ground.

GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC.
CIVIL ENGINEERS & LAND SURVEYORS
303 ALLEGHENY AVENUE
TOWSON, MARYLAND 21204
(301)825-8120

ENGINEER'S CERTIFICATE:
I CERTIFY THAT THIS PLAN FOR S.W.M. FACILITY CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENT 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 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 S.W.M. FACILITY WITHIN 30 DAYS OF COMPLETION.

ENGINEER: *V. Chandra*
REG. NO. 8230 DATE: 6/29/88

OWNER/DEVELOPER
PARTNERSHIP OF LIMITED PARTNERSHIP
1000 BRITAIN BANK CENTER
COLUMBIA, MARYLAND 21044

DEVELOPER'S CERTIFICATE:
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 DEPT. OF NATURAL RESOURCES APPROVED 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. 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-LINE "AS-BUILT" OF THE S.W.M. FACILITY WITHIN 30 DAYS OF COMPLETION.

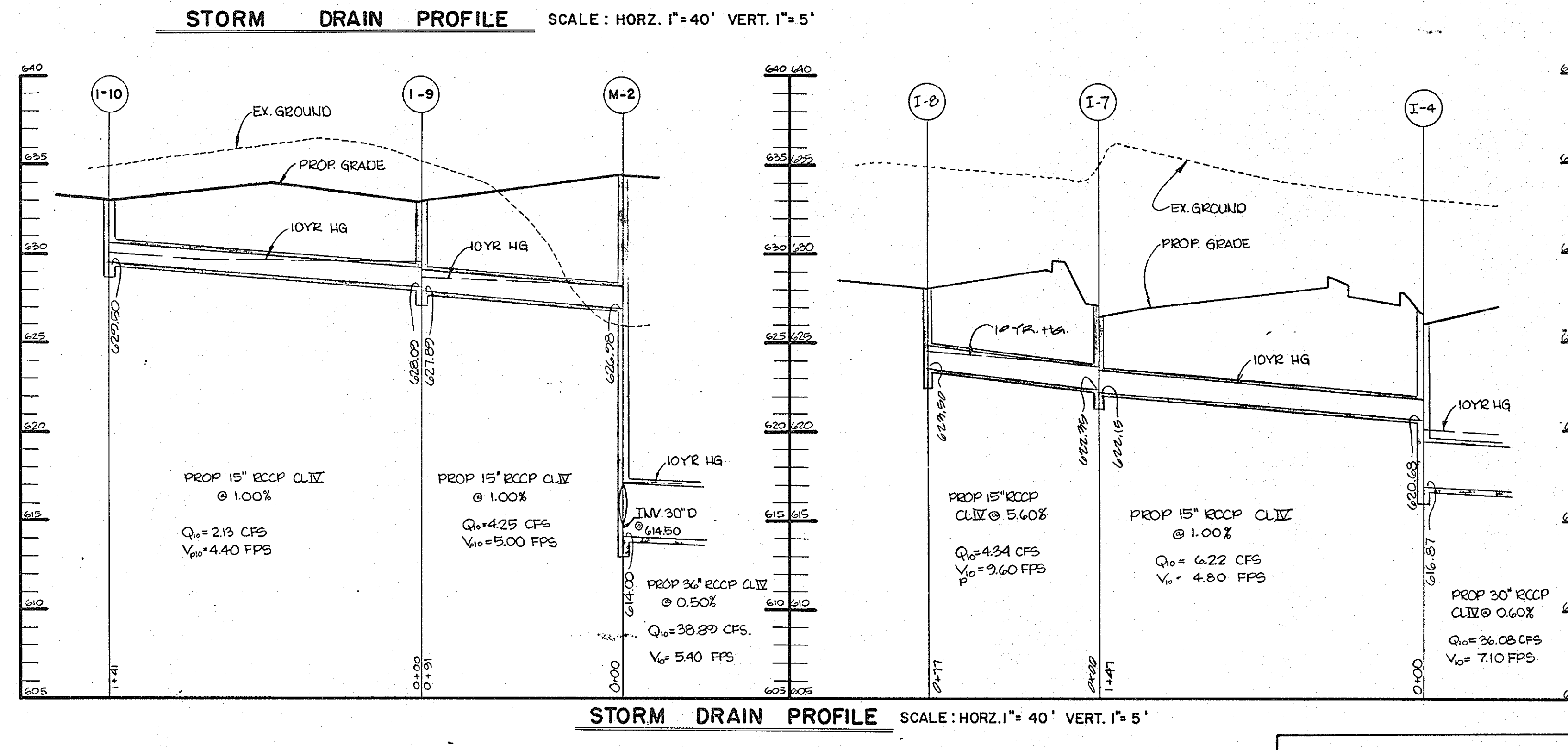
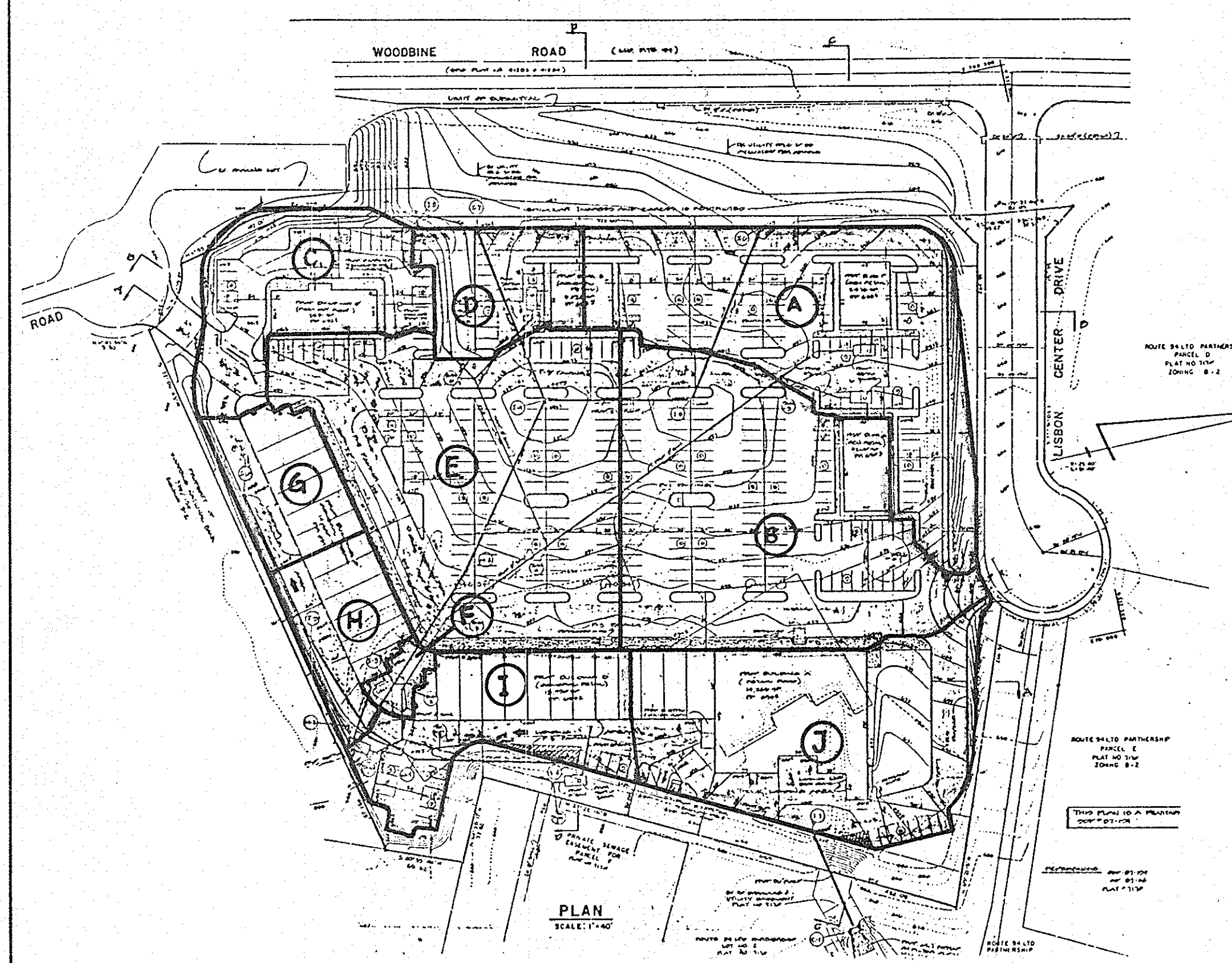
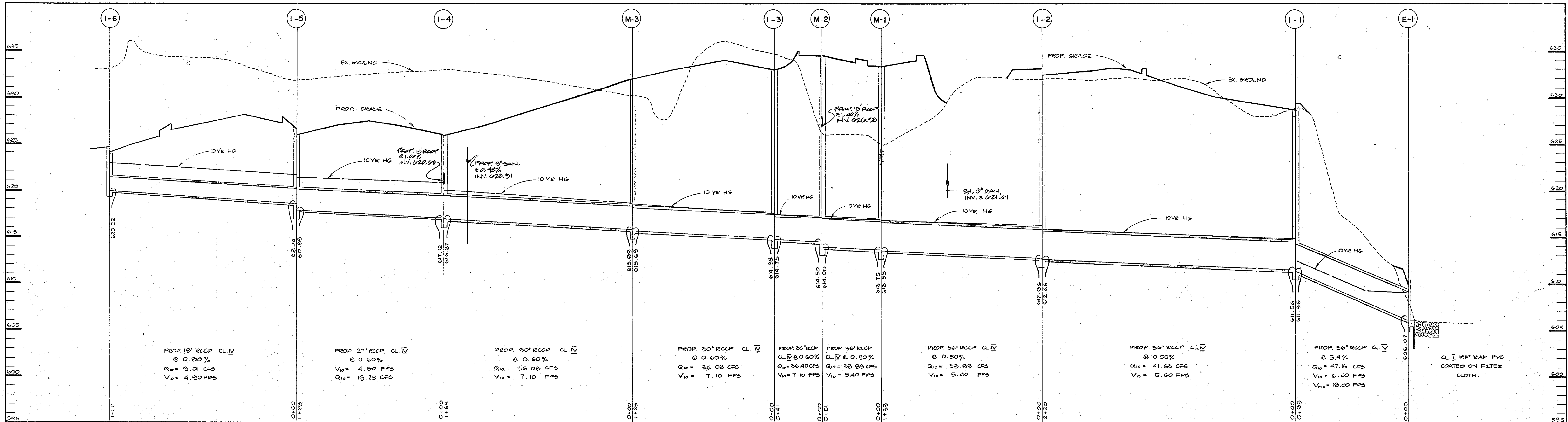
DEVELOPER: *James M. Selma* DATE: 6/29/88

DES: *VB/ND*
DRAW: *J.W.*
CHECK: *TC*
PROVIDED:

PROFILES AND DETAILS FOR
LISBON CENTER
ROUTE 94 BUSINESS CENTER

HOW. CO. MARYLAND
TAX. MAP. NO. 2
SCALE: 1"=40'

ELEC. DIST. 4
PARCEL F
SHT 2 OF 8



INLET SCHEDULE

NO	TYPE	TOP ELEV.	INV. IN	INV. OUT	SEE HOW.CO.DET.
I-1	DBL'S COMB.	629.10	611.80	611.20	SD 4.34
I-2	DBL'S COMB.	629.10	612.80	612.66	SD 4.34
I-3	TYPE 'B' INLET	629.00	614.95	614.75	SD 4.22
I-4	DBL'S COMB.	626.60	620.50	616.87	SD 4.34
I-5	DBL'S COMB.	626.60	618.74	617.87	SD 4.34
I-6	DBL'S COMB.	624.30	-	620.02	SD 4.34
I-7	DBL'S COMB.	627.10	622.35	622.15	SD 4.34
I-8	DBL'S COMB.	628.00	-	623.60	SD 4.34
I-9	DBL'S COMB.	628.60	623.09	627.89	SD 4.34
I-10	DBL'S COMB.	622.60	-	629.30	SD 4.34

STRUCTURE SCHEDULE

NO	TYPE	TOP ELEV.	INV. IN	INV. OUT	SEE HOW.CO.DET.
A	1.20	0.88	-	-	-
B	1.42	0.93	-	-	-
C	0.61	0.84	-	-	-
D	0.31	0.75	-	-	-
E	1.31	0.92	-	-	-
F	0.06	0.65	-	-	-
G	0.28	0.88	-	-	-
H	0.27	0.86	-	-	-
I	0.55	0.91	-	-	-
J	1.05	0.93	-	-	-

STRUCTURE SCHEDULE

NO	TYPE	TOP ELEV.	INV. IN	INV. OUT	SEE HOW.CO.DET.
M-1	MANHOLE	623.95	613.75	613.95	G 5.02
M-2	MANHOLE	624.45	614.50	614.00	G 5.02
M-3	MANHOLE	622.00	615.87	615.69	G 5.02
E-1	HEADWALL	-	606.07	605.90	SD 5.11

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT & MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

John M. Selin 7/22/88
DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.

