SITE DEVELOPMENT PLAN

DORSEY RUN PARK

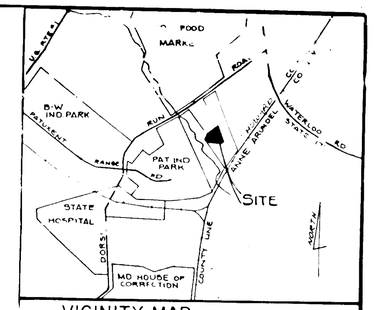
BUILDING 4 - UNIT NO. 1C

PUMP & POWER SHOP - ADDITION TO SDP-86-255 & 88-71 & 90-102

6TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	GRADING & SEDIMENT CONTROL
4	LANDSCAPING PLAN
5	SEWER PROFILE & CONSTRUCTION DETAIL SHEET
6	CONSTRUCTION DETAIL SHEET
7	SEDIMENT CONTROL DETAIL SHEET
8	DRAINAGE AREA MAP
9	SOILS MAP



VICINITY MAP

GENERAL NOTES

1. ALL WATER LINES SHALL BE CONSTRUCTED A MINIMUM OF 42" COVER BELOW FINISHED GRADE.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV, i.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
3. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. 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.
4. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES, WHERE DIRECTED BY THE ENGINEER. A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS.
5. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

MISS UTILITY	1-800-257-7777
C&P TELEPHONE COMPANY	725-9976
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
AT&T CABLE LOCATION DIVISION	393-3553
BALTIMORE GAS AND ELECTRIC COMPANY	685-0123
STATE HIGHWAY ADMINISTRATION	531-5533
HOWARD COUNTY CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	792-7272

6. ALL PIPE ELEVATIONS SHOWN ARE INVERT (I) ELEVATIONS.
7. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
8. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
9. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO SUBGRADE.
10. TOPO TAKEN FROM FIELD RUN SURVEY DATED 4/7/87 BY KIDDE CONSULTANTS, INC.
11. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
12. SITE LIGHTING TO BE DIRECTED INWARD AND DOWNWARD AWAY FROM ALL RESIDENTIAL AREAS.
13. WAIVER PETITION WP 89-143 GRANTED FROM SECTION 16.100 OF THE HOWARD COUNTY SUBDIVISION & LAND DEVELOPMENT REGS. DATED JUNE 20, 1989, FOR THE PURPOSES OF REQUESTING AN EXTENSION OF CONDITIONAL APPROVAL.

BUILDING #2

SITE ANALYSIS

A.	AREA OF PARCEL	32.549 AC. (1,417,834 SQ. FT.)
B.	AREA OF PROPOSED SITE	2.3 AC. (100,188 SQ. FT.)
C.	PRESENT ZONING	M-2
D.	PROPOSED USE	AUTO VEHICLE REPAIR SHOP
E.	BUILDING AREA SQ. FT.	26,500 (26,136 SQ. FT.)
F.	PARKING REQUIRED	ONE SPACE/500 SQ. FT. OF FLOOR AREA 44
	PARKING SPACES PROVIDED	
	STANDARD PARKING SPACES	38
	HANDICAPPED PARKING SPACES	6
	TOTAL PARKING PROVIDED	44
	HANDICAPPED SP. REQUIRED	3
	HANDICAPPED SP. PROVIDED	3
G.	OPEN SPACE REQUIRED	(20%) 46 AC (20,038.00 SQ FT)
H.	OPEN SPACE PROVIDED	1.7 AC (74,053.00 SQ FT)= 74%
I.	BUILDING COVERAGE	60 AC (26,136.00 SQ FT)= 26%
J.	LANDSCAPED ISLANDS REQ.	(5% OF TOTAL PARKING AREA) 600 SQ FT
K.	LANDSCAPED ISLANDS PROV.	4,250.00 SQ FT= 26.5%
L.	PARKING AREA	37 AC (16,000.00 SQ FT) (44%)

BUILDING #5

SITE TABULATION

* EXISTING ZONING - M2
* TOTAL SITE AREA - 150,020.64SF, 3.444 AC
* TOTAL BUILDING AREA - 37,155 SF/FLOOR OR 74,310 SF TOTAL
* TOTAL AREA OF PARKING LOTS - 72,799 SF
* TOTAL OPEN SPACE AREA:
  - A. REQUIRED 20% - 30,000 SF
  - B. PROVIDED 39,905.32 SF
* BUILDING COVERAGE 24.88%
* PARKING SPACES REQUIRED 149 (1 PER 500 SF, Sec. 127.B.2.b(7))
* HANDICAP SPACES REQUIRED 5
* TOTAL PARKING PROVIDED INCLUDING HANDICAP - 150
* LANDSCAPE ISLANDS:
  - A. REQUIRED 5% - 3,639 SF
  - B. PROVIDED - 3,639 SF

SITE ANALYSIS

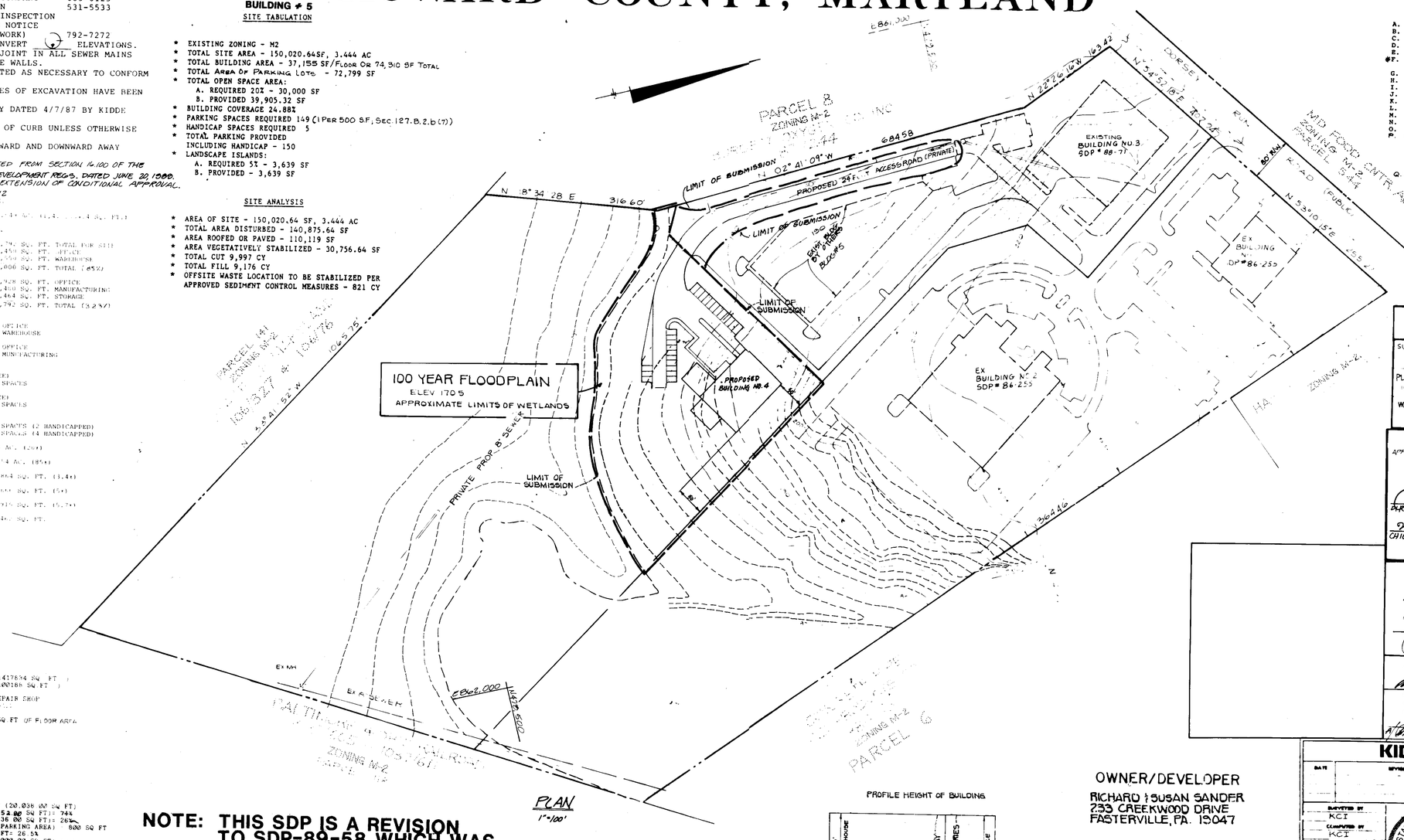
* AREA OF SITE - 150,020.64 SF, 3.444 AC
* TOTAL AREA DISTURBED - 140,875.64 SF
* AREA ROOFED OR PAVED - 110,119 SF
* AREA VEGETATIVELY STABILIZED - 30,756.64 SF
* TOTAL CUT 9,997 CY
* TOTAL FILL 9,176 CY
* OFFSITE WASTE LOCATION TO BE STABILIZED PER APPROVED SEDIMENT CONTROL MEASURES - 821 CY

BUILDING #4

SITE ANALYSIS

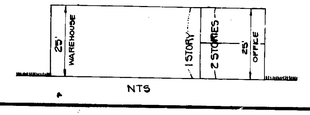
A.	AREA OF PARCEL	32.549 AC. (1,417,834 SQ.FT.)
B.	AREA OF PROPOSED SITE	3.0 AC. (130,680 SQ.FT.)+0.83 fm.
C.	PRESENT ZONING	M-2
D.	PROPOSED BUILDING	WAREHOUSE/OFFICE
E.	BUILDING AREA SQ.FT.	12,600 SQ.FT.
*F.	PARKING SPACES REQUIRED	ONE SPACE/500 SQ.FT. OF FLOOR AREA 30.0
G.	PARKING SPACES PROVIDED	30.0
H.	HANDICAPPED SPACE REQUIRED	2
I.	HANDICAPPED SPACE PROVIDED	2
J.	OPEN SPACE REQUIRED	20% (26,136 SQ.FT.)
K.	OPEN SPACE PROVIDED	80.62% (107,908 SQ.FT.)
L.	BUILDING COVERAGE	9.63%
M.	LANDSCAPED ISLAND REQUIRED	5% OF PARKING AREA (1,028 ± FT²)
N.	LANDSCAPED ISLAND PROVIDED	8% OF PARKING AREA (1,655 FT²)
O.	PARKING AREA	14.9% (8,764 SQ.FT.) 19.1% (20,671 FT²)
P.	BLDG. SQ. FT. TOTALS - OFFICE: 1,800 x 2	3,600 ±
	- WAREHOUSE	10800 ±
	TOTAL	14,400 ±
Q.	NO. OF EMPLOYEES - OFFICE	17 (SEVENTEEN)
	- WAREHOUSE	6
		11

* ONE SPACE/900 SQ.FT. USED FOR OFFICE & WAREHOUSE AREAS



PLAN
1"=100'

PROFILE HEIGHT OF BUILDING



NTS

NOTE: THIS SDP IS A REVISION TO SDP-89-58 WHICH WAS TENTATIVELY APPROVED ON AUGUST 28, 1989

OWNER/DEVELOPER
RICHARD & SUSAN SANDER
233 CREEKWOOD DRIVE
FASTERVILLE, PA. 19047

ADDRESS CHART	
3	8005 DORSEY RUN RD.
4	8019 DORSEY RUN ROAD
5	

DORSEY RUN PARK
HOWARD COUNTY, MARYLAND

SUBDIVISION NAME	SECT/AREA	PARCEL NO
DORSEY RUN PARK		

PLAT NO OR L/F	BLOCK NO	ZONE	TAX/ZONE MAP	ELEC DIST	CENSUS TR
1000 155	3	M-2	44		

WATER CODE — SEWER CODE

APPROVED: FOR PUBLIC WATER & SEWERAGE, STORM DRAINAGE SYSTEMS & PUBLIC ROADS, HOWARD COUNTY DEPT. OF PUBLIC WORKS.

DIRECTOR Acting — 2/12/91 DATE

CHIEF BUREAU OF ENGINEERING — 2-11-91 DATE

APPROVED: FOR PUBLIC WATER & PUBLIC SEWERAGE SYSTEMS. HOWARD COUNTY DEPT. OF PUBLIC WORKS.

COUNTY HEALTH OFFICER — 2/15/91 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT — 2/27/91 DATE

DIRECTOR — 3/1/91

KIDDE CONSULTANTS, INC.

ENGINEERS • PLANNERS • SURVEYORS

DATE	DIVISION	BY

SURVEYED BY: KCI
COMPUTED BY: KCI
DRAWN BY: LM
CHECKED BY: RA/DCW
SHEET 1 OF 9

STATE OF MARYLAND — RAY ALLISON — No. 18018 — REGISTERED PROFESSIONAL ENGINEER

DATE Aug., 1988 SCALE AS SHOWN

SDP-90-207

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DIRECTOR — 3/1/91 DATE

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — 2/27/91 DATE

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

DIRECTOR Acting — 2/12/91 DATE

CHIEF BUREAU OF ENGINEERING — 2.11.91 DATE

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

COUNTY HEALTH OFFICER — 2/15/91 DATE

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.

U.S. SOIL CONSERVATION SERVICE — 11-27-90 DATE

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

HOWARD SOIL CONSERVATION DISTRICT — 11/27/90 DATE

ENGINEERS CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR EROSION & 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."

ENGINEERS SIGNATURE — 11-15-90 DATE

DEVELOPERS CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT & CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 & EROSION BEFORE BEGINING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT"

DEVELOPERS SIGNATURE — 11/15/90 DATE

REVISION CHART

DATE	REVISION

PUMP & POWER WAREHOUSE

SITE DEVELOPMENT PLAN

DORSEY RUN PARK - UNIT NO. 1C
BUILDING No 4

HOWARD COUNTY, MARYLAND
TAX MAP 45 PARCEL 5
6TH ELECTION DISTRICT

KIDDE CONSULTANTS, INC.

DATE	REVISION	BY
11/27/91	ADD FIRE ACCESS RD - MOVED HYDRANT	SDH

ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET SUITE 100 LAUREL MD 2070?
(Wash.) 301-953-1821 792-8086 (Balt.)

SURVEYED BY: OTHERS
COMPUTED BY: SDH
DRAWN BY: RJC
CHECKED BY: BJS, SDH

STATE OF MARYLAND — VIJAY BALUSU — No. 18044 — REGISTERED PROFESSIONAL ENGINEER

Drwg. No. 2 of 9

DATE MAY, 1990 SCALE 1"=30'

SDP 90-207

NOTE: THIS PLAN FOR GRADING AND SEDIMENT CONTROL ONLY. THIS SITE HAS BEEN PREVIOUSLY GRADED IN ACCORDANCE WITH APPROVED GRADING PLAN GP-89-08

SEDIMENT BASIN SCHEDULE

MAX DRAINAGE AREA:	2.00 ACRES
REQ. STORAGE VOL.:	3,600 CU. FT.
PROV. STORAGE VOL.:	10,000 CU. FT.
BOTTOM ELEVATION:	172.50'
CLEANOUT ELEVATION:	173.70'

OWNER/DEVELOPER
RICHARD & SUSAN SANDER
233 CREEKWOOD DRIVE
FASTERVILLE, PA 1904?

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[signature] 3/8/91 DATE

[signature] 2/27/91 DATE

DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

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

[signature] Acting DIRECTOR — 2/12/91 DATE

[signature] CHIEF BUREAU OF ENGINEERING — 2-11-91 DATE

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.

[signature] U.S. SOIL CONSERVATION SERVICE — 11/27/90 DATE

REVISION CHART

DATE	REVISION

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

[signature] COUNTY HEALTH OFFICER — 2/15/91 DATE

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

[signature] HOWARD SOIL CONSERVATION DISTRICT — 11/27/90 DATE

ENGINEERS CERTIFICATE

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

[signature] ENGINEERS SIGNATURE — 11-15-90 DATE

DEVELOPERS 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 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."

Richard C Sander — DEVELOPERS SIGNATURE — 11/15/90 DATE

PUMP & POWER WAREHOUSE

GRADING & SEDIMENT CONTROL PLAN

DORSEY RUN PARK-UNIT NO. 1C
BUILDING No 4
HOWARD COUNTY, MARYLAND
TAX MAP 45 PARCEL 5
6th ELECTION DISTRICT

KIDDE CONSULTANTS, INC.

ENGINEERS • PLANNERS • SURVEYORS

DATE	REVISION	BY
8/4/92	SWM AS BUILT	
11/27/91	ADDED FIRE ACCESS ROAD-MOVED HYDRANT	SDH

SURVEYED BY OTHERS
COMPUTED BY SDH
DRAWN BY RJC
CHECKED BY BJS, JCF

STATE OF MARYLAND — VIJAY BALUS — No. 18044 — REGISTERED PROFESSIONAL ENGINEER

STATE OF MARYLAND — PAUL KONRAD FRANCIS — NO. 15317 — REGISTERED PROFESSIONAL ENGINEER

DATE MAY 1990 SCALE 1"=30'

Drwg. No 3 of 9

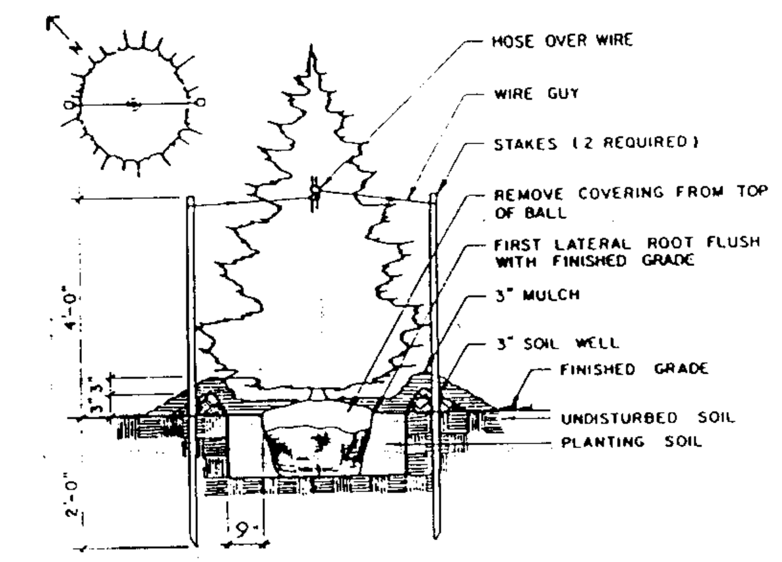
SDP 90-207

PLANT LIST

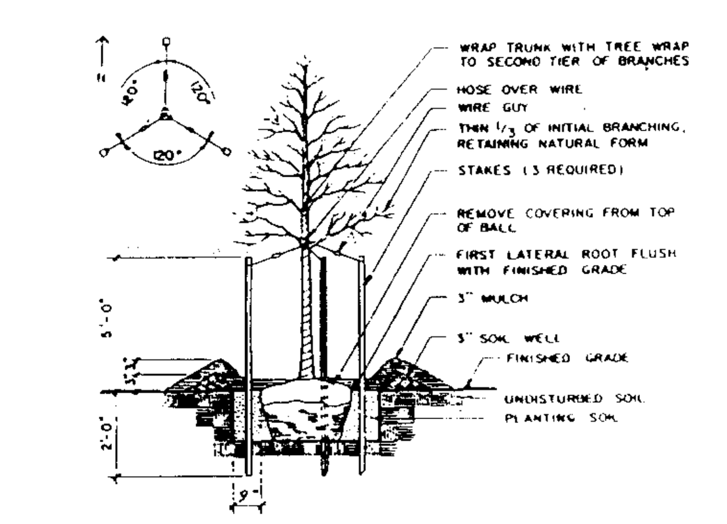
KEY	QUANTITY	BOTANICAL NAME / COMMON NAME	SIZE	ROOT	SPACING
TREES					
AR	2	Acer rubrum "Red Sunset" Red Sunset Glory Maple	2 1/2"-3" Cal. 12'-14' Ht.	B&B	As noted
QP	2	Quercus phellos Willow Oak	2 1/2"-3" Cal. 12'-14' Ht.	B&B	As noted
EVERGREEN TREES					
PS	7	Pinus strobus Eastern White Pine	6'-8' Ht.	B&B	10' O.C.
FLOWERING TREES					
PC	4	Pyrus calleryana "Aristocrat" Aristocrat Callery Pear	1½"-1 3/4" Cal. 7'-9' Ht.	B&B	As noted
SHRUBS					
BT	14	Berberis thunbergii var. Atropurpurea "Crimson Pygmy"	18"-24" Spd.	Cont.	30" O.C.
IC	24	Ilex crenata "Helleri" Dwarf Japanese Holly	18"-24" Spd.	Cont.	30" O.C.
GROUNDCOVER					
JH	14	Junipens horizontalis "Hughes" Hughes Juniper	18"-24" Spd.	Cont.	30" O.C.

