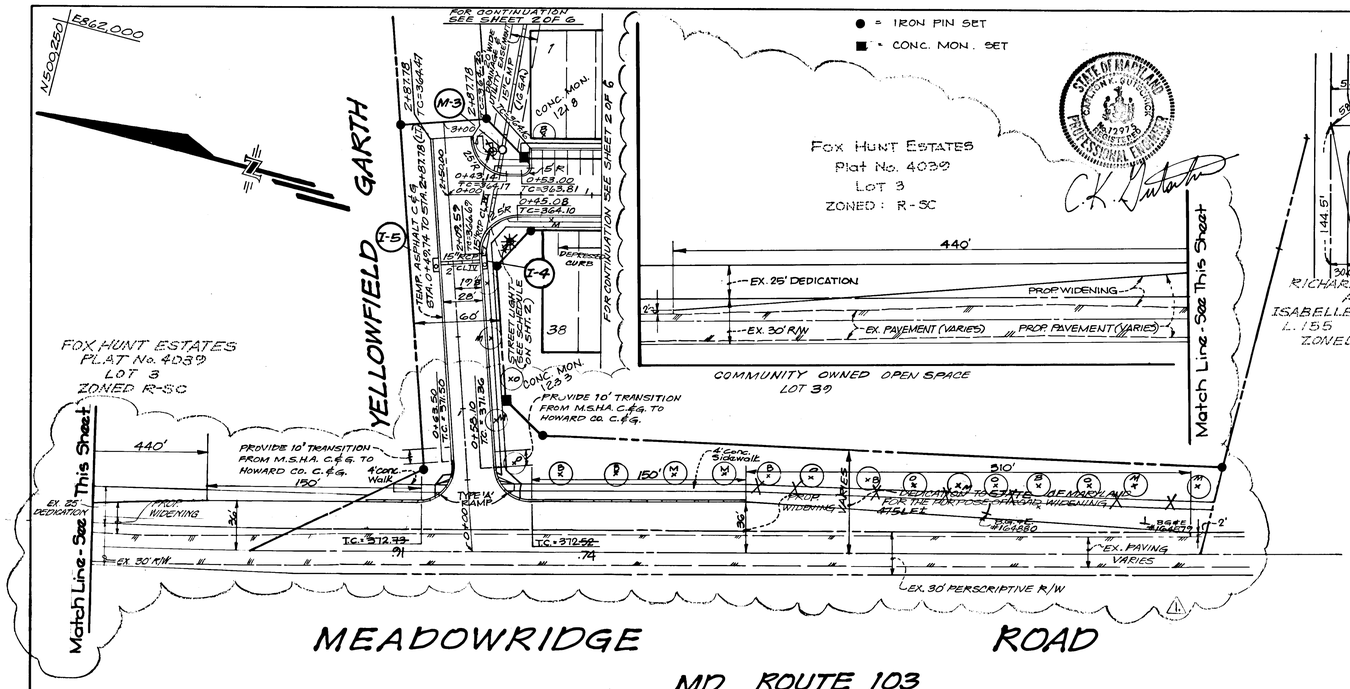


MEADOWRIDGE ROAD

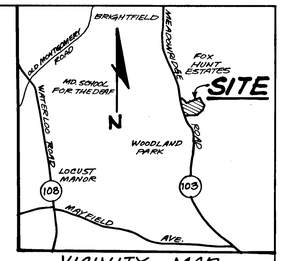
MD. ROUTE 103

PLAN

SCALE: 1" = 50'

GENERAL NOTES:

1. ALL STORM DRAIN & PAVING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST DETAILS & SPECIFICATIONS OF HOWARD COUNTY & MD. S.H.A.
2. TYPES OF STORM DRAIN STRUCTURES REFER TO THE STANDARD DETAILS OF HOWARD COUNTY & MD. S.H.A.
3. TRENCH COMPACTION FOR STORM DRAINS WITHIN ROAD OR STREET RIGHT-OF-WAY LIMITS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOL. II CLASS D TRENCH BEDDING TO BE USED FOR ALL STORM DRAIN, UNLESS SHOWN OTHER WISE, SEE DETAIL SHT. 3
4. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS, BY HAND, AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF CONSTRUCTION.
5. ALL UTILITY COMPANIES SHALL BE NOTIFIED 24 HRS. IN ADVANCE OF CONSTRUCTION.
6. ALL TRAFFIC CONTROL DEVICES, PARKING & SIGNING TO BE DONE IN ACCORDANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" 1984 EDITION.
7. SAG & CREST VERTICAL CURVES WERE DESIGNED IN ACCORDANCE WITH HOWARD CO. DESIGN MANUAL VOL. III
8. PROVIDE CONCRETE SIDEWALK RAMPS, HOWARD CO. STD. TYPE "A" R-4.01 WHERE SHOWN IN PLAN.
9. DESIGN SPEED: SEE CHART SHT. 3 OF 6.
10. ZONING: R-SC
11. CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION/SURVEY DIVISION 24 HRS. BEFORE COMMENCING WORK AT 792-7272.
12. FOR TREE SCHEDULE SEE THIS SHT. BELOW.
13. STREET LIGHTS SHALL BE PROVIDED AT THE LOCATIONS SHOWN IN THE SCHEDULE ON SHT. 2 & IN ACCORDANCE WITH VOL. III OF THE HOWARD CO. DESIGN MANUAL.



VICINITY MAP
SCALE: 1" = 2,000'

TREE PLANTING NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING.
2. FINAL LOCATION OF TREES MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS.
3. PLANTING PROCEDURES SHALL COMPLY WITH "LANDSCAPE SPECIFICATIONS FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS."
4. SUBSTITUTIONS TO THE AREA SPECIES MAY BE PERMITTED PROVIDED THAT THE PLANTING IS IN ACCORDANCE WITH THE STREET TREE AND LANDSCAPE REQUIREMENTS AS SPECIFIED IN SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

TREE SCHEDULE

KEY	PLANT NAME	SIZE	QUANT.	REMARKS
(M)	ACER RUBRUM SUNSET SUNSET MAPLE	2½" CAL. MIN.	19	B & B, HEAVY HEADS
(O)	QUERCUS RUBRA NORTHERN RED OAK	↓	16	↓
(B)	ACER SACCHARUM "GREEN MOUNTAIN" GREEN MOUNTAIN SUGAR MAPLE	↓	17	↓

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 4/20/89

CHIEF, BUREAU OF HIGHWAYS — DATE 5/25/89

CHIEF, BUREAU OF ENGINEERING — DATE 5-25-89

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT — DATE 5/24/89

GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS
3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK · BURTONSVILLE, MD. 20866
TEL.: (301) 421 - 4024

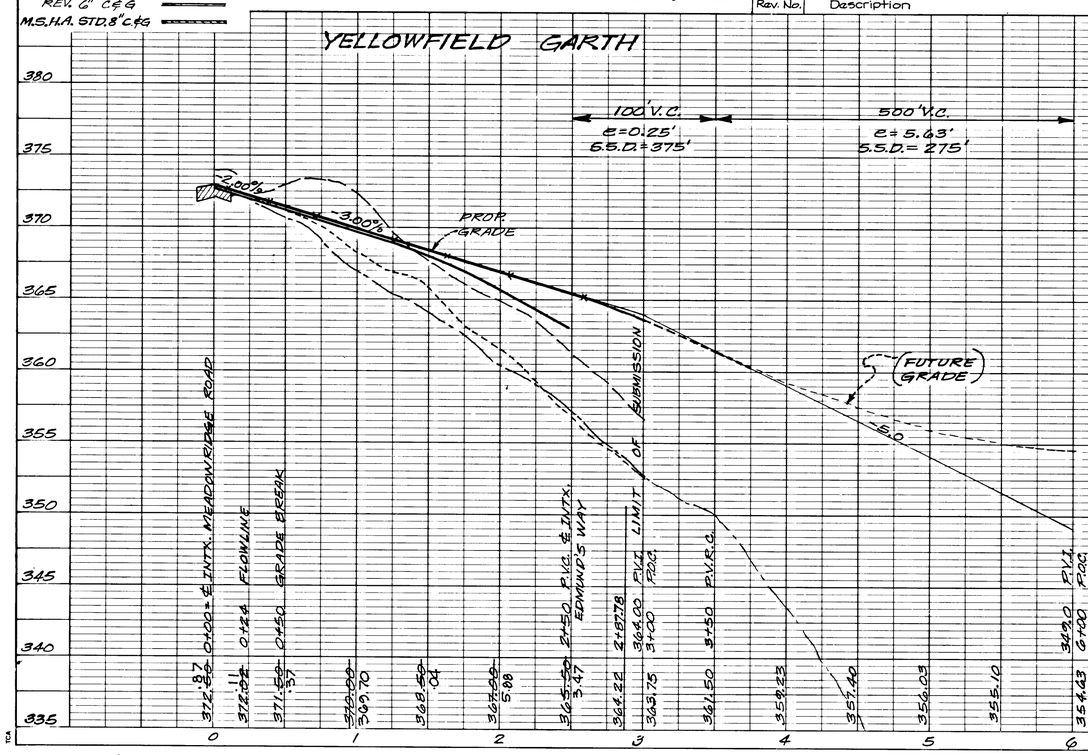
DESIGNED	J.J'E.
DRAWN	R.R.S.
CHECKED	C.K.G.
DATE	MARCH 22 1989

ROAD CONSTRUCTION PLANS
YELLOWFIELD GARTH
BRIGHTFIELD
SECTION 3
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
FOR: 100 INVESTMENT LTD. PARTNERSHIP
c/o BRITAM DEVELOPMENT
9030 RED BRANCH ROAD SUITE 250
COLUMBIA, MARYLAND 21045 (301) 740 - 3323

SCALE: AS SHOWN
DRAWING: 1 OF 6
JOB NO.: 86-058

Rev. No.	Description	By	Date
1	Revise Meadowridge Road Widening-add insert	G.A.W.	12-4-90