Stephen J. Fuler 7/22/88
DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT.

James P. ... 8-17-88
DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING.

Chris ... 9-8-88
DATE

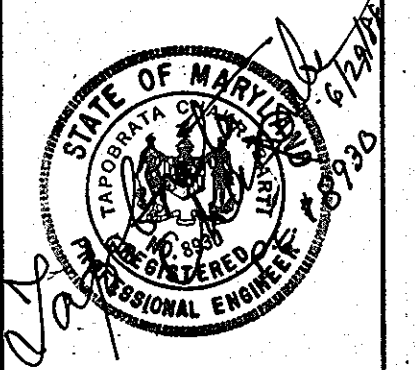
Frank J. ... 9-1-88
DATE

APPROVED: FOR SEWER EFFLUENT SYSTEMS AND PRIVATE SEWERAGE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

James ... 8/29/88
DATE

William ... 9-21-88
DATE

GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC.
CIVIL ENGINEERS & LAND SURVEYORS
303 ALLEGHENY AVENUE
TOWSON, MARYLAND 21204
(301) 825-8120



ENGINEER'S CERTIFICATE:
I CERTIFY THAT THIS PLAN FOR S.W.M. FACILITY CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENT 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 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 S.W.M. FACILITY WITHIN 30 DAYS OF COMPLETION.

ENGINEER: *Vapornata Chakrabarti*
REG. NO. 2936 DATE: 6/29/88

OWNER/DEVELOPER
1000 EQUITABLE BANK CENTER
COLUMBIA, MARYLAND 21044

DEVELOPER'S CERTIFICATE:
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 DEPT. OF NATURAL RESOURCES APPROVED 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. 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-LINE "AS-BUILT" OF THE S.W.M. FACILITY WITHIN 30 DAYS OF COMPLETION.

DEVELOPER: *John M. Selin* DATE: 6/29/88

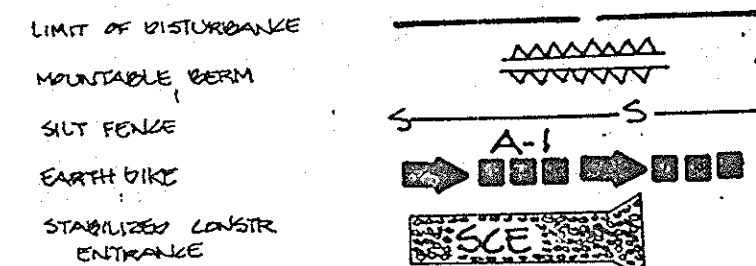
DES: N.B.
DRAW: J.W.
CHECK: N.B.

STORM DRAIN PROFILES
FOR
LISBON CENTER
ROUTE 94 BUSINESS CENTER

HOW.CO. MARYLAND TAX MAP NO. 2 SCALE: 1" = 40'

ELEC. DIST. 4 PARCEL F SH 3 OF 8

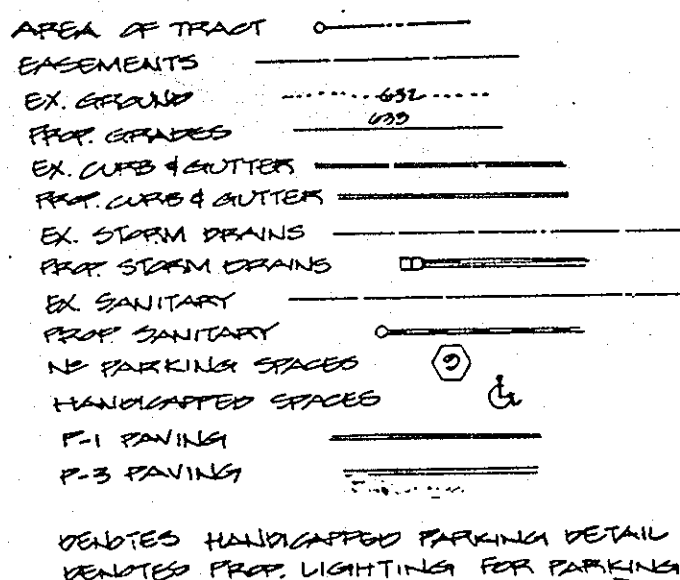
LEGEND



GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME 17, 11.1. STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, AND/OR AS SHOWN ON THESE PLANS.
 - CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS:
- | | |
|--|----------------|
| WES UTILITIES | 1-400-217-7777 |
| E & P TELEPHONE COMPANY | 726-1976 |
| HOWARD COUNTY BUREAU OF UTILITIES | 993-3366 |
| WATER CARE SOLUTION SYSTEMS | 793-9553 |
| MILLSTONE GAS & ELECTRIC COMPANY | 445-6123 |
| STATE REGULATORY ADMINISTRATION | 524-5533 |
| HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE FROM TO COMMENCEMENT OF WORK) | 793-7772 |
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. FROM BEST AVAILABLE INFORMATION THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
 - THE CONTRACTOR SHALL TEST ALL EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND DEPTH. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IF LOCATION OF UTILITIES IS OTHER THAN SHOWN.
 - ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS AND/OR ADJACENT PROPERTIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
 - ALL AREAS NOT BEING PAVED OR RECEIVING ANY BUILDING COVERAGE SHALL BE STABILIZED IN ACCORDANCE WITH THE PLAN APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
 - ALL SLOPES SHALL BE 2:1 OR FLATTER.
 - THE CONTRACTOR SHALL MAINTAIN AT LEAST A 3" GRADE BERM BEHIND ALL CURBS AND OUTSIDE RECEIVING VESSEL AREAS.
 - THE CONTRACTOR SHALL REMOVE ALL EXISTING PAVING, CURBS AND UTILITY, ETC. THAT MAY INTERFERE WITH PROPOSED CONSTRUCTION.
 - ALL UTILITIES INSTALLED UNDER PAVING SHALL RECEIVE FULL TRUCK CONNECTION.
 - ALL WATER MAIN TEES, BRANCHES, CAPS, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY DESIGN REQUIREMENTS.
 - ALL WATER MAINS SHALL HAVE A MIN. 3.5" COVER UNLESS NOTED OTHERWISE ON THE PLAN.
 - CONTRACTOR TO PROVIDE "AS-BUILT" LOCATION AT WATER MAIN IF THERE IS ANY DEVIATION FROM THE PLAN LOCATION.
 - ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 - THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SLOPE RAISES WITHIN 3'-0" OF EXTERIOR.
 - FOR DETAILS OF RAISES AND SEEDS FOR THE BAREGRADED SEE THE HANDBOOK REVEGETATION CODE FOR THE BAREGRADED AND ACID SOILS EDITION.
 - 20% DATA FROM MASS GRADING PLAN (C947-64) BY THE RECTOR GROUP, INC.

LEGEND



SITE DATA

AREA OF SITE: 7.99 AC.
 AREA OF SUBMITTAL: 2.91 AC.
 EXISTING ZONING: B-2
 PROPERTY REFERENCE: PLAT #1710 (PARCEL "F")
 EXISTING USE: VACANT
 PROPOSED USE: FOOD/GENERAL RETAIL
 TOTAL FLOOR AREA: 56,306 SF. (12.29 AC.)
 PARKING REQUIRED: 400 SPACES
 FLOOR AREA RATIO: 1.29 AC./7.99 AC. = 16.13
 % OPEN SPACE: 1.36 AC./7.99 AC. = 17.02%
 % BUILDING COVERAGE WITH PAVING: 6.63 AC./7.99 AC. = 82.98%
 AREA TO BE DISTURBED: 6.78 AC.
 AREA TO VEGETATIVELY STABILIZED: 2.15 AC.
 % BUILDING COVERAGE: 16.13%
 TOTAL AREA OF PARKING LOT: 3.08 AC.
 TOTAL AREA OF LANDSCAPED ISLANDS: 0.24 AC.
 % LANDSCAPED ISLANDS AND PARKING: 0.24 AC./3.08 AC. = 7.79%

PARKING TABULATION

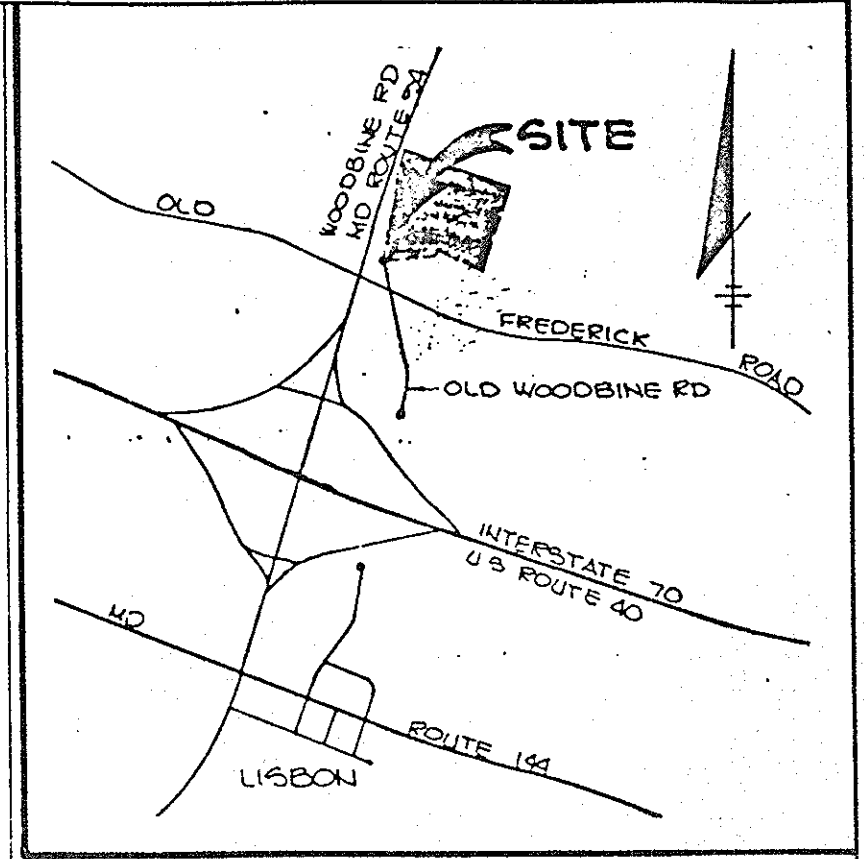
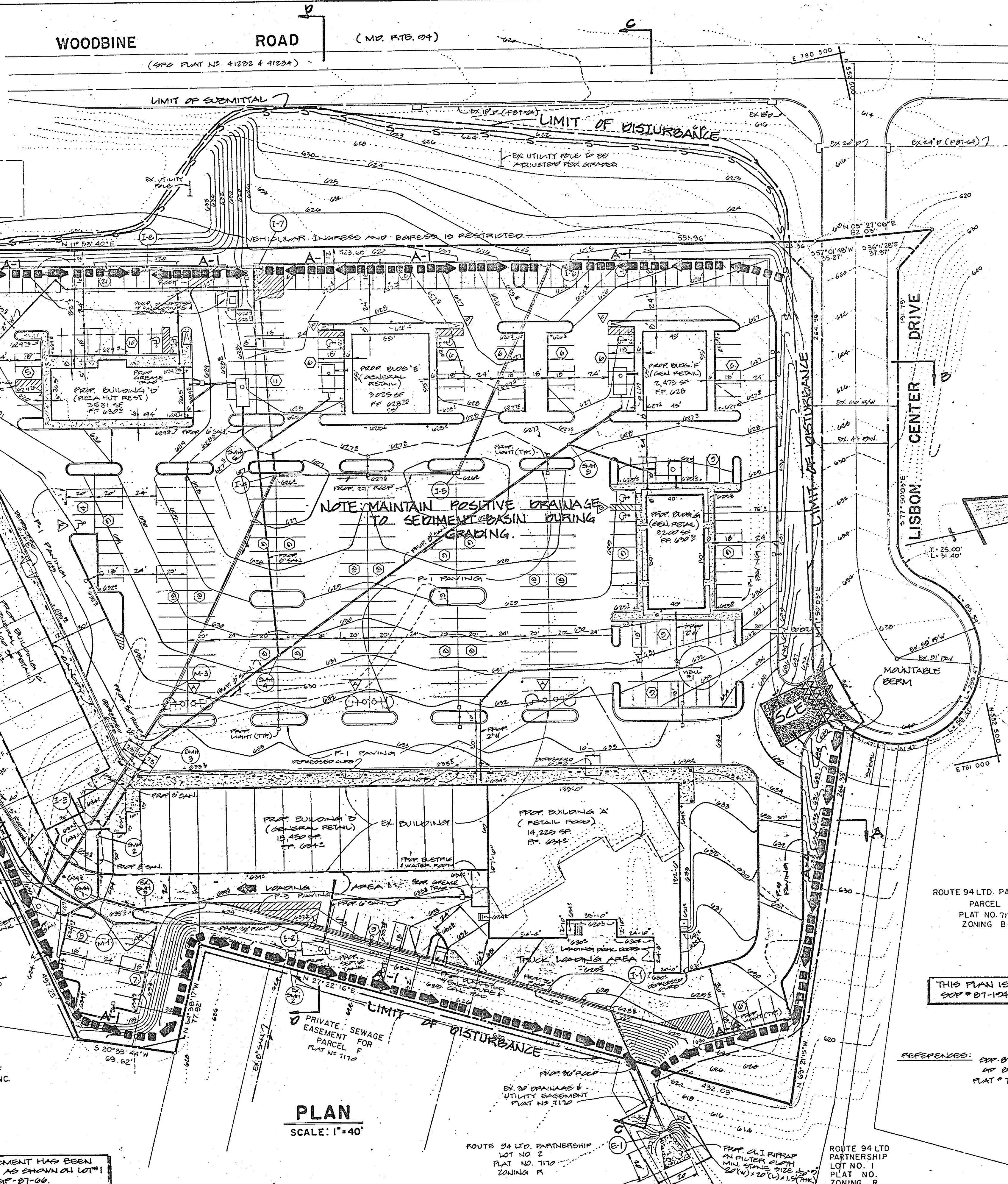
BUILDING #	AREA (S.F.)	SEATING / EMPLOYEES	GENERAL RETAIL # 1 SPACE/200 S.F.	GENERAL RETAIL # 2 SPACE/100 S.F.
BUILDING A	14,225 S.F.	(FOOD RETAIL) - 12,500 S.F. AVAILABLE TO THE PUBLIC # 1 SPACE 150 S.F. # 77 P.S.		
BUILDING B	15,460 S.F.	(GENERAL RETAIL) # 1 SPACE/200 S.F. = 78 P.S.		
BUILDING C	14,400 S.F.	(GENERAL RETAIL) # 1 SPACE/200 S.F. = 72 P.S.		
BUILDING D	3,521 S.F.	(RESTROOM) - 46 SEATS; 12 EMPLOYEES # 1 SPACE/4 SEATS; 1 SPACE/2 EMPLOYEES = 18 P.S.		
BUILDING E	3,025 S.F.	(GENERAL RETAIL) # 1 SPACE/200 S.F. = 16 P.S.		
BUILDING F	2,475 S.F.	(GENERAL RETAIL) # 1 SPACE/200 S.F. = 13 P.S.		
BUILDING G	3,200 S.F.	(GENERAL RETAIL) # 1 SPACE/200 S.F. = 16 P.S.		

