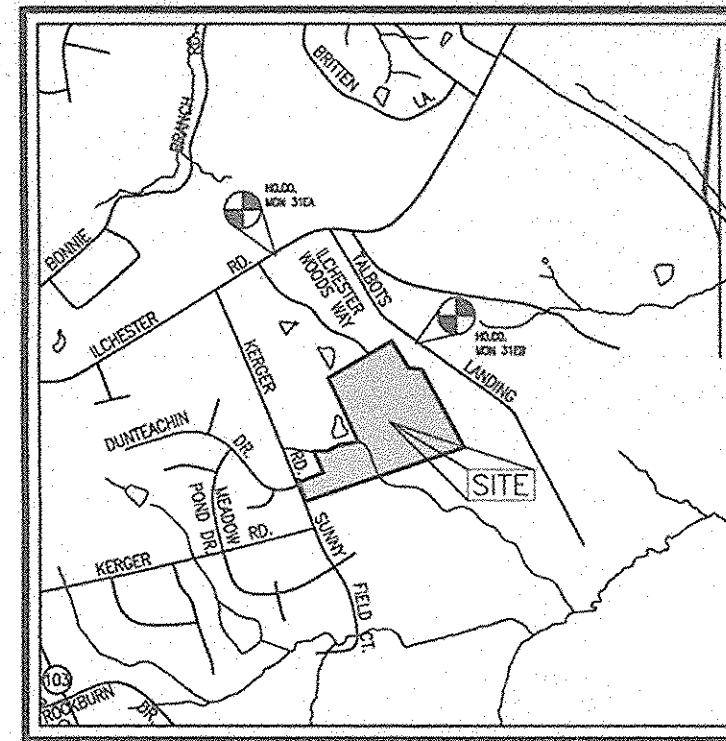


FINAL ROAD CONSTRUCTION PLAN DENNIS PRESERVE LOTS 1-58 HOWARD COUNTY, MARYLAND

BENCHMARK NO. 1; COUNTY CONTROL #31EA
N 569641.123 E 1374815.935
ELEV. = 469.603

BENCHMARK NO. 2; COUNTY CONTROL #31EB
N 568730.994 E 1376273.491
ELEV. = 453.396



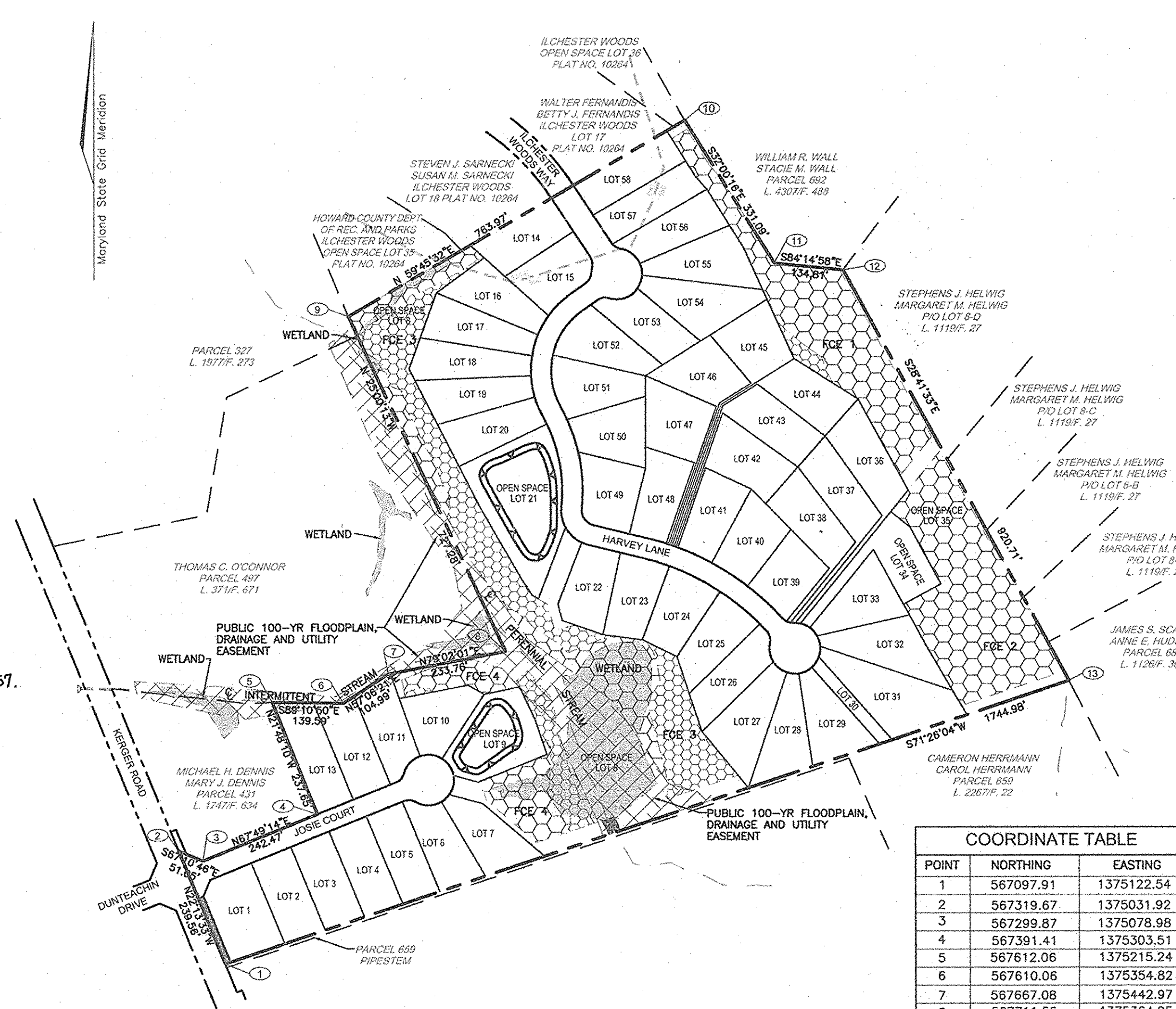
VICINITY MAP
SCALE: 1"=2000'

SITE DATA

LOCATION: TAX MAP 31, GRID 21, PARCEL '226'
1ST ELECTION DISTRICT
EXISTING ZONING: R-20
DPZ REFERENCES: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)
GROSS AREA OF PROJECT: 31.37 AC.
AREA OF 100-YR FLOODPLAIN: 1.57 AC. (68,284 SF±)
NET AREA OF PROJECT: 29.80 AC.
AREA OF PUBLIC RIGHT-OF-WAY DEDICATION: 2.09 AC. (91,223 SF±)
AREA OF OPEN SPACE REQUIRED: 30% OR 9.41 AC.
AREA OF CREDITED OPEN SPACE PROVIDED: 34.2% OR 10.75 AC. (468,159 SF±)
AREA OF NON-CREDITED OPEN SPACE: 0.09 AC.
TOTAL AREA OF OPEN SPACE PROVIDED: 10.84 AC. OR 34.6%
APPROXIMATE LIMIT OF DISTURBANCE: 21.55 AC±