CURB & GUTTER LEGEND
STD. 7" C&G
REV. 7" C&G
STD. 6" C&G
REV. 6" C&G
M.S.H.A. STD. 8" C&G

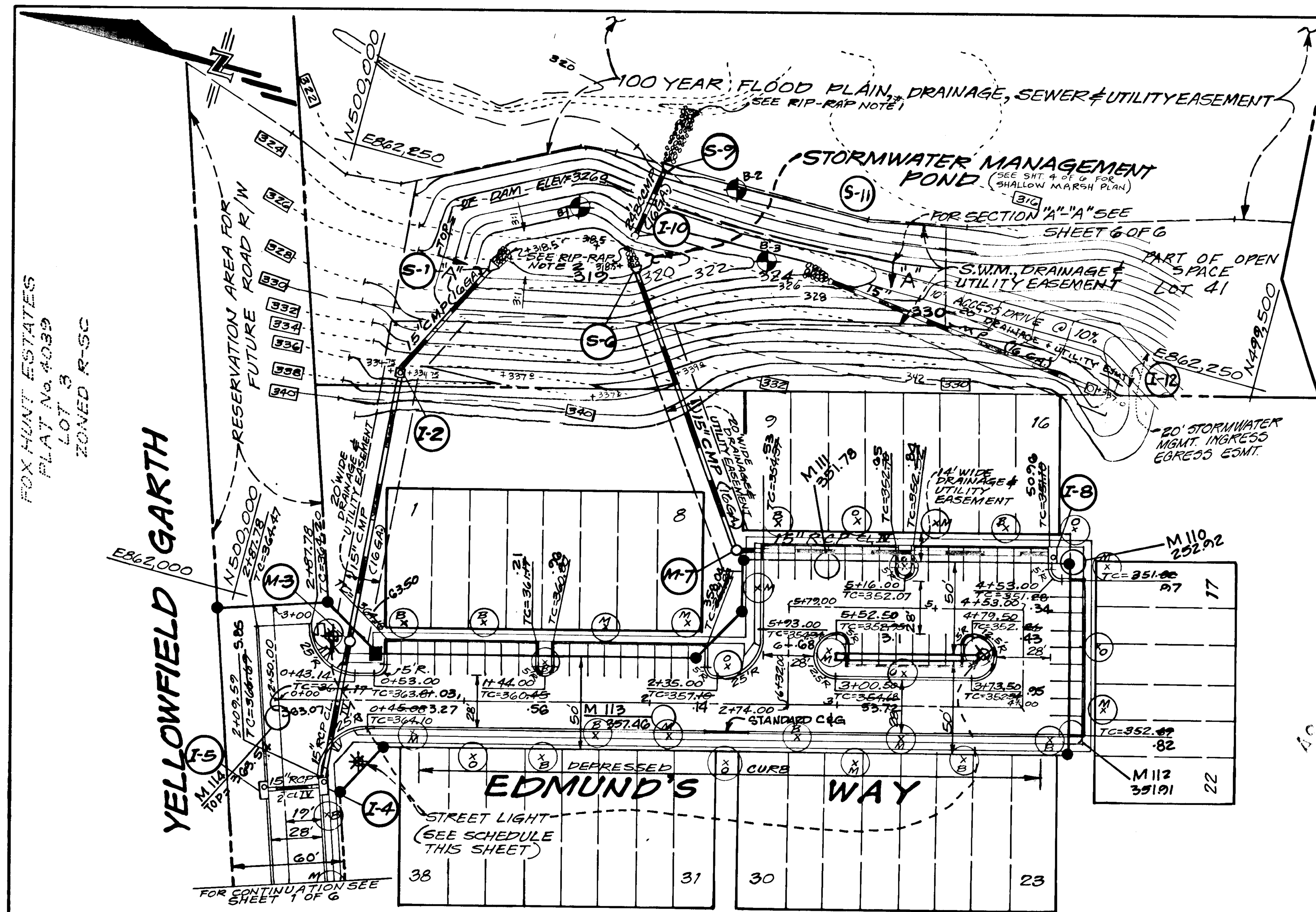


PROFILE SCALE:
HORIZ.: 1" = 50'
VERT.: 1" = 5'

PROFILE LEGEND
PROFILE GRADE LINE
EXISTING ℄
B.R.L. (Rt.)
B.R.L. (Lt.)

1382

F-89-20
AS-BUILT 4-22-92



CURB & GUTTER LEGEND

- STD. 7" C&G
- REV. 7" C&G
- STD. 6" C&G
- REV. 6" C&G

PLAN

SCALE: 1"=50'

NOTES: B-1 = INDICATES SOIL BORING

RIP-RAP NOTE 1: 35 L.F. UNGROUTED RIP-RAP d_{50} = 0.8' THICKNESS (MIN.) = 1.8' (SEE DETAIL SHT. 3 OF 6)

RIP-RAP NOTE 2: 10 L.F. UNGROUTED RIP-RAP d_{50} = 6" THICKNESS (MIN.) = 14" (SEE DETAIL SHT. 3 OF 6)

STREET LIGHT SCHEDULE

LOCATION	LAMP TYPE	MOUNTING	POLE TYPE
YELLOWFIELD GARTH & STA. 2+12± (40.5'± RT.)	175 WATT Hg	COLONAL-POST TOP	14' BLACK FIBERGLASS

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

Robert W. Ziehm — Howard Soil Conservation District — Date 4/12/89

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.

J. Helm — U.S. Soil Conservation Service — Date 4/12/89

DEVELOPER'S/BUILDER'S CERTIFICATE

"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 H.S.C.D.

Signature of Developer/Builder — Date 7/13/88

ENGINEER'S CERTIFICATE

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

C K Gutschick — Date 7-13-88

STATE OF MARYLAND — CARL K. GUTSCHICK — No. 12975 — REGISTERED PROFESSIONAL ENGINEER

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION	4/20/89 DATE
CHIEF, BUREAU OF HIGHWAYS	5/25/89 DATE
CHIEF, BUREAU OF ENGINEERING	5-23-89 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT	5/31/89 DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.

ENGINEERS, PLANNERS, SURVEYORS

3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK · BURTONSVILLE, MD. 20866

TEL.: (301) 421-4024

DESIGNED J.d'E.	ROAD CONSTRUCTION PLANS	SCALE AS SHOWN
DRAWN R.R.S.	EDMUND'S WAY **BRIGHTFIELD**	DRAWING 2 OF 6
CHECKED C.K.G.	SECTION 3, 1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	
DATE MARCH 22 1989	FOR: 100 INVESTMENT LTD. PARTNERSHIP c/o BRITAM DEVELOPMENT 9030 RED BRANCH ROAD SUITE 250 COLUMBIA, MARYLAND 21045 (301) 740-3323	JOB NO. 86-058

RECORD OF SOIL EXPLORATION B-1

KIDDE CONSULTANTS, INC. — Project Name: Sehman Property — Boring: B-1 — Job: 3-87-311 — Foreman: W.Muller — Date Completed: 12-2-87

Light brown moist sand with some gravel, trace silt (gravelly sand) 4.5

bottom of test hole at 4.5'

RECORD OF SOIL EXPLORATION B-2

KIDDE CONSULTANTS, INC. — Project Name: Sehman Property — Boring: B-2 — Job: 3-87-311 — Foreman: W.Muller — Boring Method: hand auger — Date Completed: 12-2-87

Wet grayish brown silt with some sand trace gravel (silt loam) 3.0

Dark gray wet organic sand with some silt trace gravel (loamy sand) 6.5

bottom of test hole at 6.5'

STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

NOTE: See the Stormwater Management Pond Notes, sht. 6 of 6, for core trench and embankment information.

RECORD OF SOIL EXPLORATION B-3

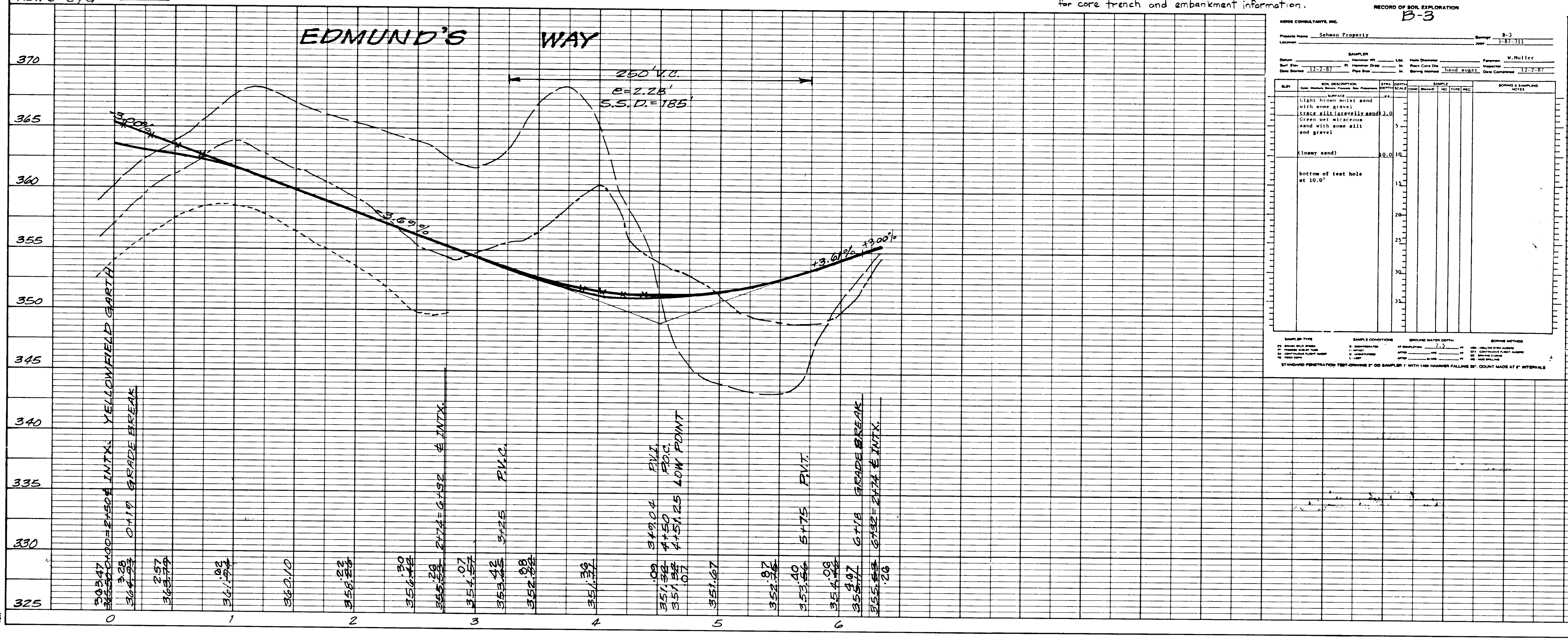
KIDDE CONSULTANTS, INC. — Project Name: Sehman Property — Boring: B-3 — Job: 3-87-311 — Foreman: W.Muller — Boring Method: hand auger — Date Completed: 12-2-87