TOTAL PARKING REQUIRED FOR ALL BUILDINGS = 290 P.S.
 TOTAL PARKING PROVIDED = 400 P.S. (INCLUDES 14 HANDICAPPED SPACES)

PROPERTY OF SOBRINA 99, INC. PARCEL A PLAT NO. 3763 ZONING B-2

STORM WATER MANAGEMENT HAS BEEN PROVIDED BY A FACILITY AS SHOWN ON LOT 1 AND APPROVED UNDER GP-97-00.

PLAN SCALE: 1"=40'



VICINITY MAP SCALE: 1"=2000'

BENCHMARK
 HOWARD COUNTY #000005 ELEVATION 024.00
 1/4" BENCHMARK FOR 25' RELAY SURFACE, 205' N. OF RTE 170 ALONG W. SIDE WOODBINE ROAD ELEVATION 024.40
 IF AT PILE AT SOUTH FOOT COR. OF PARCEL D ADJACENT WOODBINE ROAD

ROUTE 94 LTD. PARTNERSHIP PARCEL D PLAT NO. 7170 ZONING B-2

ROUTE 94 LTD. PARTNERSHIP PARCEL E PLAT NO. 7170 ZONING B-2

THIS PLAN IS A REVISION TO GP-97-00

REFERENCES: GP-97-00A GP-97-00B GP-97-00C PLAT # 7170

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT & MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

APPROVED: *James M. Schuler* 7/22/88
 U.S. SOIL CONSERVATION SERVICE DATE

APPROVED: *Andrew L. Shuler* 7/22/88
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: *James M. Schuler* 8-17-88
 COUNTY HEALTH OFFICE DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

DIRECTOR: *Walter J. Lough* 9.8.88 DATE
 CHIEF DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT DATE

APPROVED: FOR STORM DRAINAGE SYSTEMS AND PRIVATE SEWERAGE, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR: *James M. Schuler* 8/22/88 DATE

CHIEF BUREAU OF ENGINEERING: *Walter J. Lough* 8-22-88 DATE

BUILDING #	STREET ADDRESS	BUILDING #	STREET ADDRESS
A	710 LISBON CENTER DRIVE	6	707 LISBON CENTER DRIVE
B	710 LISBON CENTER DRIVE		
C	707 LISBON CENTER DRIVE		
D	704 LISBON CENTER DRIVE		
E	704 LISBON CENTER DRIVE		
F	702 LISBON CENTER DRIVE		

SEEDMENT & EROSION CONTROL PLAN FOR LISBON CENTER ROUTE 94 BUSINESS CENTER

HOW. CO. MARYLAND TAX. MAP. NO. 2 SCALE: 1"=40' ELEC. DIST. 4 PARCEL - F SHT 4 OF 8

GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC.
 CIVIL ENGINEERS & LAND SURVEYORS
 303 ALLEGHENY AVENUE TOWSON, MARYLAND 21204 (301) 825-8120



ENGINEER'S CERTIFICATE:
 I CERTIFY THAT THIS PLAN FOR S.W.M. FACILITY CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENT 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 SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH A RED-LINED "AS-BUILT" OF THE S.W.M. FACILITY WITHIN 30 DAYS OF COMPLETION.
 ENGINEER: *George William Stephens, Jr.*
 REG. NO.: 8930 DATE: 6/29/88

OWNER/DEVELOPER:
 ROUTE 94 LIMITED PARTNERSHIP
 1000 BRITAIN BANK CENTER
 COLUMBIA, MARYLAND 21044

DEVELOPER'S CERTIFICATE:
 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 DEPT. OF NATURAL RESOURCES APPROVED 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. 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-LINE "AS-BUILT" OF THE S.W.M. FACILITY WITHIN 30 DAYS OF COMPLETION.
 DEVELOPER: *James M. Schuler* DATE: 6/29/88

DES.: JB/ND
 DRAW.: J.W.
 CHECK.: TO PREVIOUS

PERMANENT SEEDING NOTES

Seedbed Preparation: Loosen upper 3 inches of soil by raking, discing or other acceptable means before seeding.

Soil Amendments: Use one of the following schedules:

- 1) Preferred - 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 urea form 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 (.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 reseeding.

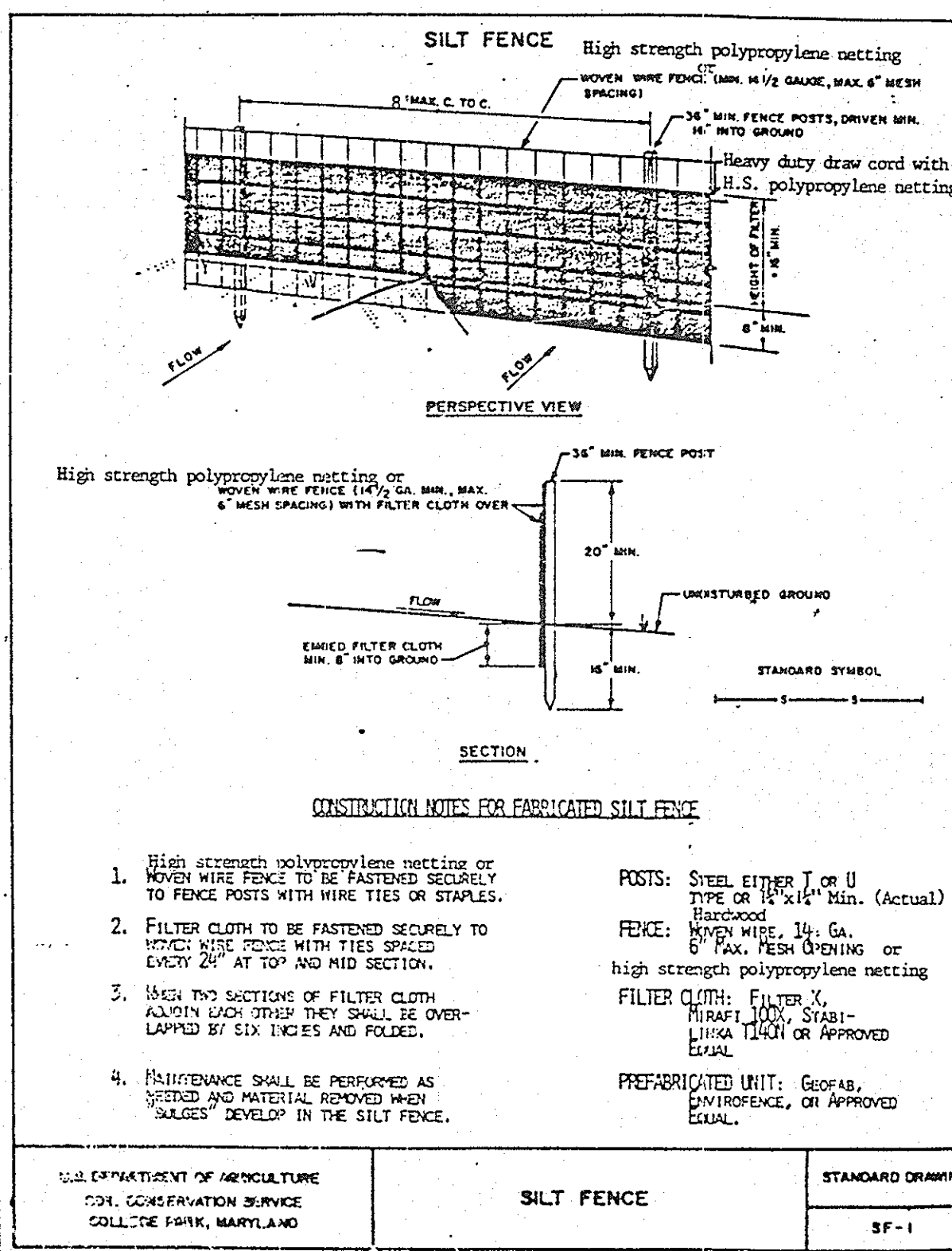
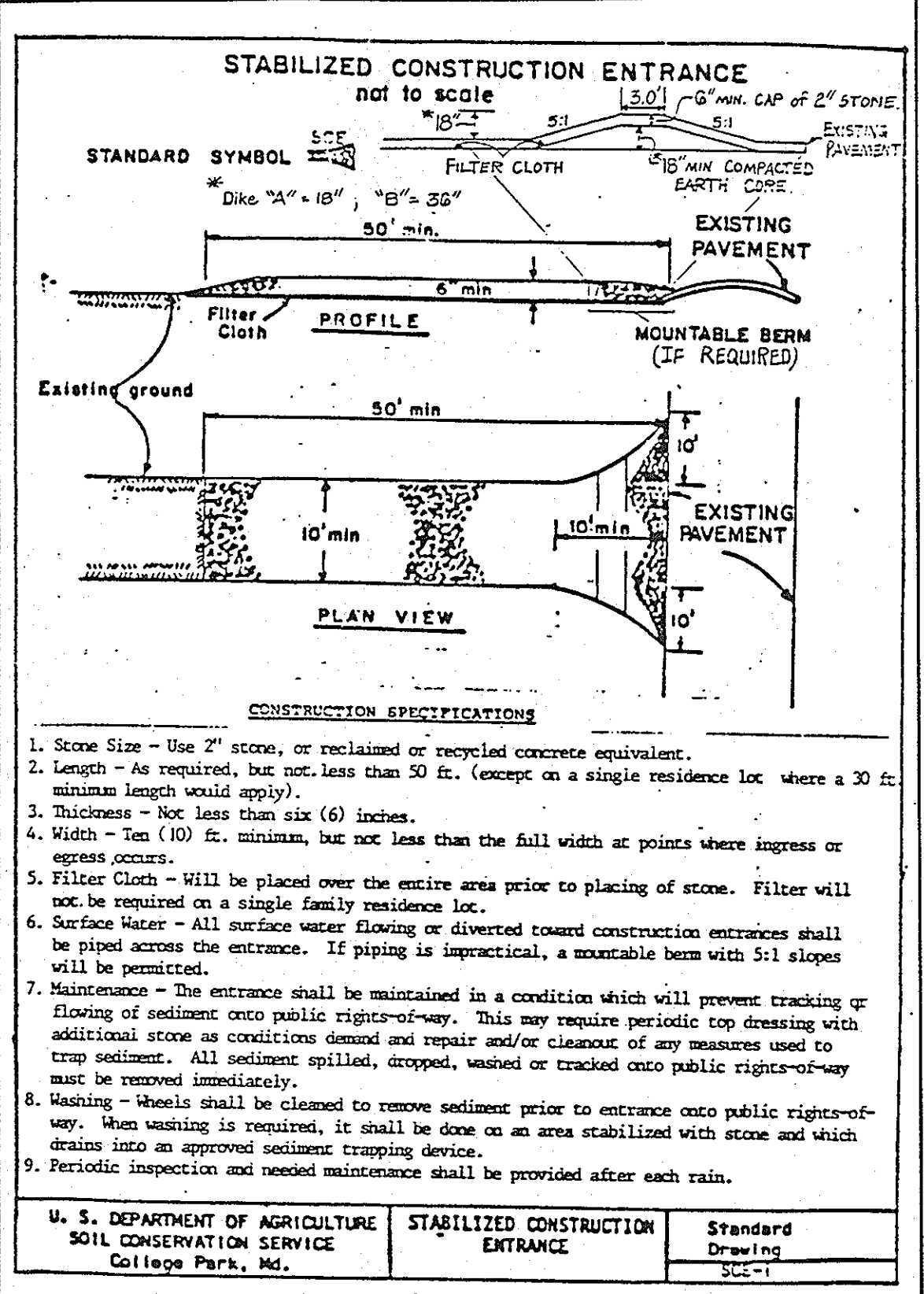
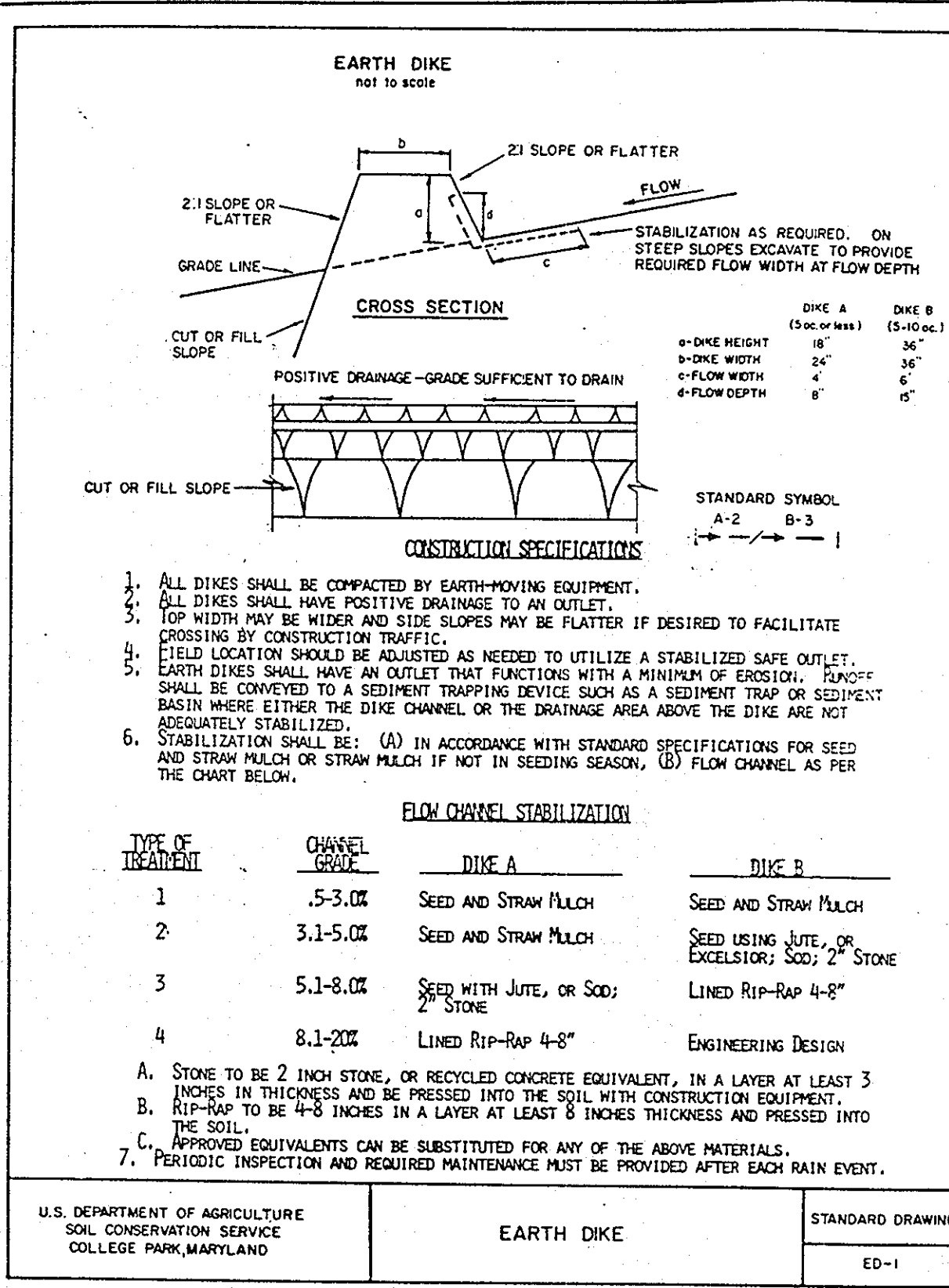
TEMPORARY SEEDING NOTES