GENERAL LANDSCAPE NOTES

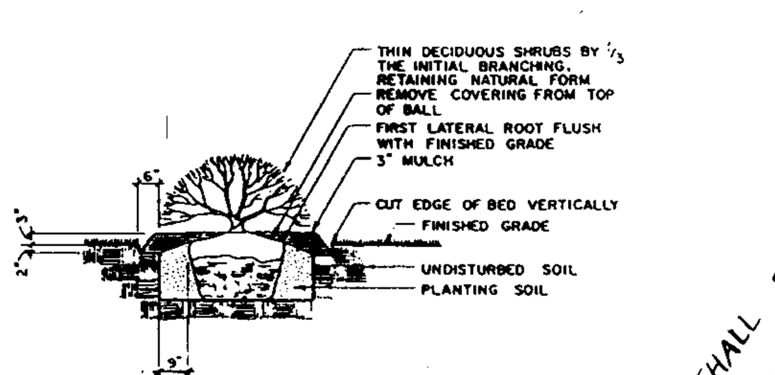
1. Plant names shall conform to the nomenclature of Standarized Plant Names. Subtitutions shall not be made without approval of landscape architect. All plants shall be properly identified by name and size on legible labels securely attached to plants.
2. All plants shall (1) be true to type and name, (2) typical of their species or variety, (3) have a normal well-developed branch structure with a vigorous root system.
3. For a period of twelve months from the date that the work under this contract is certified as complete, the contractor shall: (1) guarantee all plants under this contract; (2) remove and replace, during the guarantee period, plants which die or are in a badly impaired condition; (3) replant with stock of same size and quality as originally specified; (4) guy as specified, at no additional cost.
4. Plants shall be staked out as indicated on plan.
5. Topsoil shall not be placed when ground is excessively wet, or in a condition that the soil cannot be worked easily and dressed smooth.
6. Provide 2" mulch at all plant beds, including tree and shrub pits. After completing mulching operations, water all newly planted areas until soaked to a minimum depth of 2".



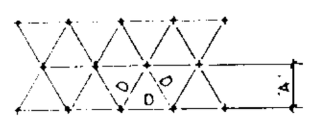
EVERGREEN TREE DETAIL



DECIDUOUS TREE DETAIL



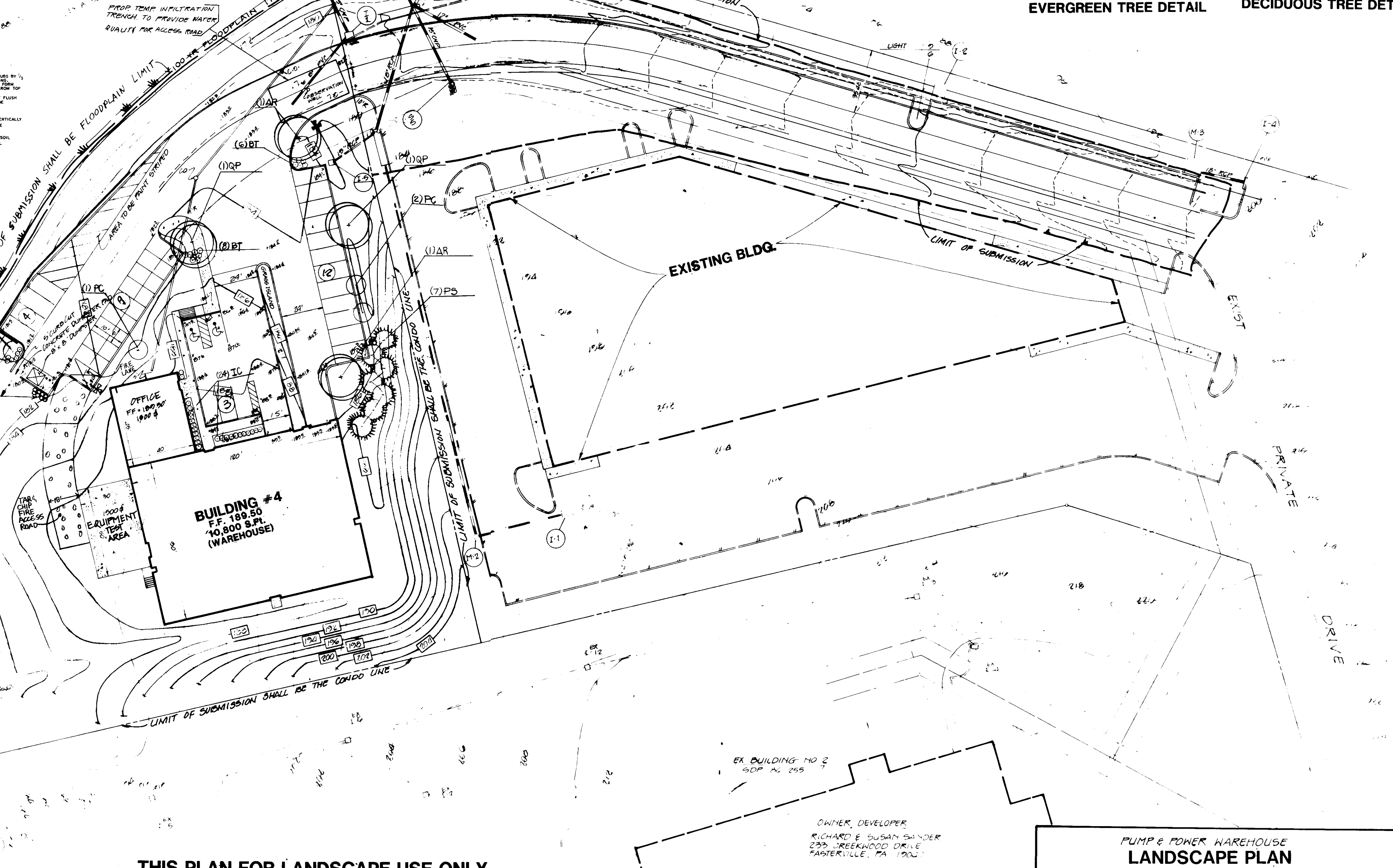
SHRUB DETAIL



NOTE: FOR USE ONLY WHEN PLANTS ARE SPACED EQUIDISTANT FROM EACH OTHER AS SHOWN AND SPECIFIED IN THE PLANT LIST.

SPACING "D"	ROW "A"	NO. OF PLANTS / S.F.
6" O.C.	5.20"	4.61
8" O.C.	6.93"	2.60
10" O.C.	8.66"	1.66
12" O.C.	10.40"	1.15
15" O.C.	13.00"	.738
18" O.C.	15.60"	.512
24" O.C.	20.80"	.290
30" O.C.	26.00"	.185
36" O.C.	30.00"	.128

GROUNDCOVER DETAIL



OWNER, DEVELOPER
RICHARD & SUSAN SANDER
233 CREEKWOOD DRIVE
FASTERVILLE, PA 1902?

THIS PLAN FOR LANDSCAPE USE ONLY

3/1/91
2/27/91

REVISION CHART

DATE	REVISION

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DIRECTOR (Acting) — DATE 2/12/91

CHIEF BUREAU OF ENGINEERING — DATE 2-11-91

PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER — DATE 2/15/91

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.

U.S. SOIL CONSERVATION SERVICE — DATE 11/27/90

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 11/27/90

ENGINEERS CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR EROSION & 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"

ENGINEERS SIGNATURE — DATE 11-15-90

DEVELOPERS CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT & CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 & EROSION BEFORE BEGINING THE PROJECT I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT"

DEVELOPERS SIGNATURE (Richard C Sander) — DATE 11/15/90

PUMP & POWER WAREHOUSE

LANDSCAPE PLAN

DORSEY RUN PARK-UNIT NO. IC
BUILDING Nº 4

HOWARD COUNTY, MARYLAND
TAX MAP 45 PARCEL 5
6TH ELECTION DISTRICT

KIDDE CONSULTANTS, INC.

ENGINEERS • PLANNERS • SURVEYORS

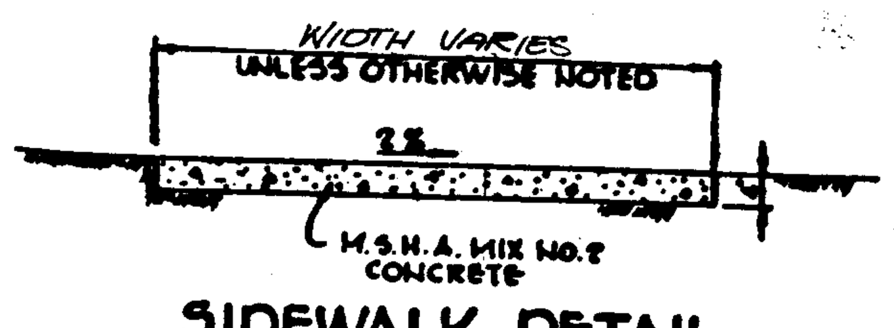
DATE	REVISION
11/27/91	ADDED FIRE ACCESS ROAD - MOVED HYDRANT SDH

SURVEYED BY OTHERS
DESIGNED BY DVO
DRAWN BY DVO
CHECKED BY SDH, B/S
Drwg. No 4 of 9

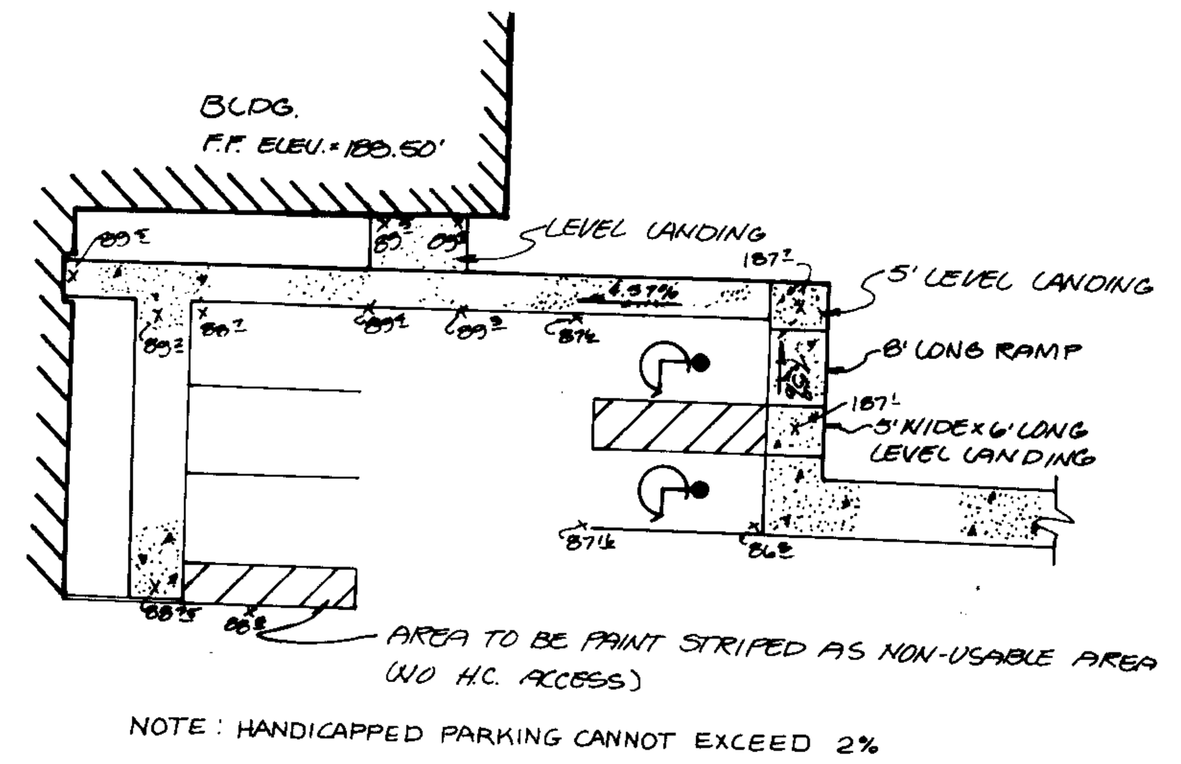
STATE OF MARYLAND — VIJAY BALUSU — PROFESSIONAL ENGINEER

DATE 22 MAY 90 SCALE 1" = 30'

SDP 90-207

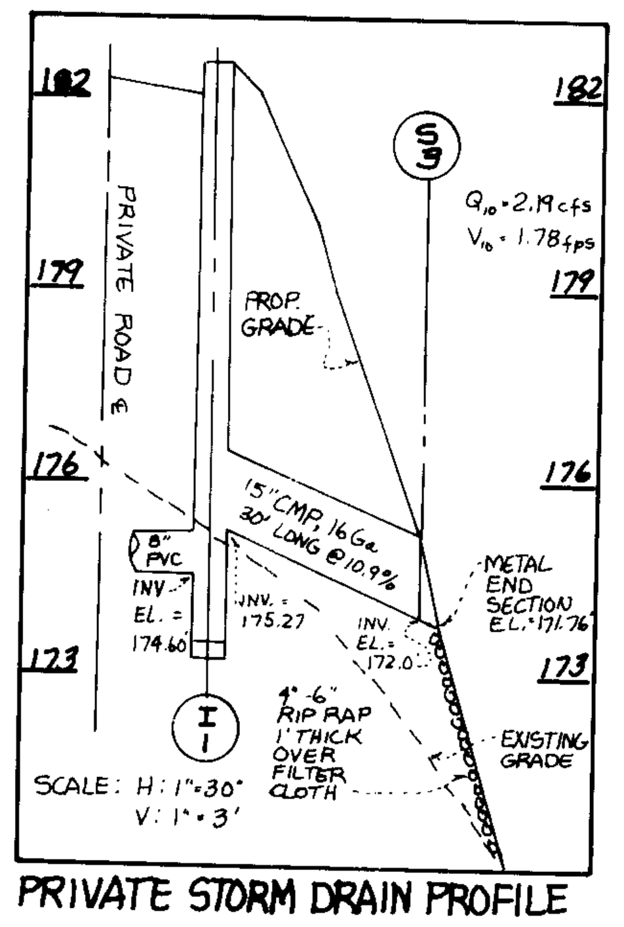


SIDEWALK DETAIL
No Scale

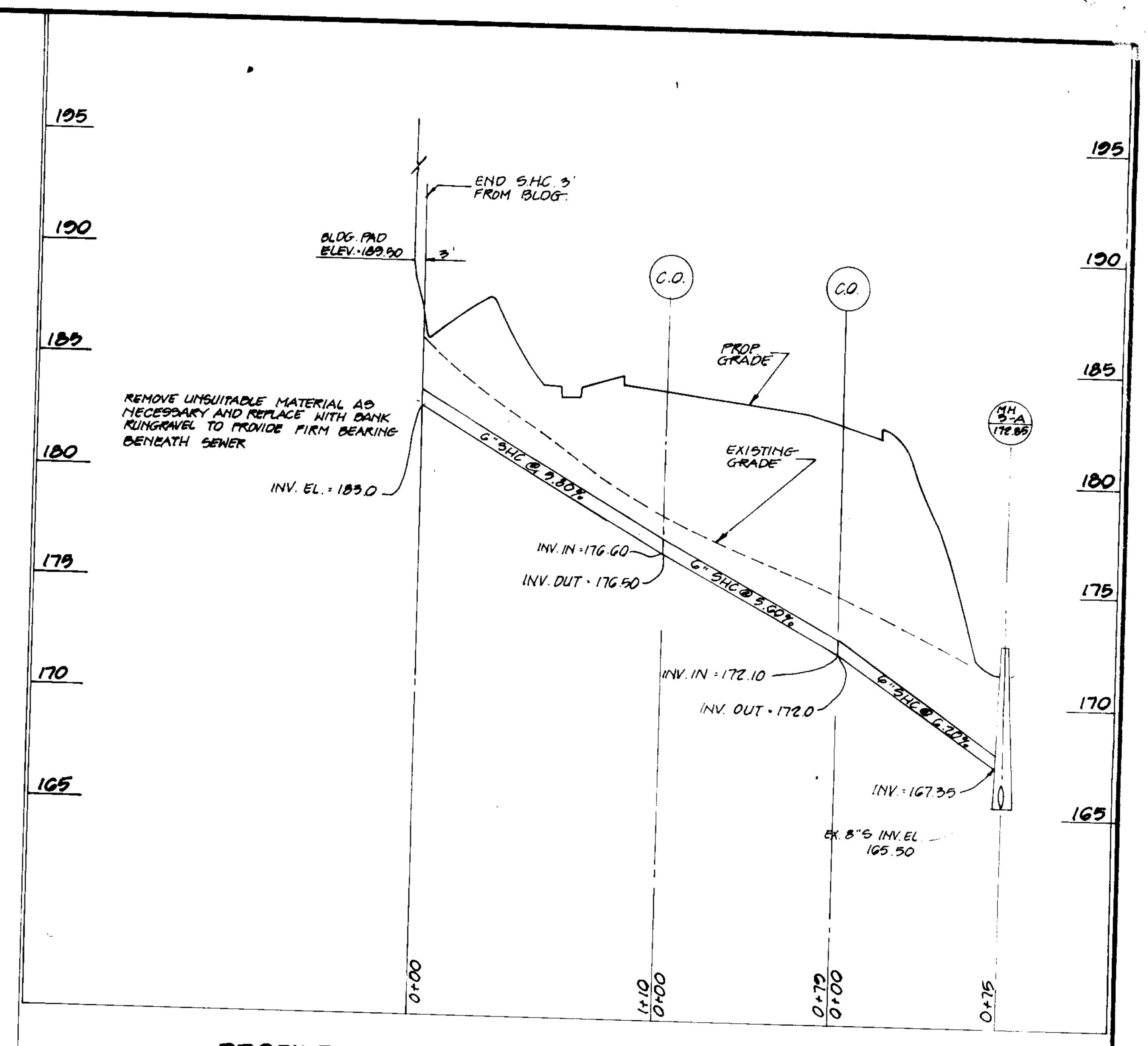


NOTE: HANDICAPPED PARKING CANNOT EXCEED 2%

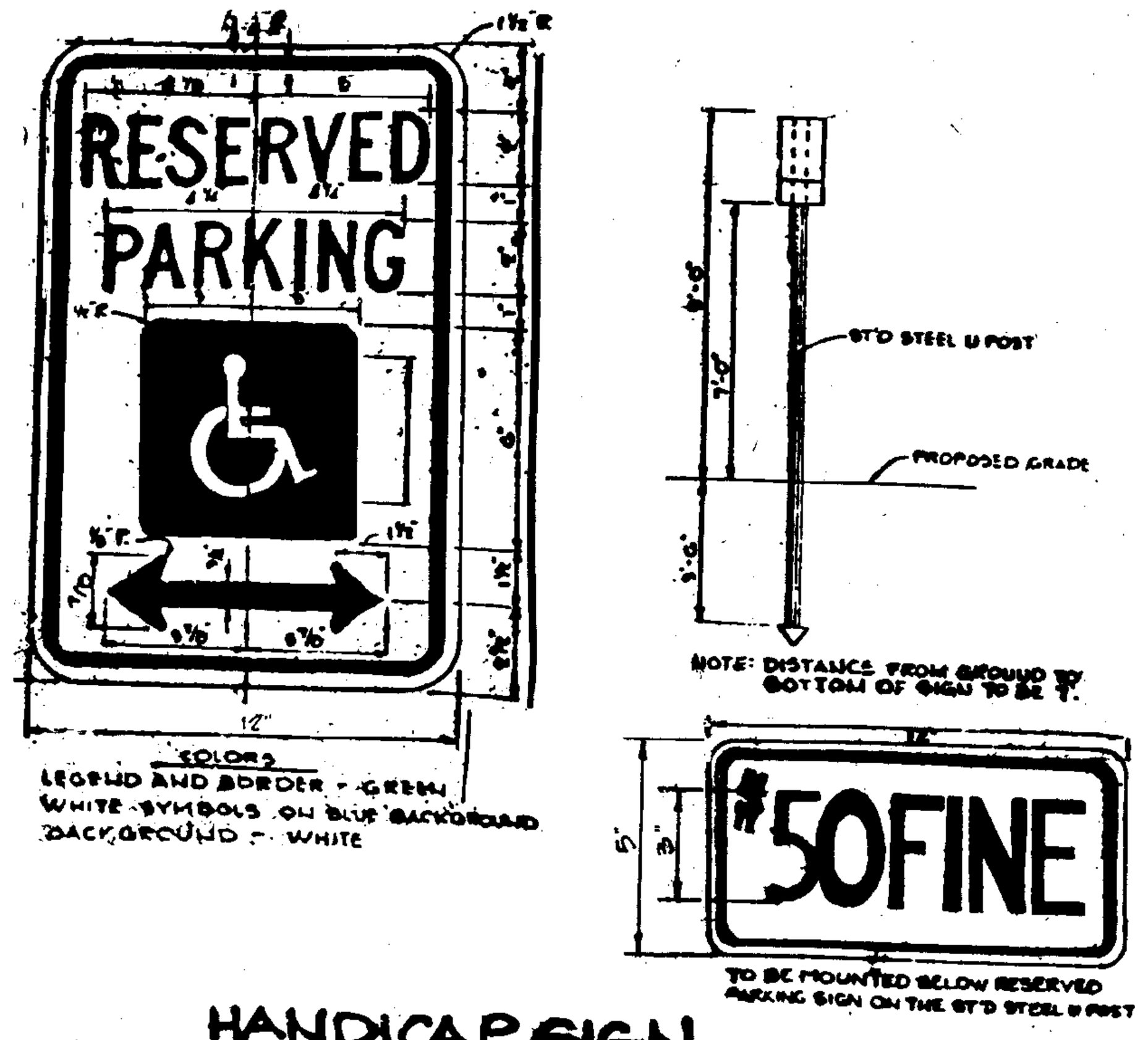
HANDICAPPED PARKING & RAMP DETAIL
SCALE: 1" = 20'