GENERAL NOTES

- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- 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.
- DEED REFERENCE: 5342/5333
- THE PROJECT BOUNDARY IS BASED ON A SURVEY PREPARED BY FREDERICK WARD ASSOCIATES, DATED DECEMBER 2001.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON AERIAL PHOTOGRAMMETRIC SURVEY PREPARED BY GREENMAN PEDERSON, DATED FEBRUARY 2001.
- COORDINATE DATUM IS BASED ON THE MARYLAND COORDINATE SYSTEM (NAD 83) AS PROJECTED BY THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL STATIONS: #31EA & #31EB
- WATER AND SEWER FOR THIS PROJECT WILL BE PUBLIC AND PROVIDED THROUGH CONTRACT NO. 14-4078-D.
- STORMWATER MANAGEMENT IS PROVIDED FOR THIS DEVELOPMENT. THE TWO STORMWATER MANAGEMENT FACILITIES ARE LOCATED ON OPEN SPACE LOTS 9 AND 21 AND WILL BE PRIVATELY OWNED AND MAINTAINED BY THE HOA-POND 1 AND POND 2 ARE MICROPOOL EXTENDED DETENTION FACILITIES PROVIDING THE REQUIRED WQv AND Cpv FOR THE DEVELOPMENT. BOTH FACILITIES ARE HAZARD CLASS 'A'.
- EXCAVATION OF SEDIMENT FROM SWM MAINTENANCE TO BE HAULED OFF-SITE AND STOCKPILED ON-SITE.
- STORMWATER MANAGEMENT SOIL BORINGS FOR THIS SITE ARE BASED ON A GEOTECHNICAL ANALYSIS PREPARED BY HILLIS-CARNES ENGINEERING ASSOC., DATED JANUARY 2002.
- HDPE BEDDING SPECIFICATIONS ARE TO BE AS PER ASTM STANDARDS.
- WETLANDS AND STREAMS SHOWN ON-SITE ARE BASED ON A FIELD INVESTIGATION BY EXPLORATION RESEARCH, DATED JUNE 2000, AND THE AERIAL PHOTOGRAMMETRIC SURVEY PREPARED BY GREENMAN PEDERSON.
- FLOODPLAIN SHOWN ON-SITE IS BASED ON A STUDY PREPARED BY FREDERICK WARD ASSOCIATES, DATED MAY 2002.
- A FOREST STAND DELINEATION PLAN WAS PREPARED FOR THIS SITE BY VOGEL AND ASSOC., DATED JUNE 2000, AND APPROVED UNDER S-01-06.
- FOREST CONSERVATION PLAN PREPARED BY FREDERICK WARD ASSOCIATES, DATED JANUARY 2002. FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY THE RETENTION OF EXISTING FOREST IN THE AMOUNT OF 4.89 AC. ON-SITE REFORESTATION IN THE AMOUNT OF 2.03 AC. AND FEE-IN-LIEU OF \$6,534.00 FOR THE REMAINING 0.30 AC. OF REFORESTATION. TOTAL OBLIGATION FOR THIS SITE IS 4.89 AC. OF RETENTION AND 2.33 AC. OF REFORESTATION. FINANCIAL SURETY IN THE AMOUNT OF \$86,815.10 WILL BE POSTED WITH THE FOREST CONSERVATION AGREEMENT.
- NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAMS, OR THEIR BUFFERS, AND THE FOREST CONSERVATION EASEMENTS EXCEPT THOSE AREAS SPECIFIED FOR THE CONSTRUCTION OF PUBLIC WATER AND PUBLIC SEWER. (MDE PERMIT TRACKING NO. 04-NT-0197/200463350)
- APFO TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP, DATED AUGUST 2000, AND APPROVED UNDER S-01-06.
- PERIMETER AND STORMWATER MANAGEMENT LANDSCAPING REQUIREMENTS AS SET FORTH IN SECTION 16.124 OF THE SUBDIVISION REGULATIONS AND THE HOWARD COUNTY LANDSCAPE MANUAL SHALL BE COMPLIED WITH. A FINANCIAL SURETY IN THE AMOUNT OF \$26,280.00 FOR THE REQUIRED 51 SHADE TREES, 31 EVERGREEN TREES, 11 SHRUBS, AND 20 PRIVATE STREET TREES WILL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT.
- STREET TREES ARE REQUIRED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(c)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$30,600.00 TO BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR THE REQUIRED 102 PUBLIC STREET TREES.
- TREE PROTECTION FENCING WILL BE PROVIDED AT THE LIMITS OF DISTURBANCE WHERE GRADING IS ADJACENT TO FOREST CONSERVATION RETENTION AREAS AND SENSITIVE ENVIRONMENTAL AREAS, SUCH AS STREAM AND WETLAND BUFFERS. STREET LIGHTING HAS BEEN PROVIDED FOR THE PUBLIC ROADS IN ACCORDANCE WITH SECTION 16.135 OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE DESIGN MANUAL. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- SEDIMENT AND EROSION CONTROL HAS BEEN PROVIDED FOR THIS SITE.
- THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETERY LOCATIONS ON SITE.
- A NOISE STUDY IS NOT REQUIRED FOR THIS SITE.
- OPEN SPACE LOTS 9, 21 AND 34 ARE TO BE PRIVATELY OWNED AND MAINTAINED BY THE HOA. OPEN SPACE LOTS 8 AND 35 ARE TO BE OWNED AND MAINTAINED BY HOWARD COUNTY DEPT. OF RECREATION AND PARKS.
- LOTS 36-38 WILL UTILIZE A USE-IN-COMMON DRIVEWAY. HOWARD COUNTY STANDARD DETAIL NO. R-6.06 WILL BE UTILIZED FOR THE ENTRANCE AT THE INTERSECTION OF THE PUBLIC ROAD.
- NON-BUILDABLE LOT 30 TO BE TRANSFERRED TO HOWARD COUNTY FOR THE PURPOSES OF A PRIVATE ACCESS EASEMENT FOR THE SUBDIVISION OF ADJACENT PARCEL 659 AND ACCESS FOR PARCELS 659, 660, 661, 631, 650, 656, 629, 665, 657.
- OPEN SPACE LOT 35 TO BE ACCESSED THROUGH LOT 34.
- FOR FLAG OR PIPE STEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPE STEM AND THE ROAD RIGHT-OF-WAY ONLY AND NOT ONTO THE FLAG OR PIPE STEM DRIVEWAY.
- WP-03-07: A WAIVER PETITION HAS BEEN SUBMITTED AND APPROVED, DATED NOVEMBER 5, 2002, TO WAIVE SECTION 16.147 TO WAIVE THE REQUIREMENT OF A FINAL SUBDIVISION PLAT/PLAN AND PERMIT THE ADJUSTMENT OF THE PROPERTY LINES AND ACRESAGES OF PARCELS 226, 327, 431 AND 497 TO BE DONE BY ADJOINER DEED CONVEYANCE. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 - THE ADJOINER DEED TRANSFERS OF LAND SHALL BE ACCOMPLISHED PRIOR TO SUBMISSION OF THE FUTURE SUBDIVISION PLAN FOR THIS PROJECT, AND THE NEW DEED RECORDING NUMBERS SHALL BE INDICATED WHERE REQUIRED ON THE FUTURE FINAL SUBDIVISION PLATS AND PLANS.
- THIS WAIVER IS VALID FROM 11/5/02 TO 11/5/03 OR AS LONG AS THE SUBDIVISION REMAINS IN ACTIVE PROCESSING.
- AS A CONSEQUENCE OF ITS SUBMISSION PRIOR TO NOVEMBER 15, 2001, THIS SUBDIVISION PLAN IS GRANDFATHERED TO THE FOURTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND BECAUSE THE PRELIMINARY PLAN WAS NOT APPROVED PRIOR TO NOVEMBER 1, 2001, THIS PROJECT IS SUBJECT TO COMPLIANCE WITH COUNTY COUNCIL BILL 50-2001 WHICH AMENDED PORTIONS OF THE ZONING REGULATIONS.
- ALL FILLED AREAS OF EARTHWORK REQUIRE 95% COMPACTION PER MSHTO-180 SPECIFICATIONS.
- DRIVEWAY PLACEMENT AND GRADING WILL BE FINALIZED AT SITE DEVELOPMENT PHASE.
- DEVELOPMENT OR CONSTRUCTION ON THESE LOTS MUST COMPLY WITH THE SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF THE SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION OR BUILDING/GRADING PERMIT.



POINT	NORTHING	EASTING
1	567097.91	1375122.54
2	567319.67	1375031.92
3	567299.87	1375078.98
4	567391.41	1375303.51
5	567612.06	1375215.24
6	567610.06	1375354.82
7	567667.08	1375442.97
8	567711.55	1375364.95
9	568370.94	1375365.06
10	568755.43	1376225.06
11	568474.66	1376200.53
12	568461.15	1376334.67
13	567653.50	1376776.71

LOCATION PLAN
SCALE: 1"=200'

SHEET NO.	TITLE
1 OF 17	COVER SHEET
2 OF 17	ROAD CONSTRUCTION PLAN
3 OF 17	ROAD CONSTRUCTION PROFILES
4 OF 17	ROAD CONSTRUCTION PLAN AND PROFILES
5 OF 17	GRADING AND SEDIMENT & EROSION CONTROL PLAN
6 OF 17	GRADING AND SEDIMENT & EROSION CONTROL PLAN AND TRAFFIC CONTROL PLAN
7 OF 17	GRADING AND SEDIMENT & EROSION CONTROL DETAILS
8 OF 17	STORM DRAIN DRAINAGE AREA MAP
9 OF 17	STORM DRAIN DRAINAGE AREA MAP
10 OF 17	STORM DRAIN PROFILES
11 OF 17	STORM DRAIN PROFILES
12 OF 17	STORMWATER MANAGEMENT DETAILS-POND #1
13 OF 17	STORMWATER MANAGEMENT DETAILS-POND #2
14 OF 17	LANDSCAPE PLAN
15 OF 17	LANDSCAPE PLAN
16 OF 17	FOREST CONSERVATION PLAN
17 OF 17	FOREST CONSERVATION PLAN

NO.	REVISION	DATE
1	ADD NOTE FOR LOT 30 USE-IN-COMMON ACCESS	1.20.06

FINAL ROAD CONSTRUCTION PLAN
DENNIS PRESERVE
LOTS 1-58

TAX MAP 31 BLOCK 21 PARCEL '226'
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)
MDE PERMIT TRACKING NO. 04-NT-0197/200463350

ROBERT H. VOGEL
ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELICOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RHV
DRAWN BY: CMH
CHECKED BY: RHV
DATE: SEPTEMBER 2004
SCALE: AS SHOWN
W.O. NO.: 2017019.0

1 SHEET OF 17

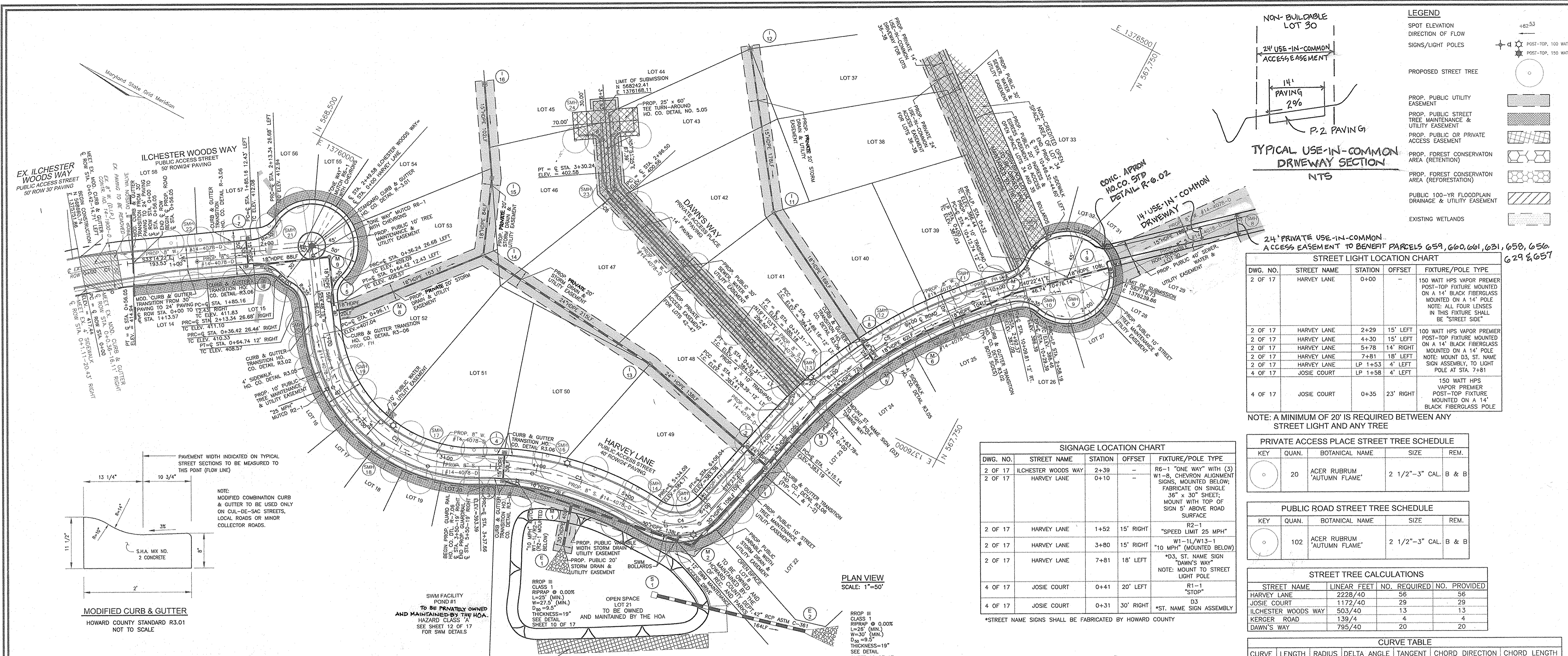
APPROVED: DEPARTMENT OF PUBLIC WORKS
Walter Z. Mohr 10-19-04
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chris Hamilton 10/27/04
Chief, Division of Land Development Date

Mike Vanaman 10/25/04
Chief, Development Engineering Division Date

DEVELOPER
ELICOTT CITY LAND HOLDINGS, LLC
8000 MAIN STREET
ELICOTT CITY, MARYLAND 21043
ATTN: MR. DONALD R. REIWER
(410) 480-9105

OWNER
DENNIS PRESERVE, LLC
ELICOTT CITY LAND HOLDINGS, LLC
SOLE MEMBER
8000 MAIN STREET
ELICOTT CITY, MD 21043
410-480-9105



NON-BUILDABLE LOT 30

24' USE-IN-COMMON ACCESS EASEMENT

14' PAVING 2%

P-2 PAVING

TYPICAL USE-IN-COMMON DRIVEWAY SECTION N.T.S.