Light brown moist sand with some gravel trace silt (gravelly sand) 2.0

Green wet micaceous sand with some silt and gravel (loamy sand) 10.0

bottom of test hole at 10.0'

STANDARD PENETRATION TEST-DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS



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

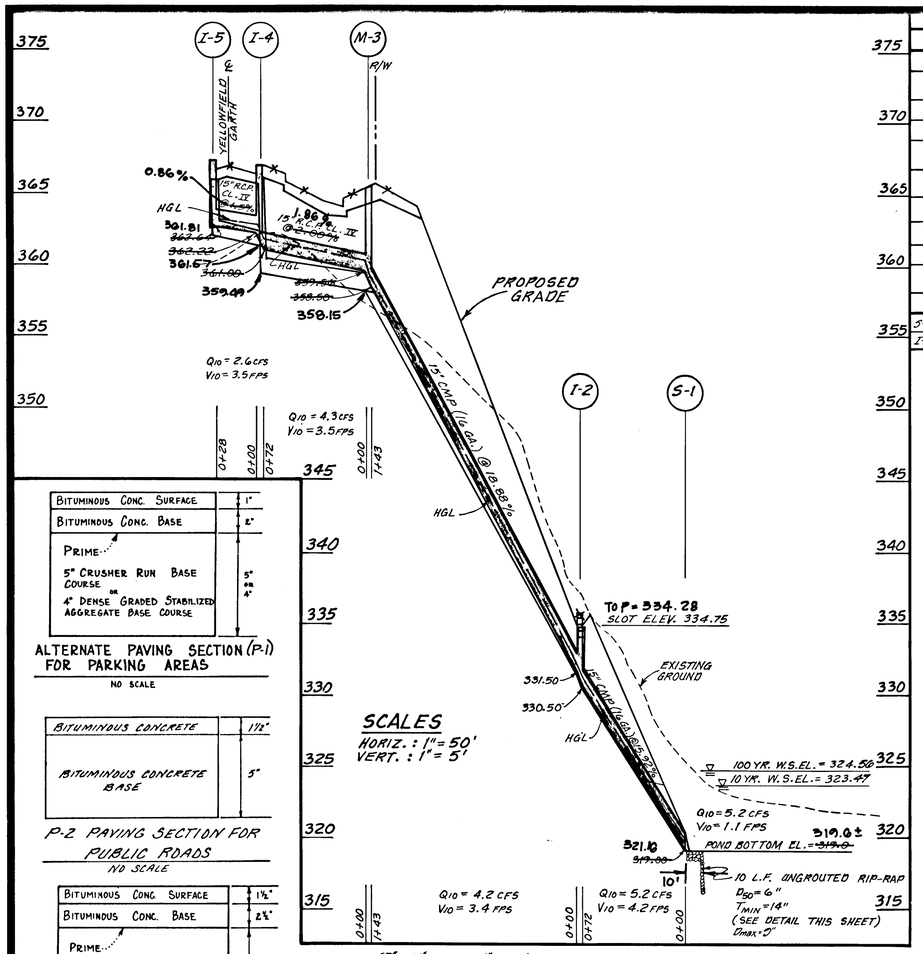
PROFILE LEGEND: PROFILE GRADE LINE; EXISTING ℄; B.R.L. (RT.); B.R.L. (LT.)

AS-BUILT 4-22-92

F-89-20

AS-BUILT 4-22-92

1382



SCALES
HORIZ. : 1" = 50'
VERT. : 1" = 5'

BITUMINOUS CONC. SURFACE	1"
BITUMINOUS CONC. BASE	2"
PRIME	
5" CRUSHER RUN BASE COURSE OR 4" DENSE GRADED STABILIZED AGGREGATE BASE COURSE	5" OR 4"

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

BITUMINOUS CONCRETE	1½"
BITUMINOUS CONCRETE BASE	5"

P-2 PAVING SECTION FOR PUBLIC ROADS
NO SCALE

BITUMINOUS CONC. SURFACE	1½"
BITUMINOUS CONC. BASE	2½"
PRIME	
8" CRUSHER RUN BASE (PLACED IN 2 COURSES) OR 6" DENSE GRADED STABILIZED AGGREGATE BASE COURSE	8" OR 6"

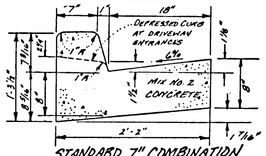
ALTERNATE PAVING SECTION (P-2) FOR PUBLIC ROADS
NO SCALE

BITUMINOUS CONC. SURFACE	1½"
BITUMINOUS CONC. BASE	1½"
BITUMINOUS CONC. BASE	5"

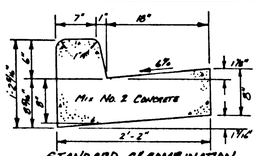
P-3 PAVING SECTION FOR PUBLIC ROADS
NO SCALE

BITUMINOUS CONC. SURFACE	1½"
BITUMINOUS CONC. BASE	4½"
PRIME	
6" CRUSHER RUN BASE COURSE OR 4½" DENSE GRADED STABILIZED AGGREGATE BASE COURSE	4½" OR 6"

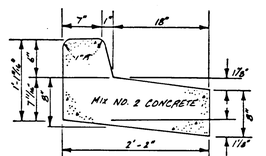
P-3 ALTERNATE PAVING SECTION FOR PUBLIC ROADS
NO SCALE



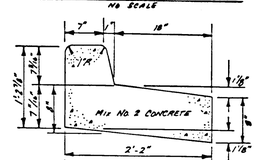
STANDARD 7" COMBINATION CURB & GUTTER
NO SCALE



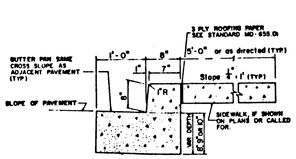
STANDARD 6" COMBINATION CURB & GUTTER
NO SCALE

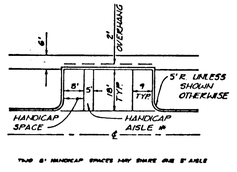


REVERSE 6" COMBINATION CURB & GUTTER
NO SCALE



REVERSE 7" COMBINATION CURB & GUTTER
NO SCALE





TYPICAL PARKING
NO SCALE

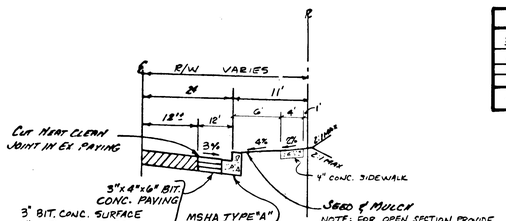
STRUCTURE SCHEDULE

NO.	TYPE	INV. IN	INV. OUT	TOP ELEVATION	HO.CO STDS	REMARKS	LOCATION
S-1	METAL END SECTION	------	~~322.16~~ 321.16 ~~319.08~~	----------	HCS SD 5.61	15" DIAMETER	SEE PLAN
I-2	D-INLET	331.50	330.50	~~335.50~~ 334.28	HCS SD-4.11	OPENINGS PLACED ON 4 SIDES	SEE PLAN
M-3	MANHOLE	~~358.15~~ 359.49	~~359.49~~ 359.40 ~~358.90~~	~~365.40~~ 364.08	HCS G-5.01	48" ROUND	SEE PLAN
I-4	A-10 INLET	~~362.32~~ 361.67	~~361.00~~ 359.49	~~366.82/367.12~~ 366.27	HCS SD 4.02	W= 2'- 6"	CL STR STA 2+02 YELLOWFIELD GARTH(19'R)
I-5	A-10 INLET	------	~~362.64~~ 361.81	~~368.12/367.42~~ 366.41	HCS SD 4.02	W = 2'- 6"	CL STR STA 2+02 YELLOWFIELD GARTH(0'L)
S-6	METAL END SECTION	------	319.00	------	HCS SD 5.61	15" DIAMETER	SEE PLAN
M-7	MANHOLE	~~345.31~~ 344.55	~~343.40~~ 342.74	~~354.00~~ 353.02	HCS G-5.01	48" ROUND	SEE PLAN
I-8	A-10 INLET	------	~~347.70~~ 347.02	351.10/~~351.10~~	HCS SD 4.02	W = 2' - 6"	SEE PLAN
S-9	METAL END SECTION	------	318.00	------	HCS SD 5.61	24" DIAMETER	SEE PLAN
I-10	SPECIAL	------	319.00	325.~~50~~ 00	----------	SEE DETAIL SHT. 6	SEE PLAN
5-11	METAL END SECTION	------	~~334.00~~ 330.76	-------	HCS SD 5.61	15" DIAMETER	SEE PLAN
I-12	D-INLET	------	334.25	~~337.87~~ 337.40	HCS SD 4.11	OPENINGS ON ALL 4 SIDES	SEE PLAN

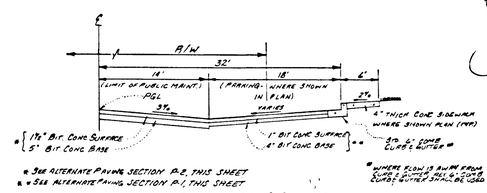
PIPE SCHEDULE

SIZE	TYPE	LENGTH
15"	RCP CL IV	266 L.F.
15"	CMP 16 GA*	680 L.F.
24"	BCCMP 16 GA*	36 L.F.