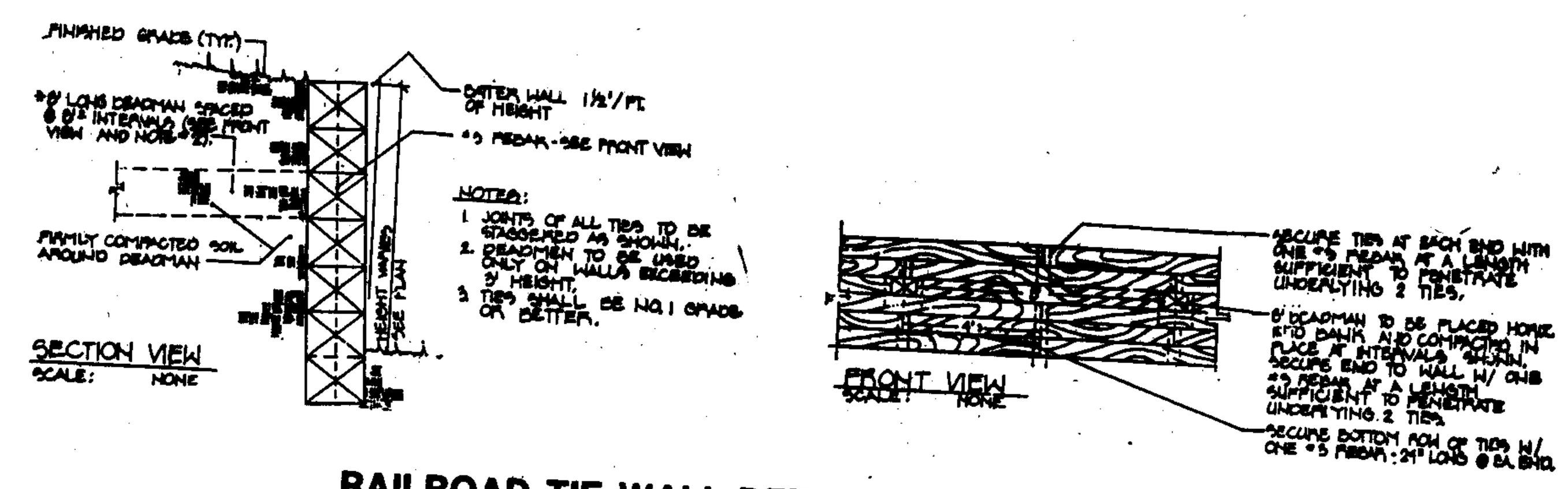
PRIVATE STORM DRAIN PROFILE
I-1 TO S-3



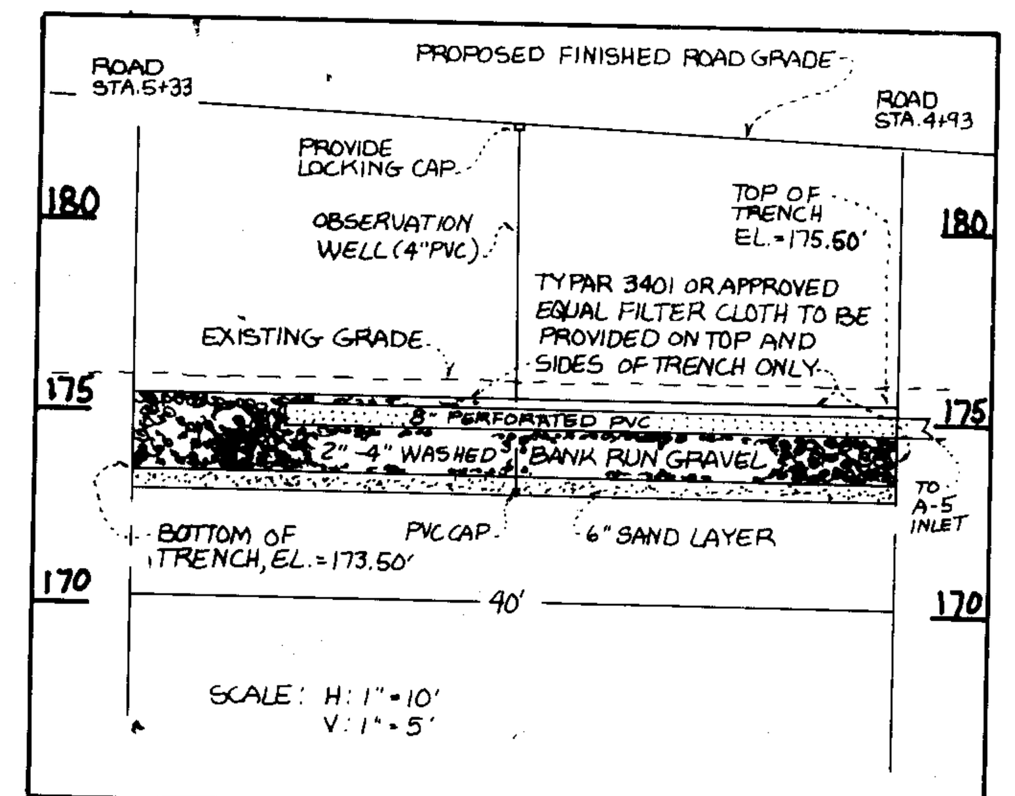
PROFILE - SEWER BUILDING CONNECTION
SCALE: HOR. 1"=50', VERT. 1"=5'