14' USE-IN-COMMON DRIVEWAY

24' PRIVATE USE-IN-COMMON ACCESS EASEMENT TO BENEFIT PARCELS 659, 660, 661, 631, 658, 656, 629 & 657

LEGEND

- SPOT ELEVATION
- DIRECTION OF FLOW
- SIGNS/LIGHT POLES
- PROPOSED STREET TREE
- PROP. PUBLIC UTILITY EASEMENT
- PROP. PUBLIC STREET TREE MAINTENANCE & UTILITY EASEMENT
- PROP. PUBLIC OR PRIVATE ACCESS EASEMENT
- PROP. FOREST CONSERVATION AREA (RETENTION)
- PROP. FOREST CONSERVATION AREA (REFORESTATION)
- PUBLIC 100-YR FLOODPLAIN DRAINAGE & UTILITY EASEMENT
- EXISTING WETLANDS

STREET LIGHT LOCATION CHART

DWG. NO.	STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
2 OF 17	HARVEY LANE	0+00	-	150 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS MOUNTED ON A 14' POLE NOTE: ALL FOUR LENSES IN THIS FIXTURE SHALL BE "STREET SIDE"
2 OF 17	HARVEY LANE	2+29	15' LEFT	100 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS MOUNTED ON A 14' POLE NOTE: MOUNT D3, ST. NAME SIGN ASSEMBLY, TO LIGHT POLE AT STA. 7+81
2 OF 17	HARVEY LANE	4+30	15' RIGHT	150 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS MOUNTED ON A 14' POLE
2 OF 17	HARVEY LANE	5+78	14' RIGHT	150 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS MOUNTED ON A 14' POLE
2 OF 17	HARVEY LANE	7+81	18' LEFT	150 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS MOUNTED ON A 14' POLE
2 OF 17	HARVEY LANE	LP 1+53	4' LEFT	150 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS MOUNTED ON A 14' POLE
4 OF 17	JOSIE COURT	LP 1+58	4' LEFT	150 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS MOUNTED ON A 14' POLE
4 OF 17	JOSIE COURT	0+35	23' RIGHT	150 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS MOUNTED ON A 14' POLE

NOTE: A MINIMUM OF 20' IS REQUIRED BETWEEN ANY STREET LIGHT AND ANY TREE

PRIVATE ACCESS PLACE STREET TREE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
20	20	ACER RUBRUM 'AUTUMN FLAME'	2 1/2"-3" CAL.	B & B

PUBLIC ROAD STREET TREE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
102	102	ACER RUBRUM 'AUTUMN FLAME'	2 1/2"-3" CAL.	B & B

STREET TREE CALCULATIONS

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
HARVEY LANE	2228/40	56	56
JOSIE COURT	1172/40	29	29
ILCHESTER WOODS WAY	503/40	13	13
KERGER ROAD	139/4	4	4
DAWN'S WAY	795/40	20	20

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA ANGLE	TANGENT	CHORD DIRECTION	CHORD LENGTH
C1	56.05'	449.40'	6°25'21"	28.06'	S 26°28'52" E	56.02'
C2	241.65'	165.00'	83°54'49"	148.34'	S 12°50'50" W	220.63'
C3	196.43'	320.03'	35°10'02"	101.42'	S 11°31'29" E	193.36'
C4	71.95'	50.00'	82°26'56"	43.81'	S 35°09'52" E	65.90'
C5	314.25'	500.00'	36°00'39"	162.51'	S 58°25'01" E	309.11'
C6	33.75'	50.00'	38°40'22"	17.55'	N 38°31'14" E	33.11'

NO.	REVISION	DATE
1	DELETE STORM DRAIN SYSTEM FROM I-9 TO I-10	1-20-06

ROAD CONSTRUCTION PLAN

DENNIS PRESERVE
LOTS 1-58

TAX MAP 31 BLOCK 21 PARCEL '226'
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

