

FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS FOR GAITHER HUNT

**SECTION ONE AREA ONE
LOTS 1-33, 63-71 AND
PRESERVATION PARCELS 'B-E'
& BULK PARCEL 'F'
ZONING 'RC-DEO'**

**TAX MAP No. 29 PARCEL 21 GRID 5
TAX MAP No. 29 PARCEL 322 GRID 11
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND**

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard M. Dwyer 2-5-98
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Condy Hamilton 2/23/98
CHIEF, DIVISION OF LAND DEVELOPMENT TC DATE

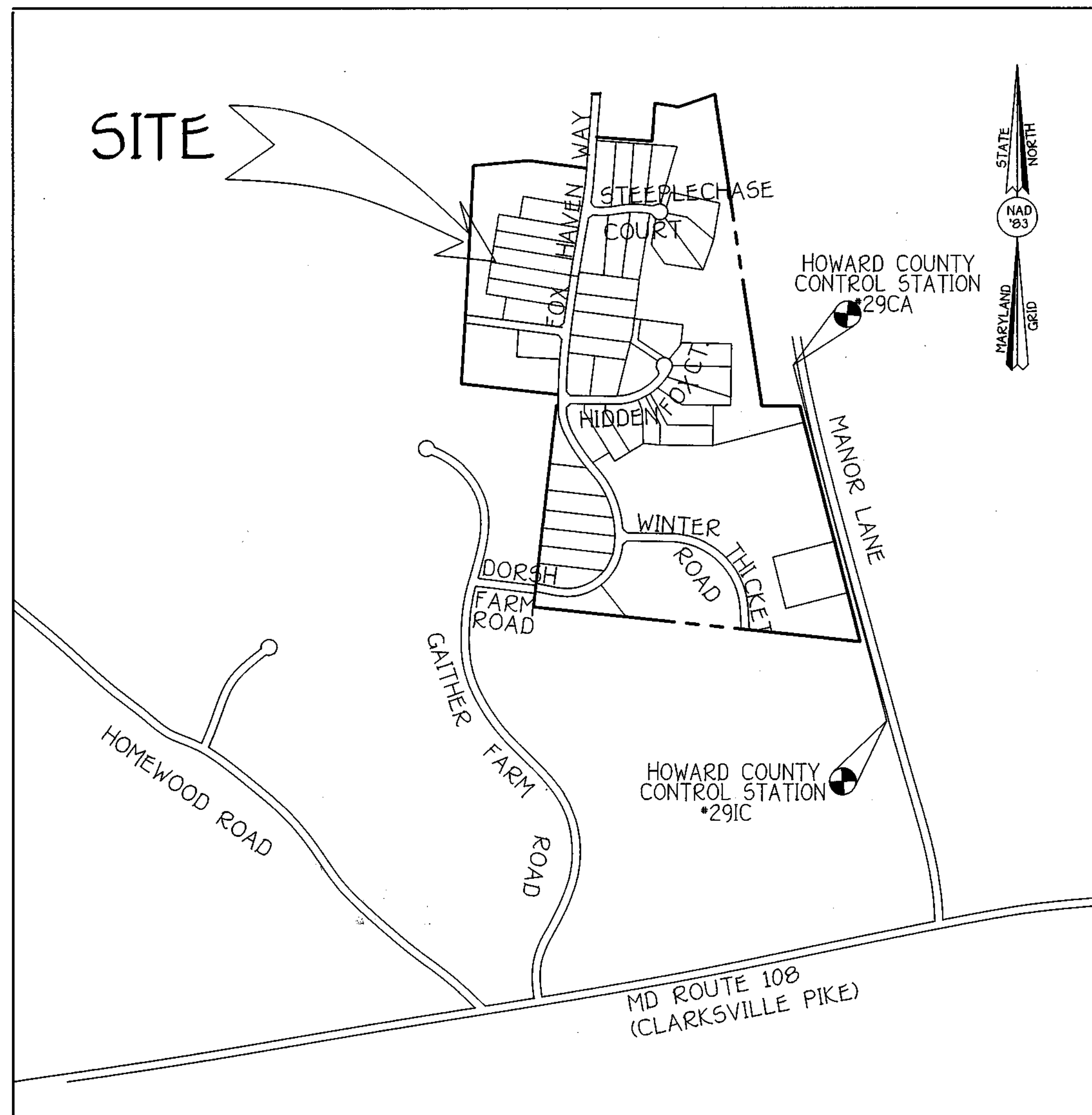
W.D. Dammann 2/18/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	DORSCH FARM ROAD / FOX HAVEN WAY PLAN & PROFILE
3	FOX HAVEN WAY PLAN & PROFILE
4	FOX HAVEN WAY PLAN & PROFILE, STEEPLECHASE COURT PROFILE
5	WINTER THICKET ROAD PLAN & PROFILE
6	HUNTERS VIEW ROAD PLAN & PROFILE, STEEPLECHASE COURT PLAN & PROFILE
7	HIDDEN FOX COURT PLAN & PROFILE
8 - 13	STREET TREE, GRADING AND SEDIMENT CONTROL PLANS
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TRAFFIC CONTROL SIGNS				
STREET NAME	STATION	OFFSET	POSTED SIGN	SIGN CODE
HIDDEN FOX COURT	0+37	12'L.T.	STOP	R2-1
HIDDEN FOX COURT	0+50	12'R.T.	SPEED LIMIT 30	R2-1
HUNTERS VIEW ROAD	0+37	12'L.T.	STOP	R2-1
HUNTERS VIEW ROAD	0+50	12'R.T.	SPEED LIMIT 30	R2-1
STEEPLECHASE COURT	0+37	12'L.T.	STOP	R2-1
STEEPLECHASE COURT	0+50	12'R.T.	SPEED LIMIT 25	R2-1
WINTER THICKET ROAD	0+37	12'L.T.	STOP	R2-1
WINTER THICKET ROAD	0+50	12'R.T.	SPEED LIMIT 30	R2-1
WINTER THICKET ROAD	10+50	12'L.T.	SPEED LIMIT 30	R2-1
DORSCH FARM ROAD	5+75	12'R.T.	SPEED LIMIT 30	R2-1
FOX HAVEN WAY	16+00	12'R.T.	SPEED LIMIT 30	R2-1
FOX HAVEN WAY	30+00	12'L.T.	SPEED LIMIT 30	R2-1
FOX HAVEN WAY	18+00	12'L.T.	SPEED LIMIT 30	R2-1

GENERAL NOTES

- UNLESS OTHERWISE NOTED, ALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH THE FOLLOWING:
 - HOWARD COUNTY STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION VOLUME IV.
 - MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, AS AMENDED.
 - SOIL CONSERVATION SERVICE 1993 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 - SOIL CONSERVATION SERVICE 1993 MARYLAND STANDARDS AND SPECIFICATION FOR POND CONSTRUCTION (CODE 37B).
 - EXISTING UTILITIES ARE BASED ON FIELD RUN TOPOGRAPHY.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF DEPARTMENT OF PUBLIC WORKS, DIVISION OF CONSTRUCTION INSPECTION AT 410-313-1000 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.
- TOPOGRAPHY AND EXISTING CONDITIONS BASED ON FIELD RUN TOPOGRAPHY SURVEYED BY FISHER, COLLINS & CARTER, INC. ON 8/96.
- STORMWATER MANAGEMENT FOR THIS DEVELOPMENT WILL BE RETENTION METHOD.
- HORIZONTAL AND VERTICAL DATUMS BASED ON HOWARD COUNTY CONTROL COORDINATES BASED ON NAD 83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 1012 AND NO. 16E1
 HOWARD COUNTY MONUMENT 29CA
 N 17515.907200 ELEV. = 445.577
 E 409508.905700
 N 17444.564000 ELEV. = 509.924
 E 409666.239400
 HOWARD COUNTY MONUMENT 29IC
 N 17515.907200 ELEV. = 445.577
 E 409508.905700
 N 17444.564000 ELEV. = 509.924
 E 409666.239400
- FOREST DELINEATION WAS PROVIDED BY EQUAL SCIENCE PROFESSIONALS.
- THE 100 YR. FLOODPLAIN AS SHOWN ON THESE PLANS ARE BASED ON THE ENCLOSED FLOODPLAIN STUDY THAT WAS PROVIDED BY FISHER, COLLINS & CARTER, INC.
- THE WETLANDS STUDY WAS PREPARED BY Eco-Science Professionals, Inc. AND APPROVED BY HOWARD COUNTY ON 8/96 UNDER 9-96-18.
- THE TRAFFIC STUDY WAS PROVIDED BY THE Traffic Group AND APPROVED ON 8/96 UNDER 9-96-18.
- THE SOILS INVESTIGATION REPORT WAS PREPARED BY I.T.E., INC. ON JUNE 28, 1994.
- THIS PLAN IS SUBJECT TO WAIVER PETITION # WP-96-126 FROM SECTION 16.132.2.2.1.A NOT TO IMPROVE ONE SIDE OF MANOR LANE NOR AND B & SECTION CONTRIBUTE FUNDS NECESSARY TO DO SUCH CONSTRUCTION.
- THE SKETCH PLAN 5 96-18 WAS APPROVED ON 8/20/96. THE PRELIMINARY PLAN P 97-08 WAS APPROVED ON 7/17/97.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (0993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE, 1993)".
- A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS DEVELOPMENT. DRAINAGE AREA IS THE LITTLE PATUXENT.
- TOTAL AREA OF SUBMISSION = 119,288 AC.
 A. TOTAL AREA ZONED RC-DEO = 119,288 AC.
 B. TOTAL AREA OF OPEN SPACE LOTS = 6.701
 C. TOTAL AREA OF ROADWAY = 6.979
 A) NON-BUILDABLE BULK PARCEL 'F' RESERVES THE RIGHT TO BE FURTHER SUBDIVIDED.
 B) THE AREA OF BULK PARCEL 'F' IS NOT REQUIRED TO SUPPORT THE DENSITY AND THE NO. OF PROPOSED LOTS.
- PERMIT TO DISTURB NATURAL WETLANDS: TRACKING # 100860208, NATURAL WETLANDS # 0747-0776 (ISSUED DATE)
- FOREST CONSERVATION EASEMENT No. 3 IS A FOREST BANK CONTAINING 1,300.8 ACRES.
- FOREST CONSERVATION EASEMENT No. 11 (CONTAINING 1,810 ACRES) AND FOREST CONSERVATION EASEMENT No. 11 (CONTAINING 2,095 ACRES) ARE DESIGNATED AND REGULATED ON 8/21/97. REVISION #11 GAITHER HUNT SECTION 1, AREA 1, PRESERVATION PARCELS 'B' AND 'D' (1-20-161).



VICINITY MAP
SCALE: 1" = 600'

PERIMETER	CATEGORY (PROPERTIES/ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF FRONTAGE PERIMETER	CREDIT FOR		NUMBER OF PLANTS REQUIRED				NUMBER OF PLANTS PROVIDED				
				EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	SHADE TREES	EVERGREEN TREES	SHRUBS	SHADE TREES	EVERGREEN TREES (2:1 SUBSTITUTION)	OTHER TREES (10:1 SUBSTITUTION)	SHRUBS		
P-1	ADJACENT TO PERIMETER	A	244'	YES (244')	NO	0	-	-	0	-	-	-	-	-
P-2	ADJACENT TO PERIMETER	A	575'	YES (570')	NO	0	-	-	0	-	-	-	-	-
P-3	ADJACENT TO PERIMETER	A	100'	YES (100')	NO	0	-	-	0	-	-	-	-	-
P-4	ADJACENT TO PERIMETER	A	746'	YES (746')	NO	0	-	-	0	-	-	-	-	-
P-5	ADJACENT TO PERIMETER	A	226'	NO	NO	3	-	-	3	-	-	-	-	-
P-6	ADJACENT TO PERIMETER	A	156'	NO	NO	2	-	-	2	-	-	-	-	-
P-7	ADJACENT TO PERIMETER	A	485'	NO	NO	8	-	-	8	-	-	-	-	-
P-8	ADJACENT TO PERIMETER	A	323'	NO	NO	5	-	-	5	-	-	-	-	-
P-9	ADJACENT TO PERIMETER	A	328'	NO	NO	5	-	-	5	-	-	-	-	-
P-10	ADJACENT TO PERIMETER	A	250'	YES (35')	NO	3	-	-	3	-	-	-	-	-
P-11	ADJACENT TO PERIMETER	A	108'	YES (108')	NO	0	-	-	0	-	-	-	-	-
P-12	ADJACENT TO PERIMETER	A	380'	YES (340')	NO	1	-	-	1	-	-	-	-	-
P-13	ADJACENT TO PERIMETER	A	313'	YES (140')	NO	2	-	-	2	-	-	-	-	-
P-14	ADJACENT TO PERIMETER	A	118'	NO	NO	2	-	-	2	-	-	-	-	-
P-15	ADJACENT TO PERIMETER	A	265'	NO	NO	4	-	-	4	-	-	-	-	-
P-16	ADJACENT TO PERIMETER	A	129'	NO	NO	2	-	-	2	-	-	-	-	-
P-17	ADJACENT TO PERIMETER	A	192'	NO	NO	3	-	-	3	-	-	-	-	-
P-18	ADJACENT TO PERIMETER	A	571'	NO	NO	9	-	-	9	-	-	-	-	-
P-19	ADJACENT TO PERIMETER	A	71'	NO	NO	1	-	-	1	-	-	-	-	-
P-20	ADJACENT TO PERIMETER	A	167'	NO	NO	2	-	-	2	-	-	-	-	-
P-21	ADJACENT TO PERIMETER	A	72'	NO	NO	1	-	-	1	-	-	-	-	-
P-22	ADJACENT TO PERIMETER	A	418'	YES (80')	NO	5	-	-	5	-	-	-	-	-
P-23	ADJACENT TO PERIMETER	A	308'	YES (50')	NO	4	-	-	4	-	-	-	-	-
P-24	ADJACENT TO PERIMETER	A	240'	NO	NO	4	-	-	4	-	-	-	-	-
P-25	ADJACENT TO PERIMETER	A	428'	YES (60')	NO	6	-	-	6	-	-	-	-	-
P-26	ADJACENT TO PERIMETER	A	312'	YES (20')	NO	4	-	-	4	-	-	-	-	-
P-27	ADJACENT TO PERIMETER	A	95'	NO	NO	1	-	-	1	-	-	-	-	-
P-28	ADJACENT TO PERIMETER	A	368'	NO	NO	6	-	-	6	-	-	-	-	-
P-29	ADJACENT TO PERIMETER	A	500'	NO	NO	8	-	-	8	-	-	-	-	-
P-30	ADJACENT TO PERIMETER	A	370'	YES (370')	NO	0	-	-	0	-	-	-	-	-
P-31	ADJACENT TO PERIMETER	A	135'	YES (135')	NO	0	-	-	0	-	-	-	-	-
P-32	ADJACENT TO PERIMETER	A	130'	YES (130')	NO	0	-	-	0	-	-	-	-	-
P-33	ADJACENT TO PERIMETER	A	500'	YES (323')	NO	3	-	-	3	-	-	-	-	-
P-34	ADJACENT TO PERIMETER	A	126'	NO	NO	2	-	-	2	-	-	-	-	-
P-35	ADJACENT TO PERIMETER	A	141'	NO	NO	2	-	-	2	-	-	-	-	-
P-36	ADJACENT TO PERIMETER	A	167'	NO	NO	2	-	-	2	-	-	-	-	-
P-37	ADJACENT TO PERIMETER	A	266'	NO	NO	4	-	-	4	-	-	-	-	-

"THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL." FINANCIAL SURETY FOR THE 144 REQUIRED LANDSCAPE TREES HAS BEEN POSTED AS PART OF THE DEVELOPERS AGREEMENT IN THE AMOUNT OF \$14,400.

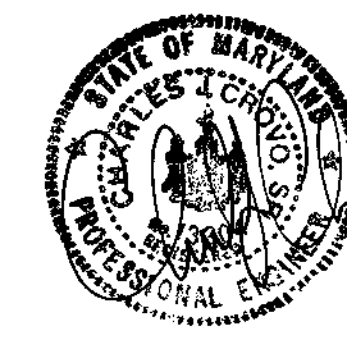
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BULLTHORN NATIONAL PIKE
ELICOTT CITY, MARYLAND 21117
410-410-2925

OWNER
MARY ARHINTA BLOOM, ET. AL.
4754 MANOR LANE
COLUMBIA, MARYLAND 21044

OWNER
PHILIP CARROLL AND THE KLEIN FAMILY
c/o J. THOMAS SCRIVENER
5026 DORSEY HALL DR., SUITE 204
ELICOTT CITY, MARYLAND 21042

DEVELOPER
RUSSELL DEVELOPMENT, L.L.C.
c/o J. THOMAS SCRIVENER
5026 DORSEY HALL DR., SUITE 204
ELICOTT CITY, MARYLAND 21042

12-28-00 REVISE P.C.E. LOCATION AND PLANNING
8-3-98 REVISE ALIQUOT SIPS TO HOME PIPE



GAITHER HUNT
SECTION ONE AREA ONE
LOTS 1-33, 63-71 AND PRESERVATION PARCELS 'B-E'
& BULK PARCEL 'F'
ZONING 'RC-DEO'
TAX MAP No. 29, PARCEL No. 21, GRID No. 5
TAX MAP No. 29, PARCEL No. 322, GRID No. 11
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SHEET 1 OF 23

AS BUILT F 98-24

CURVE DATA
 DORSCH FARM ROAD
 STA. 9+85.81 TO STA. 10+52.71
 R = 597.46'
 L = 67.20'
 Δ = 08°26'39"
 T = 33.03'
 CHD = N 04°05'05"E, 67.16'

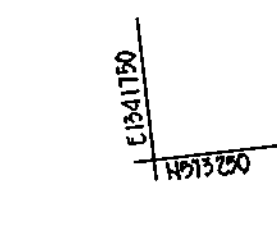
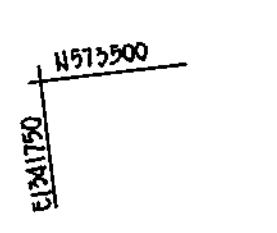
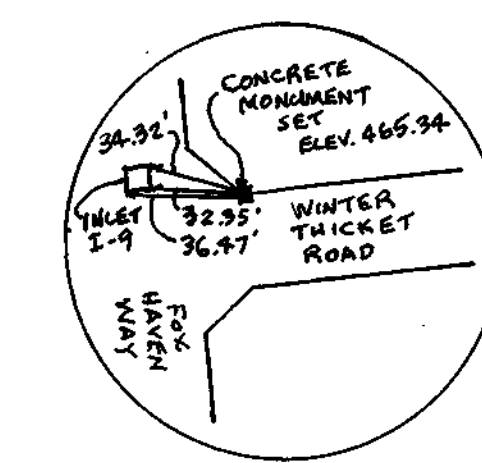
CURVE DATA
 FOX HAVEN WAY
 STA. 10+52.72 TO STA. 11+97.73
 R = 597.46'
 L = 445.02'
 Δ = 42°40'41"
 T = 233.41'
 CHD = N 20°28'18"W, 434.81'

(NON-BUILDABLE)
 PRESERVATION PARCEL 'B'
 (POTENTIAL GOLF COURSE USE)
 FOREST CONSERVATION
 EASEMENT No. 12
 (2.50 AC)

WINTER THICKET
 ROAD

(NON-BUILDABLE)
 PRESERVATION PARCEL 'D'
 (POTENTIAL GOLF COURSE USE)

CURVE DATA
 DORSCH FARM ROAD
 STA. 4+57.16 TO STA. 9+85.81
 R = 321.08'
 L = 528.35'
 Δ = 94°17'03"
 T = 346.03'
 CHD = N 54°27'12"E, 470.72'



- A PT 3+70.00 C/K TO 400.88 BS
- B PC 3+01.04 483'K TO 400.52
- C PC 3+16.04 489'L TO 400.50
- D PT 3+10.00 C/L TO 400.88 BS
- E PC 4+57.16 C/L TO 400.88 BS
- F PC 4+66.13 483'L TO 400.03
- G PC 4+66.13 483'L TO 400.03
- H PC 4+57.16 C/K TO 400.18 ✓

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cathy Hanotta 2/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
William M. Danels 2/18/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Danels 2-5-98
 CHIEF, BUREAU OF HIGHWAYS DATE



10-28-00 REVISE P.C.E. LOCATION AND PLANTINGS
 REVISIONS
 8-3-98 REVISE ALL EXISTING TO HOPE TYPE & REVISE ENTRANCE

GAITHER HUNT
 SECTION 1 AREA 1
 LOTS 1-33, 63-71 AND PRESERVATION PARCELS 'B-E'
 & BULK PARCEL 'F'
 SECOND ELECTION DISTRICT HOWARD COUNTY, MD

DORSCH FARM ROAD/FOX HAVEN WAY
 PLAN & PROFILE

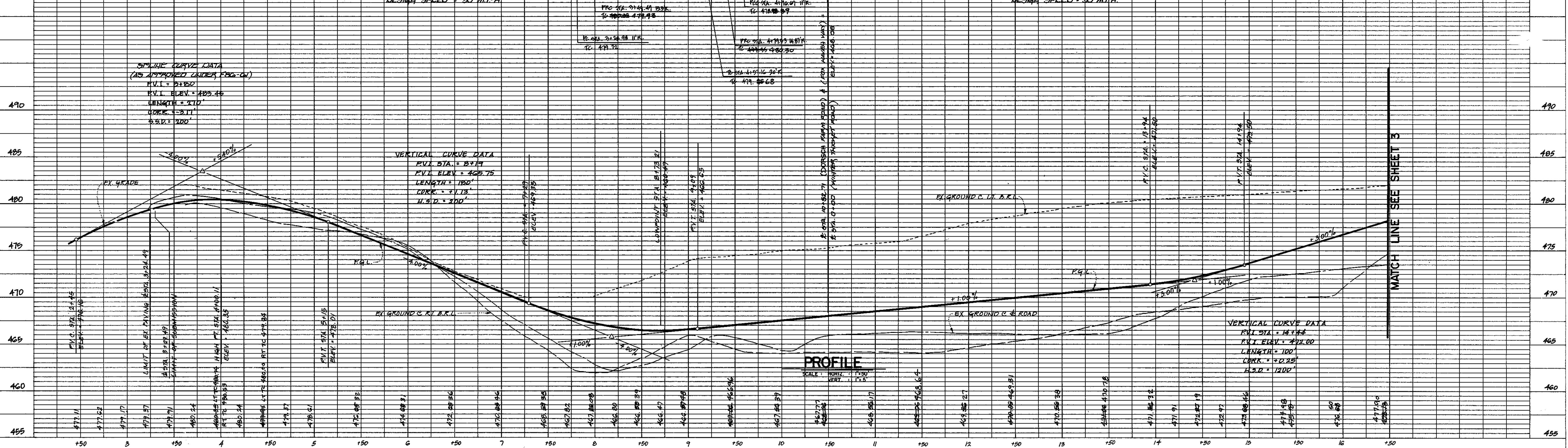
DEVELOPER	OWNER	OWNER
RUSSELL DEVELOPMENT, LLC	MARY ADRIANA BLOOD, ET AL. PHELIP CARROLL AND THE KLEN FAMILY	630 S. THOMAS SCORING
3902 DORSEY HALL DR., STE. 204	6756 MARKE LANE	6756 MARKE LANE
ELLCOTT CITY, MARYLAND 21042	ELLCOTT CITY, MARYLAND 21044	3002 DORSEY HALL DR., SUITE 204
ELLCOTT CITY, MARYLAND 21042	ELLCOTT CITY, MARYLAND 21042	ELLCOTT CITY, MARYLAND 21042

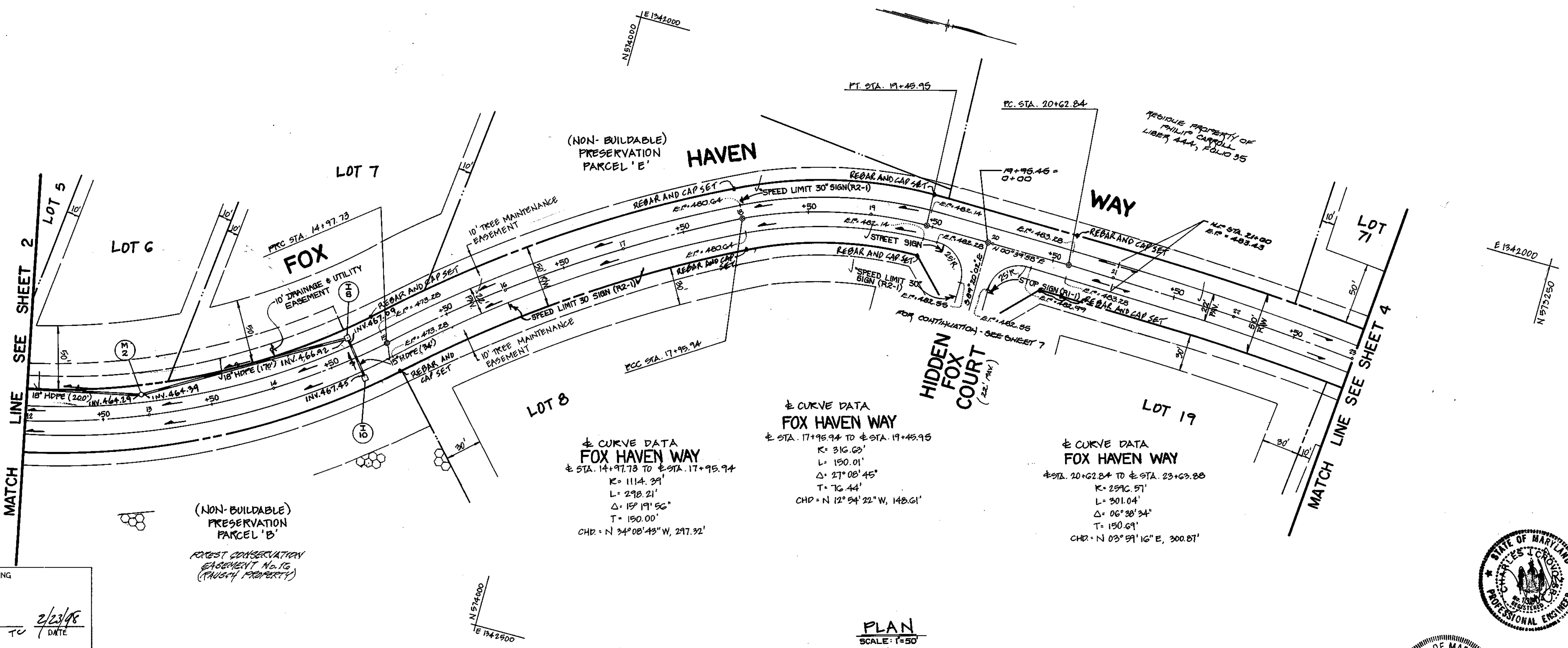
SCALE: AS SHOWN DATE: AUG. 8, 1997 DWG. NO. Z OF 23
 DES. J.V.P. DRN. J.A.U. CHK. Z.Y.F.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLCOTT CITY, MARYLAND 21042
 (410) 981-2855

DORSCH FARM ROAD
 DESIGN SPEED = 30 MPH

FOX HAVEN WAY
 DESIGN SPEED = 30 MPH



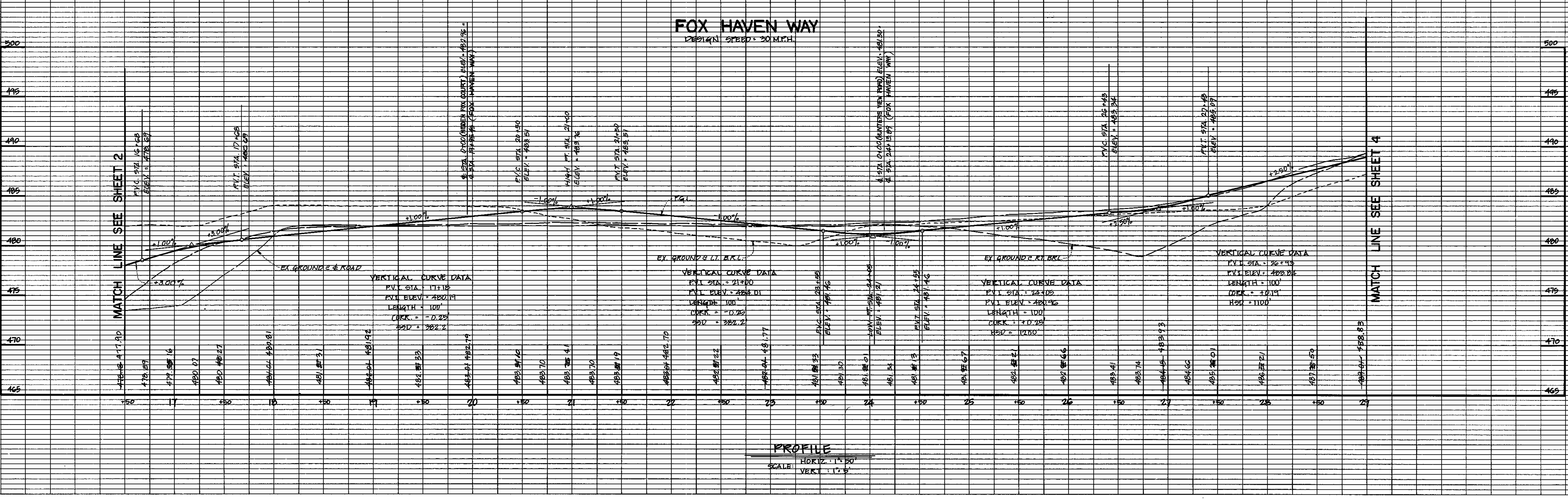


APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 2/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT

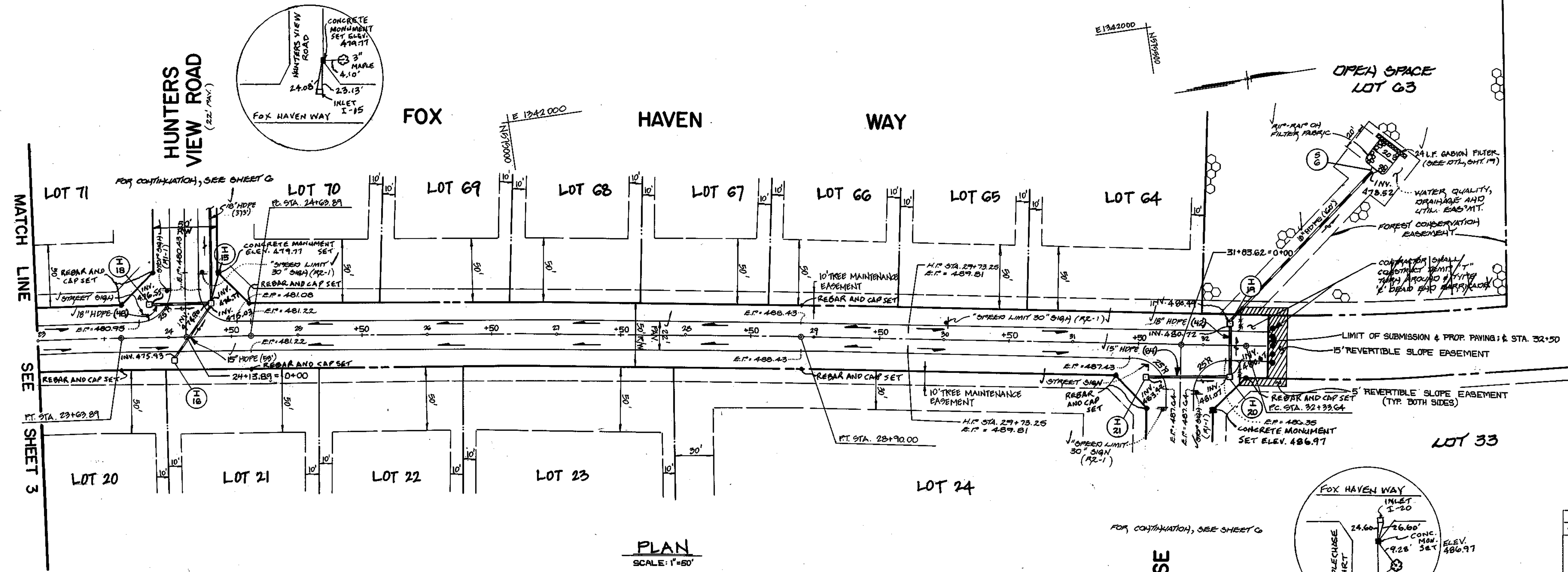
APPROVED: DEPARTMENT OF PLANNING AND ZONING
John Drummond 2/12/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 2-5-98
 CHIEF, BUREAU OF HIGHWAYS

10-28-00	REVISE FILE LOCATION AND PLANNING
8-3-98	REVISE ALL ROOT PIPE TO 12" DIPS
GAITHER HUNT	
SECTION 1 AREA 1	
LOTS 1-33, 65-71 AND PRESERVATION PARCELS 'B-E'	
SECOND ELECTION DISTRICT HOWARD COUNTY, MD.	
FOX HAVEN WAY	
PLAN AND PROFILE	
DEVELOPER	OWNER
RUSSELL DEVELOPMENT, LLC 600 S. THOMAS SQUARE SPOKE DORSEY HALL DR., STE. 204 ELLETTT CITY, MARYLAND 20626	MARY ADRIANA BLOOM ET AL. PHILIP CARROLL AND THE ELEAN FARELY 6750 HANCOCK LANE COLUMBIA, MARYLAND 20646 5026 DORSEY HALL DR., SUITE 204 ELLETTT CITY, MARYLAND 20626
SCALE: AS SHOWN	DATE: Aug. 8, 1997
DES. J.V.F.	DRN. J.A.U.
DWG. NO. 3	CHK. Z.V.F.
FISHER, COLLINS & CARTER, INC.	
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS	
CENTENNIAL SQUARE OFFICE PARK - 10272 BALDORNE NATIONAL Pkwy. ELLETTT CITY, MARYLAND 20624 4109 661 - 2855	



AS BUILT F 98-24



PLAN
SCALE: 1"=50'

VERTICAL CURVE DATA
FOX HAVEN WAY
 PVI STA. 24+03.09 TO PVI STA. 28+70.00
 R = 11,183.31'
 L = 420.10'
 Δ = 02° 10' 39"
 T = 213.06'
 CHD. = 4 08' 24" 02' E, 422.06'

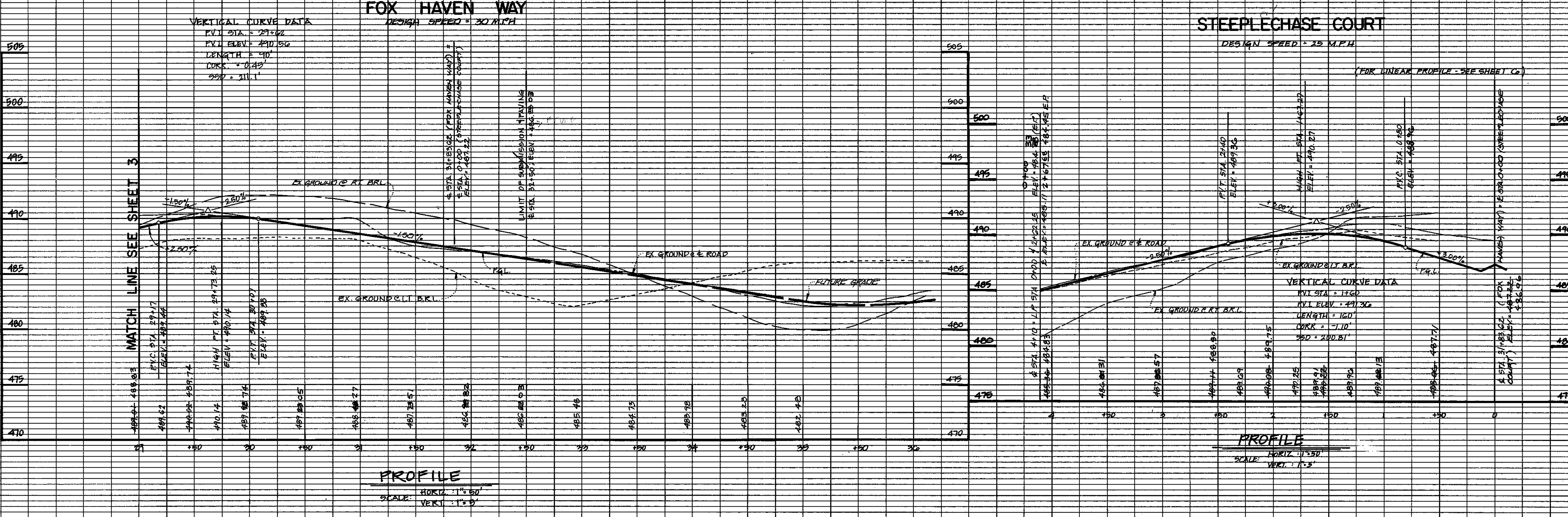


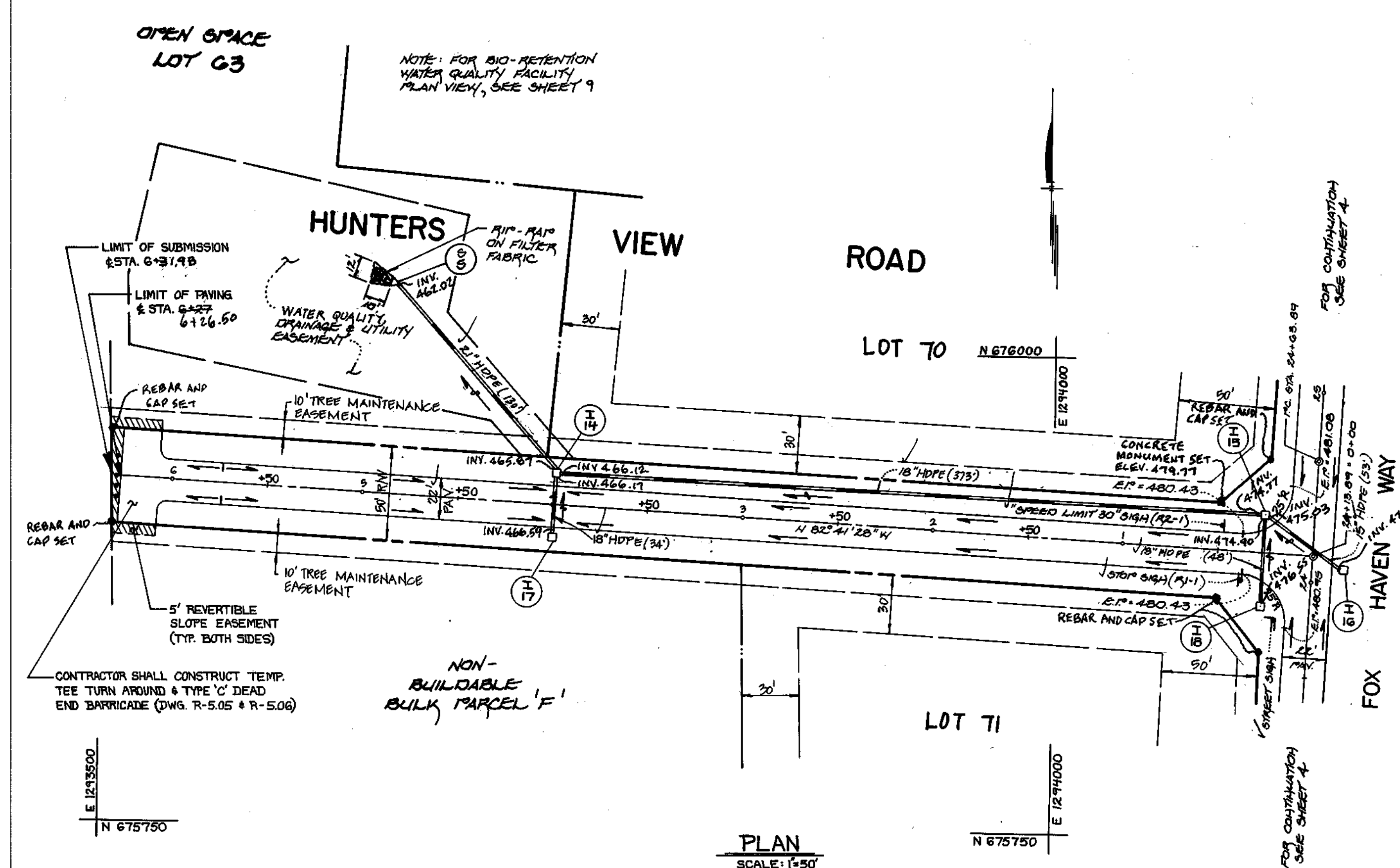
REVISIONS		
8-9-98	REUSE ALL FOOT TO HOPE PIPE.	
GAITHER HUNT		
SECTION 1 AREA 1		
LOTS 1-33, 65-71 AND PRESERVATION PARCELS 'B-E' & 'BULY' PARCEL 'A'		
SECOND ELECTION DISTRICT HOWARD COUNTY, MD.		
FOX HAVEN WAY		
PLAN & PROFILE		
STEEPLECHASE COURT		
PROFILE		
DEVELOPER	RUSSELL DEVELOPMENT, L.L.C.	OWNER
OWNER	MARY ADRIANA BLOOM ET AL. PHILIP CARROLL AND THE KLEN FAMILY	OWNER
DESIGNER	J.V.F.	CHECKER
DATE	Aug 6, 1997	DWG. NO.
SCALE	AS SHOWN	OF 23
FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTENAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL Pk. ELICOTT CITY, MARYLAND 21042 (410) 461-2255		

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Candy Hamilton 2/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT 10 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Mike Dammann 2/23/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Danek 2-5-98
 CHIEF, BUREAU OF HIGHWAYS NS DATE





APPROVED: DEPARTMENT OF PLANNING AND ZONING

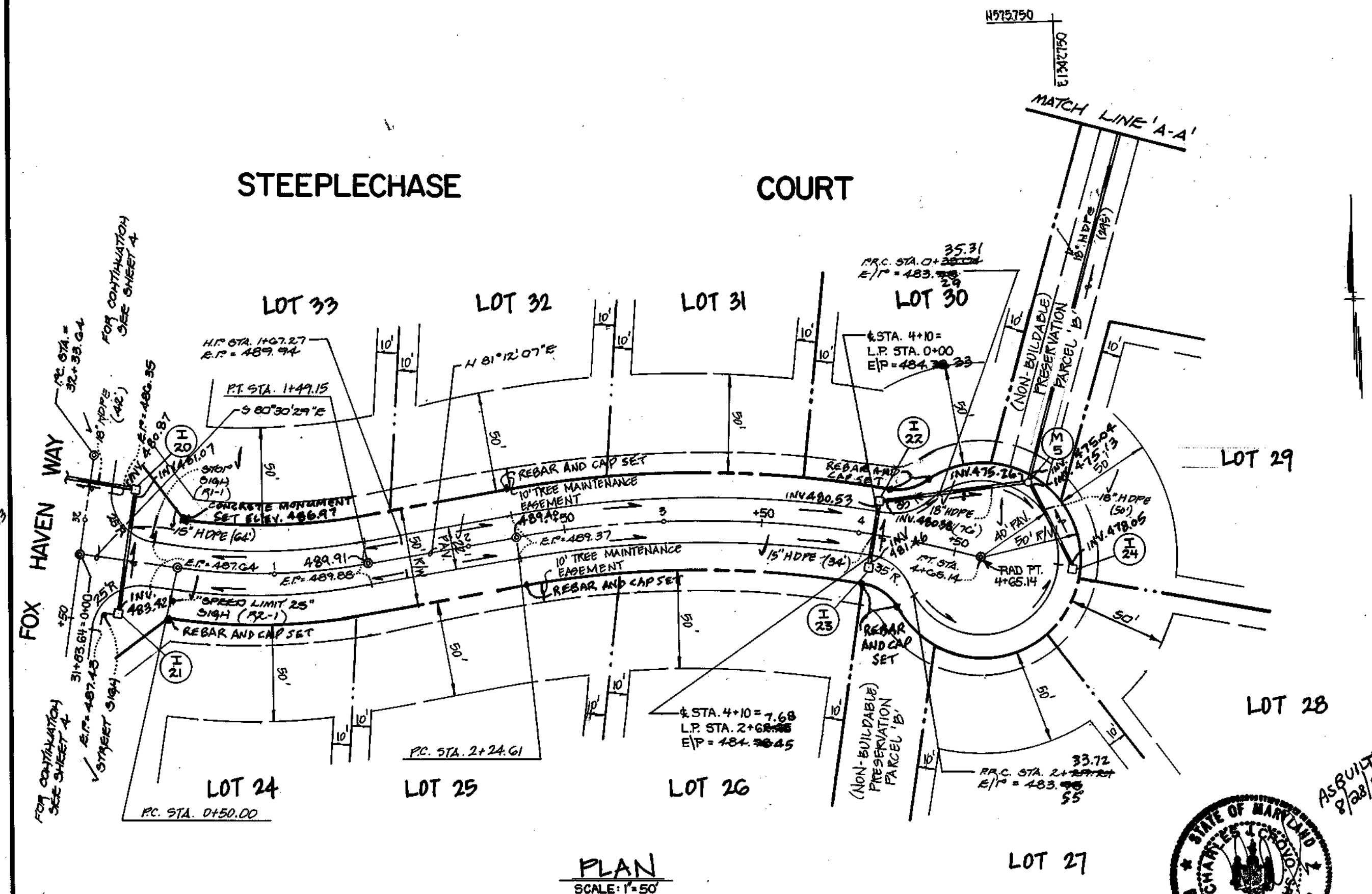
Cindy Hamilton 2/23/95
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

William Dammann 2/23/95
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Stephen M. Souder 2-5-96
 CHIEF, BUREAU OF HIGHWAYS DATE



± CURVE DATA
 STEEPLCHASE COURT
 ± STA. 0+50.00 TO ± STA. 1+49.15
 R= 310.00'
 L= 79.15'
 Δ= 18°17'24"
 T= 50.00'
 CHD= 89°31'11"E, 98.73'

± CURVE DATA
 STEEPLCHASE COURT
 ± STA. 2+24.61 TO ± STA. 4+68.14
 R= 970.00'
 L= 240.55'
 Δ= 26°00'07"
 T= 122.31'
 CHD= 85°41'49"E, 296.47'

REVISIONS

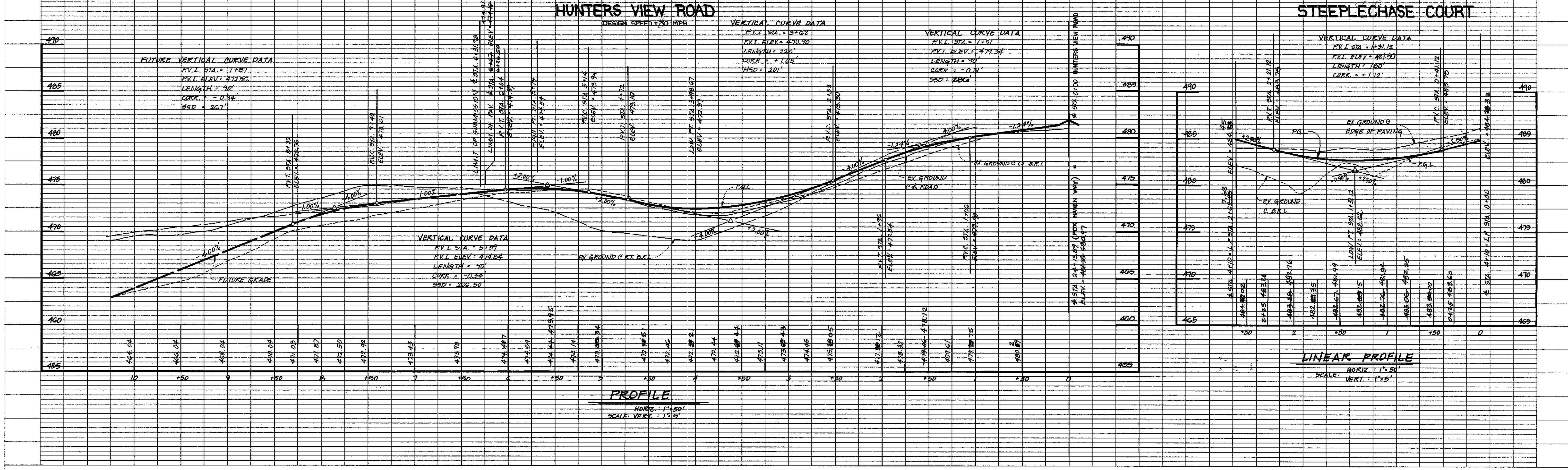
B.3.90 REVISE ALL REEF PIPE TO HOPE PIPE

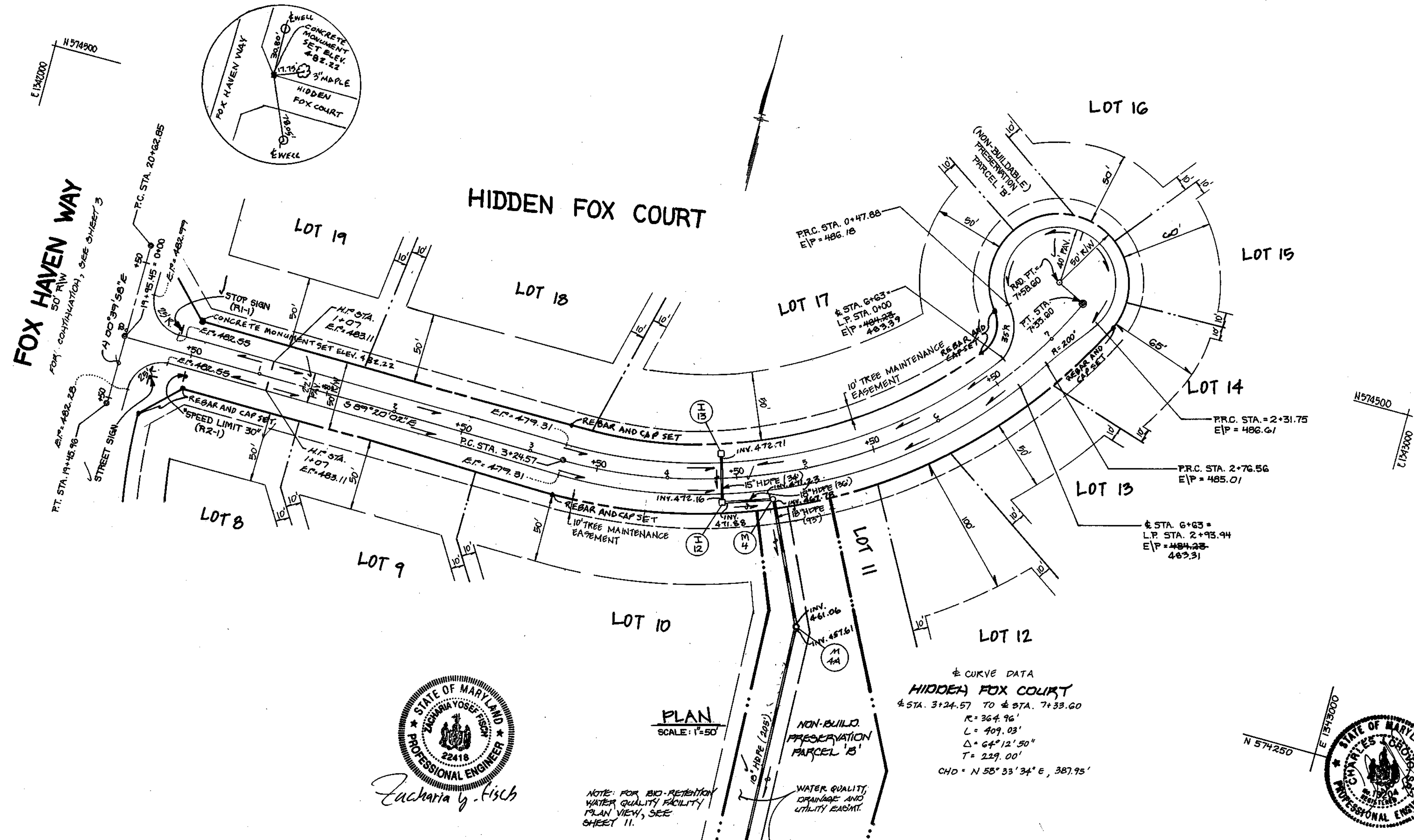
GAITHER HUNT
 SECTION I AREA I
 LOTS 1-33 G3-71 AND PRESERVATION PARCELS 'B-E'
 & BULK PARCEL 'F'
 SECOND ELECTION DISTRICT HOWARD COUNTY, MD.
HUNTERS VIEW / STEEPLCHASE COURT
 PLAN AND PROFILE

DEVELOPER: RUSSELL DEVELOPMENT, LLC. OWNER: MARY ANNETTA BLOOM, ET AL. PHILIP CARROLL AND THE ELEN FAMILY. CS & THOMAS SCORPIONE. 1755 MARSH LANE. CS & THOMAS SCORPIONE. 3000 DORSEY HALL DR., STE. 204 COLUMBIA, MARYLAND 21044. 3000 DORSEY HALL DR., SUITE 204 ELLICOTT CITY, MARYLAND 21042.

SCALE: AS SHOWN DATE: AUG. 8, 1997 DWG. NO. G OF 23
 DES. J.Y.P. DRN. J.A.U. CHK. Z.Y.P.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 4101 461 - 2855





Zacharia G. Fisch

NOTE: FOR BIO-RETENTION WATER QUALITY FACILITY PLAN VIEW, SEE SHEET 11.

REVISIONS
 8-2-98 REVISION ALL REBAR PIPE TO HOPE PIPE

GAITHER HUNT
SECTION 1 AREA 1
 LOTS 1-35, 65-71 AND PRESERVATION PARCELS 'B-E'
 SECOND ELECTION DISTRICT HOWARD COUNTY, MD.

HIDDEN FOX COURT
PLAN AND PROFILE

DEVELOPER	RUSSELL DEVELOPMENT, LLC	OWNER	MARY ARNOLD BLOOD, ET AL. PHEP CARROLL AND THE ELEN FAMILY
SCALE	AS SHOWN	DATE	Aug. 8, 1997
DES.	J.V.F.	DRN.	J.A.U.
CHK.	Z.Y.F.	DWG. NO.	7 OF 29

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 18272 BALTIMORE NATIONAL PKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2855

APPROVED: DEPARTMENT OF PLANNING AND ZONING

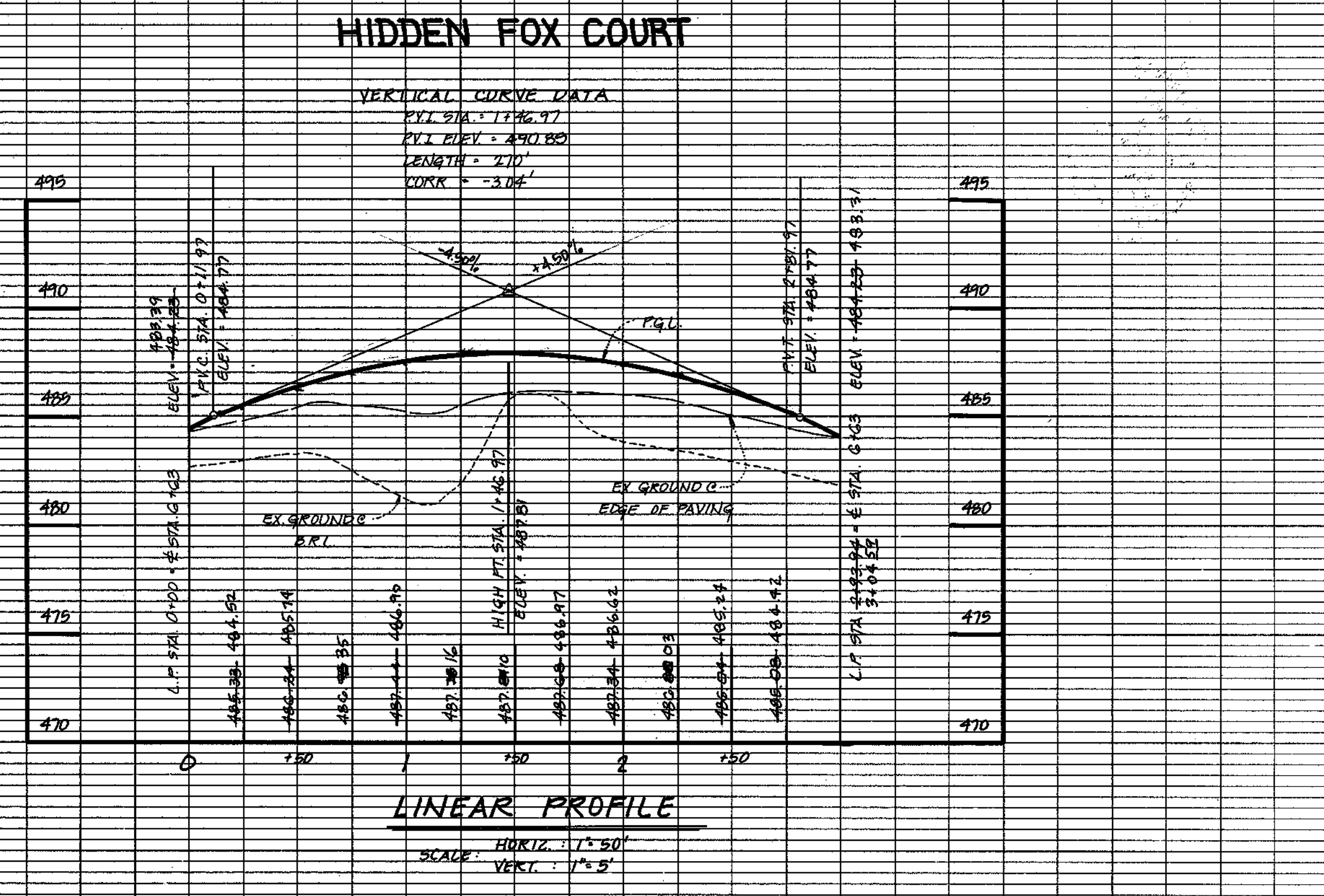
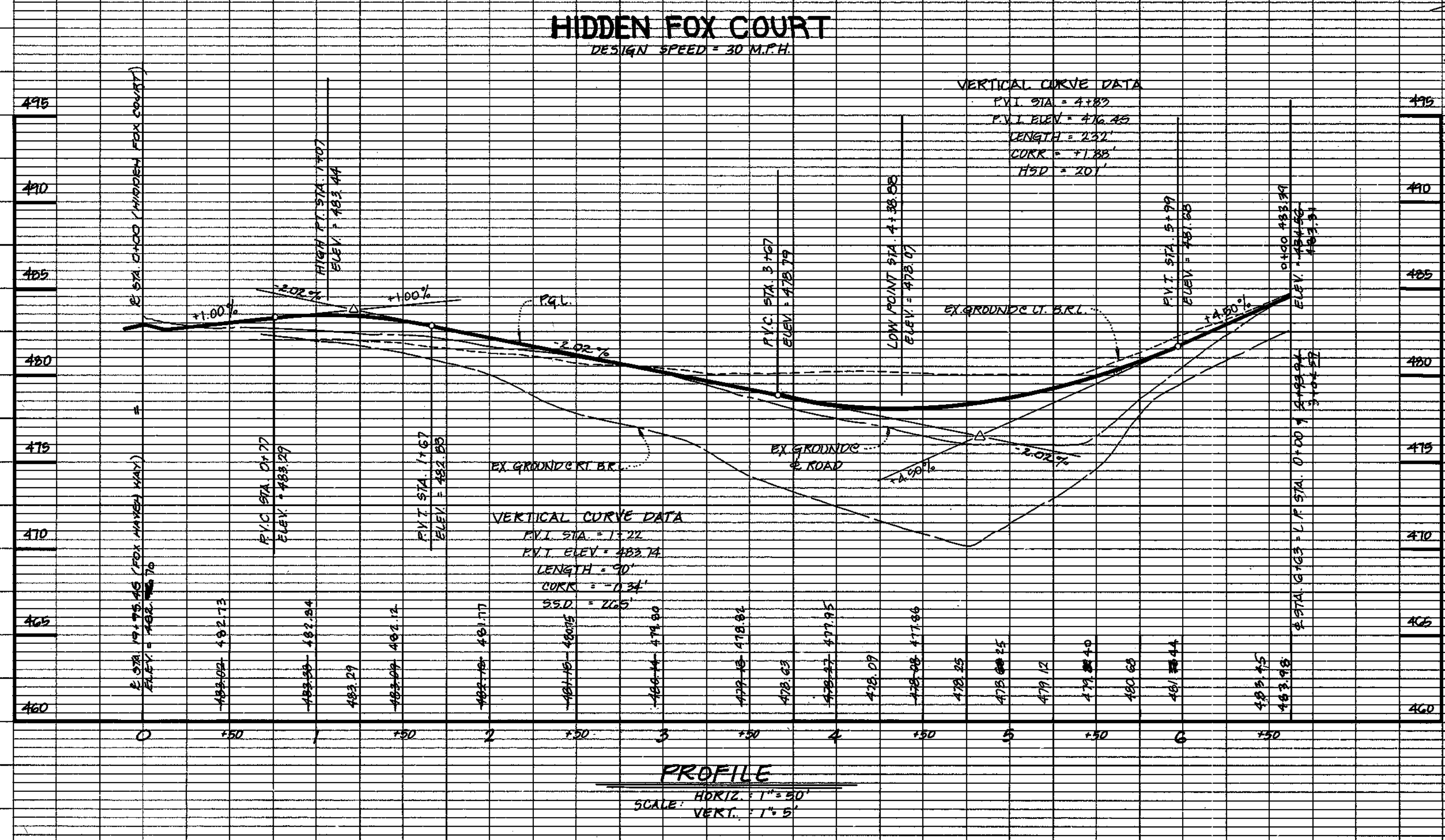
Cindy Hamilton 2/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT TC DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Michael Dammann 2/12/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Andrew M. Fowler 2-5-98
 CHIEF, BUREAU OF HIGHWAYS MS DATE



By The Developer:
 I/We 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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I/We, the Developer, Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.

Signature of Developer: *[Signature]* Date: 12/12/97

Printed Name Of Developer: _____

By The Engineer:
 I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.

Signature of Engineer: *Zacharia Y. Fisch* Date: 8/29/97

Printed Name Of Engineer: ZACHARIA Y. FISCH

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: *Carol Simmons* Date: 11/21/95

Signature: *John P. Roberts* Date: 11/21/95

Signature: *Andrew M. Sawyer* Date: 2-5-98

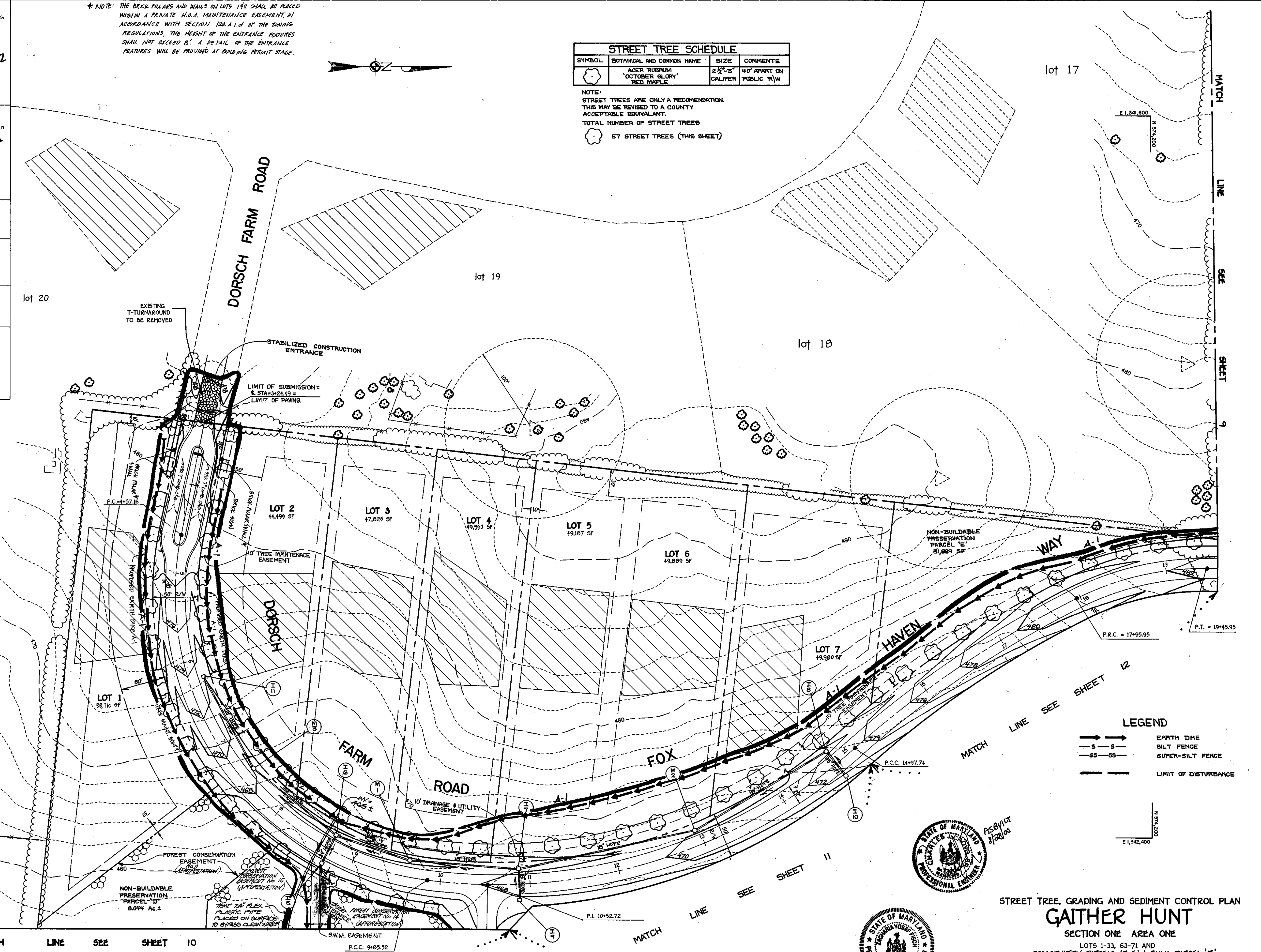
Signature: *Conch Hamilton* Date: 2/23/95

Signature: *Mark Dammann* Date: 2/13/98

* NOTE: THE BRICK PILLARS AND WALLS ON LOTS 19 & 20 SHALL BE PLACED WITHIN A PRIVATE H.O.A. MAINTENANCE EASEMENT, IN ACCORDANCE WITH SECTION 12B.1.1.D OF THE ZONING REGULATIONS. THE HEIGHT OF THE ENTRANCE FEATURES SHALL NOT EXCEED 8'. A DETAIL OF THE ENTRANCE FEATURES WILL BE PROVIDED AT BUILDING PERMIT STAGE.