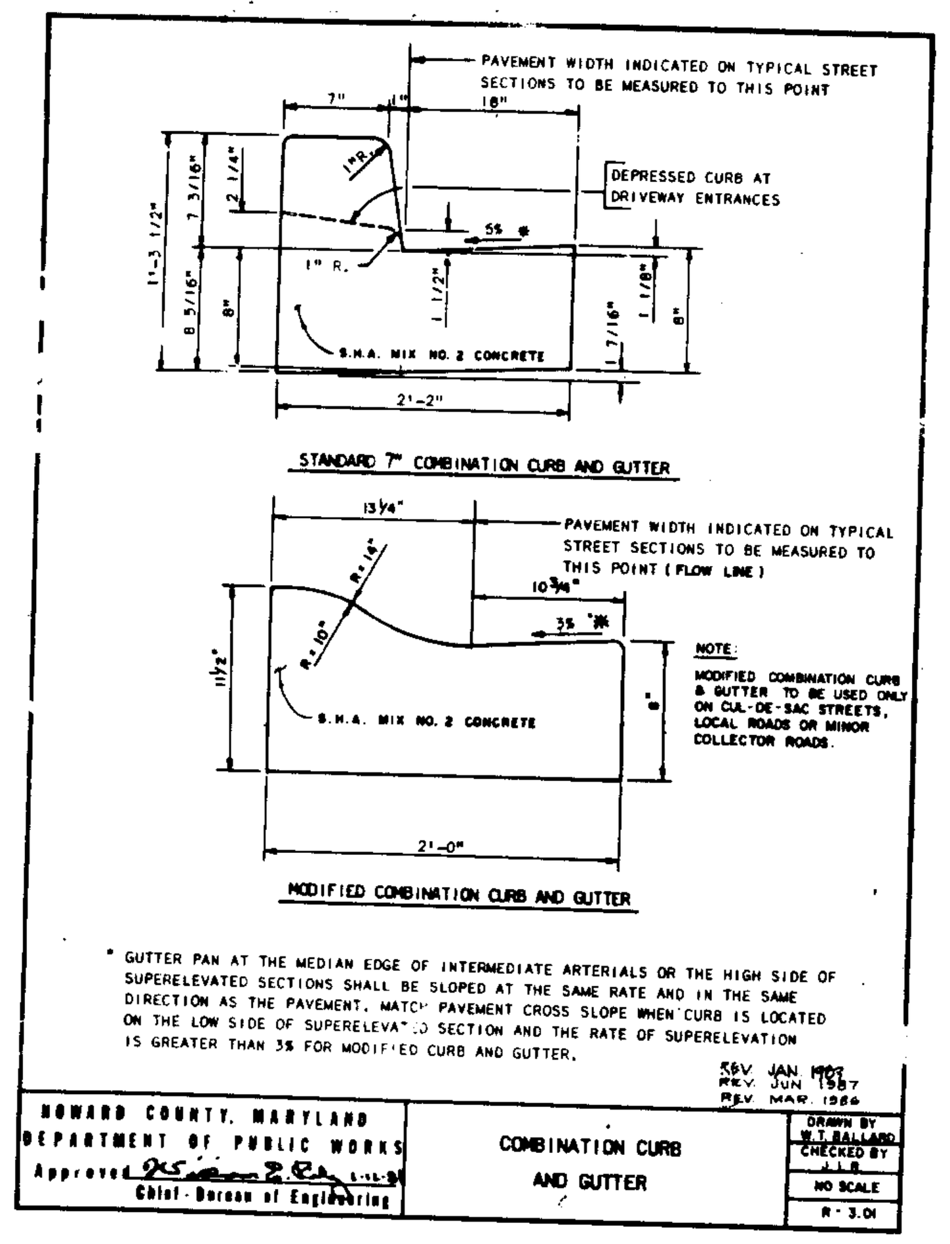
HANDICAP SIGN
NO SCALE

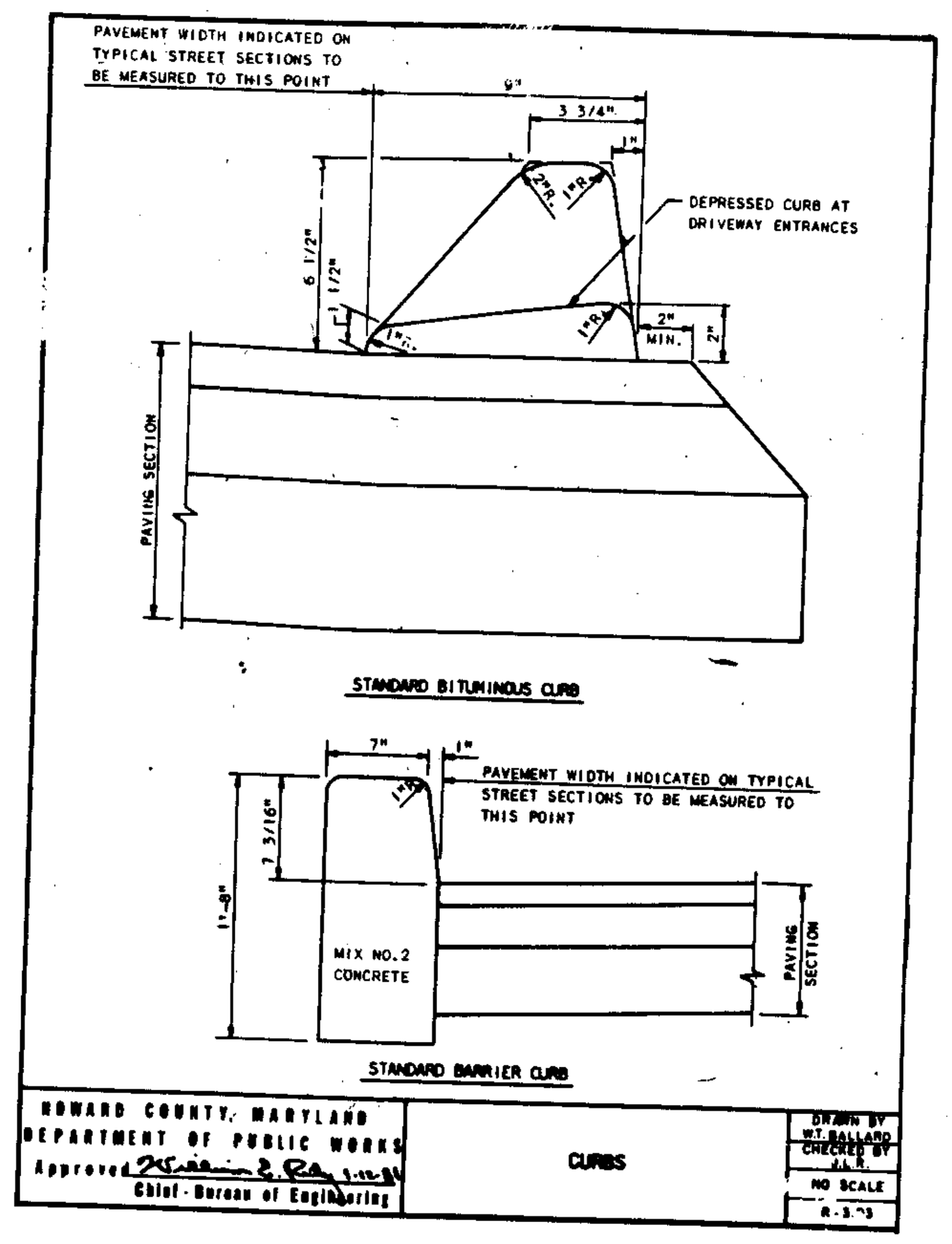


RAILROAD TIE WALL DETAIL
NOT TO SCALE

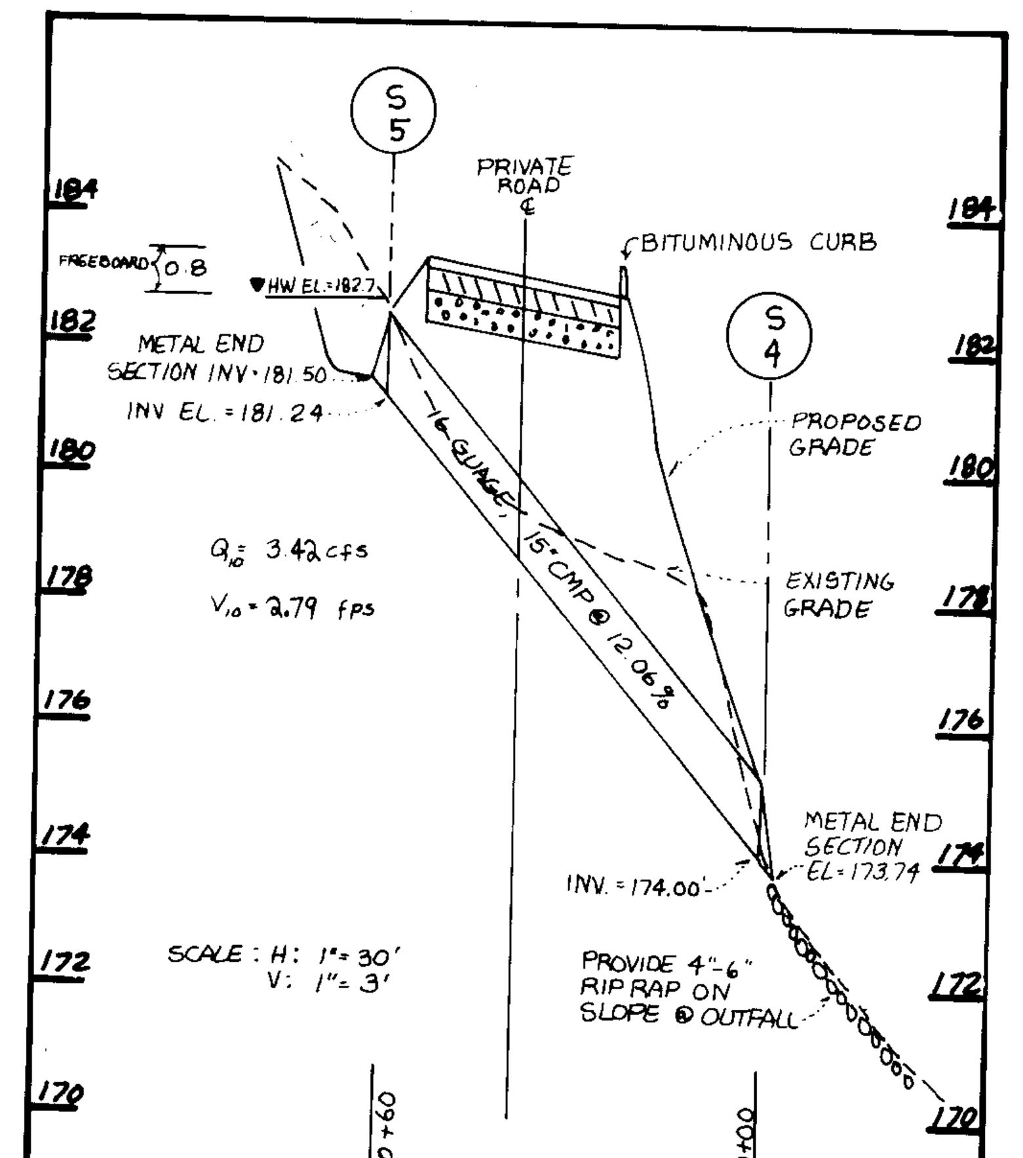


PROFILE ALONG ROAD ℄ THRU TEMPORARY INFILTRATION TRENCH

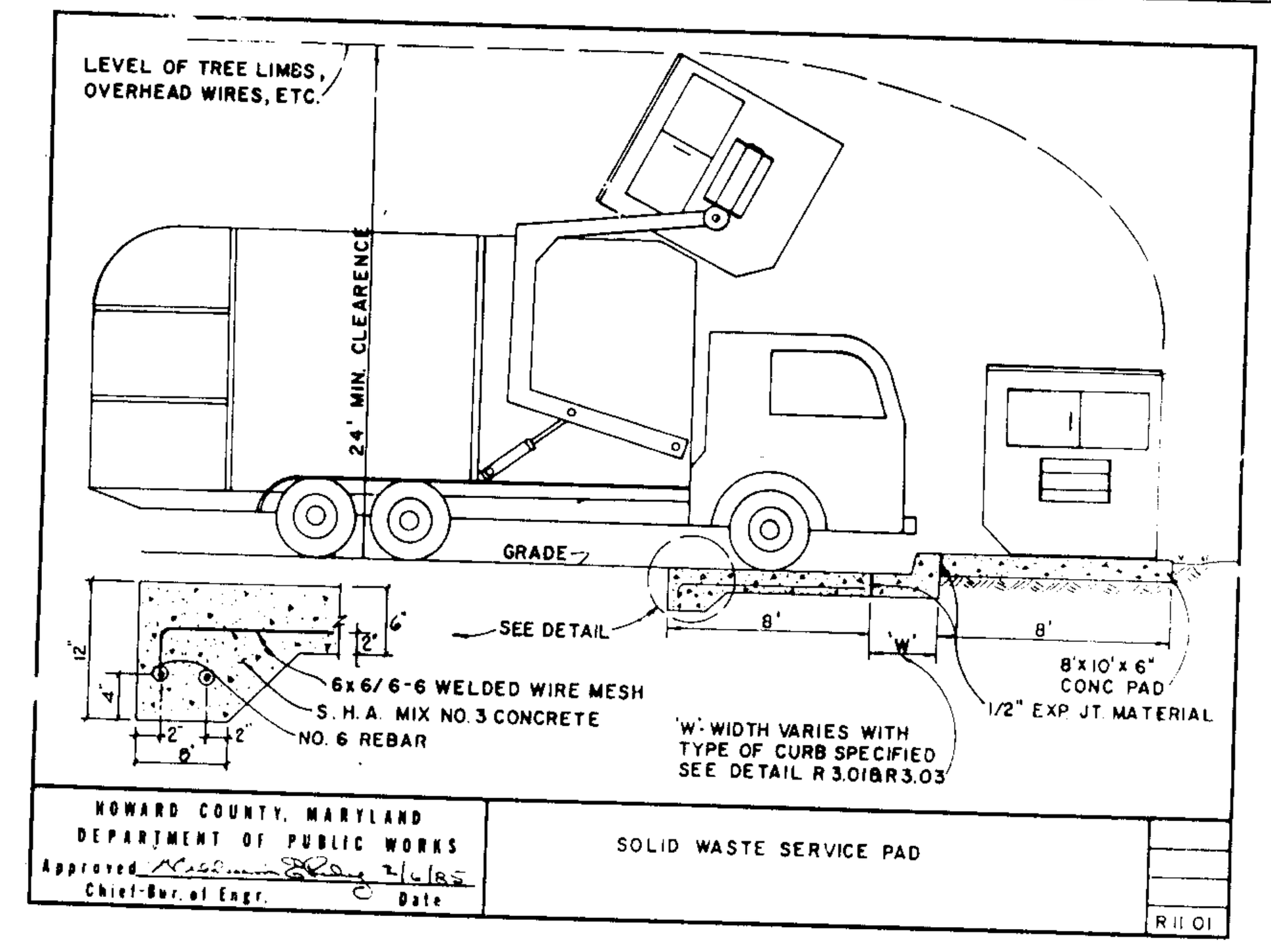




SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVEMENT MATERIALS: FULL DEPTH BIT. CONC. ALTERNATE	PAVEMENT MATERIALS: GRANULAR BASE ALTERNATES
P-1	PARKING AREAS AND TRAVELWAYS APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO HEAVY TRUCKS	1" BIT. CONC. SURFACE 4" BIT. CONC. BASE FOR ONSITE PARKING AREAS	1" BIT. CONC. SURFACE 2" BIT. CONC. BASE PRIME 5" CRUSHER RUN BASE COURSE OR 4" DENSE GRADED STABILIZED AGGREGATE BASE COURSE
P-2	RESIDENTIAL ZONES -- LOCAL, CUL-DE-SAC STS. ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL LOTS PARKING AREAS APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO MORE THAN 40 HEAVY TRUCKS PER DAY*	1 1/2" BIT. CONC. SURFACE 5" BIT. CONC. BASE FOR ONSITE TRAVELWAYS	1 1/2" BIT. CONC. SURFACE 2 1/2" BIT. CONC. BASE PRIME 8" CRUSHER RUN BASE COURSE (2 COURSES) OR 6" DENSE GRADED STABILIZED AGGREGATE BASE COURSE
P-3	RESIDENTIAL ZONES MINOR AND MAJOR COLLECTORS COMMERCIAL-INDUSTRIAL ZONES LOCAL AND CUL-DE-SAC STREETS ALLEYS TRAVELWAYS APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH MORE THAN 10 HEAVY TRUCKS PER DAY*	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE 5" BIT. CONC. BASE FOR ACCESS ROAD	1 1/2" BIT. CONC. SURFACE 4 1/2" BIT. CONC. BASE PRIME 6" CRUSHER RUN BASE COURSE OR 4 1/2" DENSE GRADED STABILIZED AGGREGATE BASE COURSE



PROFILE OF CMP CULVERT UNDER PRIVATE ROAD (TEMP)



STRUCTURE SCHEDULE

STRUCT. NO.	INV. IN	INV. OUT	TOP ELEVATION	REMARKS
S-1	---	171.50	173.50	SWM POND OUTFALL METAL END SEC. HO. CO. STD. SD-5.61
S-2	---	---	174.77	SWM RISER SEE DETAIL SHT. 6 OF 9
S-3	172.00	171.76	173.25	METAL END SEC. HO. CO. STD. SD-5.61
S-4	174.00	173.74	175.25	METAL END SEC. HO. CO. STD. SD-5.61
S-5	181.50	181.24	182.49	METAL END SEC. HO. CO. STD. SD-5.61
I-1	---	175.27	182.54	MODIFIED TYPE A-5 INLET (SEE DETAIL SHEET 7 OF 9 & HO. CO. STD. SD-4.01)

PUMP & POWER WAREHOUSE
SEWER PROFILES & CONSTRUCTION DETAILS

DORSEY RUN PARK - UNIT NO. 1C
BUILDING NO. 4
HOWARD COUNTY, MARYLAND
TAX MAP 45 PARCEL 5
6TH ELECTION DISTRICT

DEPT.
3/1/91
2/27/91

APPROVED: WATER AND SEWERAGE ... DEPARTMENT OF PUBLIC WORKS
2/12/91
DATE
2-11-91
DATE
... WATER AND PUBLIC SEWERAGE SYSTEMS ... HEALTH DEPARTMENT
COUNTY HEALTH OFFICER
2/15/91
DATE

REVIEWED FOR HOWARD SOIL CONSERVATION AND MEETS TECHNICAL REQUIREMENTS
11/27/90
US SOIL CONSERVATION SERVICE DATE

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

ENGINEERS CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR EROSION & 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"

ENGINEERS SIGNATURE 11-15-90 DATE

DEVELOPERS CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT & CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 & EROSION BEFORE BEGINING THE PROJECT I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT"

DEVELOPERS SIGNATURE 11/15/90 DATE

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS

SURVEYED BY: OTHERS
COMPUTED BY: SDH
DRAWN BY: RJC
CHECKED BY: BIS
Drwg. No. 5 of 9
DATE MAY 1990 SCALE AS SHOWN

SOIL CONSERVATION SERVICE
MARYLAND
CONSTRUCTION SPECIFICATIONS
FOR
PONDS

These specifications are appropriate to ponds within the scope of the Standard for practice 378.

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, 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 or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction 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 cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

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-274-79I 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 painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be 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.

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 predicted 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 suplemented 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 compunds may also be used.

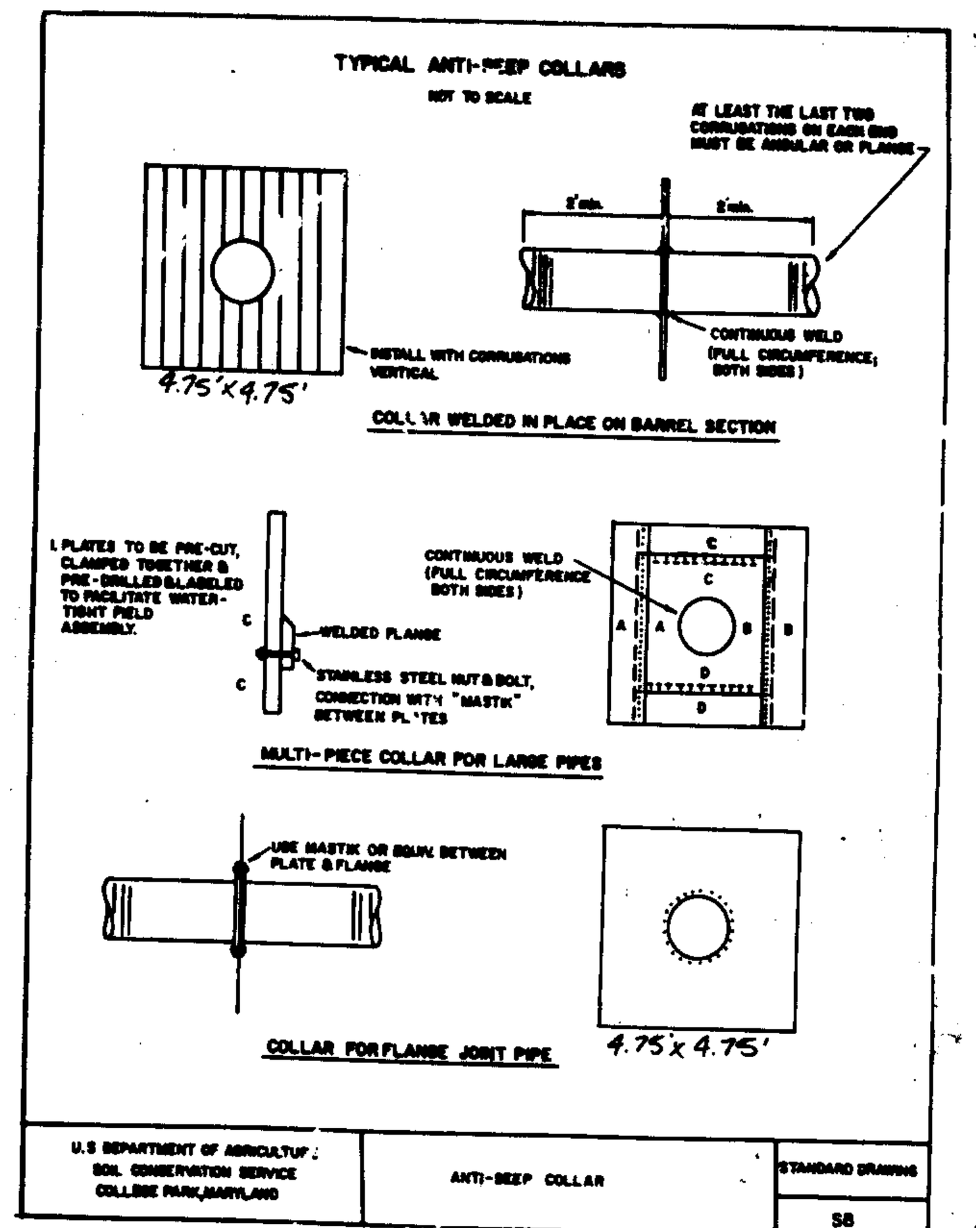
9. Placing Temperature - Concrete may not be placed at temperatures below 37o F with the temperature falling, or 34o with the temperature rising.

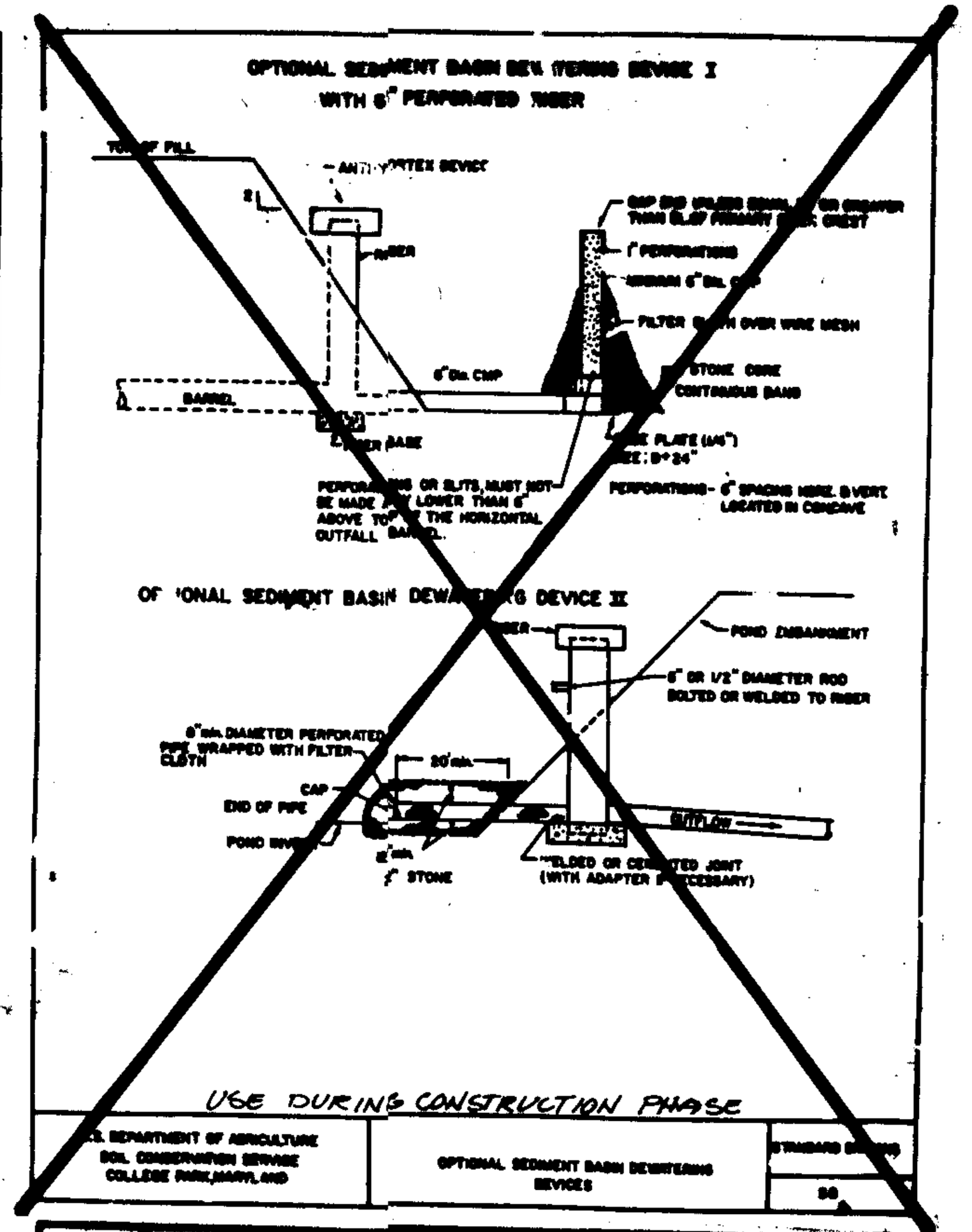
VI. STABILIZATION

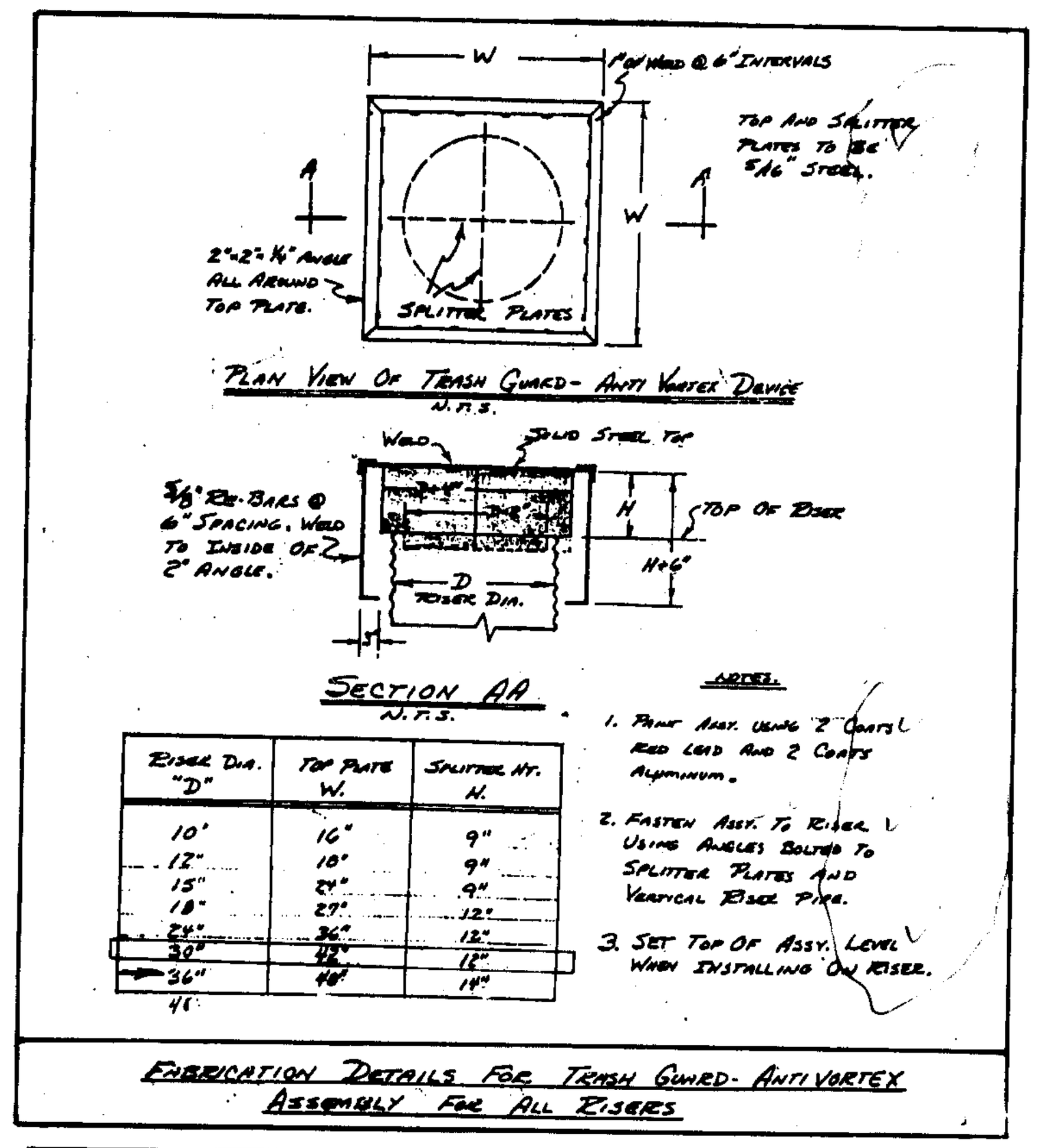
All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching (if required) in accordance with the vegetative treatment specifications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

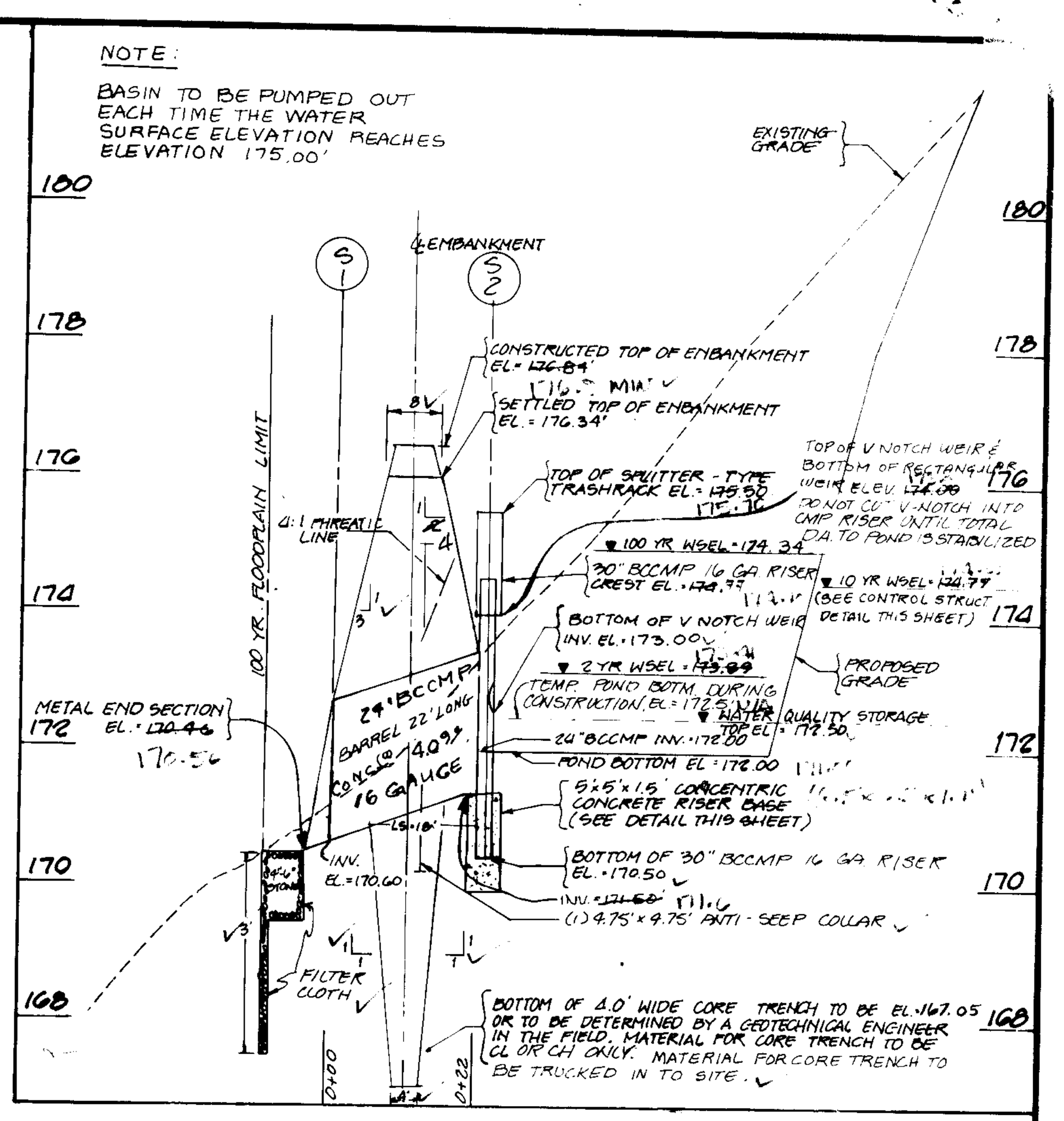
VII. EROSION AND SEDIMENT CONTROL

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.