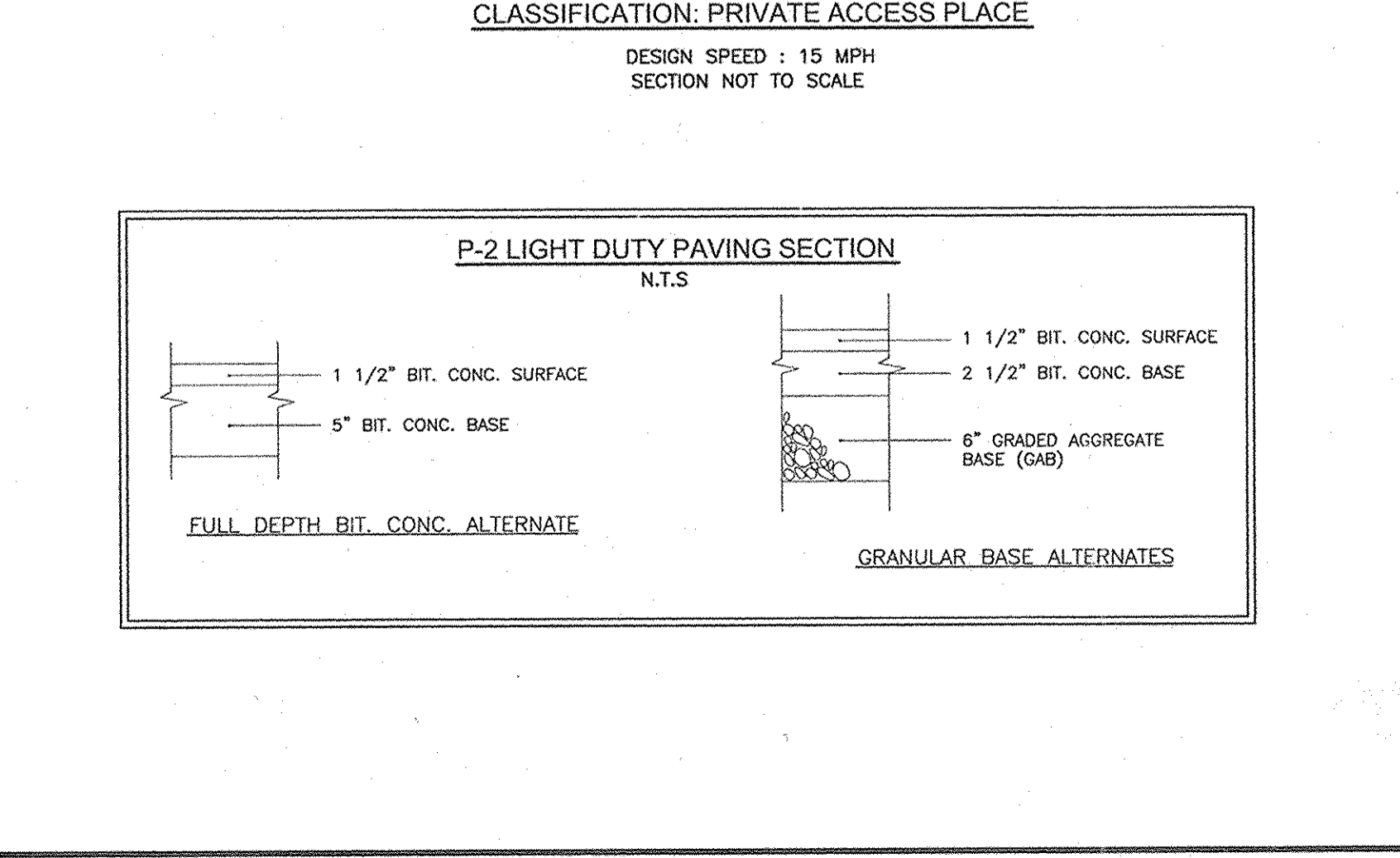
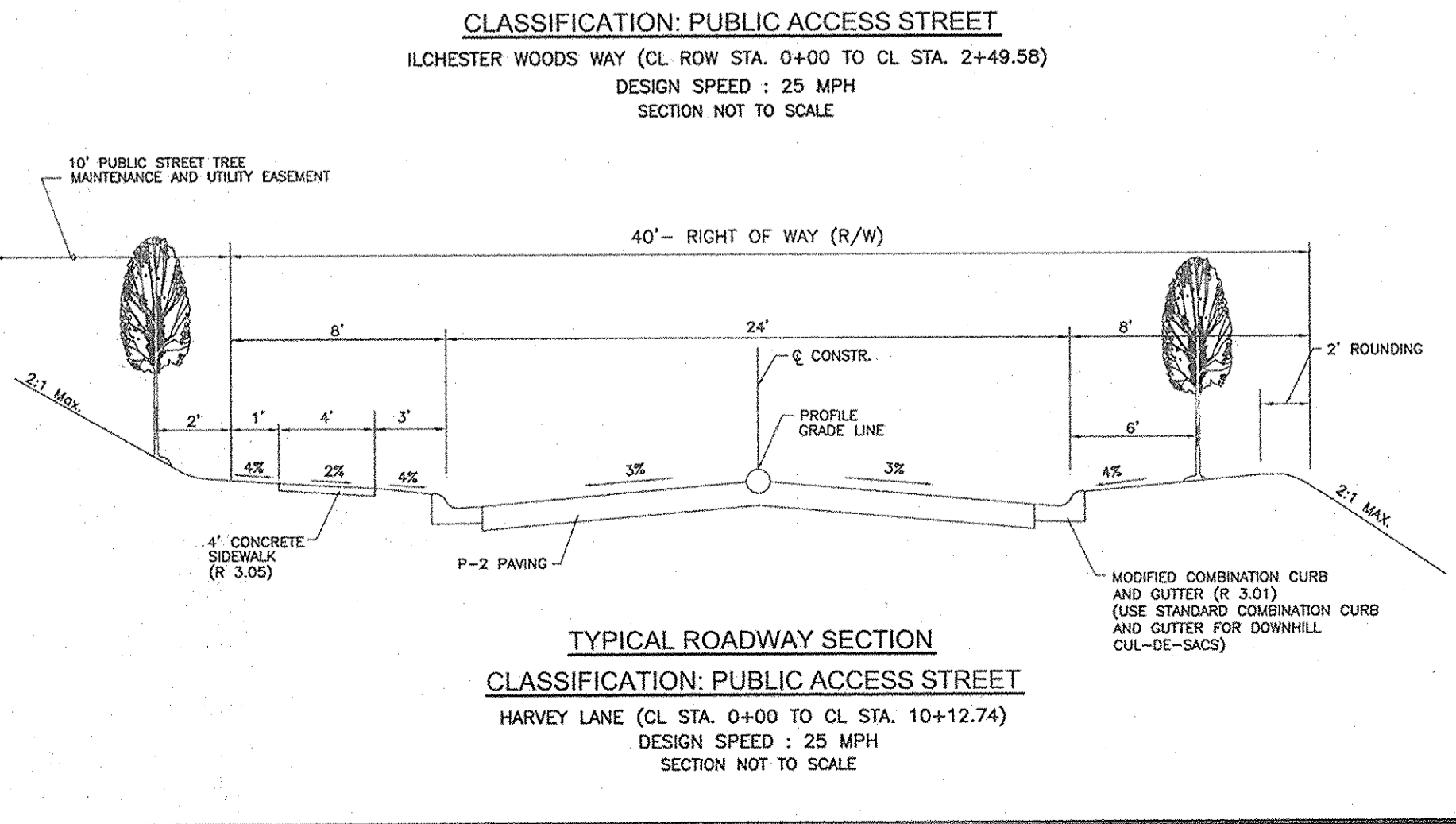
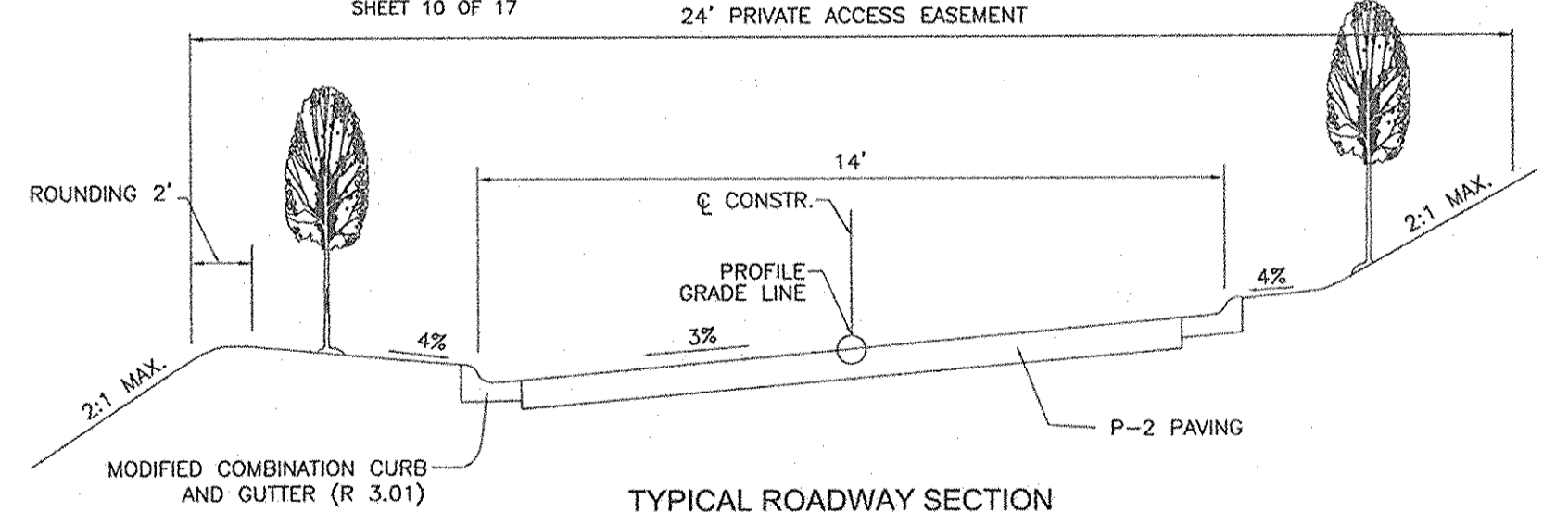
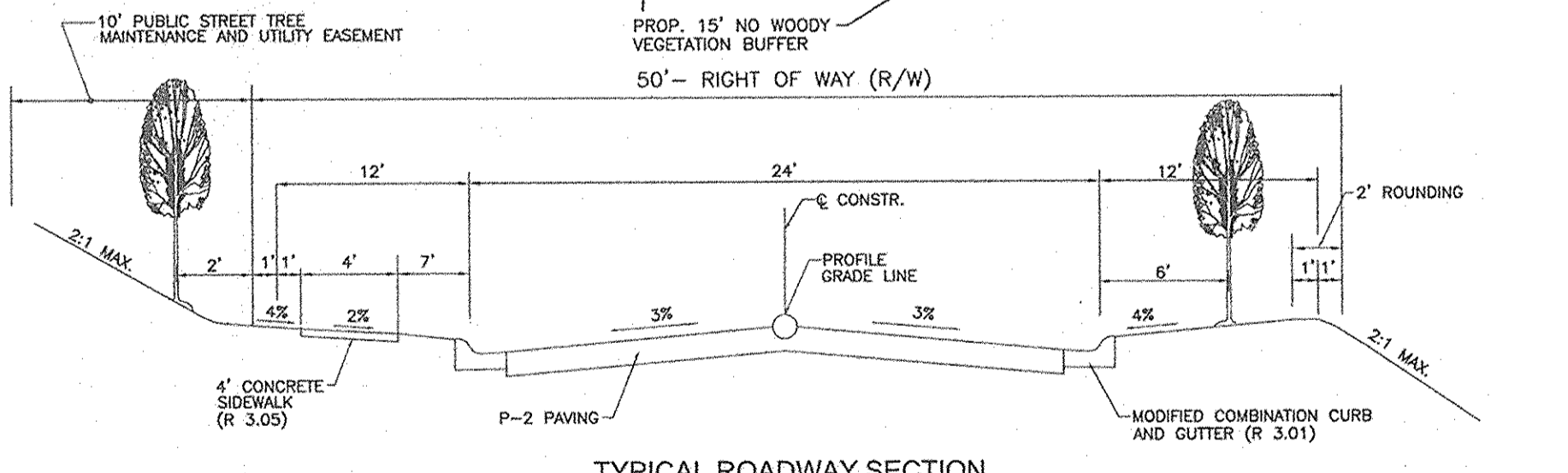
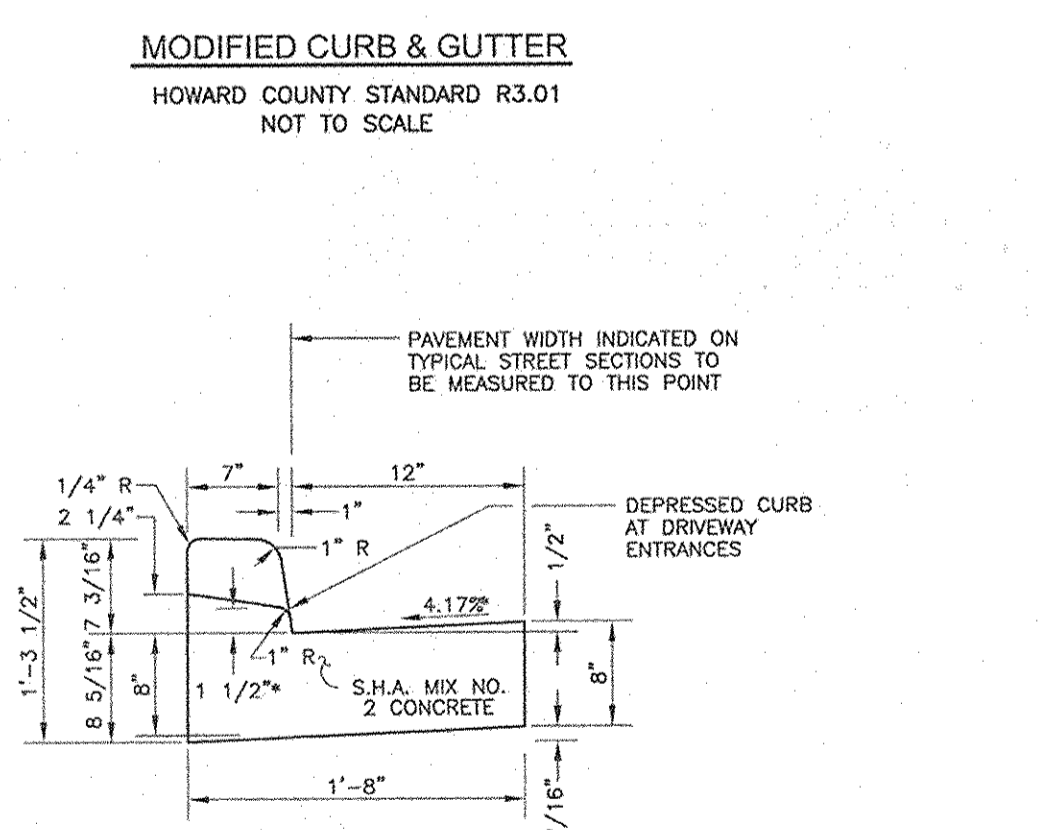
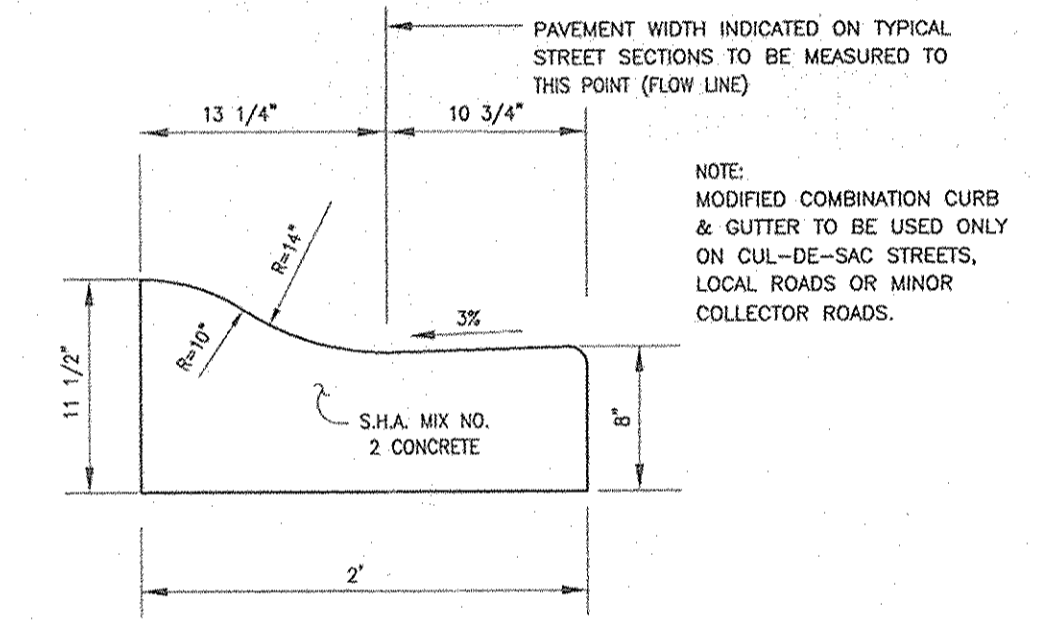
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