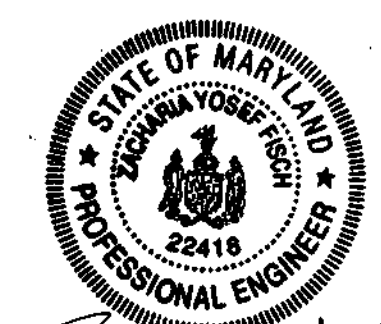
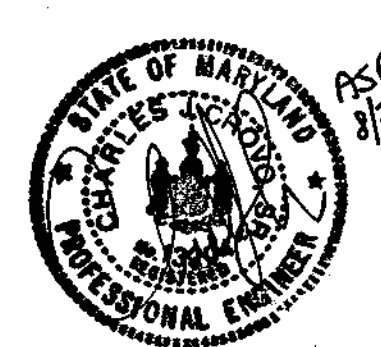
STREET TREE SCHEDULE			
SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2" - 3" CALIPER	40' APART ON PUBLIC R/W

NOTE:
 STREET TREES ARE ONLY A RECOMMENDATION. THIS MAY BE REVISED TO A COUNTY ACCEPTABLE EQUIVALENT.
 TOTAL NUMBER OF STREET TREES
 57 STREET TREES (THIS SHEET)



LEGEND

- EARTH DIKE
- SILT FENCE
- SUPER-SILT FENCE
- LIMIT OF DISTURBANCE



STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
GATHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND PRESERVATION PARCELS 'B-E' & BULKY PARCEL 'M'
 ZONING: 'RC-DEO'
 TAX MAP No. 29 PARCEL 21 GRID 5
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: AUGUST 8, 1997
 SHEET 8 OF 29

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 410.418.2895

OWNER
 MARY ARBETHA BLOOM, ET AL.
 4754 MANOR LAKE
 COLUMBIA, MARYLAND 21044

OWNER
 PHILIP CARROLL AND
 THE KLEIN FAMILY
 c/o J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 c/o J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

2-29-00 REVISE F.C.E. LOCATION AND PLANTING
 REVISIONS
 8-3-98 REVISE ENTRANCE AND ALL PILES TO HOPE

ASBUILT F98-24

By The Developer:
 I/We 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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I/We Shall Engage A Registered Professional Engineer To Supervise The Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.
 Signature of Developer: *Zachary V. Fison* Date: 12/29/97

Printed Name Of Developer: **ZACHARY V. FISON**

By The Engineer:
 I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I/We Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.
 Signature of Engineer: *Zachary V. Fison* Date: 8/29/97
 Printed Name Of Engineer: **ZACHARY V. FISON**

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: *Chester Simmons* Date: 11/11/98
 USNR-Natural Resources Conservation Service
 Signature: *John R. Robertson* Date: 11/21/98
 Howard Soil Conservation District

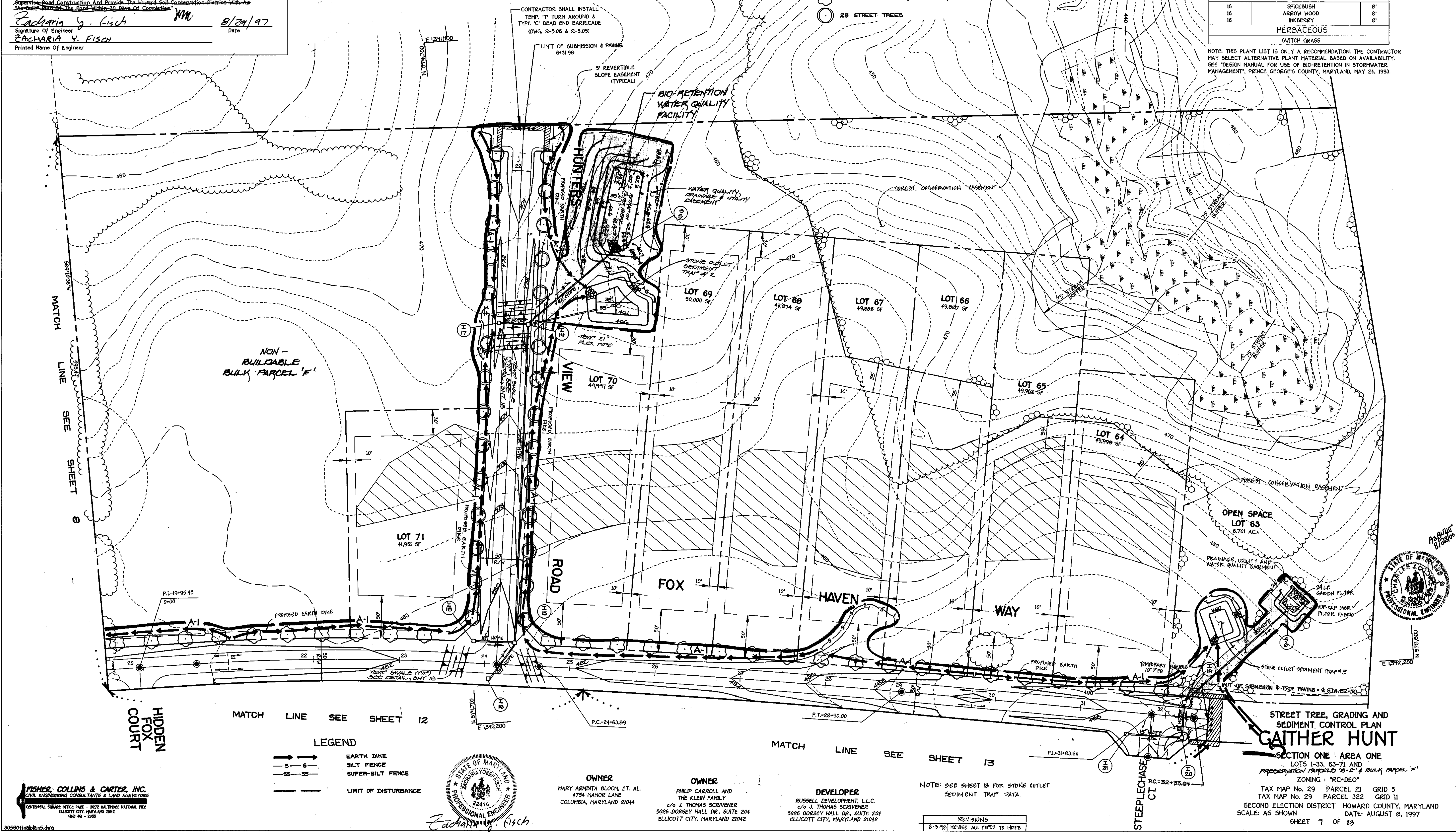
Approved Department Of Planning And Zoning
 Signature: *Cathy Hamilton* Date: 2/23/98
 Chief, Division Of Land Development
 Signature: *John Simmons* Date: 2/12/98
 Chief, Development Engineering Division M1K

STREET TREE SCHEDULE			
SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
(Symbol)	ACER RUBRUM 'OCTOBER GLORY' / RED MAPLE	2 1/2" DB" CALIPER	40' APART ON PUBLIC R/W
(Symbol)	PLATANUS OCCIDENTALIS 'BLOODGOOD' / LONDON PLANETREE	2 1/2" DB" CALIPER	40' APART ON PUBLIC R/W

NOTE:
 STREET TREES ARE ONLY A RECOMMENDATION. THIS MAY BE REVISED TO A COUNTY ACCEPTABLE EQUIVALENT.
 TOTAL NUMBER OF STREET TREES:
 29 STREET TREES (THIS SHEET)
 28 STREET TREES

BIO-RETENTION 5-5 PLANT LIST		
TREES		
NO. OF PLANTS	TYPE	SPACING
8	QUERCUS BICOLOR (SWAMP WHITE OAK)	12'
8	QUERCUS FELLOWS (WILLOW OAK)	12'
8	NYSSA SYLVATICA (BLACK GUM)	12'
SHRUBS		
16	SPICEBUSH	8'
16	ARROW WOOD	8'
16	INKBERRY	8'
HERBACEOUS		
	SWITCH GRASS	

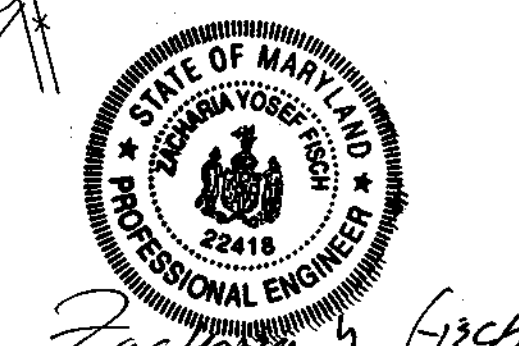
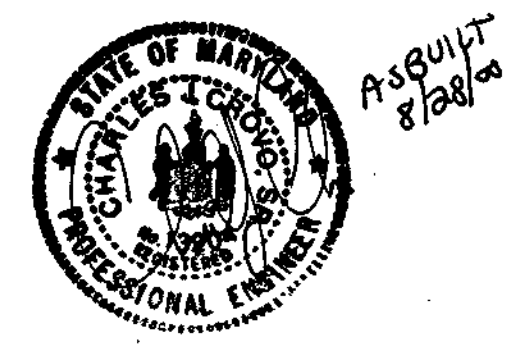
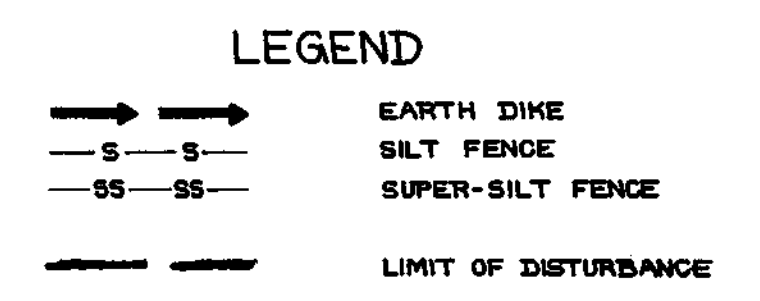
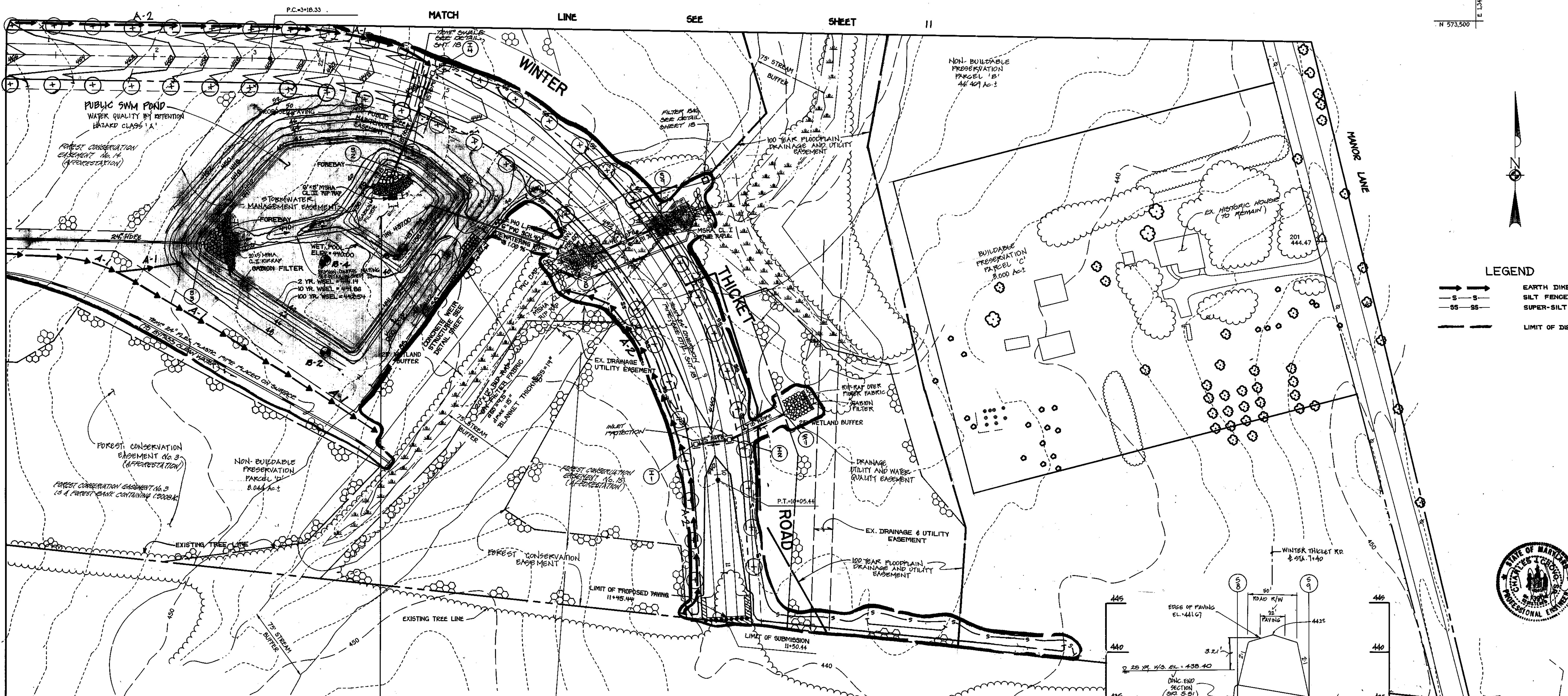
NOTE: THIS PLANT LIST IS ONLY A RECOMMENDATION. THE CONTRACTOR MAY SELECT ALTERNATIVE PLANT MATERIAL BASED ON AVAILABILITY. SEE "DESIGN MANUAL FOR USE OF BIO-RETENTION IN STORMWATER MANAGEMENT", PRINCE GEORGE'S COUNTY, MARYLAND, MAY 24, 1993.



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 1827 BALDWIN NATIONAL FREE ELLICOTT CITY, MARYLAND 21042
 410P 46 - 2002

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
GAITHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND PREDEVELOPED PARCELS 19-21 & BULK PARCEL 'F'
 ZONING: "RC-DEO"
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: AUGUST 8, 1997
 SHEET 9 OF 29

AS BUILT F98-24

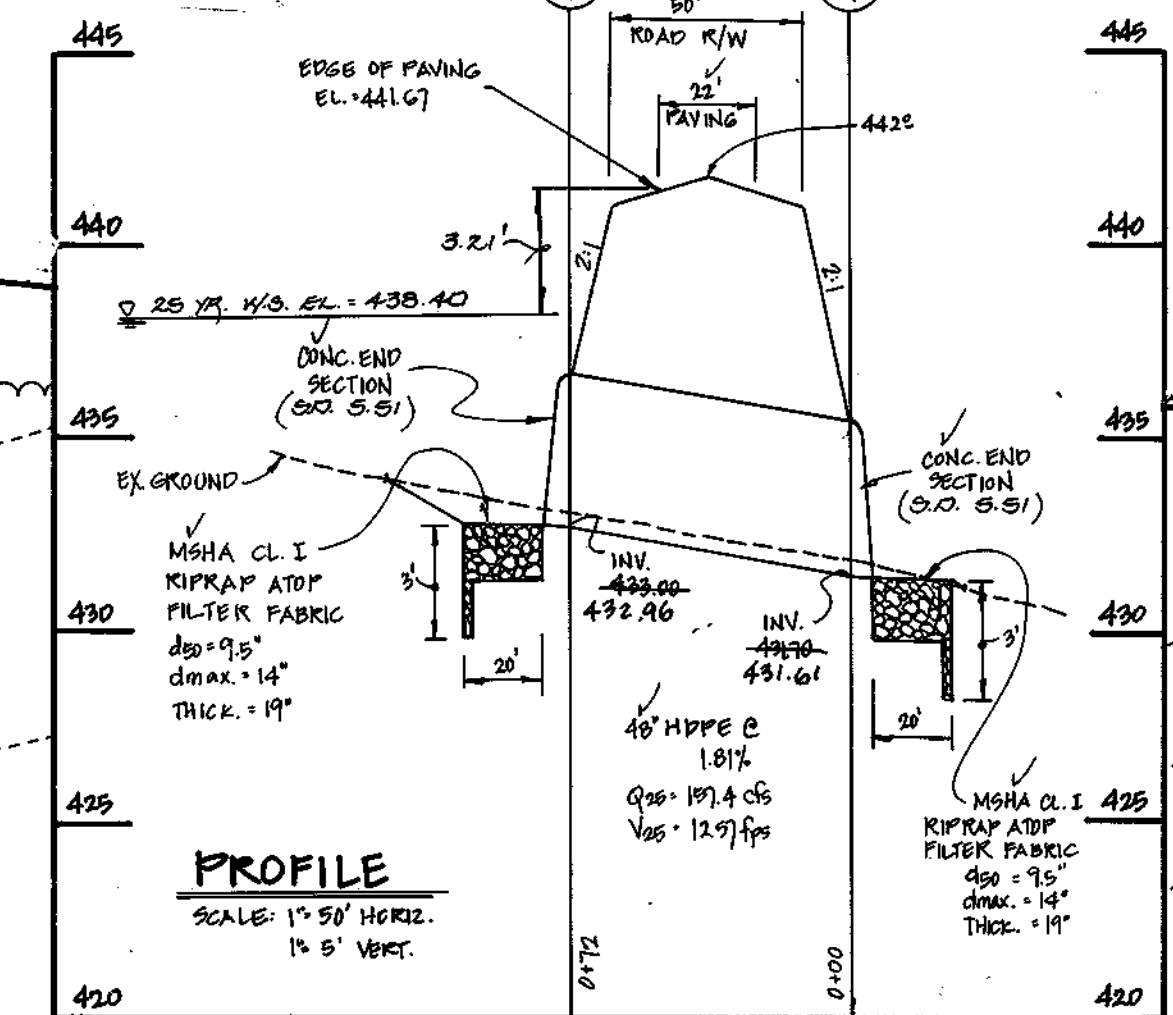


SEDIMENT BASIN
 D.A. TO SEDIMENT BASIN = 3.4 AC ±
 STORAGE REQUIRED = 12,240 CF
 STORAGE PROVIDED = 60,900 CF
 CREST EL. FOR 10 WIDE CONC. WEIR = 441.50
 BOTTOM OF BASIN = 437.00
 CLEAN-OUT ELEV. = 439.50
 DEMANDING ELEV. = 440.50
 PROVIDE 4" PVC W/ 1/2" BLOW OFF ELEV. = 440.5
 BLOCK OFF CONC. WEIR FROM ELEV. 440.5 TO 441.5 FOR SEDIMENT CONTROL PURPOSES ONLY.

WETLANDS PERMIT FOR CROSSING STA. 7+00 TO 8+00 WINTER THICKET ROAD # 133860202, # 97-NI-0710

STREET TREE SCHEDULE			
SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
(+)	ACER RUBRUM 'AUTUMN FLAME'	2 1/2" x 3"	40' APART ON CALIPER PUBLIC HW

NOTE:
 STREET TREES ARE ONLY A RECOMMENDATION. THIS MAY BE REVISED TO A COUNTY ACCEPTABLE EQUIVALENT.
 TOTAL NUMBER OF STREET TREES
 (+) 52 STREET TREES



By The Developer:
 I/We 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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project.
 Signature of Developer: *[Signature]* Date: 12/17/97
 Printed Name of Developer: *[Name]*

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 of Reviewer: *[Signature]* Date: 11/2/98
 USA-Nat'l of Resources Conservation Service

By The Engineer:
 I Certify That This Plan For Road 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, The Maryland Department Of Transportation, And Provided The Construction District With A Final Plan Of The Road Within 30 Days Of Completion.
 Signature of Engineer: *[Signature]* Date: 8/29/97
 ZACHARIA Y. FINCH
 Printed Name of Engineer

These Plans For Small-Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.
 Signature of Reviewer: *[Signature]* Date: 11/2/98
 John R. Roberts
 Howard Soil Conservation District

Approved Department Of Public Works
 Signature: *[Signature]* Date: 2-5-98
 Chief Bureau of Highways

Approved Department Of Planning And Zoning
 Signature: *[Signature]* Date: 8/23/98
 Chief, Division of Land Development TC

Signature: *[Signature]* Date: 2/13/98
 Chief, Development Engineering Division MJK

OWNER
 MARY ARMINA BLOOM, ET AL.
 4754 MANOK LANE
 COLUMBIA, MARYLAND 21044

OWNER
 PHILIP CARROLL AND THE KLEN FAMILY
 c/o J. THOMAS SCRIVENER
 5028 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
GATHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND PRESERVATION PARCELS 'B-E' & 'BULK PARCEL #1'
 ZONING: "RC-DEO"
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: AUGUST 8, 1997
 SHEET 10 OF 23

By The Developer:
 I/We 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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. *Professional Engineer* Registered Professional Engineer. To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.
 Signature of Developer: *[Signature]* Date: 12/22/98

By The Engineer:
 I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Reviewed The Decision, The Hydrology Report, A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.
 Signature Of Engineer: *Zacharia Y. Fisch* Date: 8/29/97
 Printed Name Of Engineer: ZACHARIA Y. FISCH

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: *[Signature]* Date: 1/21/98
 Natural Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.
 Signature: *[Signature]* Date: 1/21/98
 Howard Soil Conservation District

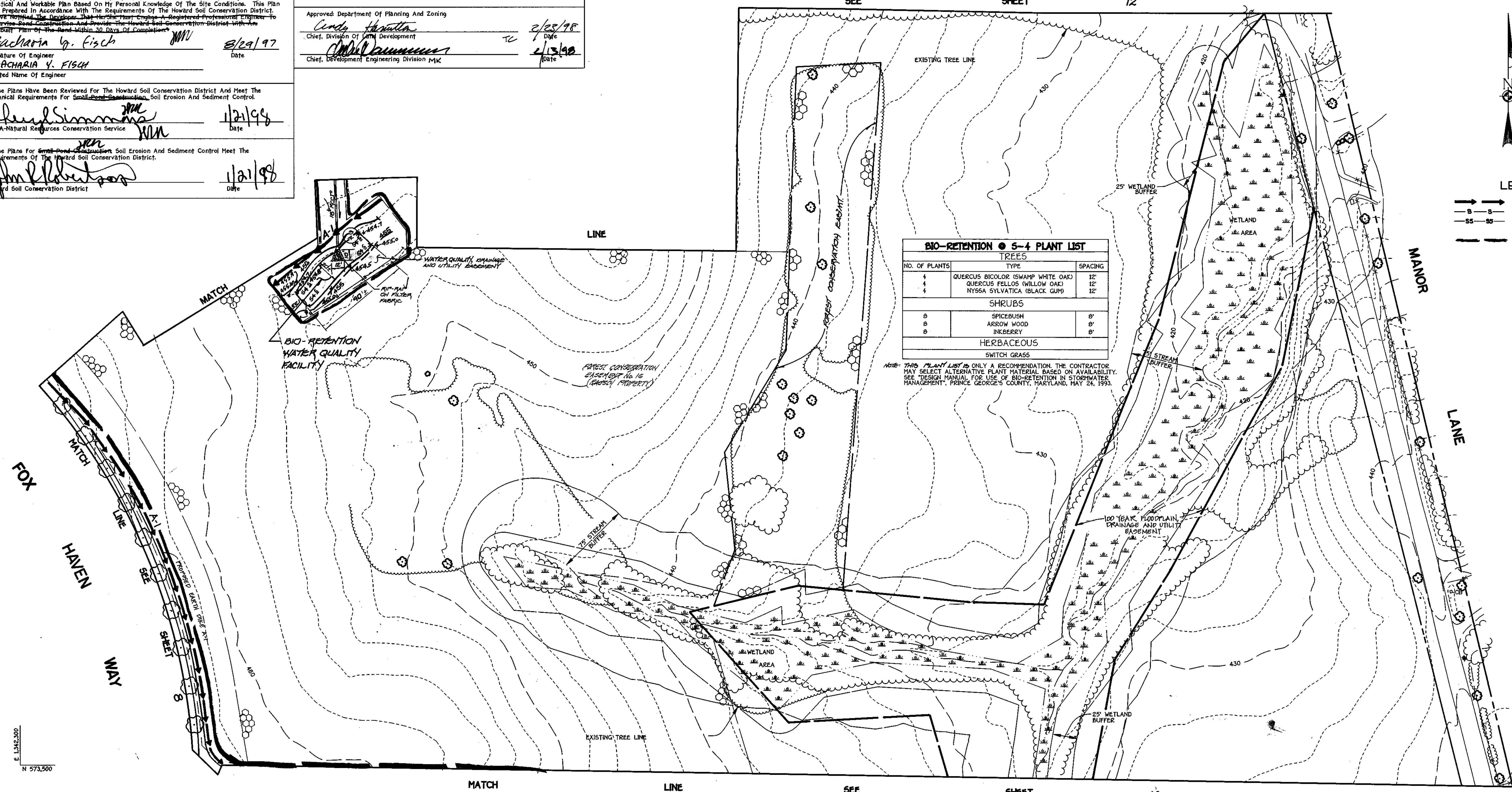
Approved: Department Of Public Works
 Signature: *[Signature]* Date: 2-5-98
 Chief, Bureau Of Highways

Approved: Department Of Planning And Zoning
 Signature: *[Signature]* Date: 2/23/98
 Chief, Division Of Land Development

Signature: *[Signature]* Date: 2/13/98
 Chief, Development Engineering Division

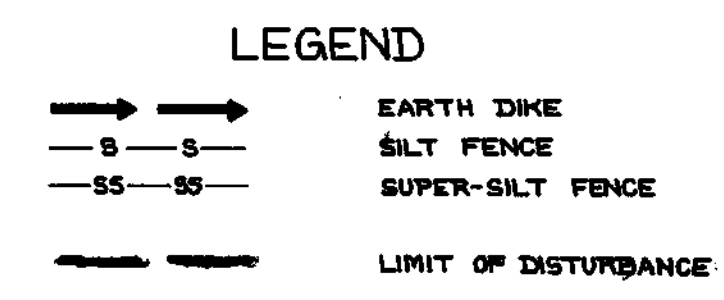
STREET TREE SCHEDULE			
SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	AGER FRURUM "OCTOBER GLORY" RED MAPLE	2 1/2" - 3" CALIPER	40' APART ON PUBLIC R/W

NOTE:
 STREET TREES ARE ONLY A RECOMMENDATION. THIS MAY BE REVISED TO A COUNTY ACCEPTABLE EQUIVALENT.
 TOTAL NUMBER OF STREET TREES
 10 STREET TREES (THIS SHEET)



BIO-RETENTION 5-4 PLANT LIST		
TREES		
NO. OF PLANTS	TYPE	SPACING
4	QUERCUS BICOLOR (SWAMP WHITE OAK)	12'
4	QUERCUS FELLOUS (WILLOW OAK)	12'
4	NYSSA SILVATICA (BLACK GUM)	12'
SHRUBS		
8	SPICEBUSH	8'
8	ARROW WOOD	8'
8	INKBERRY	8'
HERBACEOUS		
	SWITCH GRASS	

NOTE: THIS PLANT LIST IS ONLY A RECOMMENDATION. THE CONTRACTOR MAY SELECT ALTERNATIVE PLANT MATERIAL BASED ON AVAILABILITY. SEE "DESIGN MANUAL FOR USE OF BIO-RETENTION IN STORMWATER MANAGEMENT", PRINCE GEORGES COUNTY, MARYLAND, MAY 24, 1993.



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 1827 BALTIMORE NATIONAL FREE
 ELLICOTT CITY, MARYLAND 21042
 410-461-2925

OWNER
 MARY ARMINTA BLOOM, ET. AL
 1754 MANOR LANE
 COLUMBIA, MARYLAND 21044

OWNER
 PHILIP CARROLL AND
 THE KLEIN FAMILY
 c/o J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 c/o J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042



Zacharia Y. Fisch

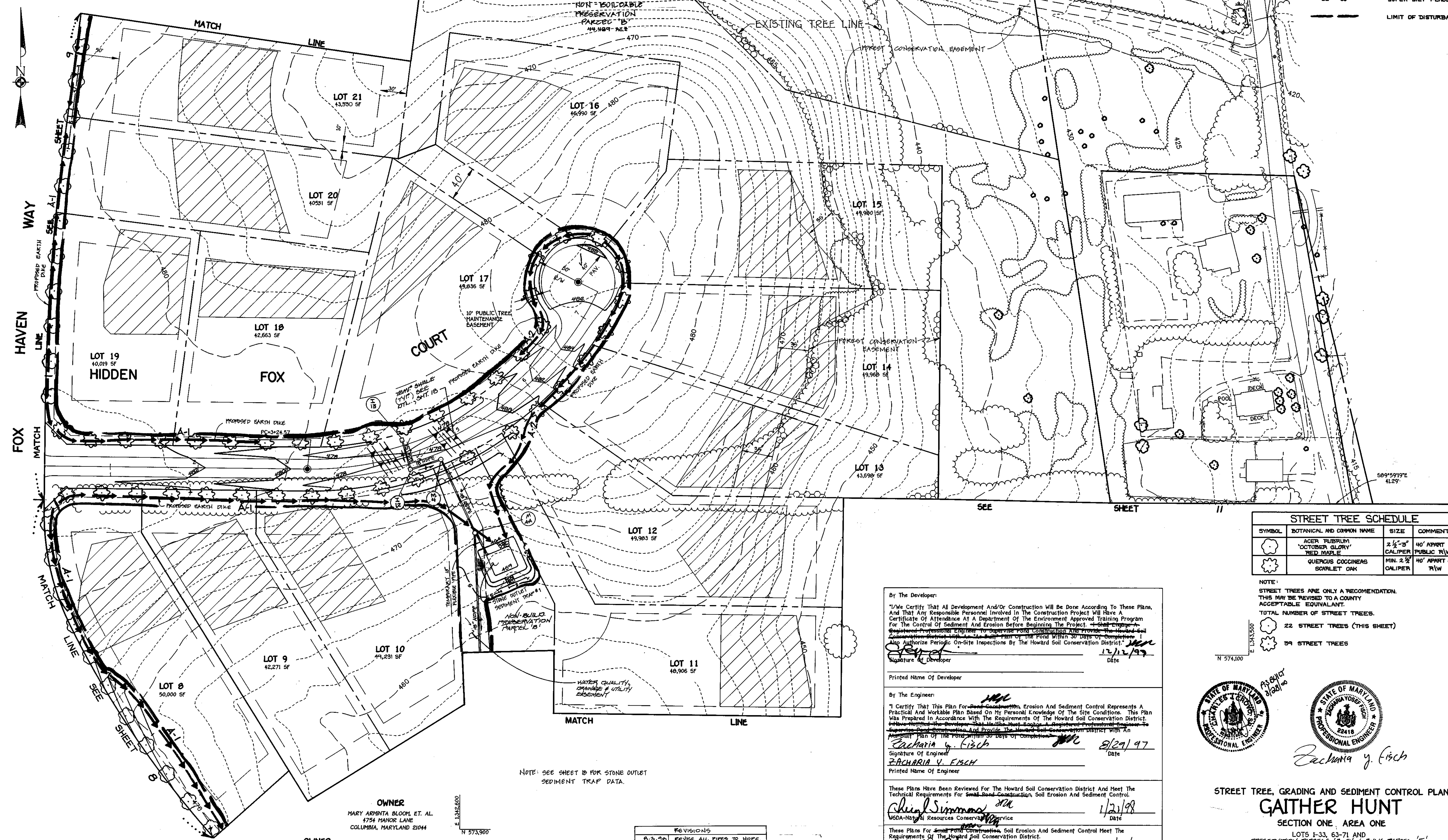
STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
GATHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND
 PRESERVATION PARCELS 'B-E' & BULK PARCEL 'F'
 ZONING: "RC-DEO"
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: AUGUST 8, 1997
 SHEET 11 OF 25

12-29-00 REVISE P.C.E. LOCATION AND PLANTINGS.
 2/12/02 REVISION

AS BUILT F 98-24

LEGEND

- EARTH DIKE
- SILT FENCE
- SUPER-SILT FENCE
- LIMIT OF DISTURBANCE



STREET TREE SCHEDULE			
SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	ACER RUBRUM "OCTOBER GLORY" RED MAPLE	2 1/2" DBH	40' APART ON PUBLIC R/W
	QUERCUS COCCINEA SCARLET OAK	MIN. 2 1/2" DBH	40' APART ON R/W

NOTE:
STREET TREES ARE ONLY A RECOMMENDATION.
THIS MAY BE REVISED TO A COUNTY
ACCEPTABLE EQUIVALENT.
TOTAL NUMBER OF STREET TREES:
 22 STREET TREES (THIS SHEET)
 39 STREET TREES

By The Developer:
I/We 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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I/We Authorize The Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With A Final Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.
[Signature]
Signature of Developer
Date: 12/12/97

By The Engineer:
I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District For The Control Of Sediment And Erosion Before Beginning The Project. I/We Authorize The Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With A Final Plan Of The Pond Within 30 Days Of Completion.
[Signature]
Signature of Engineer
ZACHARIA V. FISCH
Printed Name of Engineer
Date: 8/29/97

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]
Date: 1/21/98
USDA-Natural Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.
[Signature]
Date: 1/21/98
Approved Department of Public Works
[Signature]
Date: 2-5-98
Chief Bureau of Highways

REVISIONS	
B-3-98	REVISE ALL PIPES TO HOPE.
Approved: Department of Planning And Zoning	
<i>[Signature]</i>	TC 2/23/98
Chief, Division of Land Development	Date
<i>[Signature]</i>	2/13/98
Chief, Development Engineering Division MK	Date

NOTE: SEE SHEET 10 FOR STONE OUTLET SEDIMENT TRAP DATA.

OWNER
MARY ARMINA BLOOM, ET. AL.
1754 MANOR LANE
COLUMBIA, MARYLAND 21044

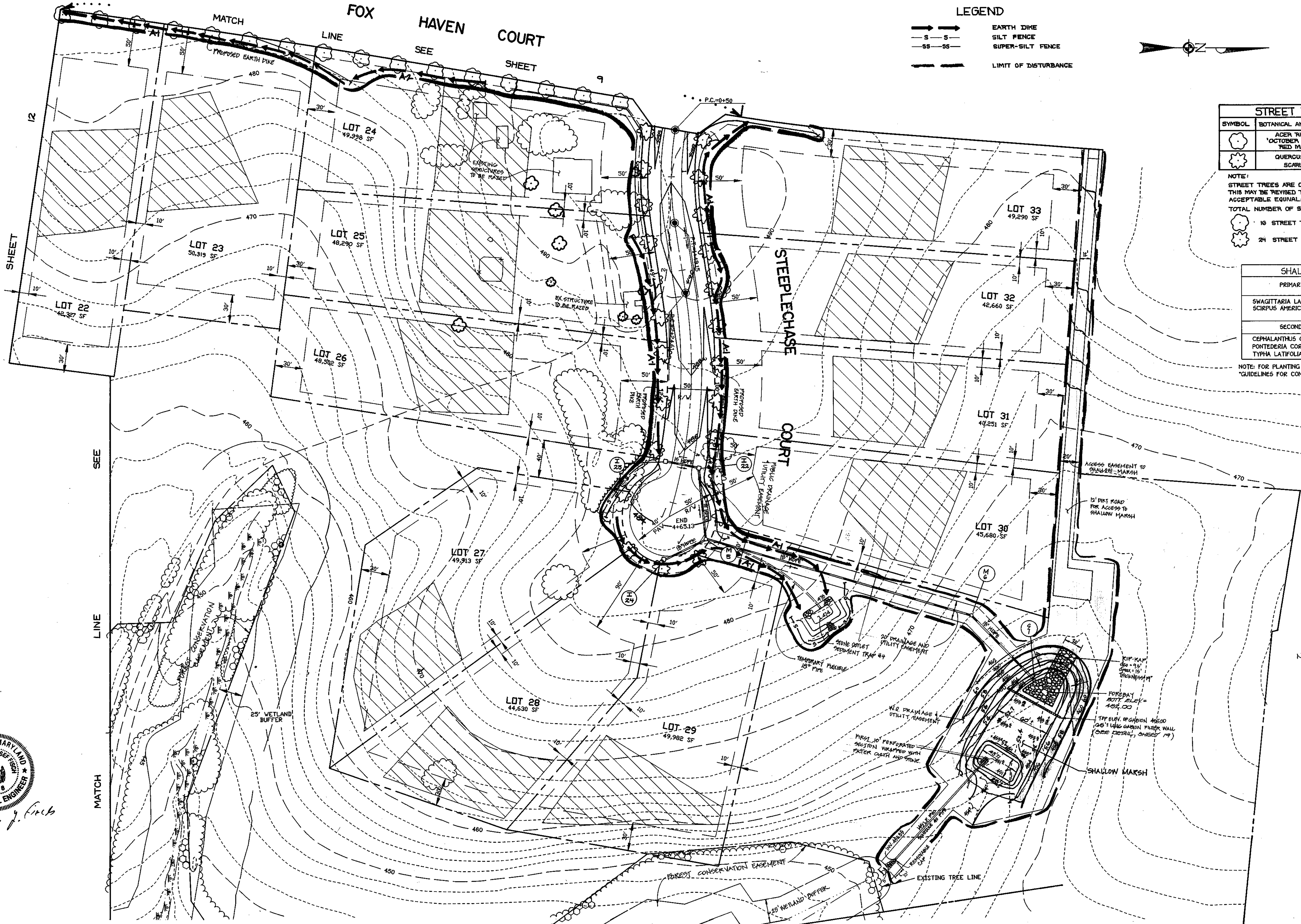
OWNER
PHILIP CARROLL AND
THE KLEIN FAMILY
c/o J. THOMAS SCRIVENER
5026 DORSEY HALL DR., SUITE 204
ELLCOTT CITY, MARYLAND 21042

DEVELOPER
RUSSELL DEVELOPMENT, L.L.C.
c/o J. THOMAS SCRIVENER
5026 DORSEY HALL DR., SUITE 204
ELLCOTT CITY, MARYLAND 21042

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL FREE
ELLCOTT CITY, MARYLAND 21042
4101 661 - 3999



STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
GATHER HUNT
SECTION ONE, AREA ONE
LOTS 1-33, 63-71 AND
PRESERVATION PARCELS 'B-E' & BULKY PARCEL 'F'
ZONING: "RC-DEO"
TAX MAP No. 29 PARCEL 21 GRID 5
TAX MAP No. 29 PARCEL 322 GRID 11
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST 8, 1997
SHEET 12 OF 23



LEGEND

- S — S — EARTH DIKE
- SS — SS — SILT FENCE
- SS — SS — SUPER-SILT FENCE
- — — LIMIT OF DISTURBANCE



STREET TREE SCHEDULE			
SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2" - 3" CALIPER	40' APART ON PUBLIC R/W
	QUERCUS COCCINEAS SCARLET OAK	MIN. 2 1/2" CALIPER	40' APART ON R/W

NOTE:
STREET TREES ARE ONLY A RECOMMENDATION.
THIS MAY BE REVISED TO A COUNTY
ACCEPTABLE EQUIVALENT.
TOTAL NUMBER OF STREET TREES
 10 STREET TREES (THIS SHEET)
 24 STREET TREES

SHALLOW MARSH PLANTING	
PRIMARY SPECIES	QUANTITY
SWAGITTARIA LATIFOLIA (DUCK POTATO)	51
SCIRPUS AMERICANUS (COMMON THREE SQUARE)	100
SECONDARY SPECIES	
QUANTITY	
CEPHALANTHUS OCCIDENTALIS (BUTTON BUSH)	10
PONTEDERIA CORDATA (PICKEREL WEED)	10
TYPHA LATIFOLIA (COMMON CATTAIL)	10

NOTE: FOR PLANTING LOCATION OR SUBSTITUTE PLANTS SEE
"GUIDELINES FOR CONSTRUCTING WETLAND STORMWATER BASIN MARCH 1997"



NOTE: SEE SHEET 10 FOR STONE OUTLET
SEDIMENT TRAP DATA.

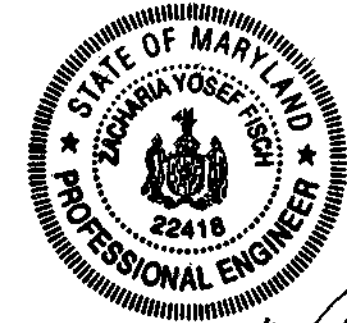
OWNER
MARY ARMINA BLOOM, ET AL.
4754 MANER LANE
COLUMBIA, MARYLAND 21044

DEVELOPER
RUSSELL DEVELOPMENT, L.L.C.
c/o J. THOMAS SCRIVENER
5026 DORSEY HALL DR., SUITE 204
ELLCOTT CITY, MARYLAND 21042

OWNER
PHILIP CARROLL AND
THE KLEIN FAMILY
c/o J. THOMAS SCRIVENER
5026 DORSEY HALL DR., SUITE 204
ELLCOTT CITY, MARYLAND 21042

E 1,342,300

E 1,343,100



Zacharia Y. Fisch

By The Developer:
I/We 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 As A Department Of The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project.
Zacharia Y. Fisch
Signature Of Developer
Date: 12/12/97
Printed Name Of Developer

By The Engineer:
I Certify That This Plan For Small Scale 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.
Zacharia Y. Fisch
Signature Of Engineer
Date: 8/29/97
Printed Name Of Engineer

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Scale Construction, Soil Erosion And Sediment Control.
John P. Hunter
Signature
Date: 1/21/98
Howard Soil Conservation District

Approved Department Of Public Works
Charles M. Dwyer
Signature
Date: 2-5-98
Chief, Bureau Of Highways

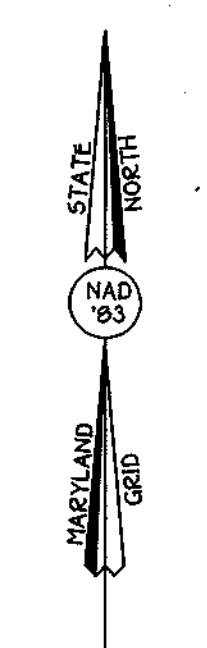
Approved Department Of Planning And Zoning
Cindy Hanvick
Signature
Date: 2/23/98
Chief, Division Of Land Development

John P. Hunter
Signature
Date: 2/13/98
Chief, Development Engineering Division MK

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
GATHER HUNT
SECTION ONE AREA ONE
LOTS 1-33, 63-71 AND
PRESERVATION PARCELS 'B-E' & 'BULK PARCEL 1'
ZONING: 'RC-DEO'
TAX MAP No. 29 PARCEL 21 GRID 5
TAX MAP No. 29 PARCEL 322 GRID 11
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST 8, 1997
SHEET 13 OF 23

AS BUILT F98-24

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways *Robert M. Daniels* 2-5-98 DATE
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development *Andy Hamilton* 2/23/98 DATE
 Chief, Development Engineering Division *Mr. J. Williams* 2/13/98 DATE



DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	'C'	ZONED	% IMP.
1-1	A	3.43 AC.	0.28	RC-DEO	5%
1-2	B	1.01 AC.	0.57	RC-DEO	17%
1-3	C	0.36 AC.	0.50	RC-DEO	36%
1-4	D	0.37 AC.	0.49	RC-DEO	32%
1-5	E	0.37 AC.	0.56	RC-DEO	41%
1-6	F	2.77 AC.	0.36	RC-DEO	4%
1-7	G	2.33 AC.	0.30	RC-DEO	4%
1-8	H	2.07 AC.	0.35	RC-DEO	8%
1-9	I	0.21 AC.	0.56	RC-DEO	48%
1-10	J	0.35 AC.	0.51	RC-DEO	37%
1-11	K	1.08 AC.	0.32	RC-DEO	6%
1-12	L	0.41 AC.	0.61	RC-DEO	51%
1-13	M	0.47 AC.	0.55	RC-DEO	42%



Eudorina J. Fisch

NOTE: SEE TITLE SHEET FOR PERIMETER LANDSCAPE CHART.

REVISIONS	DATE	DESCRIPTION
1008-00		REVISE P.C.E. LOCATION AND PLANTING
8-3-98		REVISE ALL REFS TO HOPP

THIS PLAN IS FOR DRAINAGE AREA AND PERIMETER LANDSCAPE PURPOSES ONLY.

DRAINAGE AREA MAP AND LANDSCAPE PLAN
GAITHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 & PRESERVATION PARCELS 'B-E'
 400' x PARCEL 'F' ZONING 'RC-DEO'
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: AUGUST 8, 1997
 Scale: 1" = 100'
 SHEET 14 OF 23

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 3072 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21114
 410-418-2200

OWNER
 HARRY ARNHEIM BLOOM, ET. AL.
 1754 MANOR LANE
 COLUMBIA, MARYLAND 21044

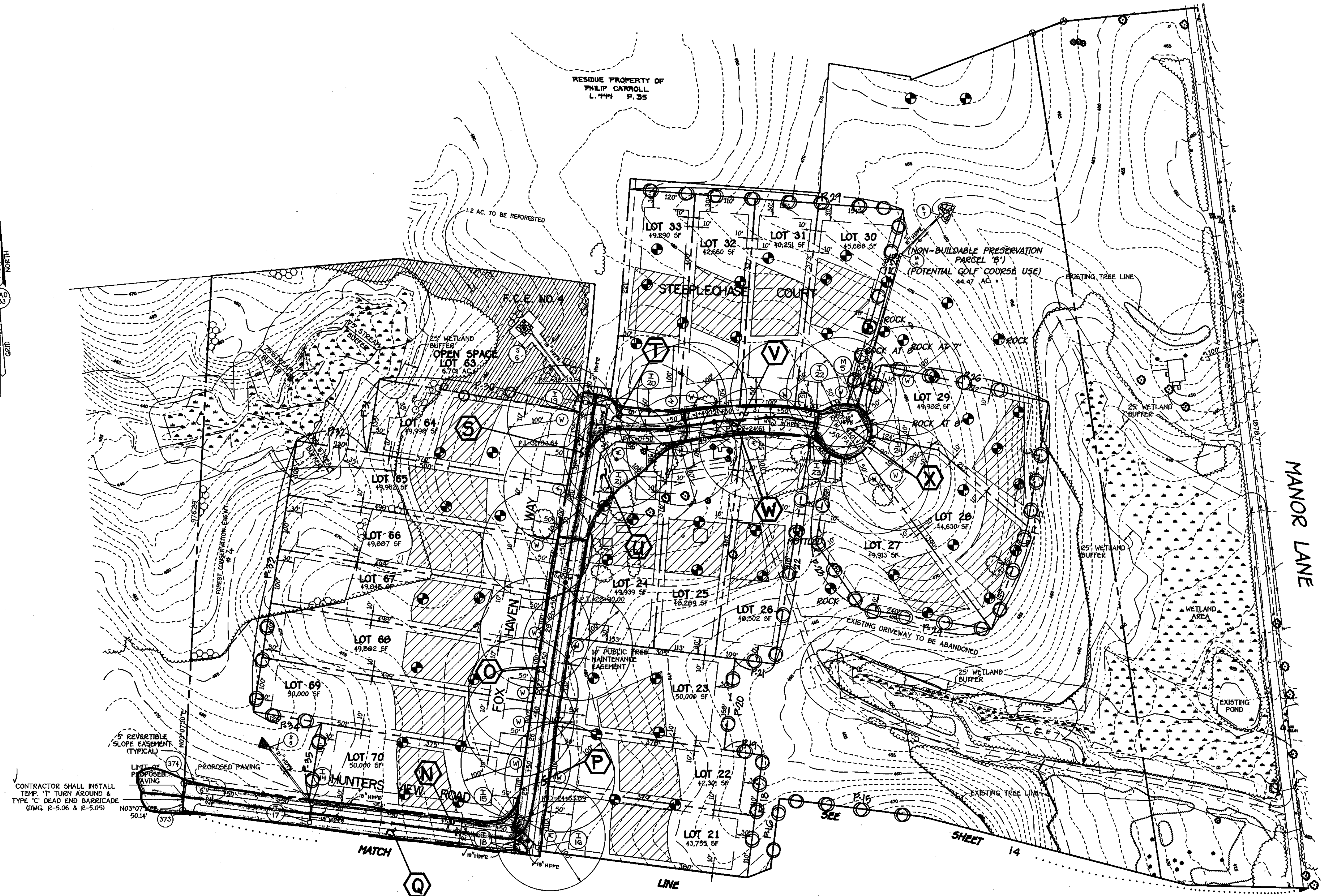
OWNER
 PHILIP CARROLL AND
 THE KLEIN FAMILY
 C/O J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 C/O J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard M. Doney 2-5-98
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Carole Hamilton 2/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John Drummond 2/15/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	"C"	ZONED	% IMP.
I-4	N	0.45 AC.	0.51	RC-DEO	37%
I-5	D	0.58 AC.	0.44	RC-DEO	31%
I-6	P	0.50 AC.	0.56	RC-DEO	44%
I-7	Q	0.40 AC.	0.53	RC-DEO	40%
I-8	R	0.17 AC.	0.54	RC-DEO	41%
I-9	S	0.17 AC.	0.54	RC-DEO	41%
I-20	T	0.18 AC.	0.46	RC-DEO	33%
I-21	U	0.41 AC.	0.39	RC-DEO	19%
I-22	V	0.15 AC.	0.58	RC-DEO	47%
I-23	W	0.16 AC.	0.56	RC-DEO	44%
I-24	X	0.23 AC.	0.61	RC-DEO	52%

THIS PLAN IS FOR DRAINAGE AREA AND PERIMETER LANDSCAPE PURPOSES ONLY.



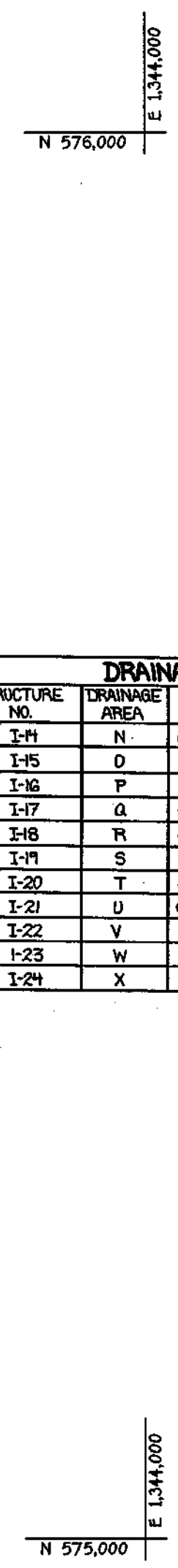
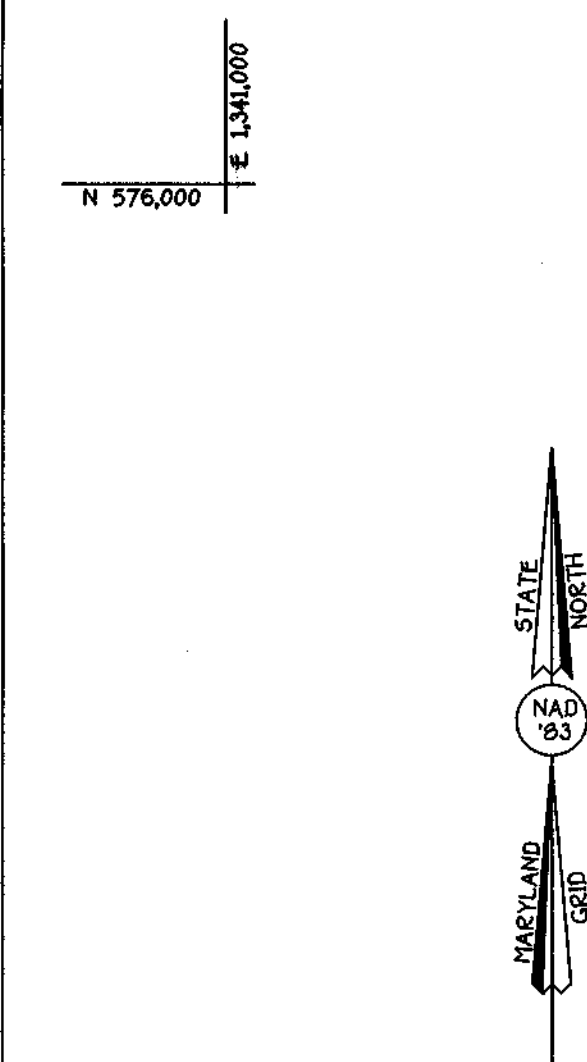
DRAINAGE AREA MAP AND LANDSCAPE PLAN
GAITHER HUNT
 SECTION ONE AREA ONE
 LOTS I-33, 63-71 & PRESERVATION PARCELS 'B-E'
 1 BULK PARCEL 'F' ZONING: "RC-DEO"
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID II
 HOWARD COUNTY, MARYLAND
 DATE: AUGUST 8, 1997

Scale: 1" = 100'
 SHEET 15 OF 23



NOTE: SEE TITLE SHEET FOR PERIMETER LANDSCAPE CHART.

REVISIONS
B3.98 REVISE ALL RCP TO HDPE



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CONFIDENTIAL SQUARE OFFICE PARK - 10272 SALTBRIDGE NATIONAL FREE
 ELLICOTT CITY, MARYLAND 21114
 410.461.2200

OWNER
 MARY ARMITA BLOOM, ET. AL.
 1754 MANOR LANE
 COLUMBIA, MARYLAND 21044

OWNER
 PHILIP CARROLL AND
 THE KLEIN FAMILY
 C/O J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 C/O J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

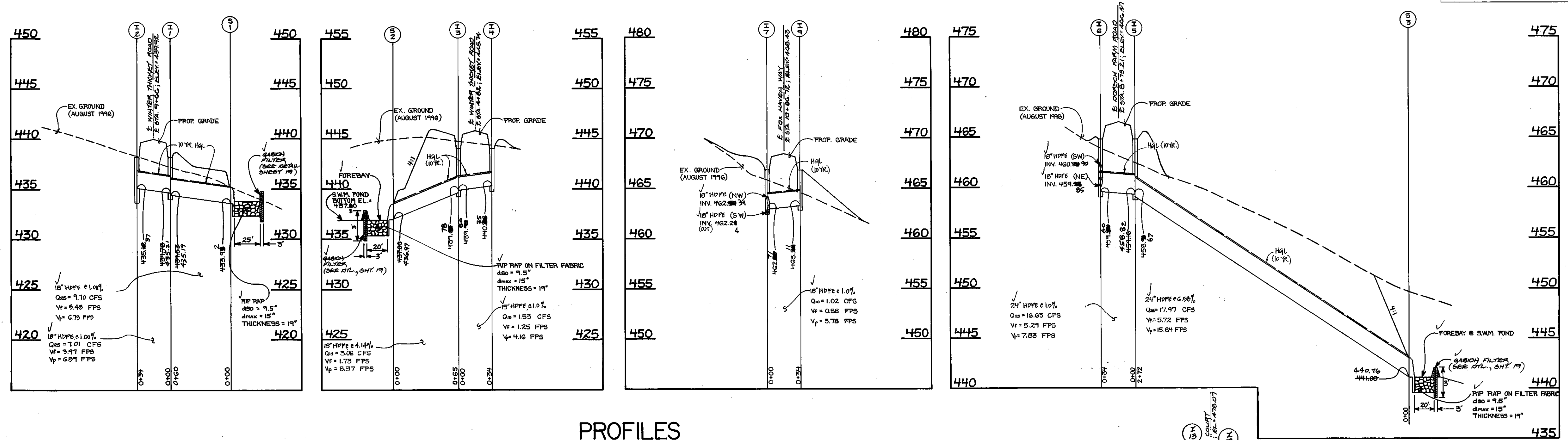
AS BUILT F98-24

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Candy Hamilton 2/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chris Dammicus 2/13/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

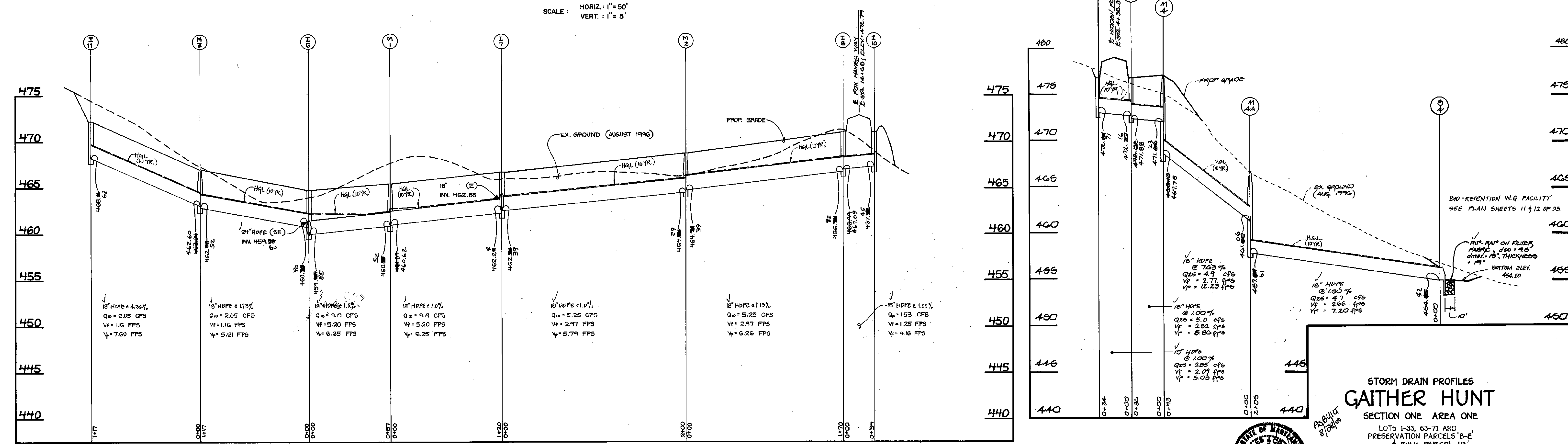
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. Queller 2-5-98
 CHIEF, BUREAU OF HIGHWAYS DATE

NOTE: SEE SHEET 10 FOR
 48" CULVERT PROFILE
 (S-2 TO S-7)



PROFILES

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



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461 - 2855

OWNER
 MARY ARMINTA BLOOM, ET. AL.
 4754 MANOR LANE
 COLUMBIA, MARYLAND 21044

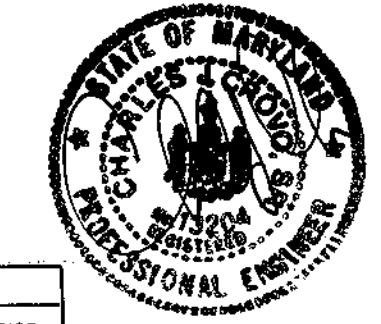
OWNER
 MR. PHILIP CARROLL
 AND THE KLEIN FAMILY
 c/o MR. TOM SCHRIENER
 5026 DORSEY HALL DRIVE-SUITE 204
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 c/o MR. TOM SCHRIENER
 5026 DORSEY HALL DRIVE-SUITE 204
 ELLICOTT CITY, MARYLAND 21042

PROFILES

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

REVISIONS
 8-3-98 REVISE ALL RCP TO HDPE

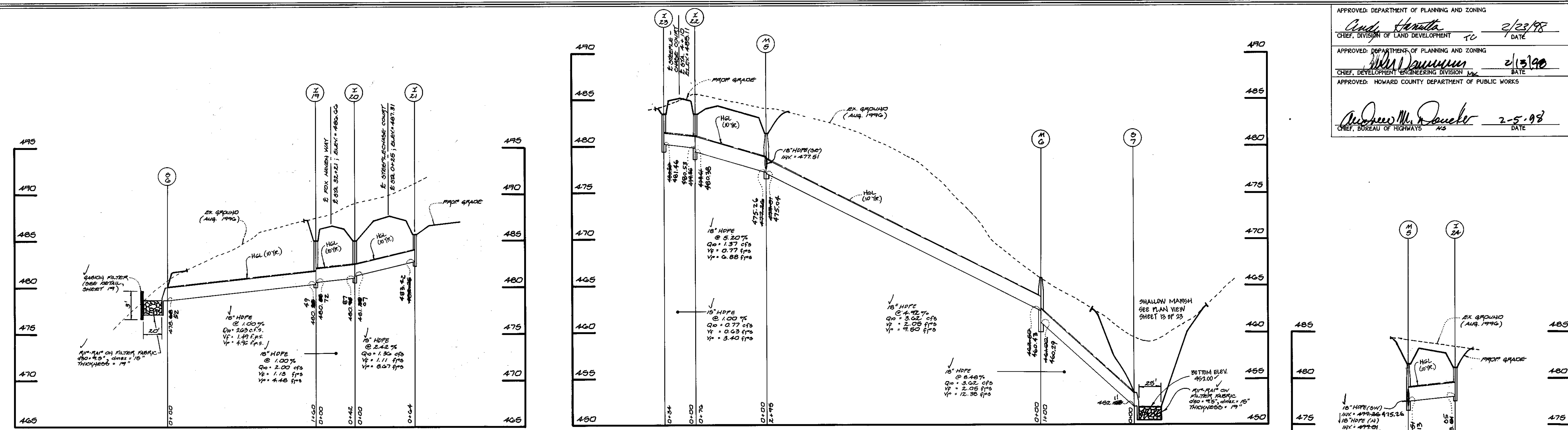


STORM DRAIN PROFILES
GAITHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND
 PRESERVATION PARCELS 'B-E'
 BULK PARCEL 'F'
 ZONING: "R2" PDC
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: AUGUST 2, 1997
 SHEET 16 OF 23

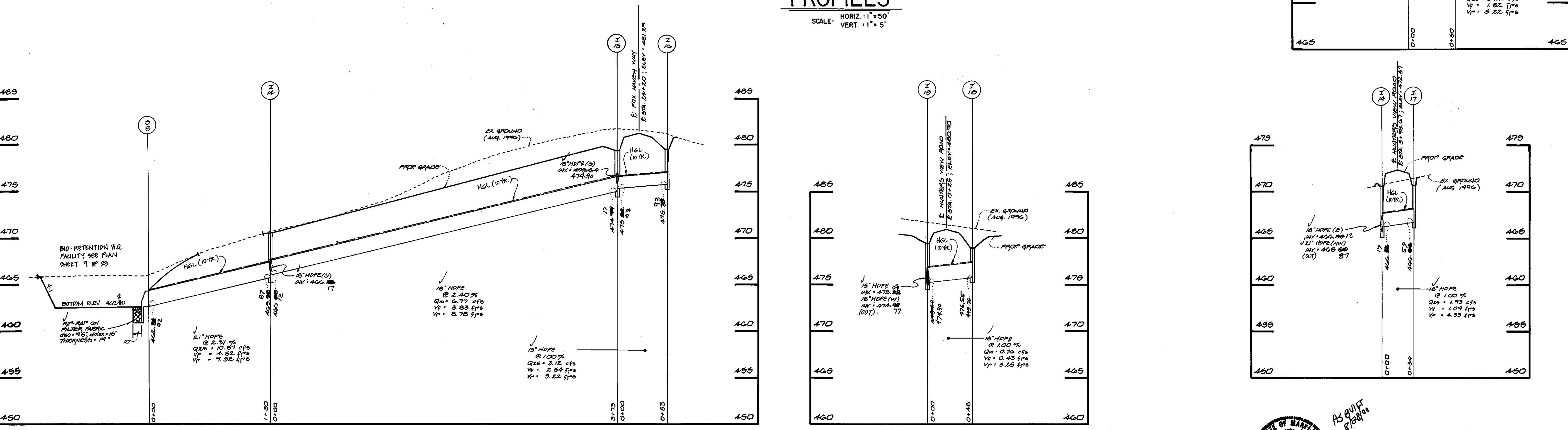
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Andi Hamata 2/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT TO DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Mr. J. J. ... 2/13/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. ... 2-5-98
 CHIEF, BUREAU OF HIGHWAYS DATE



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



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

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2855

OWNER
 MARY ARMITA BLOOM, ET. AL
 4754 MANOR LANE
 COLUMBIA, MARYLAND 21044

OWNER
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 AND THE KLEIN FAMILY
 c/o MR. TOM SCHRIEVERER
 5026 DORSEY HALL DRIVE-SUITE 204
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 c/o MR. TOM SCHRIEVERER
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 ELLICOTT CITY, MARYLAND 21042



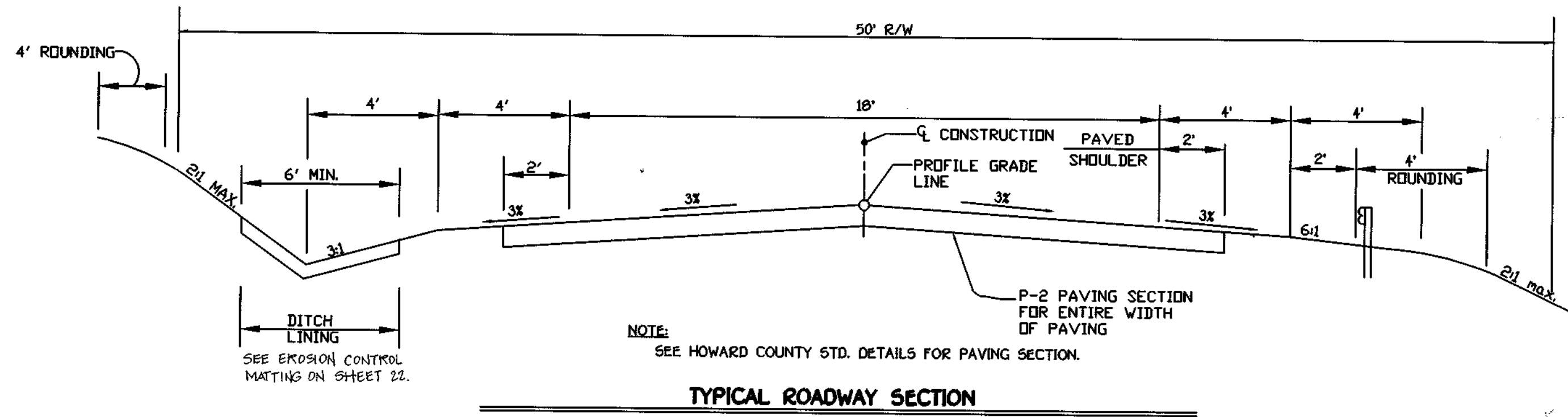
STORM DRAIN PROFILES
GAITHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND
 PRESERVATION PARCELS 'B-E'
 1 BULK PARCEL 'F'
 ZONING: R-2, P-20
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: AUGUST 8, 1997
 SHEET 17 OF 23

AS BUILT F98-24

STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS
I-1	439.23	438.21	438.21	WINTER THicket ROAD	C.L. STA. 9+66	17' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-2	439.23	438.21	438.21	WINTER THicket ROAD	C.L. STA. 9+66	17' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-3	446.28	444.03	439.80	WINTER THicket ROAD	C.L. STA. 4+82	17' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-4	446.28	444.03	439.80	WINTER THicket ROAD	C.L. STA. 4+82	17' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-5	466.41	464.76	459.84	DORSH FARM ROAD	C.L. STA. 0+73	16' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-6	466.41	464.76	459.84	DORSH FARM ROAD	C.L. STA. 0+73	16' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-7	462.14	466.72	462.14	FOX HAVEN WAY	C.L. STA. 10+60	17' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-8	472.14	471.00	466.99	FOX HAVEN WAY	C.L. STA. 14+60	17' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-9	467.14	466.72	463.88	FOX HAVEN WAY	C.L. STA. 10+60	17' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-10	472.10	471.00	467.85	FOX HAVEN WAY	C.L. STA. 14+60	17' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-11	473.31	472.14	468.98	DORSH FARM ROAD	C.L. STA. 6+20	16.5' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-12	472.36	476.36	472.36	HIDDEN FOX COURT	C.L. STA. 4+30	16.5' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-13	472.36	476.36	472.36	HIDDEN FOX COURT	C.L. STA. 4+30	17.5' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-14	471.72	470.66	466.80	HUNTERS VIEW ROAD	C.L. STA. 3+90	16' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-15	466.05	479.25	475.00	HUNTERS VIEW ROAD	C.L. STA. 0+28.4	20' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-16	471.58	479.50	475.93	FOX HAVEN WAY	C.L. STA. 24+08.6	18' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-17	471.58	479.50	475.93	HUNTERS VIEW ROAD	C.L. STA. 3+90	16' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-18	480.35	478.75	476.55	HUNTERS VIEW ROAD	C.L. STA. 0+28.4	19.5' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-19	486.21	484.95	480.88	FOX HAVEN WAY	C.L. STA. 32+94.3	19' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-20	486.12	484.95	481.88	FOX HAVEN WAY	C.L. STA. 32+94.3	28.3' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-21	497.16	485.54	482.55	FOX HAVEN WAY	C.L. STA. 31+59.5	28.3' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-22	484.56	483.39	481.21	STEEPLE CHASE COURT	C.L. STA. 4+10	16.5' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-23	484.56	483.39	481.21	STEEPLE CHASE COURT	C.L. STA. 4+10	17.5' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-24	481.80	480.95	478.05	STEEPLE CHASE COURT	L.P. STA. 1+31.2	6'	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
M-1	465.89	460.97	460.97	DORSH FARM ROAD	C.L. STA. 9+68.2	17.5' LT	STD. MANHOLE	G. 5.01
M-2	468.79	464.39	464.39	FOX HAVEN WAY	C.L. STA. 12+94	17.5' LT	STD. MANHOLE	G. 5.01
M-3	467.80	462.20	462.20	DORSH FARM ROAD	C.L. STA. 7+48.7	17' LT	STD. MANHOLE	G. 5.01
M-4	476.38	471.66	471.66	HIDDEN FOX COURT	C.L. STA. 4+78.5	20' RT	DROP MANHOLE	MD - 303.11
M-5	482.05	477.82	477.82	STEEPLE CHASE COURT	L.P. STA. 0+00	6'	STD. MANHOLE	G. 5.01
M-6	465.28	460.80	460.80	---	---	---	STD. MANHOLE	G. 5.01
M-4A	466.88	461.06	457.86	---	---	---	DROP MANHOLE	MD - 303.11
S-1	435.48	433.98	433.98	---	---	---	CONC. END SECTION	S.D. 5.51
S-2	430.80	427.00	427.00	---	---	---	CONC. END SECTION	S.D. 5.51
S-3	442.00	440.76	440.76	---	---	---	CONC. END SECTION	S.D. 5.51
S-4	456.00	454.92	454.92	---	---	---	CONC. END SECTION	S.D. 5.51
S-5	464.85	462.77	462.77	---	---	---	CONC. END SECTION	S.D. 5.51
S-6	480.88	478.52	478.52	---	---	---	CONC. END SECTION	S.D. 5.51
S-7	453.88	452.11	452.11	---	---	---	CONC. END SECTION	S.D. 5.51
S-8	437.00	432.96	432.96	---	---	---	CONC. END SECTION	S.D. 5.51
S-9	435.88	431.61	431.61	---	---	---	CONC. END SECTION	S.D. 5.51

* DENOTES THROAT ELEVATION
 ** IN ACCORDANCE WITH HOWARD COUNTY MEMORANDUM DATED OCTOBER 2, 1997 ALL TYPE 'K' INLETS CAN BE SUBSTITUTED WITH PRECAST OPEN END GRATE (S.D. 4.36). THE CONTRACTOR MUST INFORM THE ENGINEER WHICH TYPE INLET WAS SELECTED PRIOR TO CONSTRUCTION STAKEOUT.