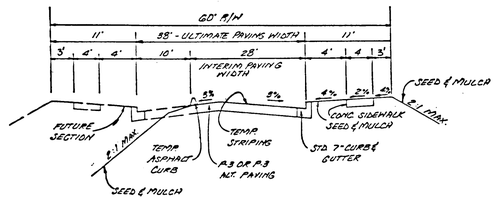
*2-2/3 X 1/2" CORRUGATIONS



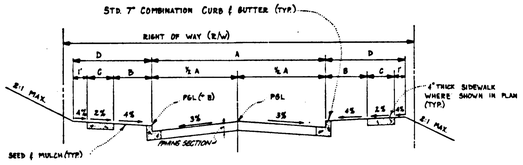
TYPICAL HALF-SECTION MEADOWRIDGE RD.
NO SCALE
(MINOR ARTERIAL)



TYPICAL HALF SECTION
PARKING ADJACENT TO PUBLIC ROADS
NO SCALE

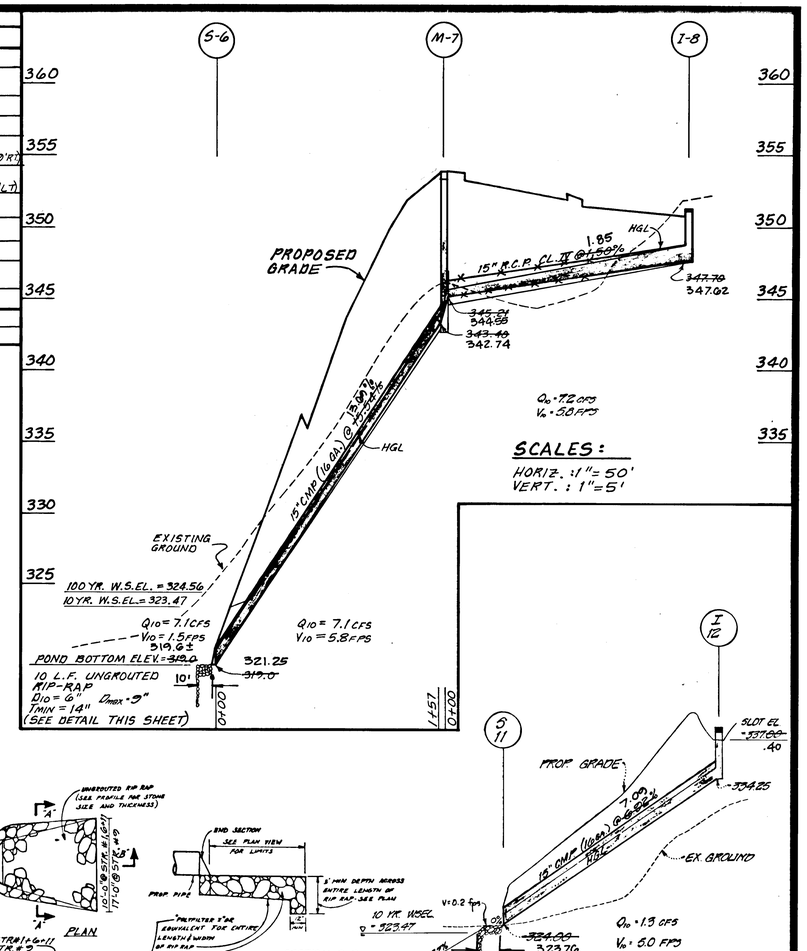


PAVING SECTION - YELLOWFIELD GARTH
NO SCALE

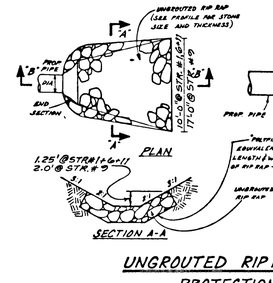


TYPICAL PAVING SECTION - PUBLIC ROADS
NO SCALE
* SEE ALTERNATE PAVING SECTIONS THIS SHEET

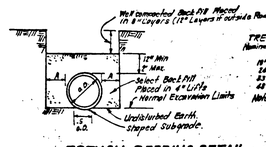
STREET NAME & STATION	TYPE OF TRAFFIC	A	B	C	D	R/W	ZONING	℄	DESIGN SPEED	PAVING SECTION
EDMUND'S WAY	CUL-DE-SAC	28'	4'	4'	9'	50'	RSC	0.18	25 MPH	P-2



SCALES:
HORIZ. : 1" = 50'
VERT. : 1" = 5'



UNGROUTED RIP RAP OUTLET PROTECTION DETAILS
NO SCALE



TRENCH BEDDING DETAIL
NO SCALE

STATE OF MARYLAND — CHARLES K. GUTSCHICK — No. 12973 — PROFESSIONAL ENGINEER

C. K. Gutschick

DEVELOPER'S/BUILDER'S CERTIFICATE

"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 H.S.C.D."

Signature of Developer/Builder — Date 7/13/88

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.

H.S.C.D. — Date 4/12/89

ENGINEER'S CERTIFICATE

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

C. K. Gutschick — Date 7-13-88

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

H.S.C.D. — Date 4/12/89

AS-BUILT
4-22-92

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — DATE 4/20/89

Granville W. Wellman — CHIEF, BUREAU OF HIGHWAYS — DATE 5/25/89

CHIEF, BUREAU OF ENGINEERING — DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT — DATE 5/26/89

GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS
3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK · BURTONSVILLE, MD. 20866
TELEPHONE: (301) 421-4024
DES. JAD | DRN. B.N. | CHK. C.K.G.

DATE	REVISION	BY	APP'R.

PREPARED FOR:
100 INVESTMENT LTD. PARTNERSHIP
C/O BRITAM DEVELOPMENT
9030 RED BRANCH RD.
SUITE 250
COLUMBIA, MD. 21045
(301) 740-3323

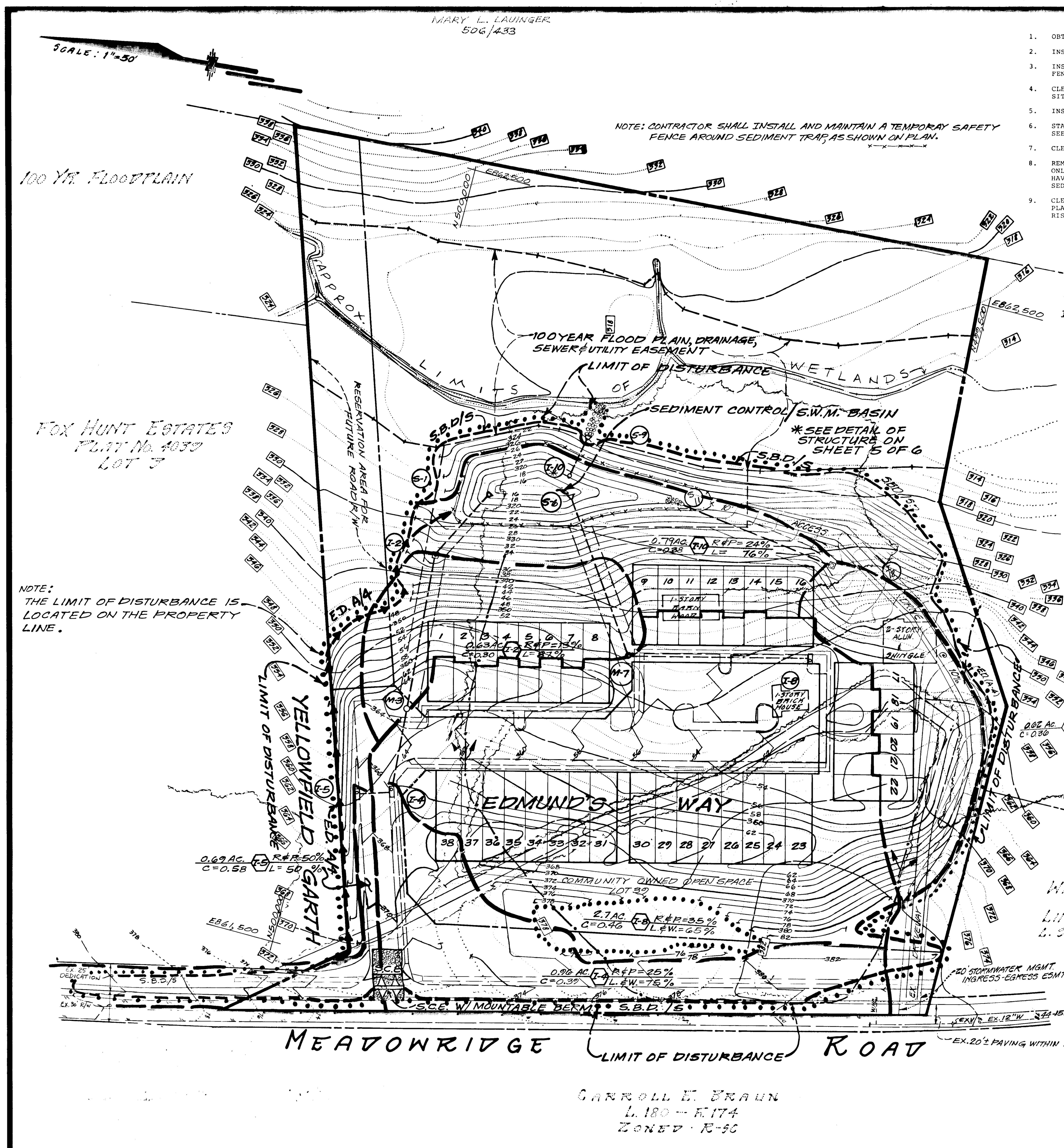
ROAD CONSTRUCTION PLANS - PAVING DETAILS & STORM DRAIN DETAILS

BRIGHTFIELD
SECTION 3
LIBER 939 - FOLIO 390
ELECTION DISTRICT NO. 1 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G.L.W. FILE No.
AS SHOWN		86-058
DATE	TAX MAP No.	SHEET
MARCH 22, 1989	37 PARCEL 77	3 OF 6