DEVELOPER
ELLICOTT CITY LAND HOLDINGS, LLC
8000 MAIN STREET ELLICOTT CITY, MARYLAND 21043
ATTN: MR. DONALD R. REUWER (410) 480-9105

OWNER
DENNIS PRESERVE, LLC
ELLICOTT CITY LAND HOLDINGS, LLC
8000 MAIN STREET ELLICOTT CITY, MD 21043
410-480-9105

DESIGN BY: RHV
DRAWN BY: CMH
CHECKED BY: RHV
DATE: SEPTEMBER 2004
SCALE: AS SHOWN
W.O. NO.: 2017019.0

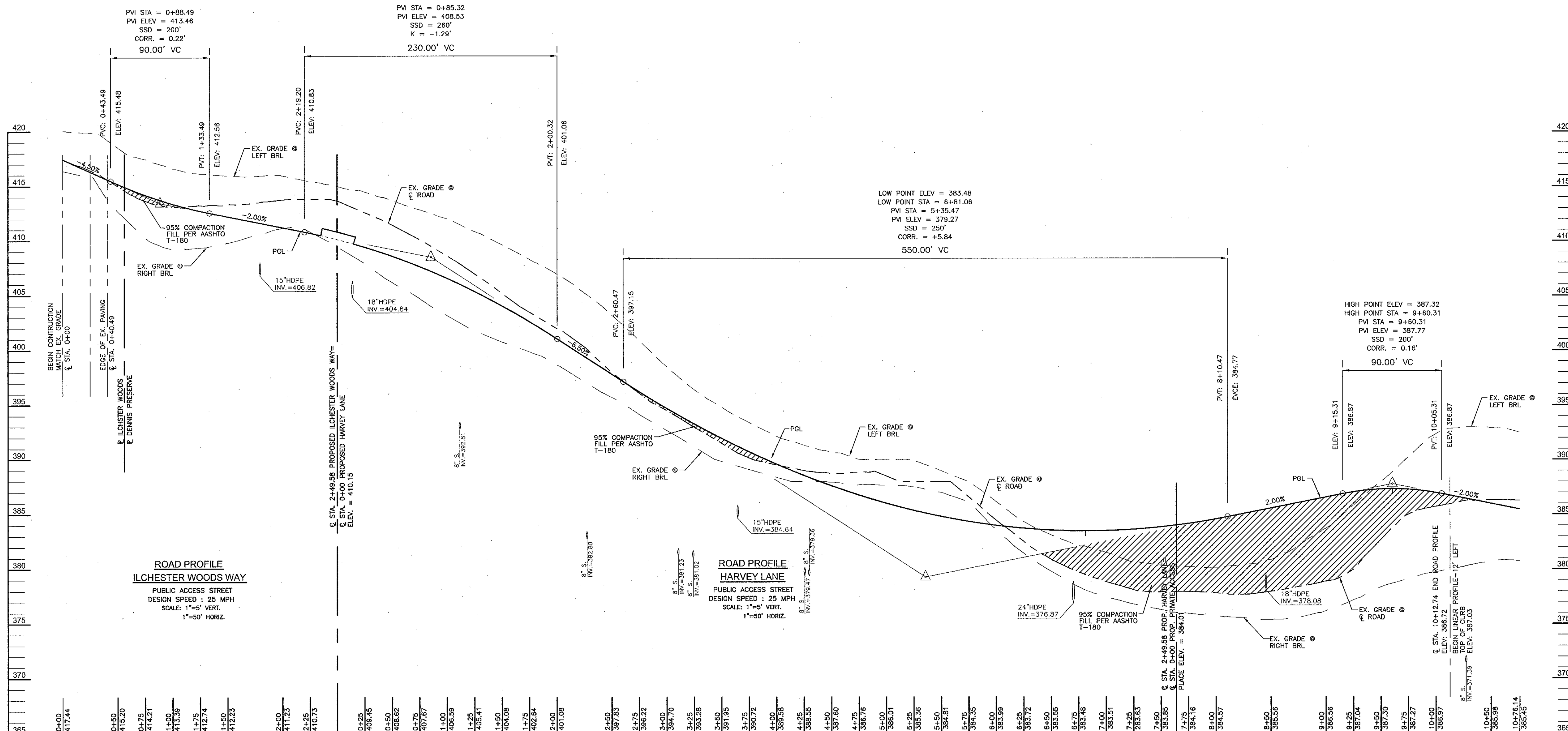
2 SHEET OF 17



APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. ... 10-19-04
Chief, Bureau of Highways Date

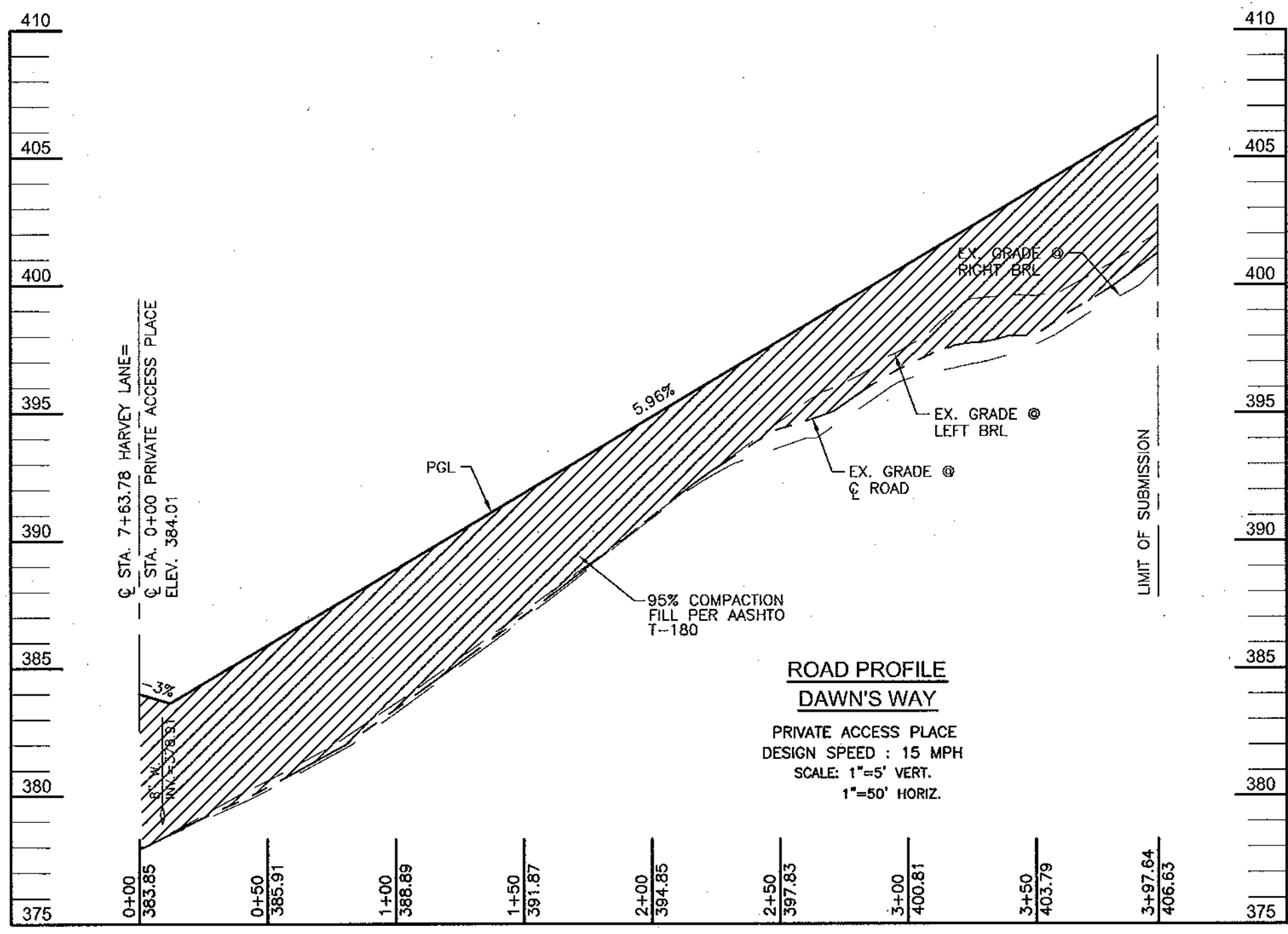
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cinda Hamilton 10/23/04
Chief, Division of Land Development Date