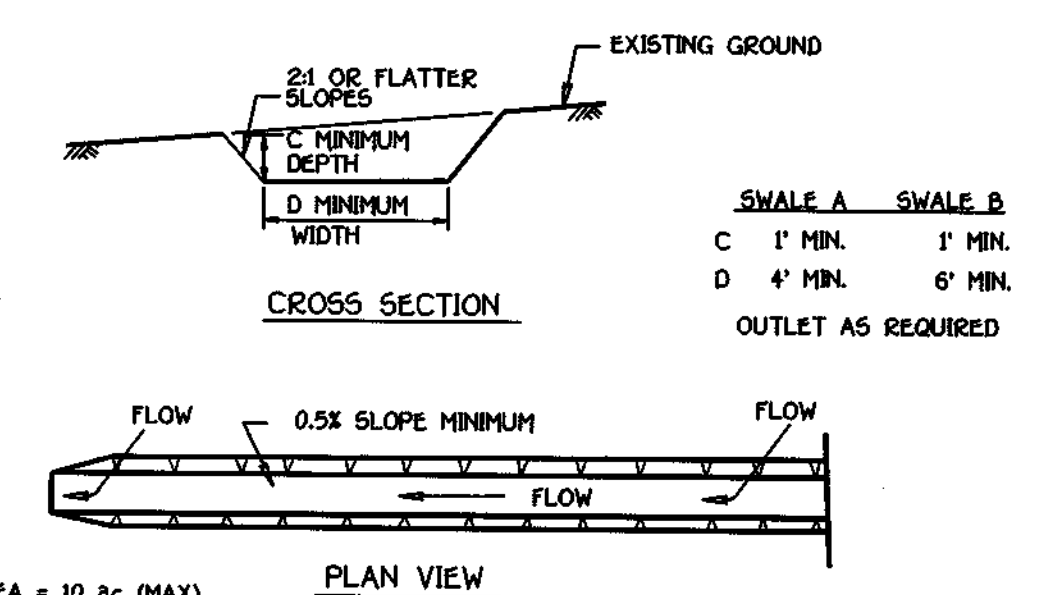


ROADWAY INFORMATION CHART

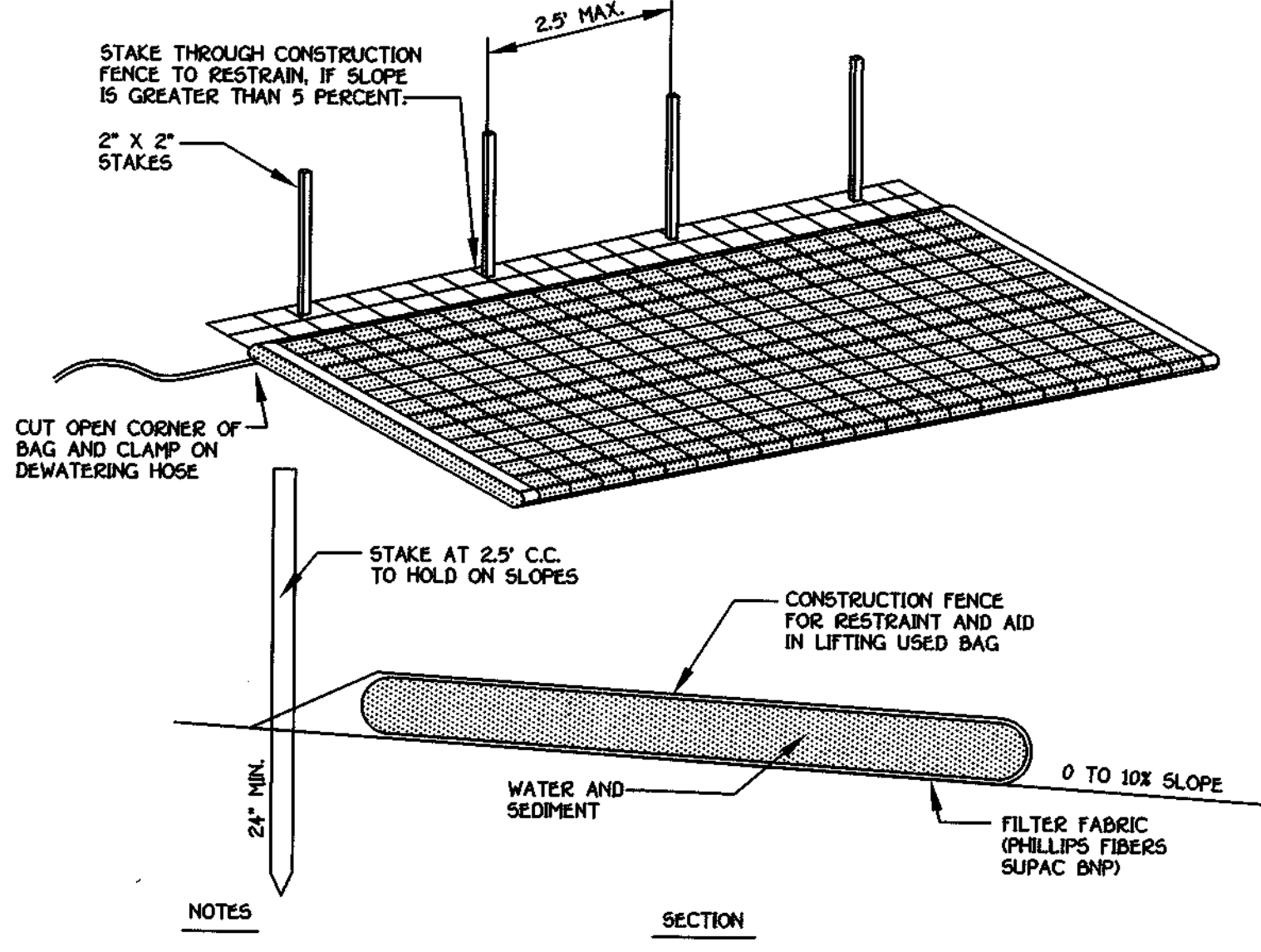
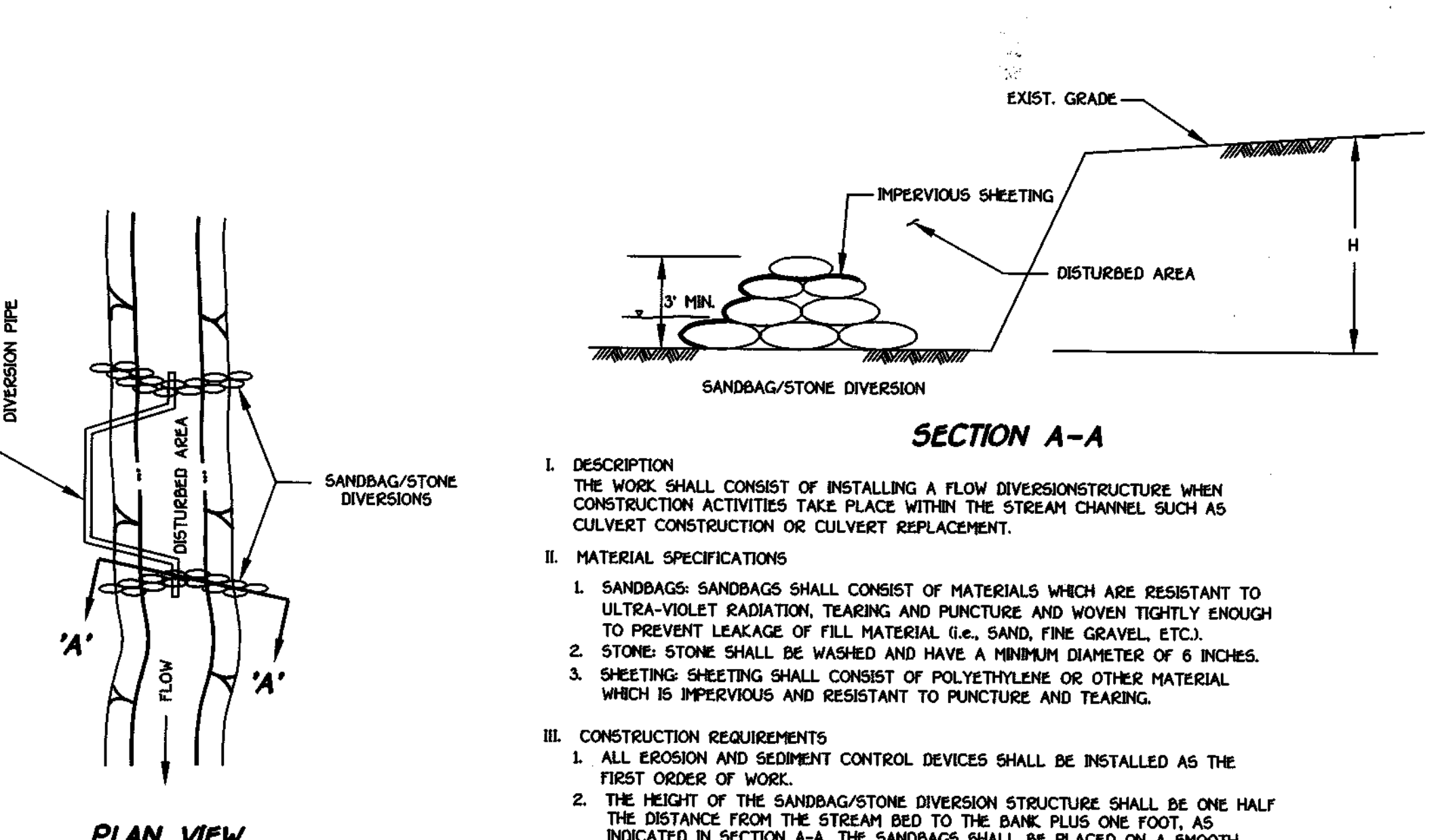
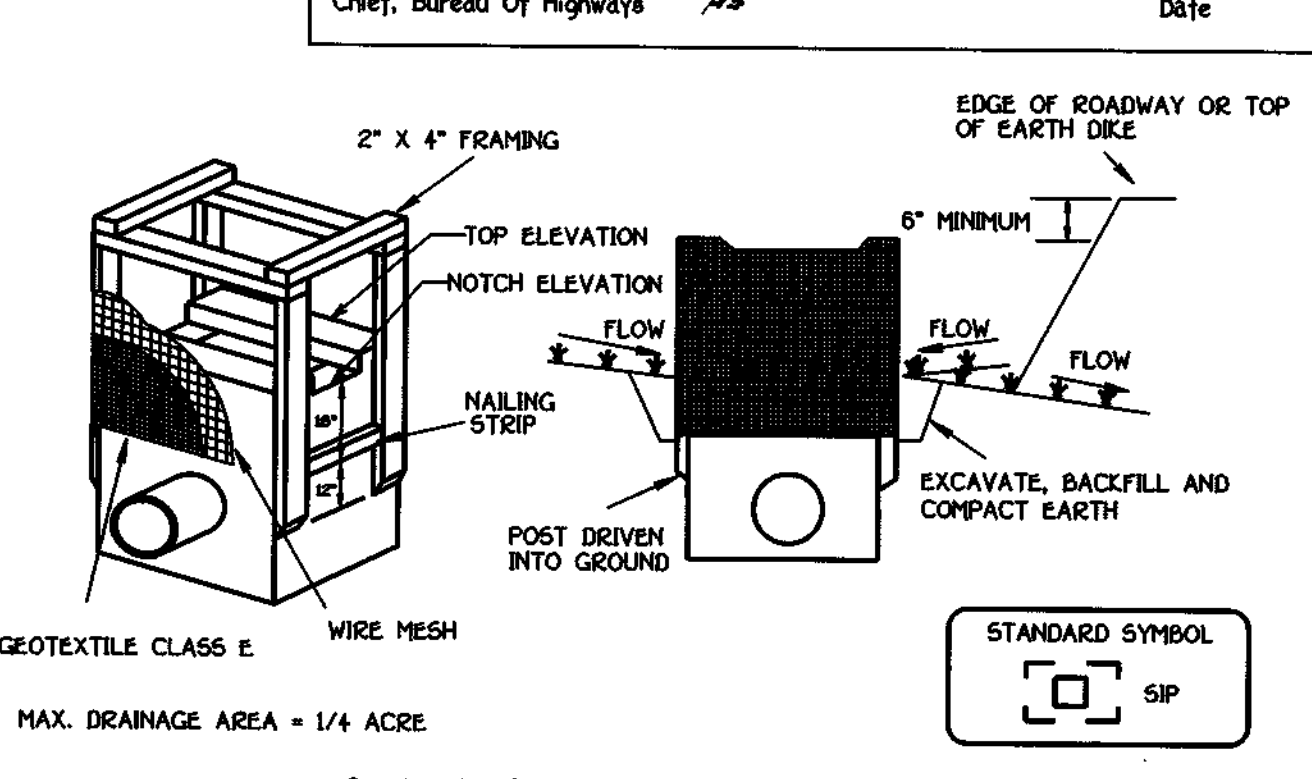
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	PAVING SECTION
DORSH FARM ROAD	LOCAL ROAD	30 MPH	RC-DEO	3+24.8 TO 10+52.72	P-2
FOX HAVEN WAY	LOCAL ROAD	30 MPH	RC-DEO	10+52.72 TO 32+50.00	P-2
WINTER THicket ROAD	LOCAL ROAD	30 MPH	RC-DEO	0+00 TO 11+54.44	P-2
HIDDEN FOX COURT	CUL-DE-SAC	30 MPH	RC-DEO	0+00 TO 7+56.60	P-2
HUNTERS VIEW ROAD	LOCAL ROAD	30 MPH	RC-DEO	0+00 TO 6+27.00	P-2
STEEPLE CHASE COURT	CUL-DE-SAC	25 MPH	RC-DEO	0+00 TO 4+65.14	P-2

STONE OUTLET SEDIMENT TRAP DATA CHART

TRAP NUMBER	TRAP #1	TRAP #2	TRAP #3	TRAP #4
DRAINAGE AREA	1.39 Ac +/-	2.09 Ac +/-	0.76 Ac +/-	0.67 Ac +/-
STORAGE REQUIRED	5,004 c.f.	7,524 c.f.	2,736 c.f.	2,412 c.f.
STORAGE PROVIDED	5,272 c.f.	7,800 c.f.	3,072 c.f.	2,544 c.f.
WEIR CREST ELEV.	463.0	465.0	483.0	477.0
BOTTOM ELEV.	459.0	461.0	480.0	474.0
DEPTH:	4'	4'	3'	3'
SIDE SLOPES:	2:1	2:1	2:1	2:1
TOP EMBANKMENT:	464.0	466.0	484.0	478.0
WEIR LENGTH:	6'	9'	3'	3'
CLEANOUT ELEV.:	461.0	463.0	481.5	475.5
BOTTOM:	25'x30'	33'x38'	20'x30'	30'x16'



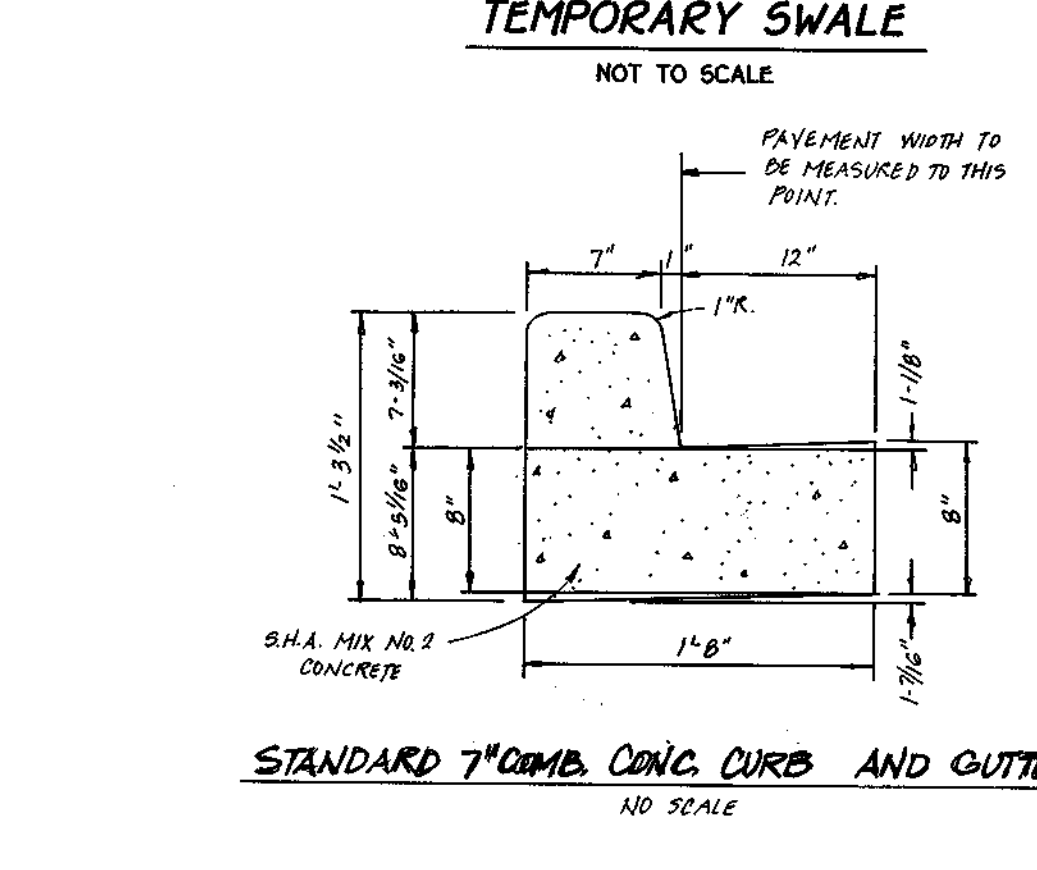
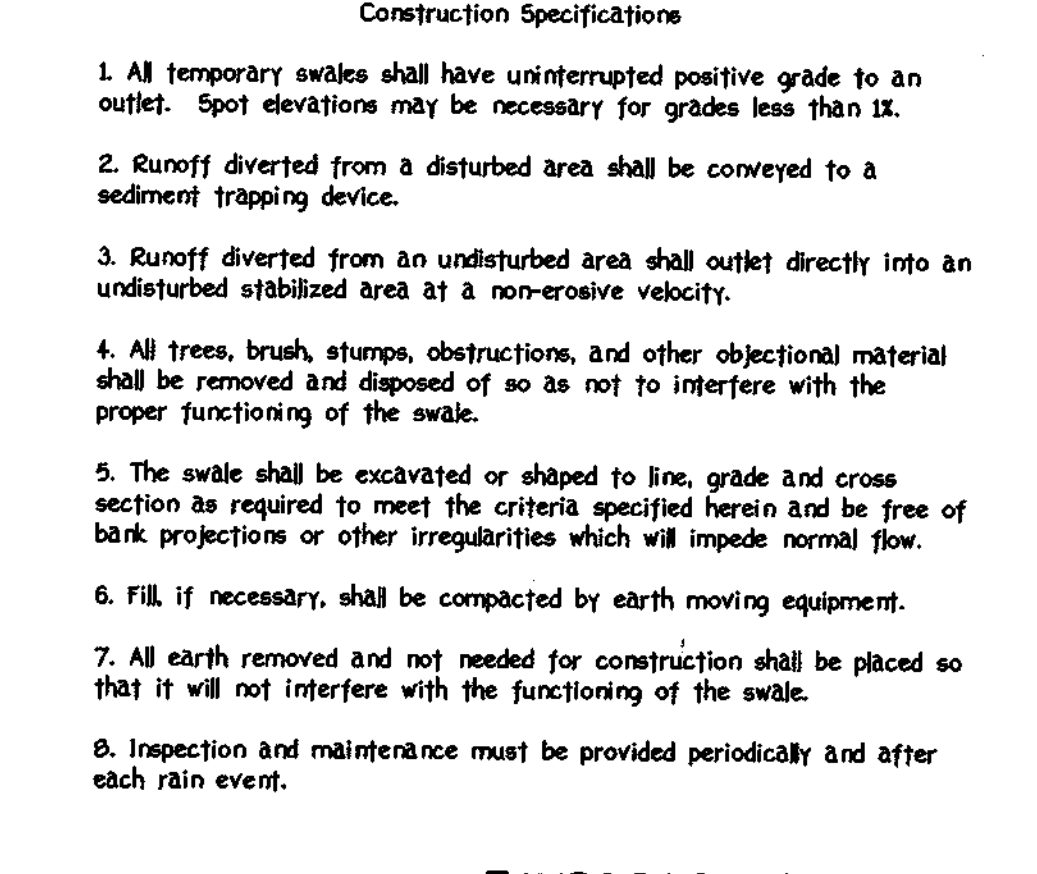
1. Seed and cover with straw mulch.
 2. Seed and cover with Erosion Control Matting or line with sod.
 3. 4"-7" stone or recycled concrete equivalent pressed into soil in a minimum 7" layer.
- CONSTRUCTION SPECIFICATIONS**
- All temporary swales shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet directly into an undisturbed stabilized area at a non-erosive velocity.
 - All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.
 - The swale shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
 - Fill, if necessary, shall be compacted by earth moving equipment.
 - All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the swale.
 - Inspection and maintenance must be provided periodically and after each rain event.



- DESCRIPTION**
 THE WORK SHALL CONSIST OF INSTALLING A FLOW DIVERSION STRUCTURE WHEN CONSTRUCTION ACTIVITIES TAKE PLACE WITHIN THE STREAM CHANNEL SUCH AS CULVERT CONSTRUCTION OR CULVERT REPLACEMENT.
- MATERIAL SPECIFICATIONS**
- SANDBAGS: SANDBAGS SHALL CONSIST OF MATERIALS WHICH ARE RESISTANT TO ULTRA-VIOLET RADIATION, TEARING AND PUNCTURE AND WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL (i.e., SAND, FINE GRAVEL, ETC.).
 - STONE: STONE SHALL BE WASHED AND HAVE A MINIMUM DIAMETER OF 6 INCHES.
 - SHEETING: SHEETING SHALL CONSIST OF POLYETHYLENE OR OTHER MATERIAL WHICH IS IMPERVIOUS AND RESISTANT TO PUNCTURE AND TEARING.
- CONSTRUCTION REQUIREMENTS**
- ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF WORK.
 - THE HEIGHT OF THE SANDBAG/STONE DIVERSION STRUCTURE SHALL BE ONE HALF THE DISTANCE FROM THE STREAM BED TO THE BANK, PLUS ONE FOOT, AS INDICATED IN SECTION A-A. THE SANDBAGS SHALL BE PLACED ON A SMOOTH, PREPARED SURFACE.
 - ALL EXCAVATED MATERIALS SHALL BE DISPOSED OF IN A SCD APPROVED DISPOSAL AREA OUTSIDE THE 100 YEAR FLOODPLAIN UNLESS OTHERWISE APPROVED ON THE PLANS BY THE WRA.
 - ALL DEWATERING OF THE CONSTRUCTION AREA SHALL BE PUMPED TO A FILTER BAG OR OTHERWISE APPROVED ON THE PLANS BY THE WRA.
 - SHEETING SHALL BE OVERLAPPED A MINIMUM OF 18 INCHES.
 - THE DIVERSION PIPE SHALL HAVE A MINIMUM DIAMETER OF SUFFICIENT SIZE TO CONVEY THE NORMAL STREAM FLOW.
 - IF NECESSARY, SILT FENCE OR STRAWBALES SHALL BE INSTALLED AROUND THE PERIMETER OF THE WORK AREA.
 - SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THE INSPECTING AUTHORITY APPROVES THEIR REMOVAL.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL OFFICE: 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21112
 (410) 481-2855

AVAILABLE FROM:
 INDIAN VALLEY INDUSTRIES, INC. P.O. BOX 810 JOHNSON CITY, NEW YORK 13790 (800) 659-5111
 A.C.F. ENVIRONMENTAL 1801-A WILLIS ROAD RICHMOND, VIRGINIA 23237 TOLL FREE 1-800-448-3636
 PRICE AND COMPANY, INC. 425 36TH STREET WYOMING, WY. 83948 (601) 530-8230



ENGINEER'S CERTIFICATE
 I hereby certify that this Plan for Erosion and Sediment Control Represents a Practical and Workable Plan Based on My Personal Knowledge of the Site Condition and that it was Prepared in Accordance with the Requirements of the Howard Soil Conservation District.
 Zacharia G. Fisch 11/10/1997
 Signature of Engineer Date

DEVELOPER'S CERTIFICATE
 I/We certify that All Development And Construction Will Be Done According To This Plan of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate of Attendance At A Department of Natural Resources Approved Training Program For The Control of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Are Deemed Necessary.
 Signature of Developer 12/12/97
 Date

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.
 John Simmons 1/21/98
 U.S.D.A. - Natural Resources Conservation Service Date

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.
 John Simmons 1/21/98
 District Howard Soil Conservation Dist. Date

Approved Department of Planning And Zoning
 Linda Hanawalt 2/23/98
 Chief, Division Of Land Development TC Date

Approved: Howard County Department Of Public Works
 Andrew M. Smoler 2/13/98
 Chief, Development Engineering Division MJK Date

Approved: Howard County Department Of Public Works
 Andrew M. Smoler 2-5-98
 Chief, Bureau Of Highways Date

REVISIONS
 03-98 ADD STD. 7\"/>

DETAIL 23A - STANDARD INLET PROTECTION
 NOT TO SCALE

TYP. ROAD SECTION, STRUCTURE SCHEDULE, SEDIMENT TRAP DATA AND SEDIMENT CONTROL DETAILS
GAITHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND PRESERVATION PARCELS 'B-E' & BULK PARCEL 'F'
 ZONING: "RC-DEO"
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: AUGUST 8, 1997
 SHEET 18 OF 23

AS BUILT F98-24

**OPERATION AND MAINTENANCE SCHEDULE
OF HOWARD COUNTY OWNED AND MAINTAINED
STORMWATER MANAGEMENT FACILITY
WET RETENTION POND**

HOME OWNERS ASSOCIATION'S MAINTENANCE RESPONSIBILITIES:

1. Top and side slopes of the embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes and maintenance access should be mowed as needed.
2. Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.
3. When deemed necessary for aesthetic reasons, sediment should be removed from the pond. Approval of the Department of Public Works is required.

By The Developer:

I/We 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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I/We Certify That I/We Have Read And Understand The Plans And Have Approved The Plans. I/We Certify That I/We Have Read And Understand The Plans And Have Approved The Plans. I/We Certify That I/We Have Read And Understand The Plans And Have Approved The Plans.

Signature Of Developer: *[Signature]* Date: 12/12/97

Printed Name Of Developer:

By The Engineer:

I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I/We Certify That I/We Have Read And Understand The Plans And Have Approved The Plans. I/We Certify That I/We Have Read And Understand The Plans And Have Approved The Plans. I/We Certify That I/We Have Read And Understand The Plans And Have Approved The Plans.

Signature Of Engineer: *[Signature]* Date: 8-23-97

Printed Name Of Engineer:

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small Stormwater Management Structures For Soil Erosion And Sediment Control.

Signature: *[Signature]* Date: 12/19/98

These Plans For Sedimentation, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Signature: *[Signature]* Date: 1/2/98

Approved Department Of Public Works

Signature: *[Signature]* Date: 2-5-98

Approved Department Of Planning And Zoning

Signature: *[Signature]* Date: 2/25/98

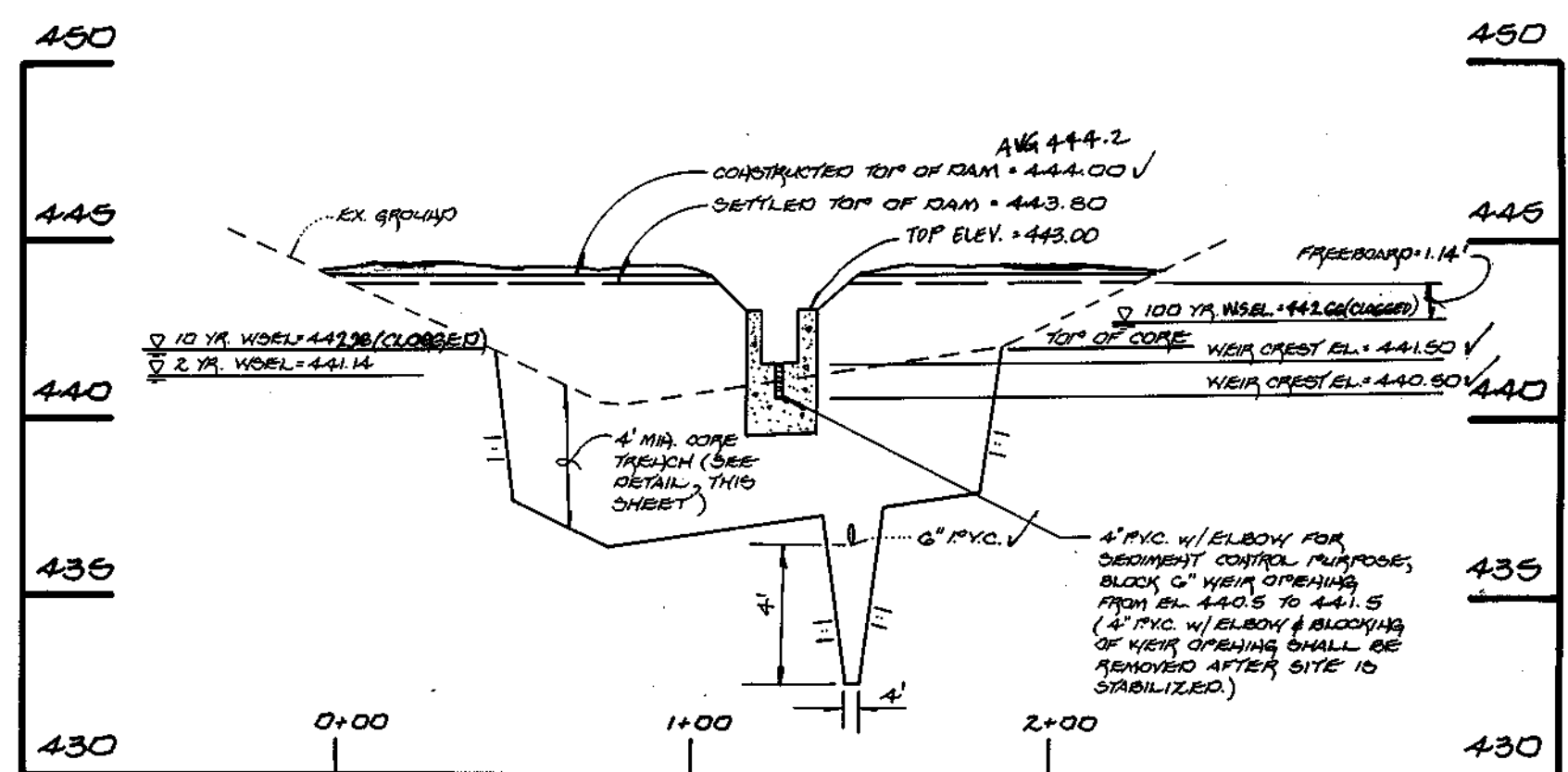
Signature: *[Signature]* Date: 2/13/98

AS-BUILT CERTIFICATION

I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

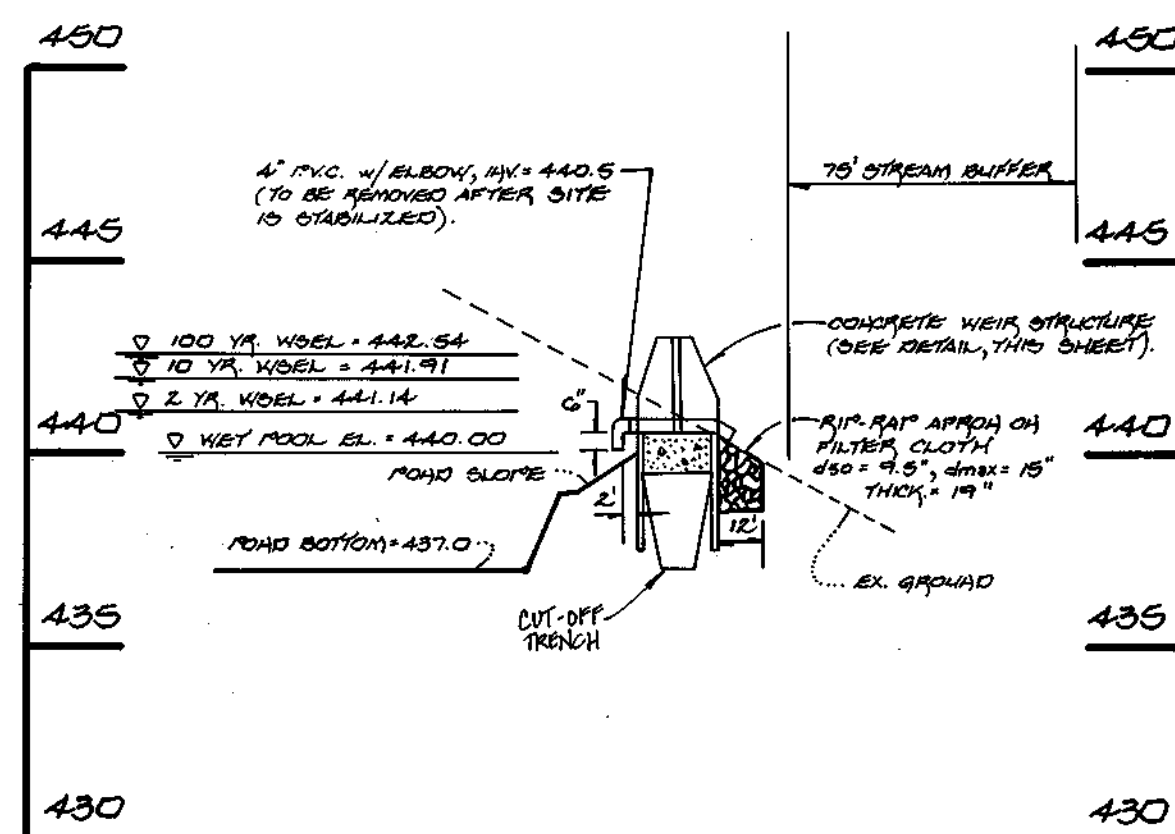
Signature: *[Signature]* Date: 1/30/00

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.



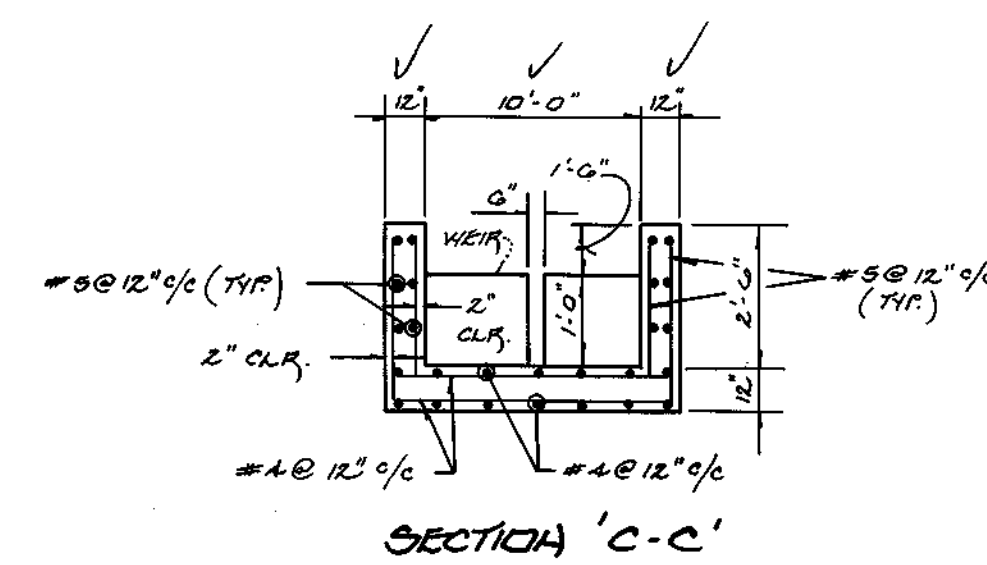
PROFILE ALONG & DAM

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

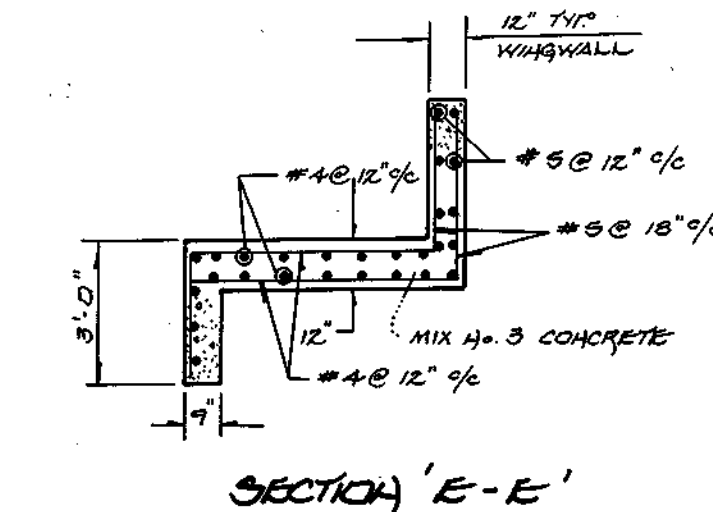


SECTION A-A'

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



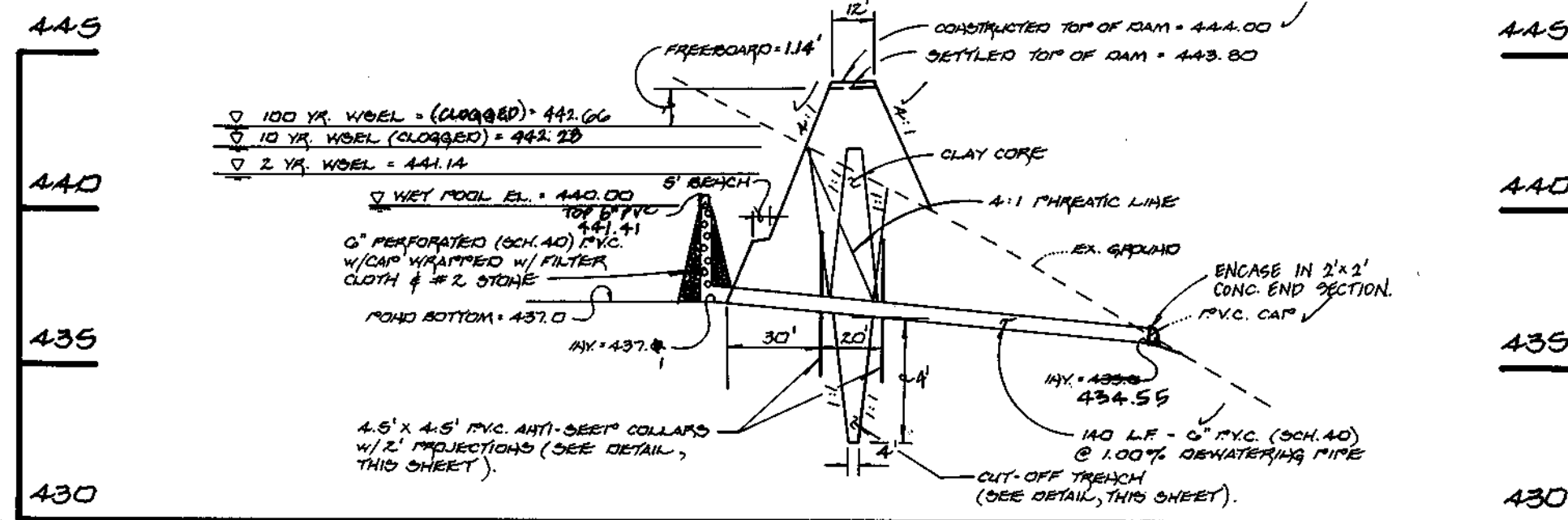
SECTION C-C'



SECTION E-E'

NOTES

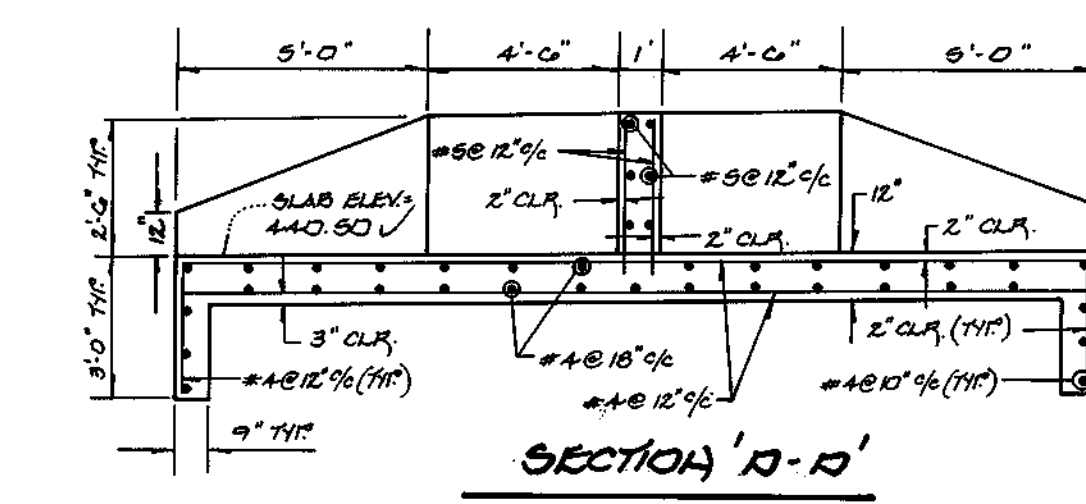
1. Concrete shall conform to the Maryland D.O.T.S.H.A. Standard Spec's for construction and materials, 1982 Mix No. 6, except that T.V. III Cement and A.S.T.M. C 33 No. 6 coarse AGG. shall be used.



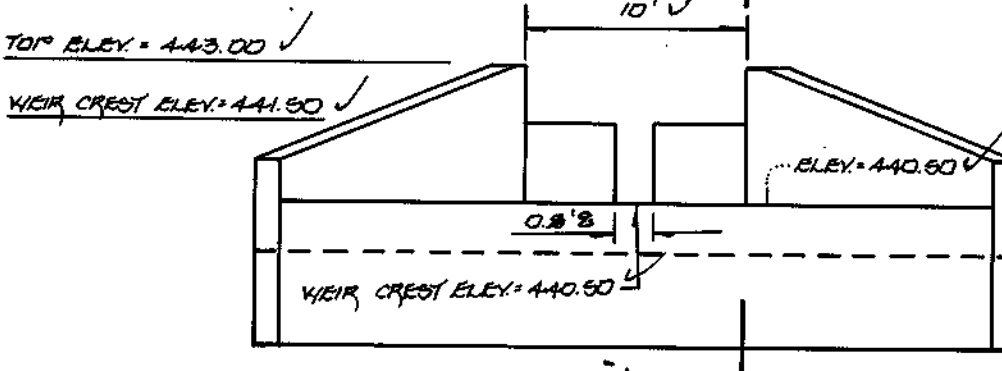
SECTION B-B'

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

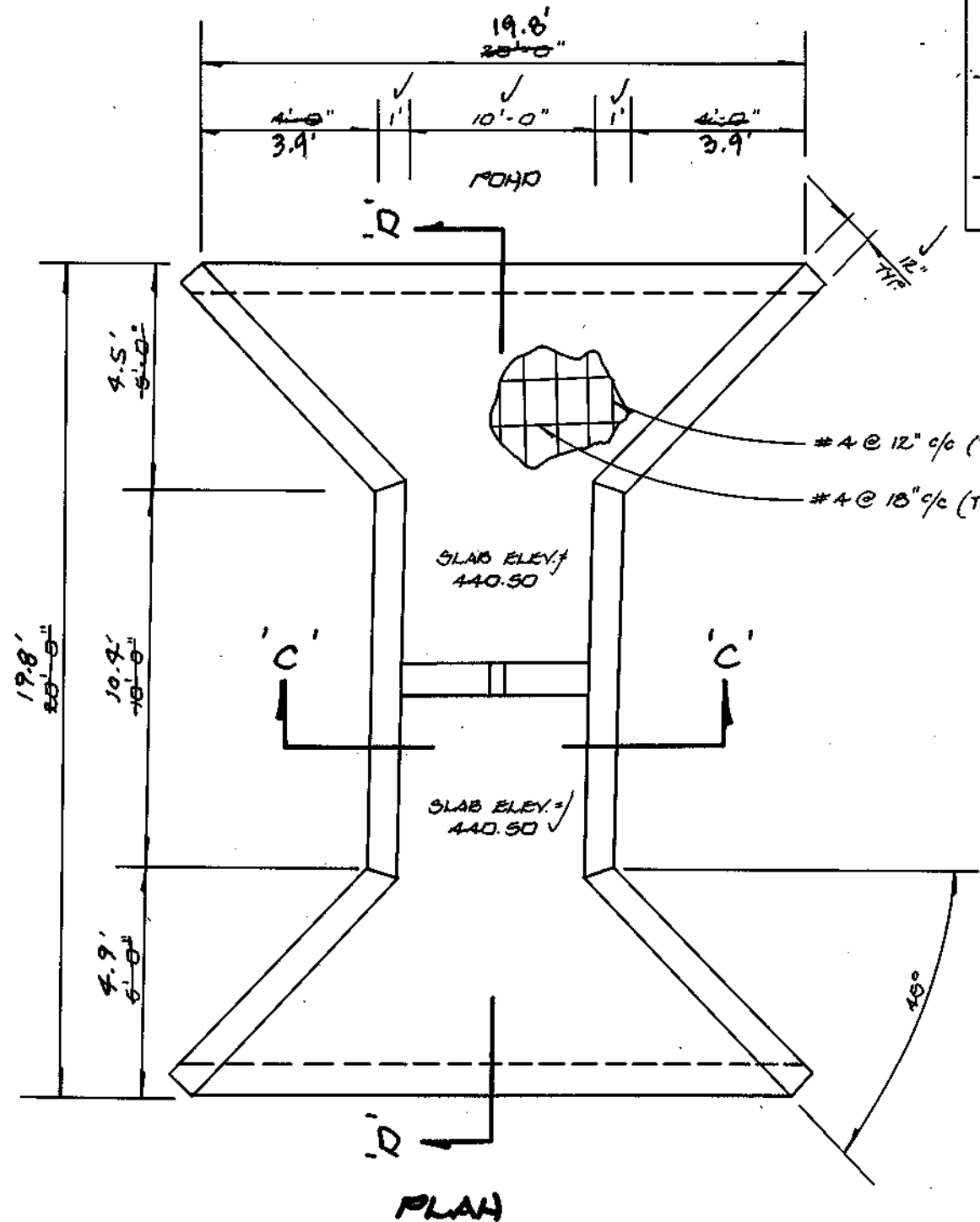
NOTE:
SHOULD WATER BE ENCOUNTERED DURING THE EXCAVATION OF THE CORE TRENCH, IT IS TO BE REMOVED BY PUMPING.



SECTION D-D'

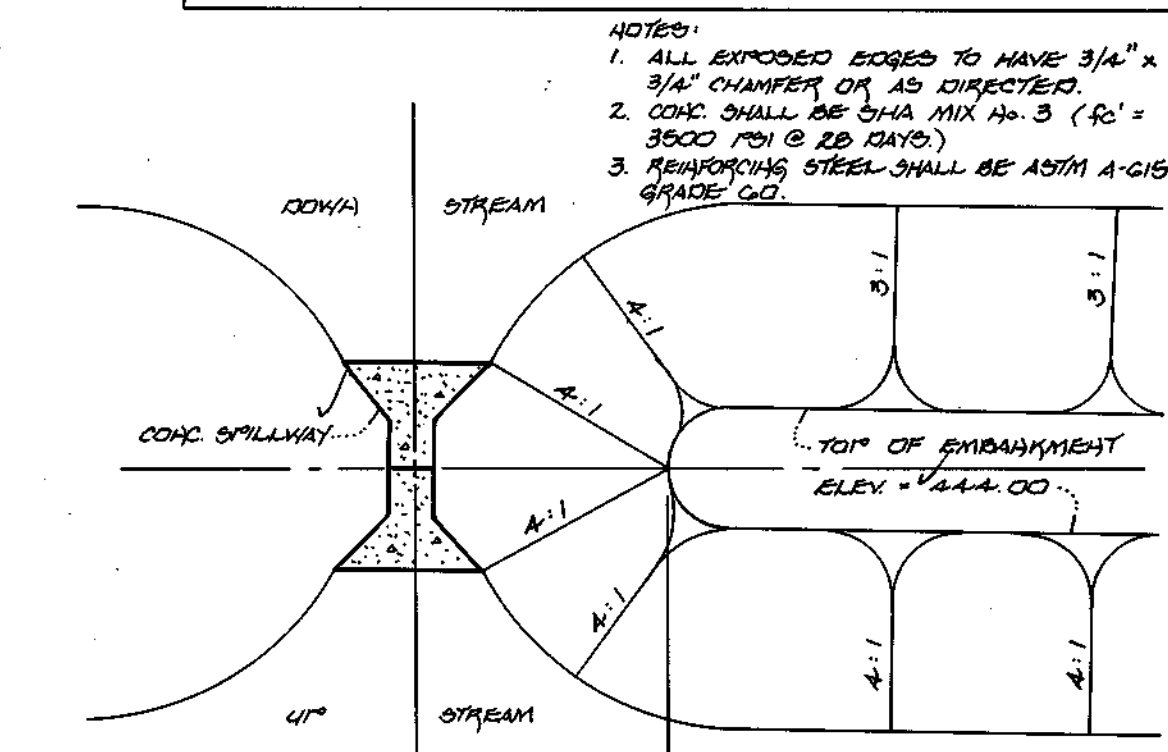


FRONT ELEVATION



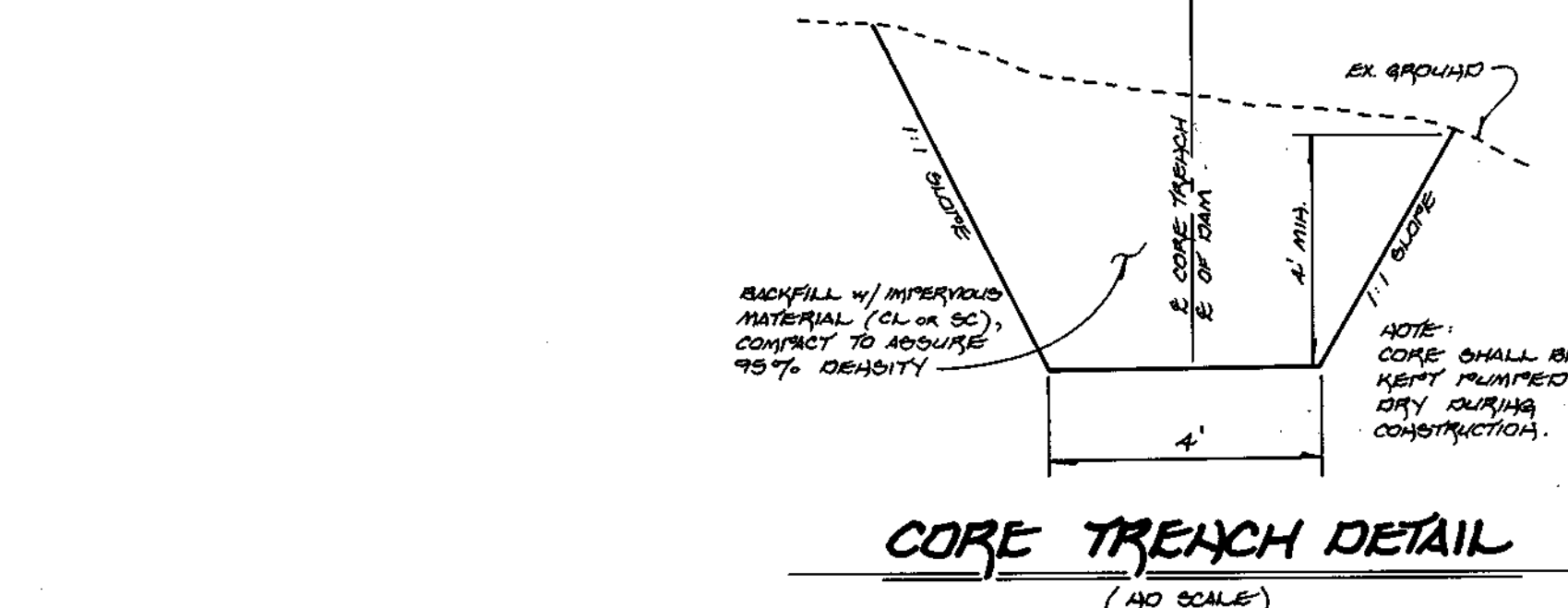
PLAN

**(MODIFIED HOWARD COUNTY STD. DET. 6.12-7.00)
CONCRETE WEIR STRUCTURE DETAIL**



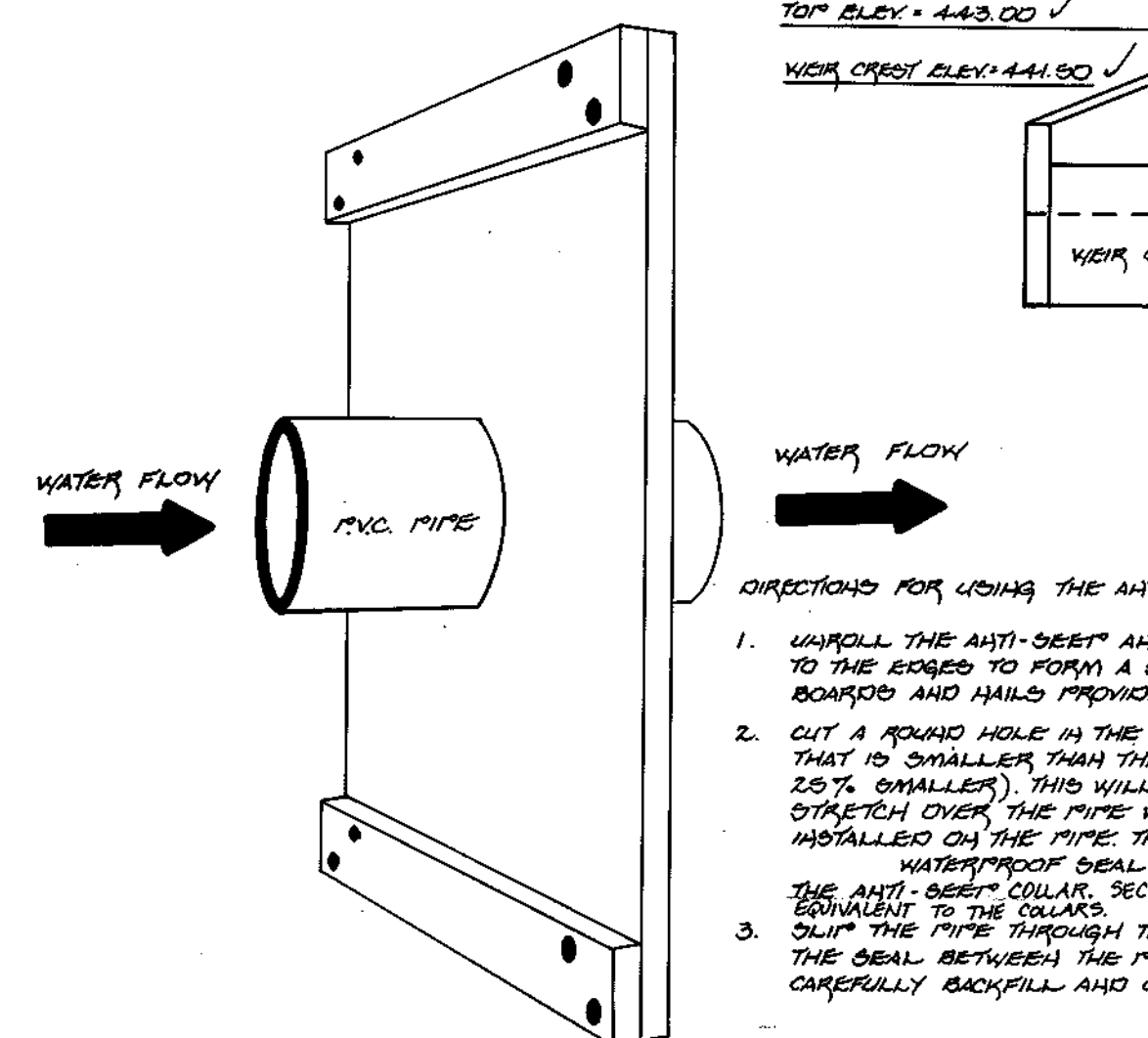
EARTH TRANSITION DETAIL

- NOTES:**
1. ALL EXPOSED EDGES TO HAVE 3/4" x 3/4" CHAMFER OR AS DIRECTED.
 2. CONC SHALL BE 5000 PSI MIX NO. 3 (F_c' = 3500 PSI @ 28 DAYS).
 3. REINFORCING STEEL SHALL BE ASTM A-615 GRADE 60.



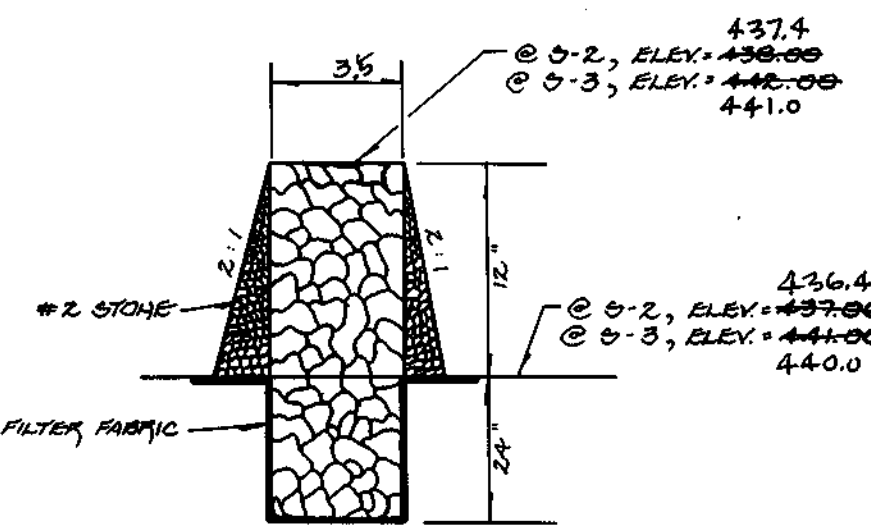
CORE TRENCH DETAIL

(NO SCALE)



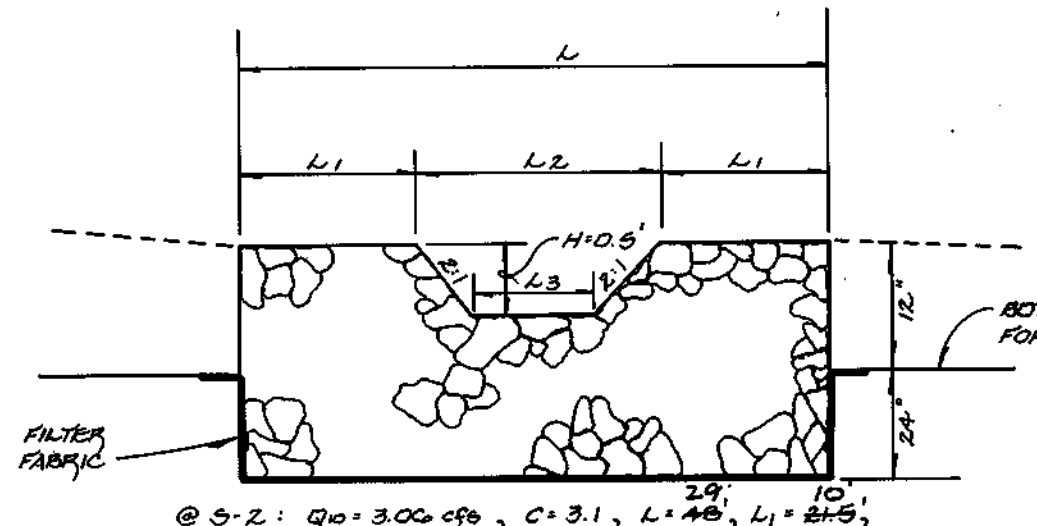
PVC ANTI-SEEP COLLAR DETAIL

(NO SCALE)



GABION FILTER DETAIL

(NO SCALE)



GABION WEIR SECTION

(NO SCALE)

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE
ELICOTT CITY, MARYLAND 21042
410.461.2950

OWNER

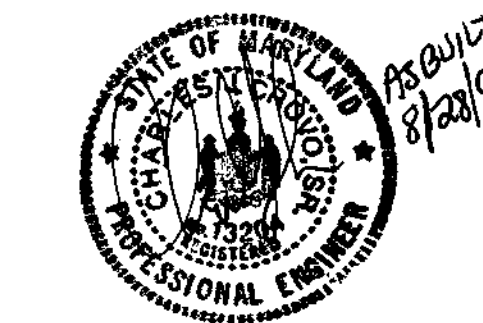
MARY ARPHINA BLOOM, ET. AL
4754 MANOR LANE
COLUMBIA, MARYLAND 21044

OWNER

PHILIP CARROLL AND THE KLEIN FAMILY
C/O THOMAS SCRIVENER
5026 DORSEY HALL DR., SUITE 204
ELICOTT CITY, MD. 21042

DEVELOPER

RUSSELL DEVELOPMENT, L.L.C.
C/O THOMAS SCRIVENER
5026 DORSEY HALL DR., SUITE 204
ELICOTT CITY, MD. 21042



**STORMWATER MANAGEMENT DETAILS
GATHER HUNT**

SECTION ONE AREA ONE
LOTS 1-33, 63-71 AND
PRESERVATION PARCELS 'B-E'
BLK. WARGEL 1"
ZONING: RC-PRO
TAX MAP No. 29 PARCEL 21 GRID 5
TAX MAP No. 29 PARCEL 322 GRID 11
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST 8, 1997
SHEET 19 OF 23

MD 378 POND SPECIFICATIONS

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 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. For dry stormwater management ponds, a minimum of a 50 foot radius around the structure shall be cleared.

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.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CL or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 6 inch thick before compaction layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into 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 will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be covered by the equipment used for excavation, with the minimum width being four feet; the depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers or hand tampers to assure maximum density and minimum permeability.

Structure Backfill

Backfill adjacent to pipes or structures 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 manually directed 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 24" or greater over the structure or pipe.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for 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 or an approved equal may be used: Nexon P-Bal-Cote, BAC-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

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. 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 between 4 and 9.

2. 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.

3. 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. 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.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 24" in diameter. Flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24".

Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

4. 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.

5. Backfilling shall conform to "Structure Backfill".

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

Reinforced Concrete Pipe- All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, 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. The first joint must be located within 2 feet from the riser.

4. Backfilling shall conform to "Structure Backfill".

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

Polyvinyl Chloride (PVC) Pipe- All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

1. Materials-PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.

2. Joints and connections to anti-seep collars shall be completely 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. Backfilling shall conform to "Structure Backfill".

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

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 505, 718 No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 912C.

Care of Water during Construction

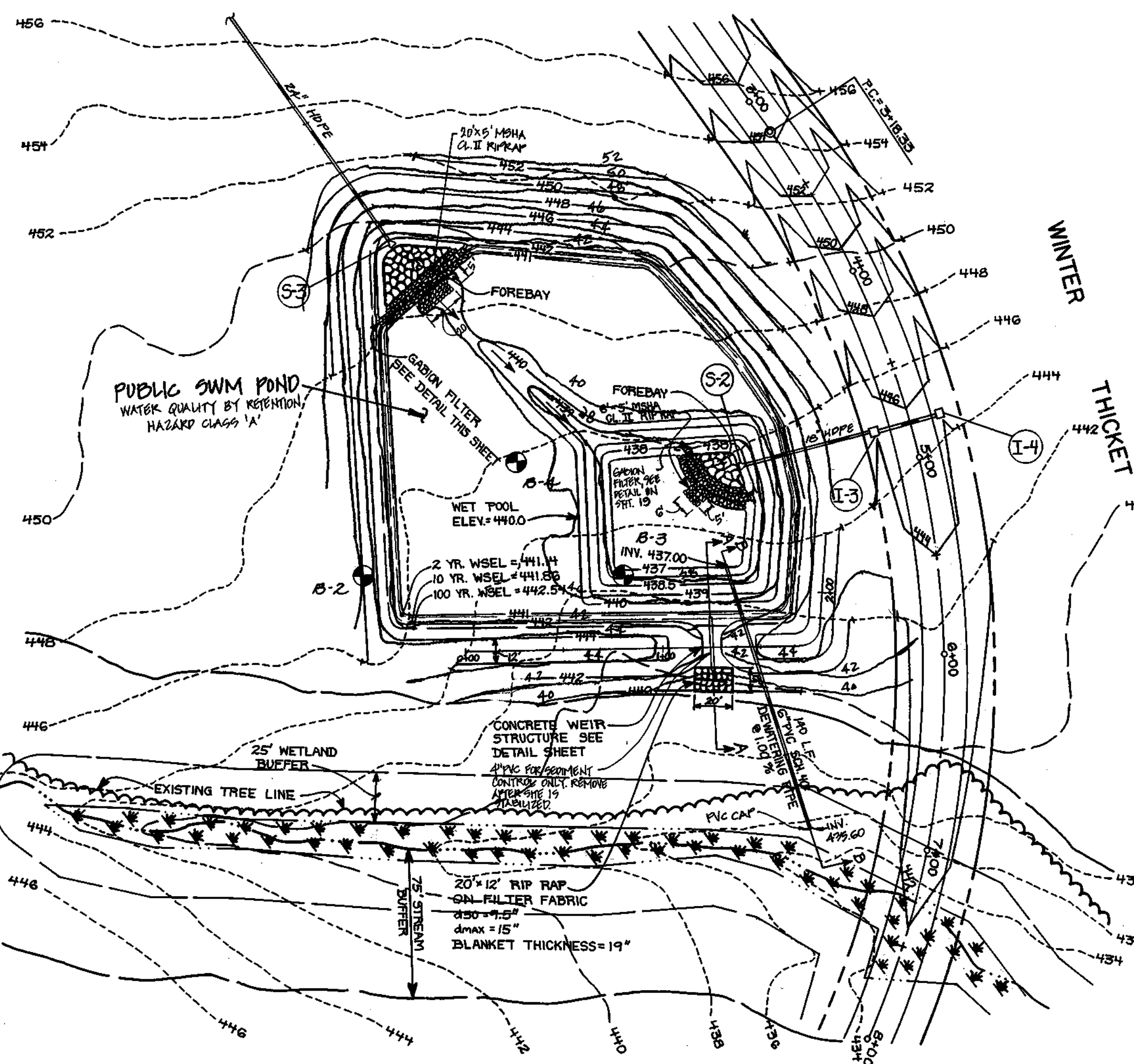
All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

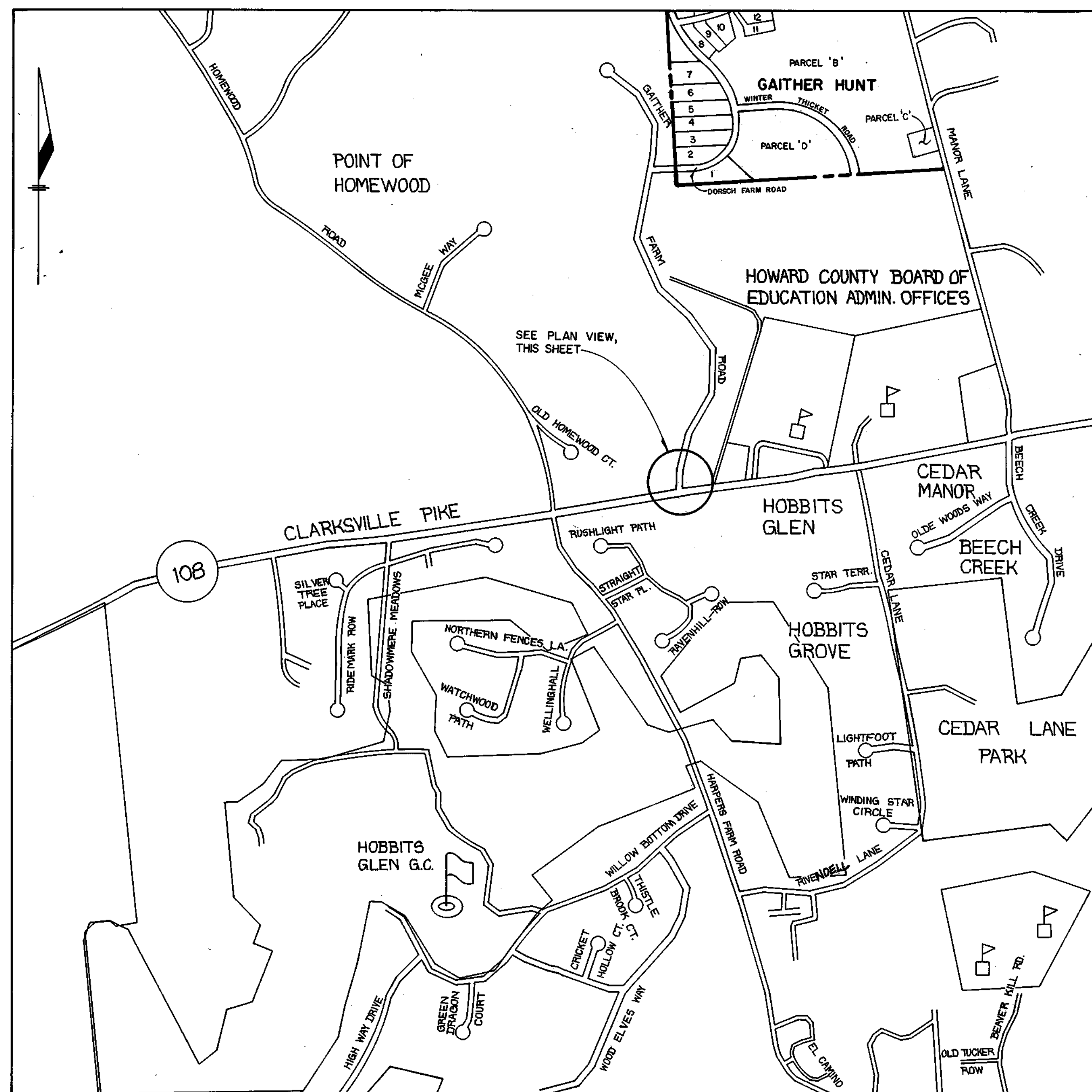
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.