Seedbed Preparation: Loosen upper 3 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.)

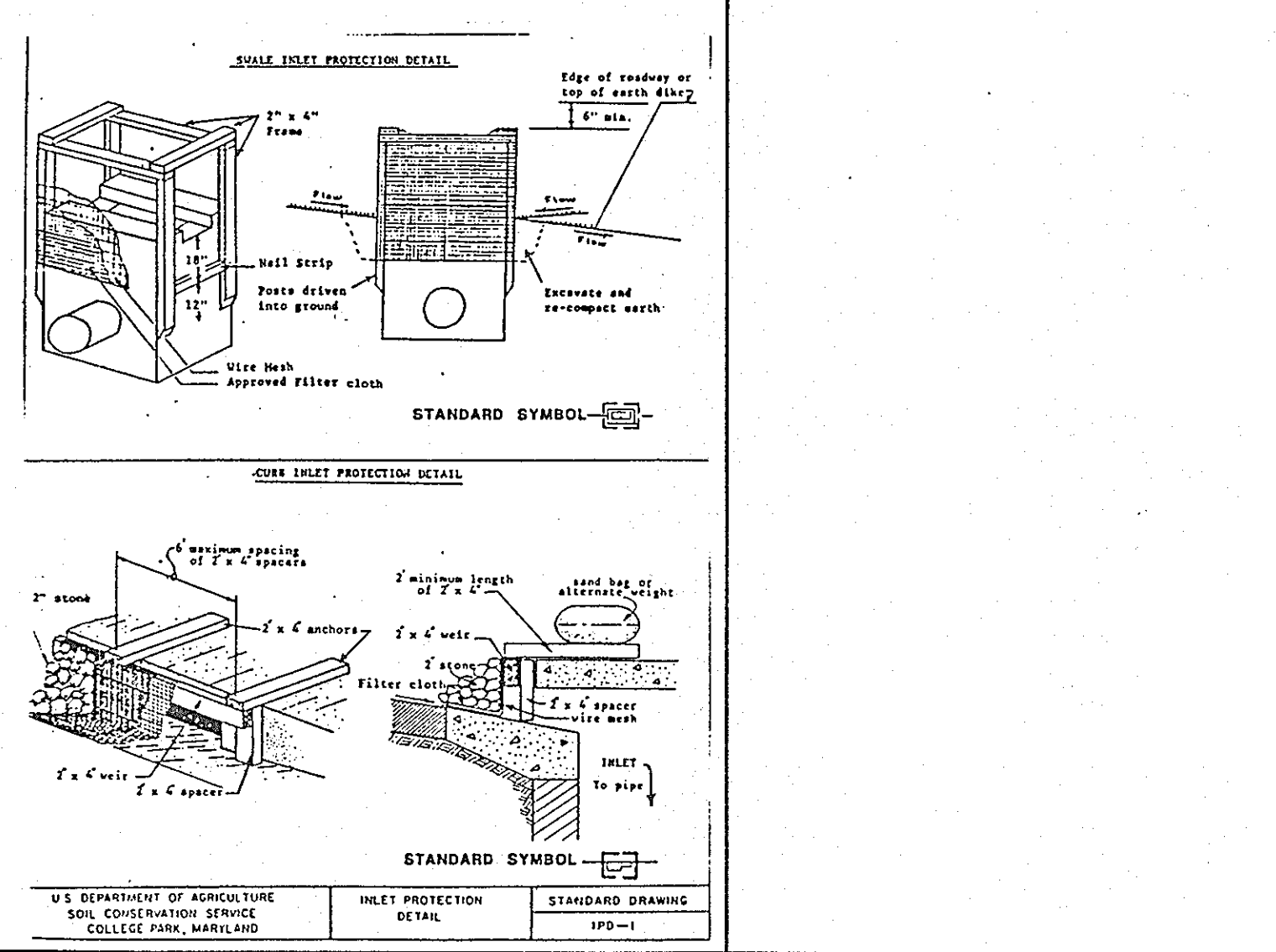
Seeding - For periods March 1 thru April 30 and from August 15 thru Nov. 15, seed with 2 1/2 bu. per acre of annual ryegrass (3.2 lbs./1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq. ft.). For the period November 16 thru February 28, 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 (70-90 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.



SEDIMENT CONTROL NOTES

- 1) 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. (SP-8-107)
- 2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 3) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days for all other disturbed or graded areas on the project site.
- 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 31) sod (Sec. 34), temporary seedings (Sec. 30) and mulching (Sec. 32). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 6) All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- 7) Site Analysis:
Total Area of Site: 7.00 Acres
Area Disturbed: 2.01 Acres
Area to be seeded or paved: 2.63 Acres
Area to be vegetatively stabilized: 2.30 Acres
Total Cut: Cu. yds.
Total Fill: Cu. yds.
Offsite waste/borrow area location:
- 8) Any sediment control practice which is disturbed by grazing activity for placement of utilities must be repaired on the same day of disturbance.
- 9) Additional sediment controls must be provided, if deemed necessary by the Howard County SPM sediment control inspector.
- 10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading impediments may not be authorized until this initial approval by the inspection agency is made.
- 11) Material Will Be Obtained From A Site With An Approved Sediment Control Plan.



SEQUENCE OF CONSTRUCTION

1. Obtain Grading Permit.
2. Perform maintenance and repairs to existing sediment controls on sediment basin as shown on GP-87-66. All controls shown under t. approved grading plan GP-87-66 must be in place and functional prior to start of work. (2 days)
3. Install silt fence and stabilized construction entrance as shown. (1 day)
4. Complete grading and construction activities. (16 weeks)
5. Stabilize all disturbed areas in accordance with the permanent seeding notes. (3 days)
6. Upon permission of the sediment control inspector, remove all sediment control and stabilize all areas disturbed in their removal in accordance with the permanent seeding notes. (1 day)
7. Upon permission of the sediment control inspector, convert the temporary sediment basin to permanent storm water management use accordance with the following procedure - (3 days):
 - a. Pump all standing water thru principal spillway.
 - b. Remove all excess sediment and excavate basin to final bottom elevation of 588.0 and spread excess earth uphill of pond.
 - c. Remove low flow orifice blocking.
 - d. Stabilize all disturbed areas in accordance with the permanent seeding notes. (silt fence may be required downgrade of exc. disposal areas)

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

John M. Bode 7/22/88
U.S. SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.

Michael L. Baker 7/22/88
APPROVED: HOWARD SOIL CONSERVATION DISTRICT DATE
PLAN NUMBER

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

John M. Bode 8-17-88
COUNTY HEALTH OFFICER DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING.