1382

F-89-20
AS-BUILT 4-22-92

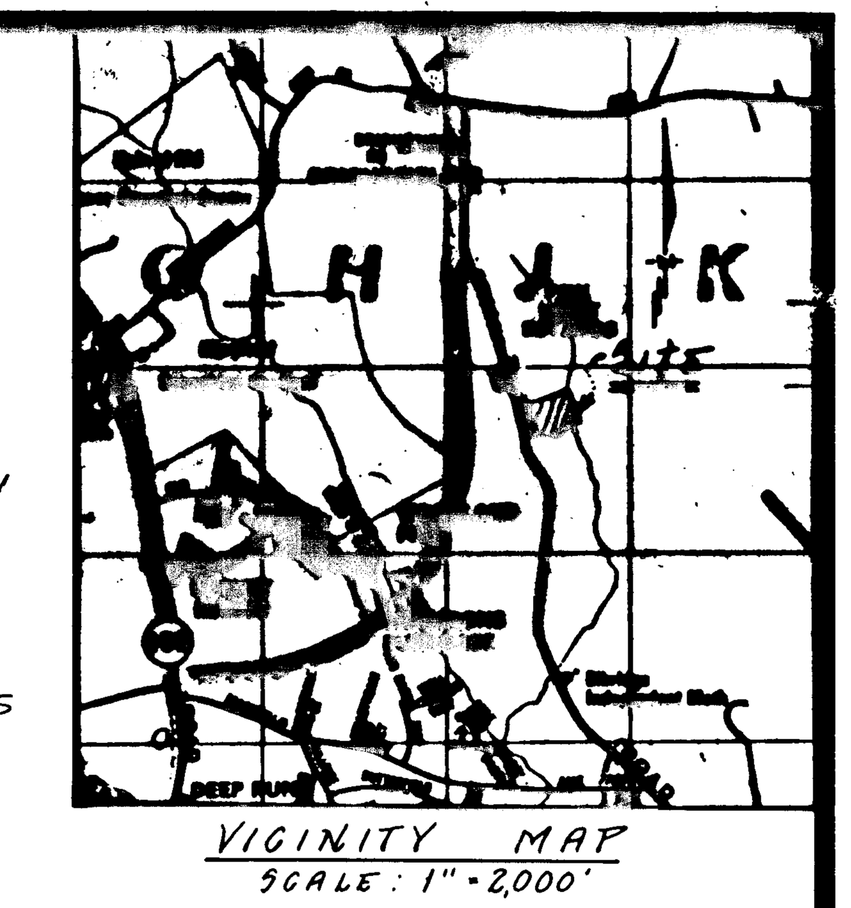


SEQUENCE OF CONSTRUCTION

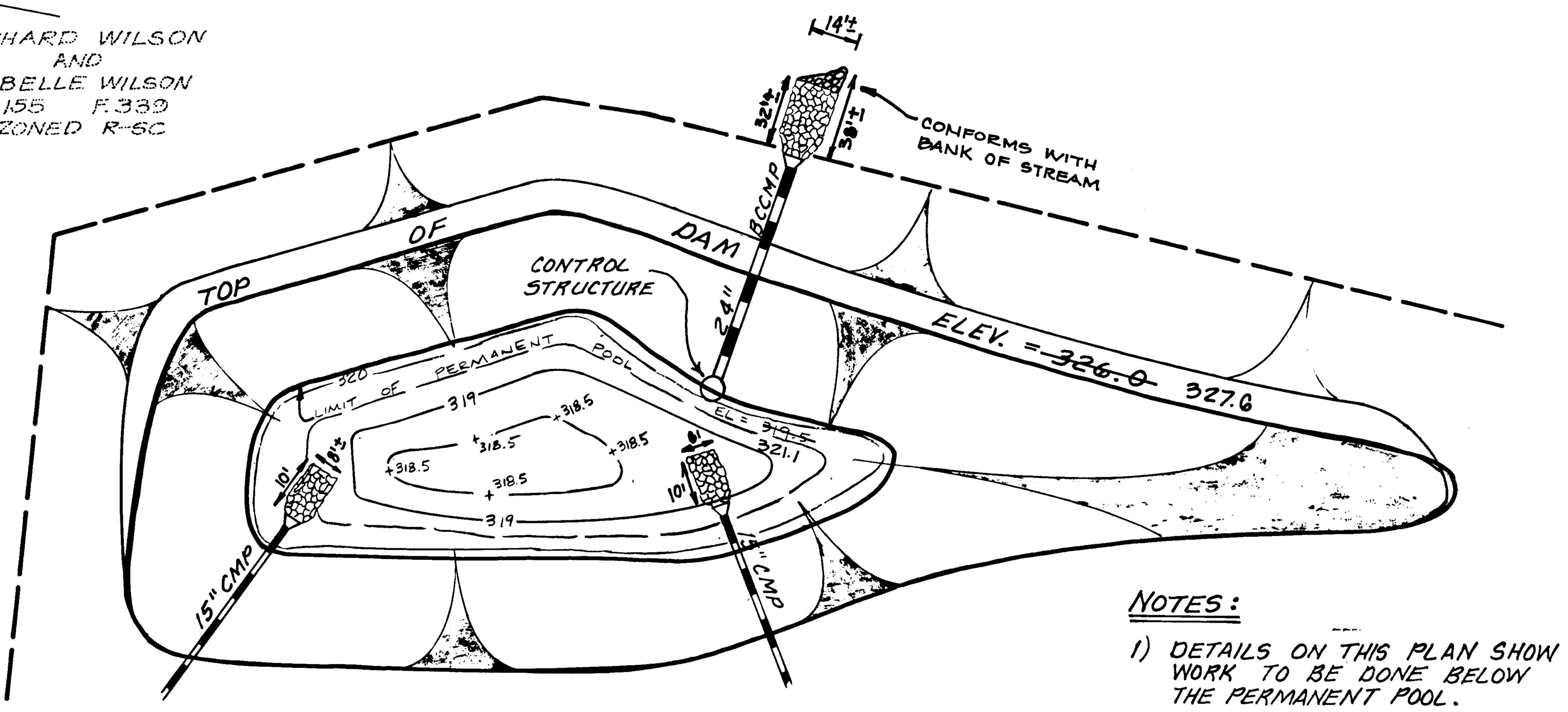
1. OBTAIN A GRADING PERMIT.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
3. INSTALL EARTH DIKES, SEDIMENT BASIN, AND STRAWBALE DIKES/SILT FENCES AS SHOWN ON THE PLAN
4. CLEAR AND GRADE THE SITE. NOTE: SWALE ON SOUTHEAST SIDE OF SITE MUST BE MAINTAINED AND FUNCTIONAL AS SITE IS GRADED.
5. INSTALL UTILITIES.
6. STABILIZE THE SITE WITH BUILDINGS, PAVING, AND SEEDING/SODDING PER THE SITE PLAN.
7. CLEAN OUT THE STORM DRAIN SYSTEM.
8. REMOVE SEDIMENT BASIN AND OTHER SEDIMENT CONTROL MEASURES ONLY AFTER THOSE AREAS WHICH ARE SERVED BY THESE MEASURES HAVE BEEN STABILIZED AND PERMISSION HAS BEEN GRANTED BY THE SEDIMENT CONTROL INSPECTOR.
9. CLEAN OUT AND REGRADE SWM POND AS NECESSARY TO CONFORM TO THE PLANS. REMOVE LOW FLOW BLOCKING DEVICE FROM THE 42" CMP RISER.

LEGEND

- S.B.D./S. = STRAW BALE DIKE OR SILT FENCE
- E.D. (A/4) = EARTH DIKE
- = EXISTING CONTOUR
- = PROPOSED CONTOUR
- = LIMIT OF DISTURBANCE
- S.C.E. = STABILIZED CONSTRUCTION ENTRANCE
- = SAFETY FENCE
- = PROP. DRAINAGE AREAS
- = EXIST. DRAINAGE AREAS



VICINITY MAP
SCALE: 1" = 2,000'



NOTES:

1) DETAILS ON THIS PLAN SHOW WORK TO BE DONE BELOW THE PERMANENT POOL.
2) MARSH PLANTINGS AND LOCATIONS TO BE DONE BY OTHERS.
3) GRADING SHOWN HERE REPRESENTS FINAL POND GRADING.

SHALLOW MARSH PLAN

PERMANENT POOL SURFACE AREA = 2890 SQ.FT.
SCALE: 1"=20'

AS-BUILT
4-22-92

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

Robert W. Zeihm 4/12/89
Howard Soil Conservation District — 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.

J. Helmutz 4/12/89
U.S. Soil Conservation Service — Date

DEVELOPER'S/BUILDER'S CERTIFICATE

"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 H.S.C.D.

Signature of Developer/Builder — 7/13/88 Date

ENGINEER'S CERTIFICATE

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

C.K. — 7-13-88 Date

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — 4/20/89 DATE
CHIEF, BUREAU OF HIGHWAYS — 5/25/89 DATE
CHIEF, BUREAU OF ENGINEERING — DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT — DATE

S-87-50

GLW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS
3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK · BURTONSVILLE, MD. 20866

DES. J. d'E. DRN. R.R.S. CHK. C.K.G.

DATE	REVISION	BY	APP'R.