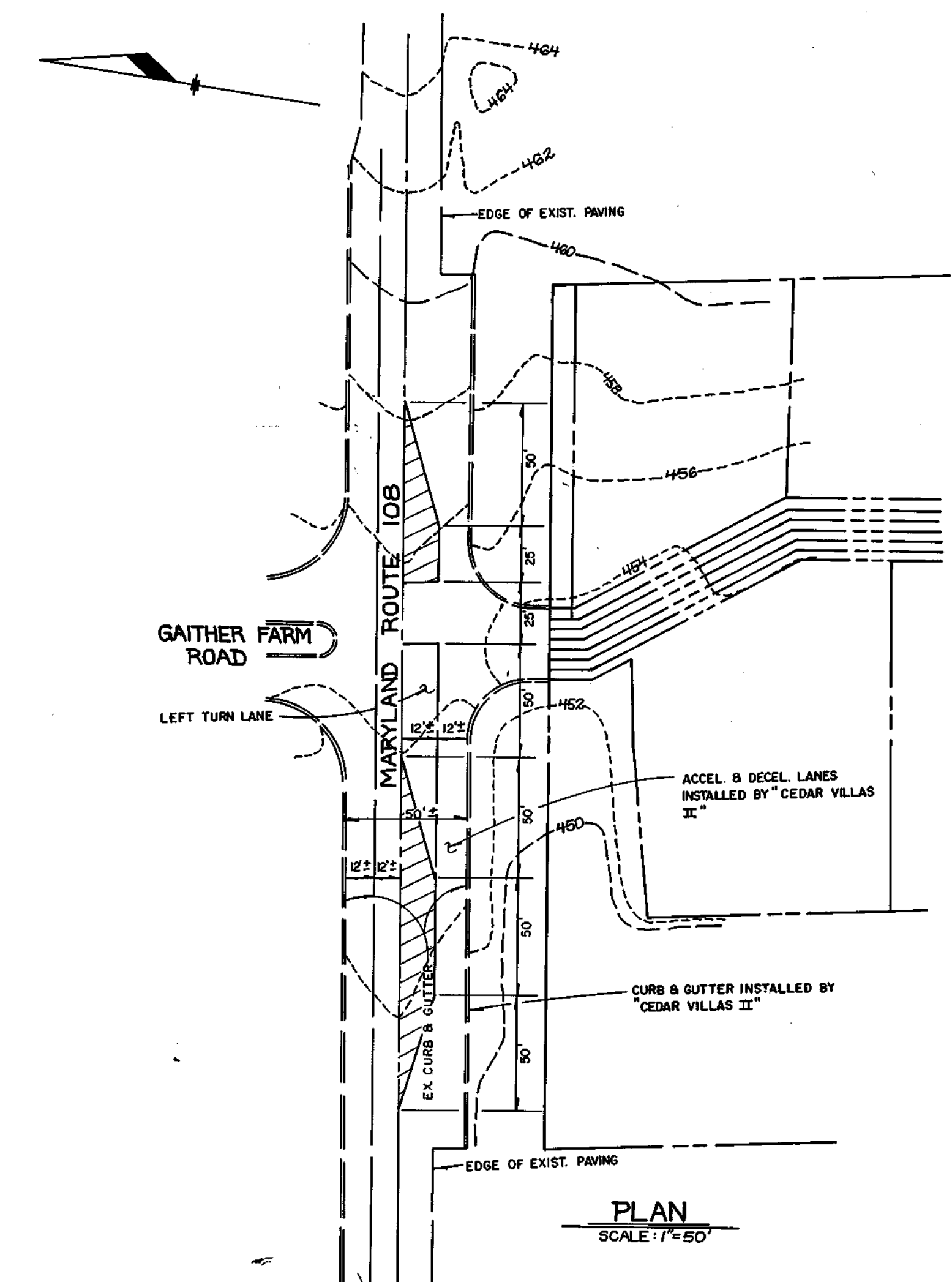
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 2/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chris Dammann 2/13/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Rudolph M. Daneker 2-5-98
 CHIEF, BUREAU OF HIGHWAYS DATE



SITE LOCATION FOR INTERSECTION AT 108
 SCALE: 1" = 1200'



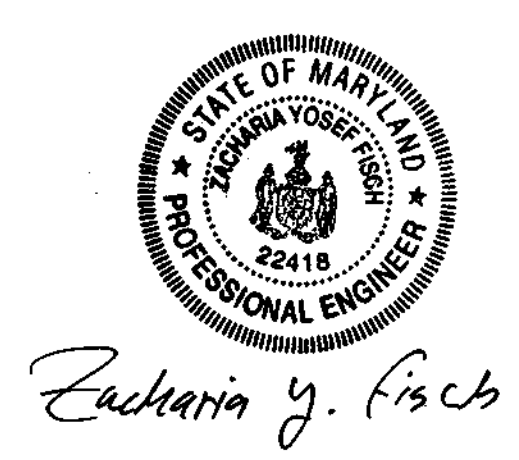
PLAN
 SCALE: 1" = 50'

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 481 - 2955

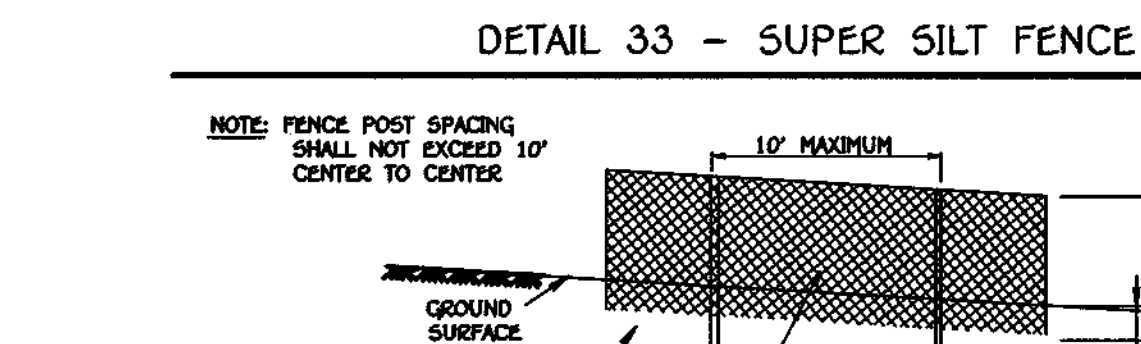
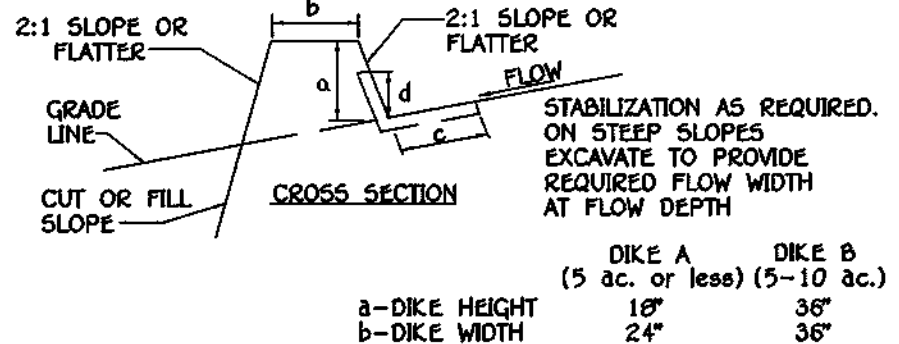
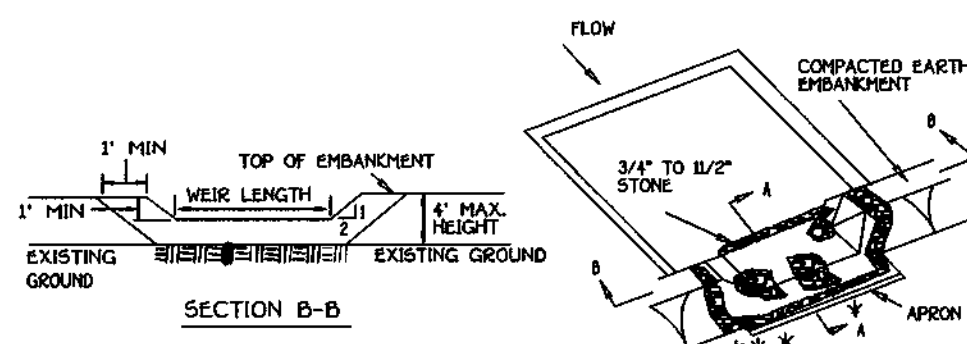
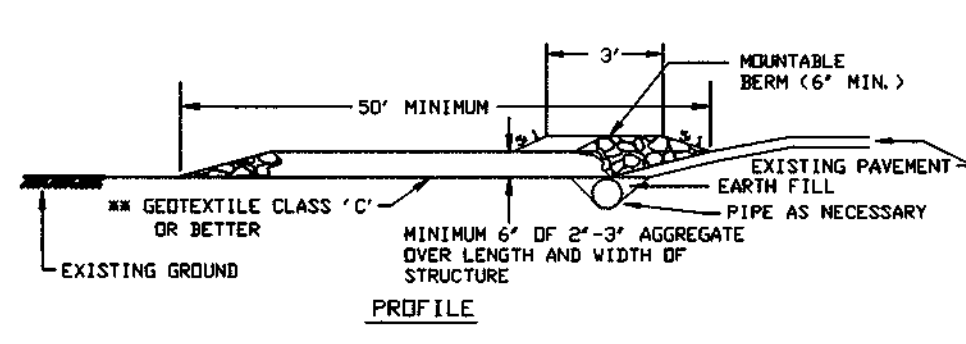
OWNER
 MARY ARMITA BLOOM, ET. AL.
 4751 MANOR LANE
 COLUMBIA, MARYLAND 21044

OWNER
 MR. PHILIP CARROLL
 AND THE KLEIN FAMILY
 c/o MR. TOM SCHRIVENER
 5026 DORSEY HALL DRIVE-SUITE 204
 ELLICOTT CITY, MARYLAND 21042

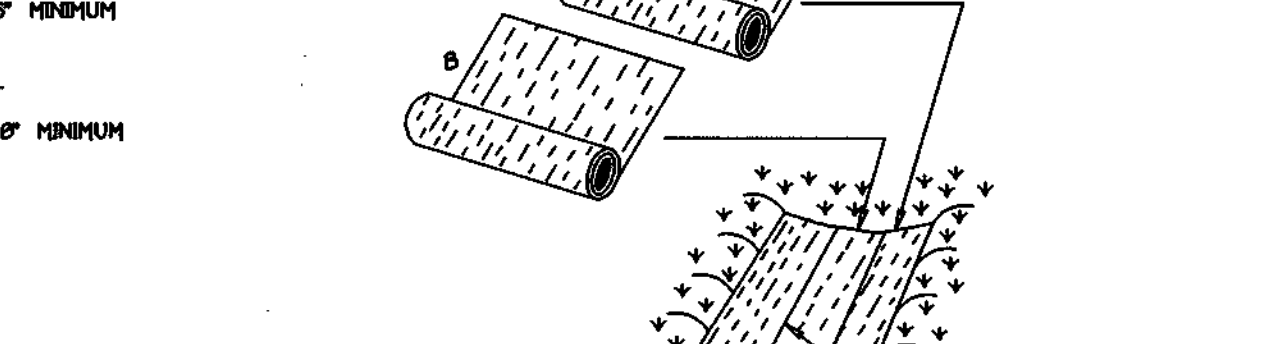
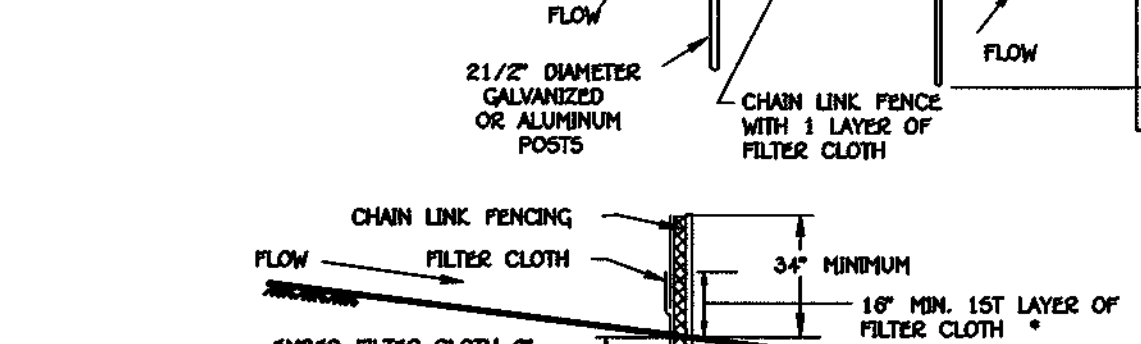
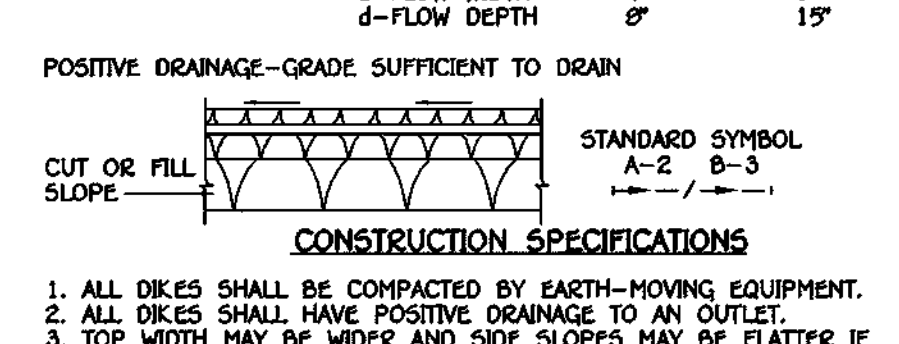
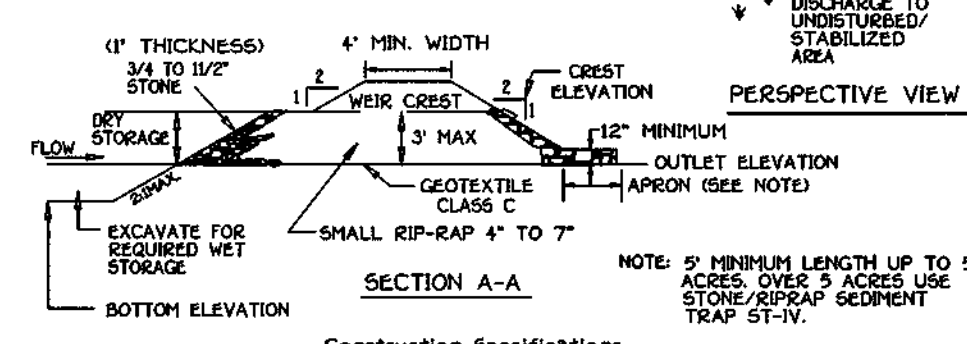
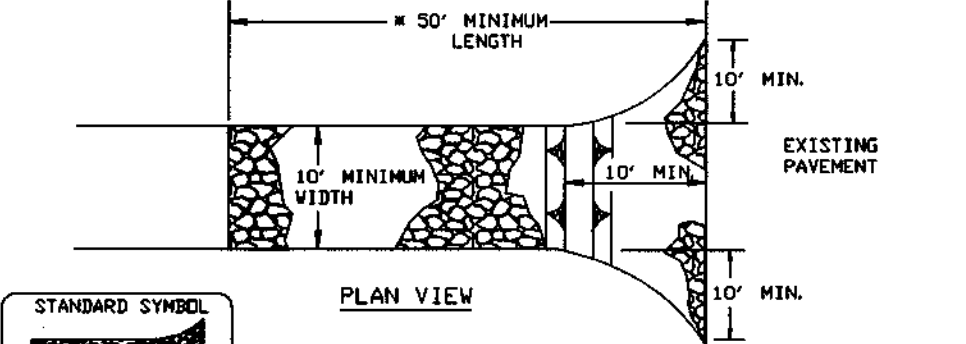
DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 c/o MR. TOM SCHRIVENER
 5026 DORSEY HALL DRIVE-SUITE 204
 ELLICOTT CITY, MARYLAND 21042



STRIPING PLAN AND SITE LOCATION MAP
GATHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND PRESERVATION PARCELS 'B-E'
 BULK PARCEL 'D'
 ZONING: "RC-PED"
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: AUGUST 8, 1997
 SHEET 21 OF 23



DEVELOPER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE CONSTRUCTION OF 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 COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS DEEMED NECESSARY.
 SIGNATURE OF DEVELOPER: *[Signature]* DATE: 12/12/97



ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 SIGNATURE OF ENGINEER: *[Signature]* DATE: 1/8/98

Construction Specifications
 1. Length - minimum of 30' (x30' for single residence lots).
 2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.
 3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approved construction entrance shall be protected with a mounded berm with 3:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the S.C.E. is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
 4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6' deep over the length and width of the entrance.
 5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mounded berm with 3:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the S.C.E. is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
 6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

Construction Specifications
 1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 2. The fill material for the embankment shall be free of roots and other wood vegetation as well as oversized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
 3. All cut and fill slopes shall be 2:1 or flatter.
 4. The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1" thick layer of 3/4" to 1/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile fabric C may be substituted for the stone. Facing by placing it on the inside face of the stone outlet.
 5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

CONSTRUCTION SPECIFICATIONS
 1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
 2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
 3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
 4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
 5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE AGE NOT ADEQUATELY STABILIZED.
 6. STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF AVAILABLE; (B) FLOW CHANNEL AS PER THE CHART BELOW.

CONSTRUCTION SPECIFICATIONS
 1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Detail for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 42" fabric and 6" length posts.
 2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brice and frass rods, drive anchors and post caps are not required except on the ends of the fence.
 3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 4. Filter cloth shall be embedded a minimum of 6" into the ground.
 5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 6. Maintenance shall be performed as needed and all buildup removed when "bushes" develop in the fill fence, or when all reaches 50% of fence height.
 7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:
 Tensile Strength 50 lb/in (min.) Test: MSMT 509
 Tensile Modulus 20 lb/in (min.) Test: MSMT 509
 Flow Rate 0.3 gal/ft²/minute (max.) Test: MSMT 322
 Filtering Efficiency 75% (min.) Test: MSMT 322

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 Flow Rate 0.3 gal/ft²/minute (max.) Test: MSMT 322
 Filtering Efficiency 75% (min.) Test: MSMT 322

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 SIGNATURE OF ENGINEER: *[Signature]* DATE: 1/21/98
 SIGNATURE OF DEVELOPER: *[Signature]* DATE: 1/21/98

DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II
 NOT TO SCALE

DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II
 NOT TO SCALE

CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSDOR, SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4"-8"
4	8.1-20%	LINED RIP-RAP 4"-8"	ENGINEERING DESIGN

A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH AN IRON ROLLER.
 B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
 C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.

CONSTRUCTION SPECIFICATIONS
 1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Detail for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 42" fabric and 6" length posts.
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 Flow Rate 0.3 gal/ft²/minute (max.) Test: MSMT 322
 Filtering Efficiency 75% (min.) Test: MSMT 322

APPROVED DEPARTMENT OF PLANNING AND ZONING
 SIGNATURE OF ENGINEER: *[Signature]* DATE: 2/23/98
 SIGNATURE OF DEVELOPER: *[Signature]* DATE: 2/13/98

STABILIZED CONSTRUCTION ENTRANCE - 2
 NOT TO SCALE

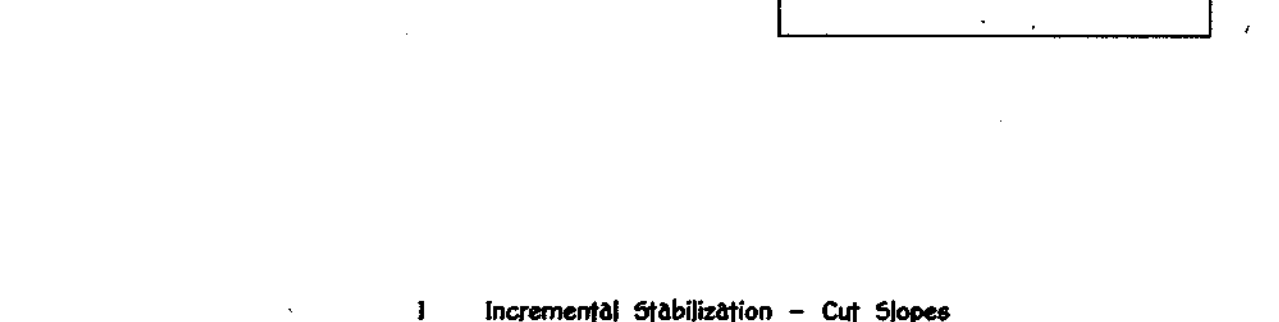
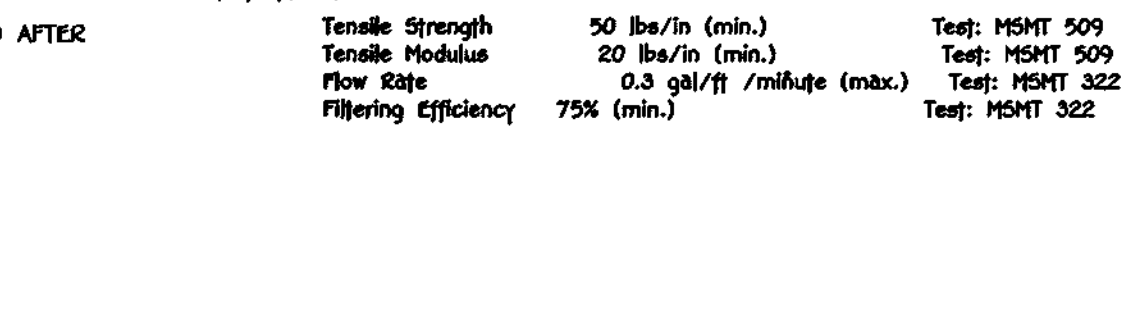
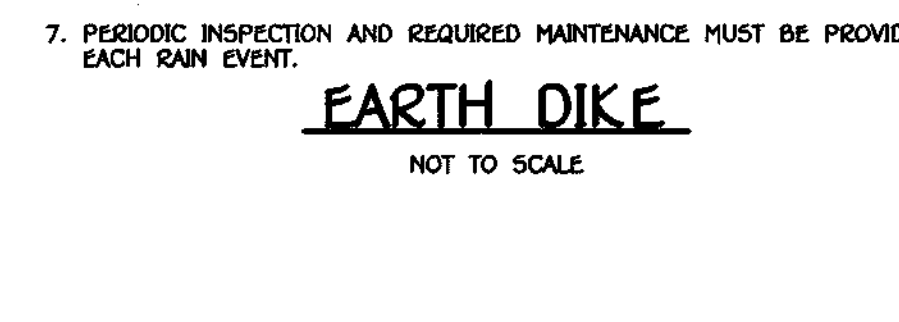
STABILIZED CONSTRUCTION ENTRANCE - 2
 NOT TO SCALE

EARTH DIKE
 NOT TO SCALE

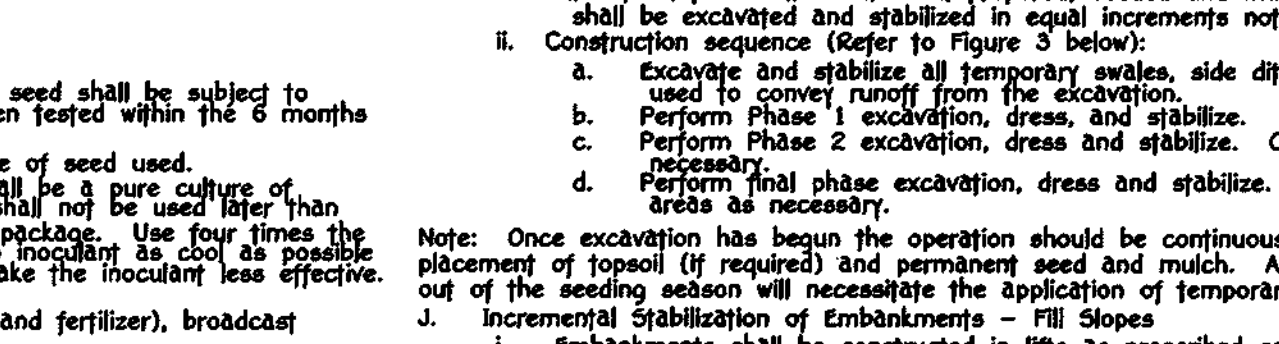
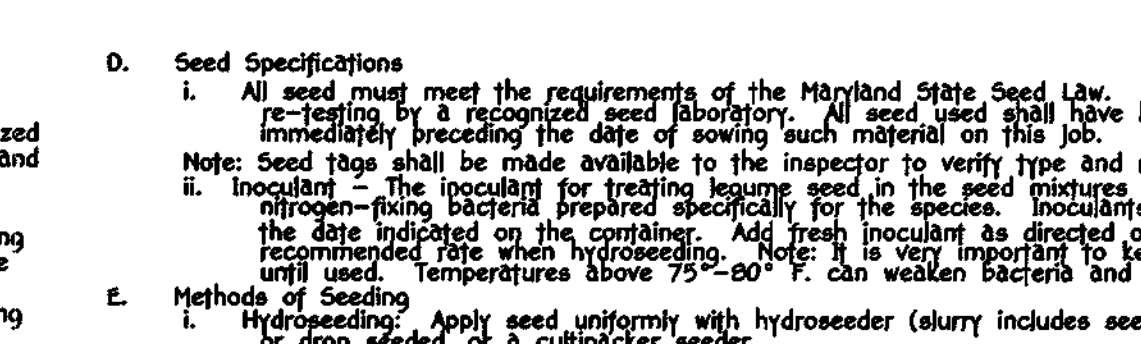
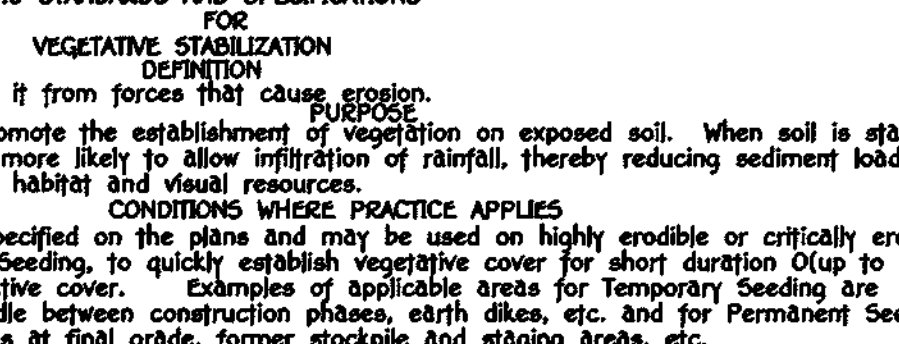
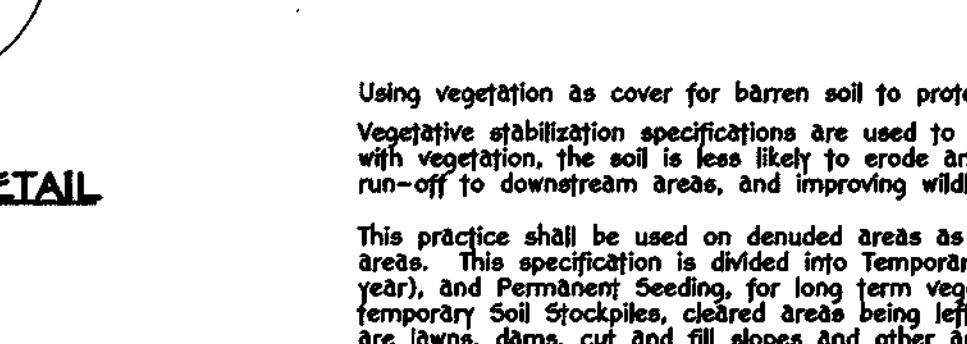
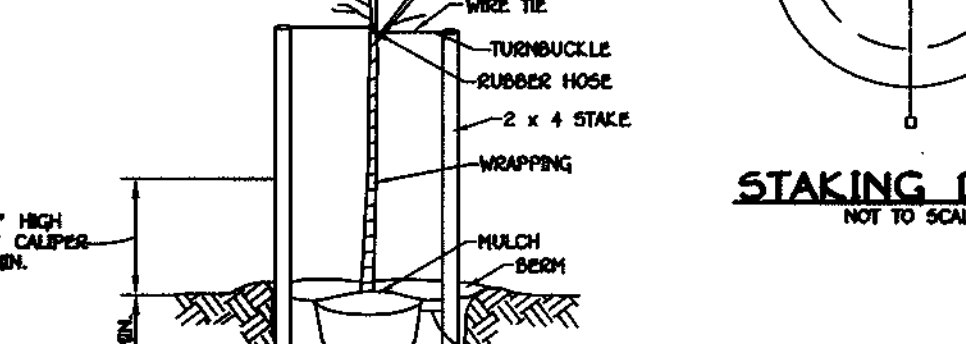
EARTH DIKE
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SEQUENCE OF CONSTRUCTION

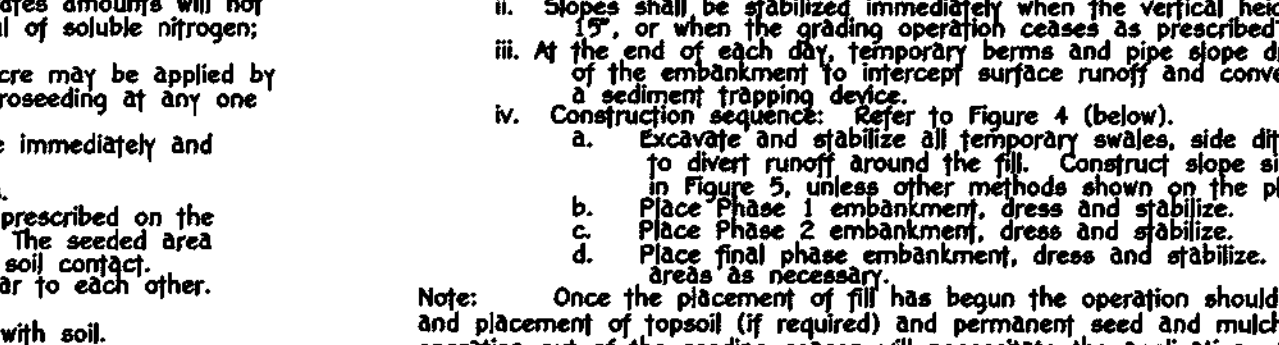
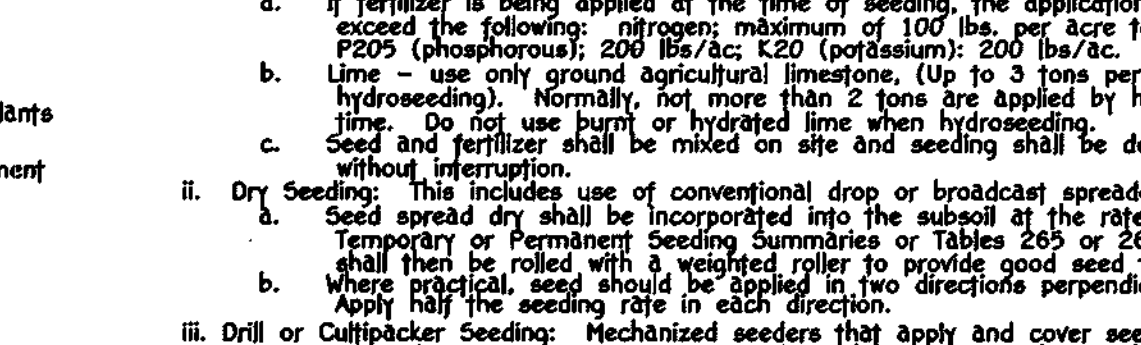
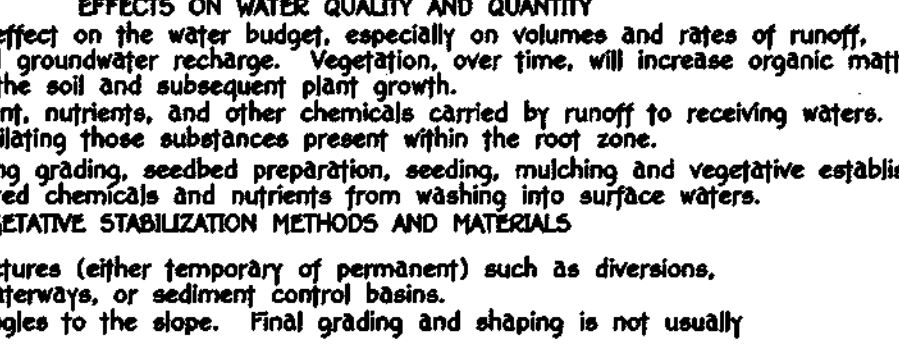
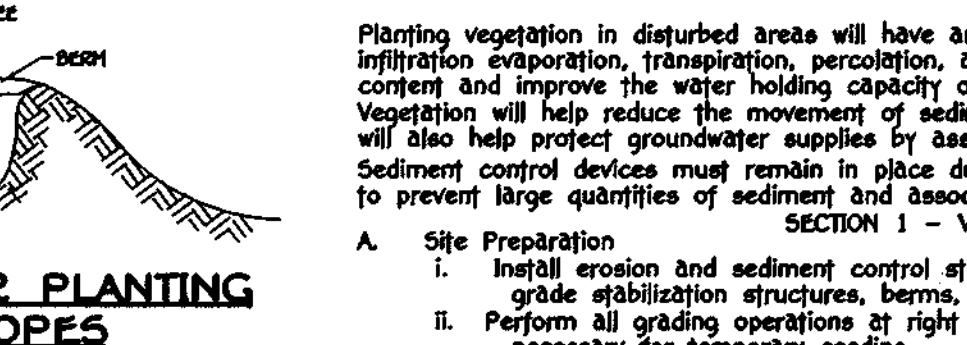
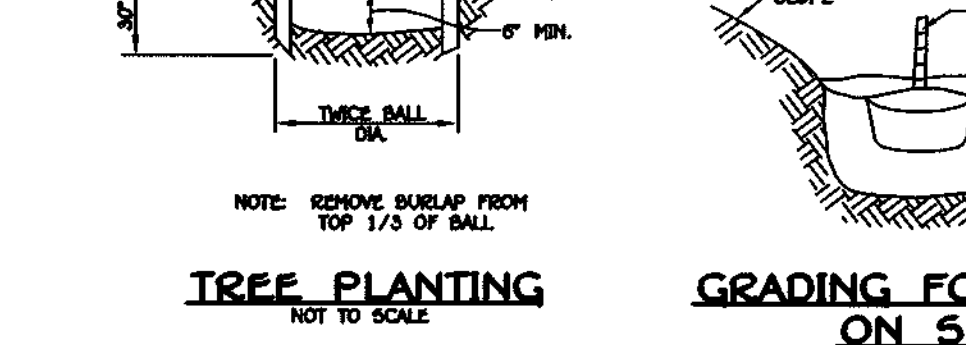
SEQUENCE OF CONSTRUCTION



SEQUENCE OF CONSTRUCTION
 1. OBTAIN A GRADING PERMIT.
 2. NOTIFY "MISS UTILITY" 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION INSPECTION AT (410) 313-1880 (5) WORKING DAYS PRIOR TO START OF CONSTRUCTION.
 3. INSTALL TREE PROTECTION FENCE.
 4. INSTALL SEDIMENT CONTROL MEASURES, STABILIZED CONSTRUCTION ENTRANCE, STONE OUTLET SEDIMENT TRAP, EARTH DIKES, SUPER SILT FENCE AND SILT FENCE. STABILIZE DISTURBED AREAS PER TEMPORARY SEEDING NOTES.
 5. GRADE ROAD TO SUBGRADE AND INSTALL STORM DRAINS, INLETS, TEMPORARY FLEXIBLE PIPE AND CONSTRUCT GABION CHECKDAM.
 6. BLOCK 1-1 TO 5-1.
 7. CONSTRUCT ROAD.
 8. OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO REMOVE SEDIMENT CONTROL.
 9. STABILIZE ALL DISTURBED AREAS WITH PERMANENT SEEDING.



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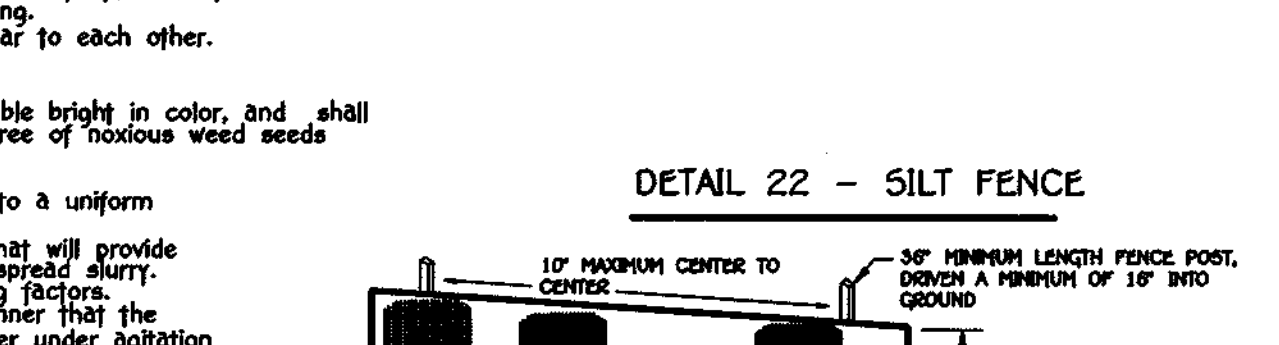
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 6. BLOCK 1-1 TO 5-1.
 7. CONSTRUCT ROAD.
 8. OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO REMOVE SEDIMENT CONTROL.
 9. STABILIZE ALL DISTURBED AREAS WITH PERMANENT SEEDING.

SEEDING CONTROL NOTES
 1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1899).
 2) ALL VEGETATIVE AND STRUCTURAL MEASURES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
 3) FOLLOWING INITIAL SOIL DISTURBANCE OR DE-STABILIZATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, STEEP SLOPES AND ALL SLOPES STEEPER 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 ACCORDING TO PERMITS IN ACCORDANCE WITH VOL. 11, 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (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 118,288 ACRES
 AREA DISTURBED 8,022 ACRES
 AREA TO BE ROOFED OR PAVED 3,071 ACRES
 AREA TO BE VEGETATIVELY STABILIZED 4,156 ACRES
 TOTAL CUT 17,000 CU.YDS.
 TOTAL FILL 17,000 CU.YDS.
 OFFICE OF WASTE/BORROW AREA LOCATION
 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 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) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

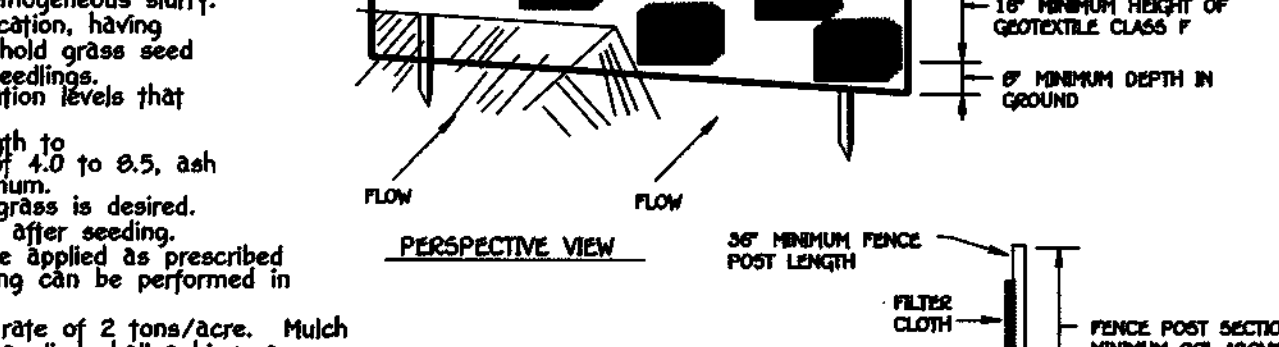
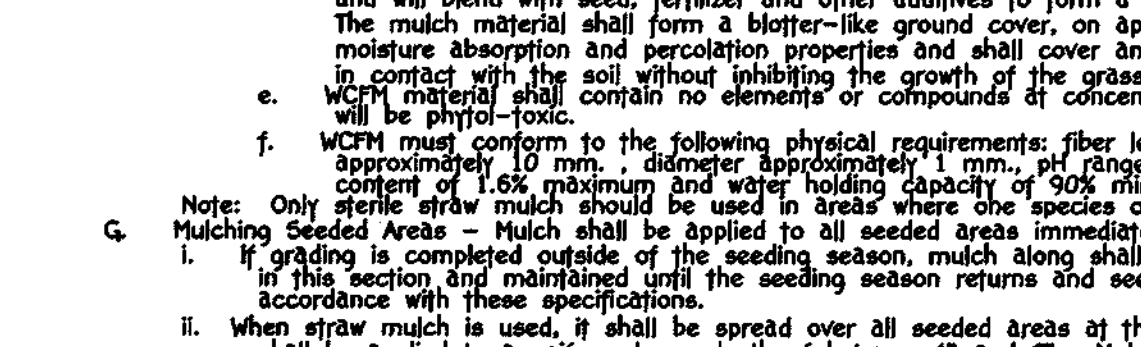
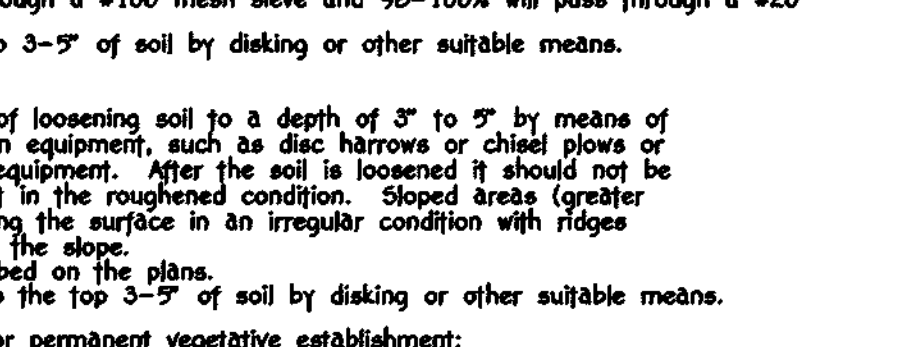
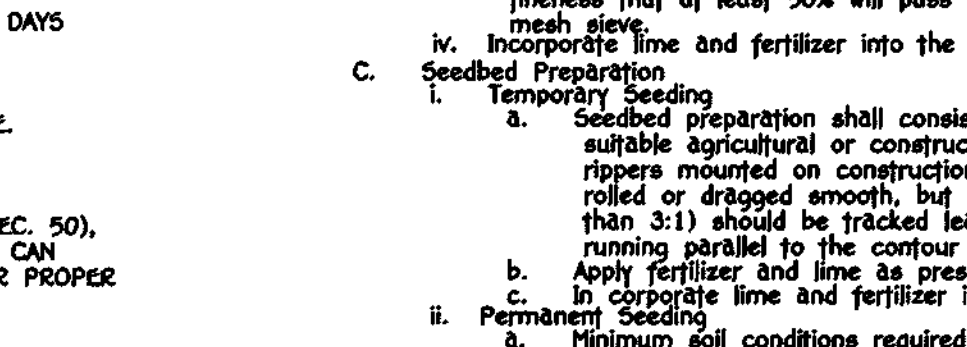
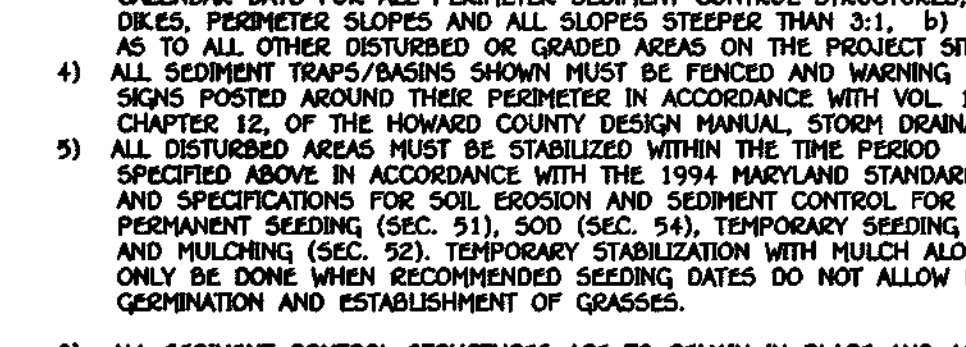
SEEDING CONTROL NOTES
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 3) FOLLOWING INITIAL SOIL DISTURBANCE OR DE-STABILIZATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, STEEP SLOPES AND ALL SLOPES STEEPER 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 ACCORDING TO PERMITS IN ACCORDANCE WITH VOL. 11, 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (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 118,288 ACRES
 AREA DISTURBED 8,022 ACRES
 AREA TO BE ROOFED OR PAVED 3,071 ACRES
 AREA TO BE VEGETATIVELY STABILIZED 4,156 ACRES
 TOTAL CUT 17,000 CU.YDS.
 TOTAL FILL 17,000 CU.YDS.
 OFFICE OF WASTE/BORROW AREA LOCATION
 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 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) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

SEEDING CONTROL NOTES
 1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1899).
 2) ALL VEGETATIVE AND STRUCTURAL MEASURES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
 3) FOLLOWING INITIAL SOIL DISTURBANCE OR DE-STABILIZATION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, STEEP SLOPES AND ALL SLOPES STEEPER THAN 3:1, b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
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 11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

SEEDING CONTROL NOTES
 1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1899).
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 11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.



SEQUENCE OF CONSTRUCTION
 1. OBTAIN A GRADING PERMIT.
 2. NOTIFY "MISS UTILITY" 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION INSPECTION AT (410) 313-1880 (5) WORKING DAYS PRIOR TO START OF CONSTRUCTION.
 3. INSTALL TREE PROTECTION FENCE.
 4. INSTALL SEDIMENT CONTROL MEASURES, STABILIZED CONSTRUCTION ENTRANCE, STONE OUTLET SEDIMENT TRAP, EARTH DIKES, SUPER SILT FENCE AND SILT FENCE. STABILIZE DISTURBED AREAS PER TEMPORARY SEEDING NOTES.
 5. GRADE ROAD TO SUBGRADE AND INSTALL STORM DRAINS, INLETS, TEMPORARY FLEXIBLE PIPE AND CONSTRUCT GABION CHECKDAM.
 6. BLOCK 1-1 TO 5-1.
 7. CONSTRUCT ROAD.
 8. OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO REMOVE SEDIMENT CONTROL.
 9. STABILIZE ALL DISTURBED AREAS WITH PERMANENT SEEDING.



SEQUENCE OF CONSTRUCTION
 1. OBTAIN A GRADING PERMIT.
 2. NOTIFY "MISS UTILITY" 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION INSPECTION AT (410) 313-1880 (5) WORKING DAYS PRIOR TO START OF CONSTRUCTION.
 3. INSTALL TREE PROTECTION FENCE.
 4. INSTALL SEDIMENT CONTROL MEASURES, STABILIZED CONSTRUCTION ENTRANCE, STONE OUTLET SEDIMENT TRAP, EARTH DIKES, SUPER SILT FENCE AND SILT FENCE. STABILIZE DISTURBED AREAS PER TEMPORARY SEEDING NOTES.
 5. GRADE ROAD TO SUBGRADE AND INSTALL STORM DRAINS, INLETS, TEMPORARY FLEXIBLE PIPE AND CONSTRUCT G

Planting Schedule

Forest Conservation Easement #1 (1.8 acres)

Qty.	Species	Size	Spacing
4	Acer rubrum - Red maple	1" cal.	##
5	Fraxinus americana - White ash	1" cal.	##
4	Liriodendron tulipifera - Tulip poplar	1" cal.	##
80	Acer rubrum - Red maple	2-3' cont.	**
30	Juniperus virginiana - Red cedar	2-3' cont.	**
100	Liriodendron tulipifera - Poplar	2-3' cont.	**
30	Prunus serotina - Black cherry	3-4' cont.	**
30	Quercus rubra - Red Oak	3-4' cont.	**
40	Sassafras albidum - Sassafras	2-4' cont.	**
	Sambucus canadensis - Elderberry	18-24" b.t.	**
	Viburnum prunifolium - Blackhaw	18-24" b.t.	**

Forest Conservation Easement #2 (1.0 acres)

Qty.	Species	Size	Spacing
2	Acer rubrum - Red maple	1" cal.	##
2	Fraxinus americana - White ash	1" cal.	##
4	Liriodendron tulipifera - Tulip poplar	1" cal.	##
80	Acer rubrum - Red maple	2-3' cont.	**
20	Juniperus virginiana - Red cedar	2-3' cont.	**
55	Liriodendron tulipifera - Poplar	2-3' cont.	**
35	Prunus serotina - Black cherry	3-4' cont.	**
45	Quercus rubra - Red Oak	3-4' cont.	**
30	Sassafras albidum - Sassafras	2-4' cont.	**
15	Sambucus canadensis - Elderberry	18-24" b.t.	**
25	Viburnum prunifolium - Blackhaw	18-24" b.t.	**

Forest Conservation Easement #3 (1.9 acres)

Qty.	Species	Size	Spacing
4	Acer rubrum - Red maple	1" cal.	##
6	Fraxinus americana - White ash	1" cal.	##
4	Liriodendron tulipifera - Tulip poplar	1" cal.	##
120	Acer rubrum - Red maple	2-3' cont.	**
65	Juniperus virginiana - Red cedar	2-3' cont.	**
130	Liriodendron tulipifera - Poplar	2-3' cont.	**
70	Prunus serotina - Black cherry	3-4' cont.	**
100	Quercus rubra - Red Oak	3-4' cont.	**
70	Sassafras albidum - Sassafras	2-4' cont.	**
30	Sambucus canadensis - Elderberry	18-24" b.t.	**
55	Viburnum prunifolium - Blackhaw	18-24" b.t.	**

Forest Conservation Easement #4 (1.2 acres)

Qty.	Species	Size	Spacing
4	Acer rubrum - Red maple	1" cal.	##
5	Fraxinus americana - White ash	1" cal.	##
6	Liriodendron tulipifera - Tulip poplar	1" cal.	##
80	Acer rubrum - Red maple	2-3' cont.	**
40	Juniperus virginiana - Red cedar	2-3' cont.	**
75	Liriodendron tulipifera - Poplar	2-3' cont.	**
42	Prunus serotina - Black cherry	3-4' cont.	**
65	Quercus rubra - Red Oak	3-4' cont.	**
35	Sassafras albidum - Sassafras	2-4' cont.	**
25	Sambucus canadensis - Elderberry	18-24" b.t.	**
32	Viburnum prunifolium - Blackhaw	18-24" b.t.	**

Forest Conservation Easement #5 (1.4 acres) SECTION 1, AREA 2

Qty.	Species	Size	Spacing
5	Acer rubrum - Red maple	1" cal.	##
5	Fraxinus americana - White ash	1" cal.	##
5	Liriodendron tulipifera - Tulip poplar	1" cal.	##
80	Acer rubrum - Red maple	2-3' cont.	**
50	Juniperus virginiana - Red cedar	2-3' cont.	**
95	Liriodendron tulipifera - Poplar	2-3' cont.	**
50	Prunus serotina - Black cherry	3-4' cont.	**
75	Quercus rubra - Red Oak	3-4' cont.	**
45	Sassafras albidum - Sassafras	2-4' cont.	**
30	Sambucus canadensis - Elderberry	18-24" b.t.	**
40	Viburnum prunifolium - Blackhaw	18-24" b.t.	**

KEY:

cal. - caliper cont. - container grown b.t. branched transplant

- one inch caliper trees shall be spaced around perimeter of FCE easement that occur adjacent to private lots or unforested open space. Spacing shall not be greater than 50', trees should be planted within 10 feet of FCE boundary.

** - trees and shrubs shall be planted, on average, at a spacing of 11 feet on center, not in a grid pattern. Limited clumping of shrubs is permitted.

Planting/Soil Specifications

- Planting of nursery stock shall take place between March 15th and April 30th.
- A twelve (12) inch layer of topsoil shall be spread over all reforestation areas impacted by site grading to assure a suitable planting area. Disturbed areas shall be seeded and established as per general construction plan for project. Planting areas not impacted by site grading shall have no additional topsoil installed.
- All bare-root planting stock shall have their root systems dipped into an anti-desiccant gel prior to planting.
- Plants shall be installed so that the top of root mass is level with the top of existing grade. Backfill in the planting pit shall consist of 3 parts existing soil to 1 part pine fines or equivalent.
- Fertilizer shall consist of Agriform 22-8-2, or equivalent, applied as per manufacturer's specifications.
- A two (2) inch layer of hardwood mulch shall be placed over the root area of all plantings.
- Plant material shall be transported to the site in a tarp or covered truck. Plants shall be kept moist prior to planting.
- All non-organic debris associated with the planting operation shall be removed from the site by the contractor.

Sequence of Construction

- Plants shall be installed as per Plant Schedule and the Planting/Soil Specifications for the project.
- Upon completion of the planting, signage shall be installed as per the Forest Retention Area Protection Devices shown on Sheet 2 of the Forest Conservation Plan.
- Plantings shall be maintained and guaranteed in accordance with the Maintenance and Guarantee requirements for project.

Maintenance of Plantings

- Maintenance of plantings shall last for a period of 24 months.
- All plant material shall be watered twice a month during the 1st growing season. Watering may be more or less frequent depending on weather conditions. During second growing season, once a month during May-September, if needed.
- Invasive exotics and noxious weeds will be removed from reforestation areas. Old field successional species will be retained.
- Plants will be examined a minimum two times during the growing season for serious plant pests and diseases. Serious problems will be treated with the appropriate agent.
- Dead branches will be pruned from plantings.

Guarantee Requirements

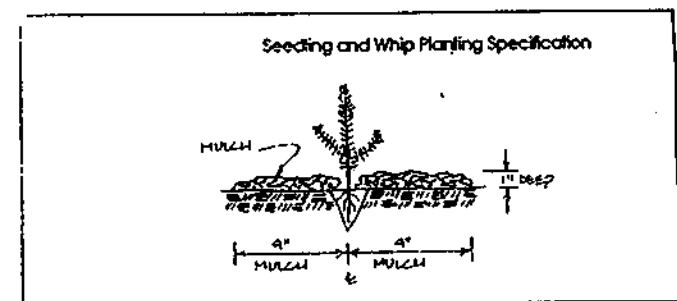
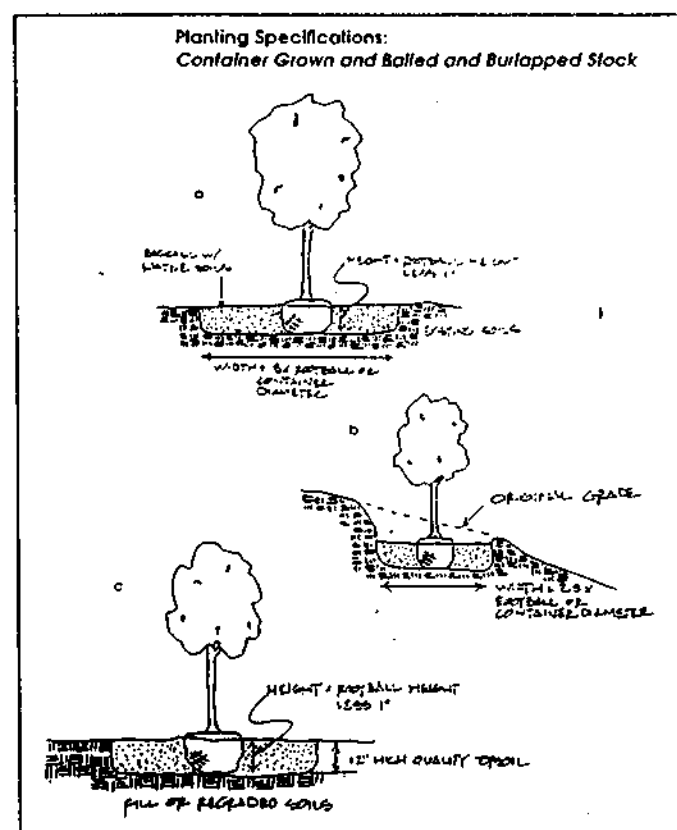
- A 75 percent survival rate of reforestation plantings will be required at the end of the 24 month maintenance period. All plant material below the 75 percent threshold will be replaced at the beginning of the next growing season. After one growing season, plant material shall be maintained at 90% survival threshold. The contractor will not be liable for plant loss due to theft or vandalism.

Surety for Reforestation

- The developer shall post a surety (bond, letter of credit) to ensure that reforestation plantings are completed. Upon acceptance of the plantings by the County, the bond shall be released.

Conservation Bank Note:

FCE #3 shall be held as a Forest Conservation Bank. The proposed plantings are not required as part of this phase of the Gaither Hunt development. Credit for use of this area may be used to offset future reforestation obligations for this or other projects, as approved Howard County DPZ. Use of this Bank for Forest Conservation Act purposes without Howard County DPZ authorization is not permitted. Development or alternate use of this "Conservation Bank" shall be permitted until a Forest Conservation Easement is recorded.



FCE NOTES

- Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
- Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
- Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
- There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
- No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
- Temporary fencing shall be used to protect forest resources during construction. The fencing shall be placed along all FCE boundaries which occur within 15 feet of the proposed limits of disturbance.
- Permanent signage shall be placed 50-100' apart along the boundaries of all areas included in Forest Conservation Easements.

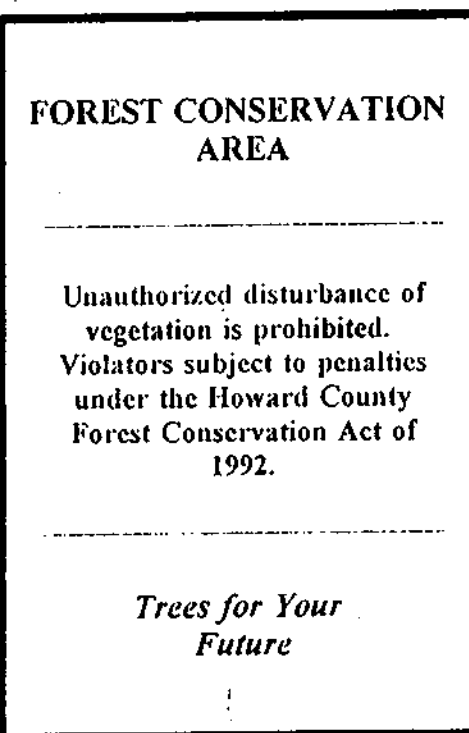
PLANTING SCHEDULE (CONT'D)

Qty.	Species	Size	Spacing
2	Acer rubrum - Red Maple	1" cal.	##
4	Fraxinus americana - White Ash	1" cal.	##
4	Liriodendron tulipifera - Tulip Poplar	1" cal.	##
35	Acer rubrum - Red Maple	2-3' cont.	**
15	Juniperus virginiana - Red Cedar	2-3' cont.	**
50	Liriodendron tulipifera - Poplar	2-3' cont.	**
80	Prunus serotina - Black Cherry	3-4' cont.	**
45	Quercus rubra - Red Oak	3-4' cont.	**
20	Sassafras albidum - Sassafras	2-4' cont.	**

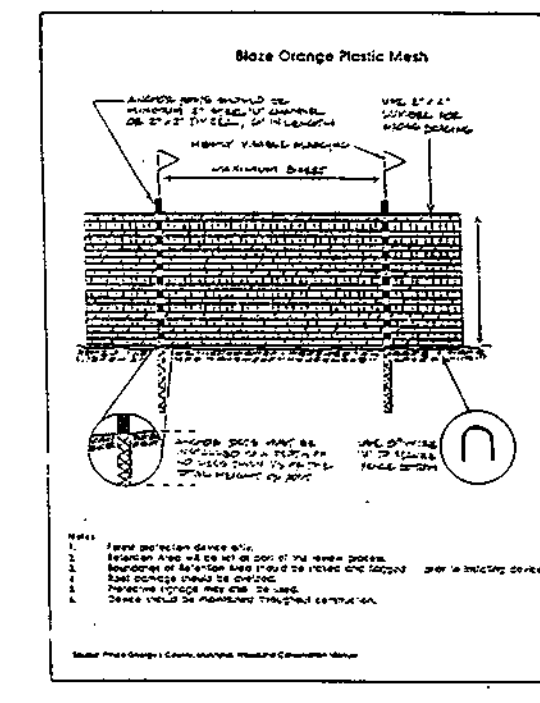
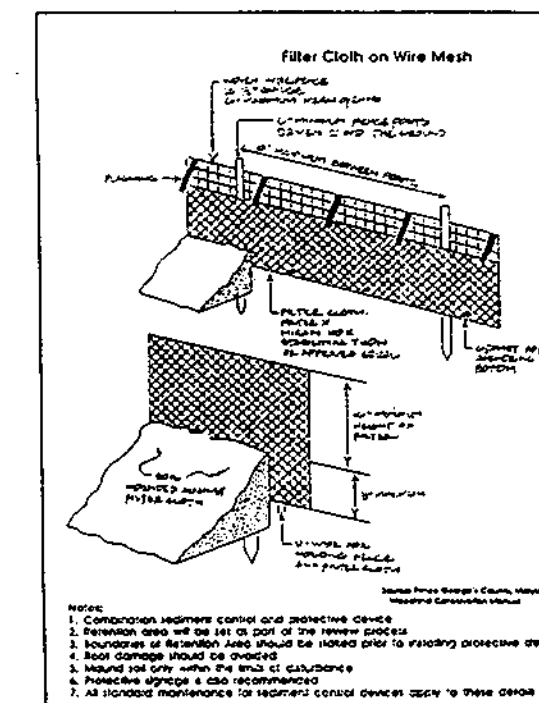
Forest Conservation Easement #15 (2.1 Acres)

Qty.	Species	Size	Spacing
4	Acer rubrum - Red Maple	1" cal.	##
2	Fraxinus americana - White Ash	1" cal.	##
2	Liriodendron tulipifera - Tulip Poplar	1" cal.	##
130	Acer rubrum - Red Maple	2-3' cont.	**
40	Juniperus virginiana - Red Cedar	2-3' cont.	**
165	Liriodendron tulipifera - Poplar	2-3' cont.	**
150	Prunus serotina - Black Cherry	3-4' cont.	**
75	Quercus rubra - Red Oak	3-4' cont.	**
65	Sassafras albidum - Sassafras	2-4' cont.	**
55	Sambucus canadensis - Elderberry	18-24" b.t.	**
75	Viburnum prunifolium - Blackhaw	18-24" b.t.	**

Permanent Protective Signage



Temporary Protective Fencing



DATE: 2/23/98
REVISION: 2/13/98
POSITION: CHIEF, BUREAU OF HIGHWAYS

FOREST CONSERVATION NOTES
GAITHER HUNT
SECTION ONE AREA ONE
LOTS 1-33, 63-71 AND
PRESERVATION PARCELS 'B-E'
ZONING: "RC-DEO"
TAX MAP No. 29 PARCEL 21 GRID 5
TAX MAP No. 29 PARCEL 322 GRID 11
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST 8, 1997
SHEET 23 OF 23

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE, OFFICE PARK - 18272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2855

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS
P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752

MD DNR Qualified Professional
USA CO2 Wetland Designer
Certification # WDC-2732MP061004482
John P. Canales

OWNER
MARY ARMITA BLOOM, ET AL.
4754 MANOR LANE
COLUMBIA, MARYLAND 21044

OWNER
MR. PHILLIP CARROLL
AND THE KLEIN FAMILY
c/o MR. TOM SCHRIVENER
5026 DORSEY HALL DRIVE-SUITE 204
ELICOTT CITY, MARYLAND 21042

DEVELOPER
RUSSELL DEVELOPMENT, L.L.C.
c/o MR. TOM SCHRIVENER
5026 DORSEY HALL DRIVE-SUITE 204
ELICOTT CITY, MARYLAND 21042

As BUILT F98-24

Planting Schedule

Forest Conservation Easement #1 (1.2 acres)

Qty.	Species	Size	Spacing
4	Acer rubrum - Red maple	1" cal.	##
5	Fraxinus americana - White ash	1" cal.	##
4	Liriodendron tulipifera - Tulip poplar	1" cal.	##
80	Acer rubrum - Red maple	2-3' cont.	**
30	Juniperus virginiana - Red cedar	2-3' cont.	**
100	Liriodendron tulipifera - Poplar	2-3' cont.	**
30	Prunus serotina - Black cherry	3-4' cont.	**
30	Quercus rubra - Red Oak	3-4' cont.	**
40	Sassafras albidum - Sassafras	2-4' cont.	**
	Sambucus canadensis - Elderberry	18-24" b.t.	**
	Viburnum prunifolium - Blackhaw	18-24" b.t.	**

Forest Conservation Easement #2 (1.0 acres)

Qty.	Species	Size	Spacing
2	Acer rubrum - Red maple	1" cal.	##
2	Fraxinus americana - White ash	1" cal.	##
4	Liriodendron tulipifera - Tulip poplar	1" cal.	##
80	Acer rubrum - Red maple	2-3' cont.	**
20	Juniperus virginiana - Red cedar	2-3' cont.	**
55	Liriodendron tulipifera - Poplar	2-3' cont.	**
35	Prunus serotina - Black cherry	3-4' cont.	**
45	Quercus rubra - Red Oak	3-4' cont.	**
35	Sassafras albidum - Sassafras	2-4' cont.	**
15	Sambucus canadensis - Elderberry	18-24" b.t.	**
25	Viburnum prunifolium - Blackhaw	18-24" b.t.	**

Forest Conservation Easement #3 (1.9 acres)

Qty.	Species	Size	Spacing
4	Acer rubrum - Red maple	1" cal.	##
6	Fraxinus americana - White ash	1" cal.	##
4	Liriodendron tulipifera - Tulip poplar	1" cal.	##
120	Acer rubrum - Red maple	2-3' cont.	**
65	Juniperus virginiana - Red cedar	2-3' cont.	**
130	Liriodendron tulipifera - Poplar	2-3' cont.	**
70	Prunus serotina - Black cherry	3-4' cont.	**
100	Quercus rubra - Red Oak	3-4' cont.	**
70	Sassafras albidum - Sassafras	2-4' cont.	**
30	Sambucus canadensis - Elderberry	18-24" b.t.	**
55	Viburnum prunifolium - Blackhaw	18-24" b.t.	**

Forest Conservation Easement #4 (1.2 acres)

Qty.	Species	Size	Spacing
4	Acer rubrum - Red maple	1" cal.	##
5	Fraxinus americana - White ash	1" cal.	##
6	Liriodendron tulipifera - Tulip poplar	1" cal.	##
80	Acer rubrum - Red maple	2-3' cont.	**
40	Juniperus virginiana - Red cedar	2-3' cont.	**
75	Liriodendron tulipifera - Poplar	2-3' cont.	**
42	Prunus serotina - Black cherry	3-4' cont.	**
65	Quercus rubra - Red Oak	3-4' cont.	**
35	Sassafras albidum - Sassafras	2-4' cont.	**
25	Sambucus canadensis - Elderberry	18-24" b.t.	**
32	Viburnum prunifolium - Blackhaw	18-24" b.t.	**

Forest Conservation Easement #5 (1.4 acres)

Qty.	Species	Size	Spacing
5	Acer rubrum - Red maple	1" cal.	##
5	Fraxinus americana - White ash	1" cal.	##
5	Liriodendron tulipifera - Tulip poplar	1" cal.	##
80	Acer rubrum - Red maple	2-3' cont.	**
50	Juniperus virginiana - Red cedar	2-3' cont.	**
95	Liriodendron tulipifera - Poplar	2-3' cont.	**
50	Prunus serotina - Black cherry	3-4' cont.	**
75	Quercus rubra - Red Oak	3-4' cont.	**
45	Sassafras albidum - Sassafras	2-4' cont.	**
30	Sambucus canadensis - Elderberry	18-24" b.t.	**
40	Viburnum prunifolium - Blackhaw	18-24" b.t.	**

KEY:
 cal. - caliper cont. - container grown b.t. branched transplant
 ## - one inch caliper trees shall be spaced around perimeter of FCE easement that occur adjacent to private lots or unforested open space. Spacing shall not be greater than 50', trees should be planted within 10 feet of FCE boundary.
 ** - trees and shrubs shall be planted, on average, at a spacing of 11 feet on center, not in a grid pattern. Limited clumping of shrubs is permitted.