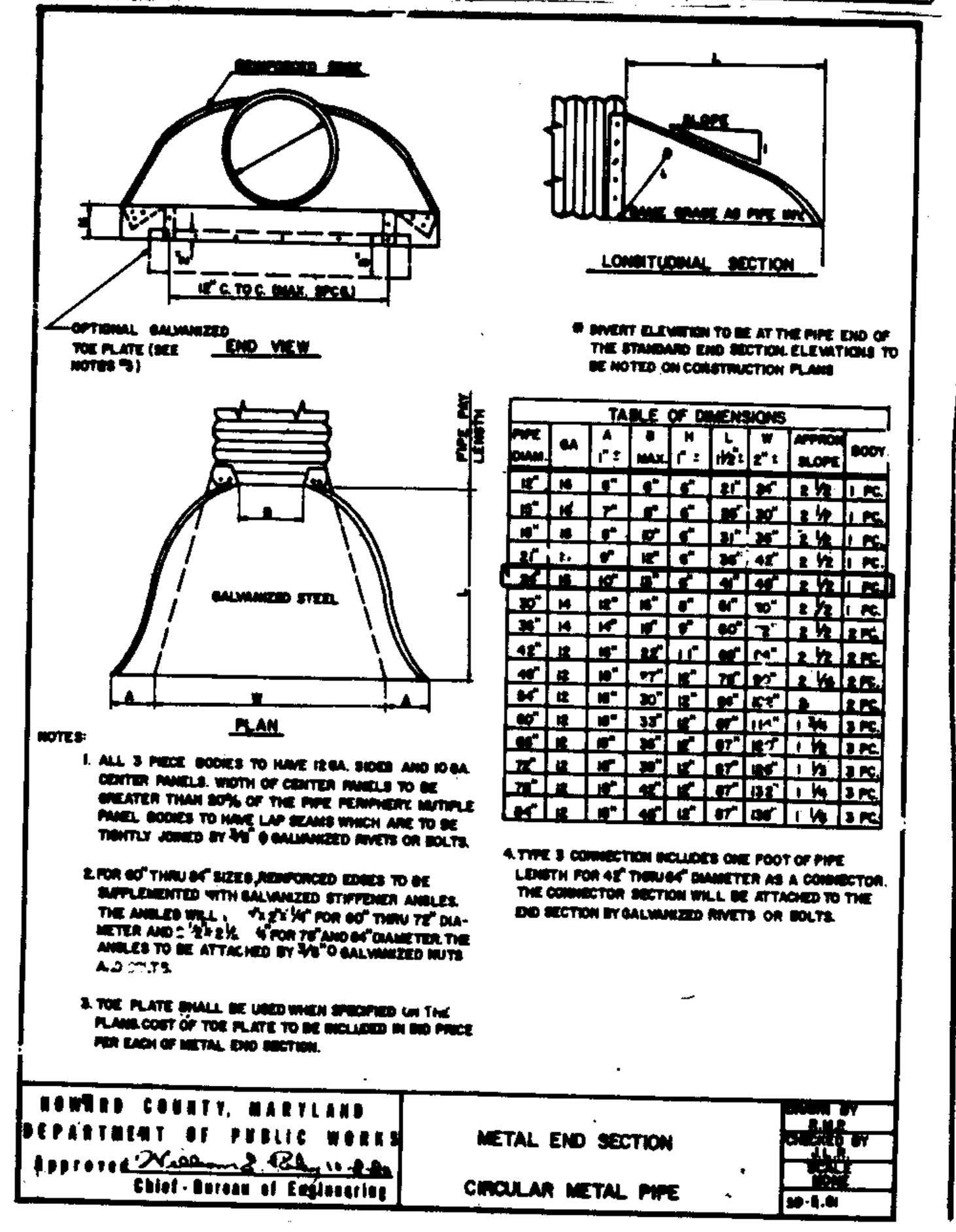


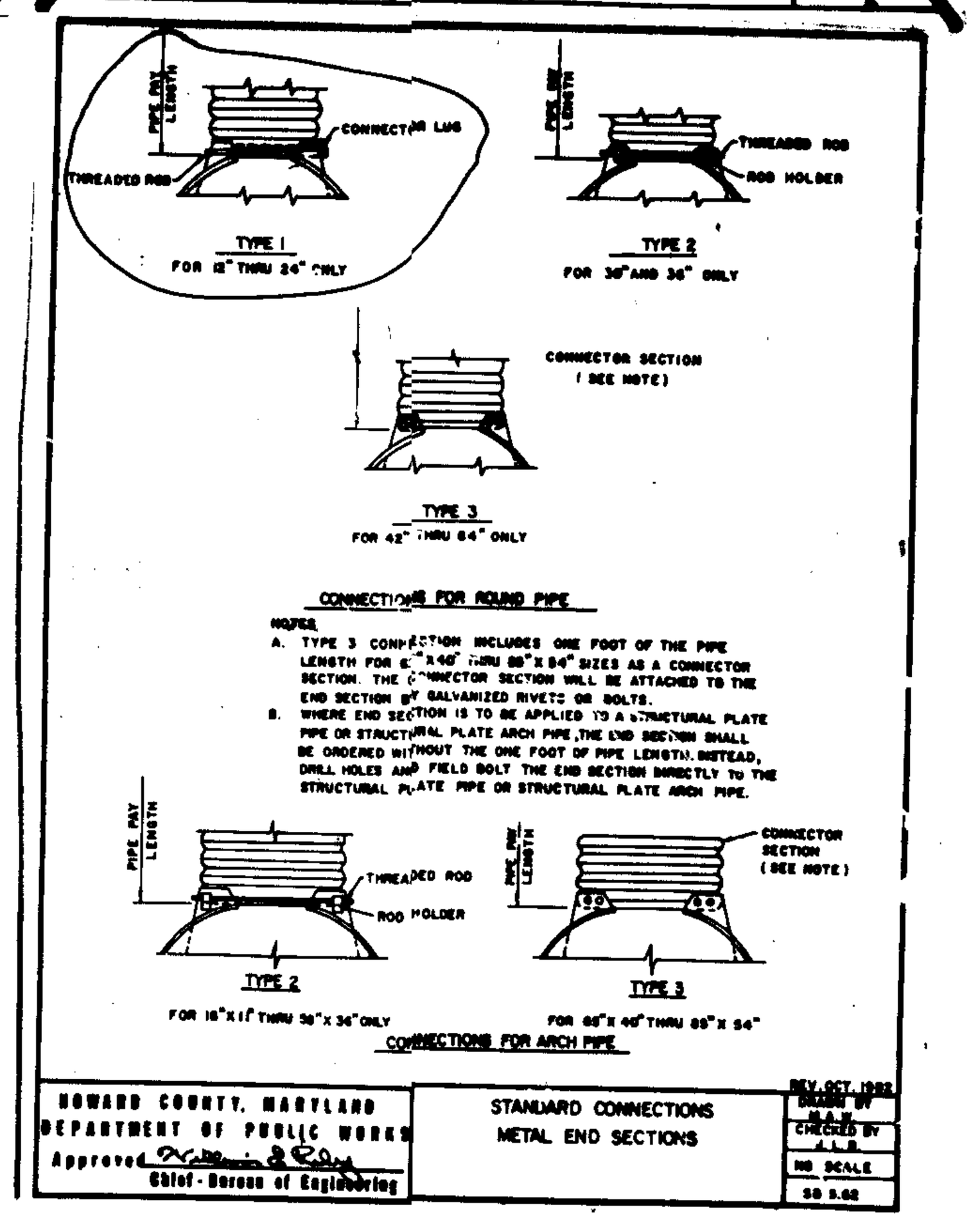


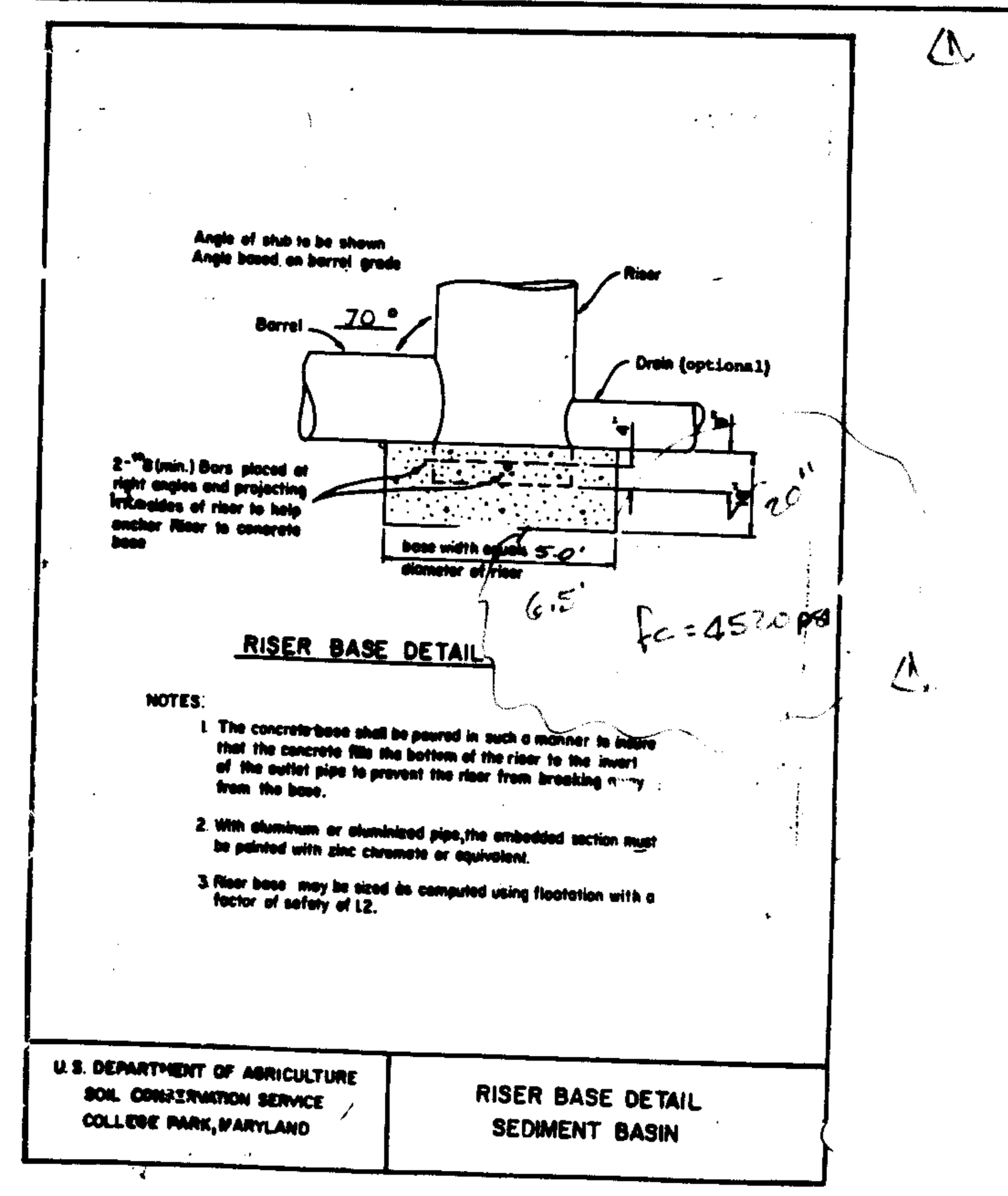
PROFILE ALONG THE CENTERLINE OF THE PRINCIPLE SPILLWAY - SWM DETENTION POND & TEMP SEDIMENT BASIN #1

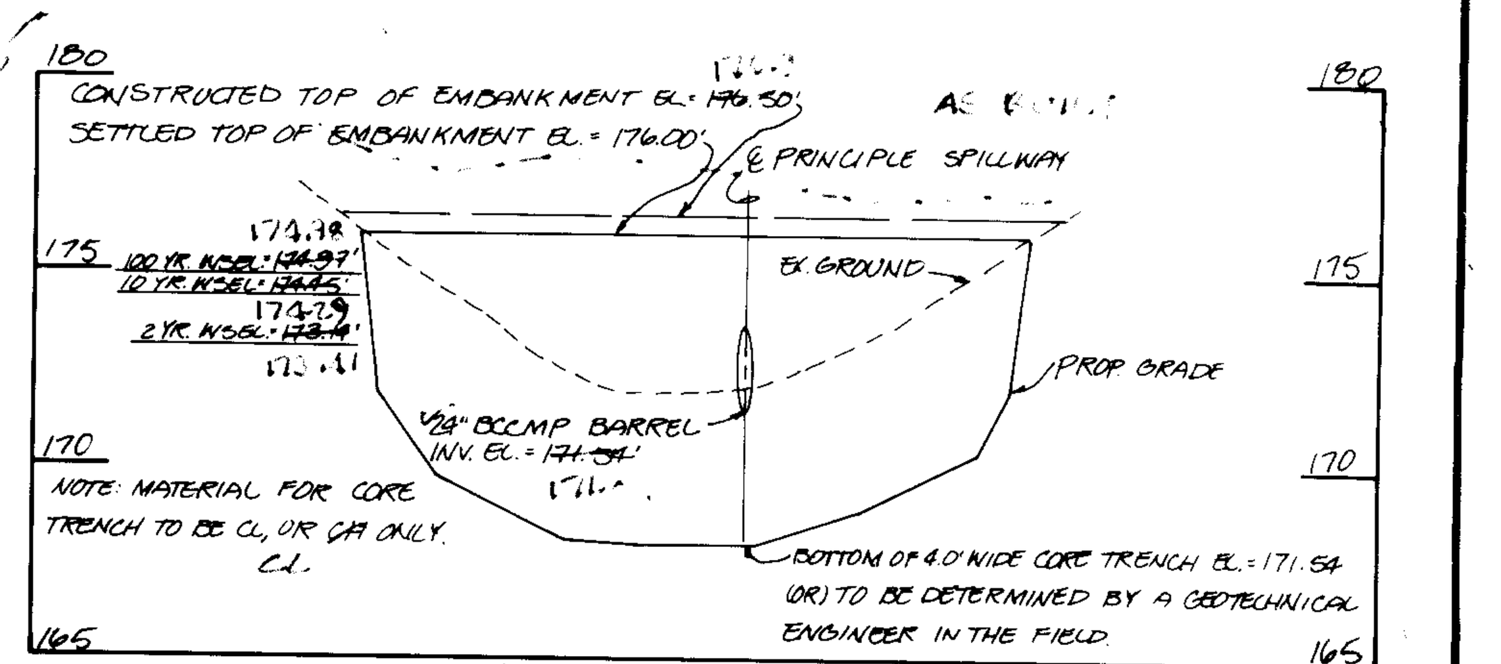
HAZARD CLASS "A"

SCALE: HORZ. 1"=20', VERT 1"=2'



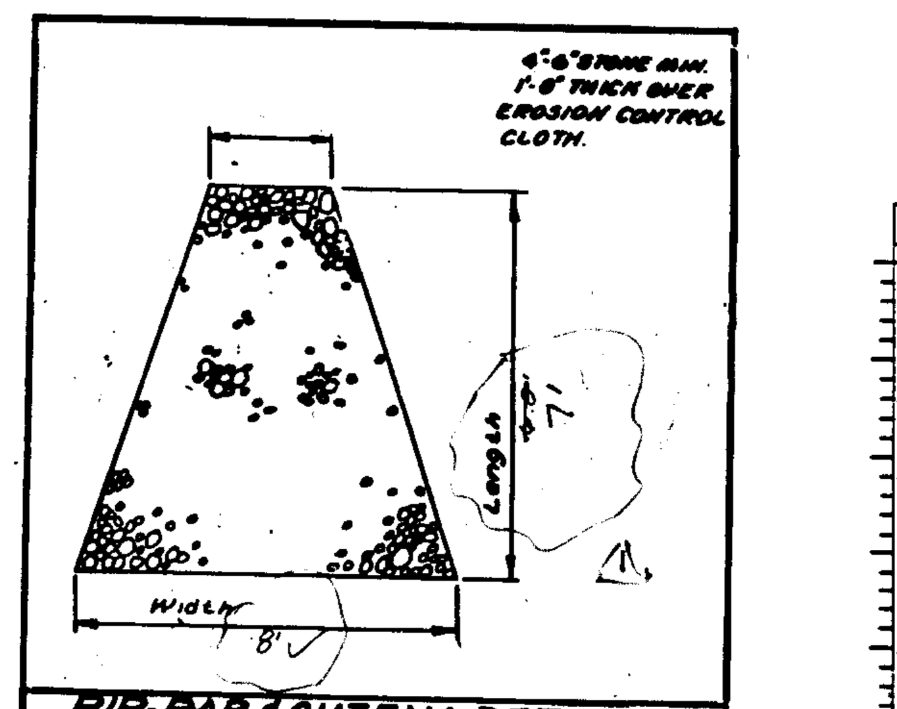






PROFILE ALONG ℄ OF EMBANKMENT - SWM DETENTION POND & TEMP SEDIMENT BASIN #1

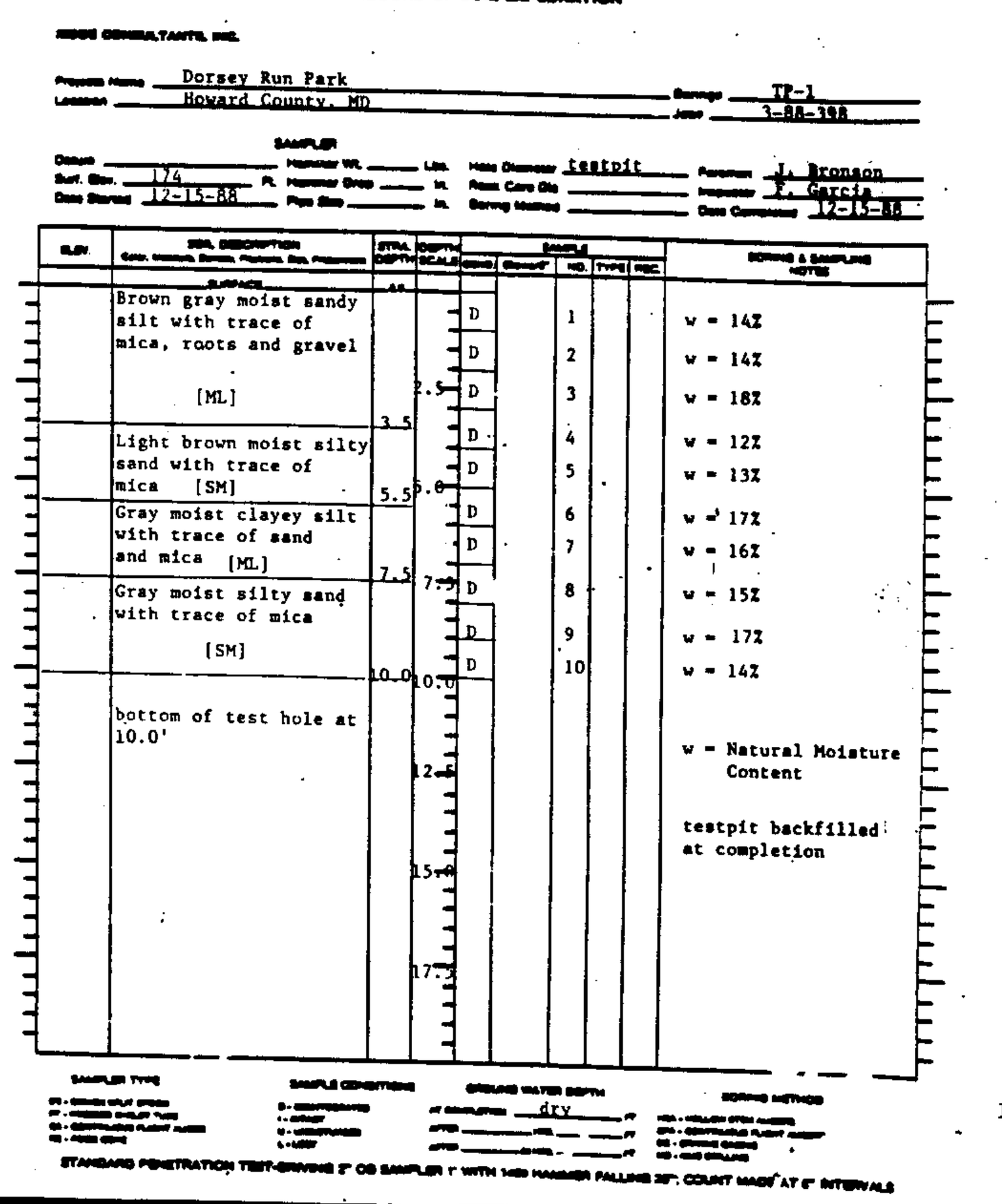
SCALE: HORZ 1"=50', VERT 1"=5'