William J. ... 9-8-88
DIRECTOR DATE

Frank J. ... 5-1-88
CHIEF DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT DATE

APPROVED: FOR STORM DRAINAGE SYSTEMS AND PRIVATE POND, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

James M. ... 6/29/88
DIRECTOR DATE

James M. ... 8-29-88
CHIEF BUREAU OF ENGINEERING DATE

GEORGE WILLIAM STEPHENS, JR. AND ASSOCIATES, INC.
CIVIL ENGINEERS & LAND SURVEYORS
303 ALLEGHENY AVENUE
TOWSON, MARYLAND 21204
(301)825-8120

ENGINEER'S CERTIFICATE
I CERTIFY THAT THIS PLAN FOR S.W.M. FACILITY CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENT 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 S.W.M. FACILITY WITHIN 30 DAYS OF COMPLETION.
ENGINEER: *Dr. Barbara Chazotte*
REG. NO. 2930 DATE: 6/29/88

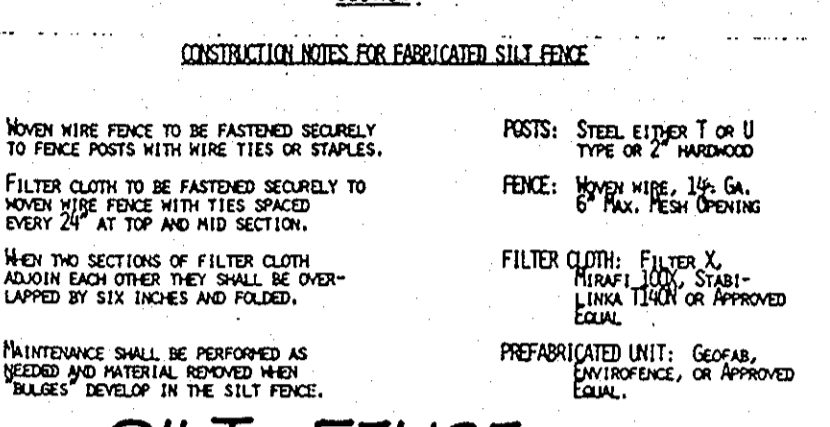
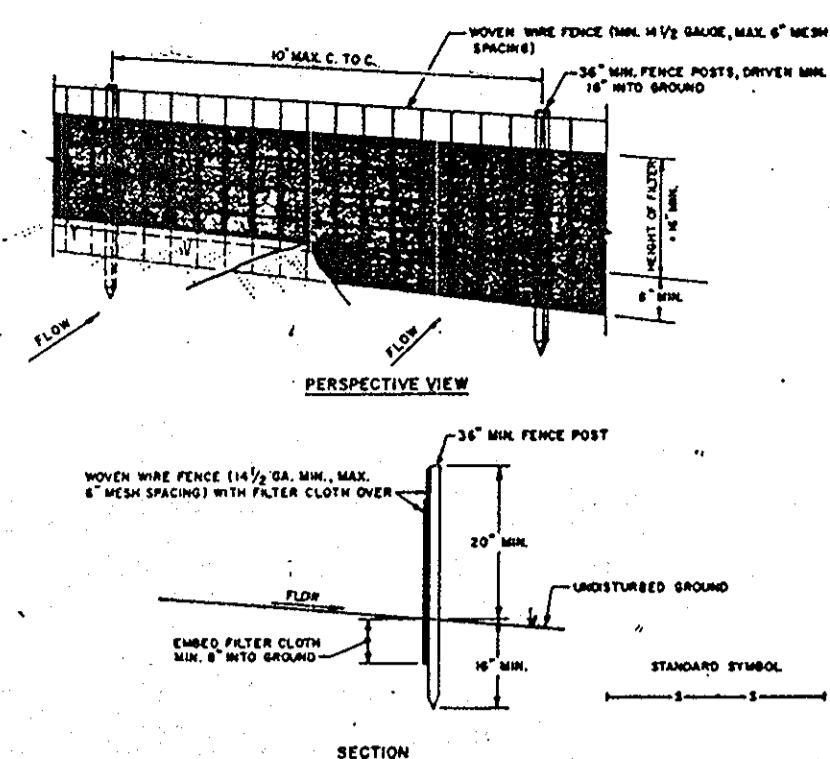
OWNER/DEVELOPER
ROUTE OF LIMITED PARTNERSHIP
1000 EQUITABLE BANK CENTER
COLUMBIA, MARYLAND 21044
DEVELOPER: *Richard M. ...* DATE: 6/29/88

DEVELOPER'S CERTIFICATE
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 DEPT. OF NATURAL RESOURCES APPROVED 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. 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-LINE "AS-BUILT" OF THE S.W.M. FACILITY WITHIN 30 DAYS OF COMPLETION.
DEVELOPER: *Richard M. ...* DATE: 6/29/88

DES: *JD/ND*
DRAW: J.W.
CHECK: *TD*
REVISIONS:

SEDIMENT CONTROL DETAILS
FOR
LISBON CENTER
ROUTE 94 BUSINESS CENTER
HOW. CO. MARYLAND
TAX. MAP. NO. 2
SCALE: 1" = 40'
ELEC. DIST. 4
PARCEL F
SHT 5 OF 8

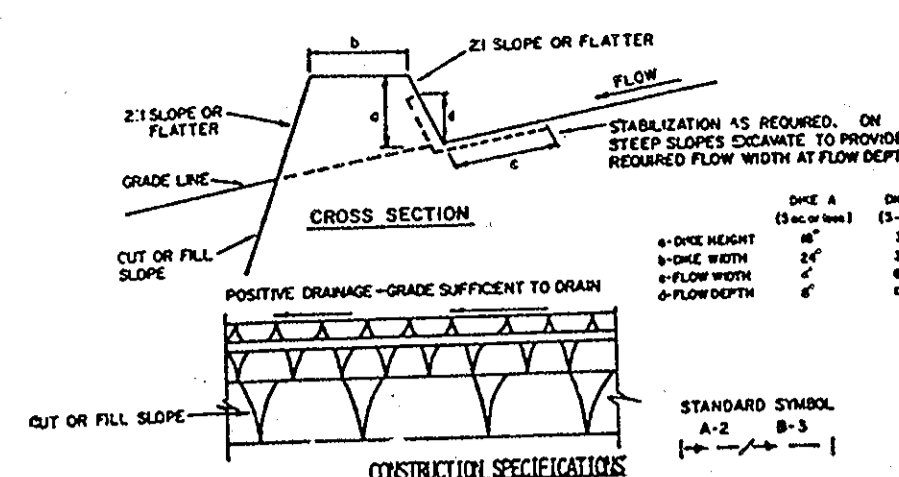
- CONSTRUCTION SPECIFICATIONS FOR ST-11**
- The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 - The fill material for the embankment shall be free of roots or other woody vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be five (5) feet, measured at centerline of embankment.
 - All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
 - Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
 - Storage area provided shall be figured by computing the volume available behind the outlet channel up to an elevation of one (1) foot below the level weir crest.
 - Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.
 - Stone used in the outlet channel shall be four (4) to eight (8) inches (rip-rap). To provide a filtering effect, a layer of filter cloth shall be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.
 - 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. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 - The structure shall be inspected after each rain and repaired as needed.
 - Construction operations shall be carried out in such a manner that erosion and water pollution shall be minimized.
 - The structure shall be removed and the area stabilized when the drainage area has been properly established.
 - Drainage area for this practice is limited to 15 acres or less.



SILT FENCE
NO SCALE

- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**
- WOODEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 - FILTER CLOTH TO BE FASTENED SECURELY TO WOODEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
 - WHERE THE SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND POLYMER LAMINATED BY SIX INCHES AND POLYMER LAMINATED BY SIX INCHES.
 - MAINTENANCE SHALL BE PERFORMED AS SEEN AND MATERIAL REMOVED WHEN "MARKS" DEVELOP IN THE SILT FENCE.

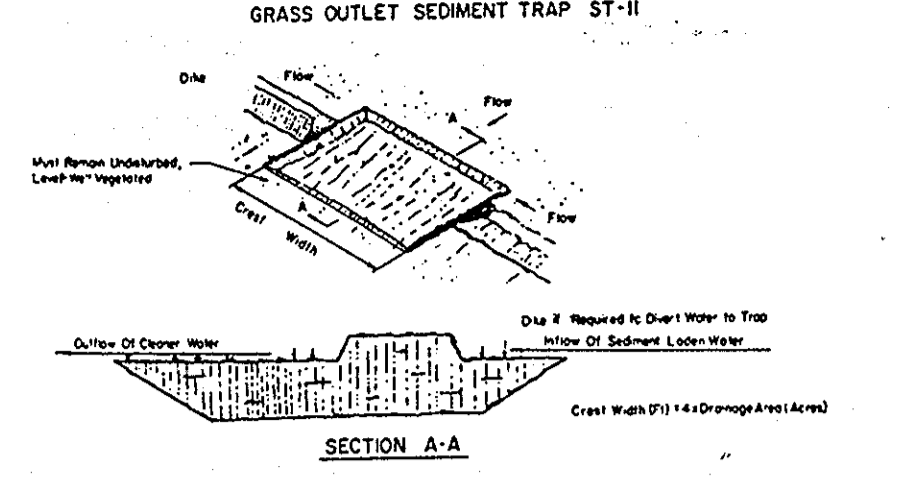
CONSTRUCTION SPECIFICATIONS FOR ST-11



CONSTRUCTION SPECIFICATIONS FOR ST-11

- 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 SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
 - FIELD LOCATIONS SHOULD BE PLANNED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
 - EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. DRAINAGE 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 ASSEMBLY 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 THE DRAINAGE PLAN.

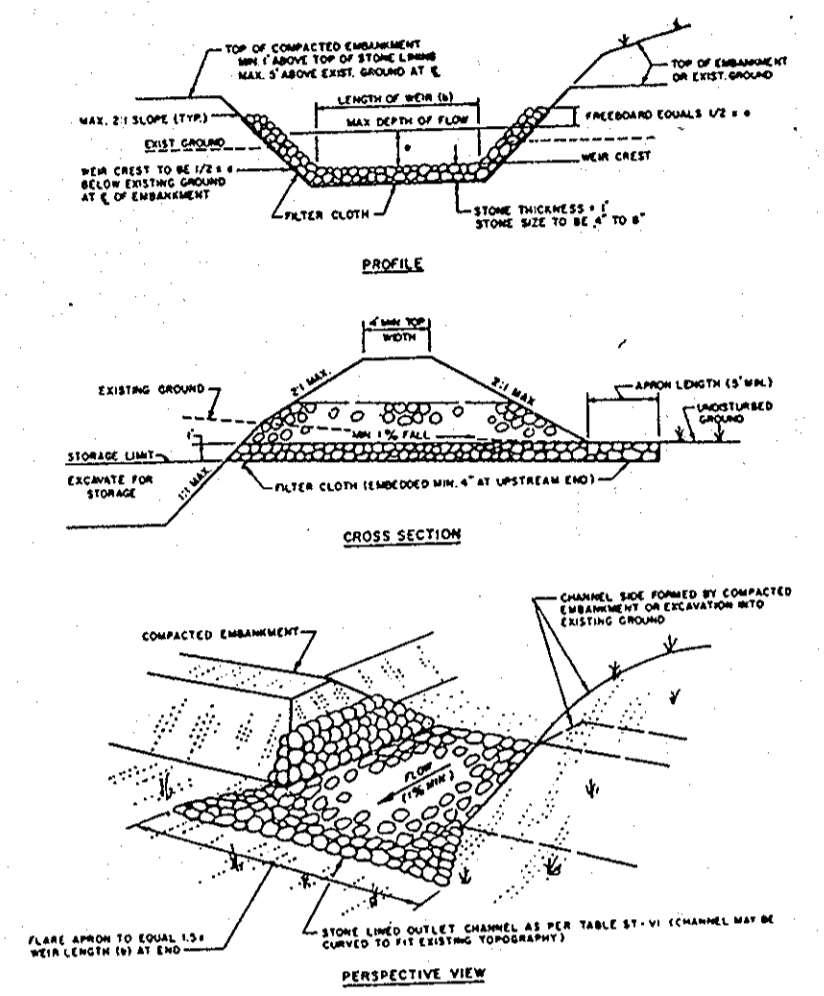
EARTH DIKE
NO SCALE



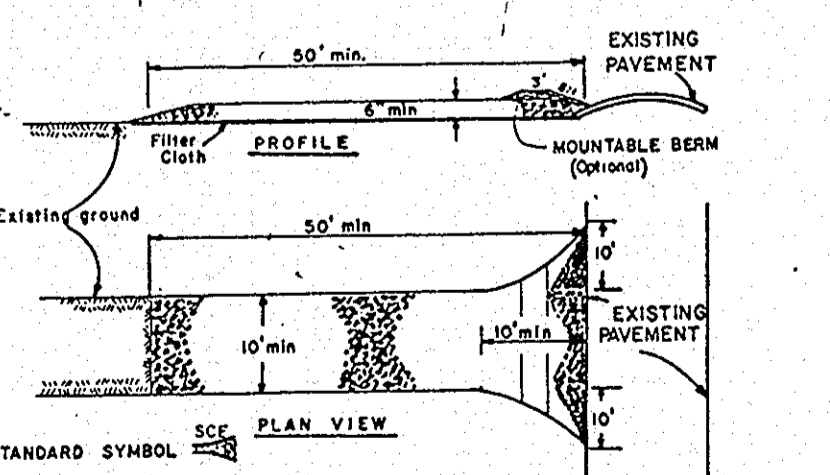
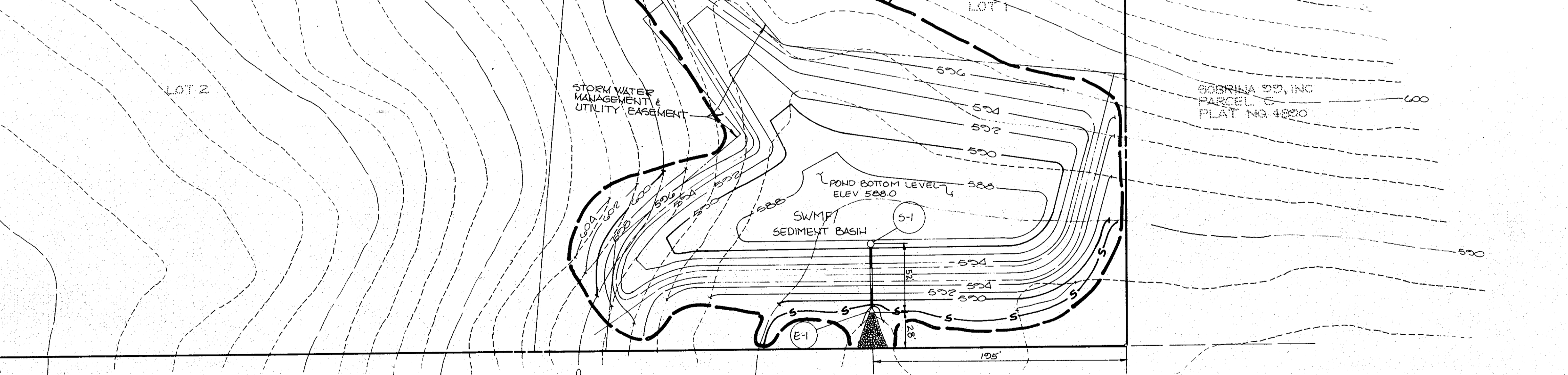
CONSTRUCTION SPECIFICATION FOR ST-11