Planting/Soil Specifications

- Planting of nursery stock shall take place between March 15th and April 30th.
- A twelve (12) inch layer of topsoil shall be spread over all differentiation areas impacted by site grading to assure a suitable planting area. Disturbed areas shall be seeded and stabilized as per general construction plan for project. Planting areas not impacted by site grading shall have no additional topsoil installed.
- All bare-root planting stock shall have their root systems dipped into an anti-desiccant gel prior to planting.
- Plants shall be installed so that the top of root mass is level with the top of existing grade. Backfill in the planting pits shall consist of 3 parts existing soil to 1 part pine fines or equivalent.
- Fertilizer shall consist of Agriform 22-8-2, or equivalent, applied as per manufacturer's specifications.
- A two (2) inch layer of hardwood mulch shall be placed over the root area of all plantings.
- Plant material shall be transported to the site in a tarped or covered truck. Plants shall be kept moist prior to planting.
- All non-organic debris associated with the planting operation shall be removed from the site by the contractor.

Sequence of Construction

- Plants shall be installed as per Plant Schedule and the Planting/Soil Specifications for the project.
- Upon completion of the planting, signage shall be installed as per the Forest Retention Area Protection Devices shown on Sheet 2 of the Forest Conservation Plan.
- Plantings shall be maintained and guaranteed in accordance with the Maintenance and Guarantee requirements for project.

Maintenance of Plantings

- Maintenance of plantings shall last for a period of 24 months.
- All plant material shall be watered twice a month during the 1st growing season. Watering may be more or less frequent depending on weather conditions. During second growing season, once a month during May-September, if needed.
- Invasive species and noxious weeds will be removed from restoration areas. Old field successional species will be retained.
- Plants will be examined a minimum two times during the growing season for serious plant pests and disease. Serious problems will be treated with the appropriate agent.
- Dead branches will be pruned from plantings.

Guarantee Requirements

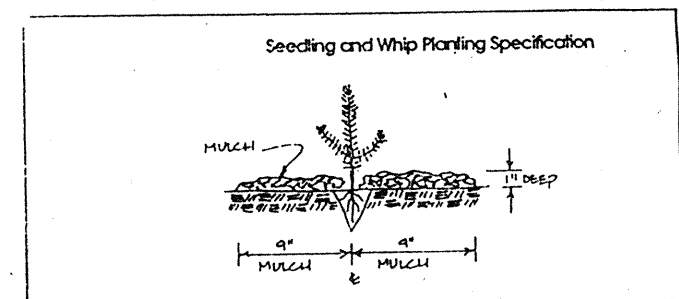
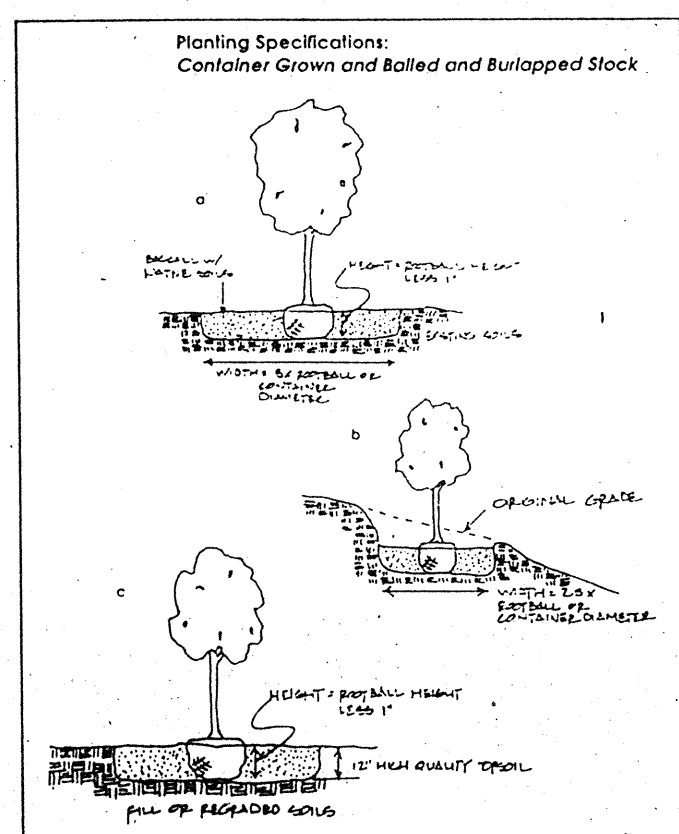
- A 75 percent survival rate of restoration plantings will be required at the end of the 24 month maintenance period. All plant material below the 75 percent threshold will be replaced at the beginning of the next growing season. After one growing season, plant material shall be maintained at 90% survival threshold.
- The contractor will not be liable for plant loss due to theft or vandalism.

Surety for Reforestation

- The developer shall post a surety (bond, letter of credit) to ensure that reforestation plantings are completed. Upon acceptance of the plantings by the County, the bond shall be released.

Conservation Bank Note:

FCE #3 shall be held as a Forest Conservation Bank. The proposed plantings are not required as part of this phase of the Gaither Hunt development. Credit for use of this area may be used to offset future forestation obligations for this or other projects, as approved by Howard County DPZ. Use of this Bank for Forest Conservation Act purposes without Howard County DPZ authorization is not permitted. Development or alternate use of this "Conservation Bank" shall be permitted until a Forest Conservation Easement is recorded.



FCP NOTES

- Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
- Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
- Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
- There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
- No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
- Temporary fencing shall be used to protect forest resources during construction. The fencing shall be placed along all FCE boundaries which occur within 15 feet of the proposed limits of disturbance.
- Permanent signage shall be placed 50-100' apart along the boundaries of all areas included in Forest Conservation Easements.

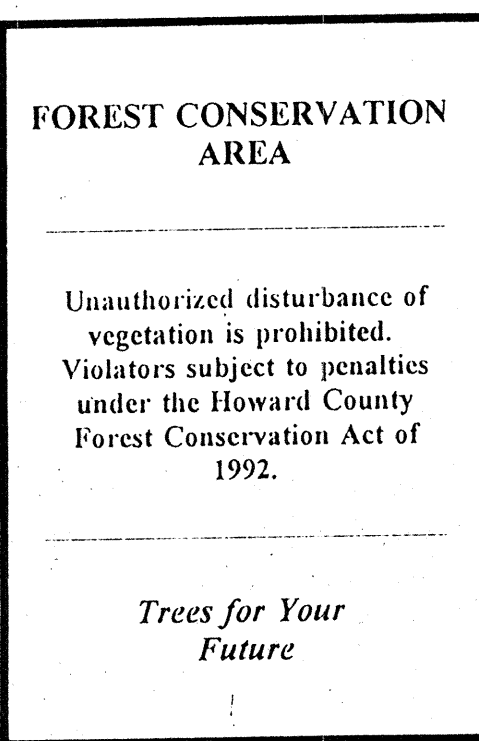
PLANTING SCHEDULE (CONT'D)

Qty.	Species	Size	Spacing
2	Acer rubrum - Red Maple	1" cal.	##
4	Fraxinus americana - White ash	1" cal.	##
4	Liriodendron tulipifera - Tulip Poplar	1" cal.	##
80	Acer rubrum - Red Maple	2-3' cont.	**
30	Juniperus virginiana - Red cedar	2-3' cont.	**
100	Liriodendron tulipifera - Poplar	2-3' cont.	**
30	Prunus serotina - Black cherry	3-4' cont.	**
45	Quercus rubra - Red oak	3-4' cont.	**
20	Sassafras albidum - Sassafras	2-4' cont.	**
10	Sambucus canadensis - Elderberry	18-24" b.t.	**
25	Viburnum prunifolium - Blackhaw	18-24" b.t.	**

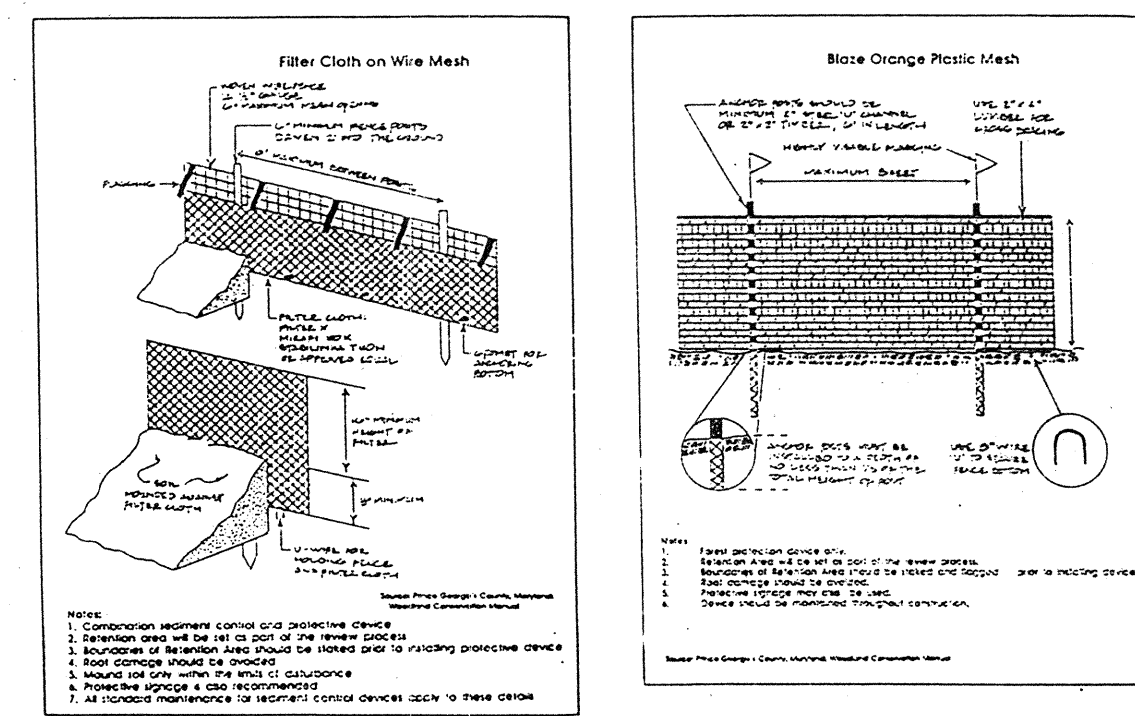
Forest Conservation Easement #15 (2.1 Acres)

Qty.	Species	Size	Spacing
4	Acer rubrum - Red Maple	1" cal.	##
2	Fraxinus americana - White ash	1" cal.	##
2	Liriodendron tulipifera - Tulip poplar	1" cal.	##
130	Acer rubrum - Red Maple	2-3' cont.	**
40	Juniperus virginiana - Red Cedar	2-3' cont.	**
165	Liriodendron tulipifera - Poplar	2-3' cont.	**
100	Prunus serotina - Black cherry	3-4' cont.	**
75	Quercus rubra - Red oak	3-4' cont.	**
65	Sassafras albidum - Sassafras	2-4' cont.	**
35	Sambucus canadensis - Elderberry	18-24" b.t.	**
75	Viburnum prunifolium - Blackhaw	18-24" b.t.	**

Permanent Protective Signage



Temporary Protective Fencing



DATE	REVISION
12-28-20	REVISE FCE LOCATION AND PLANTING

FOREST CONSERVATION NOTES
GAITHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND
 PRESERVATION PARCELS 'B-E'
 ZONING: "RC-DEO"
 TAX MAP No. 29 PARCEL 322 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: AUGUST 8, 1997
 SHEET 23 OF 23

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2855

Eco-Science Professionals, Inc.
 CONSULTING ECOLOGISTS
 P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752

MD DNR Qualified Professional
 USACOE Wetland Delineator
 Certification #WDCP33MPO61004412
 John P. Canoles



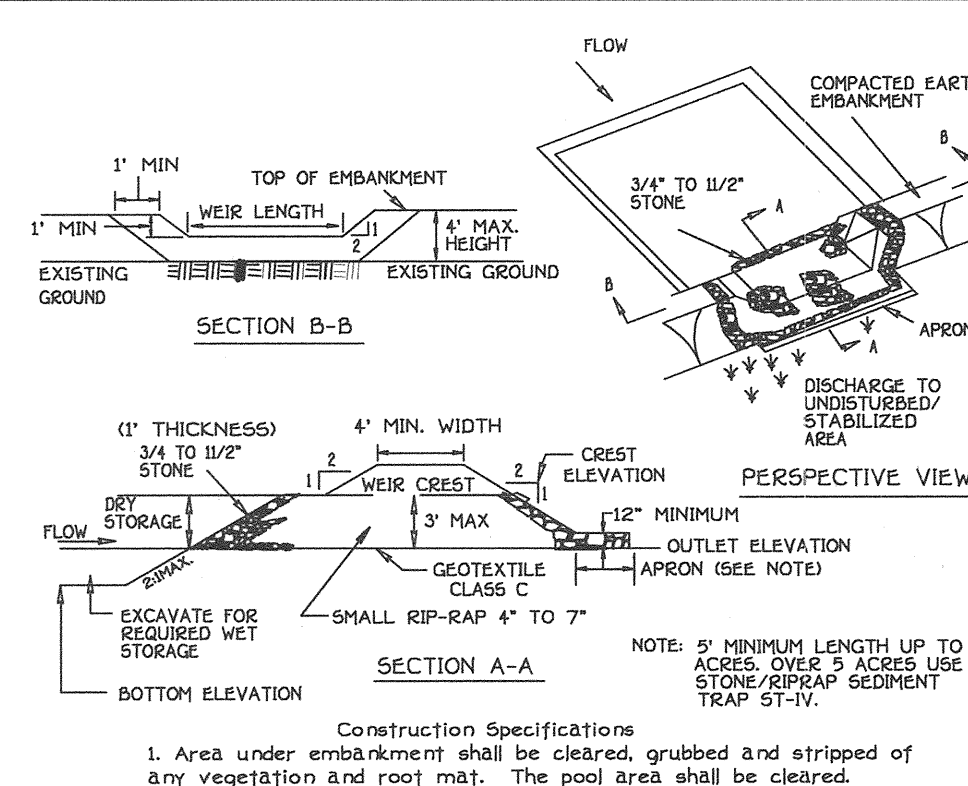
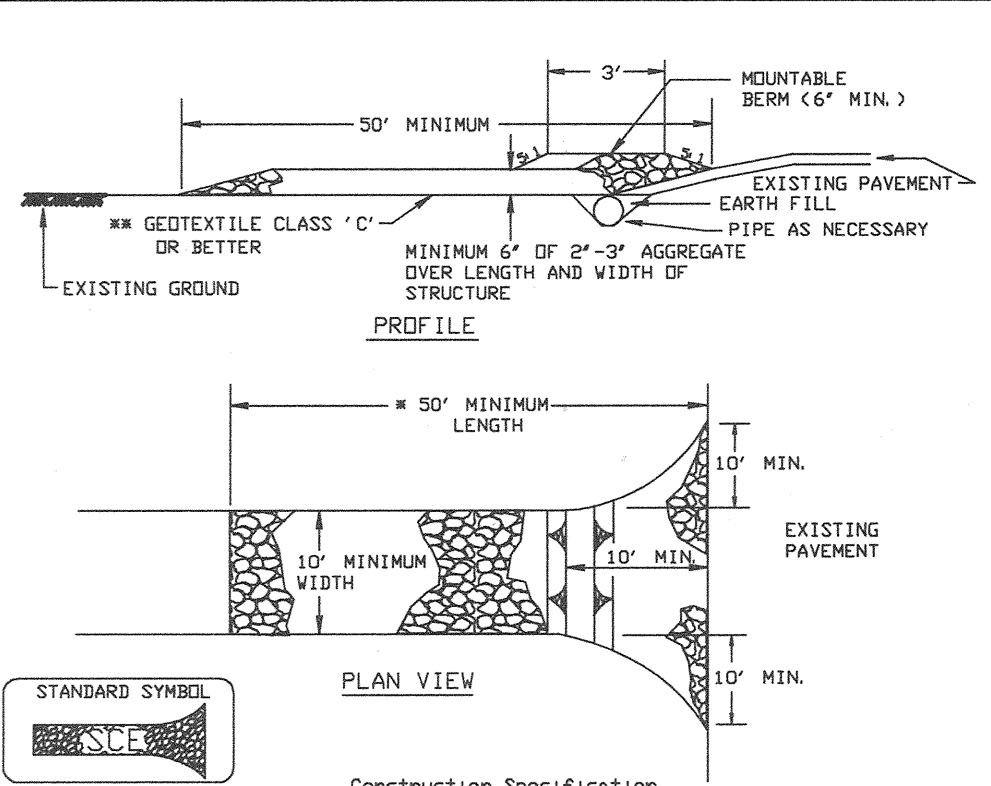
Eckhart J. Fisher

OWNER
 MARY ARNITA BLOOM, ET. AL.
 4754 MANOR LANE
 COLUMBIA, MARYLAND 21044

OWNER
 MR. PHILIP CARROLL
 AND THE KLEIN FAMILY
 c/o MR. TOM SCHRIVENER
 5025 DORSEY HALL DRIVE-SUITE 204
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DEVELOPER
 RUSSELL DEVELOPMENT, LLC
 c/o MR. TOM SCHRIVENER
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 ELLICOTT CITY, MARYLAND 21042

AS BUILT F98-24



STABILIZED CONSTRUCTION ENTRANCE - 2
NOT TO SCALE

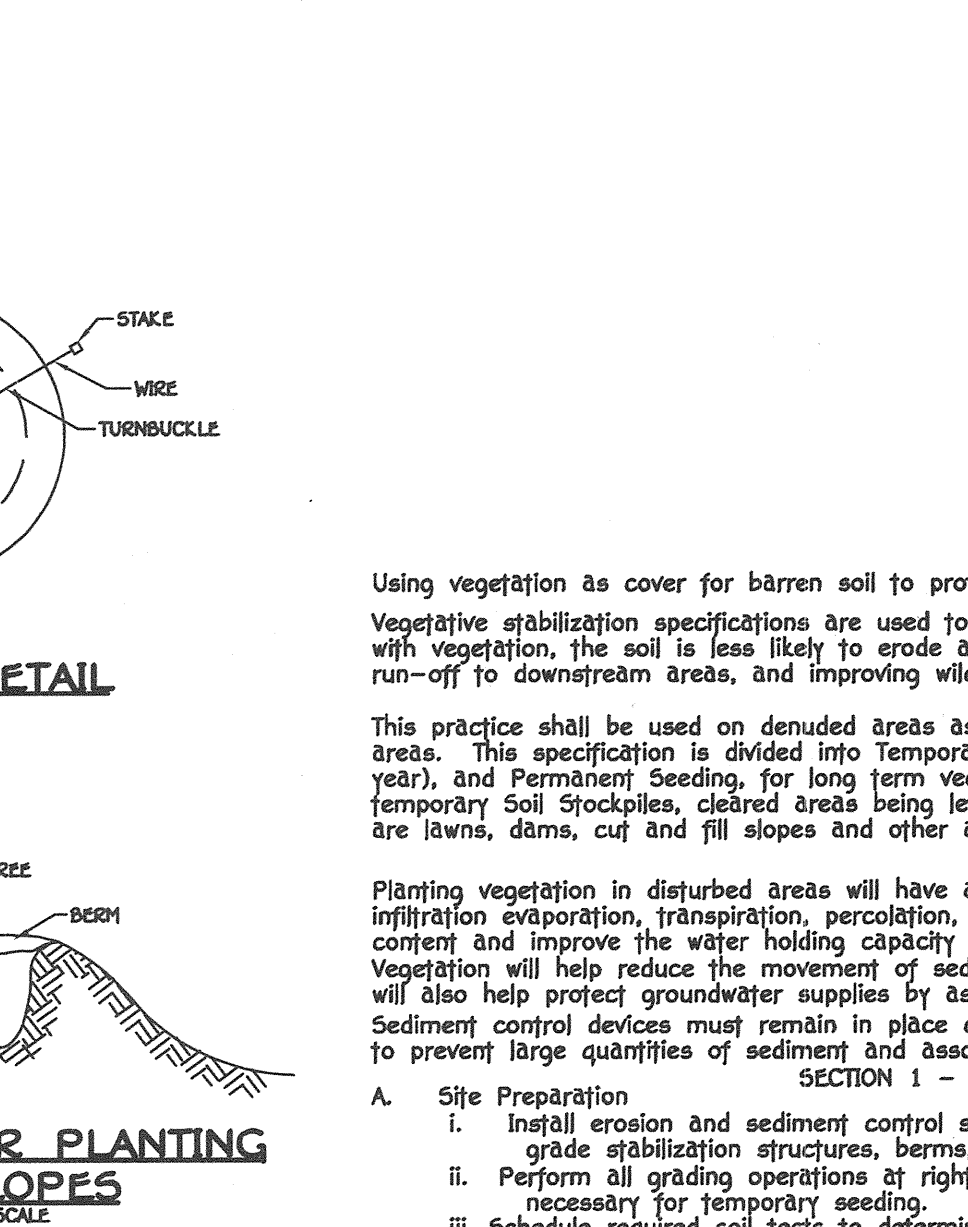
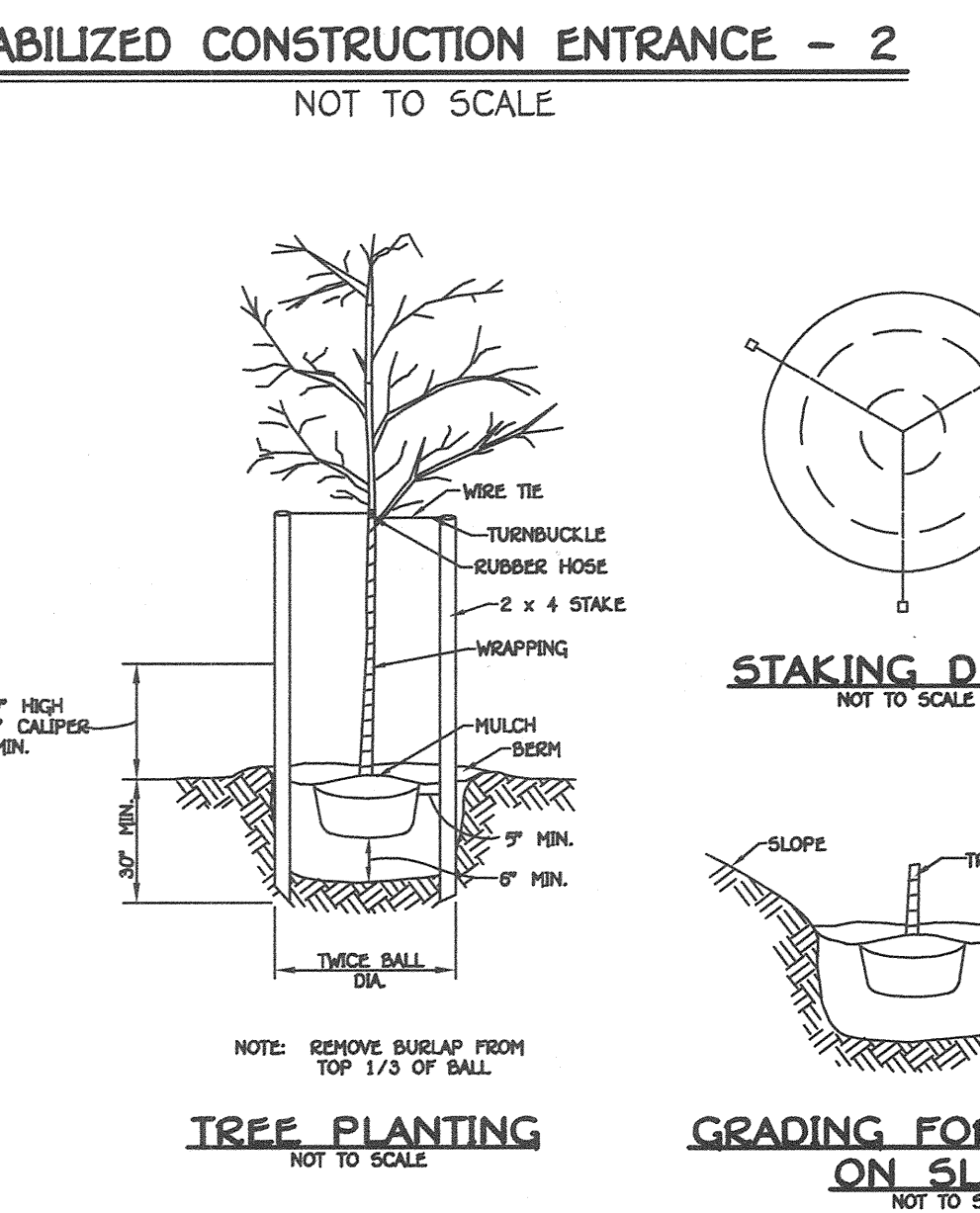
Construction Specifications

- Length - minimum of 50' (#30 for single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The stone shall be placed over the geotextile.
- Stone - crushed aggregate (#2 to #3) or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through stabilized construction entrance shall be protected with a nountable berm with 5' slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to the entrance, a pipe shall be installed. The pipe shall be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II
NOT TO SCALE

Construction Specifications

- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
- The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
- All cut and fill slopes shall be 2:1 or flatter.
- The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1" thick layer of 3/4" to 1 1/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.
- Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in a manner that it will not erode.



TREE PLANTING
NOT TO SCALE

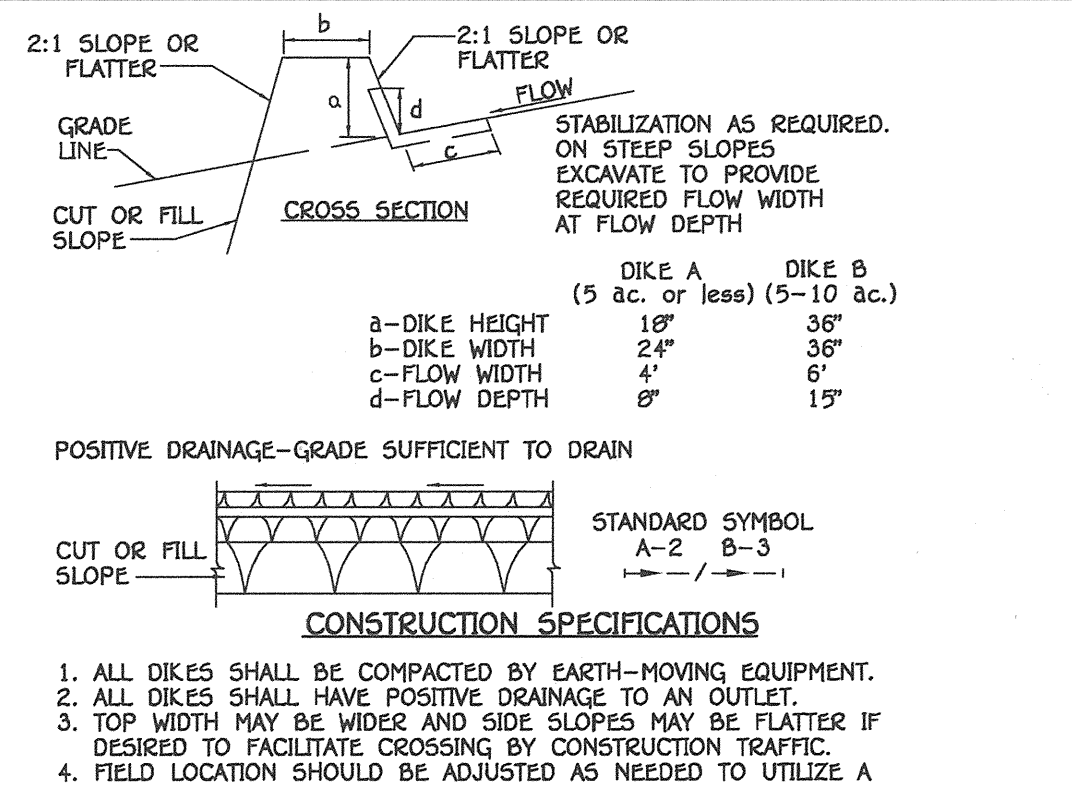
GRADING FOR PLANTING ON SLOPES
NOT TO SCALE

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1895).
- ALL VEGETATIVE AND EROSION CONTROL MEASURES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: (a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SEDIMENT BASINS AND ALL SLOPES STEEPER THAN 3:1, (b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR PERMANENT SEEDING (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	118,288	ACRES
AREA TO BE ROOFED OR PAVED	8,025	ACRES
AREA TO BE VEGETATIVELY STABILIZED	3,071	ACRES
TOTAL CUT	4,955	CU.YDS.
TOTAL FILL	17,000	CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION	N/A	CU.YDS.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, THE 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.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

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(410) 461 - 2855



DETAIL 33 - SUPER SILT FENCE

NOTE: FENCE POST SPACING SHALL NOT EXCEED 10' CENTER TO CENTER

CONSTRUCTION SPECIFICATIONS

- ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
- ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
- TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
- FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
- EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
- STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	-5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCESSIVE SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4"-8"
4	8.1-20%	LINED RIP-RAP 4"-8"	ENGINEERING DESIGN

A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.

B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.

C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.

EARTH DIKE
NOT TO SCALE

20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION DEFINITION

Using vegetation as cover for barren soil to protect it from forces that cause erosion. Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary soil stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, ditches, cut and fill slopes and other areas of final grade, former stockpile and staging areas, etc.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. Chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control devices must remain in place during grading, seeded preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. Site Preparation

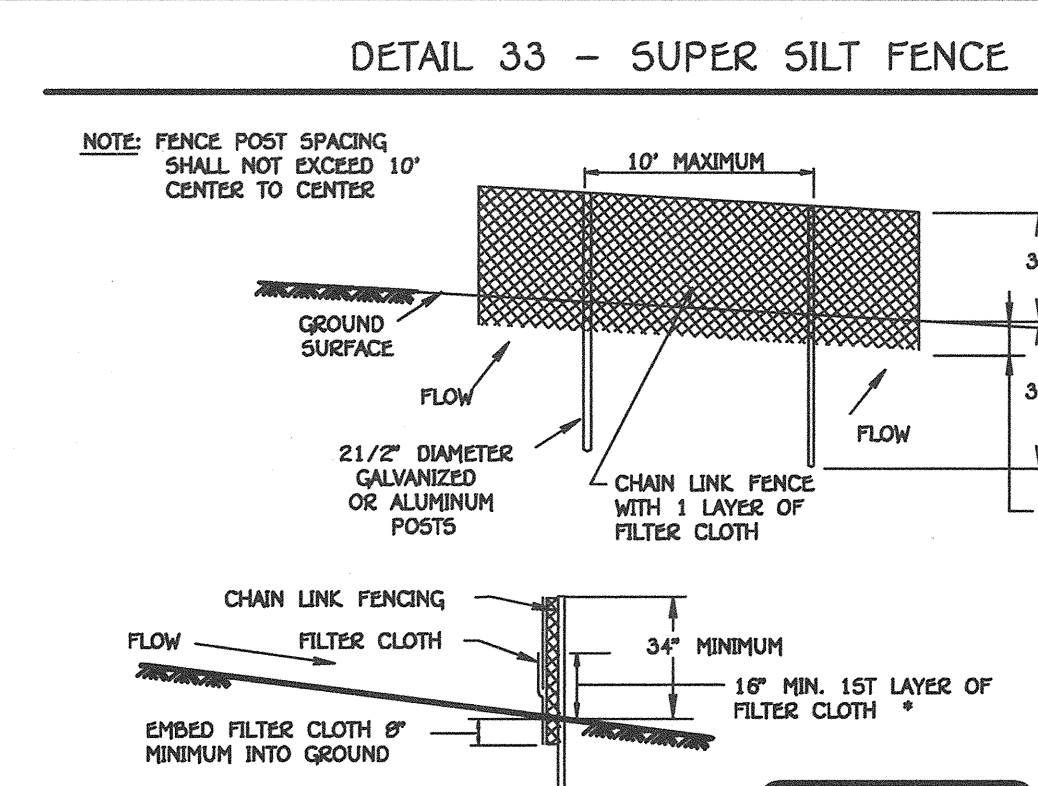
- Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
- Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
- Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.
- Soil Amendments (Fertilizer and Lime Specifications)

B. Seeded Preparation

- Temporary Seeding
 - Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it shall not be rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - In incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
- Permanent Seeding
 - Minimum soil conditions required for permanent vegetative establishment:
 - Soil pH shall be between 6.0 and 7.0.
 - Soluble salts shall be less than 500 parts per million (ppm).
 - The soil shall contain less than 40% clay, but enough fine grained material (>30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lowlands or ceresca (pedesetas) is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.
 - Soil shall contain 1.5% minimum organic matter by weight.
 - Soil must contain sufficient pore space to permit adequate root penetration.
 - If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.
 - Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
 - Apply soil amendments as per soil test or as included on the plans.
 - Mix soil amendments into the top 3-5" of topsoil by disking or other suitable means. Lawn areas should be rolled to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. Where site conditions will not permit normal seeded preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be seeded and then leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.

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AND THE KLEIN FAMILY
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DEVELOPER
RUSSELL DEVELOPMENT, L.L.C.
c/o MR. TOM SCHRIEVER
5025 DORSEY HALL DRIVE-SUITE 204
ELLCOTT CITY, MARYLAND 21042



DETAIL 30 - EROSION CONTROL MATTING

NOTE: FENCE POST SPACING SHALL NOT EXCEED 10' CENTER TO CENTER

CONSTRUCTION SPECIFICATIONS

- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6" fence shall be used, substituting 42" fabric and 6" length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and tension rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 6" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and all bulldups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
- Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft / minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

SEED SPECIFICATIONS

I. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed lab. Seed used shall have been tested within the 12 months immediately preceding the date of sowing such material on this job.

Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.

ii. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. It is important to keep inoculant as cool as possible until used. Temperatures above 75°-80° F. can weaken bacteria and make the inoculant less effective.

E. Methods of Seeding

i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a multipacker seeder.

- If fertilizer is being used, the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorus); 200 lbs/acre; K2O (potassium); 200 lbs/acre.
- Lime - use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
- seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.

ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

- seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 265 or 266. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
- Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

iii. Drill or Multipacker Seeding: Mechanized seeders that apply and cover seed with soil.

- Multipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4" inch of soil covering. Seeded must be firm after planting.
- Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

F. Mulch Specifications (In order of preference)

- Straw shall consist of a cleanly threshed and wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, caked, decayed, or excessively dry and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
- Wood Cellulose Fiber Mulch (WCFM)
 - WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical sheet.
 - WCFM shall be dry green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformity spread slurry.
 - WCFM, including dye, shall contain no germinant or other plant growth inhibitors.
 - WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall have a blifter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
 - WCFM material shall contain no elements or compounds at concentrations levels that will be phytotoxic.

Note: WCFM must conform to the following physical requirements: fiber length to approximately 10 mm; diameter approximately 1 mm; pH range of 4.0 to 8.5, ash content of 1.5% maximum and water holding capacity of 90% minimum.

G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.

ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.

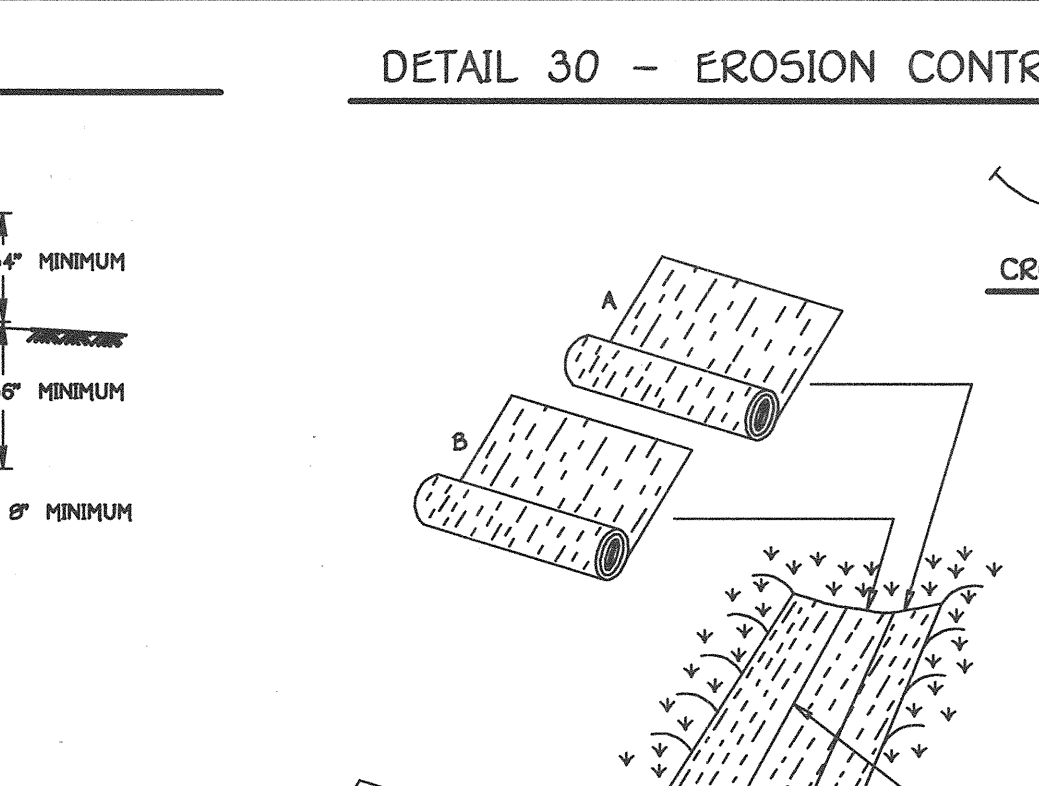
iii. Wood cellulose fiber mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

H. Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:

- A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping lands this practice will be limited to areas where there is no water and the water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
- Application of liquid binders should be heavier at the edges where wind catches much, such as in valleys and crests of banks. The remainder of area should be applied uniform after binder application. Synthetic binders such as Acrylic (Acr-100), DCA-70 Polyurea, Terra Tax Terra Tack 62 or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
- Lightweight plastic netting may be used on steep slopes where there is no water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

STATE OF MARYLAND
BARBARA JOSEPH FISH
22418
PROFESSIONAL ENGINEER

GAITHER HUNT
SECTION ONE AREA TWO
LOTS 1-33, G3-71 AND
PRESERVATION PARCELS 'B-E'
AND BULK PARCEL 'F'
ZONING - "RC-PED"
TAX MAP No. 29 PARCEL 21 GRID 5
TAX MAP No. 29 PARCEL 322 GRID 11
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN SHEET 22 OF 23



DETAIL 22 - SILT FENCE

NOTE: FENCE POST SPACING SHALL NOT EXCEED 10' CENTER TO CENTER

CONSTRUCTION SPECIFICATIONS

- Fence posts shall be a minimum of 30" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 pound per linear foot.
- Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft / minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment by-pass.
- Silt fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

SEQUENCE OF CONSTRUCTION

- OBTAIN A GRADING PERMIT.
- NOTIFY "MSS UTILITY" 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION INSPECTION AT (410) 313-1800 (5) WORKING DAYS PRIOR TO START OF CONSTRUCTION.
- INSTALL TREE PROTECTION FENCE.
- INSTALL SEDIMENT CONTROL MEASURES, STABILIZED CONSTRUCTION ENTRANCE, STONE OUTLET SEDIMENT TRAP, EARTH DIKES, SUPER SILT FENCE AND SILT FENCE. STABILIZE DISTURBED AREAS PER TEMPORARY SEEDING NOTES.
- GRADE ROAD TO SUBGRADE AND INSTALL STORM DRAINS, INLETS, TEMPORARY FLEXIBLE PIPE AND CONSTRUCT GARBAGE CHECKDAM.
- BLOCK 1-1 TO 5-1.
- CONSTRUCT ROAD.
- OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO REMOVE SEDIMENT CONTROL.
- STABILIZE ALL DISTURBED AREAS WITH PERMANENT SEEDING.

SEDIMENT CONTROL NOTES AND DETAILS

GAITHER HUNT
SECTION ONE AREA TWO
LOTS 1-33, G3-71 AND
PRESERVATION PARCELS 'B-E'
AND BULK PARCEL 'F'
ZONING - "RC-PED"
TAX MAP No. 29 PARCEL 21 GRID 5
TAX MAP No. 29 PARCEL 322 GRID 11
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN SHEET 22 OF 23

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL 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 COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

SIGNATURE OF DEVELOPER: *[Signature]* DATE: 12/12/97

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITION AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

SIGNATURE OF ENGINEER: *[Signature]* DATE: 1/8/98

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

SIGNATURE: *[Signature]* DATE: 1/21/98
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE

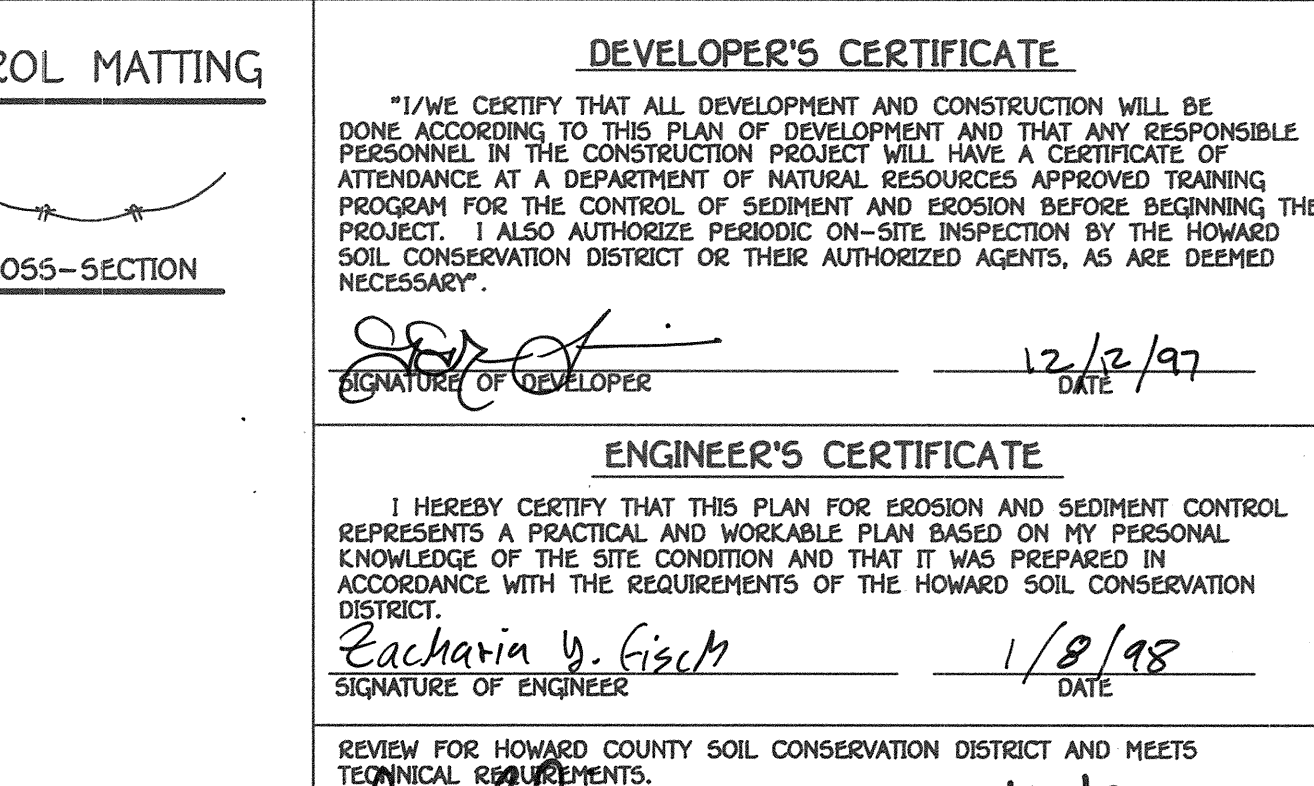
THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

APPROVED: *[Signature]* DATE: 1/21/98
HOWARD COUNTY SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
SIGNATURE: *[Signature]* DATE: 2/23/98
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
SIGNATURE: *[Signature]* DATE: 2/13/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
SIGNATURE: *[Signature]* DATE: 2-5-98
CHIEF, BUREAU OF HIGHWAYS



DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II
NOT TO SCALE

Construction Specifications

- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
- The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
- All cut and fill slopes shall be 2:1 or flatter.
- The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1" thick layer of 3/4" to 1 1/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.
- Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in a manner that it will not erode.

EARTH DIKE
NOT TO SCALE

20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION DEFINITION

Using vegetation as cover for barren soil to protect it from forces that cause erosion. Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary soil stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, ditches, cut and fill slopes and other areas of final grade, former stockpile and staging areas, etc.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth. Chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control devices must remain in place during grading, seeded preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. Site Preparation

- Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
- Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
- Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.
- Soil Amendments (Fertilizer and Lime Specifications)

B. Seeded Preparation

- Temporary Seeding
 - Seeded preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it shall not be rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - In incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.
- Permanent Seeding
 - Minimum soil conditions required for permanent vegetative establishment:
 - Soil pH shall be between 6.0 and 7.0.
 - Soluble salts shall be less than 500 parts per million (ppm).
 - The soil shall contain less than 40% clay, but enough fine grained material (>30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lowlands or ceresca (pedesetas) is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.
 - Soil shall contain 1.5% minimum organic matter by weight.
 - Soil must contain sufficient pore space to permit adequate root penetration.
 - If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.
 - Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
 - Apply soil amendments as per soil test or as included on the plans.
 - Mix soil amendments into the top 3-5" of topsoil by disking or other suitable means. Lawn areas should be rolled to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. Where site conditions will not permit normal seeded preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be seeded and then leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1-3" of soil should be loose and friable. Seeded loosening may not be necessary on newly disturbed areas.

SEED SPECIFICATIONS

I. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed lab. Seed used shall have been tested within the 12 months immediately preceding the date of sowing such material on this job.

Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.

ii. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. It is important to keep inoculant as cool as possible until used. Temperatures above 75°-80° F. can weaken bacteria and make the inoculant less effective.

E. Methods of Seeding

i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a multipacker seeder.

- If fertilizer is being used, the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorus); 200 lbs/acre; K2O (potassium); 200 lbs/acre.
- Lime - use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
- seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.

ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

- seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 265 or 266. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
- Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

iii. Drill or Multipacker Seeding: Mechanized seeders that apply and cover seed with soil.

- Multipacker seeders are required to bury the seed in such a fashion as to provide at least 1/4" inch of soil covering. Seeded must be firm after planting.
- Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

SEQUENCE OF CONSTRUCTION

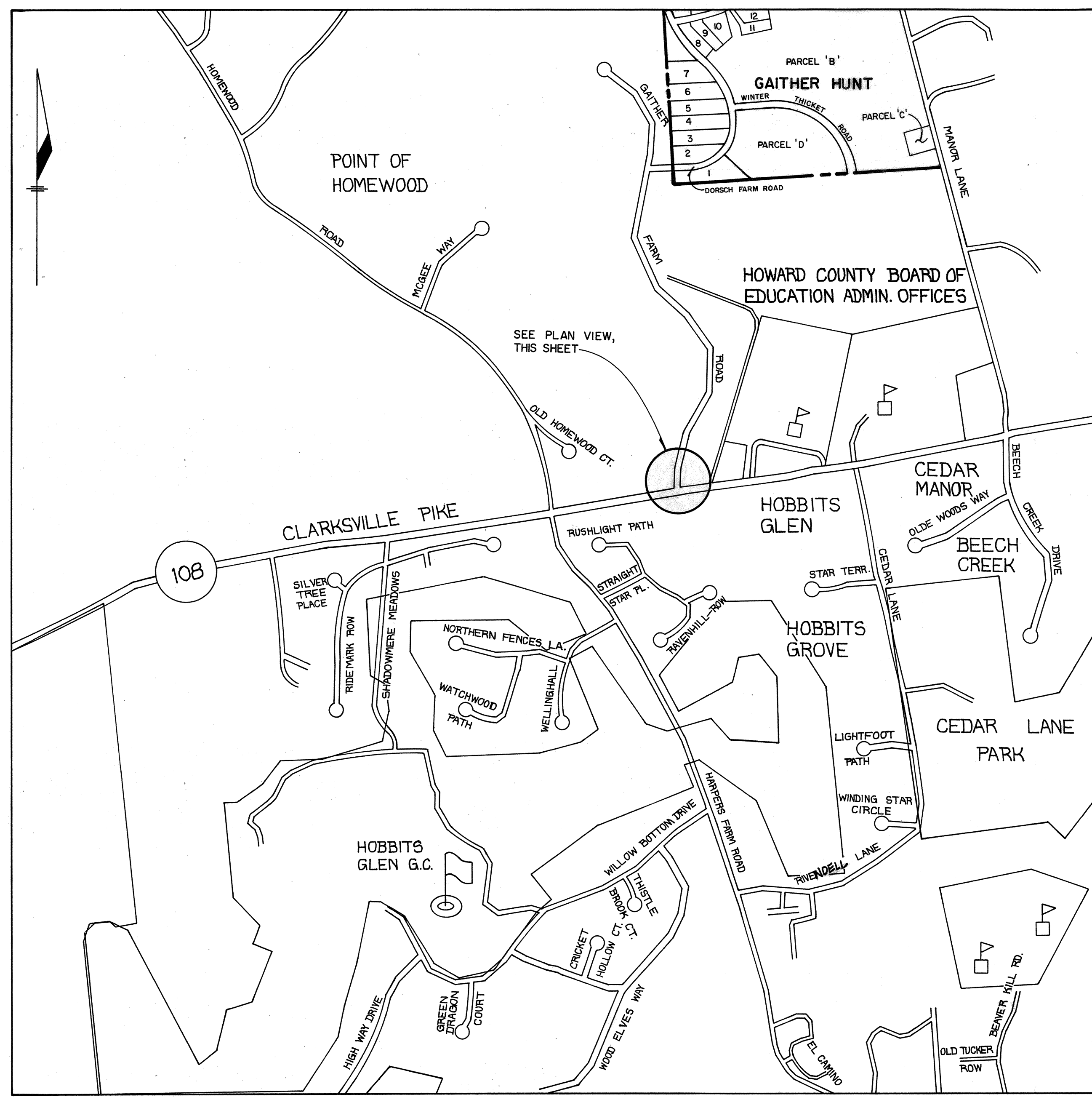
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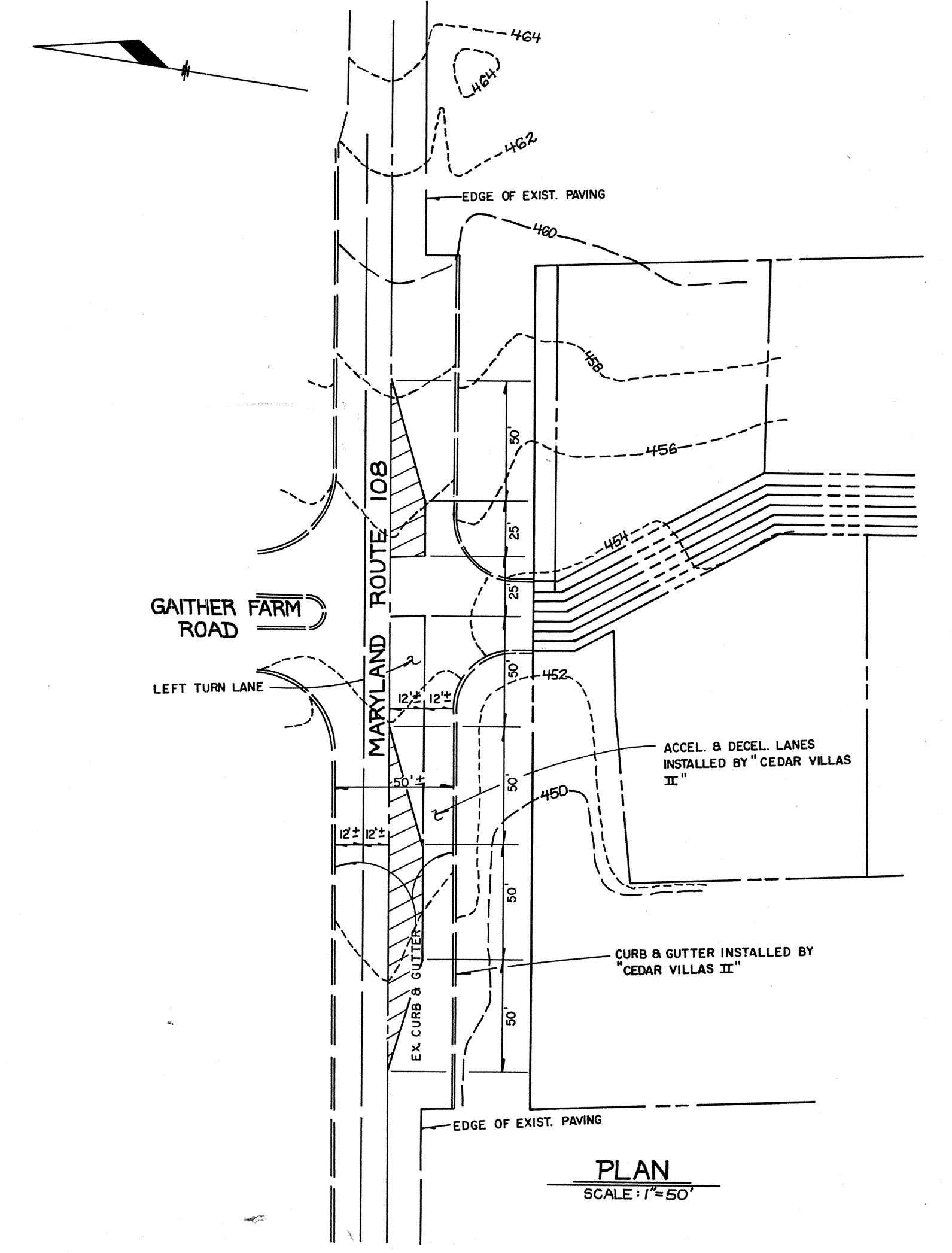
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cathy Hamilton 2/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chris Dammann 2/13/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Davelle 2-5-98
 CHIEF, BUREAU OF HIGHWAYS DATE



SITE LOCATION FOR INTERSECTION AT 108
 SCALE: 1" = 1200'



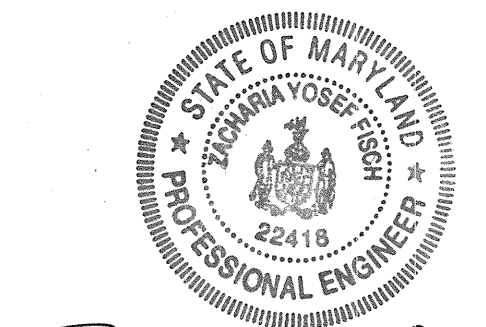
PLAN
 SCALE: 1" = 50'

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2895

OWNER
 MARY ARMINTA BLOOM, ET. AL
 4754 MANOR LANE
 COLUMBIA, MARYLAND 21044

OWNER
 MR. PHILLIP CARROLL
 AND THE KLEIN FAMILY
 c/o MR. TOM SCHRIEVERER
 5026 DORSEY HALL DRIVE-SUITE 204
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 c/o MR. TOM SCHRIEVERER
 5026 DORSEY HALL DRIVE-SUITE 204
 ELLICOTT CITY, MARYLAND 21042



Zacharia J. Fish

STRIPING PLAN AND
 SITE LOCATION MAP
GAITHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND
 PRESERVATION PARCELS 'B-E'
 1 BULK PARCEL 'F'
 ZONING: 'RC-PD'
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: AUGUST 8, 1997
 SHEET 21 OF 23

AS BUILT F 98-24

MD 378 POND SPECIFICATIONS

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 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. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

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.

Earth Fill

Material-The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement - Areas on which fill is to be placed shall be covered prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into 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 will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment rollers or hand tampers to assure maximum density and minimum permeability.

Structure Backfill

Backfill adjacent to pipes or structures 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 manually directed 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 24" or greater over the structure or pipe.

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for 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 or an approved equal may be used: Nexon, Plast-Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

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. 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 between 4 and 9.

2. 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.

3. 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. 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.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 24" in diameter. Flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket and a 12" wide huggie type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and nuts. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24".

Helicly corrugated pipe shall have either continuously welded seams or have lock seams with infernal caulking or a neoprene bead.

4. 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.

5. Backfilling shall conform to "Structure Backfill".

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

Reinforced Concrete Pipe- All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-301.

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, 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. The first joint must be located within 2 feet from the riser.

4. Backfilling shall conform to "Structure Backfill".

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

Polyvinyl Chloride (PVC) Pipe- All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

1. Materials-PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.

2. Joints and connections to anti-seep collars shall be completely 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. Backfilling shall conform to "Structure Backfill".

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

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 608, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The riprap shall be placed in the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

Care of Water during Construction

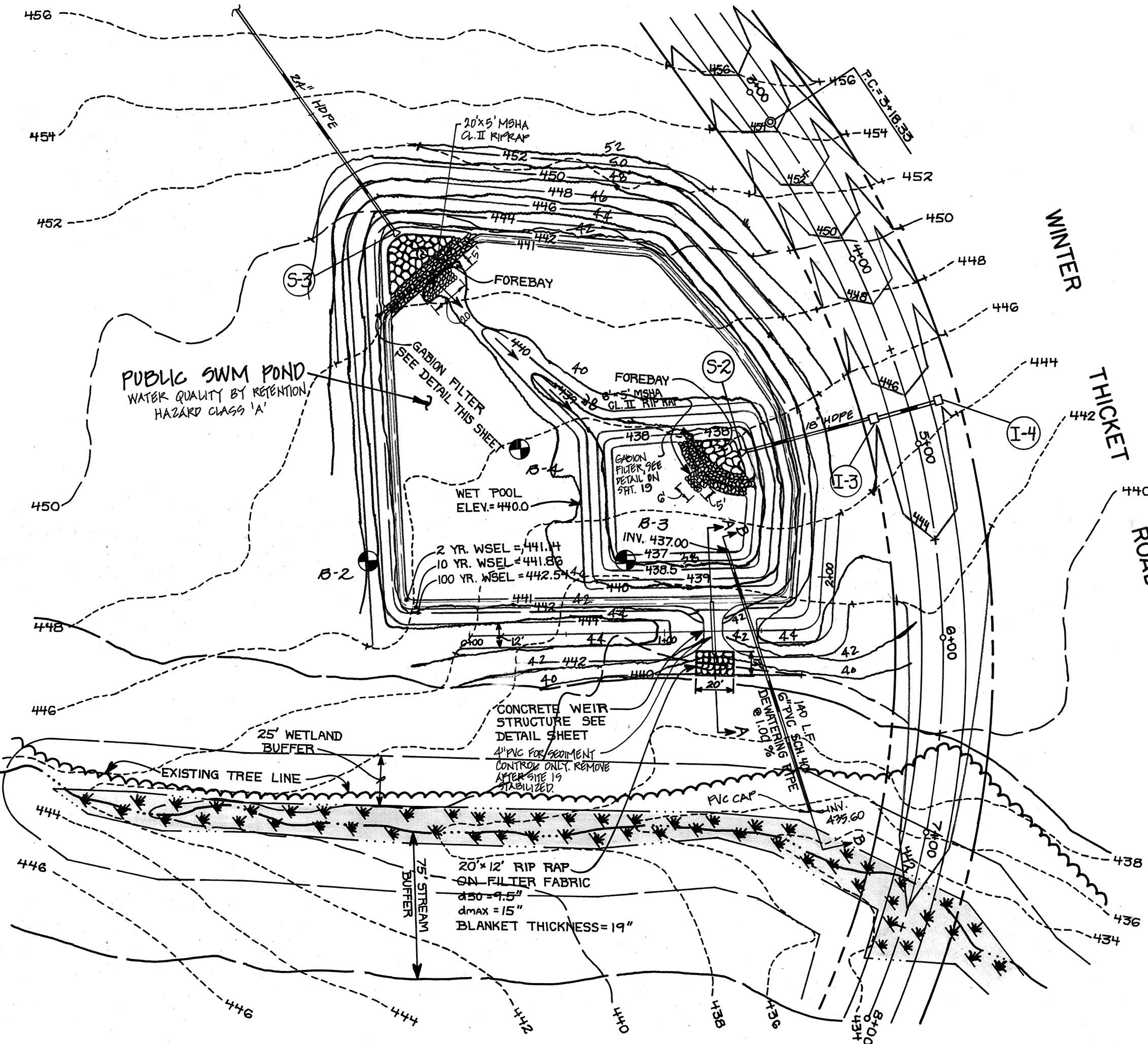
All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

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 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.



PLAN
SCALE: 1" = 50'

BORING NO. 4				BORING NO. 3				BORING NO. 2			
ELEVATION	DEPTH	DESCRIPTION OF MATERIALS	REMARKS	ELEVATION	DEPTH	DESCRIPTION OF MATERIALS	REMARKS	ELEVATION	DEPTH	DESCRIPTION OF MATERIALS	REMARKS
446.5	0.5	5.0 inches of topsoil		442.3	0.7	8 inches of topsoil		446.4	0.6	7.3 inches of topsoil	
445.0	2.0	sandy SILT, brown, moist, medium dense. (ML) (LOAM)	water levels dry while sampling dry at completion dry on 6/21/97	445.0	2.0	clayey SILT with sand, trace gravel and mica, brown, moist, loose. (ML) (CLAY LOAM)	water levels dry while sampling dry on 6/21/97	445.0	2.0	sandy SILT, brown, moist, loose. (ML) (LOAM)	water levels dry while sampling dry at completion dry on 6/21/97
439.5	7.5	sandy SILT, trace clay and mica, brown to gray, moist, loose. (ML) (LOAM)		434.0	9.0	micaceous, very sandy SILT, trace clay, dark brown, moist, medium dense. (ML) (LOAM)		439.0	8.0	sandy SILT, trace clay and mica, brown to gray, moist, medium dense to loose. (ML) (LOAM)	
437.0	10.0	micaceous, very sandy SILT, brown, moist, loose. (ML) (LOAM)		433.0	10.0	boring terminated at 10 feet		437.0	10.0	boring terminated at 10 feet	

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 18275 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461-2955

OWNER
MARY ARNITA BLOCH, ET. AL.
4754 MANOR LANE
COLUMBIA, MARYLAND 21044

OWNER
MR. PHILLIP CARROLL
AND THE KLEN FAMILY
c/o MR. TOM SCHRIVENER
5026 DORSEY HALL DRIVE-SUITE 204
ELLICOTT CITY, MARYLAND 21042

DEVELOPER
RUSSELL DEVELOPMENT, L.L.C.
c/o MR. TOM SCHRIVENER
5026 DORSEY HALL DRIVE-SUITE 204
ELLICOTT CITY, MARYLAND 21042

REVISIONS
8-3-98 REVISE ALL RCP TO HDPE

By The Developer:
"I/We 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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project."
Signature Of Developer: [Signature] Date: 12/12/97

Printed Name Of Developer: [Name]

By The Engineer:
"I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That I Am Not A Registered Professional Engineer In Maryland. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District."
Signature Of Engineer: [Signature] Date: 8-22-97

Printed Name Of Engineer: [Name]

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: [Signature] Date: 11/21/98
USDA-Natural Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.
Signature: [Signature] Date: 11-21-98
Howard Soil Conservation District

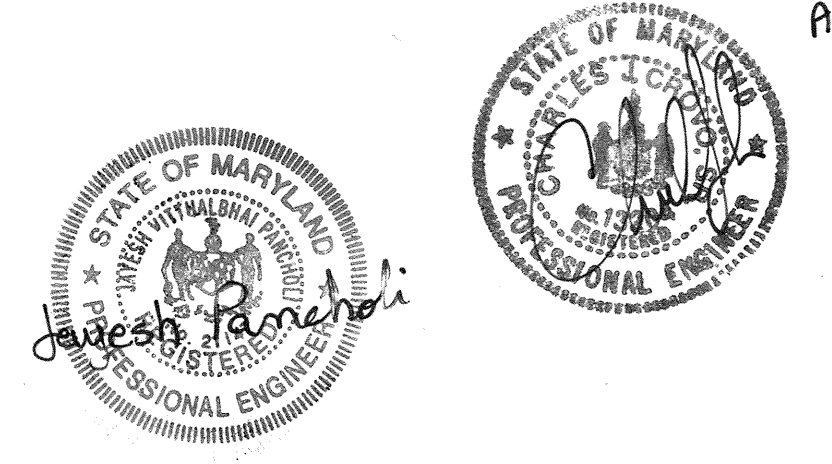
Approved: Department Of Public Works
Signature: [Signature] Date: 2-5-98
Chief, Bureau Of Highways

Approved: Department Of Planning And Zoning
Signature: [Signature] Date: 2/23/98
Chief, Division Of Land Development

Signature: [Signature] Date: 2/13/98
Chief, Development Engineering Division

AS-BUILT CERTIFICATION
I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.
Signature: [Signature] Date: 13804
P.E. No. 82800

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.



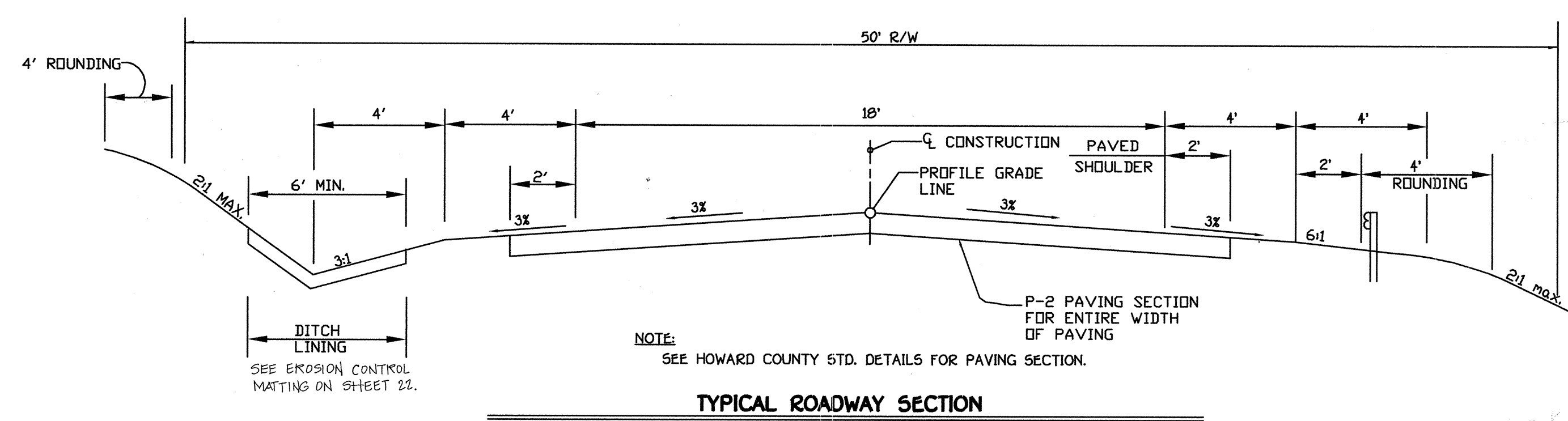
STORMWATER MANAGEMENT POND PLAN AND NOTES
GATHER HUNT
SECTION ONE AREA ONE
LOTS 1-33, 63-71 AND PRESERVATION PARCELS 'B-E'
1 BULK PARCEL 'F' ZONING 'RE-DEO'
TAX MAP No. 29 PARCEL 21 GRID 5
TAX MAP No. 29 PARCEL 322 GRID 11
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST 8, 1997
SHEET 20 OF 23

AS BUILT F98-24

STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS
I-1	434.23	436.21	434.70	WINTER THICKET ROAD	CL. STA. 9+66	17' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-2	434.33	438.21	435.12	WINTER THICKET ROAD	CL. STA. 9+66	17.5' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-3	445.28	444.03	439.80	WINTER THICKET ROAD	CL. STA. 4+82	17.5' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-4	445.28	444.03	440.25	WINTER THICKET ROAD	CL. STA. 4+82	17' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-5	465.47	464.76	459.10	DORSCH FARM ROAD	CL. STA. 0+73.82	16' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-6	465.65	464.76	459.20	DORSCH FARM ROAD	CL. STA. 0+73.82	18' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-7	467.44	466.72	462.20	DORSCH FARM ROAD	CL. STA. 10+66.72	17' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-8	472.14	471.08	466.99	DORSCH FARM ROAD	CL. STA. 14+60	16.5' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-9	467.61	466.72	463.22	DORSCH FARM ROAD	CL. STA. 10+66.72	17' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-10	472.10	471.08	467.88	DORSCH FARM ROAD	CL. STA. 14+60	18' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-11	473.31	472.14	468.96	DORSCH FARM ROAD	CL. STA. 6+20	16.5' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-12	477.36	476.36	472.27	HIDDEN FOX COURT	CL. STA. 4+30.60	16' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-13	477.24	476.36	472.01	HIDDEN FOX COURT	CL. STA. 4+30.60	17.5' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-14	471.72	470.66	465.80	HUNTERS VIEW ROAD	CL. STA. 3+90.87	15' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-15	464.05	479.25	475.04	HUNTERS VIEW ROAD	CL. STA. 0+28.4	20' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-16	480.58	479.50	475.30	DORSCH FARM ROAD	CL. STA. 24+00.6	18' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-17	471.64	470.66	466.60	HUNTERS VIEW ROAD	CL. STA. 3+90.87	15' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-18	480.35	478.75	476.10	HUNTERS VIEW ROAD	CL. STA. 0+28.4	21.5' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-19	486.27	484.95	480.88	DORSCH FARM ROAD	CL. STA. 32+08.95	19' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-20	486.12	484.95	480.88	DORSCH FARM ROAD	CL. STA. 32+08.95	23' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-21	487.06	485.54	482.75	DORSCH FARM ROAD	CL. STA. 31+57.50	23' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-22	484.56	483.39	481.46	STEEPLE CHASE COURT	CL. STA. 4+10	16.5' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-23	484.31	483.39	481.80	STEEPLE CHASE COURT	CL. STA. 4+10	17.5' RT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
I-24	481.80	480.95	478.05	STEEPLE CHASE COURT	CL. STA. 1+31.12	6' LT	** 'K' INLET	S.D. 4.12 W/S.D. 4.13
M-1	465.80	460.62	460.84	DORSCH FARM ROAD	CL. STA. 9+66.2	17.5' LT	STD. MANHOLE	G. 5.01
M-2	468.79	464.29	464.54	DORSCH FARM ROAD	CL. STA. 12+94	17.5' LT	STD. MANHOLE	G. 5.01
M-3	467.80	462.60	462.78	DORSCH FARM ROAD	CL. STA. 7+40	17' LT	STD. MANHOLE	G. 5.01
M-4	476.36	471.66	469.10	HIDDEN FOX COURT	CL. STA. 4+78.5	16' RT	DROP MANHOLE	MD. - 383.11
M-5	482.05	477.01	477.01	STEEPLE CHASE COURT	CL. STA. 0+80	6' LT	STD. MANHOLE	G. 5.01
M-6	465.29	466.00	466.00	STEEPLE CHASE COURT	CL. STA. 0+80	6' LT	STD. MANHOLE	G. 5.01
M-4A	466.90	461.06	457.50	STEEPLE CHASE COURT	CL. STA. 0+80	6' LT	DROP MANHOLE	MD. - 383.11
S-1	435.48	433.92	433.92				CONC. END SECTION	S.D. 5.51
S-2	436.90	436.97	437.00				CONC. END SECTION	S.D. 5.51
S-3	443.00	444.74	443.00				CONC. END SECTION	S.D. 5.51
S-4	456.00	455.92	454.50				CONC. END SECTION	S.D. 5.51
S-5	464.25	465.77	462.50				CONC. END SECTION	S.D. 5.51
S-6	480.30	480.52	478.60				CONC. END SECTION	S.D. 5.51
S-7	453.50	452.11	452.00				CONC. END SECTION	S.D. 5.51
S-8	437.00	436.94	433.00				CONC. END SECTION	S.D. 5.51
S-9	435.30	436.61	431.70				CONC. END SECTION	S.D. 5.51

* DENOTES THROAT ELEVATION
 ** IN ACCORDANCE WITH HOWARD COUNTY MEMORANDUM DATED OCTOBER 2, 1997 ALL TYPE 'K' INLETS CAN BE SUBSTITUTED WITH PRECAST OPEN END GRATE (S.D. 4.36). THE CONTRACTOR MUST INFORM THE ENGINEER WHICH TYPE INLET WAS SELECTED PRIOR TO CONSTRUCTION STAKEOUT.