RIP-RAP & OUTFALL DETAIL

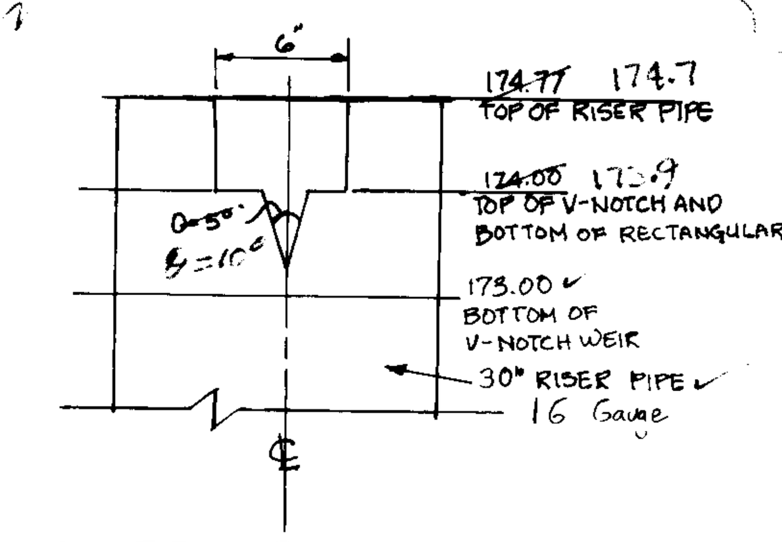
NOT TO SCALE

RECORD OF SOIL EXPLORATION



SEQUENCE OF CONSTRUCTION

1.	Obtain grading permit/revised grading permit.	1 Day
2.	Install all sediment controls including sediment basin, earth dikes, silt fence and trapezoidal ditch along access road. Install pipe from S-4 to S-5 and utilize existing sediment controls where possible.	1 Week
3.	Grade access road and site in accordance with the grading plan. Immediately stabilize all areas not to be roofed or paved in accordance with the temporary stabilization notes.	2 Weeks
4.	Construct timber retaining wall on 2:1 slope adjacent to lower parking area.	3 Days
5.	Install I-1 to S-3 and perforated pipe into temporary infiltration trench. Immediately block the inlet as per standard detail.	2 Days
6.	Construct temporary infiltration trench as per plan.	3 Days
7.	Install sewer and water house connections.	2 Days
8.	Construct building and the retaining wall next to loading area.	1½ Months
9.	Install all curb and gutter and sidewalks onsite and bituminous curb along west side of access road.	1 Week
10.	Install all P-1, P-2, & P-3 paving.	1 Week
11.	Stabilize all remaining undisturbed areas. Once all disturbed areas are stabilized as per the permanent seeding notes, unblock inlet I-1 and allow infiltration trench to function.	2 Days
12.	Convert temporary sediment basin into permanent stormwater detention/water quality pond.	3 Days
	a) Excavate material from basin. Insure that permanent bottom elevation is 172.00. b) Install rip-rap in swales entering the pond as shown on plan. c) Stabilize the entire pond area in accordance with the permanent seeding notes on sheet 7 of 9. d) Cut V-notch weir into riser as per detail on this sheet	4 Days
13.	With the permission of the sediment control inspector remove all sediment control devices and immediately stabilize all remaining disturbed areas in accordance with the permanent stabilization notes.	1 Week



CONTROL STRUCTURE DETAIL

NOT TO SCALE

OWNER / DEVELOPER
RICHARD & SUSAN SANDER
233 CREEKWOOD DRIVE
FASTERVILLE, PA. 19047

APPROVED: HOWARD COUNTY DEPT OF PLANNING AND ZONING

Joseph Rutter — DIRECTOR — DATE 3/1/91

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 2/27/91

REVISION CHART

DATE	REVISION

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

DIRECTOR (Acting) — DATE 2/12/91

CHIEF BUREAU OF ENGINEERING — DATE 2-11-91

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

COUNTY HEALTH OFFICER — DATE 2/15/91

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.

U.S. SOIL CONSERVATION SERVICE — DATE 11/27/90

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 11/27/90

ENGINEERS CERTIFICATE

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

ENGINEERS SIGNATURE — DATE 11-15-90

DEVELOPERS 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 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."

Richard C Sander — DEVELOPERS SIGNATURE — DATE 11/15/90

STORMWATER MANAGEMENT CONSTRUCTION DETAIL SHEET

DORSEY RUN PARK - UNIT NO. 1C
BUILDING No 4

HOWARD COUNTY, MARYLAND
TAX MAP 45 PARCEL 5
6TH ELECTION DISTRICT

KIDDE CONSULTANTS, INC.

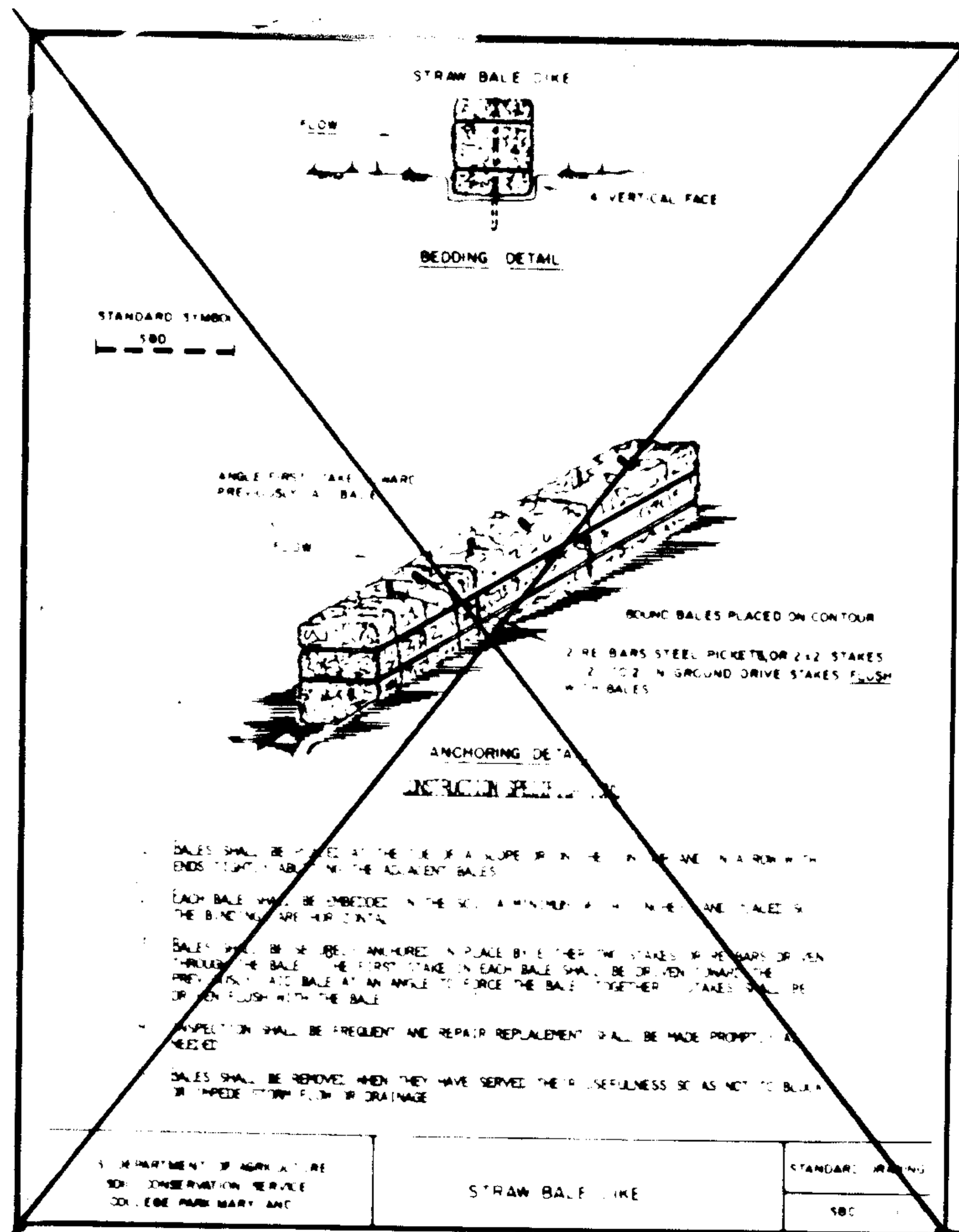
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET SUITE 100 LAUREL MD
(Wash) 301 953 1821 792 8086 Balt

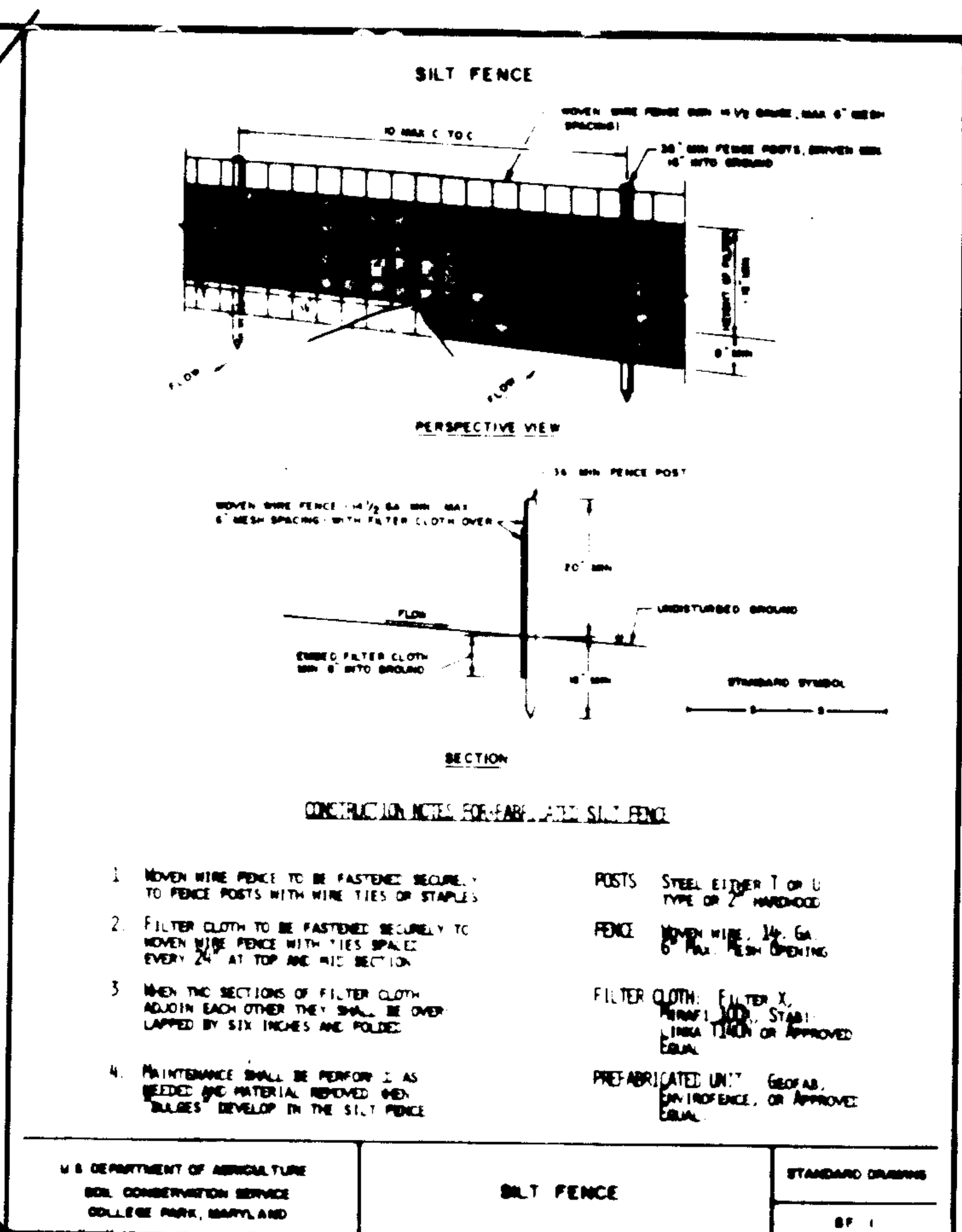
DATE	REVISION	BY
8/21/92		SW

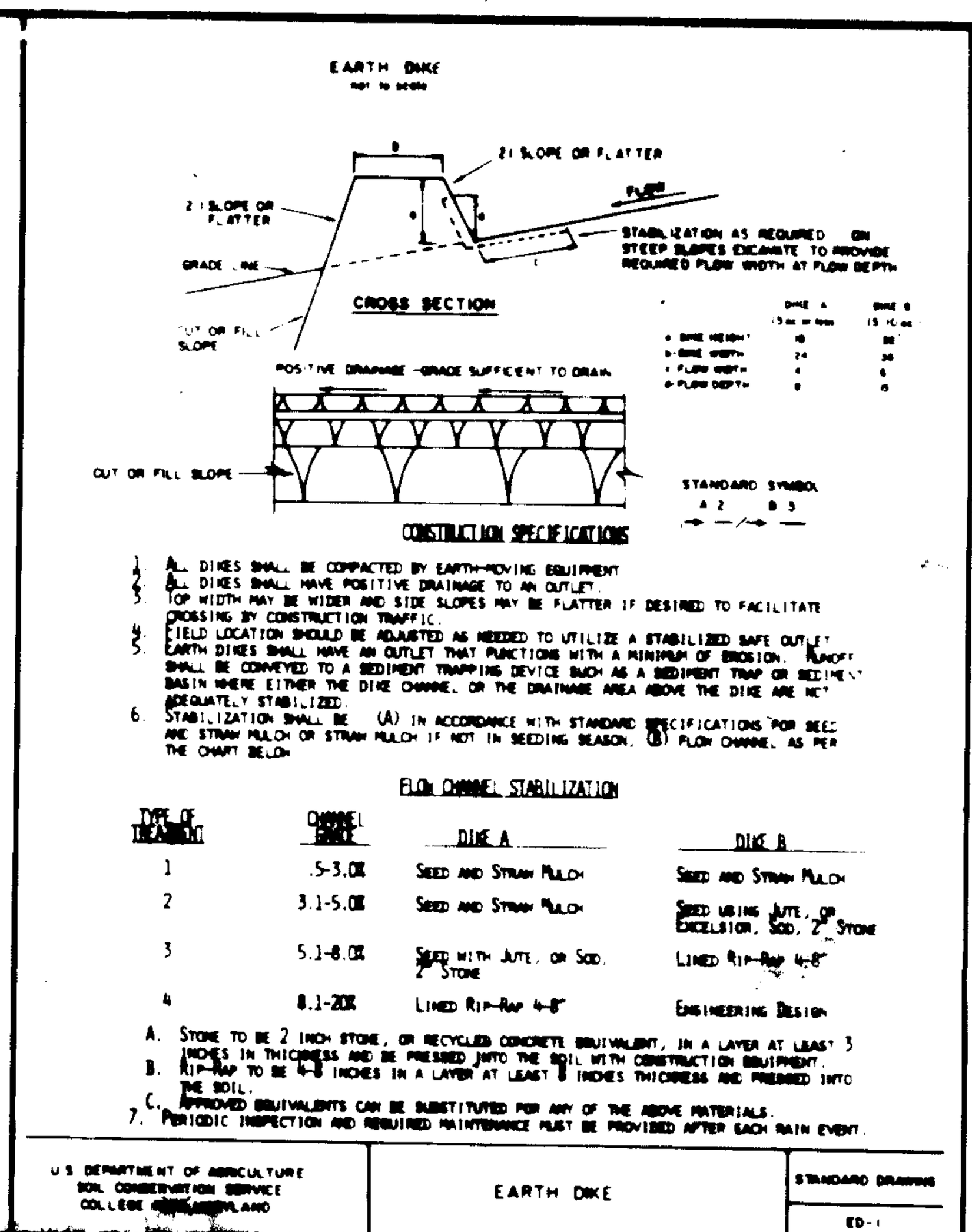
SURVEYED BY: OTHERS
COMPUTED BY: SDH
DRAWN BY: RJC
CHECKED BY: BIS, JCF

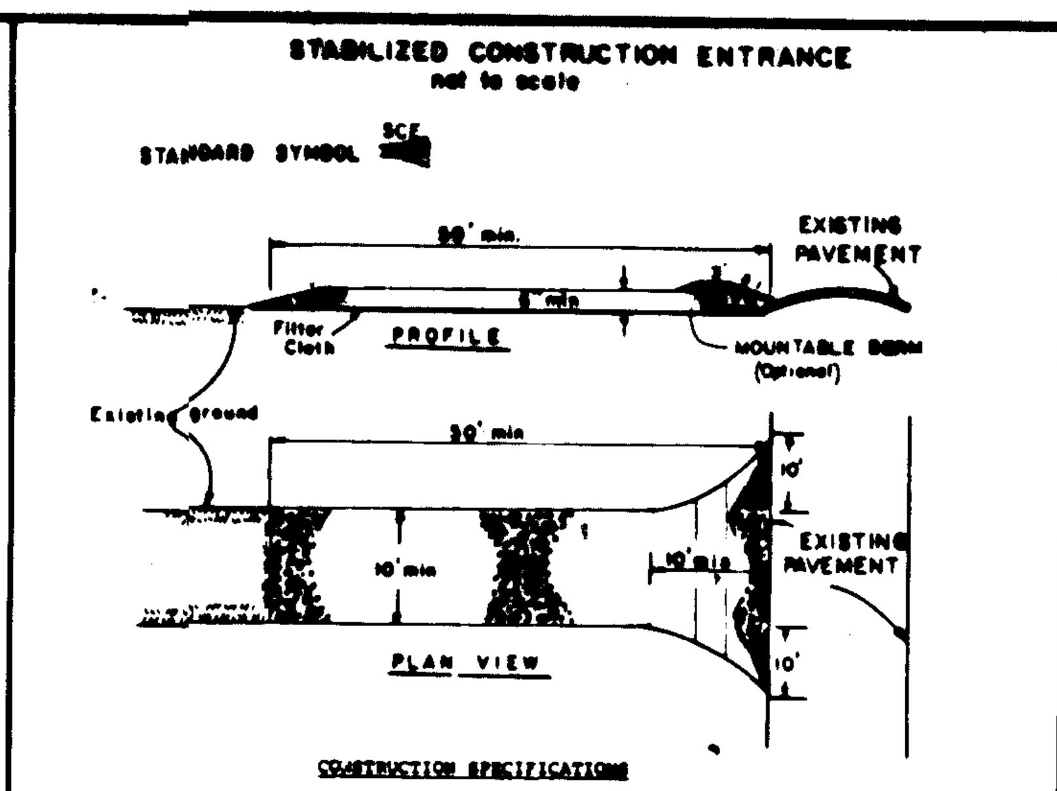
DATE MAY 1990

Drwg No 6 OF 9









CONSTRUCTION SPECIFICATIONS

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

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	STABILIZED CONSTRUCTION ENTRANCE	Standard Drawing

3.3.6. Construction Specifications

3.3.6.1. Timing

An infiltration trench shall not be constructed or placed in service until all of the contributing drainage area has been stabilized and approved by the responsible inspector.