[Signature] 10/23/04
Chief, Development Engineering Division Date

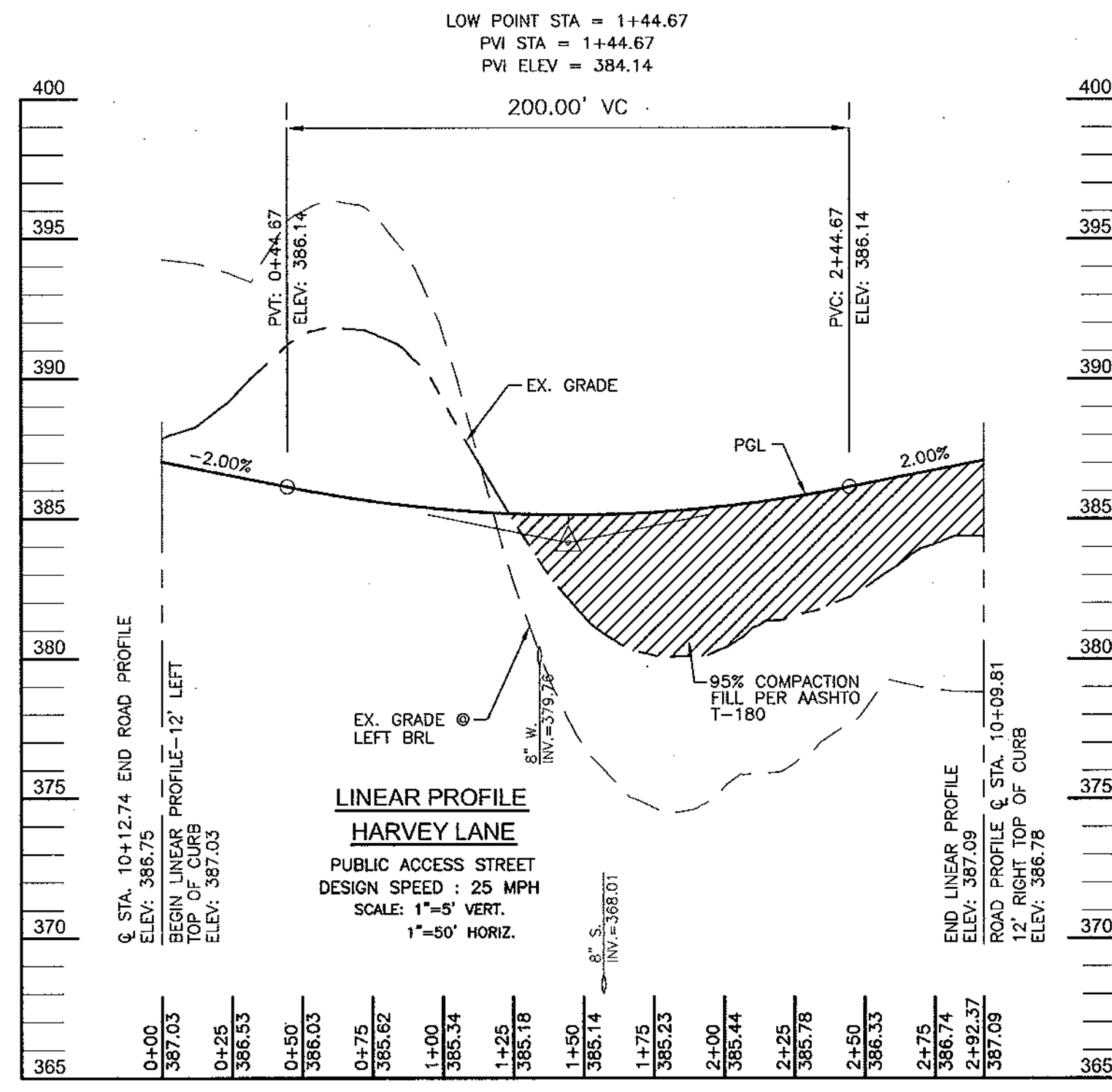


ROAD PROFILE
ILCHESTER WOODS WAY
 PUBLIC ACCESS STREET
 DESIGN SPEED : 25 MPH
 SCALE: 1"=5' VERT.
 1"=50' HORIZ.

ROAD PROFILE
HARVEY LANE
 PUBLIC ACCESS STREET
 DESIGN SPEED : 25 MPH
 SCALE: 1"=5' VERT.
 1"=50' HORIZ.



ROAD PROFILE
DAWN'S WAY
 PRIVATE ACCESS PLACE
 DESIGN SPEED : 15 MPH
 SCALE: 1"=5' VERT.
 1"=50' HORIZ.



LINEAR PROFILE
HARVEY LANE
 PUBLIC ACCESS STREET
 DESIGN SPEED : 25 MPH
 SCALE: 1"=5' VERT.
 1"=50' HORIZ.

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. Mahoney 10-19-04
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cecilia Hamaker 10/23/04
 Chief, Division of Land Development Date

John J. Mahoney 10/23/04
 Chief, Development Engineering Division Date

DEVELOPER
 ELLICOTT CITY LAND HOLDINGS, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 211043
 ATTN: MR. DONALD R. REUWER
 (410) 480-9105

OWNER
 DENNIS PRESERVE, LLC
 ELLICOTT CITY LAND HOLDINGS, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MD 211043
 410-480-5105

NO.	REVISION	DATE

ROAD CONSTRUCTION PROFILES
DENNIS PRESERVE
 LOTS 1-58

TAX MAP 31 BLOCK 21 PARCEL '226'
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 211043 FAX: 410.461.8961

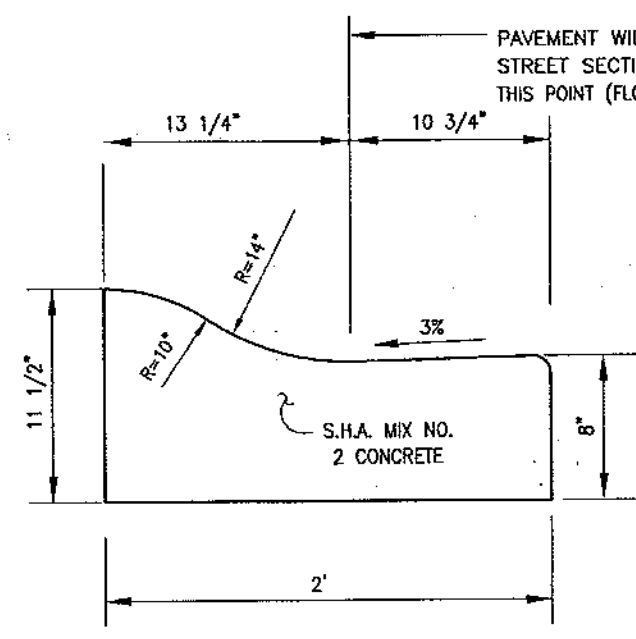
DESIGN BY: RHV
 DRAWN BY: CMH
 CHECKED BY: RHV
 DATE: SEPTEMBER 2004
 SCALE: AS SHOWN
 W.O. NO.: 2017019.0

3 SHEET OF 17

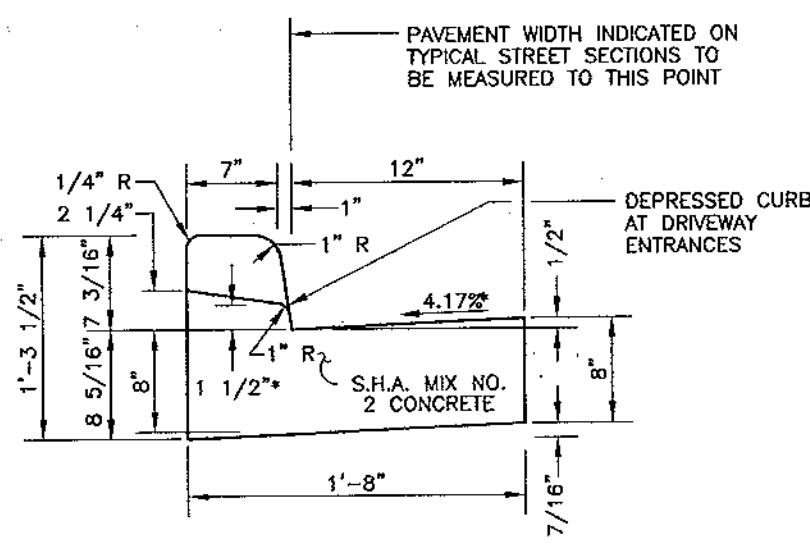
DWG. NO.	STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
2 OF 17	HARVEY LANE	0+00		150 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS MOUNTED ON A 14" POLE. NOTE: ALL FOUR LENSES IN THIS FIXTURE SHALL BE "STREET SIDE"
2 OF 17	HARVEY LANE	4+30	15' LEFT	100 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14" POLE. NOTE: MOUNT D3, ST. NAME SIGN ASSEMBLY, TO LIGHT POLE AT STA. 7+81
2 OF 17	HARVEY LANE	5+78	14' RIGHT	
2 OF 17	HARVEY LANE	7+81	18' LEFT	
2 OF 17	HARVEY LANE	LP 1+53	4' LEFT	
4 OF 17	JOSIE COURT	0+35	23' RIGHT	150 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14" BLACK FIBERGLASS POLE

KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
	20	ACER RUBRUM 'AUTUMN FLAME'	2 1/2"-3" CAL. B & B	