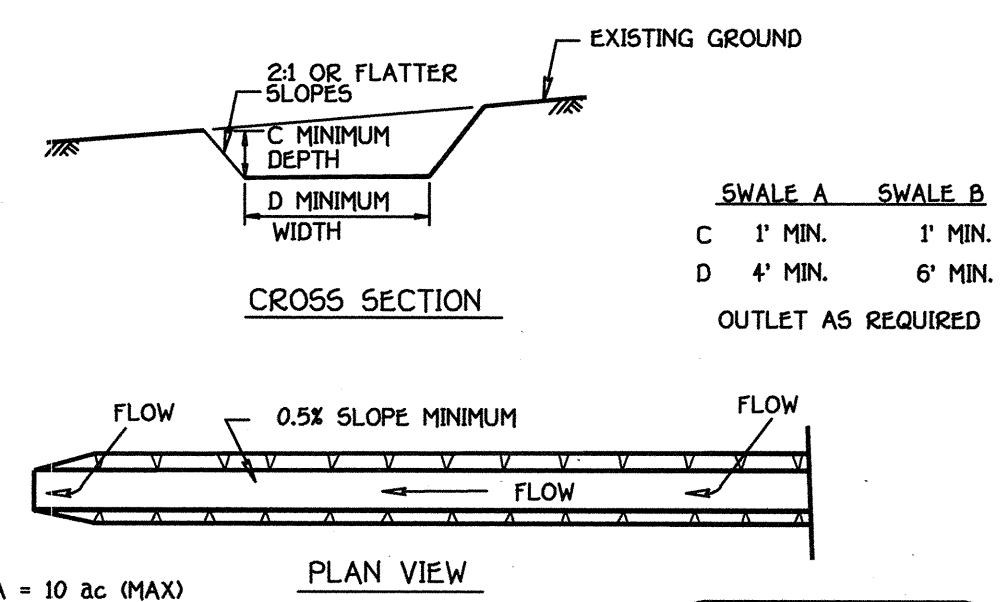


ROADWAY INFORMATION CHART

ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	PAVING SECTION
DORSCH FARM ROAD	LOCAL ROAD	30 M.P.H.	RC-DEO	3+24.49 TO 10+52.72	P-2
DORSCH FARM ROAD	LOCAL ROAD	30 M.P.H.	RC-DEO	10+52.72 TO 32+50.00	P-2
WINTER THICKET ROAD	LOCAL ROAD	30 M.P.H.	RC-DEO	0+00 TO 11+45.44	P-2
HIDDEN FOX COURT	CUL-DE-SAC	30 M.P.H.	RC-DEO	0+00 TO 7+58.60	P-2
HUNTERS VIEW ROAD	LOCAL ROAD	30 M.P.H.	RC-DEO	0+00 TO 6+27.00	P-2
STEEPLECHASE COURT	CUL-DE-SAC	25 M.P.H.	RC-DEO	0+00 TO 4+65.14	P-2

STONE OUTLET SEDIMENT TRAP DATA CHART

TRAP NUMBER	TRAP #1	TRAP #2	TRAP #3	TRAP #4
DRAINAGE AREA	1.39 Ac. +/-	2.09 Ac. +/-	0.76 Ac. +/-	0.67 Ac. +/-
STORAGE REQUIRED	5,004 c.f.	7,524 c.f.	2,736 c.f.	2,412 c.f.
STORAGE PROVIDED	5,272 c.f.	7,800 c.f.	3,072 c.f.	2,544 c.f.
WEIR CREST ELEV.	463.0	465.0	483.0	477.0
BOTTOM ELEV.	459.0	461.0	480.0	474.0
DEPTH:	4'	4'	3'	3'
SIDE SLOPES:	2:1	2:1	2:1	2:1
TOP EMBANKMENT:	464.0	466.0	484.0	478.0
WEIR LENGTH:	6'	9'	3'	3'
CLEANOUT ELEV.:	461.0	463.0	481.5	475.5
BOTTOM:	25'x30'	33'x30'	20'x30'	30'x16'

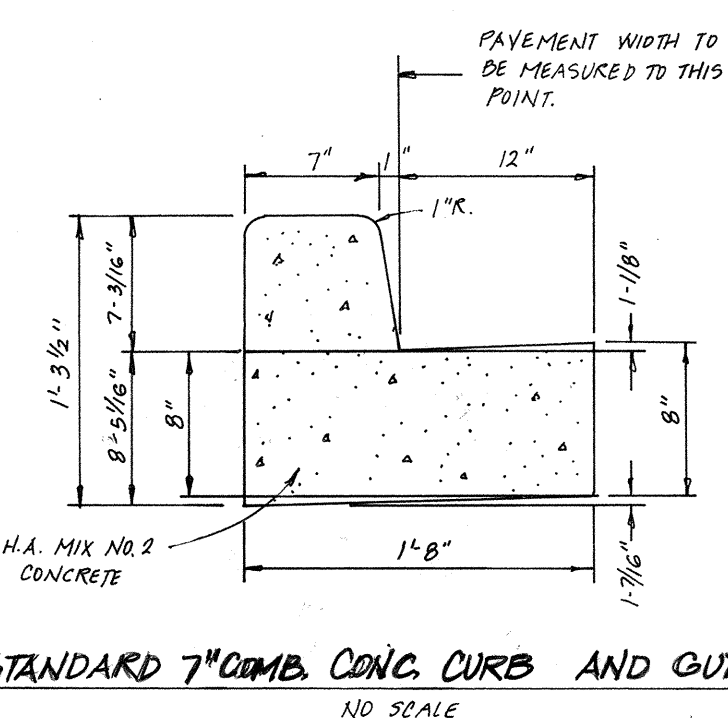


DRAINAGE AREA = 10 ac (MAX)
 SLOPE = 10% (MAX)

STANDARD SYMBOL
 A - 2 / B - 3

- Construction Specifications**
- Seed and cover with straw mulch.
 - Seed and cover with Erosion Control Matting or line with sod.
 - 4"-7" stone or recycled concrete equivalent pressed into soil in a minimum 7" layer.
- Construction Specifications**
- All temporary swales shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet directly into an undisturbed stabilized area at a non-erosive velocity.
 - All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.
 - The swale shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
 - Fill, if necessary, shall be compacted by earth moving equipment.
 - All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the swale.
 - Inspection and maintenance must be provided periodically and after each rain event.

TEMPORARY SWALE



ENGINEER'S CERTIFICATE

I hereby Certify That This Plan For Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

Zacharia G. Fisch
 Signature of Engineer
 11/10/1997
 Date

DEVELOPER'S CERTIFICATE

I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District Or Their Authorized Agents, As Deemed Necessary.

[Signature]
 Signature of Developer
 12/12/97
 Date

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements.

[Signature]
 U.S.D.A. - Natural Resources Conservation Service
 11/21/98
 Date

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

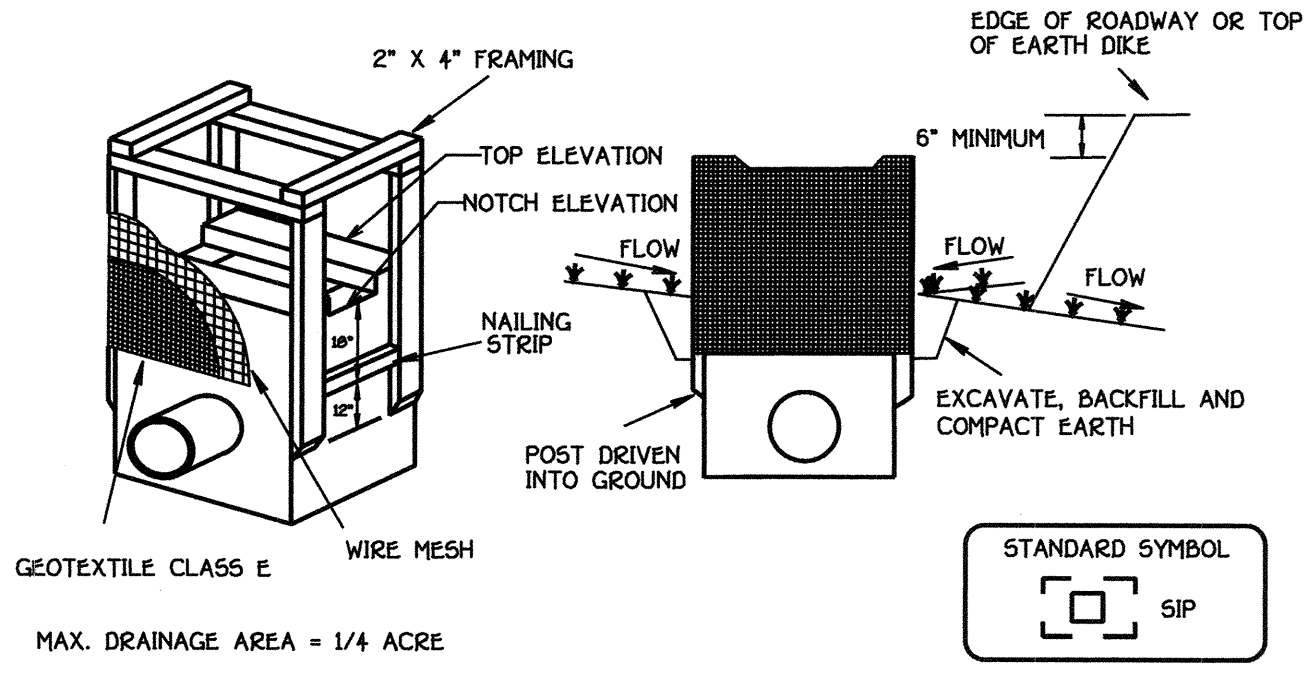
[Signature]
 District Howard Soil Conservation Dist.
 11/21/98
 Date

Approved: Department Of Planning And Zoning

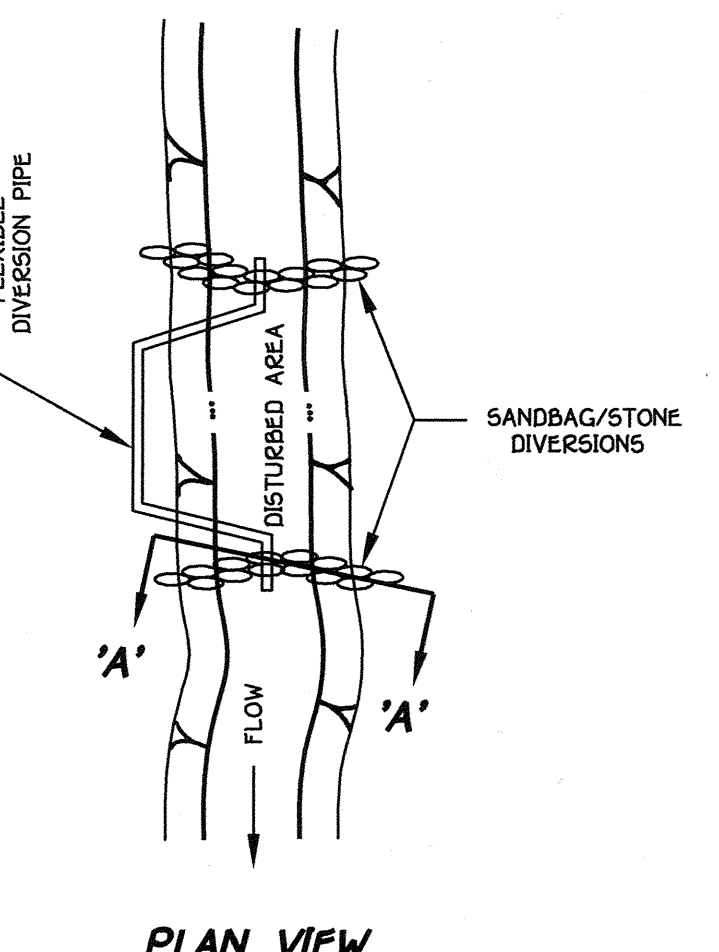
[Signature]
 Chief, Division Of Land Development
 TC
 2/23/98
 Date

Approved: Howard County Department Of Public Works

[Signature]
 Chief, Bureau Of Highways
 2-5-98
 Date



- Construction Specifications**
- Excavate completely around the inlet to a depth of 18" below the notch elevation.
 - Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
 - Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
 - Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
 - Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.
 - If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
 - The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

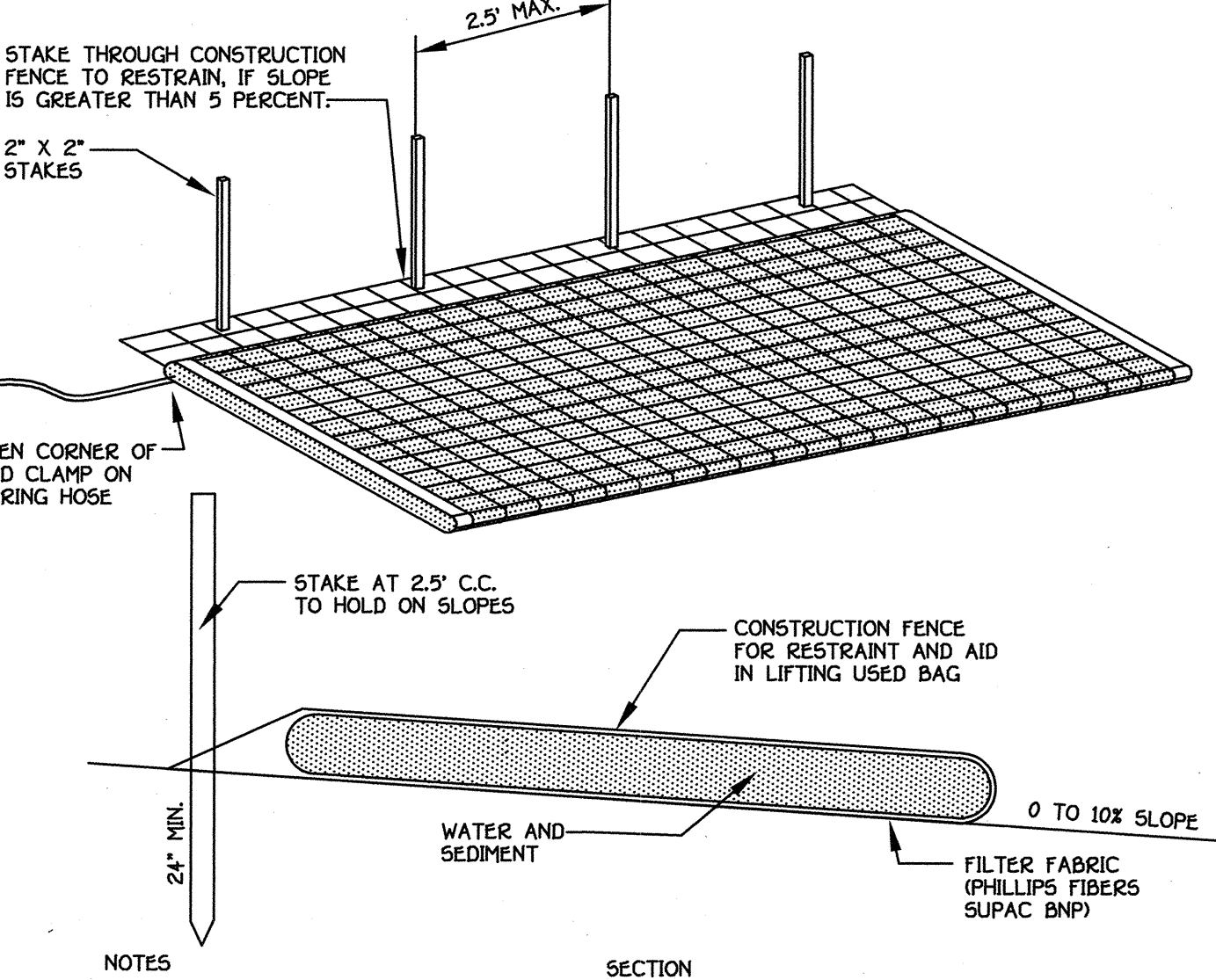


SECTION A-A

- DESCRIPTION**
 THE WORK SHALL CONSIST OF INSTALLING A FLOW DIVERSION STRUCTURE WHEN CONSTRUCTION ACTIVITIES TAKE PLACE WITHIN THE STREAM CHANNEL SUCH AS CULVERT CONSTRUCTION OR CULVERT REPLACEMENT.
- MATERIAL SPECIFICATIONS**
 - SANDBAGS: SANDBAGS SHALL CONSIST OF MATERIALS WHICH ARE RESISTANT TO ULTRA-VIOLET RADIATION, TEARING AND PUNCTURE AND WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL (i.e., SAND, FINE GRAVEL, ETC.).
 - STONE: STONE SHALL BE WASHED AND HAVE A MINIMUM DIAMETER OF 6 INCHES.
 - SHEETING: SHEETING SHALL CONSIST OF POLYETHYLENE OR OTHER MATERIAL WHICH IS IMPERVIOUS AND RESISTANT TO PUNCTURE AND TEARING.
- CONSTRUCTION REQUIREMENTS**
 - ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF WORK.
 - THE HEIGHT OF THE SANDBAG/STONE DIVERSION STRUCTURE SHALL BE ONE HALF THE DISTANCE FROM THE STREAM BED TO THE BANK PLUS ONE FOOT, AS INDICATED IN SECTION A-A. THE SANDBAGS SHALL BE PLACED ON A SMOOTH, PREPARED SURFACE.
 - ALL EXCAVATED MATERIALS SHALL BE DISPOSED OF IN A SCD APPROVED DISPOSAL AREA OUTSIDE THE 100 YEAR FLOODPLAIN UNLESS OTHERWISE APPROVED ON THE PLANS BY THE WRA.
 - ALL DEWATERING OF THE CONSTRUCTION AREA SHALL BE PUMPED TO A FILTER BAG OF OTHERWISE APPROVED ON THE PLANS BY THE WRA.
 - SHEETING SHALL BE OVERLAPPED A MINIMUM OF 18 INCHES.
 - THE DIVERSION PIPE SHALL HAVE A MINIMUM DIAMETER OF SUFFICIENT SIZE TO CONVEY THE NORMAL STREAM FLOW.
 - IF NECESSARY, SILT FENCE OR STRAWBALES SHALL BE INSTALLED AROUND THE PERIMETER OF THE WORK AREA.
 - SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THE INSPECTING AUTHORITY APPROVES THEIR REMOVAL.

DIVERSION PIPE

NOT TO SCALE



- NOTES**
- FILTER BAG SHALL BE PLACED ON A SLOPING OR LEVEL, WELL GRADED VEGETATED SITE SUCH THAT WATER WILL FLOW AWAY FROM DEVICE AND ANY WORK AREAS.
 - WIDTH AND LENGTH SHALL BE AS SHOWN IN THE TABLE.
 - THE FILTER BAG MUST BE STAKED IN PLACE AND SECURED TO THE PUMP DISCHARGE LINE.
 - FILTER BAG SHALL NOT BE USED FOR DISCHARGE FLOWS GREATER THAN 300 GPM.
 - DEVICE SHALL BE REMOVED AND DISPOSED OF AFTER BAG IS FILLED WITH SEDIMENT. SEDIMENT FROM BAG SHALL BE SPREAD IN AN UPLAND AREA.

FILTER BAG DETAIL

NOT TO SCALE

AVAILABLE FROM:
 INDIAN VALLEY INDUSTRIES, INC.
 P.O. BOX 810
 JOHNSON CITY, NEW YORK 13790
 (800) 659-5111

OR

A.C.F. ENVIRONMENTAL
 1801-A WILLIS ROAD
 RICHMOND, VIRGINIA 23237
 TOLL FREE 1-800-448-3636

OR

PRICE AND COMPANY, INC.
 425 36TH STREET
 WYOMING, MI. 49540
 (616) 530-8230

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2895

OWNER
 MARY ARBINTA BLOOM, ET AL.
 4734 MANOR LANE
 COLUMBIA, MARYLAND 21044

OWNER
 MR. PHILLIP CARROLL
 AND THE KLEIN FAMILY
 c/o MR. TOM SCHRIEVER
 5026 DORSEY HALL DRIVE-SUITE 204
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 c/o MR. TOM SCHRIEVER
 5026 DORSEY HALL DRIVE-SUITE 204
 ELLICOTT CITY, MARYLAND 21042

TYP. ROAD SECTION, STRUCTURE SCHEDULE, SEDIMENT TRAP DATA AND SEDIMENT CONTROL DETAILS

GAITHER HUNT

SECTION ONE AREA ONE

LOTS 1-33, 63-71 AND PRESERVATION PARCELS 'B-E' & BULK PARCEL 'F'

ZONING: "RC-DEO"

TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11

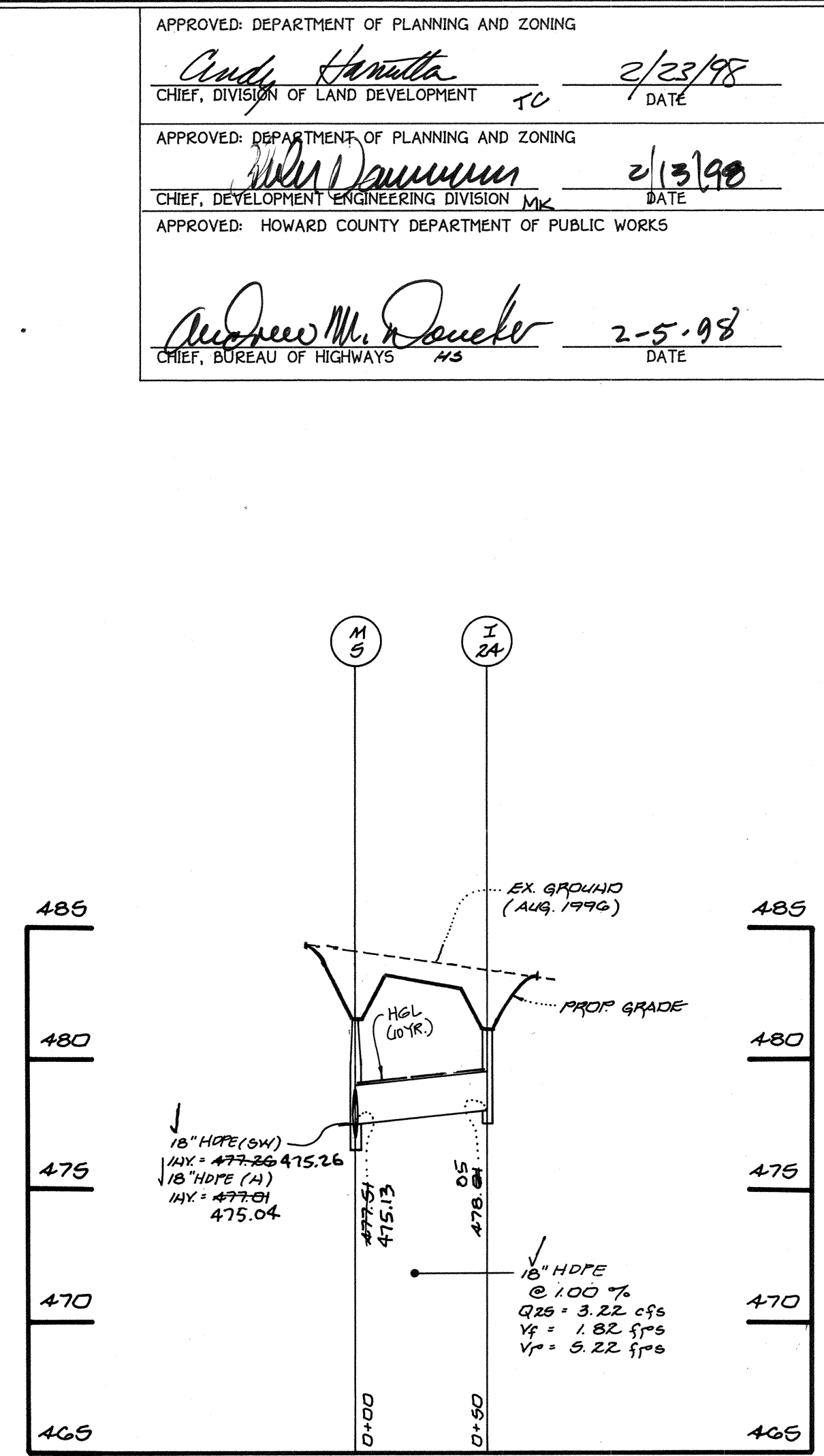
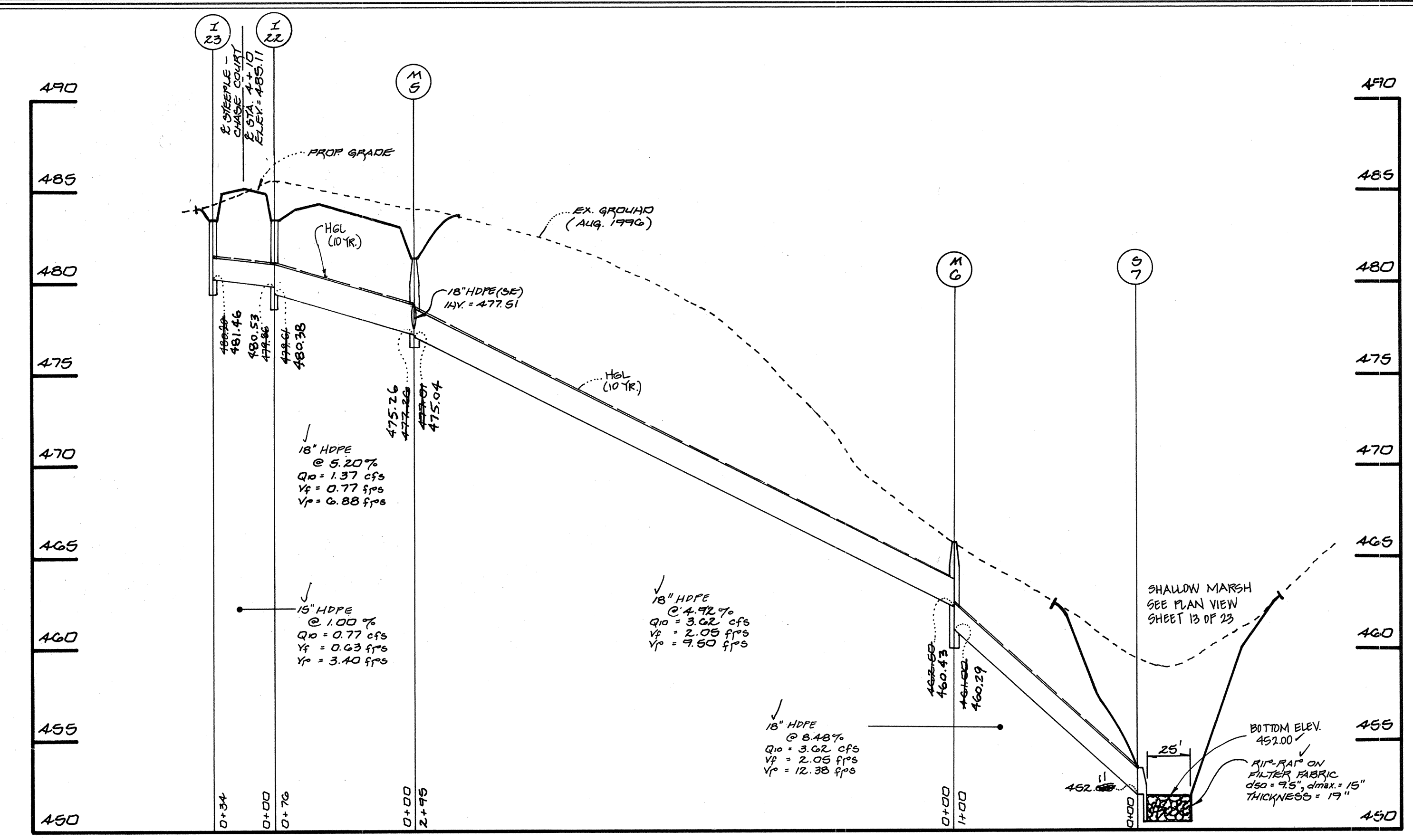
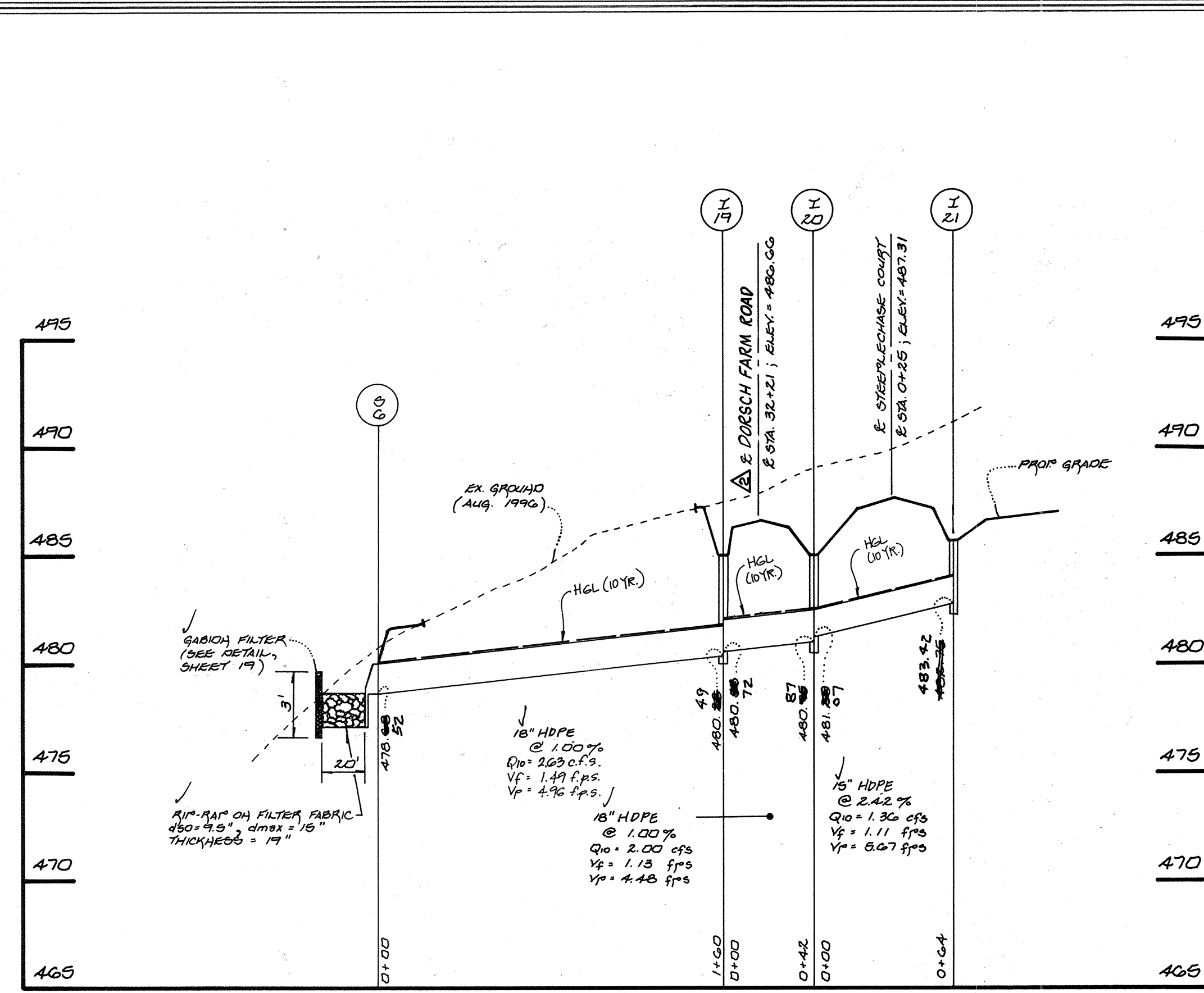
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN DATE: AUGUST 8, 1997

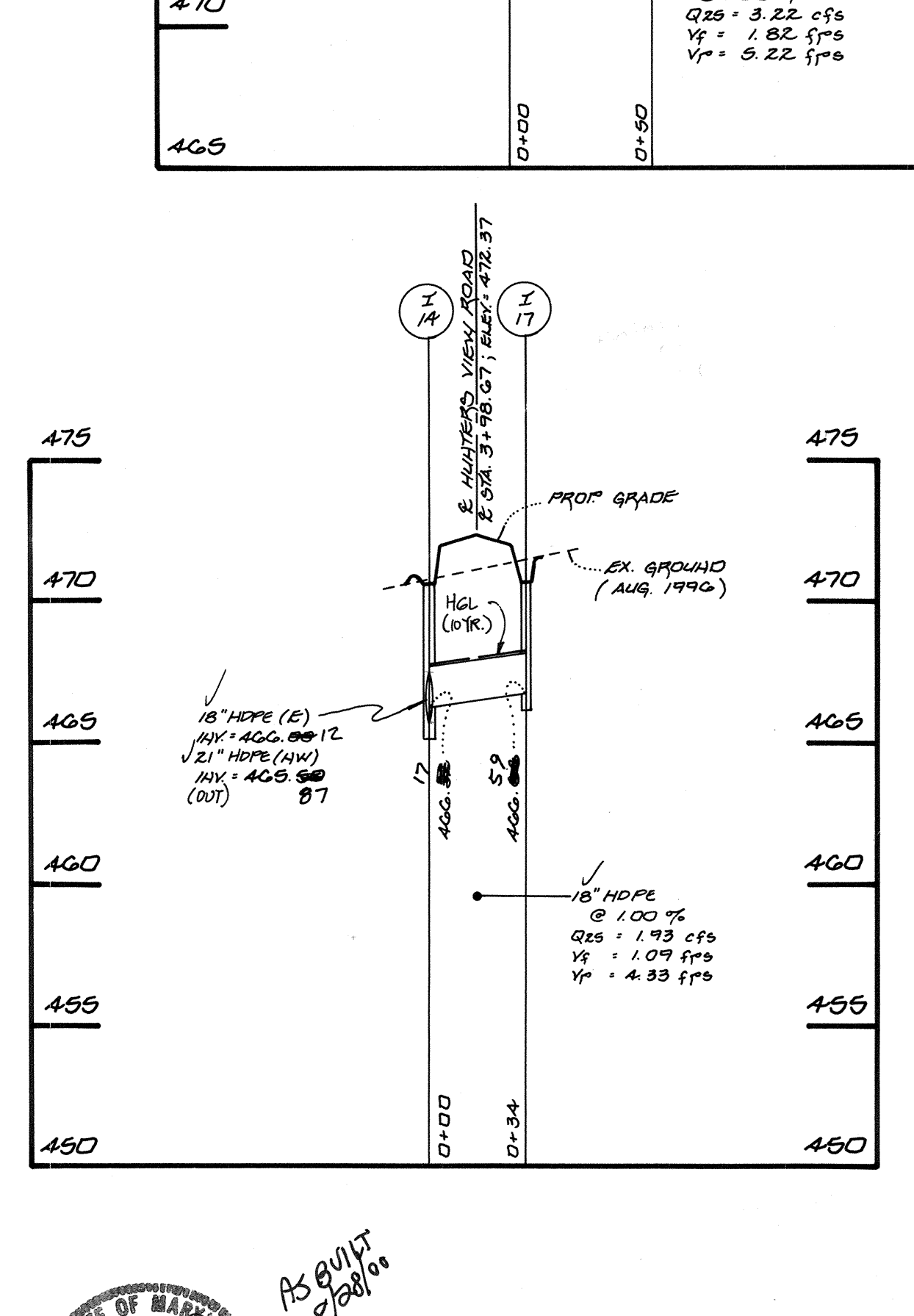
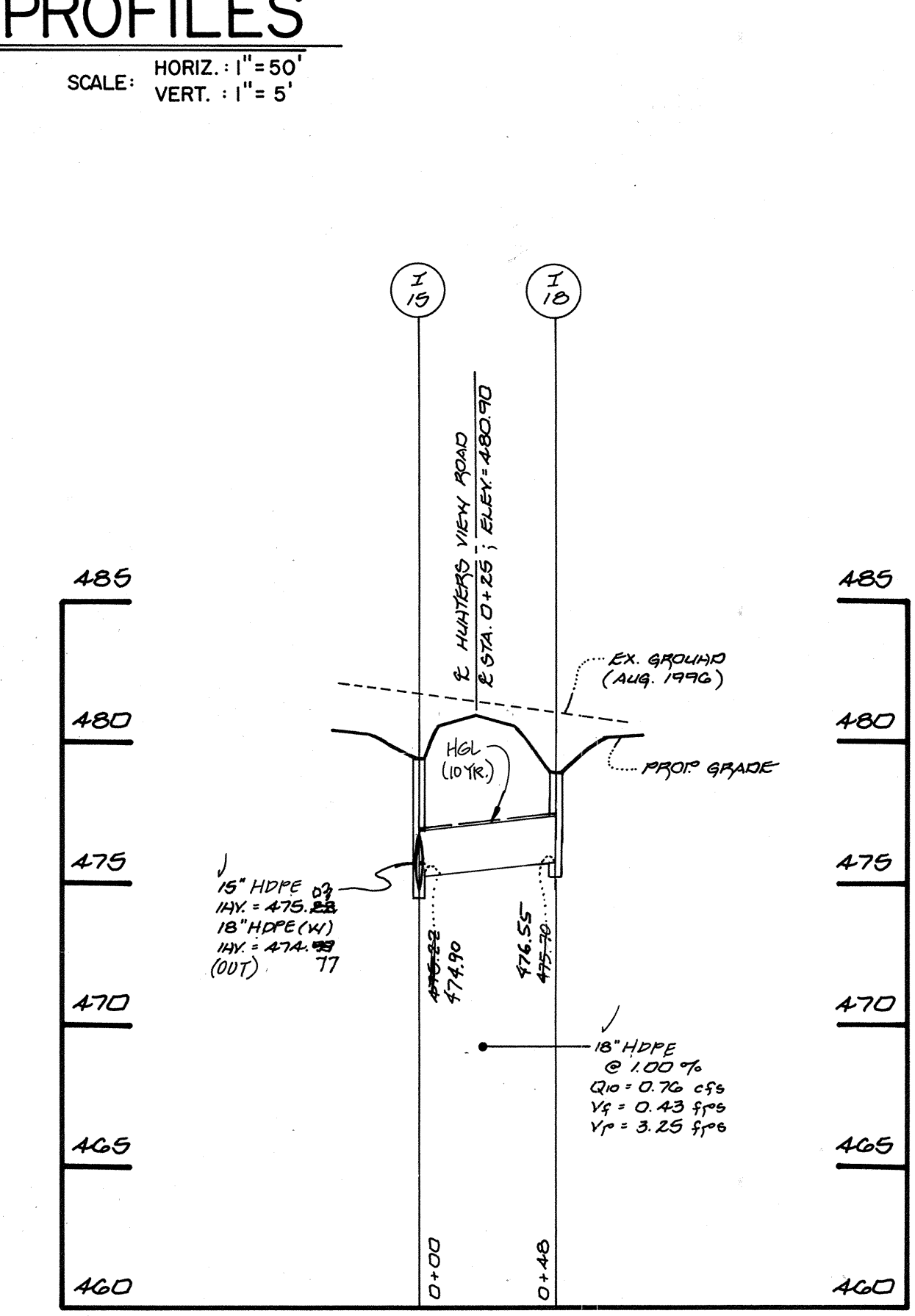
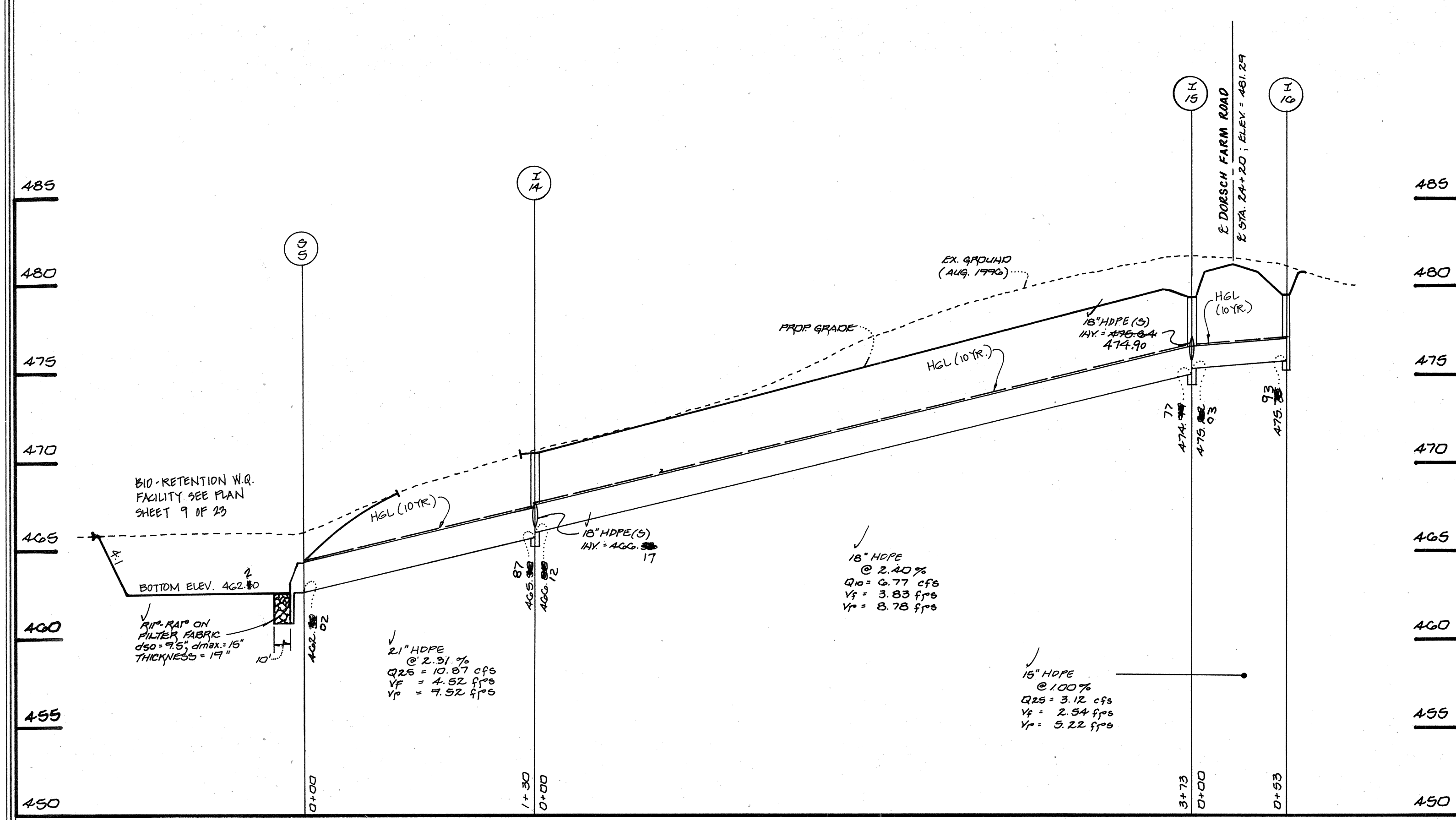
SHEET 18 OF 23

AS BUILT F98-24

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development *Candy Horvath* 2/23/98 DATE
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division *Mark Dammann* 2/13/98 DATE
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways *Andrew M. Daveler* 2-5-98 DATE



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



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

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2855

OWNER
 MARY AGNITA BLOOM, ET. AL.
 4754 MARJOR LANE
 COLUMBIA, MARYLAND 21044

OWNER
 MR. PHILLIP CARROLL
 AND THE KLEIN FAMILY
 c/o MR. TOM SCHRIEVER
 5026 DORSEY HALL DRIVE-SUITE 204
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 c/o MR. TOM SCHRIEVER
 5026 DORSEY HALL DRIVE-SUITE 204
 ELLICOTT CITY, MARYLAND 21042

10-5-01	REVISE FOX HAVEN WAY TO DORSCH FARM ROAD
8-3-98	REVISE ALL FOOT TO HDPE

Zachary J. Fisch
 PROFESSIONAL ENGINEER



STORM DRAIN PROFILES
GATHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND PRESERVATION PARCELS 'B-E'
 BULK PARCEL 'F'
 ZONING: 'RC-DEO'
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: AUGUST 8, 1997
 SHEET 17 OF 23

AS BUILT F98-24

APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways *Mr. Davelle* 2-5-98
 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development *Ms. Hamilton* 2/23/98
 DATE

Mr. Drummond 2/13/98
 Chief, Development Engineering Division
 DATE



DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	'C'	ZONED	% IMP.
I-4	N	0.43 AC.	0.51	RC-DEO	37%
I-15	O	0.38 AC.	0.49	RC-DEO	34%
I-16	P	0.50 AC.	0.56	RC-DEO	44%
I-17	Q	0.40 AC.	0.53	RC-DEO	40%
I-18	R	0.17 AC.	0.54	RC-DEO	41%
I-19	S	0.17 AC.	0.54	RC-DEO	41%
I-20	T	0.18 AC.	0.48	RC-DEO	33%
I-21	U	0.41 AC.	0.39	RC-DEO	19%
I-22	V	0.15 AC.	0.58	RC-DEO	47%
I-23	W	0.16 AC.	0.56	RC-DEO	44%
I-24	X	0.23 AC.	0.61	RC-DEO	52%

THIS PLAN IS FOR DRAINAGE AREA AND PERIMETER LANDSCAPE PURPOSES ONLY.



AS BUILT 8/28/00

NOTE: SEE TITLE SHEET FOR PERIMETER LANDSCAPE CHART.

DRAINAGE AREA MAP AND LANDSCAPE PLAN
GATHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 & PRESERVATION PARCELS 'B-E'
 4 BULK PARCEL 'P' ZONING: "RC-DEO"
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: AUGUST 8, 1997

Scale 1" = 100'
 SHEET 15 OF 29



Zacharia J. Fischer

N 576,000
 E 1,341,000

N 576,000
 E 1,344,000



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PKWY
 ELLICOTT CITY, MARYLAND 21044
 410.461.2895

OWNER
 MARY ARHINTA BLOOM, ET. AL.
 1754 MANOR LANE
 COLUMBIA, MARYLAND 21044

OWNER
 PHILIP CARROLL AND THE KLEIN FAMILY
 C/O J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

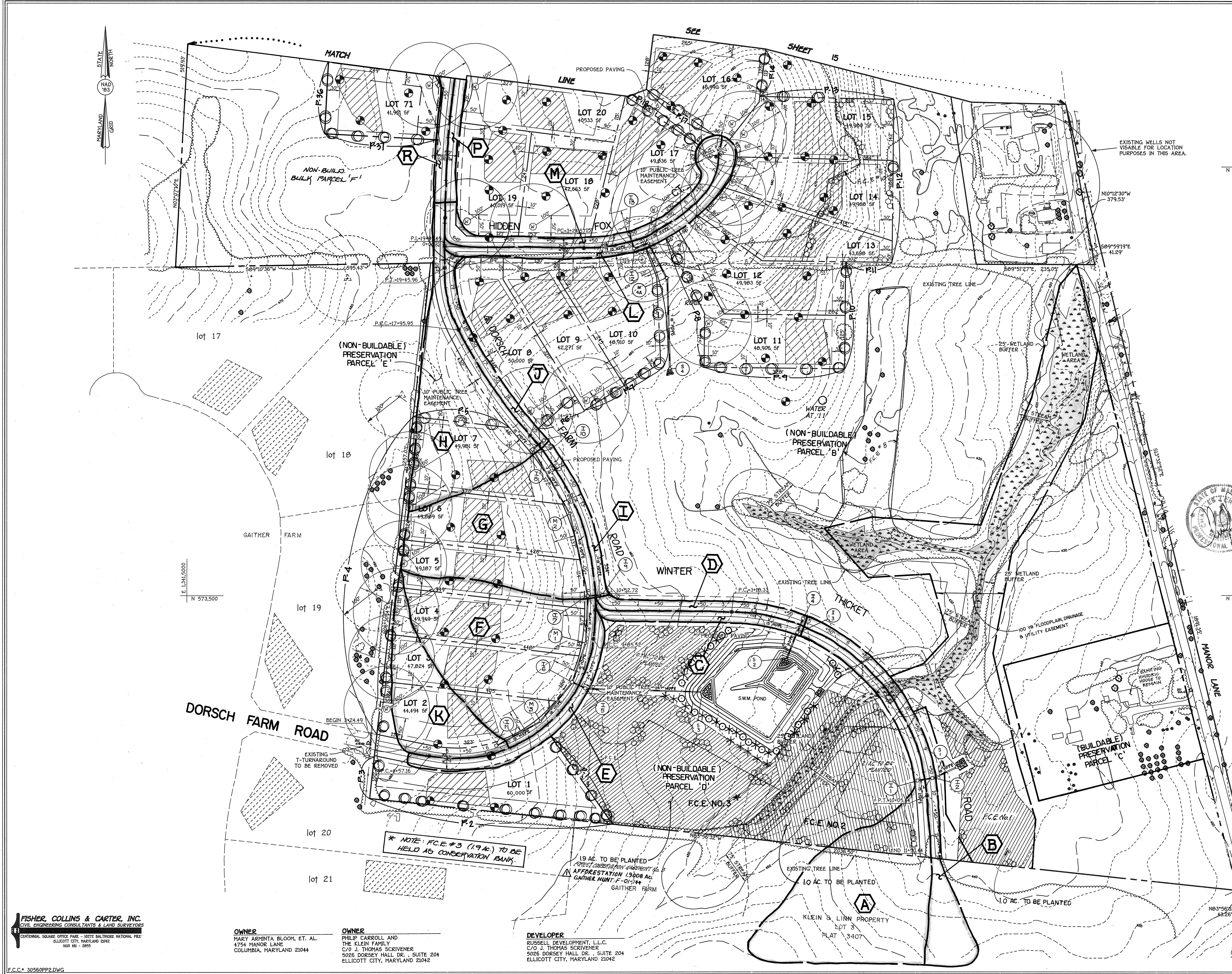
DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 C/O J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

10-5-01 REVISE FOX HAVEN WAY TO DORSCH FARM ROAD REVISIONS
 8-3-98 REVISE ALL ROOF TO HDPE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard M. Dwyer 2-5-98
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Andy Hamilton 2/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mr. Drummond 2/13/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION M&E DATE



DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	'C'	ZONED	% IMP.
I-1	A	3.43 AC.	0.28	RC-DEO	5%
I-2	B	1.01 AC.	0.57	RC-DEO	17%
I-3	C	0.36 AC.	0.50	RC-DEO	36%
I-4	D	0.37 AC.	0.48	RC-DEO	32%
I-5	E	0.39 AC.	0.56	RC-DEO	41%
I-6	F	2.77 AC.	0.36	RC-DEO	4%
I-7	G	2.33 AC.	0.30	RC-DEO	4%
I-8	H	2.07 AC.	0.33	RC-DEO	8%
I-9	I	0.21 AC.	0.58	RC-DEO	46%
I-10	J	0.25 AC.	0.51	RC-DEO	37%
I-11	K	1.08 AC.	0.32	RC-DEO	6%
I-12	L	0.01 AC.	0.61	RC-DEO	51%
I-13	M	0.47 AC.	0.55	RC-DEO	42%



Zacharia G. Fisch

NOTE: SEE TITLE SHEET FOR PERIMETER LANDSCAPE CHART.

- 10-5-01 REVISE FOX HAVEN WAY TO DORSCH FARM ROAD
- 10-5-01 IDENTIFY F-01-144 PLANTING EASEMENT
- 10-28-00 REVISE F.C.E. LOCATION AND PLANTING REVISIONS
- 8-3-98 REVISE ALL ROAD TO HDPE

THIS PLAN IS FOR DRAINAGE AREA AND PERIMETER LANDSCAPE PURPOSES ONLY.

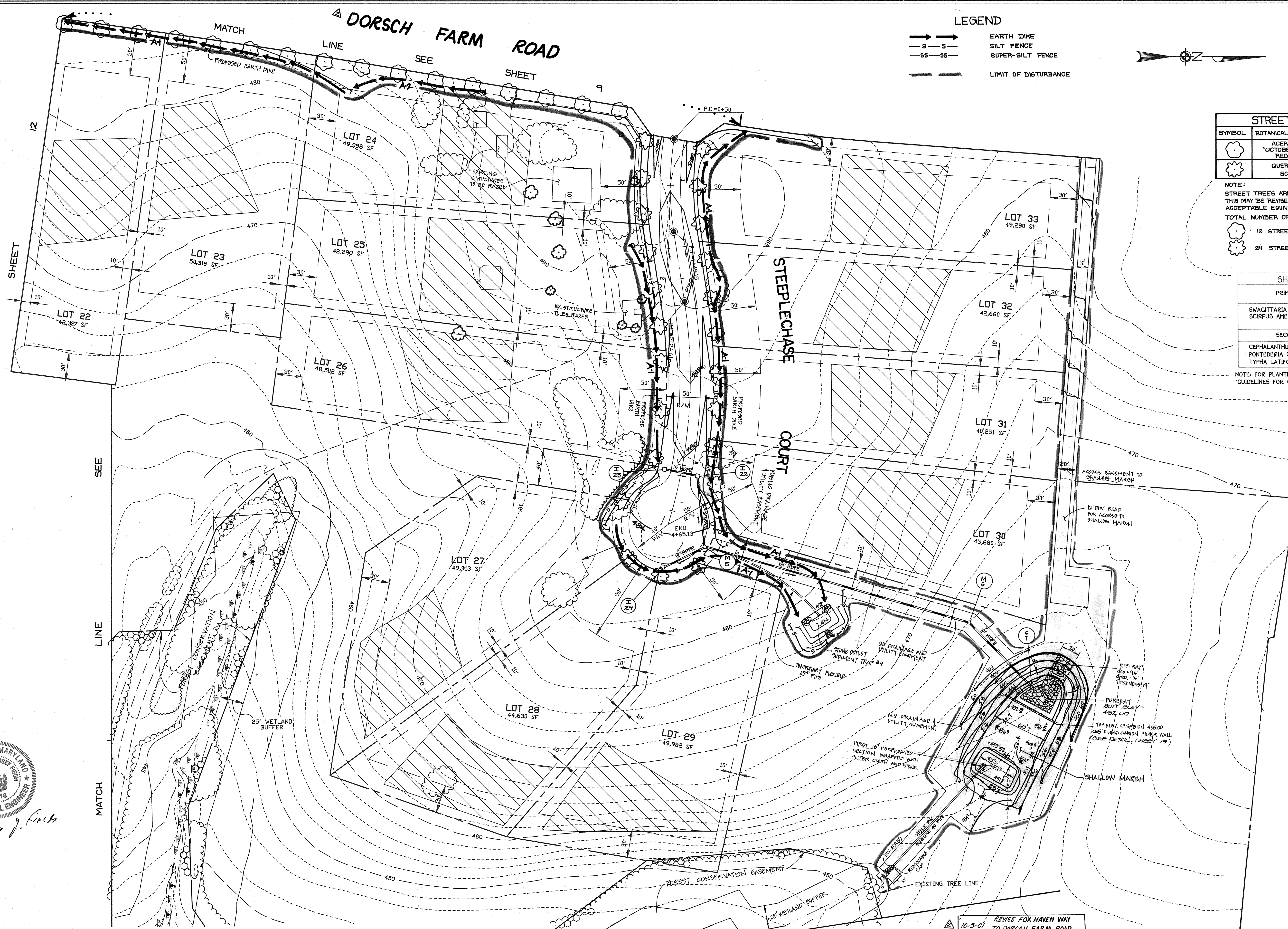
DRAINAGE AREA MAP AND LANDSCAPE PLAN
GAITHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 & PRESERVATION PARCELS 'B-E'
 BULK PARCEL 'F' ZONING 'RC-DEO'
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 DATE: AUGUST 8, 1997
 Scale: 1" = 100'
 SHEET 14 OF 23

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALDWIN NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 410-461-2955

OWNER
 MARY ARMINTA BLOOM, ET AL.
 4754 MANOR LANE
 COLUMBIA, MARYLAND 21044

OWNER
 PHILIP CARROLL AND
 THE KLEIN FAMILY
 C/O J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 C/O J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042



LEGEND

- S—S— EARTH DIKE
- SS-SS- SILT FENCE
- SS-SS- SUPER-SILT FENCE
- LIMIT OF DISTURBANCE



STREET TREE SCHEDULE			
SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	ACER RUBRUM 'OCTOBER GLORY' 'RED MAPLE'	2 1/2" - 3" CALIPER	40' APART ON PUBLIC R/W
	QUERCUS COCCINEA SCARLET OAK	MIN. 2 1/2" CALIPER	40' APART ON R/W

NOTE:
STREET TREES ARE ONLY A RECOMMENDATION.
THIS MAY BE REVISED TO A COUNTY
ACCEPTABLE EQUIVALENT.

- TOTAL NUMBER OF STREET TREES
- 16 STREET TREES (THIS SHEET)
 - 24 STREET TREES

SHALLOW MARSH PLANTING	
PRIMARY SPECIES	QUANTITY
SWAGITTARIA LATIFOLIA (DUCK POTATO)	51
SCIRPUS AMERICANUS (COMMON THREE SQUARE)	100
SECONDARY SPECIES	QUANTITY
CEPHALANTHUS OCCIDENTALIS (BUTTON BUSH)	10
PONTERDERIA CORDATA (PICKEREL WEED)	10
TYPHA LATIFOLIA (COMMON CATTAIL)	10

NOTE: FOR PLANTING LOCATION OR SUBSTITUTE PLANTS SEE
"GUIDELINES FOR CONSTRUCTING WETLAND STORMWATER BASIN MARCH 1997."



NOTE: SEE SHEET 10 FOR STONE OUTLET
SEDIMENT TRAP DATA.

OWNER
MARY ARMINTA BLODM, ET. AL.
4754 MANDR LANE
COLUMBIA, MARYLAND 21044

DEVELOPER
RUSSELL DEVELOPMENT, L.L.C.
c/o J. THOMAS SCRIVENER
5026 DORSEY HALL DR., SUITE 204
ELLCOTT CITY, MARYLAND 21042

OWNER
PHILIP CARROLL AND
THE KLEIN FAMILY
c/o J. THOMAS SCRIVENER
5026 DORSEY HALL DR., SUITE 204
ELLCOTT CITY, MARYLAND 21042

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN

GAITHER HUNT

SECTION ONE AREA ONE

LOTS 1-33, 63-71 AND
PRESERVATION PARCELS 10-E & BULK PARCEL 17
ZONING: "RC-DEO"
TAX MAP No. 29 PARCEL 21 GRID 5
TAX MAP No. 29 PARCEL 322 GRID 11
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST 8, 1997
SHEET 13 OF 23

E 1,342,300
N 57.4,700

E 1,343,100
N 57.4,700



Zacharia Y. Fisch

By The Developer:
"I/We 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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project."
Signature Of Developer: *Zacharia Y. Fisch* Date: 12/12/97
Printed Name Of Developer: Zacharia Y. Fisch

By The Engineer:
"I Certify That This Plan For ~~Construction~~ Erosion And Sediment Control Represents A Practical And Viable 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."
Signature Of Engineer: *Zacharia Y. Fisch* Date: 8/29/97
Printed Name Of Engineer: Zacharia Y. Fisch

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: *Cheryl Simmons* Date: 4/21/98
Signature: *John K. [unclear]* Date: 4/21/98
Signature: *John K. [unclear]* Date: 4/21/98

Approved Department Of Public Works
Signature: *Richard M. [unclear]* Date: 2-5-98
Approved Department Of Planning And Zoning
Signature: *Cindy Hamilton* Date: 2/23/98
Signature: *William [unclear]* Date: 2/13/98

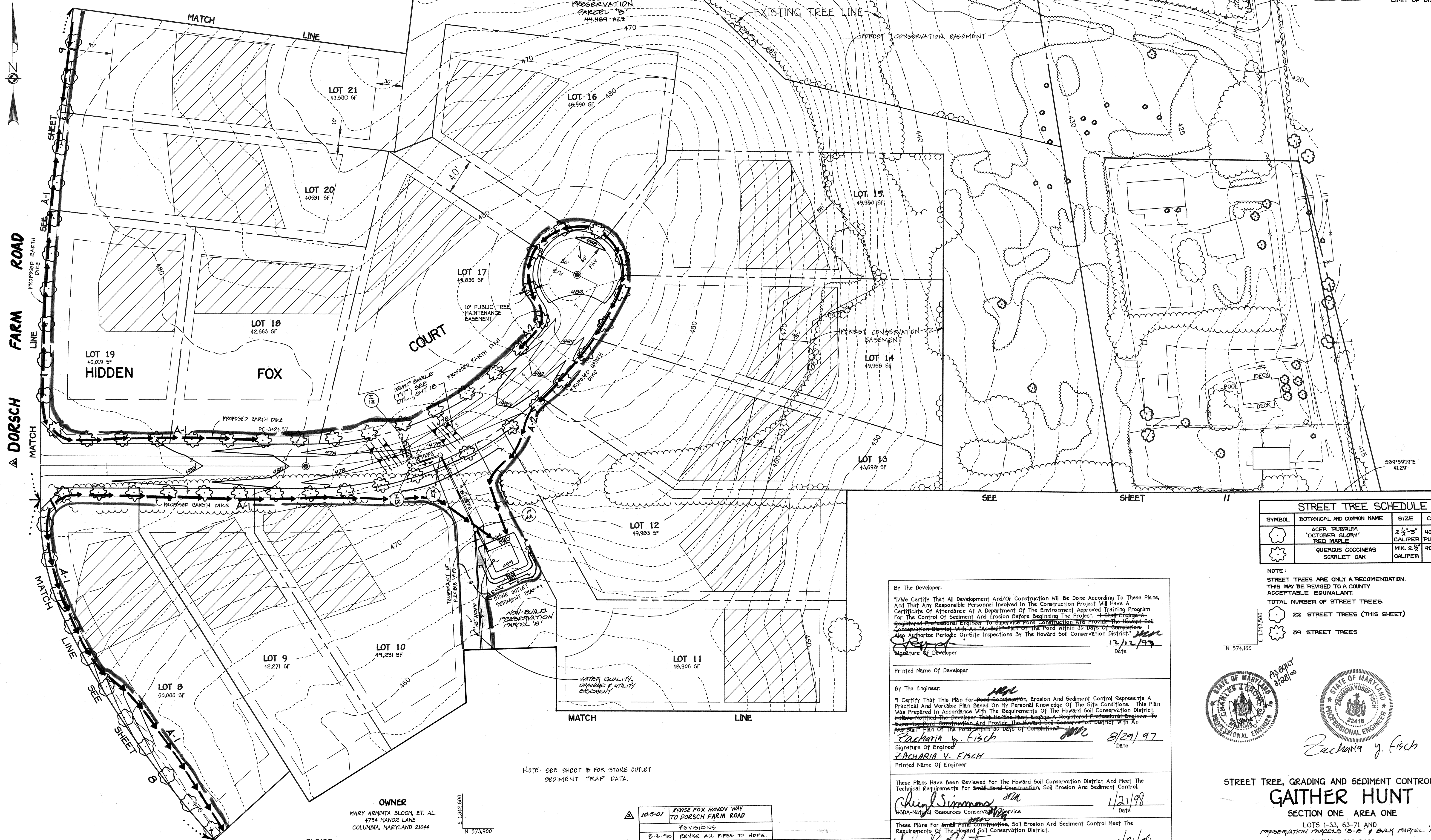
10-5-01 REVISE FOX HAVEN WAY TO DORSCH FARM ROAD
8-3-98 REVISE ALL PIPE TO HDPE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
INTERNATIONAL SQUARE OFFICE PARK - 10272 BALDOR NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
410-461-2855

30560Fhalplan6.dwg

AS BUILT F98-24

- EARTH DIKE
- SILT FENCE
- SUPER-SILT FENCE
- LIMIT OF DISTURBANCE



STREET TREE SCHEDULE			
SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2" DB CALIPER	40' APART ON PUBLIC R/W
	QUERCUS COCCINEA SCARLET OAK	MIN. 2 1/2" CALIPER	40' APART ON R/W

NOTE:
STREET TREES ARE ONLY A RECOMMENDATION.
THIS MAY BE REVISED TO A COUNTY
ACCEPTABLE EQUIVALENT.

TOTAL NUMBER OF STREET TREES:
22 STREET TREES (THIS SHEET)
29 STREET TREES

By The Developer:
"I/We 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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project."
[Signature]
Signature Of Developer
Date: 12/12/97

By The Engineer:
"I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District."
[Signature]
Signature Of Engineer
ZACHARIA V. FISCH
Printed Name Of Engineer
Date: 8/29/97

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]
Signature Of Reviewer
Date: 1/23/98

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.
[Signature]
Signature Of Reviewer
Date: 1/24/98

Approved Department Of Public Works
[Signature]
Signature Of Reviewer
Date: 2-5-98



STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
GATHER HUNT
SECTION ONE AREA ONE
LOTS 1-33, 63-71 AND
PRESERVATION PARCELS 'B-E' & BULK PARCEL 'F'
ZONING: "RC-DEO"
TAX MAP No. 29 PARCEL 21 GRID 5
TAX MAP No. 29 PARCEL 322 GRID 11
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST 8, 1997
SHEET 12 OF 23

NOTE: SEE SHEET 10 FOR STONE OUTLET SEDIMENT TRAP DATA.