PREPARED FOR:
100 INVESTMENT LTD. PARTNERSHIP
c/o BRITAM DEVELOPMENT
9030 RED BRANCH ROAD, SUITE 250
COLUMBIA, MARYLAND 21045
(301) 740-3323

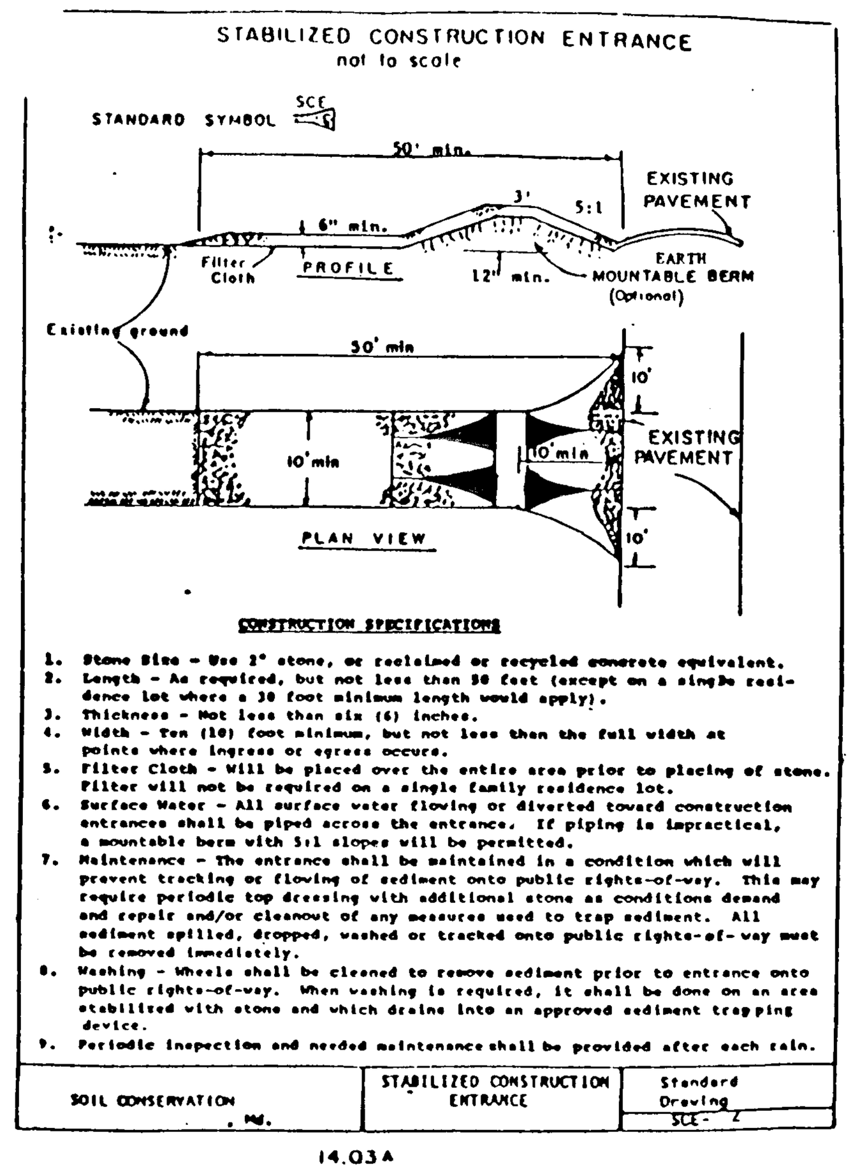
SEDIMENT CONTROL PLAN, DRAINAGE AREA MAP & SHALLOW MARSH PLAN

BRIGHTFIELD

SECTION 3
L. 937 F. 390
YELLOWFIELD GARTH AND EDMUND'S WAY
1st ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

SCALE	CONTOUR INTERVAL	G.L.W. FILE No.
AS SHOWN	2 FT.	86-058
DATE	TAX MAP No.	SHEET
MARCH 22 1989	37 PARCEL 77	4 of 6

AS-BUILT 4-22-92



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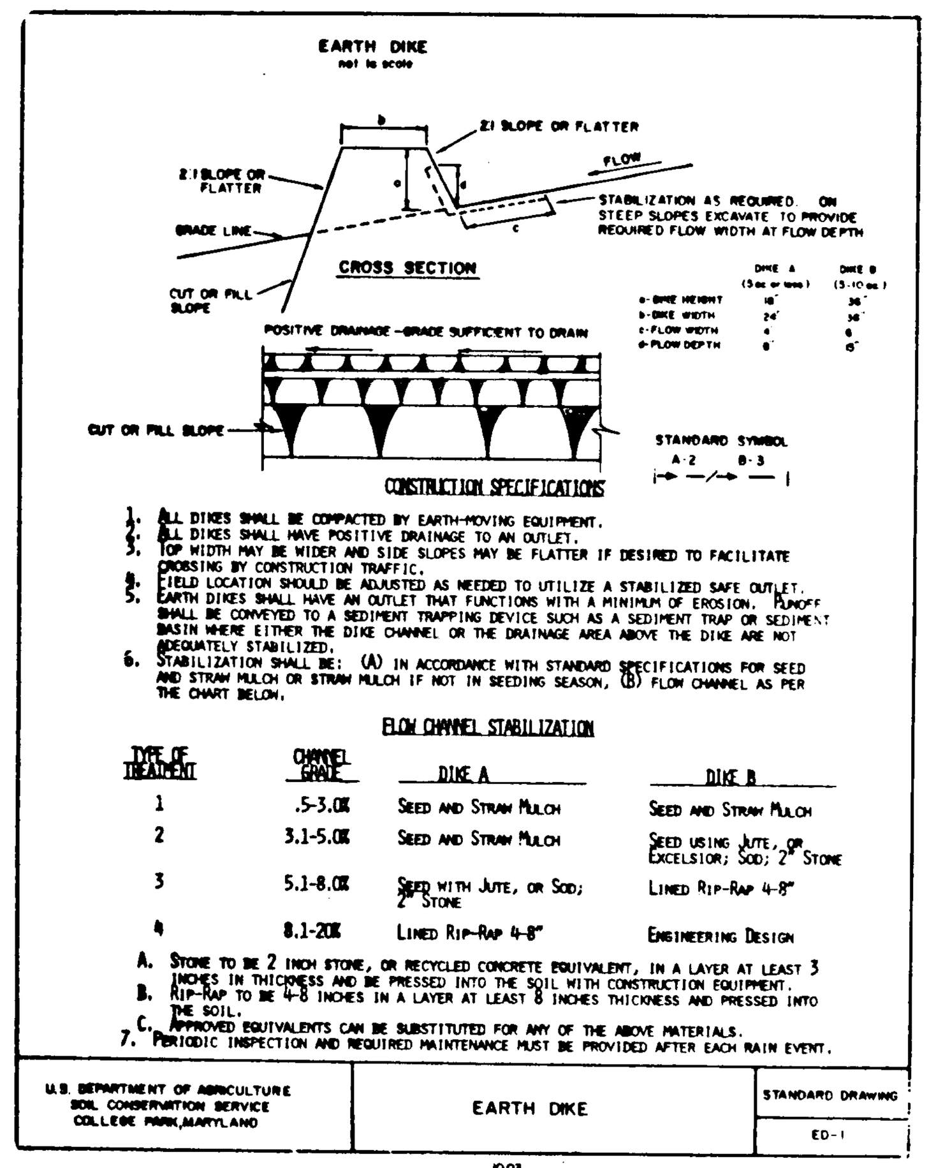
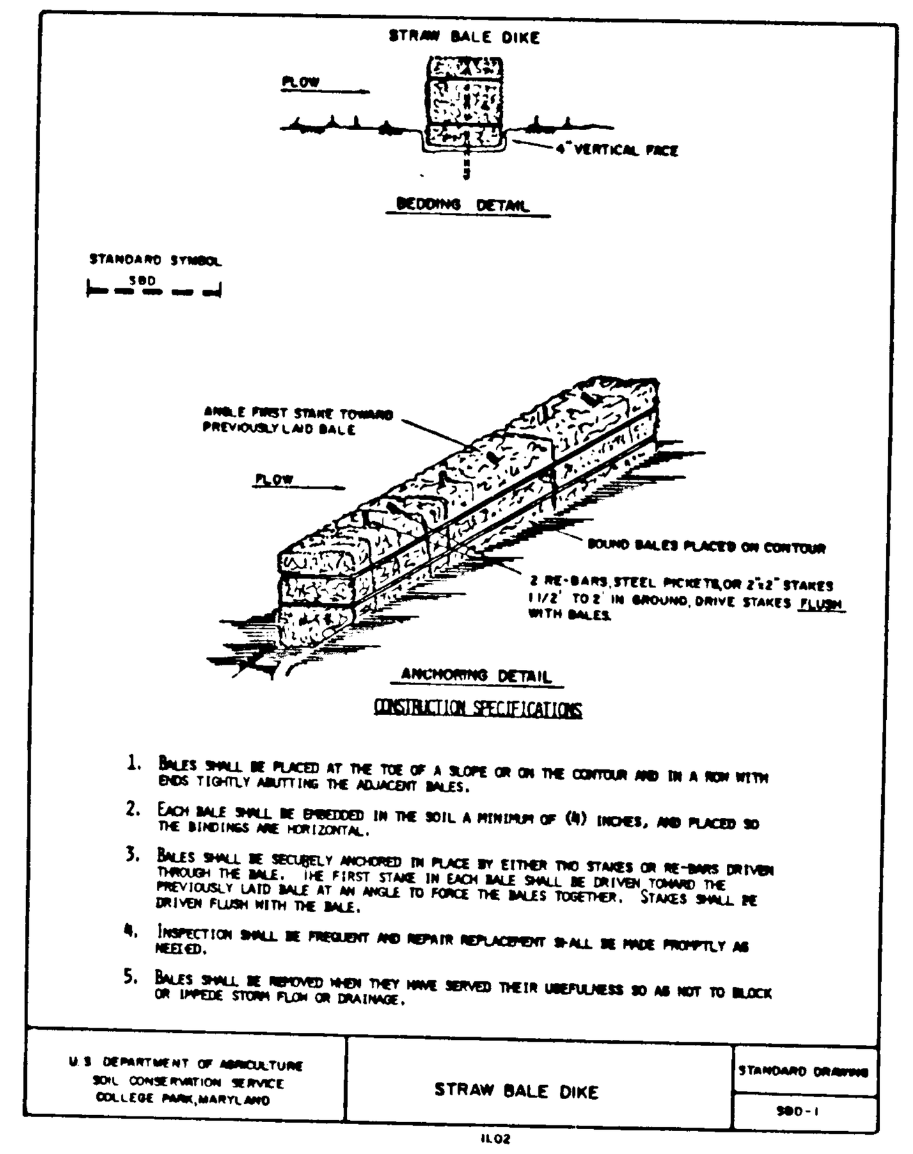
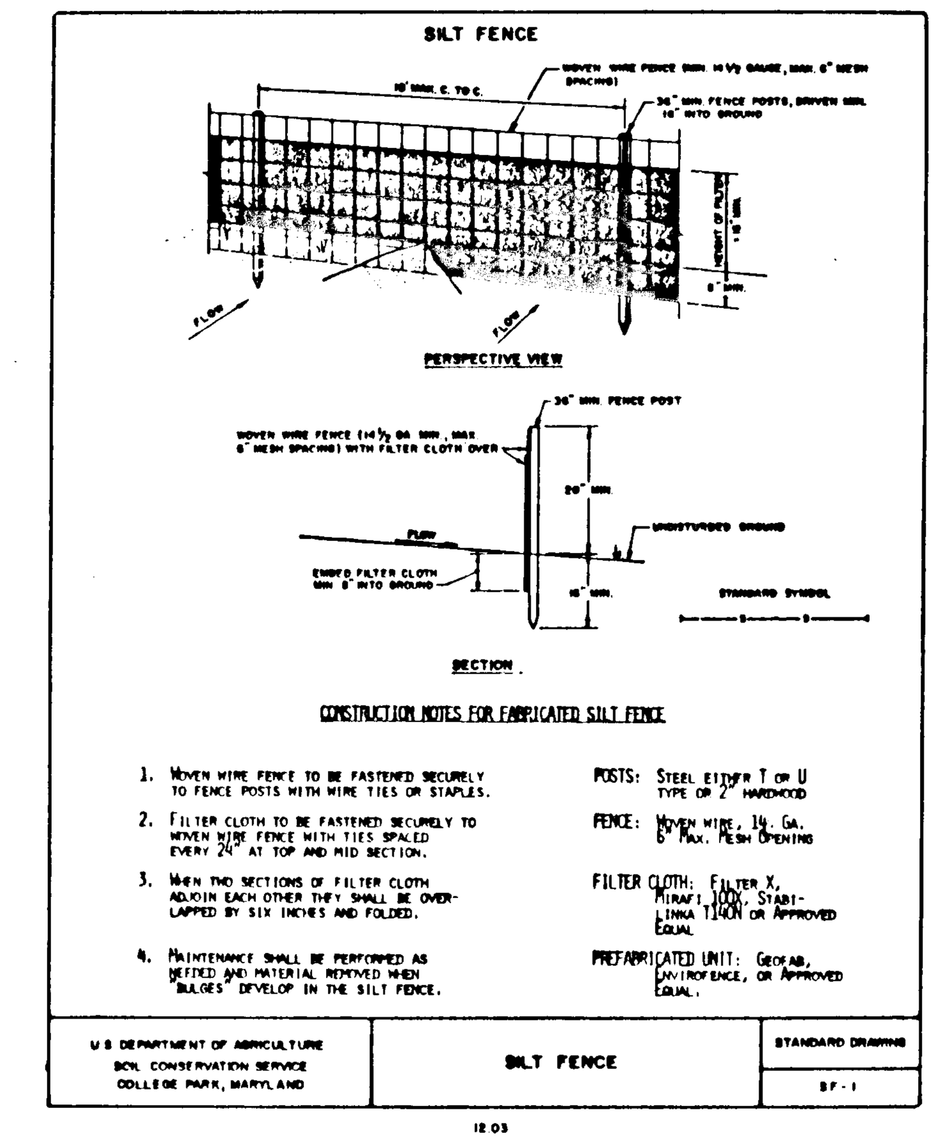