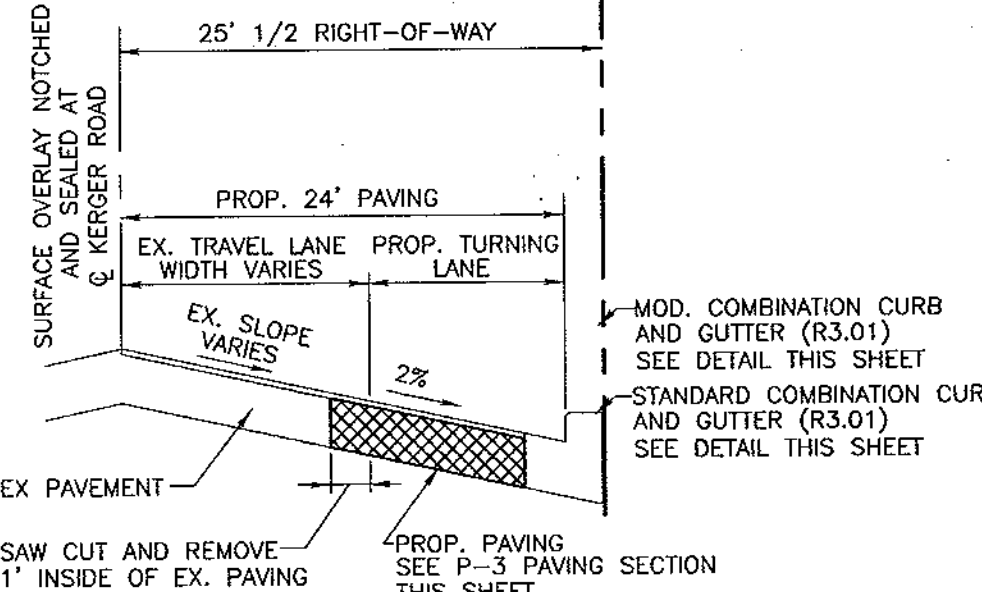
NOTE: A MINIMUM OF 20' IS REQUIRED BETWEEN ANY STREET LIGHT AND ANY TREE



MODIFIED CURB & GUTTER
HOWARD COUNTY STANDARD R3.01
NOT TO SCALE



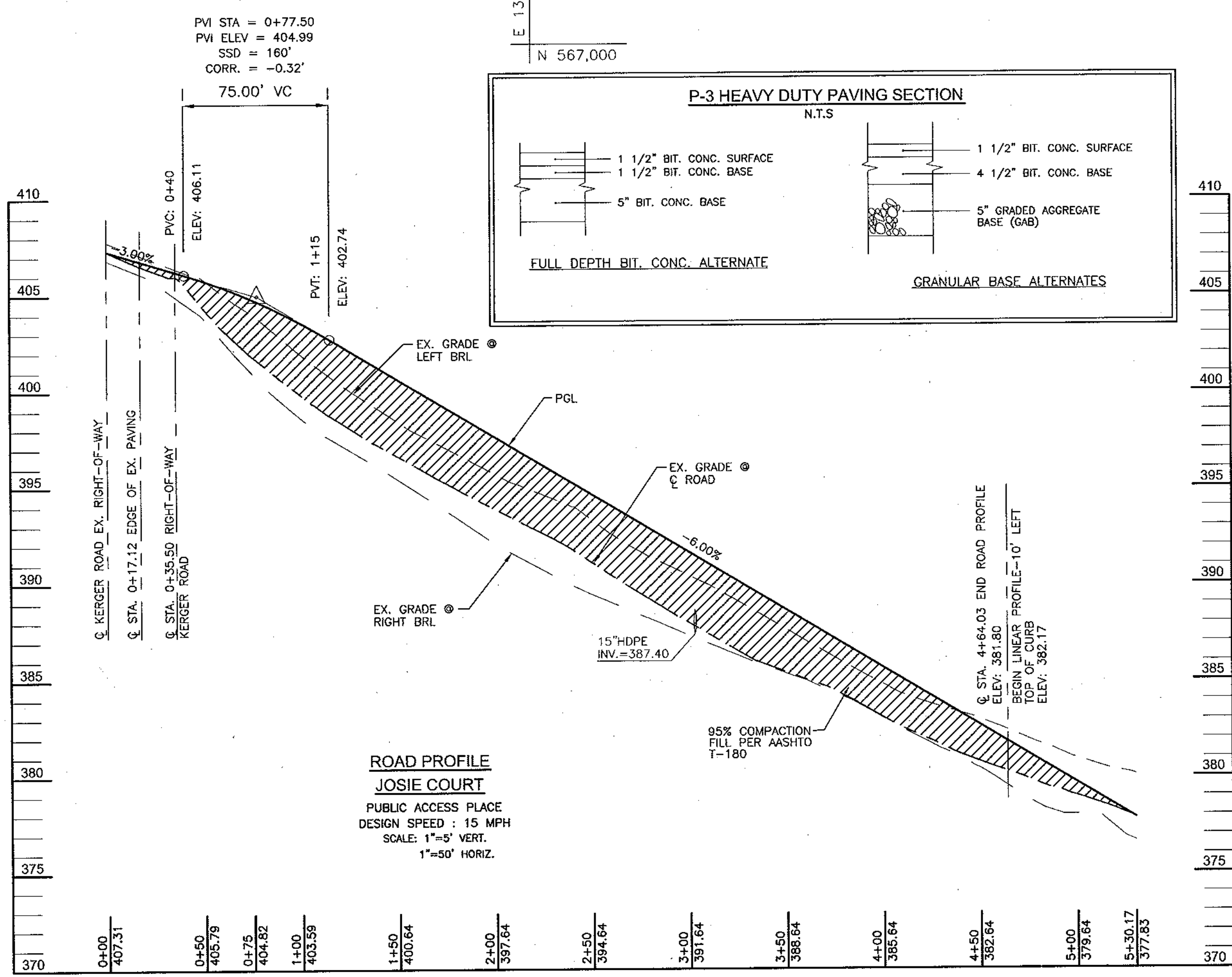
STANDARD COMBINATION CURB AND GUTTER
HOWARD COUNTY STANDARD R-3.01
NOT TO SCALE



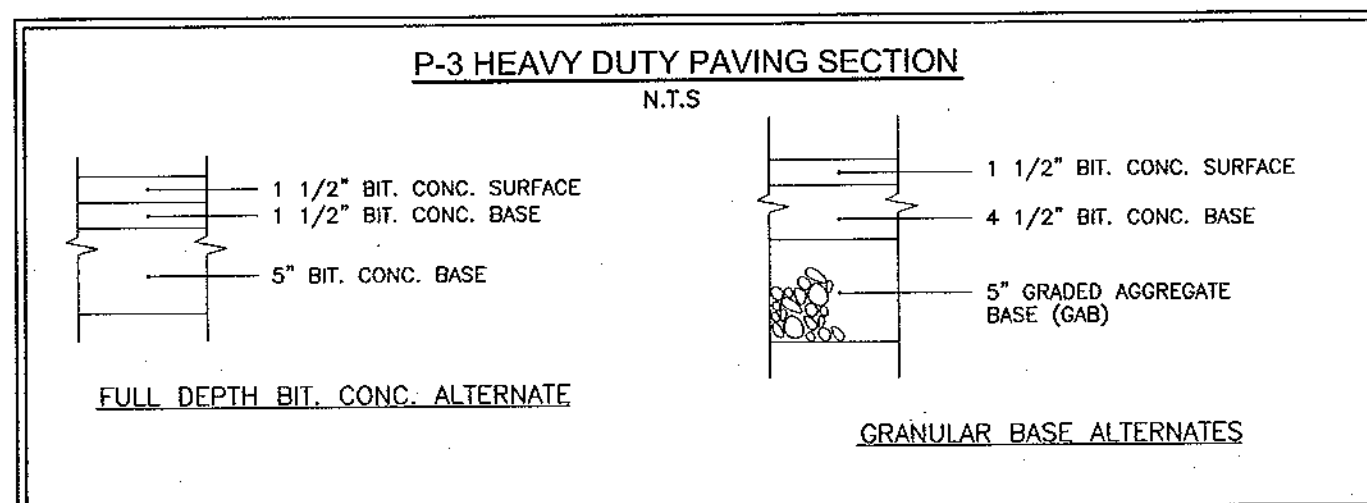
WIDENING DETAIL KERGER ROAD
© STA. 0+13 TO © STA. 2+63
SCALE: 1"=50'

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. ... 10-19-04
Chief, Bureau of Highways

APPROVED: DEPARTMENT OF PLANNING AND ZONING
... 10/23/04
Chief, Division of Land Development

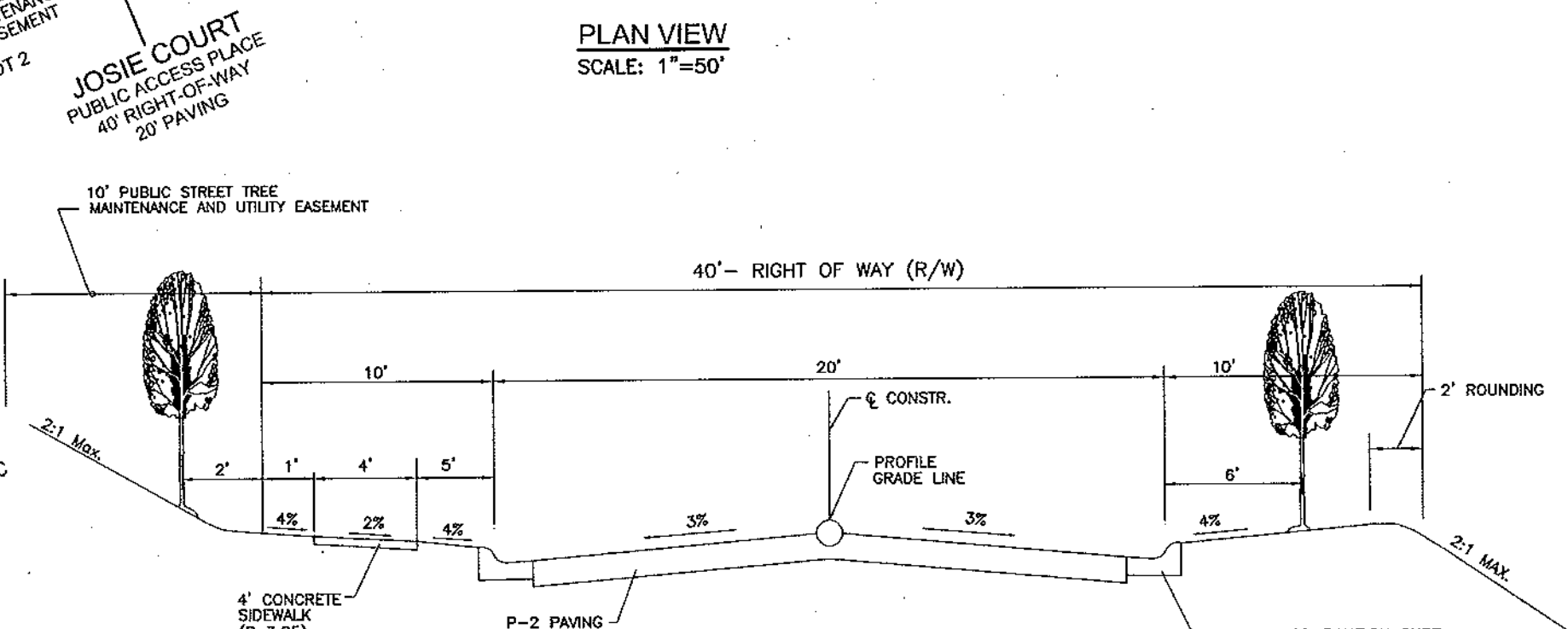


ROAD PROFILE JOSIE COURT
PUBLIC ACCESS PLACE
DESIGN SPEED: 15 MPH
SCALE: 1"=5' VERT.
1"=50' HORIZ.