OWNER
MARY ARMINTA BLOOM, ET. AL.
4754 MANDOR LANE
COLUMBIA, MARYLAND 21044

OWNER
PHILIP CARROLL AND
THE KLEIN FAMILY
c/o J. THOMAS SCRIVENER
5026 DORSEY HALL DR., SUITE 204
ELLCOTT CITY, MARYLAND 21042

DEVELOPER
RUSSELL DEVELOPMENT, L.L.C.
c/o J. THOMAS SCRIVENER
5026 DORSEY HALL DR., SUITE 204
ELLCOTT CITY, MARYLAND 21042

10-5-01 REVISE FOX HAVEN WAY TO DORSEY FARM ROAD
REVISIONS
8-3-98 REVISE ALL TYPES TO HDPE
Approved Department Of Planning And Zoning
[Signature]
Signature Of Reviewer
Date: 2/23/98

[Signature]
Signature Of Reviewer
Date: 1/13/98

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
(410) 461-2855

By The Developer:
 "I/We 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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I/We Shall Engage A Registered Professional Engineer To Supervise Post-Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Final Work Within 90 Days Of Completion. I/We Shall Post-Construct Within 30 Days Of Completion. I/We Authorize Periodic On-Site Inspections By The Howard Soil Conservation District."
 Signature of Developer: *Zacharia Y. Fisch* Date: 12/12/97

Printed Name Of Developer:
 By The Engineer:
 "I Certify That This Plan For Post-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/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POST-CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE FINAL WORK WITHIN 90 DAYS OF COMPLETION."
 Signature of Engineer: *Zacharia Y. Fisch* Date: 8/29/97
 Printed Name Of Engineer: ZACHARIA Y. FISCH

These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For Small-Scale Construction Soil Erosion And Sediment Control.
 Signature: *Cheryl Simmons* Date: 11/21/98
 USDA-Natural Resources Conservation Service

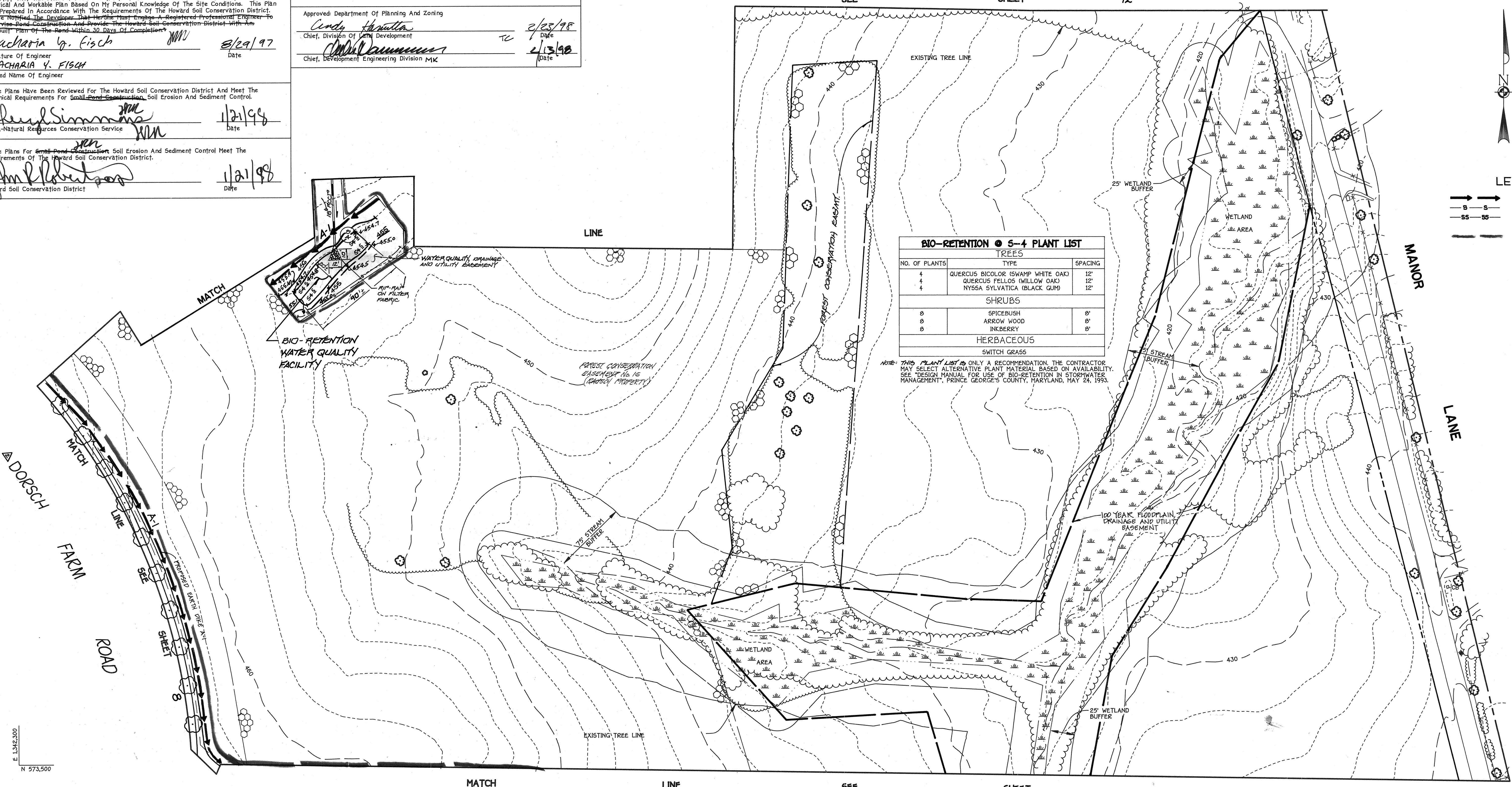
These Plans For Small-Scale Construction Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.
 Signature: *John Robertson* Date: 11/21/98
 Howard Soil Conservation District

Approved: Department Of Public Works
 Signature: *Richard M. Daveler* Date: 2-5-98
 Chief, Bureau Of Highways
 Approved: Department Of Planning And Zoning
 Signature: *Condy Hamilton* Date: 2/25/98
 Chief, Division Of Land Development
 Signature: *Mark Lammert* Date: 2/13/98
 Chief, Development Engineering Division MK

STREET TREE SCHEDULE			
SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	AGER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2" DB' CALIPER	40' APART ON PUBLIC ROW

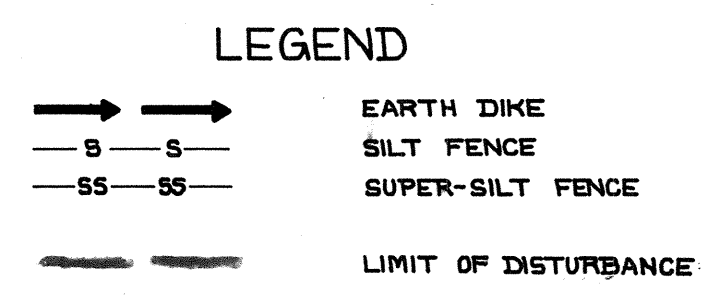
NOTE:
 STREET TREES ARE ONLY A RECOMMENDATION. THIS MAY BE REVISED TO A COUNTY ACCEPTABLE EQUIVALENT.
 TOTAL NUMBER OF STREET TREES
 10 STREET TREES (THIS SHEET)

N 574,400
 E 134,900



BIO-RETENTION 5-4 PLANT LIST		
TREES		
NO. OF PLANTS	TYPE	SPACING
4	QUERCUS BICOLOR (SWAMP WHITE OAK)	12'
4	QUERCUS FELLOUS (WILLOW OAK)	12'
4	NYSSA SYLVATICA (BLACK GUM)	12'
SHRUBS		
0	SPICEBUSH	0'
0	ARROW WOOD	0'
0	INKBERRY	0'
HERBACEOUS		
	SWITCH GRASS	

NOTE: THIS PLANT LIST IS ONLY A RECOMMENDATION. THE CONTRACTOR MAY SELECT ALTERNATIVE PLANT MATERIAL BASED ON AVAILABILITY. SEE DESIGN MANUAL FOR USE OF BIO-RETENTION IN STORMWATER MANAGEMENT, PRINCE GEORGE'S COUNTY, MARYLAND, MAY 24, 1993.



N 573,500
 E 134,200

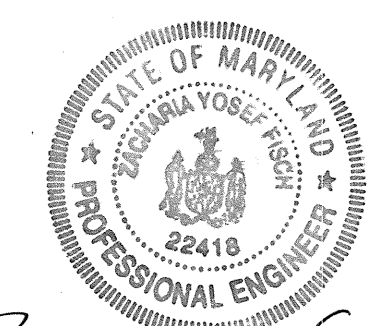
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE
 ELLICOTT CITY, MARYLAND 21041
 410-418-2955

OWNER
 MARY ARMINTA BLOOM, ET. AL.
 4754 MANOR LANE
 COLUMBIA, MARYLAND 21044

OWNER
 PHILIP CARROLL AND
 THE KLEIN FAMILY
 c/o J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

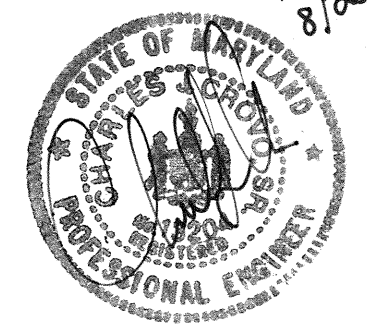
DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 c/o J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

10-5-01 REVISE FOX HAVEN WAY TO DORSEY FARM ROAD
 12-28-20 REVISE FENCE LOCATION AND PLANTINGS
 DATE REVISION

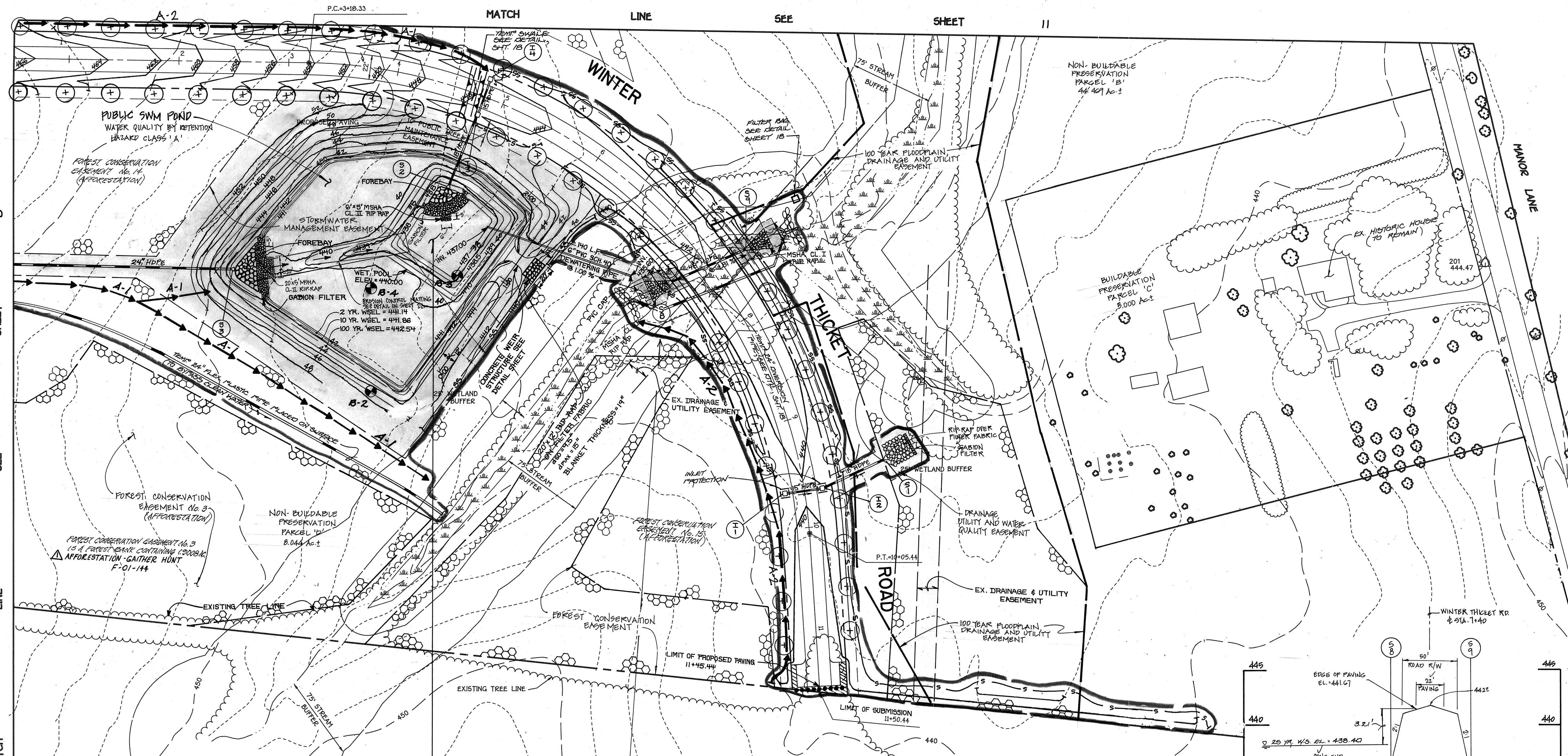


Zacharia Y. Fisch

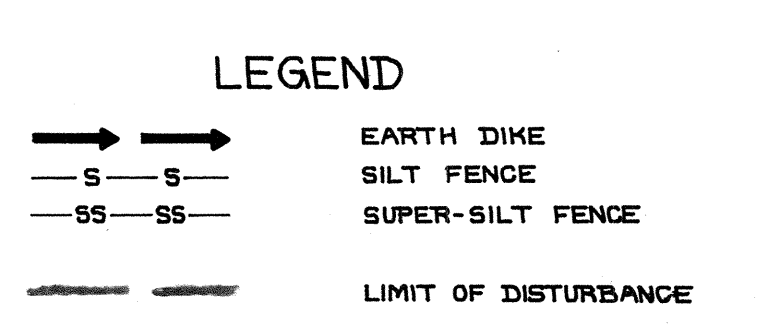
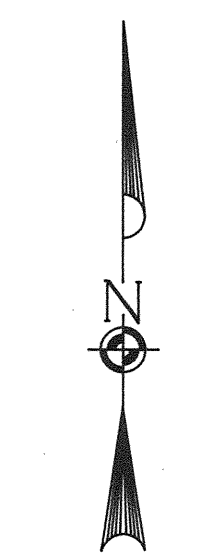
STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
GATHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND
 PRESERVATION PARCELS 'B-E' & BULKY PARCEL 'F'
 ZONING: "RC-DEO"
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: AUGUST 8, 1997
 SHEET 11 OF 29



AS BUILT F 98-24



N 573,500
E 1,342,000



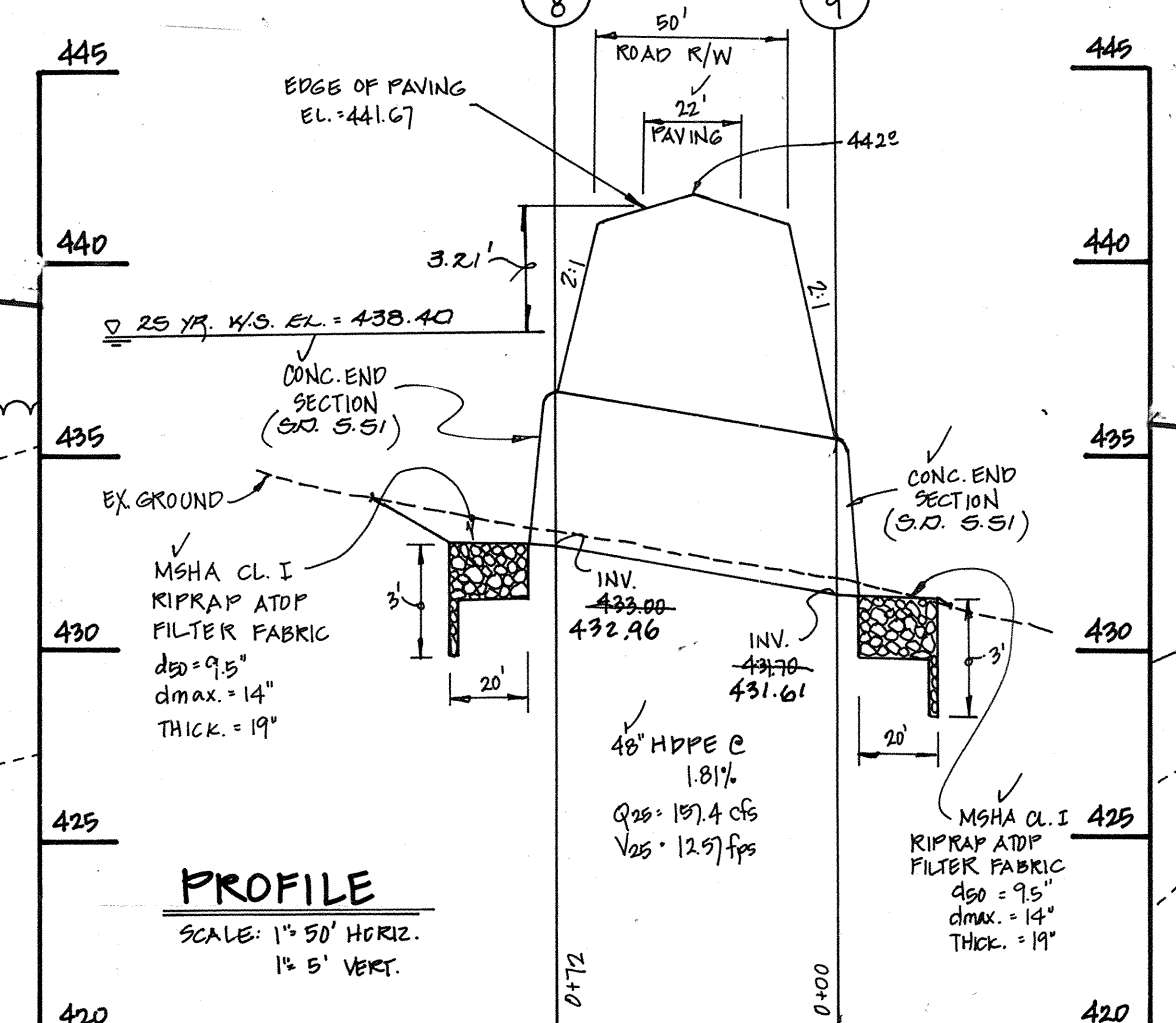
SEDIMENT BASIN
 O.A. TO SEDIMENT BASIN = 3.4 AC.±
 STORAGE REQUIRED = 12,240 CF.
 STORAGE PROVIDED = 10,300 CF.
 CREST EL. FOR 10' WIDE CONC. WEIR = 441.50
 BOTTOM OF BASIN = 437.00
 CLEAN-OUT ELEV. = 437.50
 DEMONSTRATE ELEV. = 440.50
 PROVIDE AT P.V.C. W/ELBOW @ ELEV. = 440.5
 BLOCK 6" CONC. WEIR FROM ELEV. 440.5 TO
 441.5 FOR SEDIMENT CONTROL PURPOSES
 ONLY.

WETLANDS PERMIT FOR
 CROSSING C STA. 7+00 TO
 8+00 WINTER THICKET ROAD
 # 133800208, # 97-NT-0716

STREET TREE SCHEDULE

SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
(+)	ACER RUBRUM 'AUTUMN FLAME'	2 1/2" - 3" 40' APART ON CALIPER	PUBLIC R/W

NOTE:
 STREET TREES ARE ONLY A RECOMMENDATION.
 THIS MAY BE REVISED TO A COUNTY
 ACCEPTABLE EQUIVALENT.
 TOTAL NUMBER OF STREET TREES
 (+) 52 STREET TREES



By The Developer:
 I/We 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 the Environment Approved Training Program For The Control of Sediment And Erosion Before Beginning The Project.
 I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.
 Signature of Developer: *[Signature]* Date: 12/12/97
 Printed Name Of Developer: *[Name]*
 These Plans Have Been Reviewed For The Howard Soil Conservation District And Meet The Technical Requirements For **Final Road Construction**, Soil Erosion And Sediment Control.
 Signature: *[Signature]* Date: 11/21/98
 USDA-Natural Resources Conservation Service

By The Engineer:
 I Certify That This Plan For Road 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.
 Signature of Engineer: *[Signature]* Date: 8/29/97
 ZACHARIA B. FISCH
 Printed Name Of Engineer
 These Plans For **Final Road Construction**, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.
 Signature: *[Signature]* Date: 11/21/98
 JOHN R. ROBERTSON
 Howard Soil Conservation District

Approved: Department Of Public Works
 Signature: *[Signature]* Date: 2-5-97
 Chief, Bureau Of Highways
 Approved: Department Of Planning And Zoning
 Signature: *[Signature]* Date: 2/23/97
 Chief, Division Of Land Development
 Signature: *[Signature]* Date: 2/13/98
 Chief, Development Engineering Division

OWNER
 MARY ARMINTA BLOOM, ET AL.
 4754 MANOR LANE
 COLUMBIA, MARYLAND 21044
OWNER
 PHILIP CARROLL AND
 THE KLEIN FAMILY
 C/O J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042
DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 C/O J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

**STREET TREE, GRADING AND
 SEDIMENT CONTROL PLAN
 GATHER HUNT**
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND
 PRESERVATION PARCELS 10-E & BULKY PARCEL 'F'
 ZONING: "RC-DEO"
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: AUGUST 8, 1997
 SHEET 10 OF 29

By The Developer:
 I/We 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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project. I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With A "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.
 Signature Of Developer: *[Signature]* Date: 12/12/97
 Printed Name Of Developer: *[Name]*

By The Engineer:
 I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.
 Signature Of Engineer: *[Signature]* Date: 8/29/97
 Printed Name Of Engineer: E. ACHARIA Y. FISCH

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: *[Signature]* Date: 12/1/98
 USA-Natural Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.
 Signature: *[Signature]* Date: 12/1/98
 Howard Soil Conservation District

Approved: Department Of Public Works
 Signature: *[Signature]* Date: 2-5-98
 Chief Bureau Of Highways

Approved: Department Of Planning And Zoning
 Signature: *[Signature]* Date: 2/23/98
 Chief, Division Of Land Development

Signature: *[Signature]* Date: 2/13/98
 Chief, Development Engineering Division MK

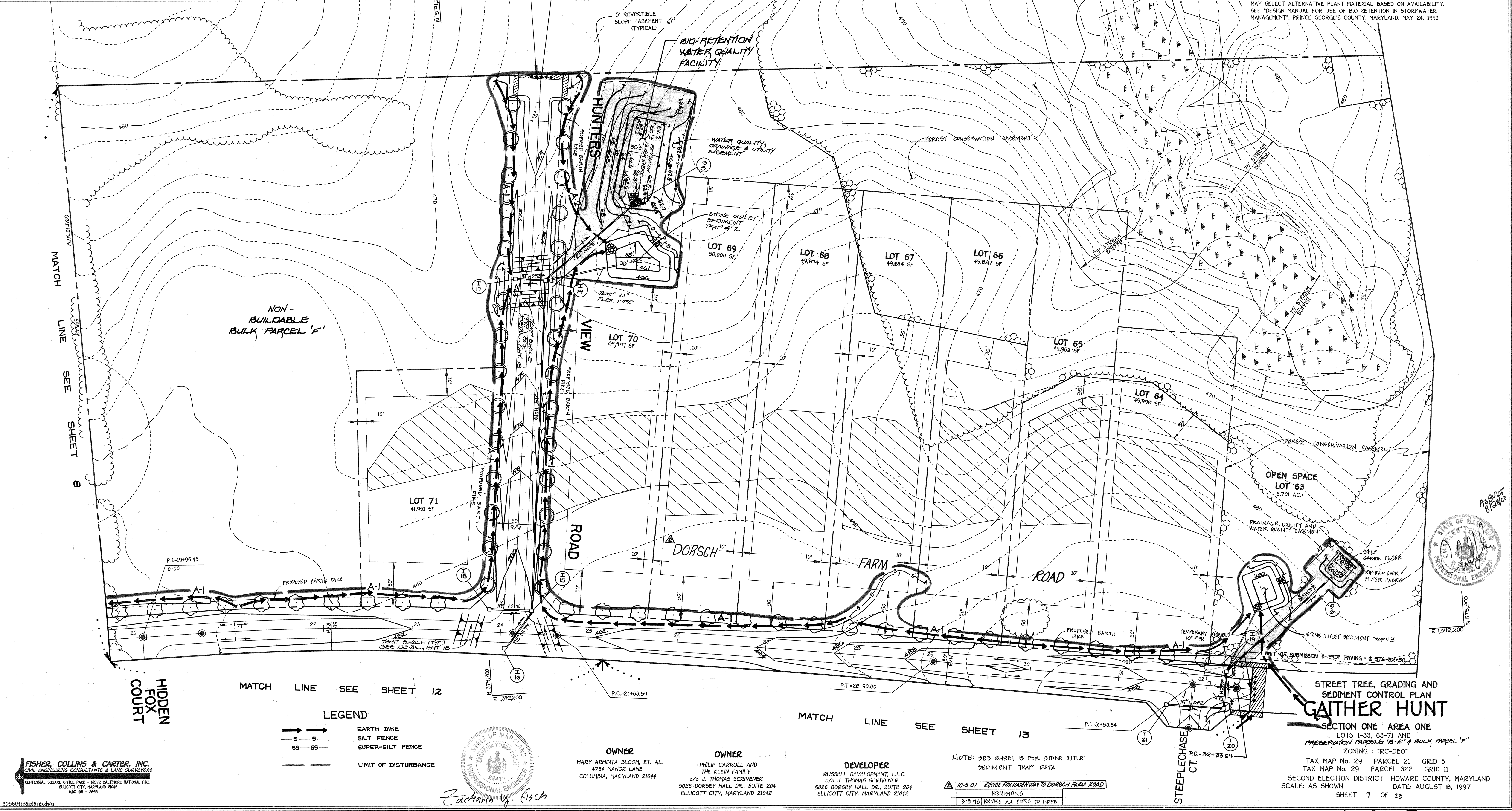
STREET TREE SCHEDULE			
SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
(Symbol)	ACER RUBRUM "OCTOBER GLORY" RED MAPLE	2 1/2" - 3" CALIPER	40' APART ON PUBLIC R/W
(Symbol)	PLATANUS OCCIDENTALIS "BLOODSOON" LONDON PLANETREE	2 1/2" - 3" CALIPER	40' APART ON PUBLIC R/W



BIO-RETENTION 5-5 PLANT LIST		
TREES		
NO. OF PLANTS	TYPE	SPACING
8	QUERCUS BICOLOR (SWAMP WHITE OAK)	12'
8	QUERCUS FELLOUS (WILLOW OAK)	12'
8	NYSSA SYLVATICA (BLACK GUM)	12'
SHRUBS		
16	SPICEBUSH	8'
16	ARROW WOOD	8'
16	INKBERRY	8'
HERBACEOUS		
SWITCH GRASS		

NOTE:
 STREET TREES ARE ONLY A RECOMMENDATION. THIS MAY BE REVISED TO A COUNTY ACCEPTABLE EQUIVALENT.
 TOTAL NUMBER OF STREET TREES:
 29 STREET TREES (THIS SHEET)
 28 STREET TREES

NOTE: THIS PLANT LIST IS ONLY A RECOMMENDATION. THE CONTRACTOR MAY SELECT ALTERNATIVE PLANT MATERIAL BASED ON AVAILABILITY. SEE "DESIGN MANUAL FOR USE OF BIO-RETENTION IN STORMWATER MANAGEMENT", PRINCE GEORGE'S COUNTY, MARYLAND, MAY 24, 1993.



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21114
 (410) 461-2855



OWNER
 MARY ARBENTA BLOOM, ET. AL.
 4754 MANOR LANE
 COLUMBIA, MARYLAND 21044

OWNER
 PHILIP CARROLL AND
 THE KLEIN FAMILY
 c/o J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 c/o J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

NOTE: SEE SHEET 13 FOR STONE OUTLET SEDIMENT TRAP DATA.
 REVISIONS
 10-5-01 REVISE FOX HAVEN WAY TO DORSEY FARM ROAD
 8-9-98 REVISE ALL PIPES TO HOPE

STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
GATHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND PRESERVATION PARCELS 'B-E' & BULK PARCEL 'F'
 ZONING: "RC-DEO"
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: AUGUST 8, 1997
 SHEET 9 OF 29

AS BUILT F98-24

By The Developer:
 "I/We 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 The Environment Approved Training Program For The Control Of Sediment And Erosion Before Beginning The Project."
 Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An As-Built Plan Of The Pond Within 30 Days Of Completion.
 Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.
 Signature of Developer: *[Signature]* Date: 12/12/97

By The Engineer:
 "I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An As-Built Plan Of The Pond Within 30 Days Of Completion."
 Signature of Engineer: *Zacharia Y. Fisch* Date: 8/29/97
 Printed Name Of Engineer: ZACHARIA Y. FISCH

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: *[Signature]* Date: 11/21/98
 USDA-Natural Resources Conservation Service

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.
 Signature: *[Signature]* Date: 11/21/98
 Howard Soil Conservation District

Approved: Department Of Public Works
 Signature: *[Signature]* Date: 2-5-98
 Chief, Bureau Of Highways

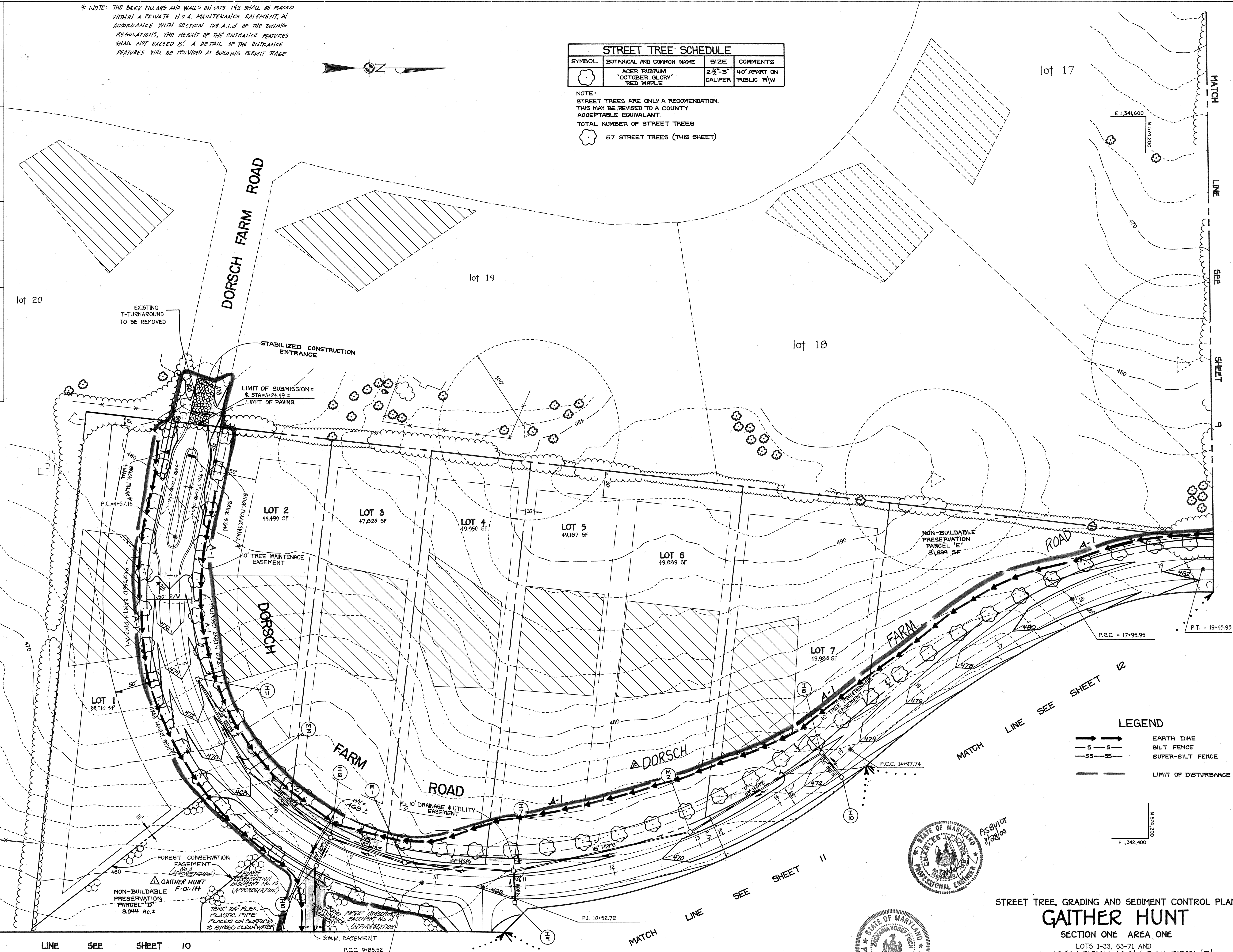
Approved: Department Of Planning And Zoning
 Signature: *[Signature]* Date: 2/23/95
 Chief, Division Of Land Development

Signature: *[Signature]* Date: 2/13/98
 Chief, Development Engineering Division MK

* NOTE: THE BECK PILLARS AND WALLS ON LOTS 19A SHALL BE PLACED WITHIN A PRIVATE H.O.A. MAINTENANCE EASEMENT, IN ACCORDANCE WITH SECTION 12B.A.1.J OF THE ZONING REGULATIONS, THE HEIGHT OF THE ENTRANCE FEATURES SHALL NOT EXCEED 8'. A DETAIL OF THE ENTRANCE FEATURES WILL BE PROVIDED AT BUILDING PERMIT STAGE.

STREET TREE SCHEDULE			
SYMBOL	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2"-3" CALIPER	40' APART ON PUBLIC R/W

NOTE:
 STREET TREES ARE ONLY A RECOMMENDATION. THIS MAY BE REVISED TO A COUNTY ACCEPTABLE EQUIVALENT.
 TOTAL NUMBER OF STREET TREES
 57 STREET TREES (THIS SHEET)



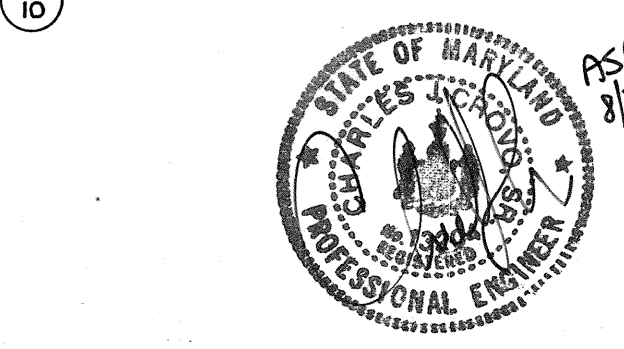
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK, 10722 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21112
 410 461 - 2855

OWNER
 MARY ARMITA BLOOM, ET. AL
 4754 MANOR LANE
 COLUMBIA, MARYLAND 21044

OWNER
 PHILIP CARROLL AND
 THE KLEIN FAMILY
 c/o J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

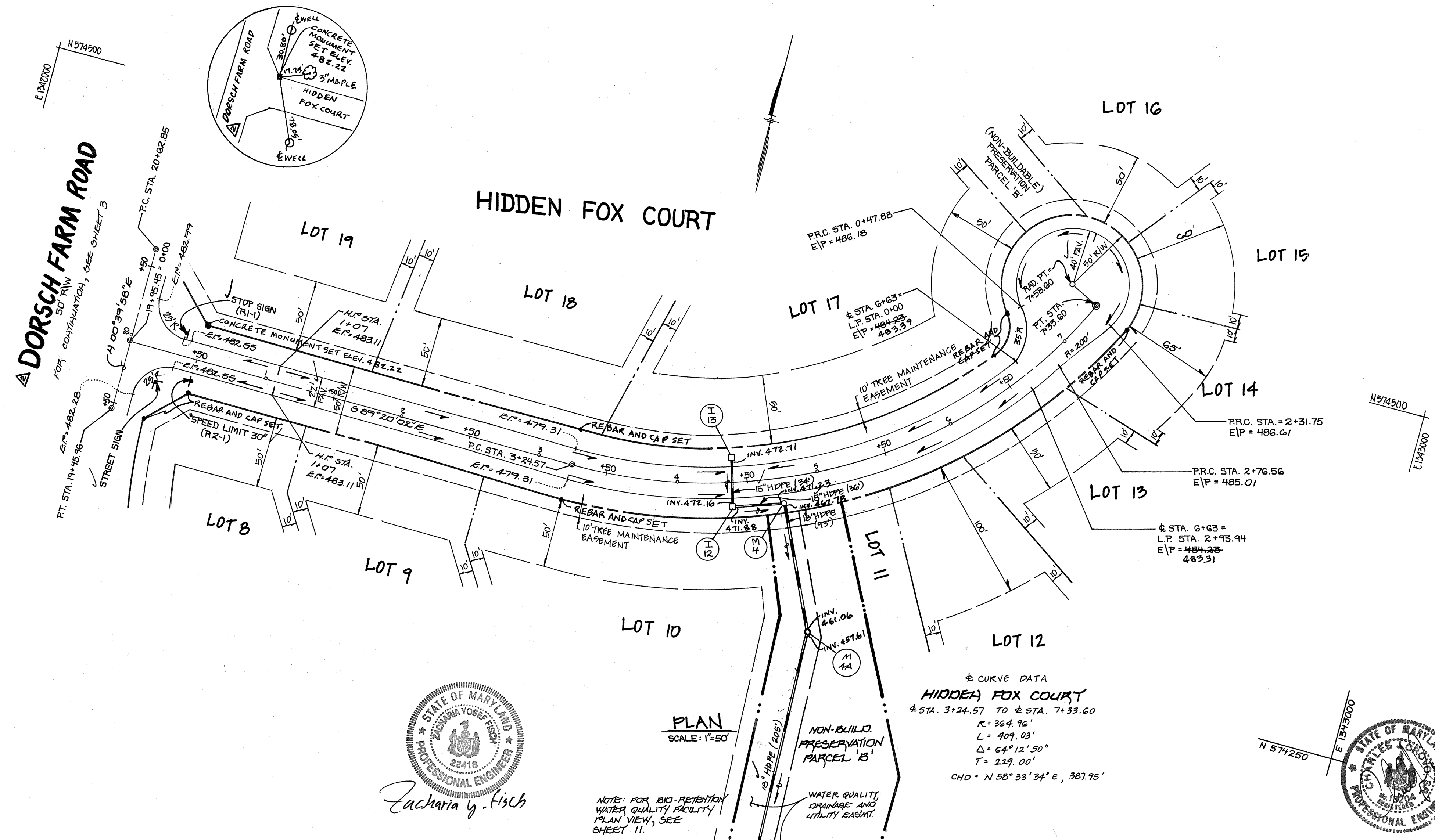
DEVELOPER
 RUSSELL DEVELOPMENT, L.L.C.
 c/o J. THOMAS SCRIVENER
 5026 DORSEY HALL DR., SUITE 204
 ELLICOTT CITY, MARYLAND 21042

10-5-01 REVISE FOX HAVEN WAY TO DORSCH FARM ROAD
 10-5-01 IDENTIFY F-01-144 PLANTING EASEMENT
 12-29-00 REVISE P.C.B. LOCATION AND PLANTING
 REVISIONS
 8-3-98 REVISE ENTRANCE AND ALL PIPES TO HOPE



STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
GAITHER HUNT
 SECTION ONE AREA ONE
 LOTS 1-33, 63-71 AND
 PRESERVATION PARCELS 'B', 'E' & BULKY PARCEL 'F'
 ZONING: 'RC-DEO'
 TAX MAP No. 29 PARCEL 21 GRID 5
 TAX MAP No. 29 PARCEL 322 GRID 11
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: AUGUST 8, 1997
 SHEET 8 OF 23

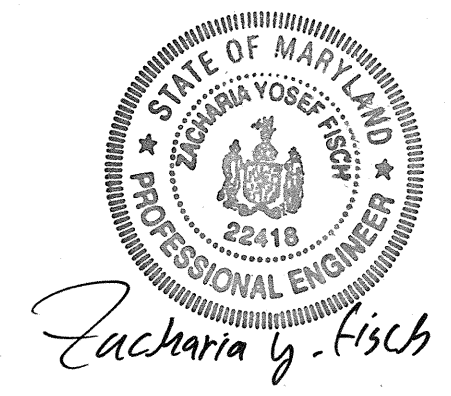
ASBUILT F98-24



APPROVED: DEPARTMENT OF PLANNING AND ZONING
Andy Hamilton 2/23/08
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Michael M. ... 2/18/08
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 2-5-08
 CHIEF, BUREAU OF HIGHWAYS DATE



REVISE FOX HAVEN WAY TO DORSCH FARM ROAD
 REVISIONS
 B-3-08 REVISE ALL RECP PIPE TO HDPE PIPE

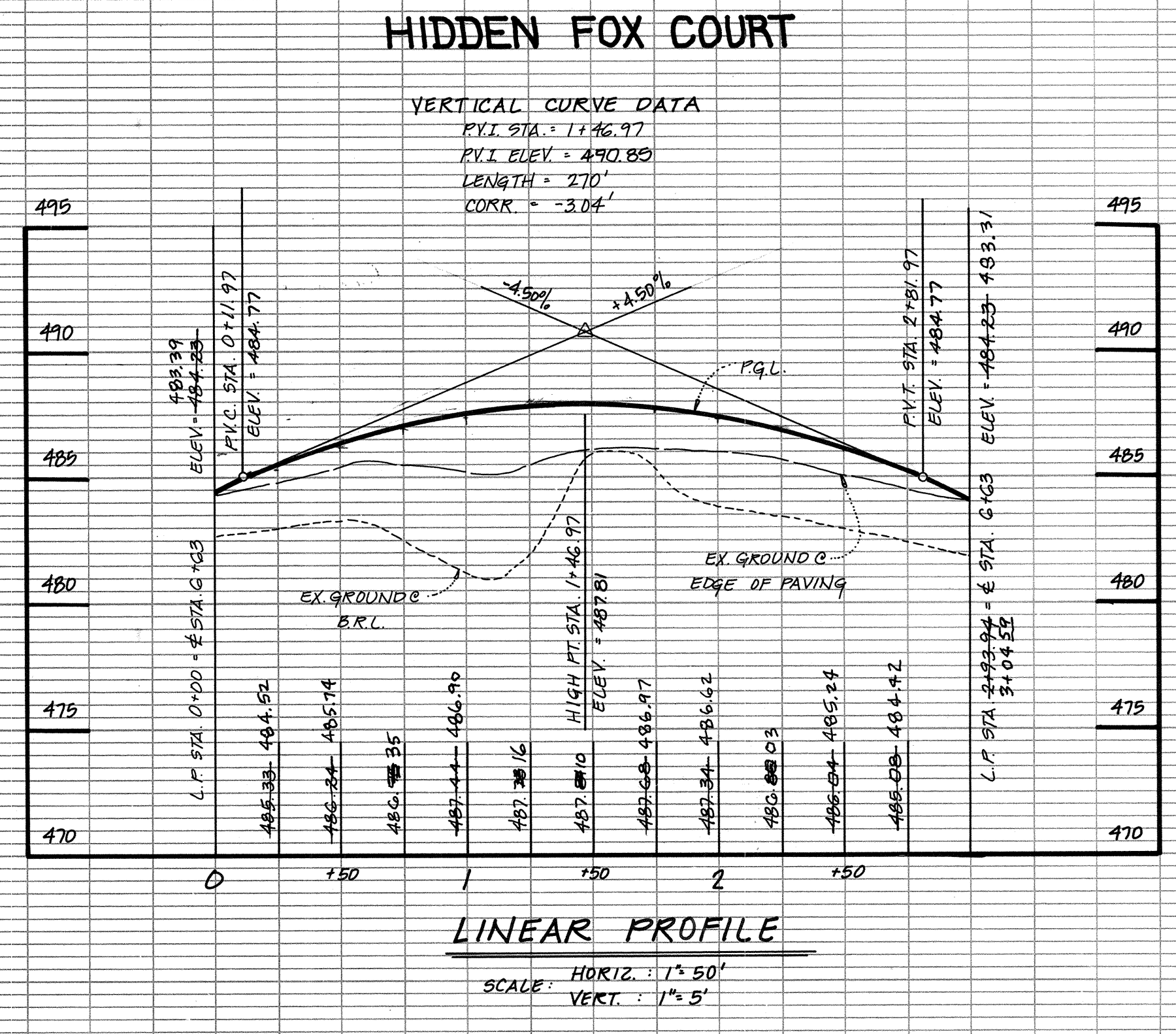
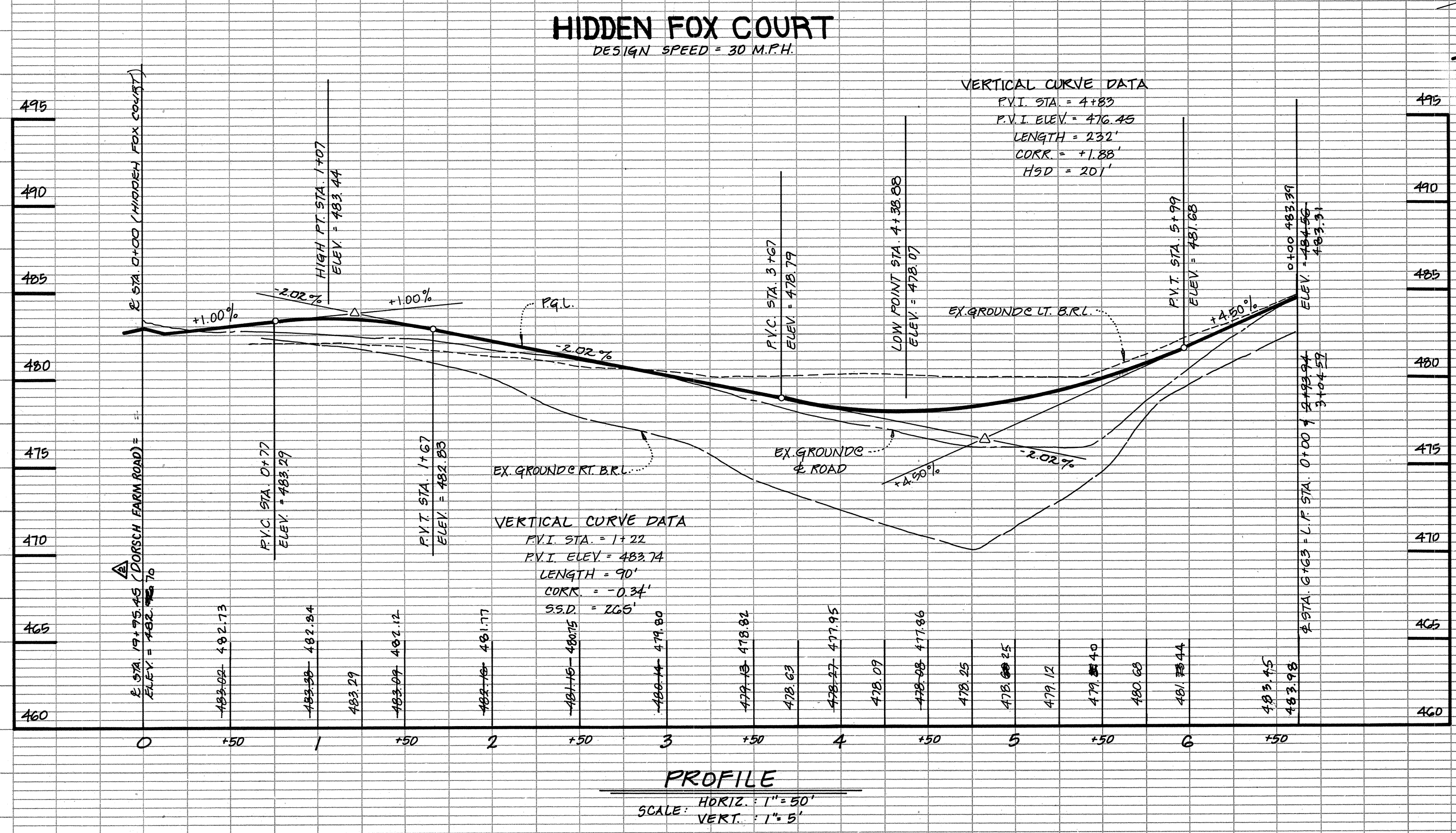
GAITHER HUNT
 SECTION 1 AREA 1
 LOTS 1-35, 65-71 AND PRESERVATION PARCELS 'B-E'
 & BULK PARCEL 'F'
 SECOND ELECTION DISTRICT HOWARD COUNTY, MD

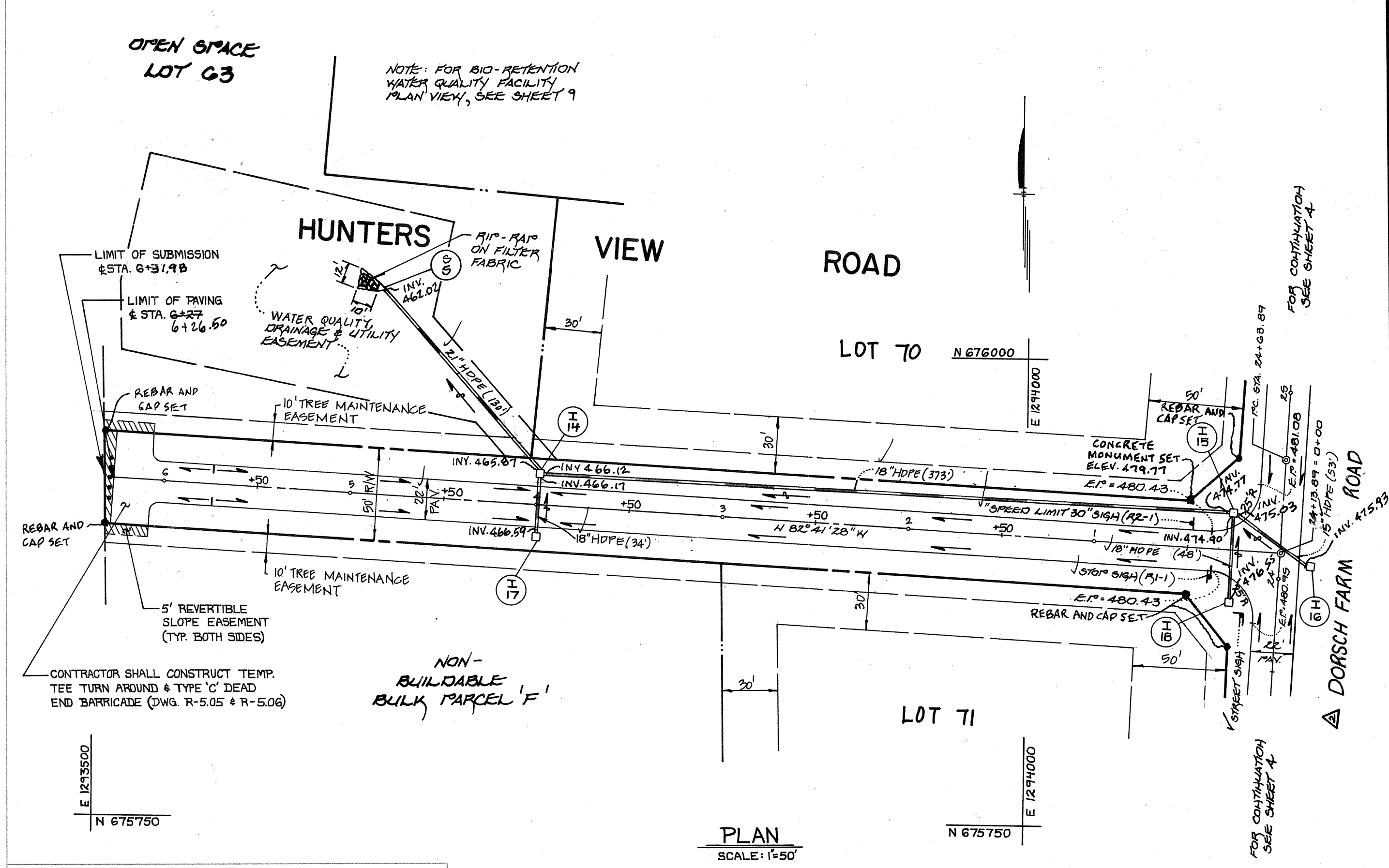
HIDDEN FOX COURT
 PLAN AND PROFILE

DEVELOPER: RUSSELL DEVELOPMENT, LLC
 OWNER: MARY ADRIANA BLOOR ET AL, PHILIP CARROLL AND THE KLEN FAMILY
 5028 DORSEY HALL DR, STE. 204 COLUMBIA, MARYLAND 21044
 5028 DORSEY HALL DR, SUITE 204 ELLICOTT CITY, MARYLAND 21042

SCALE: AS SHOWN DATE: AUG. 8, 1997 DWG. NO. 7 OF 29
 DES. J.V.F. DRN. J.A.U. CHK. Z.Y.F.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK • 10072 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2855

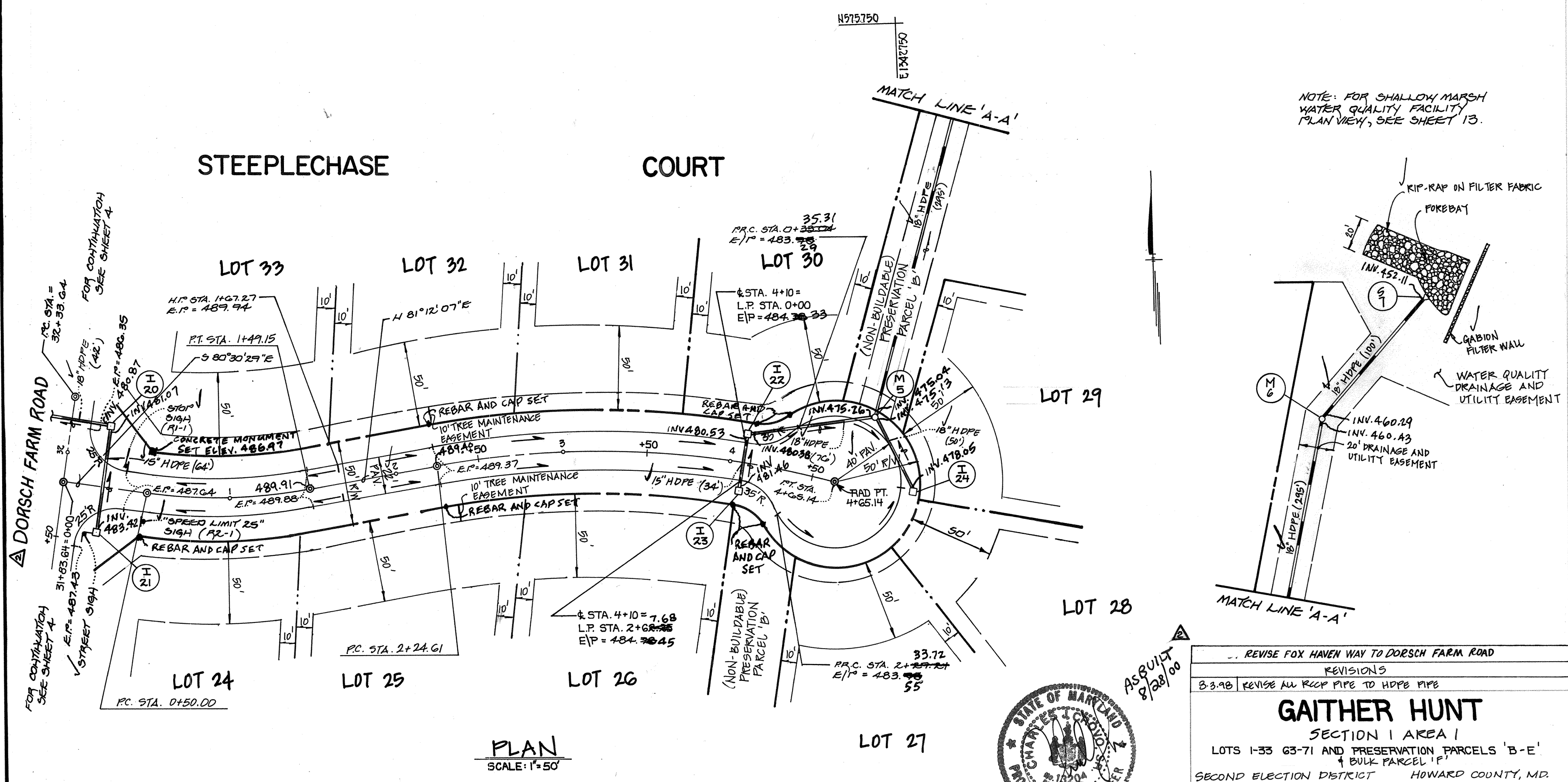




APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 2/29/95
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
William D. ... 2/29/95
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

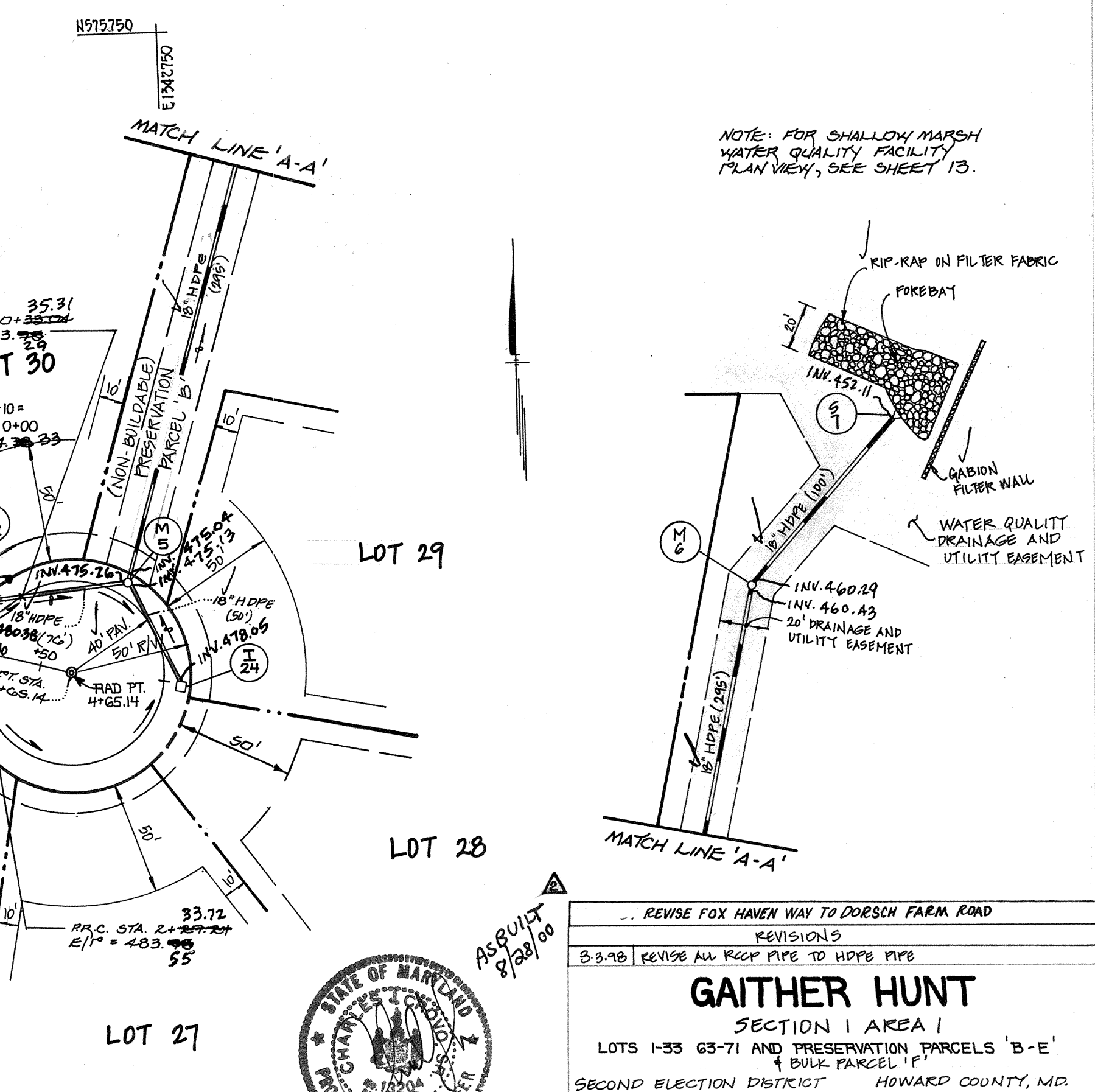
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Stephen M. ... 2-5-98
 CHIEF, BUREAU OF HIGHWAYS



APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 2/29/95
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
William D. ... 2/29/95
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Stephen M. ... 2-5-98
 CHIEF, BUREAU OF HIGHWAYS



APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 2/29/95
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
William D. ... 2/29/95
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Stephen M. ... 2-5-98
 CHIEF, BUREAU OF HIGHWAYS

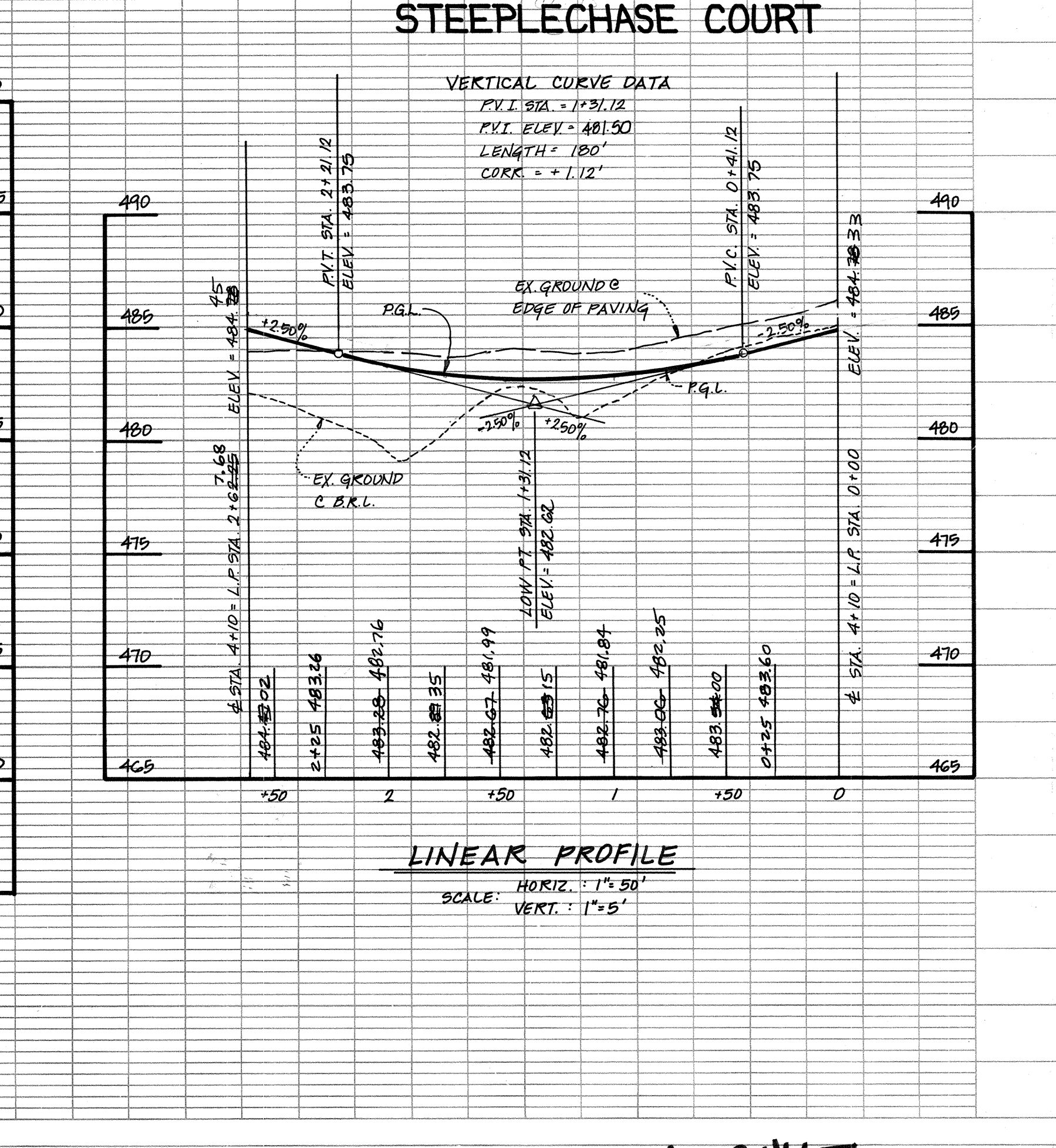
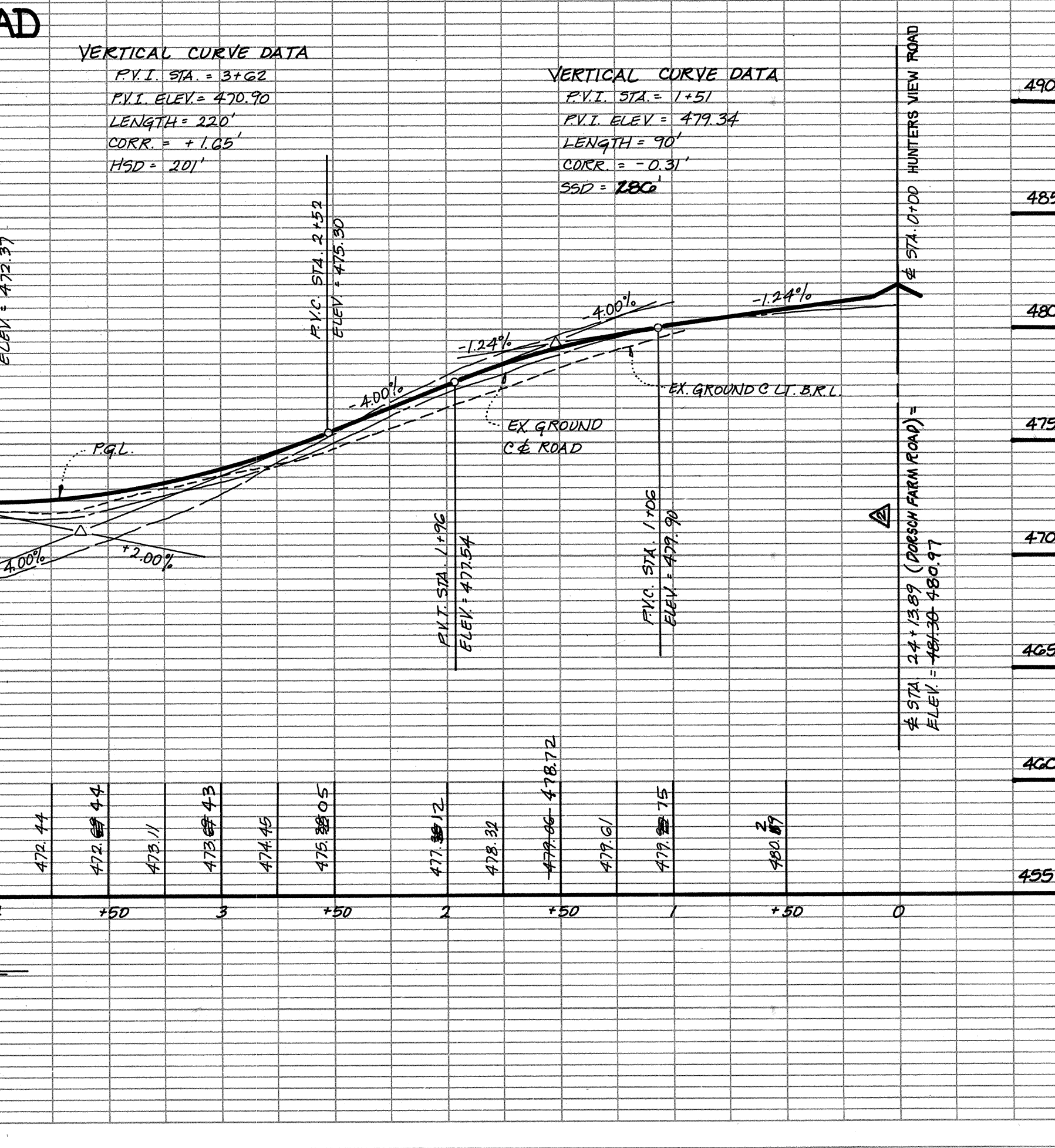
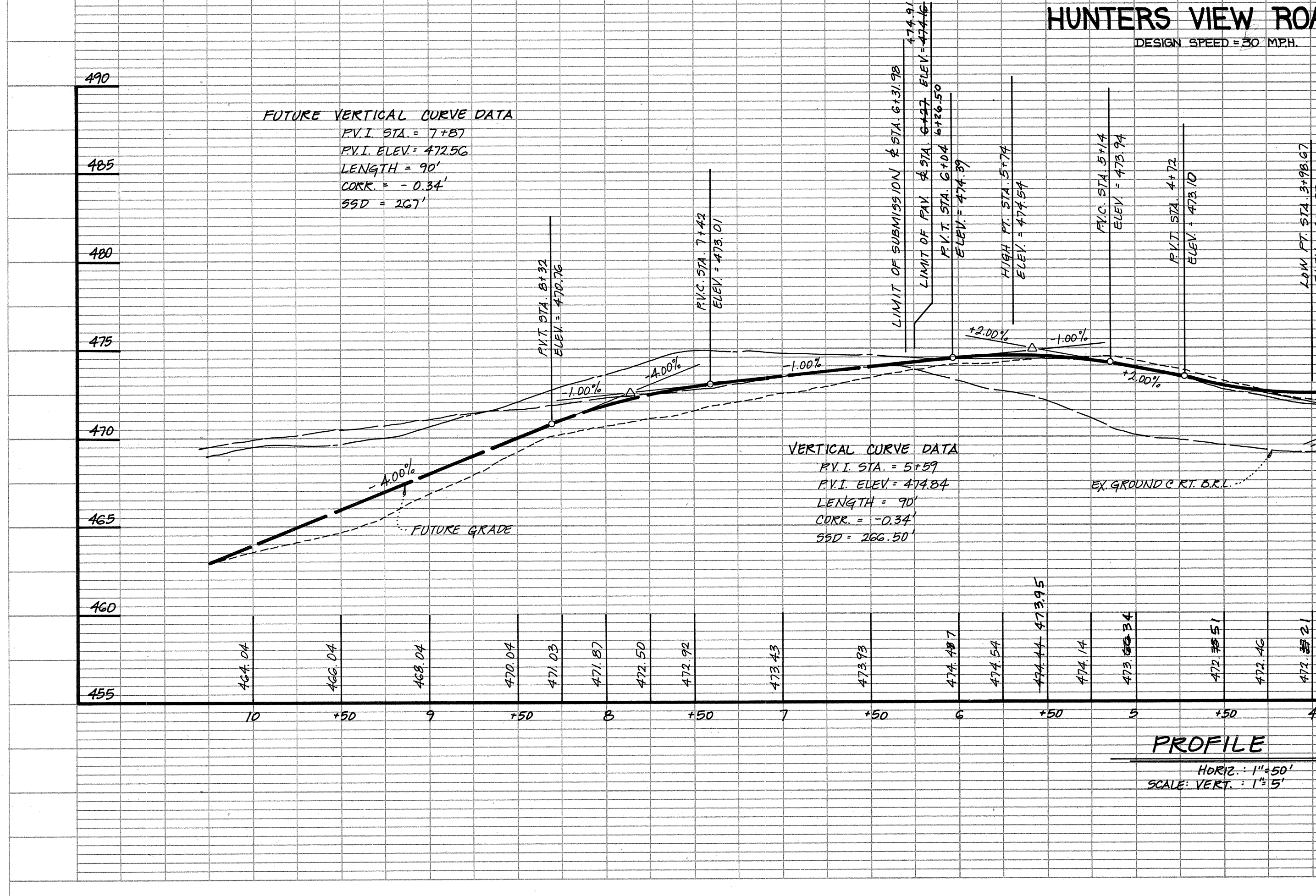
REVISIONS
 B.3.98 REVISE ALL RIP RAP TO HOPE PIPE