12.03

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, unless previously Loosened
Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft).

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/1000 sq ft). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

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

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, unless previously Loosened.
Soil Amendments: In lieu of soil test recommendations, use one of the following schedules

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

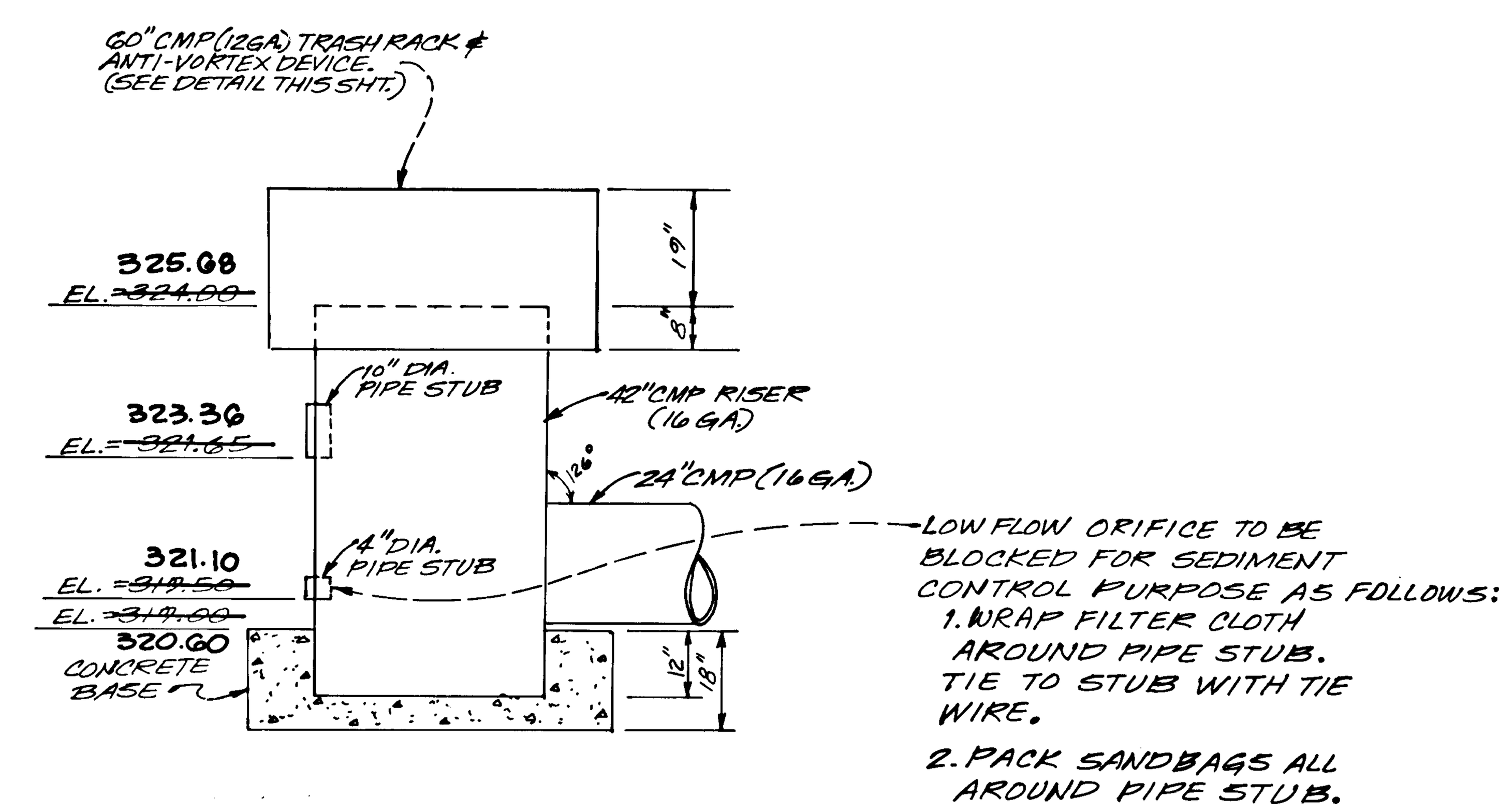
Seeding - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (.05 lbs/1000 sq ft) of weeping lovegrass. 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 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq ft) for anchoring.

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

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 and 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, 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 EROSIONS AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec 54), temporary seedings (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: 10.7 Acres
   Area Disturbed: 6.6 Acres
   Area to be roofed or paved 1.7 Acres
   Area to be vegetatively stabilized 4.9 Acres
   Total Cut 24,500 Cu. Yds.
   Total Fill 24,500 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 control must be provided, if deemed necessary by the Howard County DPW 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 inspection approvals may not be authorized until this initial approval by the inspection agency is made.
11. If houses are to be constructed on an "As-Sold" basis, at random, Single Lot Sediment Control as shown below shall be implemented.
12. All pipes to be blocked at the end of each day (see detail below).
13. The total amount of straw bale dikes/silt fences equals 1430 L.F.



DETAIL OF SEDIMENT CONTROL STRUCTURE #10

NOT TO SCALE

Peter J. Dare
4-22-92

DEVELOPER'S/BUILDER'S CERTIFICATE

"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."

Rodolph Mayd — Signature of Developer/Builder — 7/13/88 Date

ENGINEER'S CERTIFICATE

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

C.K. Gutarte — 7-13-88 Date

C.K. Gutarte

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

Robert W. Ziehm — Howard Soil Conservation District — 4/12/89 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 — 4/12/89 Date

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF, LAND DEVELOPMENT DIVISION — 4/20/89 DATE

CHIEF, BUREAU OF HIGHWAYS — 5/25/89 DATE

CHIEF, BUREAU OF ENGINEERING — 5-25-89 DATE

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT — 5/1/89 DATE

GLW GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS
3909 NATIONAL DRIVE · SUITE 250 · BURTONSVILLE OFFICE PARK · BURTONSVILLE, MD. 20866
TELEPHONE: (301) 421-4024
DES. R.R.S. DRN. R.R.S. CHK. J. d'E.

DATE	REVISION	BY	APP'R.

PREPARED FOR:
100 INVESTMENT LTD. PARTNERSHIP
c/o BRITAM DEVELOPMENT
9030 RED BRANCH ROAD, SUITE 250
COLUMBIA, MARYLAND 21045
(301) 740-3823

SEDIMENT & EROSION CONTROL DETAILS
BRIGHTFIELD
SECTION 3
L. 939 F. 390
YELLOWFIELD GARTH AND EDMUND'S WAY
1st ELECTION DISTRICT — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G.L.W. FILE No.
NO SCALE	—	86-058
DATE	TAX MAP No.	SHEET
MARCH 22 1989	37 PARCEL 77	5 OF 6

F-89-20
AS-BUILT 4-22-92

1382

STORM WATER MANAGEMENT POND NOTES:

I. SITE PREPARATION:

A. 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 no steeper than 1:1.

B. Areas to be covered by 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.

C. 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

**A. MATERIAL: The fill material shall be taken from approved designated borrow areas or areas. It shall be free of roots, stumps, wood, rubbish, oversized 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.