3.3.6.2. Trench Preparation

Excavate the trench to the design dimensions. Excavated materials shall be placed away from the trench sides to enhance trench wall stability. Large tree roots must be trimmed flush with the trench sides in order to prevent fabric puncturing or tearing during subsequent installation procedures. The side walls of the trench shall be roughened where sheared and sealed by heavy equipment.

3.3.6.3. Fabric Laydown

The filter fabric roll must be cut to the proper width prior to installation. The cut width must include sufficient material to conform to trench perimeter irregularities and for a 6-inch minimum top overlap. Place the fabric roll over the trench and unroll a sufficient length to allow placement of the fabric down into the trench. Stones or other anchoring objects should be placed on the fabric at the edge of the trench to keep the lined trench open during windy periods. When overlaps are required between rolls, the upstream roll should lap a minimum of 2 feet over the downstream roll in order to provide a shingled effect. The overlap ensures fabric continuity or to ensure that the fabric conforms to the excavation surface during aggregate placement and compaction.

3.3.6.4. Stone Aggregate Placement and Compaction

The stone aggregate should be placed in lifts and compacted using plate compactors. As a rule of thumb, a maximum loose lift thickness of 12 inches is recommended. The compaction process ensures fabric conformity to the excavation sides, thereby reducing the potential for soil piping, fabric clogging, and settlement problems.

3.3.6.5. Overlapping and Covering

Following the stone aggregate placement, the filter fabric shall be folded over the stone aggregate to form a 6" minimum longitudinal lap. The desired fill soil or stone aggregate shall be placed over the lap at sufficient intervals to maintain the lap during subsequent backfilling.

3.3.6.6. Contamination

Care shall be exercised to prevent natural or fill soils from intermixing with the stone aggregate. All contaminated stone aggregate shall be removed and replaced with uncontaminated stone aggregate.

3.3.6.7. Voids Behind Fabric

Voids can be created between the fabric and excavation sides and shall be avoided. Removing boulders or other obstacles from the trench walls is one source of such voids. Natural soils should be placed in these voids at the most convenient time during construction to ensure fabric conformity to the excavation sides. Soil piping, fabric clogging, and possible surface subsidence will be avoided by this remedial process.

3.3.6.8. Unstable Excavation Sides

Vertically excavated walls may be difficult to maintain in areas where the soil moisture is high or where soft cohesive or cohesionless soils predominate. These conditions may require laying back of the side slopes to maintain stability; trapezoidal rather than rectangular cross sections may result.

3.3.6.9. Vegetative Buffer

A vegetative buffer of at least 20 feet (wider, if possible) shall be used to intercept surface runoff from all impervious areas.

3.3.6.10. Traffic Control

Heavy equipment and traffic shall be restricted from travelling over the infiltration areas to minimize compaction of the soil.

3.3.6.11. Observation Well

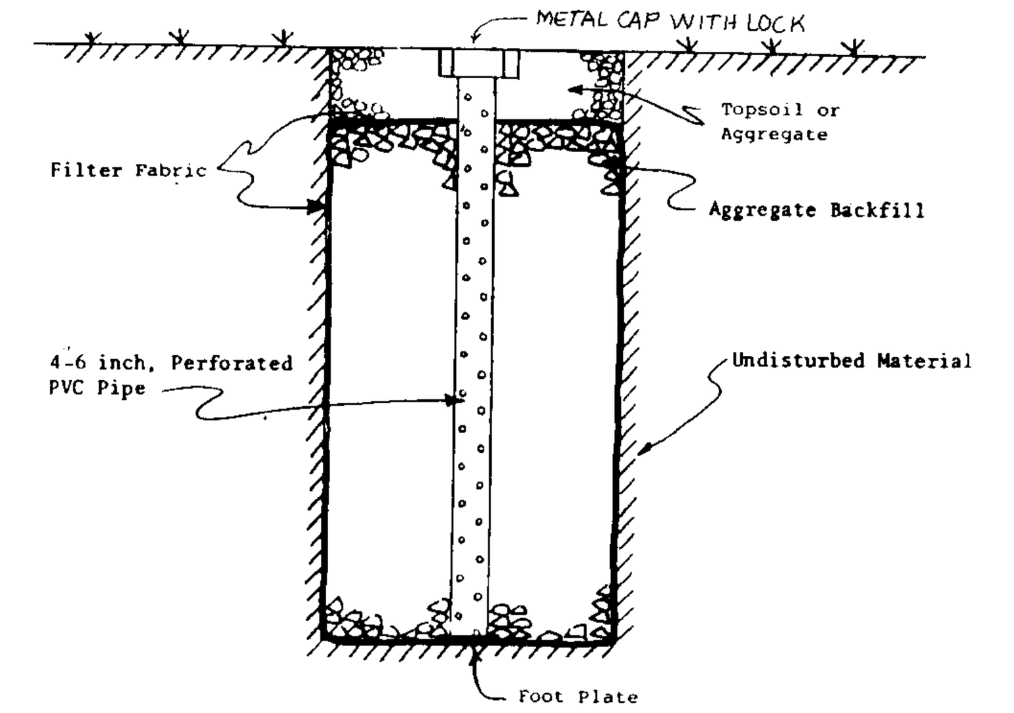
An observation well, as described in subsection 3.3.4.8 and Figure 3-5 shall be provided. The depth of the well at the time of installation will be clearly marked on the well cap.

3.3.7. Maintenance

Infiltration trenches shall be designed to minimize maintenance. However, it is recognized that all infiltration facilities are subject to clogging by sediment, oil, grease, grit and other debris. In addition, the performance and longevity of these structures is not well documented. Consequently, a monitoring observation well is required for all infiltration structures.

The observation well shall be monitored periodically. For the first year after completion of construction, the well should be monitored on a quarterly basis and after every large storm. It is recommended that a log book be maintained indicating the rate at which the facility dewaters after large storms and the depth of the well for each observation. Once the performance characteristics of the structure have been verified, the monitoring schedule can be reduced to an annual basis, unless the performance data indicate that a more frequent schedule is required.

Sediment build-up in the top foot of stone aggregates or the surface inlet should be monitored on the same schedule as the observation well. A monitoring well in the top foot of stone aggregate will be required when the trench has a stone surface. Sediment deposited shall not be allowed to build up to the point where it will reduce the rate of infiltration into the trench.



OBSERVATION WELL DETAIL

PERMANENT SEEDING NOTES

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

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

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 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).
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 1½ 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.

Matinenance - Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

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

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

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 2½ 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.

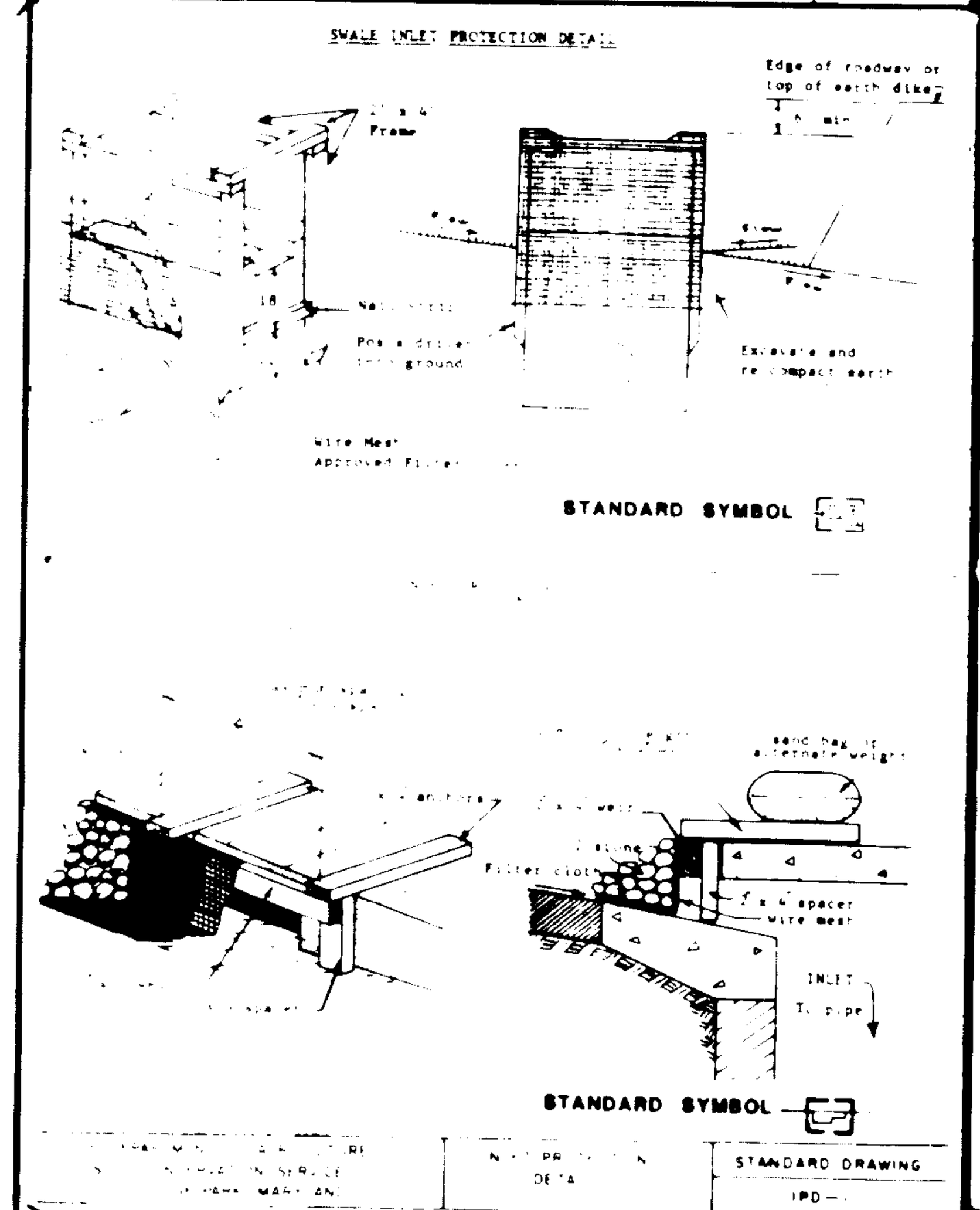
Mulching: Apply 1½ to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

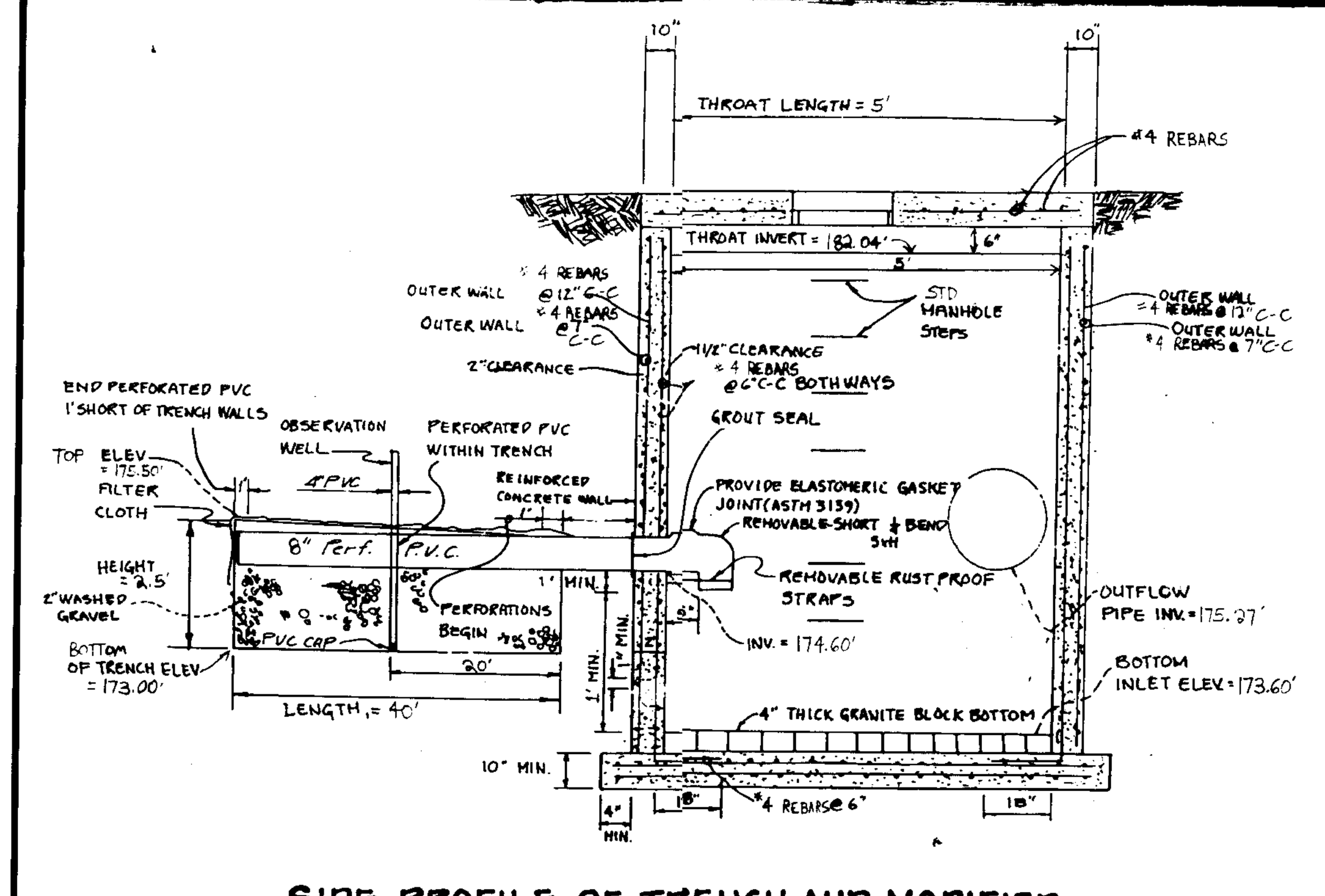
Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

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. (992-2437)
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 as to all other disturbed or graded areas on the project site.
4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chaper 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52.) Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
6) All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector
7) Site Analysis:
   - Total Area of Site 3.83 Acres
   - Area Disturbed 3.05 Acres
   - Area to be roofed or paved 1.15 Acres
   - Area to be vegetatively stabilized 1.90 Acres
   - Total Cut 3,570.00 Cu. yds
   - Total Fill 3,570.00 Cu. yds
   - Offsite waste/borrow area location N/A
8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9) Additional sediment controls must be provided, if deemed necessary by the Howard County DPW sediment control inspector.

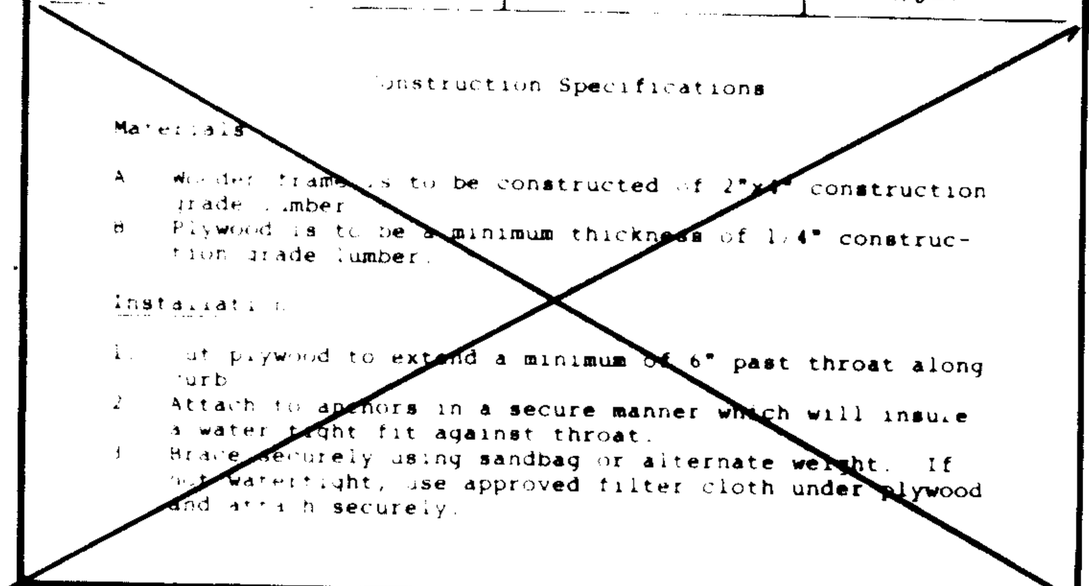
On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may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