- Volume of sediment storage shall be 1800 cubic feet per acre of contributory drainage area.
- Minimum crest width shall be 4 X Drainage Area.
- 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. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
- 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 shall be minimized.
- The sediment trap shall be removed and area stabilized when the remaining drainage area has been properly stabilized.
- All cut slopes shall be 1:1 or flatter.

GRASS OUTLET SEDIMENT TRAP
NO SCALE

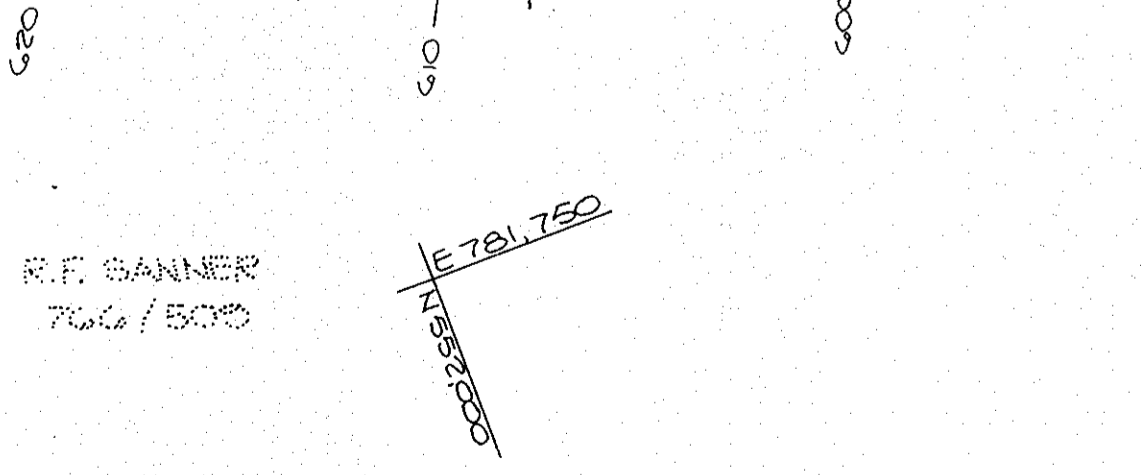


RIP RAP OUTLET SEDIMENT TRAP
NO SCALE



STABILIZED CONSTRUCTION ENTRANCE
NO SCALE

- CONSTRUCTION SPECIFICATIONS**
- Stone Size - Use 3" stone, or reclaimed or recycled concrete equivalent.
 - Length - As required, but not less than 50 feet (except on a single residential lot where a 20 foot minimum length would apply).
 - Thickness - Not less than six (6) inches.
 - Width - One (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
 - 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.
 - Surface Water - All surface water flowing or directed toward construction entrances shall be piped across the entrance. If piping is impractical, a moundside berm with 1:1 slope will be permitted.
 - Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public right-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleaning of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public right-of-way must be removed immediately.
 - Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public right-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
NO SCALE

SEDIMENT BASIN DATA

UNRAILAGE AREA	= 27.4 ACRES
REQUIRED VOLUME	= 49,320 CF
VOLUME PROVIDED AT 592.5	= 76,230 CF
BOTTOM ELEV (TEMPORARY)	= 589.50
RISER CREST ELEV	= 592.50
CLEAN OUT ELEV	= 591.00
TOP OF DAMELEV	= 593.10

NOTE FOR GENERAL NOTES AND SEQUENCE OF CONSTRUCTION SEE SHEET 3.

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT A MEET THE TECHNICAL REQUIREMENTS FOR GRASS OUTLET SEDIMENT TRAP CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

APPROVED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT
DATE: 7/22/88

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
DATE: 8-17-88

APPROVED FOR PLANNING & ZONING DEPARTMENT, HOWARD COUNTY.
DATE: 8-8-88

APPROVED FOR PLANNING & ZONING DEPARTMENT, HOWARD COUNTY.
DATE: 8-1-88

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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

DATE: 7/18/88

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 MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

DATE: 7-18-88

OWNER/DEVELOPER

ROUTE 94 LIMITED PARTNERSHIP
1000 EQUITABLE BANK CENTER
COLUMBIA, MARYLAND 21044

PROJECT:

LISBON CENTER
MASS GRADING PLAN

AREA: ROUTE 94 BUSINESS CENTER
TAX MAP 2, PARCELS D, E, F AND LOTS 1 & 2
4TH ELECTION DISTRICT HOWARD COUNTY MARYLAND

TITLE: **GRADING AND SEDIMENT CONTROL PLAN & DETAILS**

THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Health Park Drive, Ellicott City, Maryland 21043 (301) 461-2690

DATE: 7-18-88

DESIGNED BY: J.K.B.

DRAWN BY: M.A.D.

PROJECT NO: 85200

DATE: 3-20-87

SCALE: AS SHOWN

DRAWING NO. 1 OF 3

SDP-88-173

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Seeding 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.) where soil is highly acidic, apply dolomitic limestone at the rate of 1 ton per acre.

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 140 lbs. 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 (0.7 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 untreated 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.

PERMANENT SEEDING NOTES

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

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

Soil Amendments: Apply 0-20-20 fertilizer at the rate of 600 lbs. per acre. Narrow or disc line and 0-20-20 fertilizer into the soil to a minimum depth of 3". Lawns or high maintenance areas will be dragged and leveled with a work rake. At the time of seeding, apply 400 lbs. of 30-0-0 ureaform fertilizer and 300 lbs. of 10-20-20 or equivalent fertilizer per acre.

Seeding: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 40 lbs. per acre (1 lb./1000 sq.ft.) of a mixture of certified 'Merion' Kentucky Bluegrass; common Kentucky bluegrass @ 40 lbs. per acre (1 lb./1000 sq.ft.) and Red Fescue, Pennlawn or Jamestown @ 20 lbs. per acre (0.5 lb./1000 sq.ft.) for the period May 1 thru July 31, seed with 40-40-20 mix as specified above and 2 lbs. per acre (0.05 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 40-40-20 mix specified above 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.

1. SITE PREPARATION

Areas under the borrow areas, embankment, and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas covered by the pond or reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable materials unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface.

All cleared and grubbed material shall be disposed of outside the limits of the dam and reservoir as directed by the owner or his 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

Materials: The fill material shall be taken from approved designated borrow area or areas. It shall be free of roots, stumps, wood, rubbish, oversize 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. 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 can be obtained with the equipment used.

Cutoff Trenches:

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 governed by the equipment used for excavation, 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 cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

111. 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 less than 6 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 the contractor drive equipment 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.

1V. CORRUGATED METAL PIPE

Material: (Steel Pipe)-This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of ASTM Specification A190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Connections:

All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around where the pipe and riser are of the same material. Watertight coupling bands shall be used at all joints. Antiseep collars shall be connected to the pipe in such a manner as to 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.

1V. CONCRETE

Materials:

- Cement - Normal Portland cement shall conform to the latest ASTM Specification C-150.
- Water - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.
- 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.
- 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.
- Reinforcing Steel - The reinforcing steel shall be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.

Design Mix: The concrete shall be mixed in the following proportions, measured by weight: The water-cement ratio shall be 5/8 to 6 U.S. gallons of water per 94 pound bag of cement. The proportion of materials for the trial mix shall be 1:2:3-3. 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.

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 the introduction of the material, including water, into the mixer. Water shall be added prior to, during, and following the mixer-charging operations. Excessive overwatering 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.

STABILIZATION

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

Forms:

The forms shall have sufficient strength and rigidity to hold the concrete and to stand the necessary pressure of ramming 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 rods and other devices used shall be recessed from the surface of the concrete.

Reinforcing Steel:

All reinforcing material shall be free of dirt, rust, scale, oil, paint or 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.

Consolidation:

Concrete placement shall be consolidated with internal type mechanical vibration. 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.

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-packing mortar.

Protection and Curing:

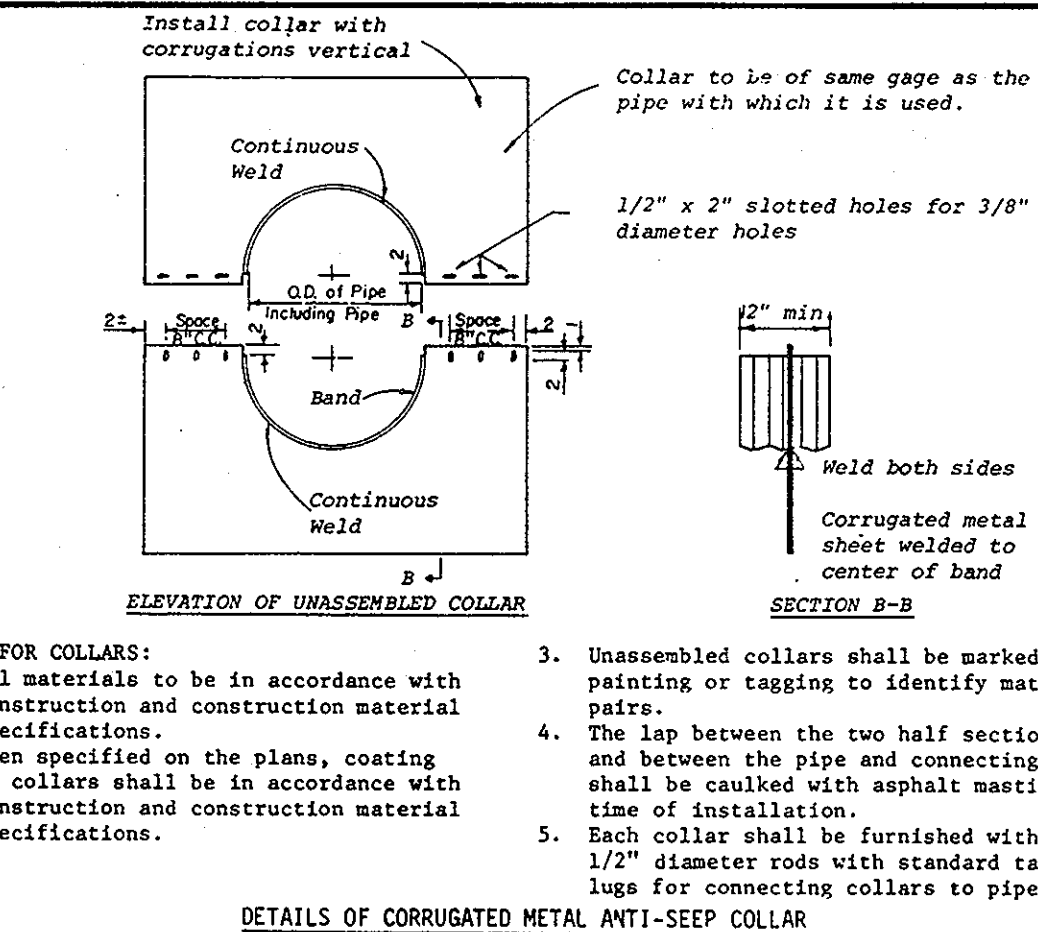
Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least the first three (3) days. All concrete shall be kept continuously moist for at least ten (10) days after being placed. Moisture may be applied by spraying or sprinkling as necessary to prevent the concrete from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

Placing Temperature:

Concrete may not be placed at temperatures below 32° F with the temperature falling, or 34° with the temperature rising.