B. 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.

**C. 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 trawersed 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 an approved roller. Fill material shall contain sufficient moisture so 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.

**D. 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 be driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of the 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 Specifications 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 001 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-274-79 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, and sections, etc. must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. 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 lap of the surrounding bands shall be less than 3 and greater than 2 corrugations.

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 be completely watertight. Dimple bands are not considered to be watertight.

3. BEDDING: The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. LAYING PIPE: The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.

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

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

B. REINFORCED CONCRETE PIPE

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

2. BEDDING: All reinforced concrete pipe conduits shall be laid in a concrete bedding for there entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3", or as shown on the drawings.

3. LAYING PIPE: Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe.

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

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

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

V. CONCRETE

A. MATERIALS
1. CEMENT - Normal Portland cement shall conform to latest ASTM Specification C-150.
2. WATER - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.
3. SAND - The sand used in concrete shall be clean, hard, strong and durable, and shall be well graded with 100% passing a one quarter inch sieve. Limestone sand shall not be used.
4. COARSE AGGREGATE - The coarse aggregate shall be clean, hard, strong and durable, and free from clay and dirt. It shall be well graded with a maximum size of one-and-one-half (1½) inches.
5. REINFORCING STEEL - The reinforcing steel shall be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.

B. DESIGN MIX - The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5 ½ to 6 U.S. Gals of water per 94-pound bag of cement. The proportion of materials for the trial mix shall be 1 : 2 ½ : 3 ½, the combination of the aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

C. 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 maximum mixing time is predicted on proper control of the speed of rotation of the mixture 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 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.

D. 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 should be mortar-tight and constructed so they can be removed without hammering or prying against the concrete. The inside of the forms will 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.

E. 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.

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

G. FINISHING - Defective concrete, honeycombed areas, voids left by 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.

H. PROTECTION AND CURING - Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least 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 compound may also be used.

I. PLACING TEMPERATURE - Concrete may not be placed at temperature below 37° with the temperature falling, or 34° with the temperature rising.

VI. STABILIZATION

All borrow areas shall be graded to provide 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.

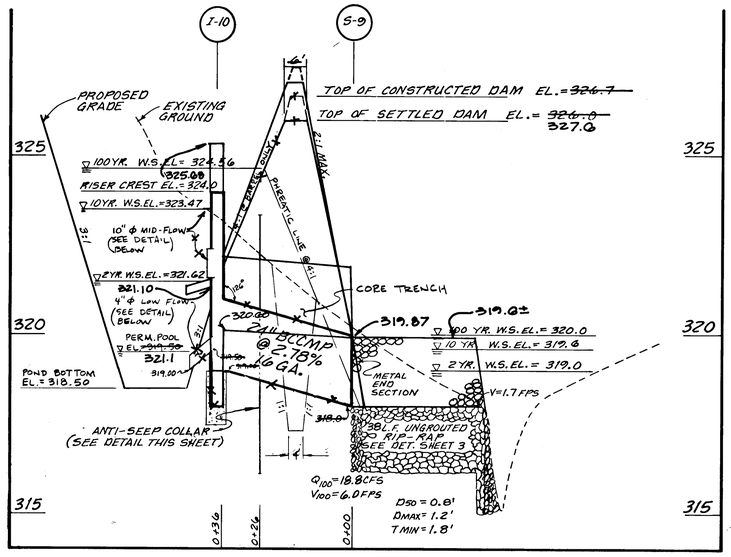
VII. EROSION AND SEDIMENT CONTROL

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 and specifications for erosion and sediment control measures to be employed during the construction process.

* It is recommended that the Storm Water Management Pond Dike Embankment and Core be constructed in 8" thick layers, each compacted to a minimum of 95% of the maximum dry density determined by the standard moisture - density relationship test (ASTM D-1557).

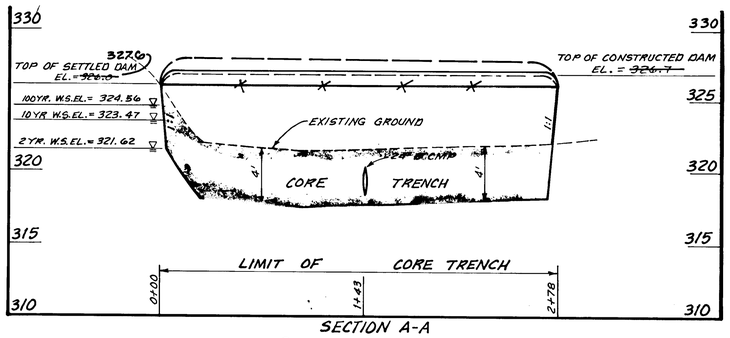
** Core trench and embankment material for the pond shall be obtained from the Brightfield Sect. 1 Subdivision, GP-88-39. Soil shall be ML, CL, CH or MH material per the Unified Soil Classification.

APPROVED: DEPARTMENT OF PUBLIC WORKS
CHIEF, LAND DEVELOPMENT DIVISION — DATE 4/20/89
CHIEF, BUREAU OF HIGHWAYS — DATE 5/1/89
CHIEF, BUREAU OF ENGINEERING — DATE 5/2/89
APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
CHIEF, DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT — DATE 5/15/89



PROFILE THRU PRINCIPAL SPILLWAY

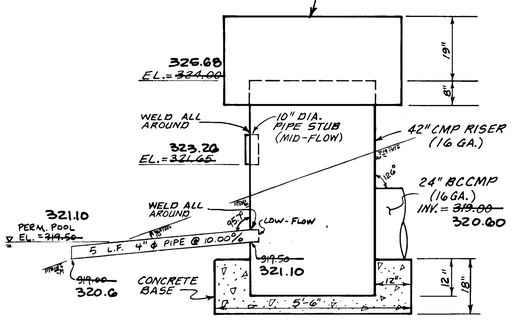
SCALES:
HORIZ: 1" = 20'
VERT.: 1" = 2'



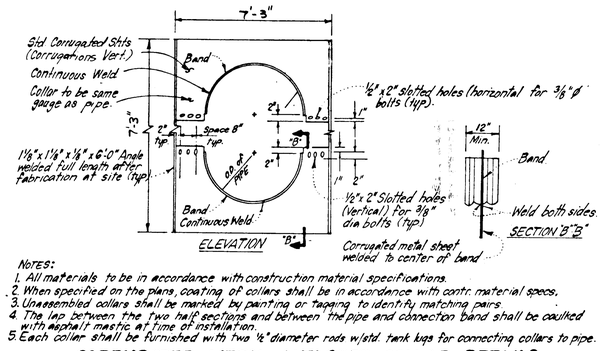
SECTION A-A

PROFILE THRU ℄ OF DAM - LOOKING DOWNSTREAM

SCALES:
HORIZ.: 1" = 50'
VERT.: 1" = 5'

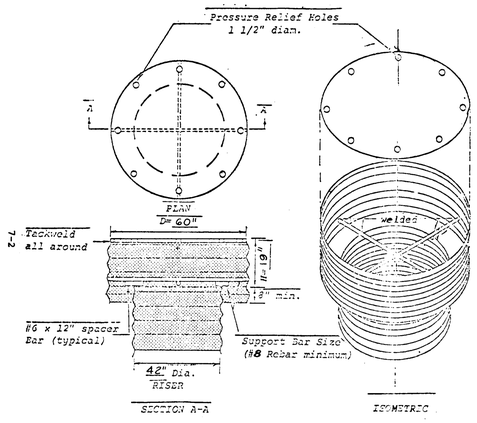


DETAIL
STORM WATER MANAGEMENT STRUCTURE #10
SCALE: 1" = 2'



NOTES:
1. All materials to be in accordance with construction material specifications.
2. When specified on the plans, coating of collars shall be in accordance with contr. material specs.
3. Unassembled collars shall be marked by painting or tagging to identify matching pairs.
4. The lap between the two half sections and between the pipe and connection band shall be caulked with asphalt mastic at time of installation.
5. Each collar shall be furnished with two ½" diameter rods w/std. tank lugs for connecting collars to pipe.

CORRUGATED METAL ANTI-SEEP COLLAR DETAILS
NO SCALE



Top is 12 gage corrugated metal or 1/8" steel plate. Pressure relief holes may be omitted, if ends of corrugations are left fully open when corrugated top is welded to cylinder.

Cylinder is 12 gage corrugated metal pipe or fabricated from 1/8" steel plate.

Notes:
1) The cylinder must be firmly fastened to the top of the riser.
2) Support bars are welded to the top of the riser or attached by straps bolted to top of riser.

CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE
(not to scale)

DEVELOPER'S/BUILDER'S CERTIFICATE

"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 H.S.C.D.

Signature of Developer/Builder — Date 7/13/88

ENGINEER'S CERTIFICATE

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

C. K. Gutschick — Date 7-13-88

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 4/12/89

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 4/12/89

A-22-92

GUTSCHICK LITTLE & WEBER, P.A.
ENGINEERS, PLANNERS, SURVEYORS
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TELEPHONE: (301) 421-4024 | DES. | DRN. B.T. | CHK.

DATE	REVISION	BY	APP'R.

PREPARED FOR:
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STORM WATER MANAGEMENT DETAILS & NOTES
BRIGHTFIELD
SECTION 3
LIBER 939 — FOLIO 390
ELECTION DISTRICT NO. 1 — HOWARD COUNTY, MARYLAND

SCALE	ZONING	G.L.W. FILE No.
AS SHOWN		86-058
DATE	TAX MAP No.	SHEET
MARCH 22 1989	37 PARCEL 77	6 OF 6

1-6-20
AS-BUILT 4-22-92