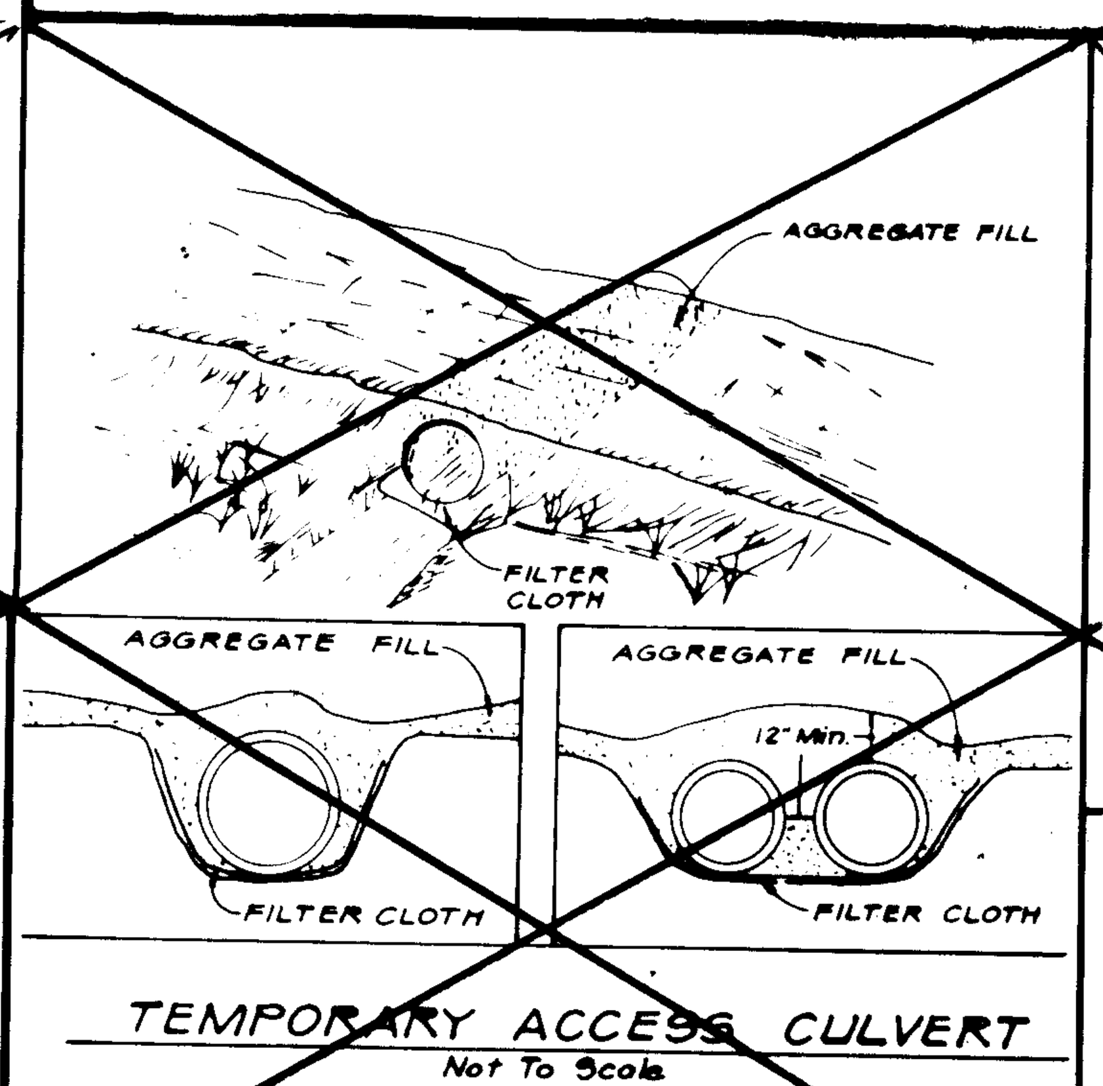


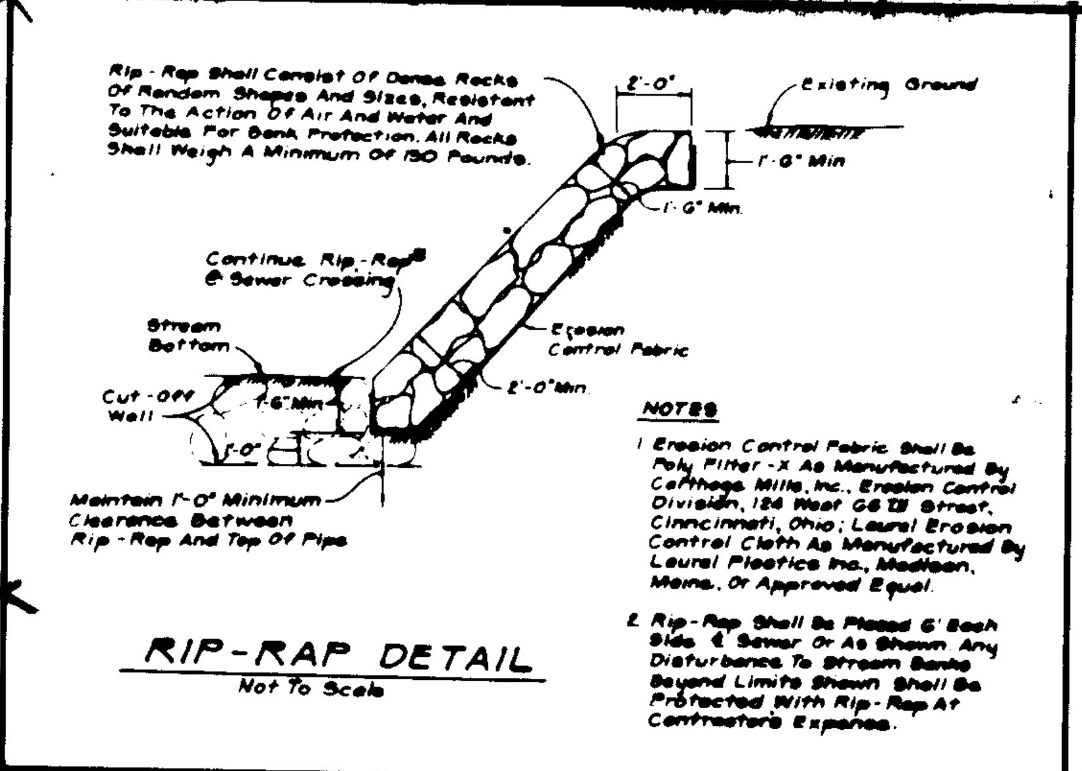


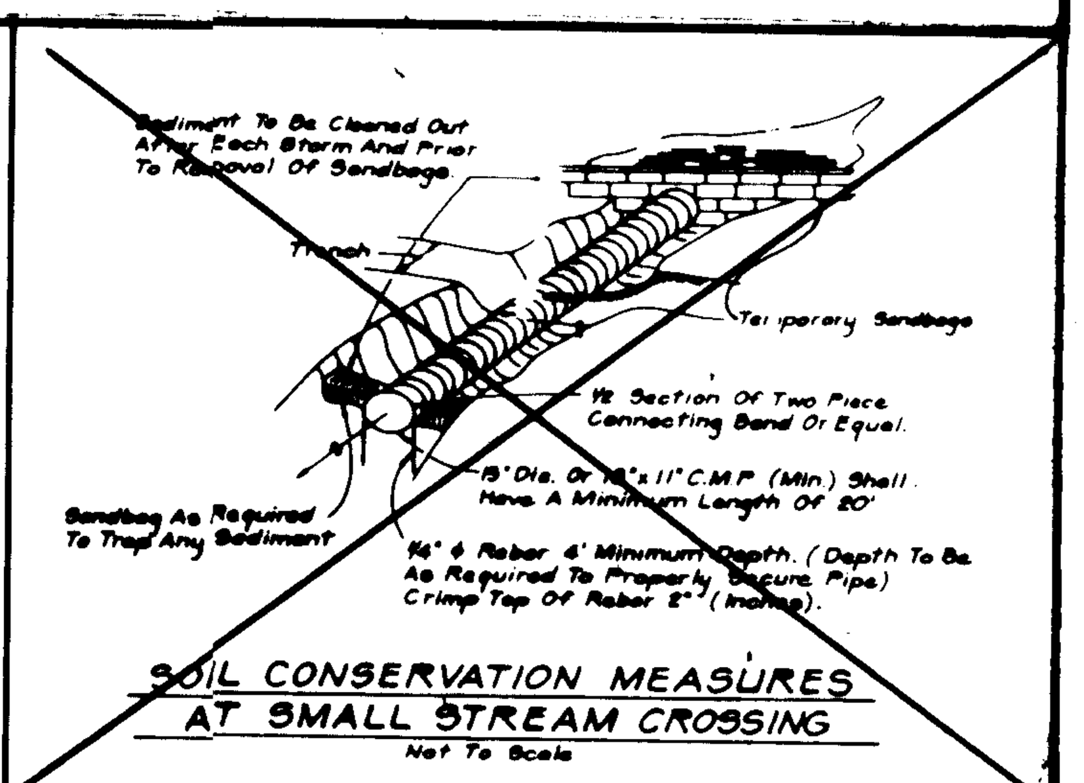
SIDE PROFILE OF TRENCH AND MODIFIED TYPE A-5 INLET

NOT TO SCALE









REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

[signature] 11/27/90
SIGNATURE DATE

U S SOIL CONSERVATION SERVICE

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

[signature] 11/27/90
Approved Howard S.C.D. DATE

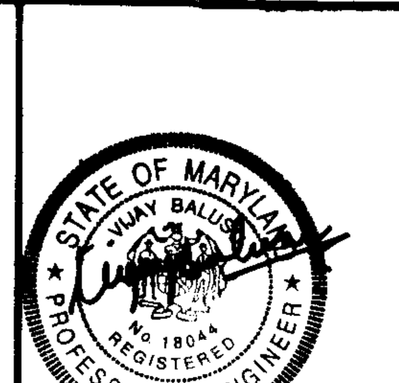
APPROVED: For Public Water And Public Sewerage Systems, Howard County Health Department

[signature] 2/15/91
COUNTY HEALTH OFFICER DATE

APPROVED: Howard County Dept. of Planning and Zoning

[signature] 3/1/91
PLANNING DIRECTOR DATE

[signature] 2/21/91
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE



OWNER/DEVELOPER
RICHARD & SUSAN SANDER
233 CREEKWOOD DRIVE
FASTERVILLE, PA. 19047

NOTE: FOR SEQUENCE OF CONSTRUCTIONS, SEE SHEET 6 OF 9

INFILTRATION DETAILS AND SEDIMENT CONTROL DETAIL SHEET

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

[signature] 2/12/91
DIRECTOR Acting DATE

[signature] 2-11-91
CHIEF BUREAU OF ENGINEERING DATE

OWNER'S / DEVELOPER'S CERTIFICATION

"I/We certify that all development and construction will be done according to this plan, 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 also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature [signature] Date 11/15/90
Name Richard C. Sander Title President Phone No [illegible]
Firm [illegible] Complete Address 233 Creekwood Drive, Fasterville, PA 19047

ENGINEER'S CERTIFICATE

"I 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] 11-15-90
VIJAY BALUSU Date

Registered Professional Engineer #18044

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
(Wash.) (301) 953-1821 / 792-8066 (Balt.)

DORSEY RUN PARK-UNIT NO. 1C
BUILDING Nº 4
HOWARD COUNTY, MARYLAND
TAX MAP 45 PARCEL 5
6TH ELECTION DISTRICT

	DATE	REVISIONS	SHEET	DATE	JOB NUMBER
Drafting RJL Jr.			7 OF 9	MAY, 1990	88-052 16
Check SDH				SCALE	
Design SDH				AS SHOWN	
Check DIS, JCF					

FOR DRAINAGE AREA ONLY

LEGEND

- PROPOSED DRAINAGE DIVIDE
- ON-SITE AREA TO BE MANAGED BY ADJACENT OWNERS SWM FACILITIES
- FLOW DIRECTION
- LIMIT OF SUBMISSION

LIMIT OF WETLANDS
- DEVELOPMENT AT NO POINT WILL BE WITHIN BUFFER AREA
- WETLAND DELINEATED BY KIDDE CONSULTANTS, INC

NOTE: THE WETLAND BUFFER INDICATED ON THIS SDP DOES NOT AFFECT THE INITIAL CONSTRUCTION OF A BUILDING OR PAVING ON A LOT. IT DOES PROHIBIT SUBSEQUENT CLEARING, GRADING OR CONSTRUCTION IN THE BUFFER AREA. MAINTENANCE OF THE BUILDING AND PAVED AREAS, LANDSCAPING, AND UTILITIES IS PERMITTED

FLOODPLAIN LIMITS DETERMINED BY THE RE-MER GROUP

A=0.30 Ac, C=0.86, (1) Z=M-2, I=85%

A=3.4 Ac, C=0.26, (2) Z=M-2, I=35%

A=0.60 Ac, C=0.78, (1) Z-M-2, I=88%

Q10 TO CURB CUT = 3.88 cfs

PROP TEMP INFILTRATION TRENCH TO PROVIDE WATER QUALITY FOR ACCESS ROAD

REF TO SDP 88-71

EX W & SEWER

100 YEAR FLOODPLAIN 140.5

UNCONTROLLED ON-SITE AREA

PROPOSED TC TO POND #1

AREA TO BE PAINT STRIPED

OFFICE FF=1000.50 1900 ft²

BUILDING # 4 FF=1000.50 10,800 ft² WAREHOUSE

NOTE: ENTIRE WAREHOUSE ROOF DRAINS AS INDICATED BY ARROWS

EQUIPMENT STORAGE AREA

FIRE LANE

OVERHEAD PLAN

TAR & CHIP FIRE ACCESS ROAD

TEMP. SEDIMENT BASIN

STORMWATER MANAGEMENT WATER QUALITY DETENTION POND # 1

TOTAL DRAINAGE AREA TO POND # 1 = 1.87 Acres

UNCONTROLLED ON-SITE AREA

260' SHALLOW CONC. FLOW

100' OVERLAND FLOW

EXISTING TIME OF CONCENTRATION TO POND # 1

BURDETT OXYGEN CO., INC.
871 / 244
PARCEL B
ZONE M-2

EXISTING BUILDING BY OTHERS
REFER TO SDP-90-102

EX BUILDING NO 2
SDP 86-255

EXIST STRUCTURE & PIPE

PRIVATE DRIVE

OWNER, DEVELOPER
RICHARD E. SUSAN SNYDER
233 CREEKWOOD DRIVE
ASHEVILLE, PA 1900

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DIRECTOR — DATE 3/1/91

CHIEF, DIVISION OF PLANNING AND LAND DEVELOPMENT — DATE 2/22/91

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

DIRECTOR — DATE 2/12/91

CHIEF BUREAU OF ENGINEERING — DATE 2-11-91

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

COUNTY HEALTH OFFICER — DATE 2/15/91

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.

USDA SOIL CONSERVATION SERVICE — DATE 11/27/90

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 11/27/90

ENGINEERS CERTIFICATE

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

ENGINEERS SIGNATURE — DATE 11-15-90

DEVELOPERS 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 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."

DEVELOPERS SIGNATURE — DATE 11/15/90

REVISION CHART

DATE	REVISION

PUMP & POWER WAREHOUSE

DRAINAGE AREA MAP

DORSEY RUN PARK - UNIT NO. 1C
BUILDING NO 4
HOWARD COUNTY, MARYLAND
TAX MAP 25 PARCEL B
6TH ELECTION DISTRICT

KIDDE CONSULTANTS, INC.

ENGINEERS • PLANNERS • SURVEYORS

11/27/90 ADDED FIRE ACCESS RD - ADDED WETLAND LINE

SURVEYED BY: OTHERS
COMPUTED BY: SDH
DRAWN BY: RJL
CHECKED BY: SDH, BJS
Drwg No 8 of 9

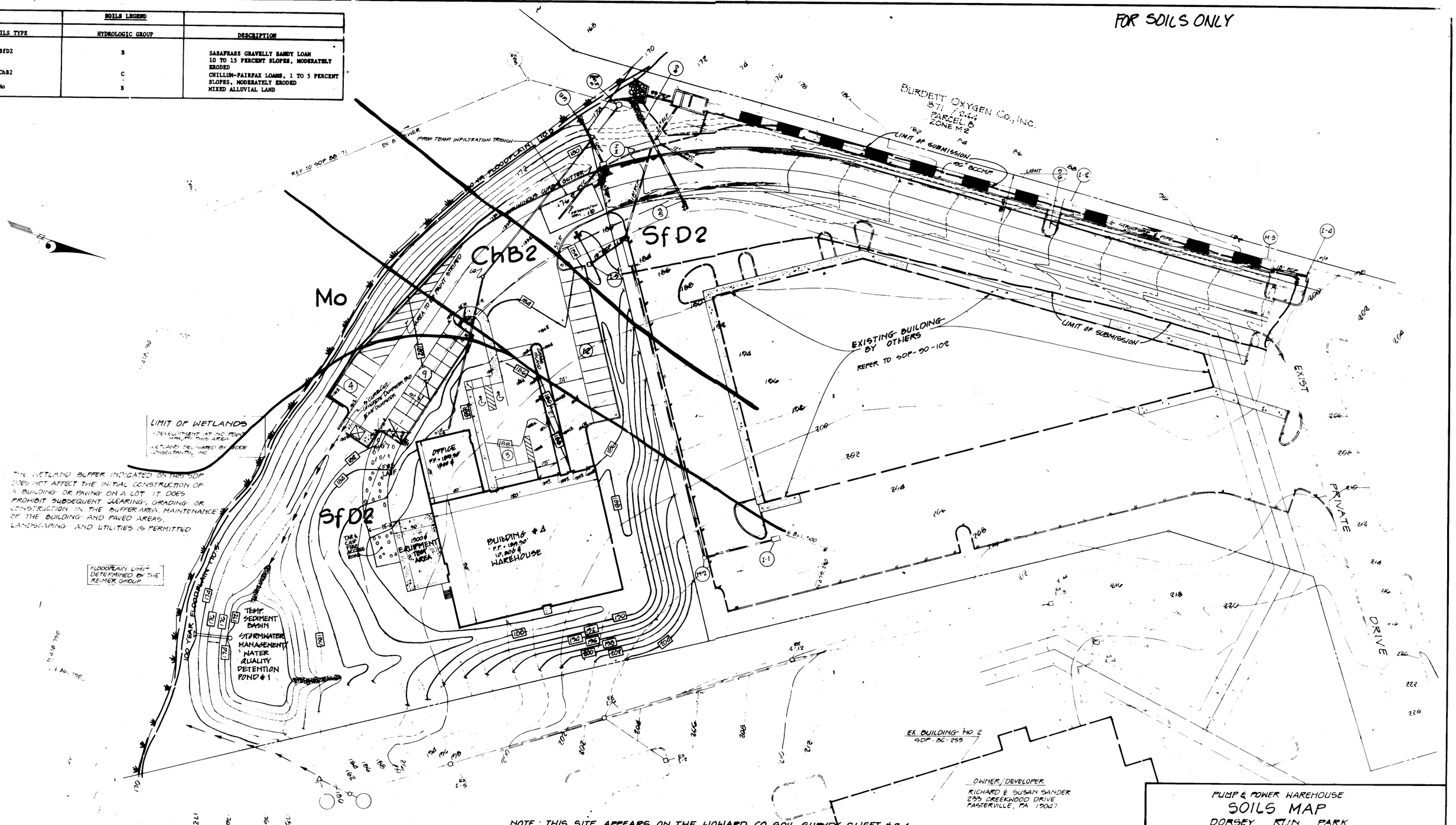
STATE OF MARYLAND — BRUCE J. SNYDER — No. 10824 — REGISTERED PROFESSIONAL ENGINEER

DATE MAY 1990 SCALE 1" = 30'

SDP 90-207

FOR SOILS ONLY

SOILS LEGEND		
SOILS TYPE	HYDROLOGIC GROUP	DESCRIPTION
SfD2	B	SASAFRASS GRAVELLY SANDY LOAM 10 TO 15 PERCENT SLOPES, MODERATELY ERODED
ChB2	C	CHILLUM-FAIRFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED
Mo	B	MIXED ALLUVIAL LAND



NOTE: THIS SITE APPEARS ON THE HOWARD CO. SOIL SURVEY SHEET #34

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DIRECTOR — DATE 3/1/91

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 2/27/91

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

DIRECTOR Acting — DATE 2/12/91

CHIEF BUREAU OF ENGINEERING — DATE 2-11-91

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

COUNTY HEALTH OFFICER — DATE 2/5/91

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.

U.S. SOIL CONSERVATION SERVICE — DATE 11/27/90

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 11/27/90

ENGINEERS CERTIFICATE

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

ENGINEERS SIGNATURE — DATE 11-15-90

DEVELOPERS 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 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."

DEVELOPERS SIGNATURE — DATE 11/15/90

REVISION CHART	
DATE	REVISION

PUMP & POWER WAREHOUSE

SOILS MAP

DORSEY RUN PARK
BUILDING No. 4
HOWARD COUNTY, MARYLAND
TAX MAP 45 PARCEL 5
6TH ELECTION DISTRICT

KIDDE CONSULTANTS, INC.

ENGINEERS • PLANNERS • SURVEYORS
1100 WEST PATAPSCO STREET, SUITE 100 LAUREL, MD. 20707
(301) 953-1823 (301) 792-8086 Balt.

DATE	REVISION	BY
11/27/91	ADDED FIRE ACCESS RD-MOVED HYDRANT	SDH

SURVEYED BY: OTHERS
COMPUTED BY: SDH
DRAWN BY: RJC
CHECKED BY: B/S, SDH
Drwg. No. 9 OF 9

STATE OF MARYLAND — HUNT BALDWIN — No. 10464 — REGISTERED PROFESSIONAL ENGINEER

DATE MAY 1990 SCALE 1"=30'

SDP 90-207