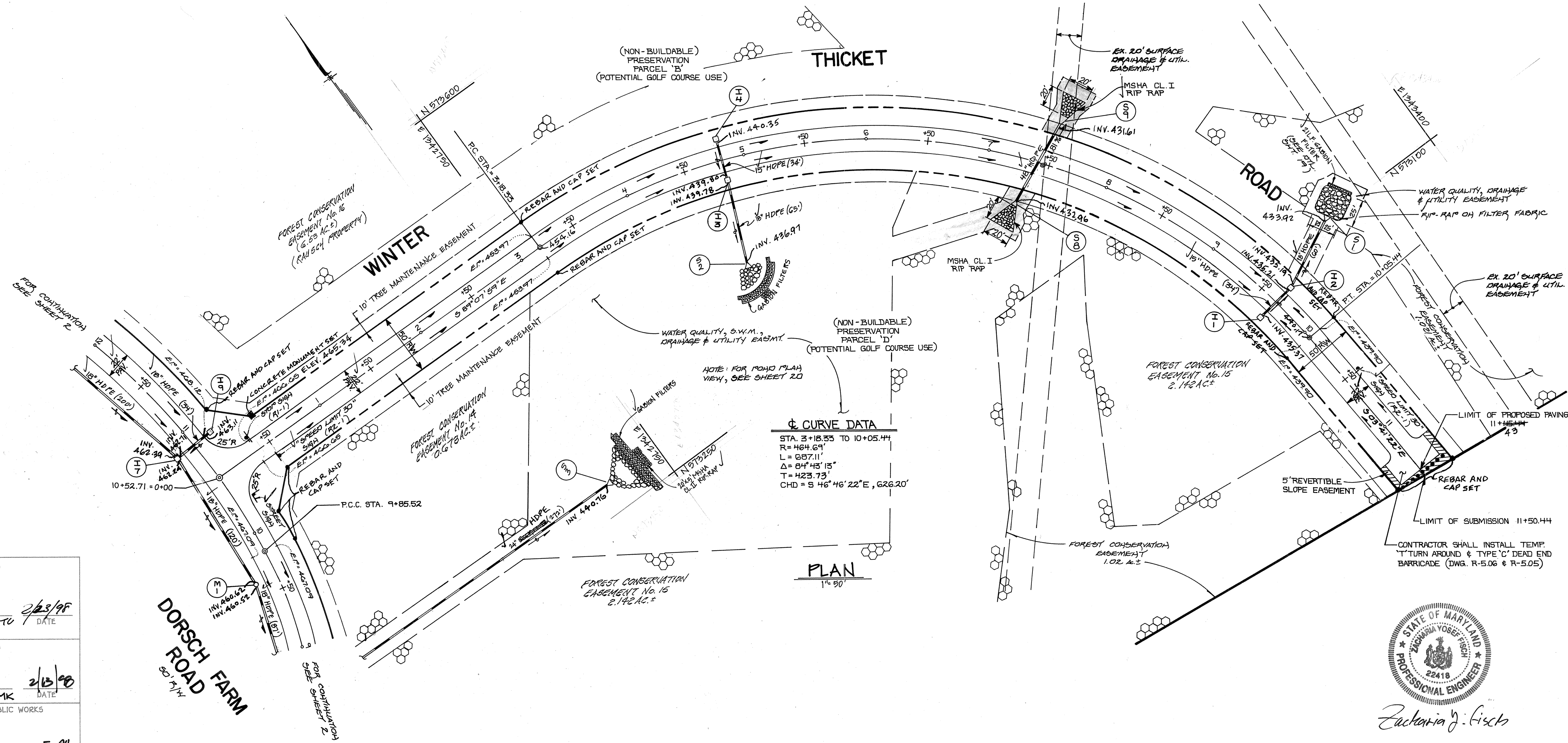
GAITHER HUNT SECTION I AREA I
 LOTS 1-35 63-71 AND PRESERVATION PARCELS 'B-E'
 SECOND ELECTION DISTRICT HOWARD COUNTY, MD.
HUNTERS VIEW / STEEPLECHASE COURT
 PLAN AND PROFILE

DEVELOPER: RUSSELL DEVELOPMENT, LLC
 OWNER: MARY ARBETH BLOOM ET AL. PHILIP CARROLL AND THE ELEAN FARMY CO. J. THOMAS SCOVILLE
 5055 DORSCH HALL DR., STE. 204 COLUMBIA, MARYLAND 21044
 ELICOTT CITY, MARYLAND 21042

SCALE: AS SHOWN DATE: AUG. 8, 1997 DWG. NO. G OF 23
 DES. J.V.P. DRN. J.A.U. CHK. Z.Y.F.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 481-2855





APPROVED: DEPARTMENT OF PLANNING AND ZONING
Andy Hamilton 2/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chris Dawson 2/13/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 2-5-98
 CHIEF, BUREAU OF HIGHWAYS DATE

STATE OF MARYLAND PROFESSIONAL ENGINEER ASBUILT 8/28/00

REVISE FOX HAVEN WAY TO DORSCH FARM ROAD
 10-20-00 REVISE FACE LOCATIONS AND PLANTINGS
 0-9-98 REVISE ALL RIP RAP TO HDPE PIPE

GAITHER HUNT SECTION I AREA I
 LOTS 1-33, 63-71 AND PRESERVATION PARCELS 'B-E' & BULK PARCEL 'F'
 SECOND ELECTION DISTRICT HOWARD COUNTY, MD

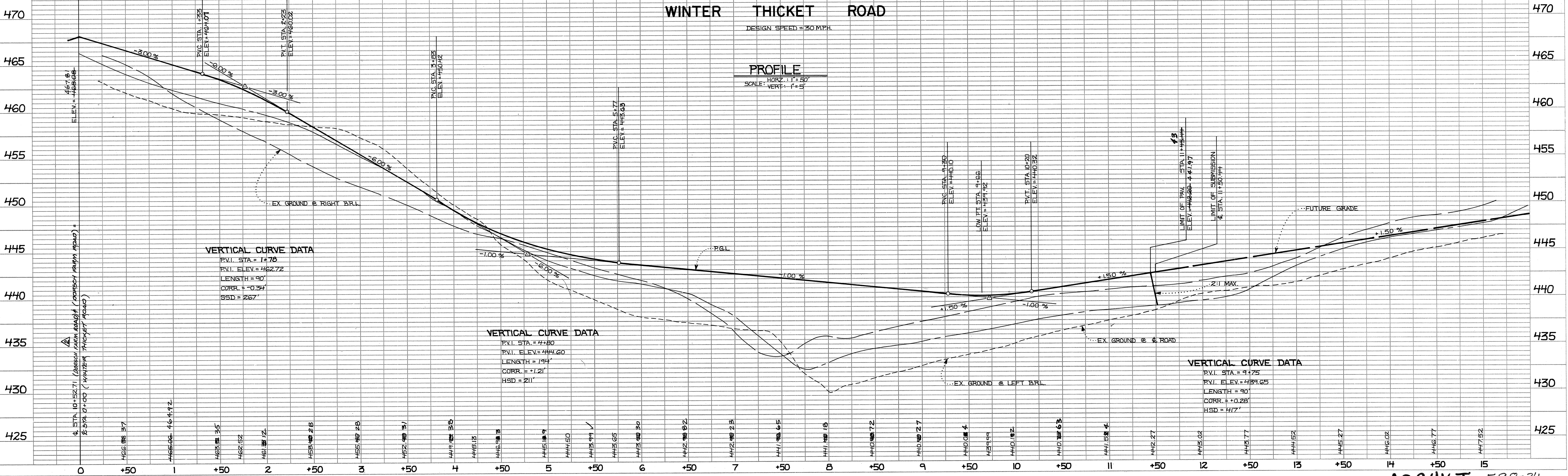
WINTER THICKET ROAD
 PLAN AND PROFILE

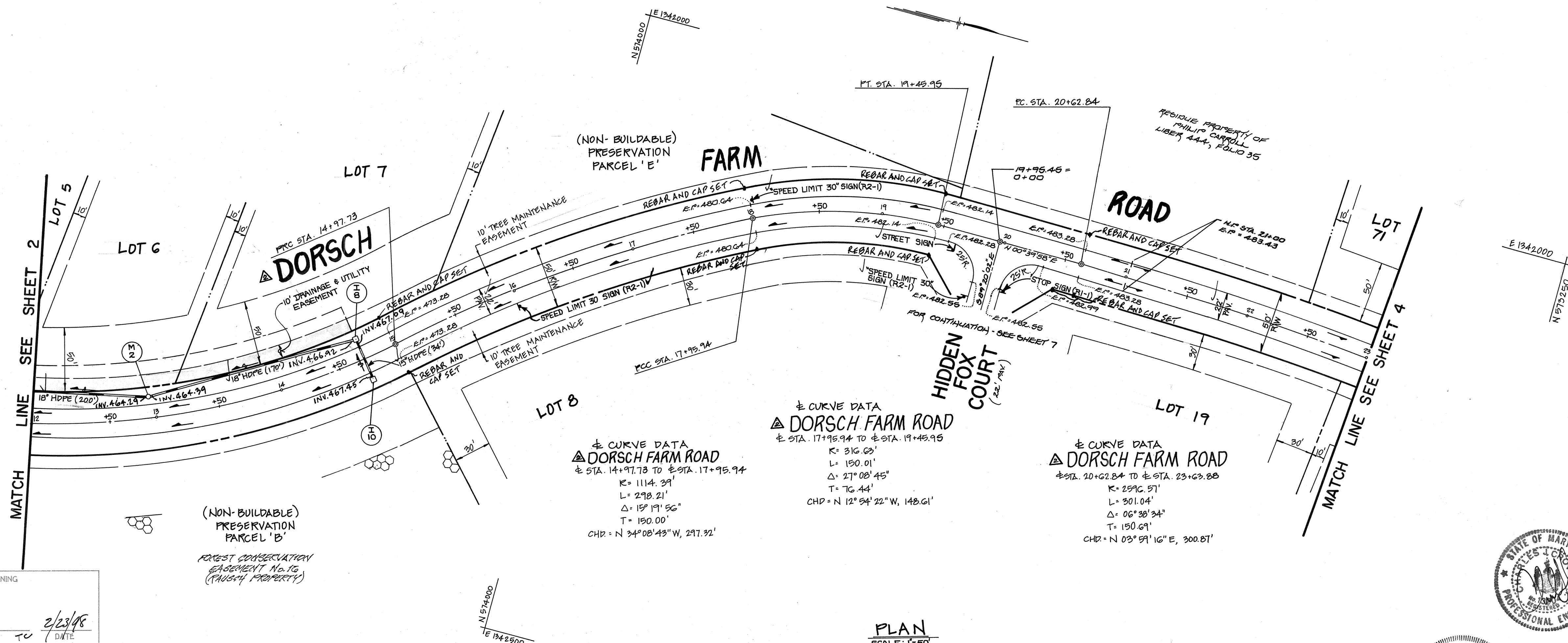
DEVELOPER: RUSSELL DEVELOPMENT, LLC
 OWNER: MARY ADRIANA BLOOR ET AL, PHILIP CARROLL AND THE ELEN FAMILY
 DES: J.V.F. DRN: J.A.U. CHK: Z.Y.F.

SCALE: AS SHOWN DATE: AUG. 8, 1997 DWG. NO. 5 OF 23
 FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

WINTER THICKET ROAD

DESIGN SPEED = 30 MPH
PROFILE
 SCALE: HORIZ. 1" = 50'
 VERT. 1" = 5'

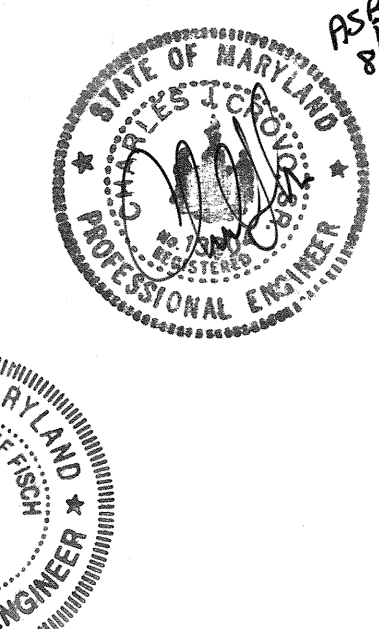




APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Harman 2/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
John Dammann 2/23/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Danely 2-5-98
 CHIEF, BUREAU OF HIGHWAYS AS DATE



Zacharia J. Fisch

10-5-01 REVISE FOX HAVEN WAY TO DORSCH FARM ROAD

REVISIONS

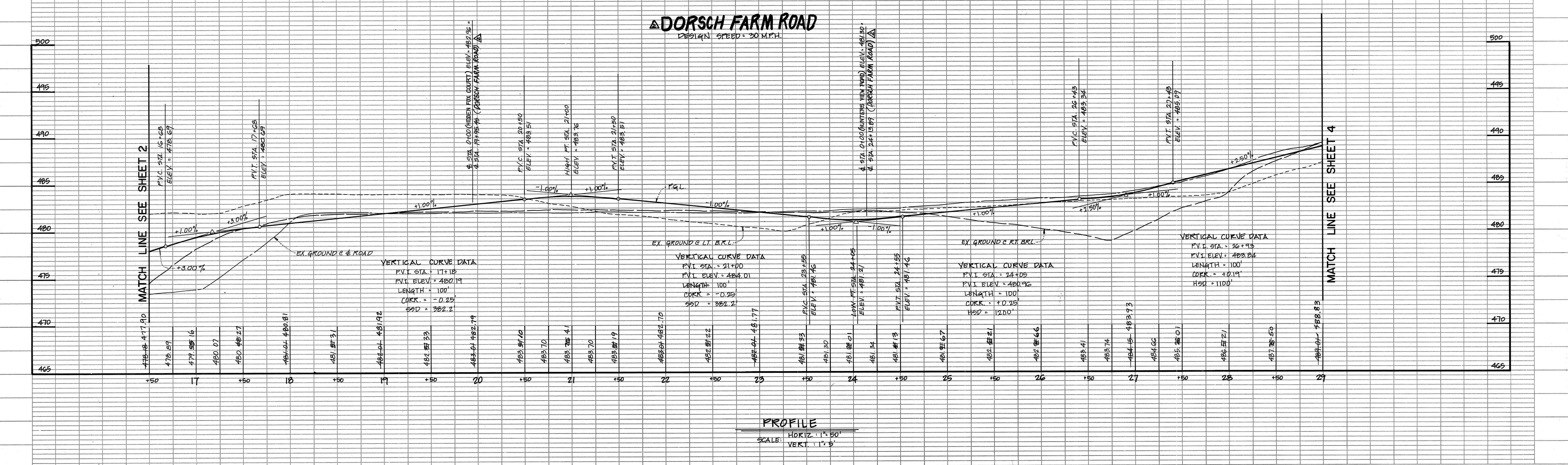
0-3-98 REVISE ALL KEEP PIPES TO HOPE PIPE

GAITHER HUNT
 SECTION 1 AREA 1
 LOTS 1-33, 65-71 AND PRESERVATION PARCELS 'B-E'
 BULK PARCEL 71
 SECOND ELECTION DISTRICT HOWARD COUNTY, MD

DORSCH FARM ROAD
 PLAN AND PROFILE

DEVELOPER: RUSSELL DEVELOPMENT, LLC
 OWNER: MARY ARBETH BLOOM ET AL, PHILIP CARROLL AND THE ELEN FAMILY
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

SCALE: AS SHOWN DATE: AUG. 8, 1997 DWG. NO. 3 OF 23
 DES. J.V.F. DRN. J.A.U. CHK. Z.Y.F.



APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cady Hamilton 2/23/98
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Michael Damann 2/10/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

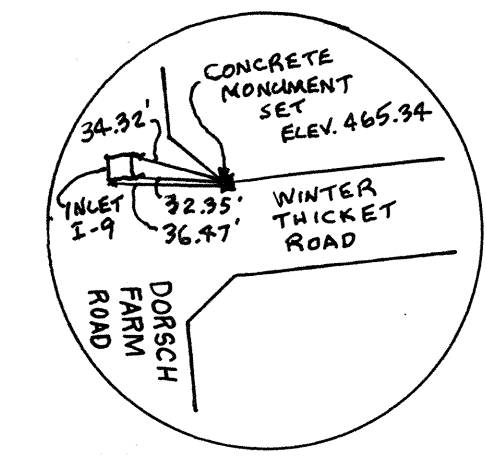
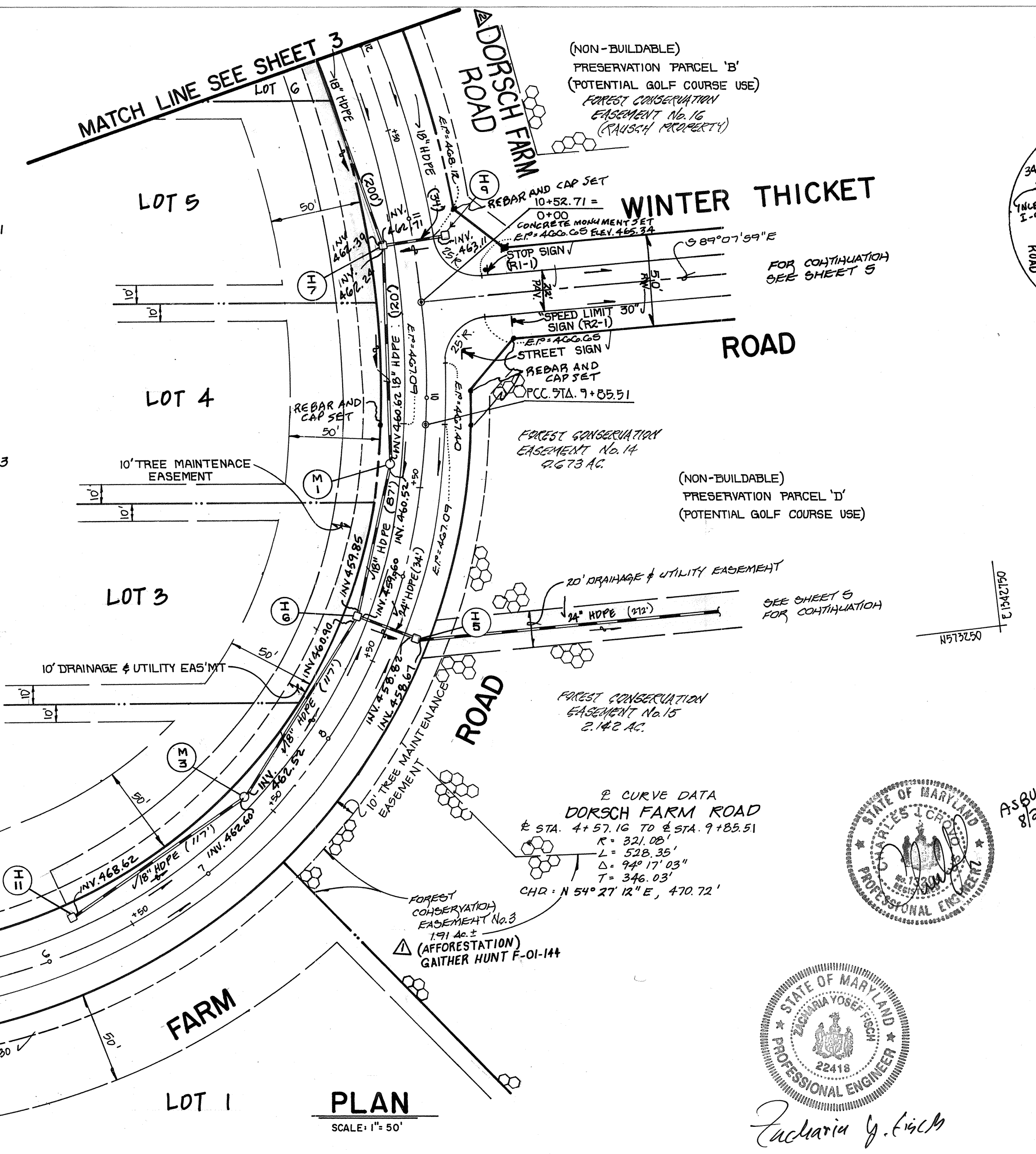
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Danek 2-5-98
 CHIEF, BUREAU OF HIGHWAYS DATE

A PVI STA 3+70.00 G.K. TO 400.54 B.S.
 B PCC STA 3+61.04 4.83'K. TO 400.52
 C PCC STA 3+62.04 4.89'K. TO 400.52
 D PVI STA 3+10.00 G.L. TO 400.88 B.S.
 E PVI STA 4+91.16 G.L. TO 400.88 B.S.
 F PCC STA 4+66.13 4.83'K. TO 400.03
 G PCC STA 4+66.13 4.83'K. TO 400.03
 H PVI STA 4+91.16 G.K. TO 400.10 ✓

§ CURVE DATA
 DORSCH FARM ROAD
 § STA. 9+85.81 TO § STA. 10+52.71
 R = 597.46'
 L = 67.20'
 Δ = 06° 26' 39"
 T = 33.03'
 CHD = N 04° 05' 05" E, 67.16'

§ CURVE DATA
 DORSCH FARM ROAD
 § STA. 10+52.72 TO § STA. 14+97.73
 R = 597.46'
 L = 445.02'
 Δ = 42° 40' 41"
 T = 233.44'
 CHD = N 20° 28' 18" W, 434.81'

§ CURVE DATA
 DORSCH FARM ROAD
 § STA. 4+57.16 TO § STA. 9+85.81
 R = 321.00'
 L = 528.35'
 Δ = 94° 17' 03"
 T = 346.03'
 CHD = N 54° 27' 12" E, 470.72'



10-5-01 REVISE FOX HAVEN TO DORSCH FARM ROAD
 10-5-01 IDENTIFY F-01-144 PLANTING EASEMENT
 12-28-00 REVISE P.C.C. LOCATION AND PLANTINGS
 REVISIONS
 8-3-98 REVISE ALL RECAP PIPE TO HOPE PIPE & REVISE ENTRANCE

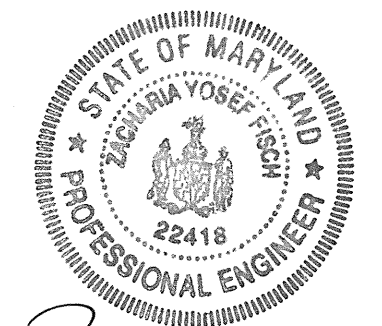
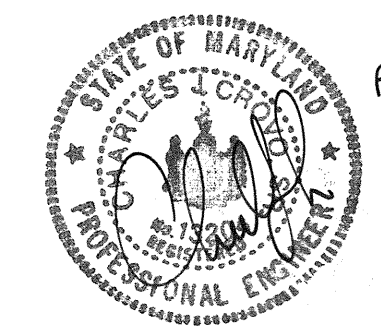
GAITHER HUNT
 SECTION AREA 1
 LOTS 1-33, 63-71 AND PRESERVATION PARCELS 'B-E'
 & BULKY PARCELS 'F-I'
 SECOND ELECTION DISTRICT HOWARD COUNTY, MD

DORSCH FARM ROAD
 PLAN & PROFILE

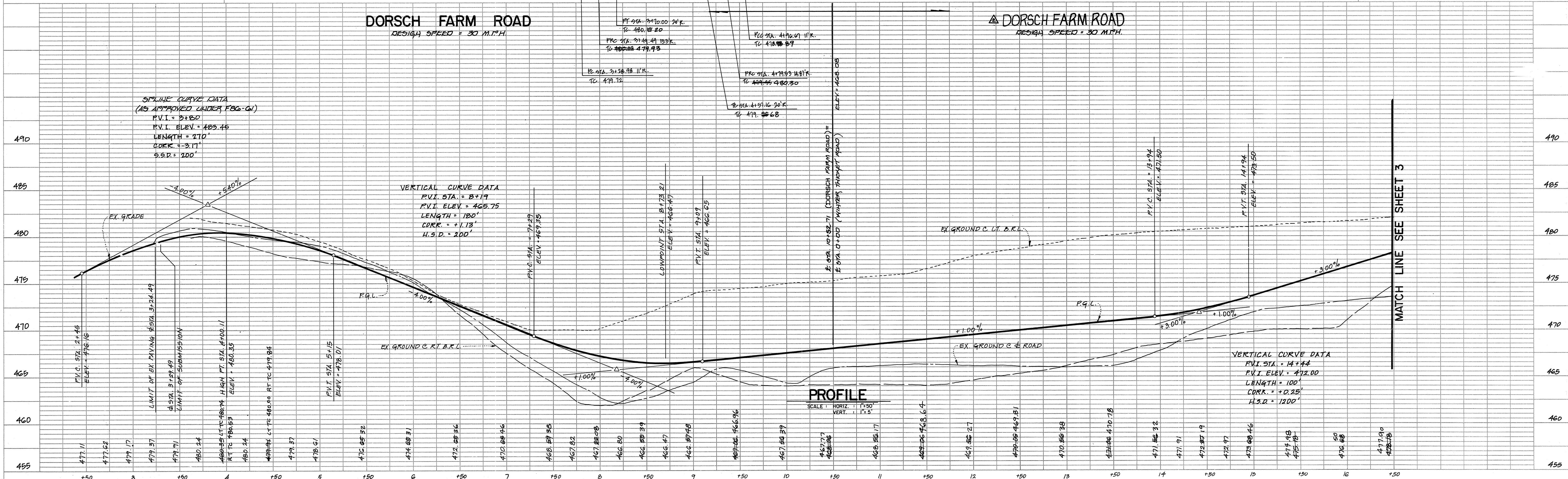
DEVELOPER: RUSSELL DEVELOPMENT, L.L.C.
 OWNER: HARRY APOSTHA BLOOD ET. AL. PHILIP CARROLL AND THE ELEN FAMILY
 5008 DORSEY HALL DR., STE. 204 ELLICOTT CITY, MARYLAND 21044

SCALE: AS SHOWN DATE: AUG. 8, 1997 DWG. NO. 2 OF 23
 DES. J.V.P. DRN. J.A.U. CHK. Z.Y.F.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2895



DORSCH FARM ROAD
 DESIGN SPEED = 30 M.P.H.



SPLINE CURVE DATA
 (AS APPROVED UNDER F&G-CM)
 P.V.I. = 3+80
 P.V.I. ELEV. = 483.45
 LENGTH = 270'
 CORR. = -3.11'
 H.S.D. = 200'

VERTICAL CURVE DATA
 P.V.I. STA. = 8+19
 P.V.I. ELEV. = 465.75
 LENGTH = 180'
 CORR. = +1.13'
 H.S.D. = 200'

VERTICAL CURVE DATA
 P.V.I. STA. = 14+44
 P.V.I. ELEV. = 472.00
 LENGTH = 100'
 CORR. = +0.25'
 H.S.D. = 1200'

AS BUILT F98-24

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	DORSCH FARM ROAD / FOX HAVEN WAY PLAN & PROFILE
3	DORSCH FARM ROAD PLAN & PROFILE
4	DORSCH FARM ROAD PLAN & PROFILE, STEEPLECHASE COURT PROFILE
5	WINTER THICKET ROAD PLAN & PROFILE
6	HUNTERS VIEW ROAD PLAN & PROFILE, STEEPLECHASE COURT PLAN & PROFILE
7	HIDDEN FOX COURT PLAN & PROFILE
8 - 13	STREET TREE, GRADING AND SEDIMENT CONTROL PLANS
14 - 15	DERAINAGE AREA MAP AND LANDSCAPE PLANS
16 - 17	STORM DRAIN PROFILES
18	TRP ROAD SECTION, STRUCTURE SCHEDULE, SEDIMENT TRAP DATA & SEDIMENT CONTROL DETAILS
19	STORMWATER MANAGEMENT DETAILS
20	STORMWATER MANAGEMENT POND PLAN & NOTES
21	STRIPING PLAN AND SITE LOCATION MAP
22	SEDIMENT CONTROL NOTES & DETAILS
23	FOREST CONSERVATION NOTES

FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS FOR GAITHER HUNT

**SECTION ONE AREA ONE
LOTS 1-33, 63-71 AND
PRESERVATION PARCELS 'B-E'
& BULK PARCEL 'F'
ZONING 'RC-DEO'**

**TAX MAP No. 29 PARCEL 21 GRID 5
TAX MAP No. 29 PARCEL 322 GRID 11
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND**

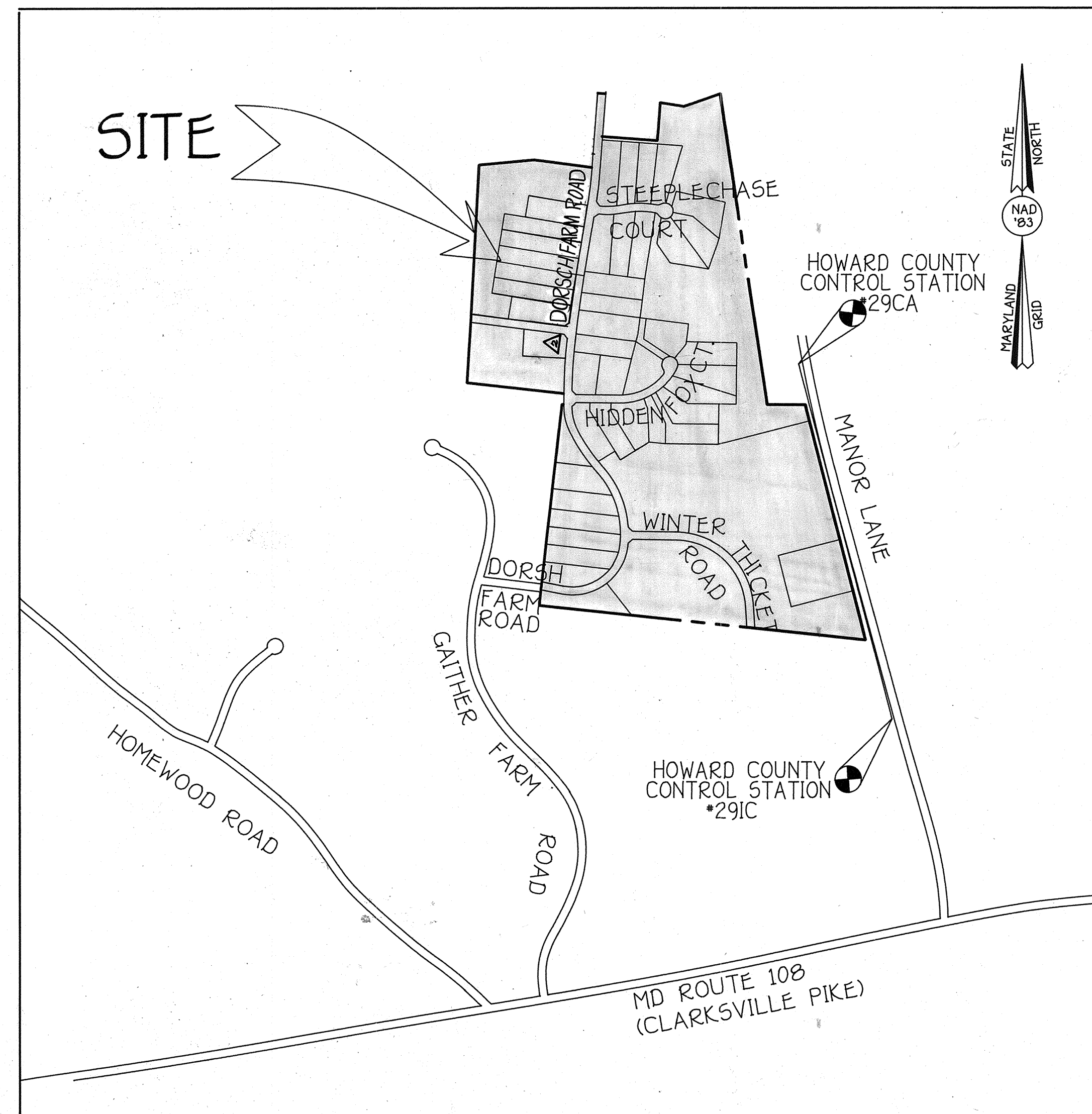
APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard M. Dwyer 2-5-98
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Andy Hamilton 2/23/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chris Dammann 2/13/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

TRAFFIC CONTROL SIGNS				
STREET NAME	STATION	OFFSET	POSTED SIGN	SIGN CODE
HIDDEN FOX COURT	0+37	12'LT.	STOP	R2-1
HIDDEN FOX COURT	0+50	12'RT.	SPEED LIMIT 30	R2-1
HUNTERS VIEW ROAD	0+37	12'LT.	STOP	R1-1
HUNTERS VIEW ROAD	0+50	12'RT.	SPEED LIMIT 30	R2-1
STEEPLECHASE COURT	0+37	12'LT.	STOP	R1-1
STEEPLECHASE COURT	0+50	12'RT.	SPEED LIMIT 25	R2-1
WINTER THICKET ROAD	0+37	12'LT.	STOP	R1-1
WINTER THICKET ROAD	0+50	12'RT.	SPEED LIMIT 30	R2-1
WINTER THICKET ROAD	10+50	12'LT.	SPEED LIMIT 30	R2-1
DORSCH FARM ROAD	5+25	12'RT.	SPEED LIMIT 30	R2-1
DORSCH FARM ROAD	16+00	12'RT.	SPEED LIMIT 30	R2-1
DORSCH FARM ROAD	30+00	12'LT.	SPEED LIMIT 30	R2-1
DORSCH FARM ROAD	18+00	12'LT.	SPEED LIMIT 30	R2-1

PERIMETER	CATEGORY	LANDSCAPE TYPE	LINEAR FEET OF ROADWAY FRONTAGE PERIMETER	CREDIT FOR		NUMBER OF PLANTS PROVIDED					
				EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	SHADE TREES	EVERGREEN TREES	OTHER TREES (2:1 SUBSTITUTION)	SHRUBS (10:1 SUBSTITUTION)		
P-1	ADJACENT TO PERIMETER	A	244'	YES (244')	NO	0	-	-	0	-	-
P-2	ADJACENT TO PERIMETER	A	575'	YES (570')	NO	0	-	-	0	-	-
P-3	ADJACENT TO PERIMETER	A	100'	YES (100')	NO	0	-	-	0	-	-
P-4	ADJACENT TO PERIMETER	A	746'	YES (746')	NO	0	-	-	0	-	-
P-5	ADJACENT TO PERIMETER	A	226'	NO	NO	3	-	-	3	-	-
P-6	ADJACENT TO PERIMETER	A	156'	NO	NO	2	-	-	2	-	-
P-7	ADJACENT TO PERIMETER	A	485'	NO	NO	8	-	-	8	-	-
P-8	ADJACENT TO PERIMETER	A	323'	NO	NO	5	-	-	5	-	-
P-9	ADJACENT TO PERIMETER	A	328'	NO	NO	5	-	-	5	-	-
P-10	ADJACENT TO PERIMETER	A	250'	YES (35')	NO	3	-	-	3	-	-
P-11	ADJACENT TO PERIMETER	A	108'	YES (108')	NO	0	-	-	0	-	-
P-12	ADJACENT TO PERIMETER	A	380'	YES (340')	NO	1	-	-	1	-	-
P-13	ADJACENT TO PERIMETER	A	313'	YES (140')	NO	2	-	-	2	-	-
P-14	ADJACENT TO PERIMETER	A	116'	NO	NO	2	-	-	2	-	-
P-15	ADJACENT TO PERIMETER	A	285'	NO	NO	4	-	-	4	-	-
P-16	ADJACENT TO PERIMETER	A	129'	NO	NO	2	-	-	2	-	-
P-17	ADJACENT TO PERIMETER	A	192'	NO	NO	3	-	-	3	-	-
P-18	ADJACENT TO PERIMETER	A	571'	NO	NO	9	-	-	9	-	-
P-19	ADJACENT TO PERIMETER	A	71'	NO	NO	1	-	-	1	-	-
P-20	ADJACENT TO PERIMETER	A	167'	NO	NO	2	-	-	2	-	-
P-21	ADJACENT TO PERIMETER	A	72'	NO	NO	1	-	-	1	-	-
P-22	ADJACENT TO PERIMETER	A	418'	YES (80')	NO	5	-	-	5	-	-
P-23	ADJACENT TO PERIMETER	A	308'	YES (150')	NO	4	-	-	4	-	-
P-24	ADJACENT TO PERIMETER	A	240'	NO	NO	4	-	-	4	-	-
P-25	ADJACENT TO PERIMETER	A	428'	YES (60')	NO	6	-	-	6	-	-
P-26	ADJACENT TO PERIMETER	A	312'	YES (20')	NO	4	-	-	4	-	-
P-27	ADJACENT TO PERIMETER	A	95'	NO	NO	1	-	-	1	-	-
P-28	ADJACENT TO PERIMETER	A	368'	NO	NO	6	-	-	6	-	-
P-29	ADJACENT TO PERIMETER	A	500'	NO	NO	8	-	-	8	-	-
P-30	ADJACENT TO PERIMETER	A	370'	YES (370')	NO	0	-	-	0	-	-
P-31	ADJACENT TO PERIMETER	A	135'	YES (135')	NO	0	-	-	0	-	-
P-32	ADJACENT TO PERIMETER	A	130'	YES (130')	NO	0	-	-	0	-	-
P-33	ADJACENT TO PERIMETER	A	500'	YES (323')	NO	3	-	-	3	-	-
P-34	ADJACENT TO PERIMETER	A	126'	NO	NO	2	-	-	2	-	-
P-35	ADJACENT TO PERIMETER	A	141'	NO	NO	2	-	-	2	-	-
P-36	ADJACENT TO PERIMETER	A	167'	NO	NO	2	-	-	2	-	-
P-37	ADJACENT TO PERIMETER	A	266'	NO	NO	4	-	-	4	-	-



GENERAL NOTES

- UNLESS OTHERWISE NOTED, ALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH THE FOLLOWING:
 - HOWARD COUNTY STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION VOLUME IV.
 - MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, AS AMENDED.
 - SOIL CONSERVATION SERVICE 1983 MARYLAND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
 - SOIL CONSERVATION SERVICE 1993 MARYLAND STANDARDS AND SPECIFICATION FOR POND CONSTRUCTION (CODE 378)
 - EXISTING UTILITIES ARE BASED ON FIELD RUN TOPOGRAPHY.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, DIVISION OF CONSTRUCTION INSPECTION AT 410-313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.
- TOPOGRAPHY AND EXISTING CONDITIONS BASED ON FIELD RUN TOPOGRAPHY SURVEYED BY FISHER, COLLINS & CARTER, INC. ON 8/96.
- STORMWATER MANAGEMENT FOR THIS DEVELOPMENT WILL BE RETENTION METHOD.
- HORIZONTAL AND VERTICAL DATUMS BASED ON HOWARD COUNTY CONTROL COORDINATES BASED ON NAD 83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 1012 AND NO. 16E1
 HOWARD COUNTY MONUMENT 29CA N 175115.907000 E 409509.905700 ELEV. = 445.577
 HOWARD COUNTY MONUMENT 291C N 174444.564000 E 409686.239400 ELEV. = 509.924
- FOREST DELINEATION WAS PROVIDED BY EQUAL SCIENCE PROFESSIONALS.
- THE 100 YR. FLOODPLAIN AS SHOWN ON THESE PLANS ARE BASED ON THE ENCLOSED FLOODPLAIN STUDY THAT WAS PROVIDED BY FISHER, COLLINS & CARTER, INC.
- THE WETLANDS STUDY WAS PREPARED BY Eco-Science Professionals, Inc. AND APPROVED BY HOWARD COUNTY ON 8/96 UNDER 5-96-18.
- THE TRAFFIC STUDY WAS PROVIDED BY THE Traffic Group AND APPROVED ON 8/96 UNDER 5-96-18.
- THE SOILS INVESTIGATION REPORT WAS PREPARED BY LITE, Inc. ON JUNE 28, 1994.
- THIS PLAN IS SUBJECT TO WAIVER PETITION * WP-96-126 FROM SECTION 16.132.a.2.1a NOT TO IMPROVE ONE SIDE OF MANOR LANE NOR AND b & SECTION CONTRIBUTE FUNDS NECESSARY TO DO SUCH CONSTRUCTION.
- THE SKETCH PLAN 5-96-18 WAS APPROVED ON 8/20/96. THE PRELIMINARY PLAN P 97-08 WAS APPROVED ON 7/17/97.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE, 1993)".
- A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS DEVELOPMENT.
- TOTAL AREA OF SUBMISSION: 118,288 AC.
 A. TOTAL AREA ZONED RC-DEO = 118,288 AC.
 B. TOTAL NUMBER OF BUILDABLE LOTS = 42
 C. TOTAL AREA OF OPEN SPACE LOTS = 6,701
 D. TOTAL AREA OF ROADWAY = 6,979
- A) NON-BUILDABLE BULK PARCEL 'F' RESERVES THE RIGHT TO BE FURTHER SUBDIVIDED.
 B) THE AREA OF BULK PARCEL 'F' IS NOT REQUIRED TO SUPPORT THE DENSITY AND THE NO. OF PROPOSED LOTS.
- PERMIT TO DISRUPT EXISTING UTILITIES: TRACKING # 120860208, NATIONAL UTILITIES # 0741-0716 (8/96) DATE
- FOREST CONSERVATION EASEMENT No. 3 15 A, FOREST PLANTING AREA FOR F-01-144 CONTAINING 1,9008 ACRES.
- FOREST CONSERVATION EASEMENT No. 1 (CONTAINING 1.87 ACRES) AND FOREST CONSERVATION EASEMENT No. 1 (CONTAINING 0.805 ACRES) ARE REMOVED AND RELOCATED ON "AT ENTITLED "REVISION PLAN GAITHER HUNT SECTION 1, AREA 1, PRESERVATION PARCELS 'B' AND 'C' (11-00-151)".

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING	
LINEAR FEET OF PERIMETER	950 LF.
NUMBER OF TREES REQUIRED	
SHADE TREES	19
EVERGREEN TREES	23
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO
NUMBER OF TREES PROVIDED	
SHADE TREES	19
EVERGREEN TREES	23
OTHER TREES (2:1 SUBSTITUTION)	-

"THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL." FINANCIAL SURETY FOR THE 14% REQUIRED LANDSCAPE TREES HAS BEEN POSTED AS PART OF THE DEVELOPERS AGREEMENT IN THE AMOUNT OF \$14,600.

VICINITY MAP
SCALE: 1" = 600'

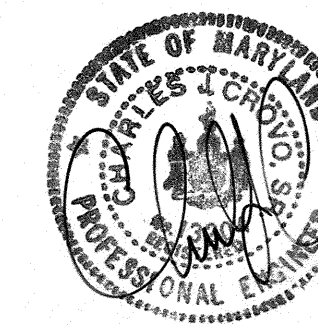
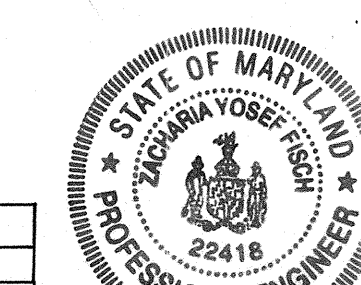
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10722 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21112
410 481 - 2999

OWNER
MARY ARMITA BLOOM, ET. AL
4794 MANOR LANE
COLUMBIA, MARYLAND 21044

OWNER
PHILIP CARROLL AND THE KLEIN FAMILY
c/o J. THOMAS SCRIVENER
5026 DORSEY HALL DR., SUITE 204
ELLICOTT CITY, MARYLAND 21042

DEVELOPER
RUSSELL DEVELOPMENT, L.L.C.
c/o J. THOMAS SCRIVENER
5026 DORSEY HALL DR., SUITE 204
ELLICOTT CITY, MARYLAND 21042

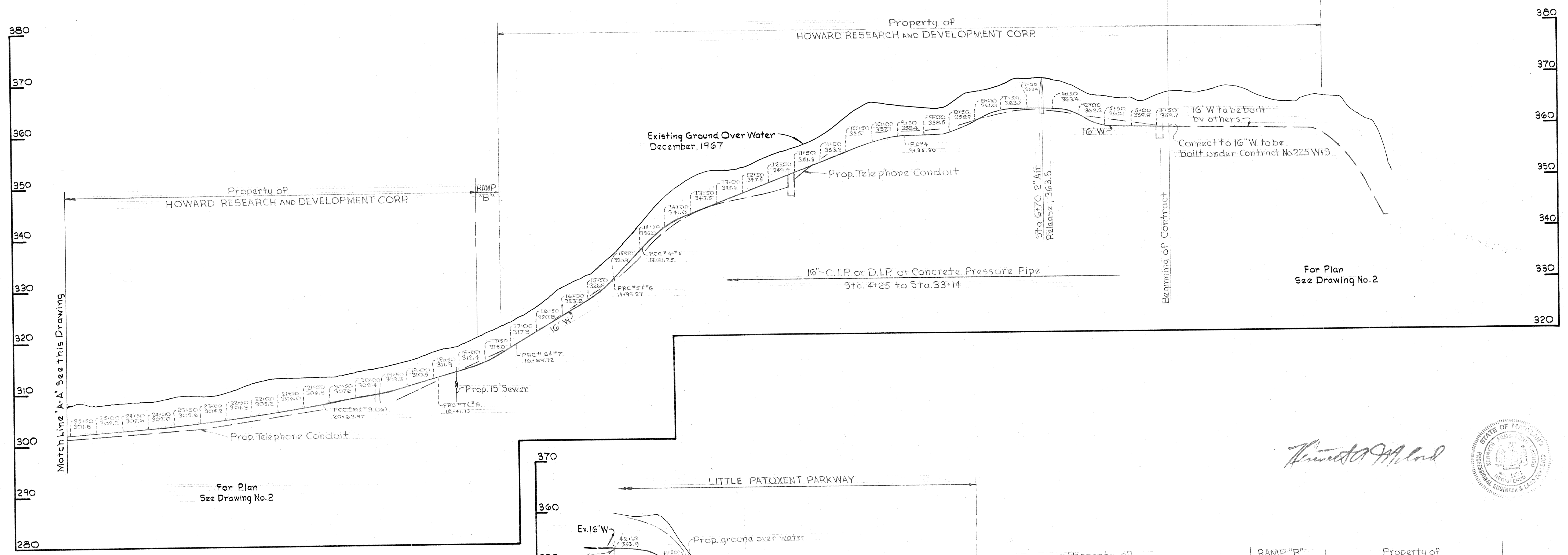
REVISE FOX HAVEN WAY TO DORSCH FARM ROAD
IDENTIFY F-01-144 PLANTING EASEMENT
12-28-00 REVISE F.C.E. LOCATION AND DRAWINGS
REVISIONS
8-3-98 REVISE ALL 6" PIPE TO HOPE PIPE
REVISE DRAINAGE



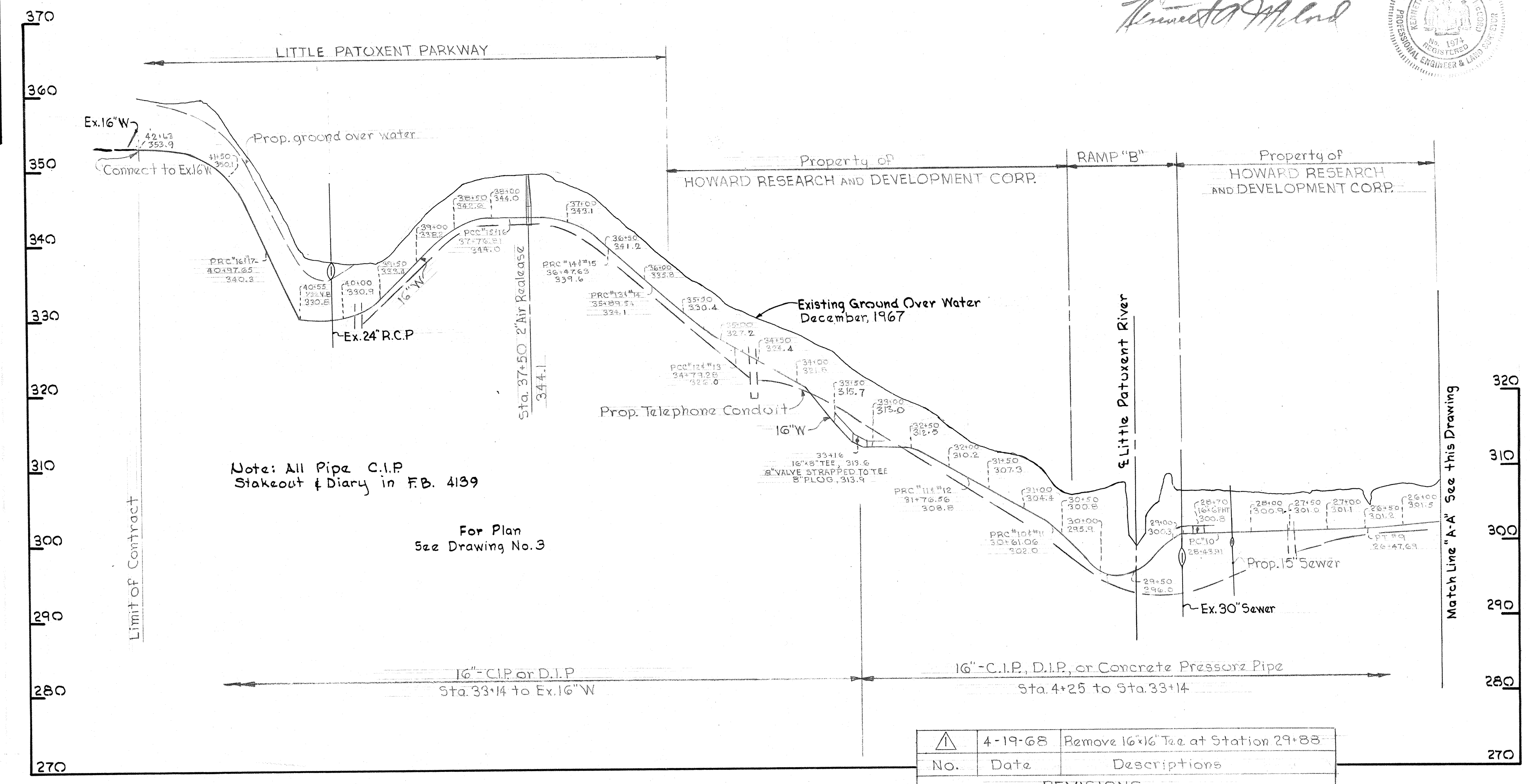
AS BUILT
8/28/00

GAITHER HUNT
SECTION ONE AREA ONE
LOTS 1-33, 63-71 AND PRESERVATION PARCELS 'B-E'
& BULK PARCEL 'F'
ZONING 'RC-DEO'
TAX MAP NO. 29, PARCEL NO. 21, GRID NO. 5
TAX MAP NO. 29, PARCEL NO. 332, GRID NO. 11
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SHEET 1 OF 23

AS BUILT F 98-24



- ### GENERAL NOTES
1. Approximate locations of existing mains are shown. The Contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired immediately.
 2. All pipe elevations are invert elevations.
 3. The Contractor shall locate existing utilities a minimum of two weeks in advance of construction operations in vicinity of utilities.
 4. For all standard details see standard bound in specifications.
 5. Block all fittings with concrete, see standard details bound in specifications.
 6. The Contractor shall notify the Telephone Company prior to any construction activities in the vicinity of the telephone cables by calling collect anytime, 343-3553 in Baltimore, Maryland.
 7. All Air Release Manholes on 16" water mains shall be 4'-0" in diameter.
 8. All 6" water mains shall be C.I.P. or D.I.P. 16" water mains must be C.I.P. or D.I.P. only except between stations 4+25 and 33+14 where C.I.P., D.I.P. or Concrete Pressure Pipe maybe used. All mains shall have a minimum of 3 1/2' of cover.
 9. Cost of Furnishing the B valve and strapping the B valve to the 16" main shall be included in the unit price bid for furnishing and laying 16" water mains.
 10. Clear all utilities by 9" minimum.



No.	Date	Descriptions
1	4-19-68	Remove 16" 16" Tee at Station 29+88

REVISIONS

WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
1304 ST. PAUL ST.
BALTIMORE, MARYLAND

HOWARD COUNTY METROPOLITAN COMMISSION
DATE 4-2-68
W. O. FILLBERT
CHIEF ENGINEER

CONTRACT NO. 175-W

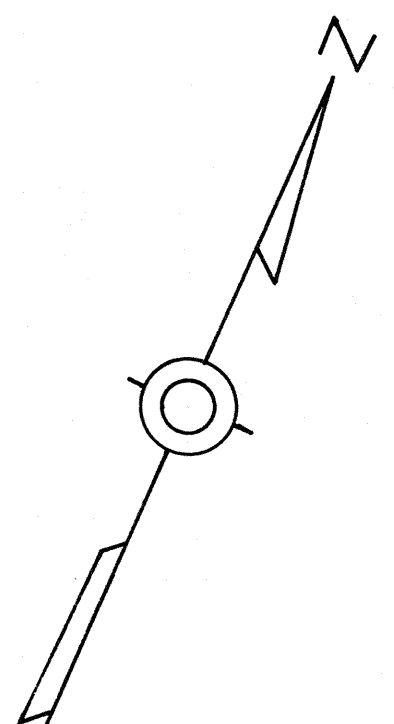
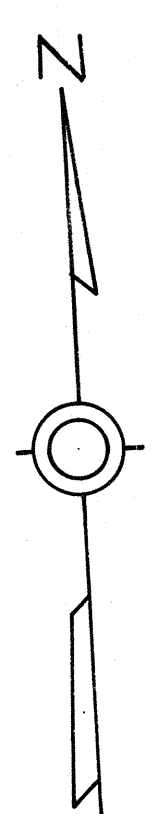
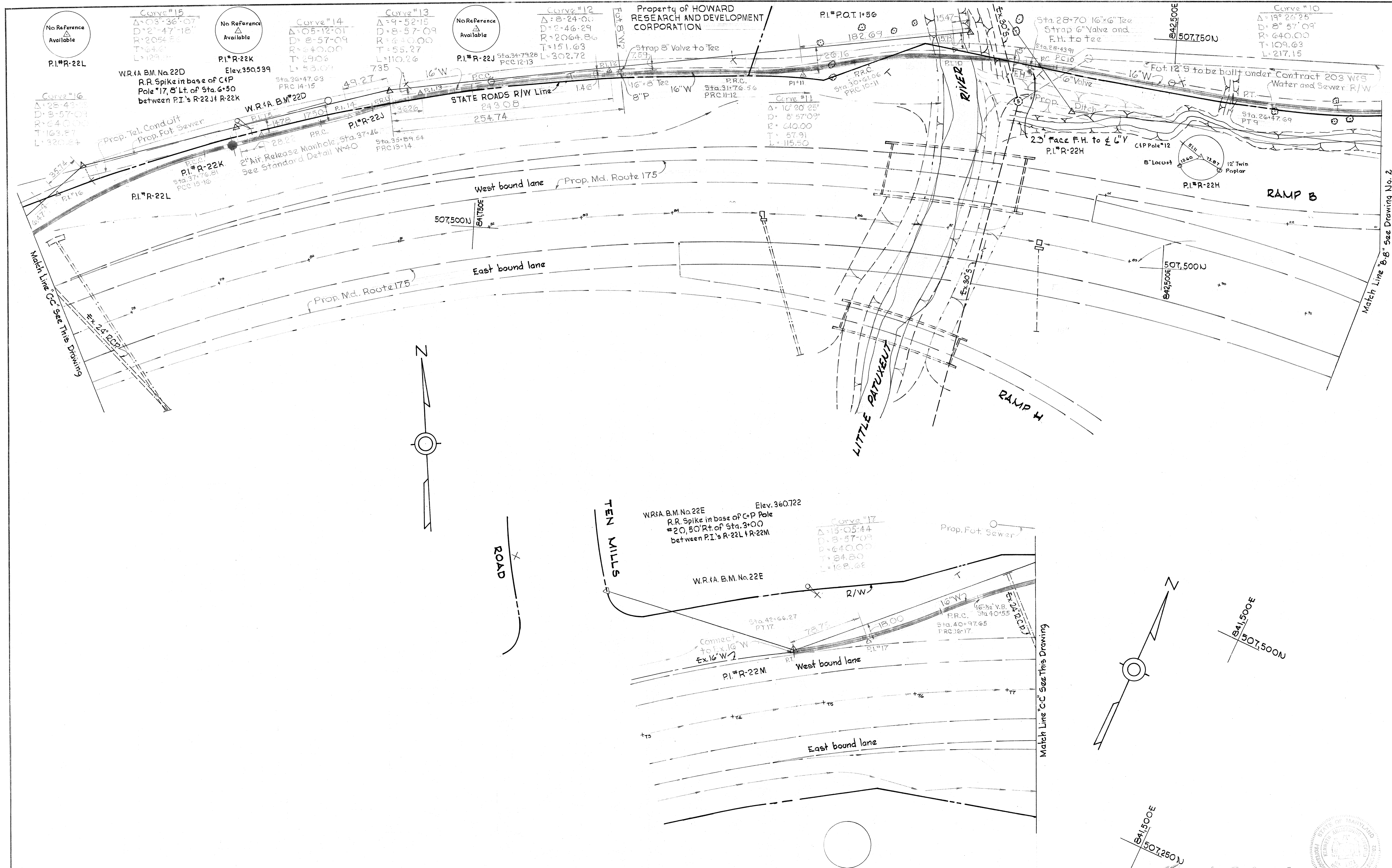
PROFILES OF
WATER MAIN EXTENSIONS

ELECTION DISTRICT
CLARKSVILLE NO. 5

DRAWING NO. 4 OF 4
SCALE H:1"=100'
V:1"=10'

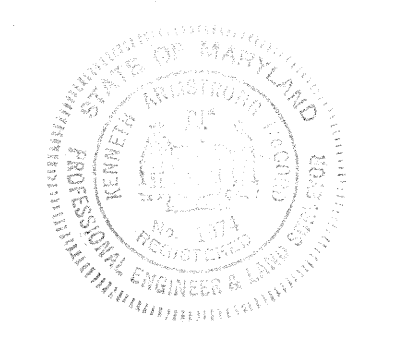
W. O. 5562-2

AS BUILT - AUG 6, 1968



No.	Date	Description
1	4-17-68	Relocate P.I. 17

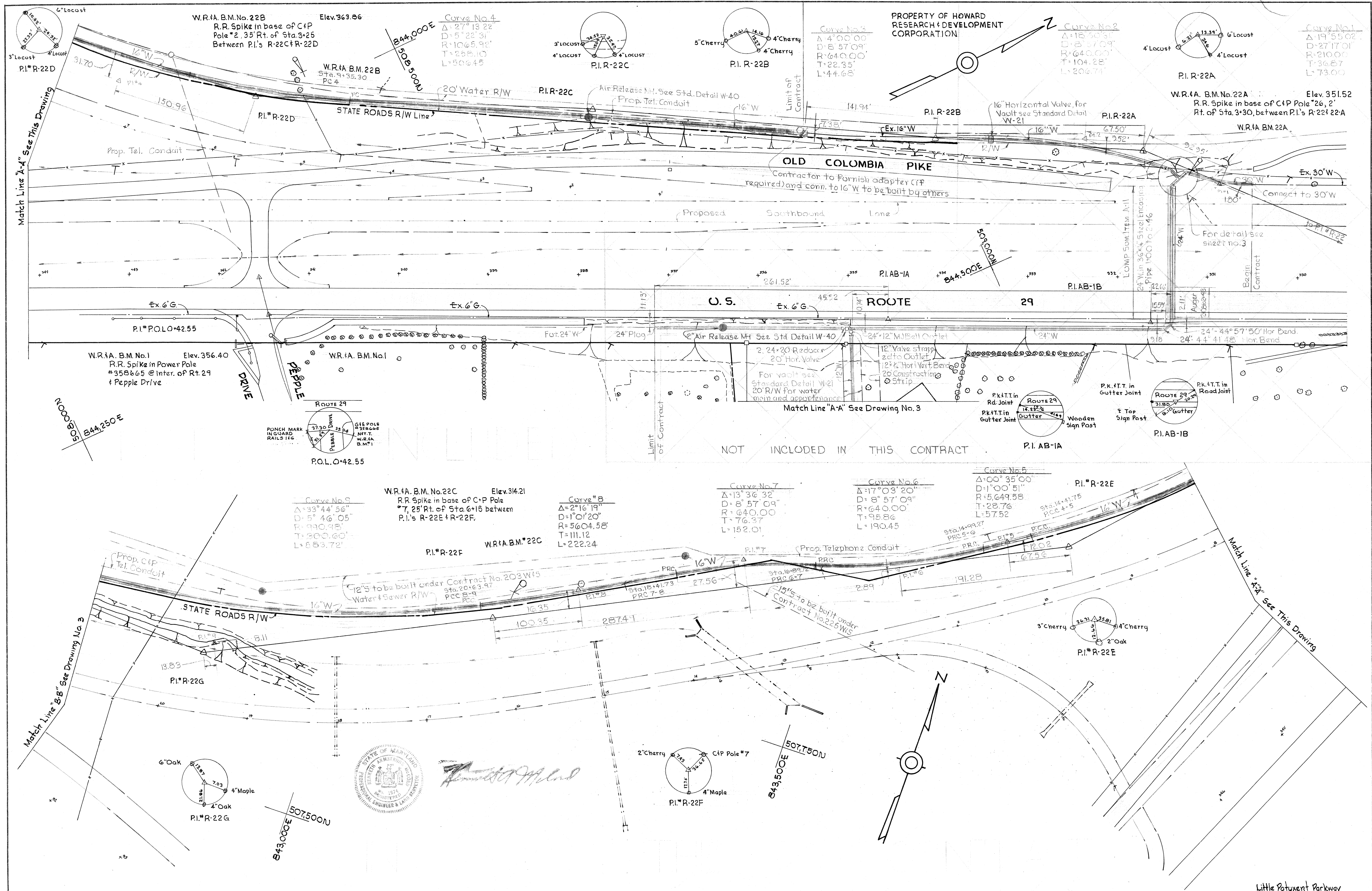
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WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	HOWARD COUNTY METROPOLITAN COMMISSION DATE: 4-2-68 W. O. FALLOUT CHIEF ENGINEER	CONTRACT NO. 175-W	PLAN OF WATER MAIN EXTENSIONS	ELECTION DISTRICT CLARKSVILLE NO. 5	DRAWING NO. 3 OF 4	SCALE 1"=50' 507-482 507-481
					AS BUILT AUG. 6, 1968	

W. O. 5562-2

WS 175-W/3



WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
1304 ST. PAUL ST.
BALTIMORE, MARYLAND

HOWARD COUNTY METROPOLITAN COMMISSION
3-18-68 *W. O. Albert*
DATE CHIEF ENGINEER

CONTRACT NO. 175-W

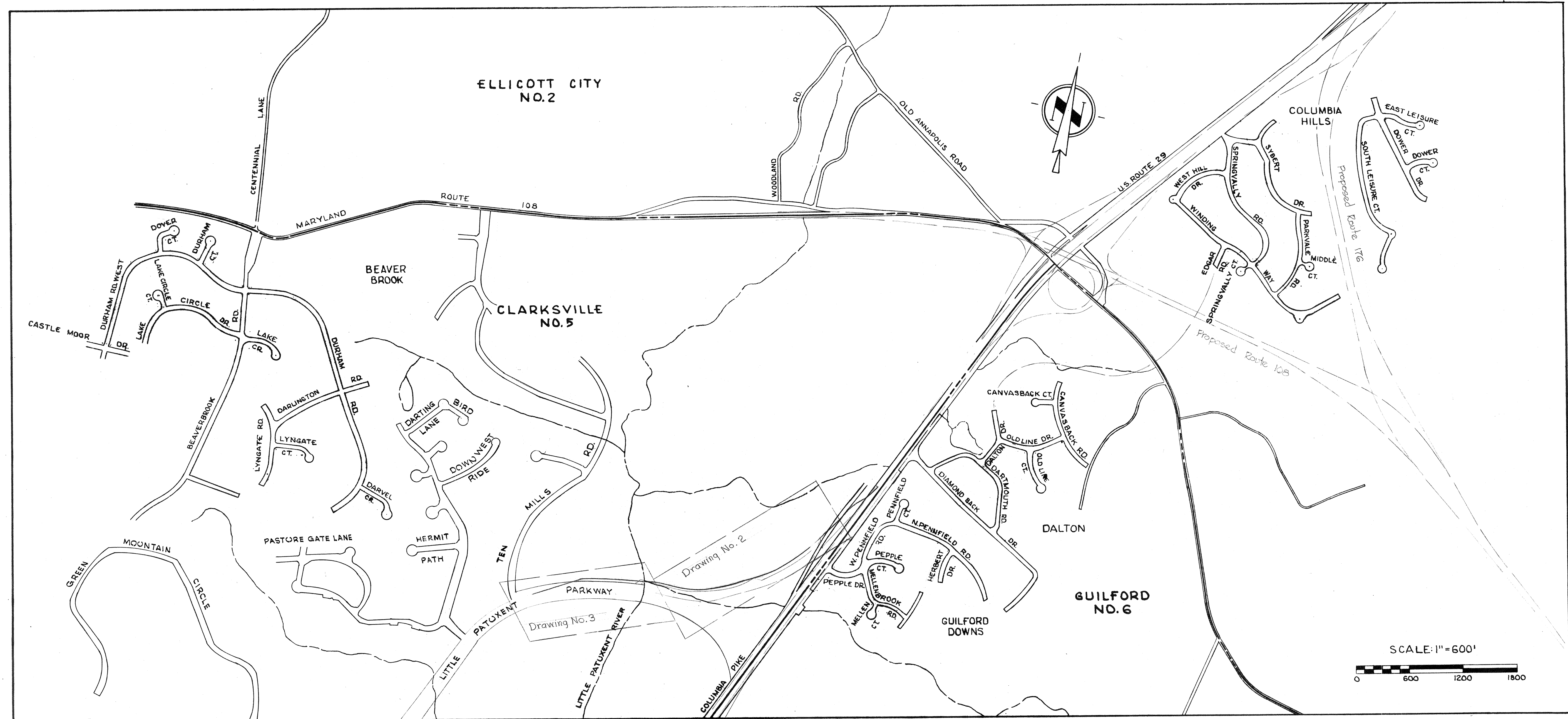
PLAN OF
WATER MAIN EXTENSIONS

ELECTION DISTRICT
CLARKVILLE NO. 5

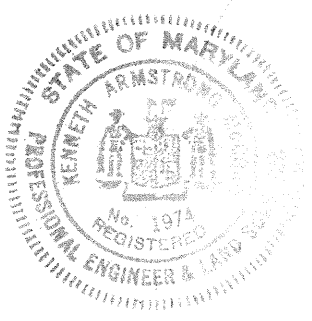
DRAWING
NO. 2
OF 4

SCALE
1"=50'
509-483
507-482
508-483

WS 175-W/2



CONTRACT 175-W
WATER MAIN EXTENSIONS
HOWARD COUNTY METROPOLITAN COMMISSION
ELLICOTT CITY, MARYLAND



Little Patuxent Parkway
Contract No. 175-W

WHITMAN, REQUARDT & ASSOCIATES ENGINEERS 1304 ST. PAUL ST. BALTIMORE, MARYLAND	HOWARD COUNTY METROPOLITAN COMMISSION DATE <u>4-2-69</u> <u>W O F</u> <small>CHIEF ENGINEER</small>	CONTRACT NO. 175-W	LOCATION MAP OF WATER MAIN EXTENSIONS	ELECTION DISTRICT CLARKVILLE NO. 5	DRAWING NO. <u>1</u> OF <u>4</u> SCALE AS SHOWN
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W. O. 55622

96969 GUT-TRING SV

WS 175-W/1