SEEDING CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspections 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 accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes 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 stabilization 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: 26.0 acres
Area Disturbed: 20.5 acres
Area to be roofed or paved: 0.5 acres
Area to be vegetatively stabilized: 25.0 acres
Total Cut: 20.0 cu. yds.
Total Fill: 25.0 cu. yds.
- 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 controls must be provided, if deemed necessary by the Howard County DPM sediment control inspector.
- Site grading will begin only after all perimeter sediment control measures have been installed and are in a functioning condition.
- Sediment will be removed from traps when its depth reaches the clean out elevation shown on the plans.



ANTI-SEEP COLLAR
NO SCALE

SEQUENCE OF CONSTRUCTION

- Obtain a Grading Permit.
- Clear for installation of sediment controls only. (1 day)
- Install stabilized construction entrance; silt fence, sediment traps and earth dikes. (2 days)
- Construct storm water management facility/sediment basin, excavating only to elevation 589.5 and block low flow orifice by water tight means. (3 days)
- Stabilize pond embankment in accordance with the permanent seeding notes. (1 day)
- Clear and grub remainder of site. (1 day)
- Complete grading as shown. (4 weeks)
- Stabilize all areas in accordance with the permanent seeding notes. (5 days)
- Upon permission of the sediment control inspector, remove all sediment controls and excavate pond to final grade (588.0) and remove low flow orifice blocking. Spread excess earth uphill of pond and stabilize all disturbed areas in accordance with the permanent seeding notes (silt fence may be required downgrade of excess disposal area). (3 days)

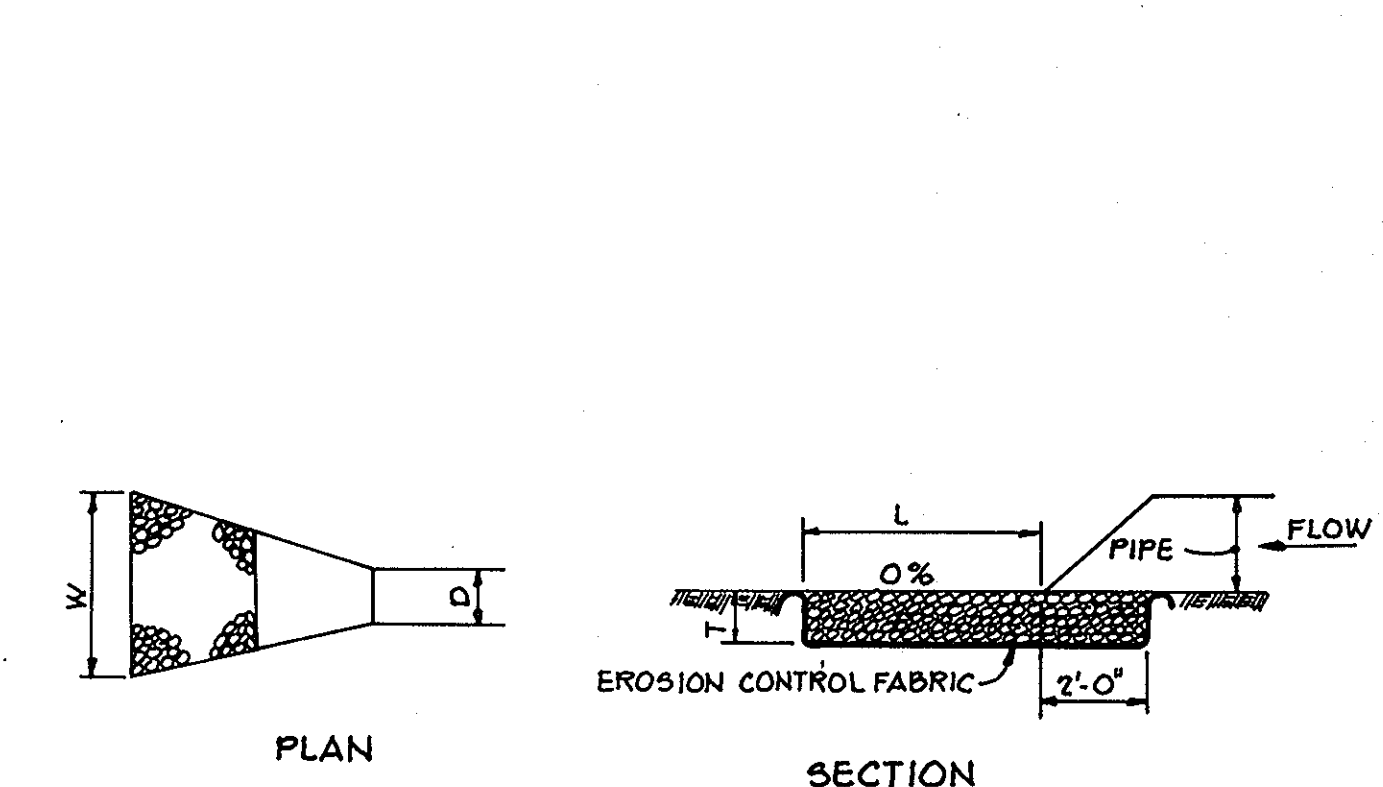
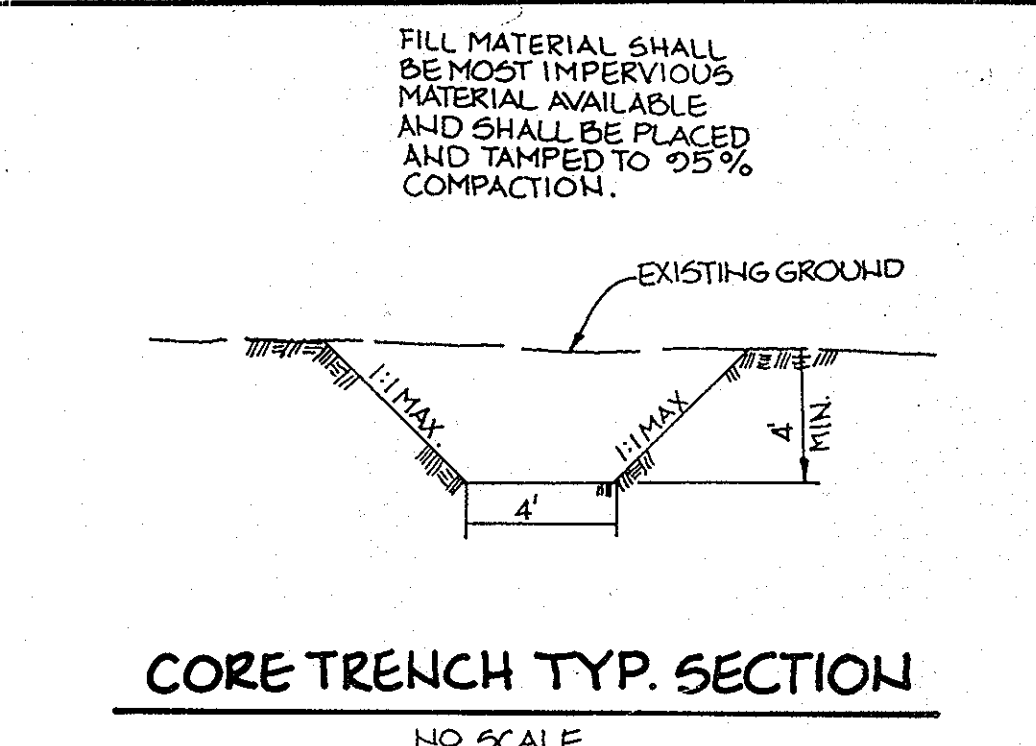
APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.

James M. Jones 5-17-88 DATE
COUNTY HEALTH OFFICER

John S. McLaughlin 9-8-88 DATE
CHIEF DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT, HOWARD COUNTY OFFICE OF PLANNING & ZONING

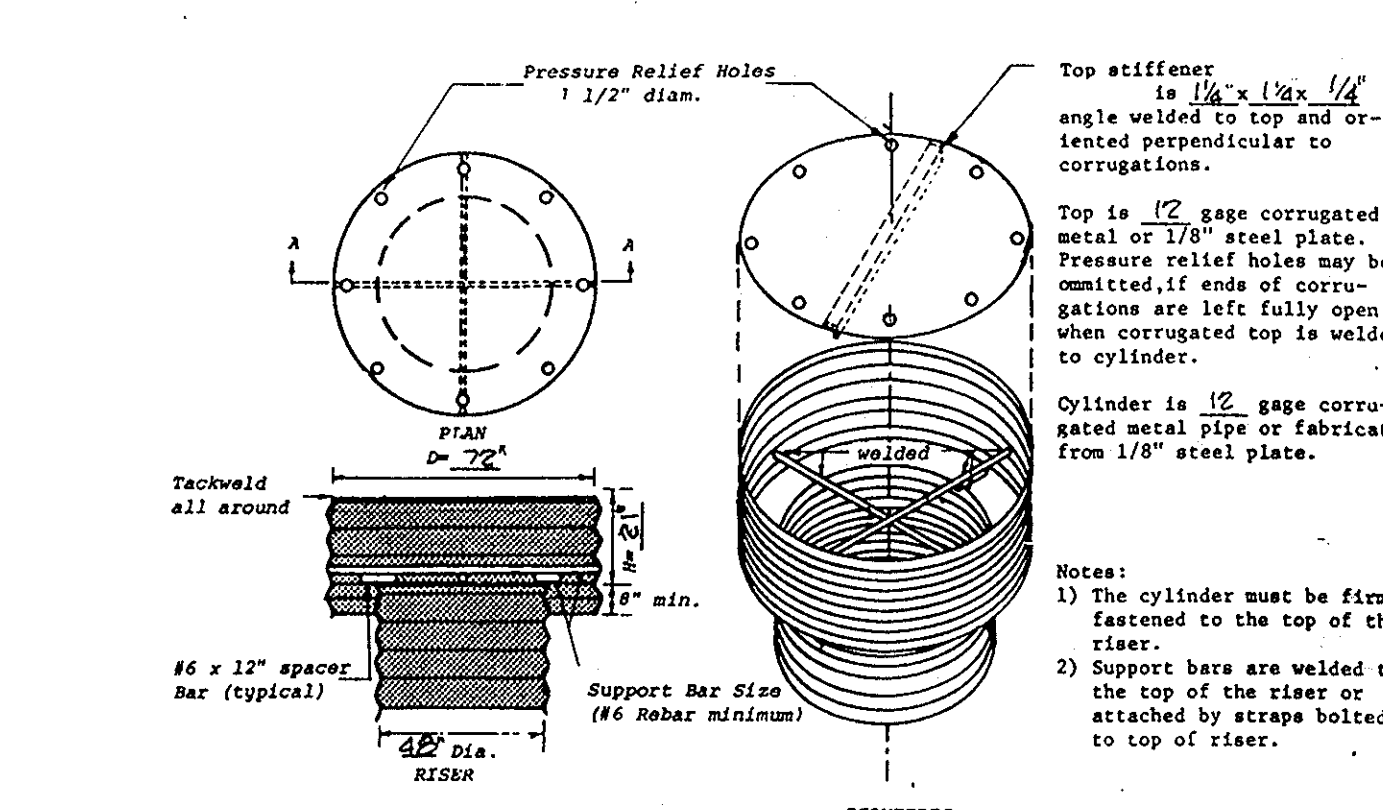
James M. Jones 8-29-88 DATE
APPROVED FOR SEWER DRAINAGE SYSTEMS AND PRIVATE SEWERS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

John S. McLaughlin 9-1-88 DATE
CHIEF BUREAU OF ENGINEERING

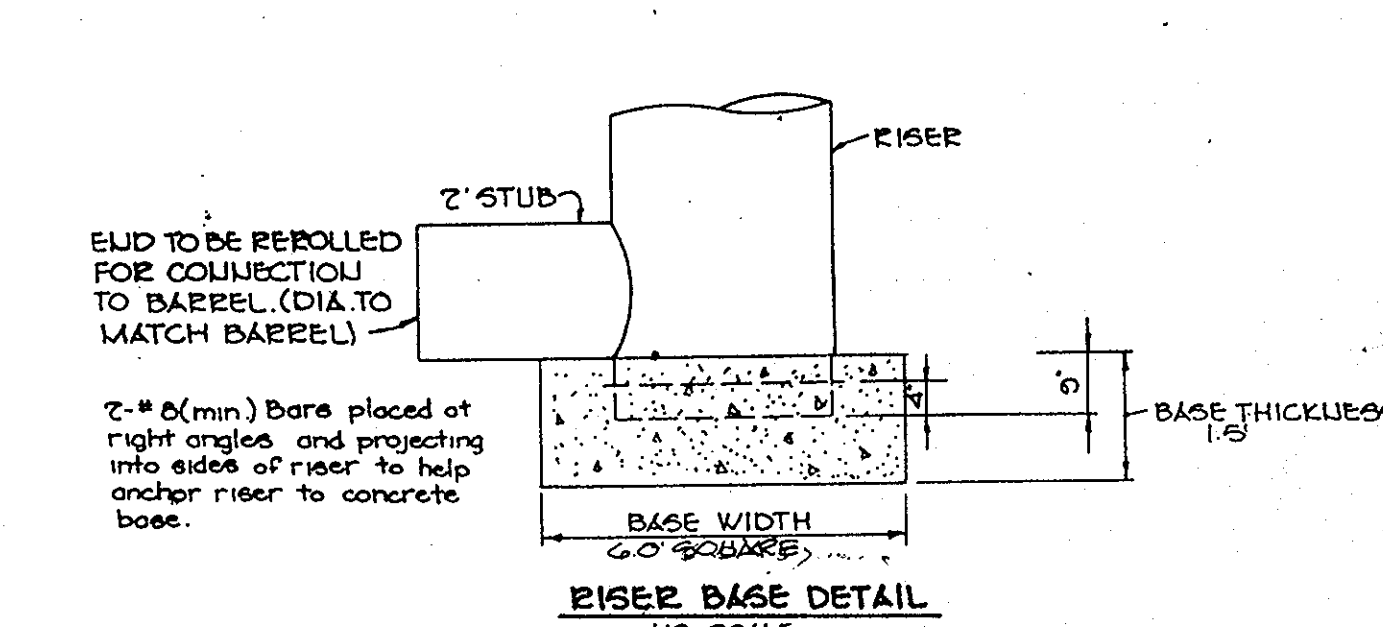


STRUCTURE	MEDIUM STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)
E-1	0.67	26	80	1.5

TRASH RACK DETAIL
NO SCALE

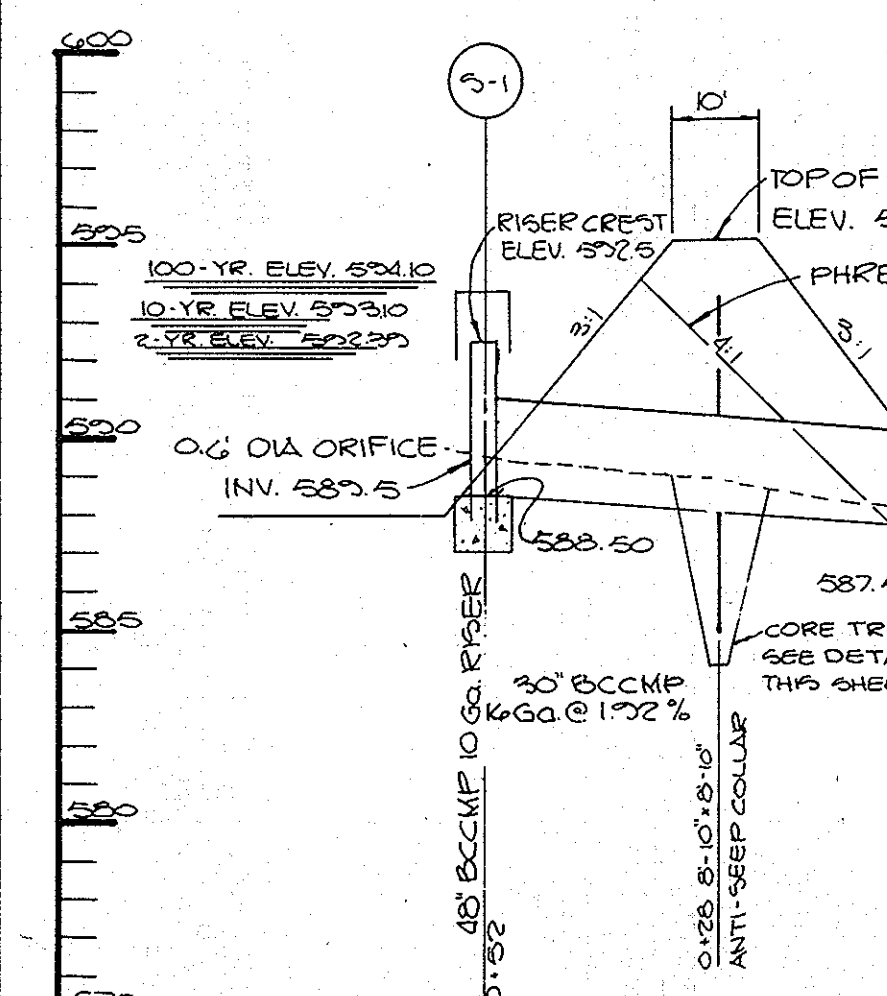
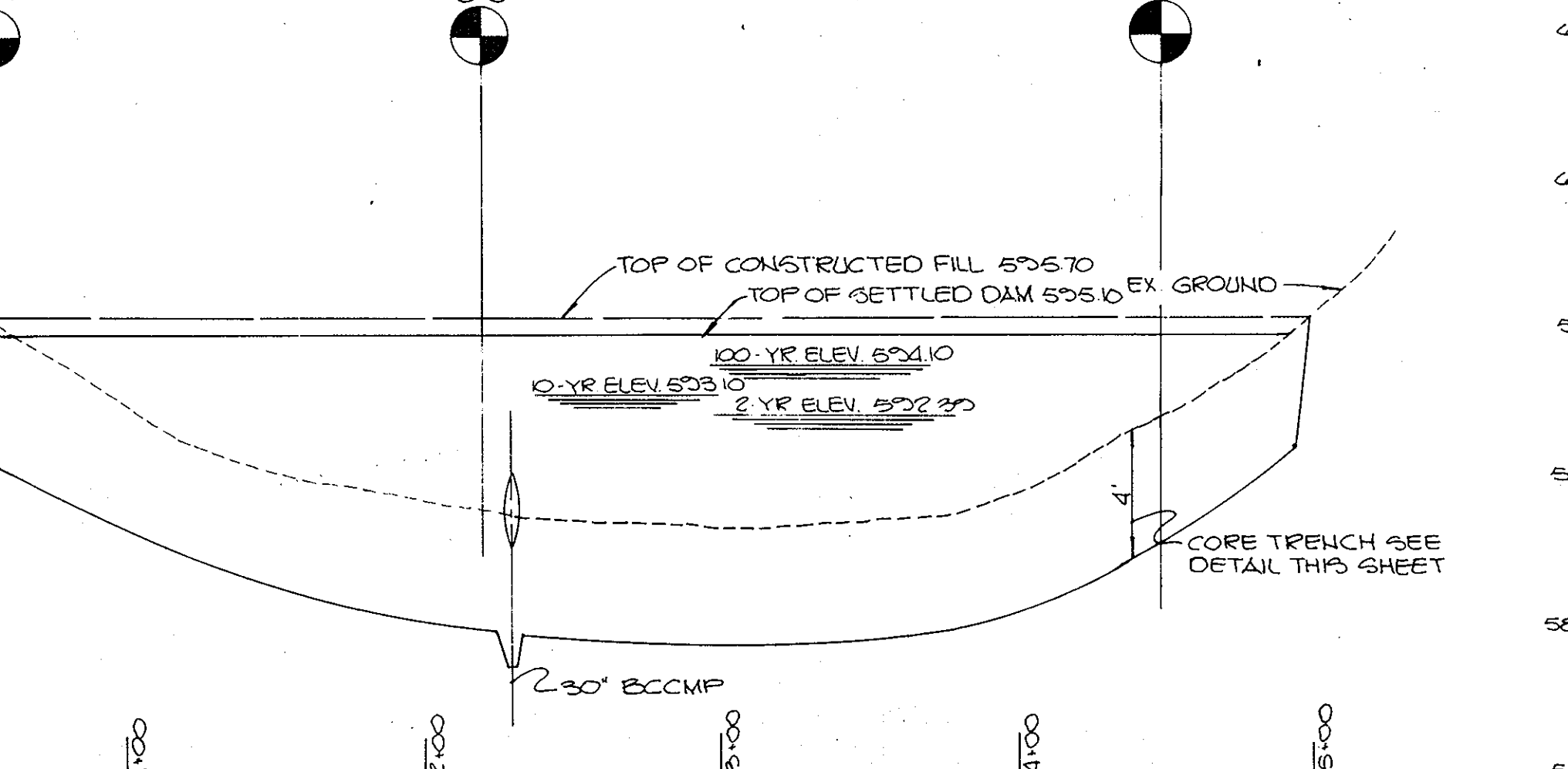
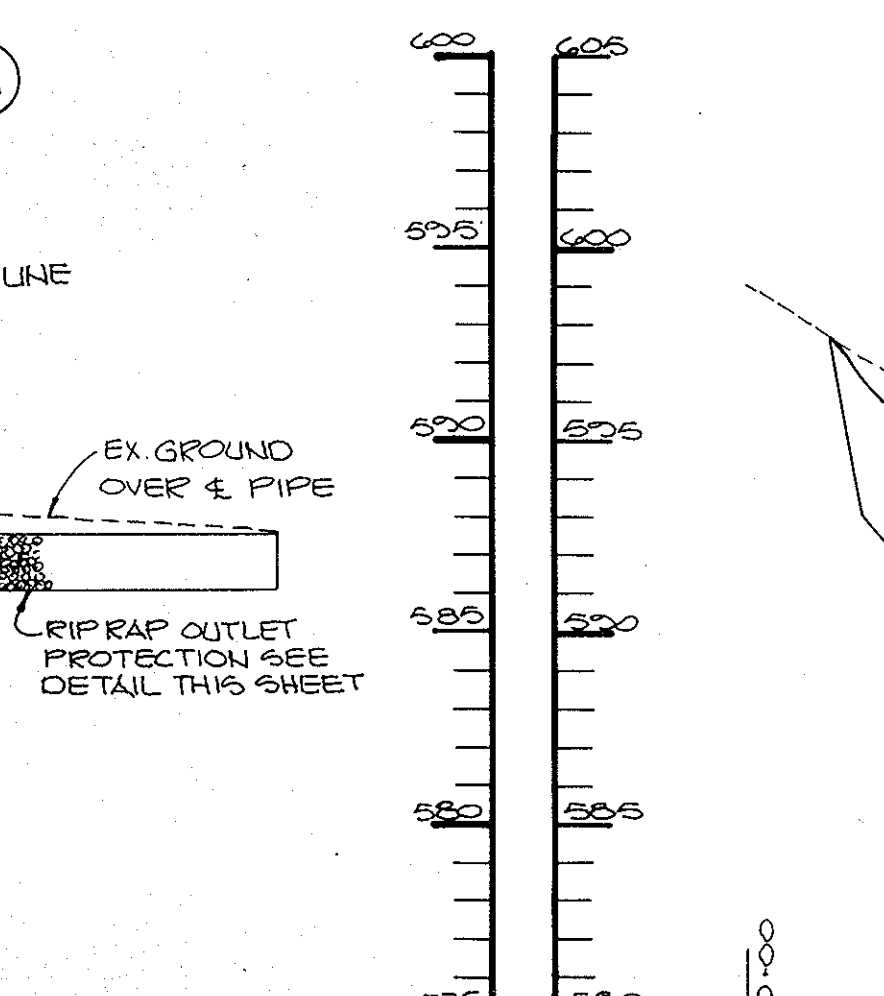


RISER BASE DETAIL
NO SCALE



NOTE: The concrete base shall be poured in such a manner to insure that the concrete fills the bottom of the riser to the invert of the outlet pipe to prevent the riser from breaking away from the base.

BORING LOGS
NO SCALE



FILL MATERIAL SHALL BE MOST IMPERVIOUS MATERIAL AVAILABLE AND SHALL BE PLACED AND TAMPED TO 95% COMPACTION.

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 NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."
John S. McLaughlin 7/1/88 DATE
DEVELOPER

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 MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
Arthur E. Muegge 7-18-88 DATE
ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.
James M. Jones 7/22/88 DATE
U.S. SOIL CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
John S. McLaughlin 7/22-88 DATE
HOWARD S.C.D.

OWNER/DEVELOPER
ROUTE 24 LIMITED PARTNERSHIP
1000 EQUITABLE BANK CENTER
COLUMBIA, MARYLAND 21044

PROJECT
LISBON CENTER
MASS GRADING PLAN

AREA
TAX MAP NO. 2 PARCELS C, E, F AND LOTS 1 & 2
HOWARD COUNTY, MARYLAND

TITLE:
PROFILES AND DETAILS

THE RIEMER GROUP, INC.
The Riemer Group, Inc. A Land Planning, Design & Civil Engineering Firm
3105 Health Park Drive, Elkctt City, Maryland 21043 (301) 461-2880

DATE: 7-18-88
DESIGNED BY: J.K.B.
DRAWN BY: M.A.O.
PROJECT NO: 86200
DATE: 3-20-87
SCALE: AS SHOWN
DRAWING NO. 8 OF 8