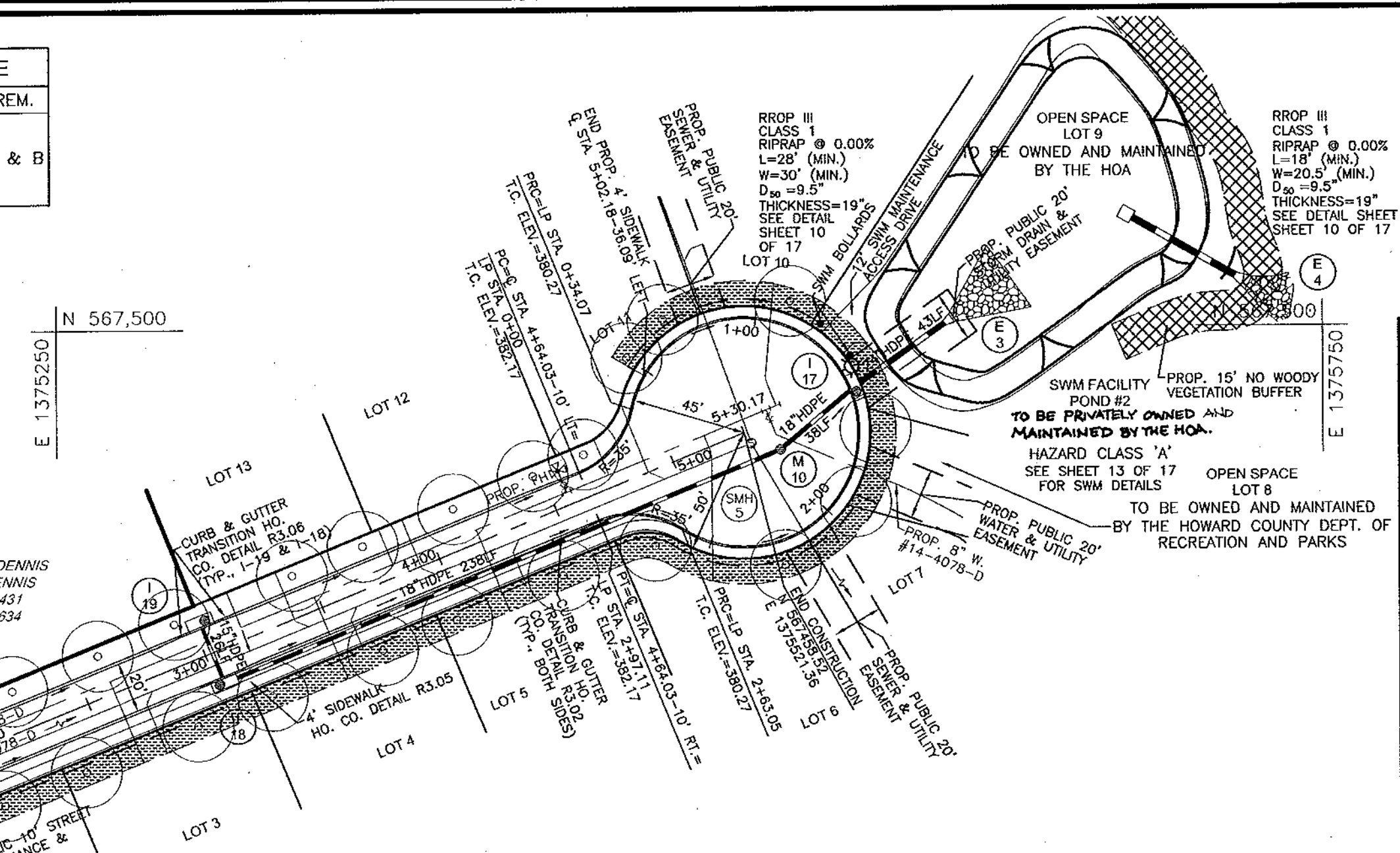


P-3 HEAVY DUTY PAVING SECTION
N.T.S.

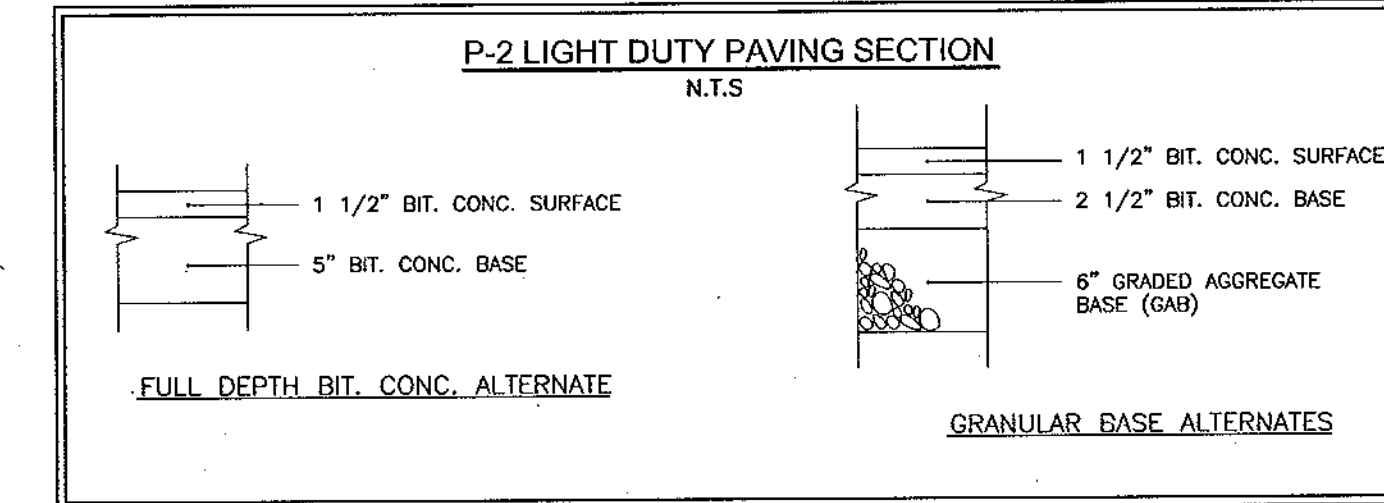
FULL DEPTH BIT. CONC. ALTERNATE
GRANULAR BASE ALTERNATES



TYPICAL ROADWAY SECTION
CLASSIFICATION: PUBLIC ACCESS PLACE
JOSIE COURT (CL STA. 0+00 TO CL STA. 4+64.03)
DESIGN SPEED: 15 MPH
SECTION NOT TO SCALE

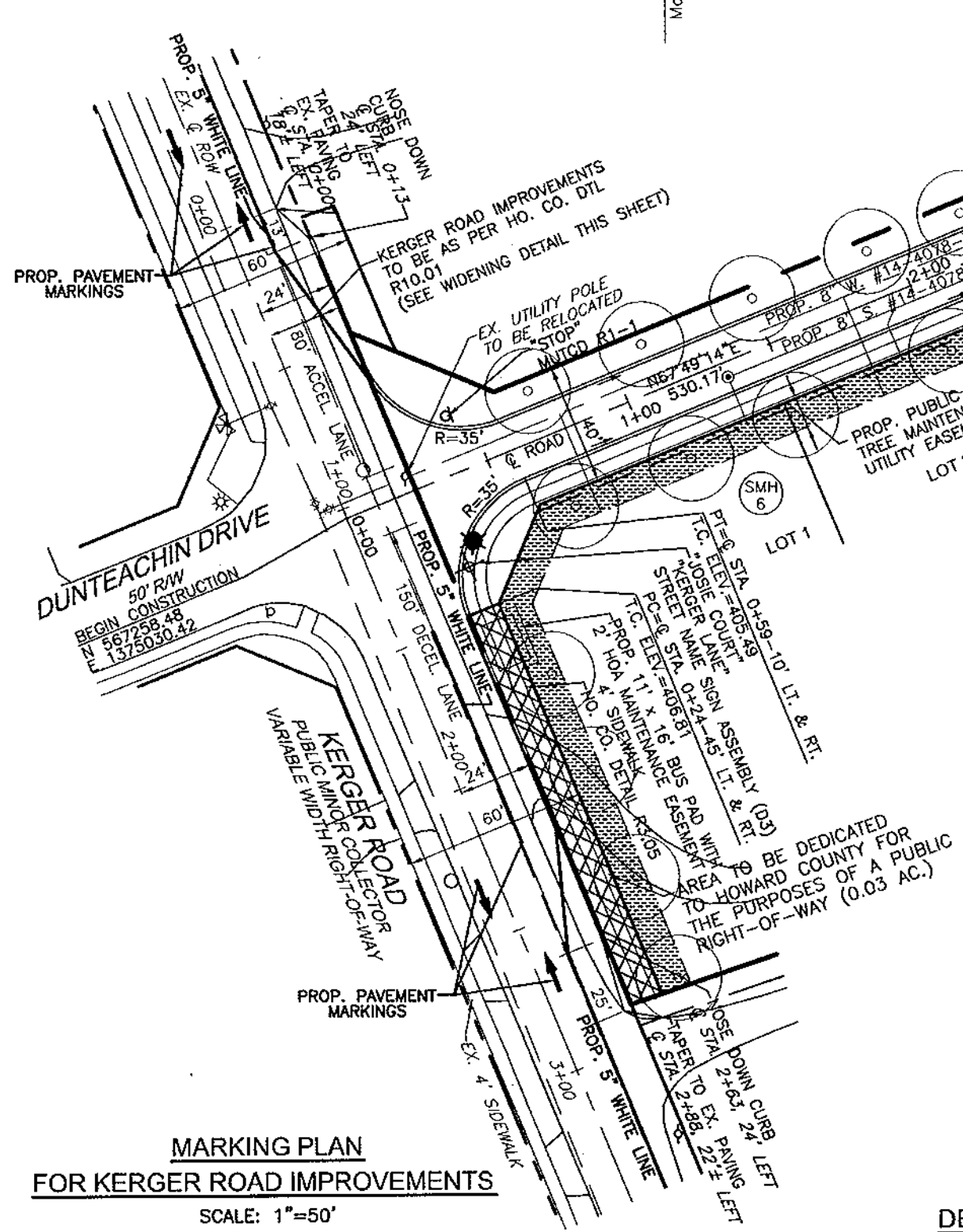


PLAN VIEW
SCALE: 1"=50'

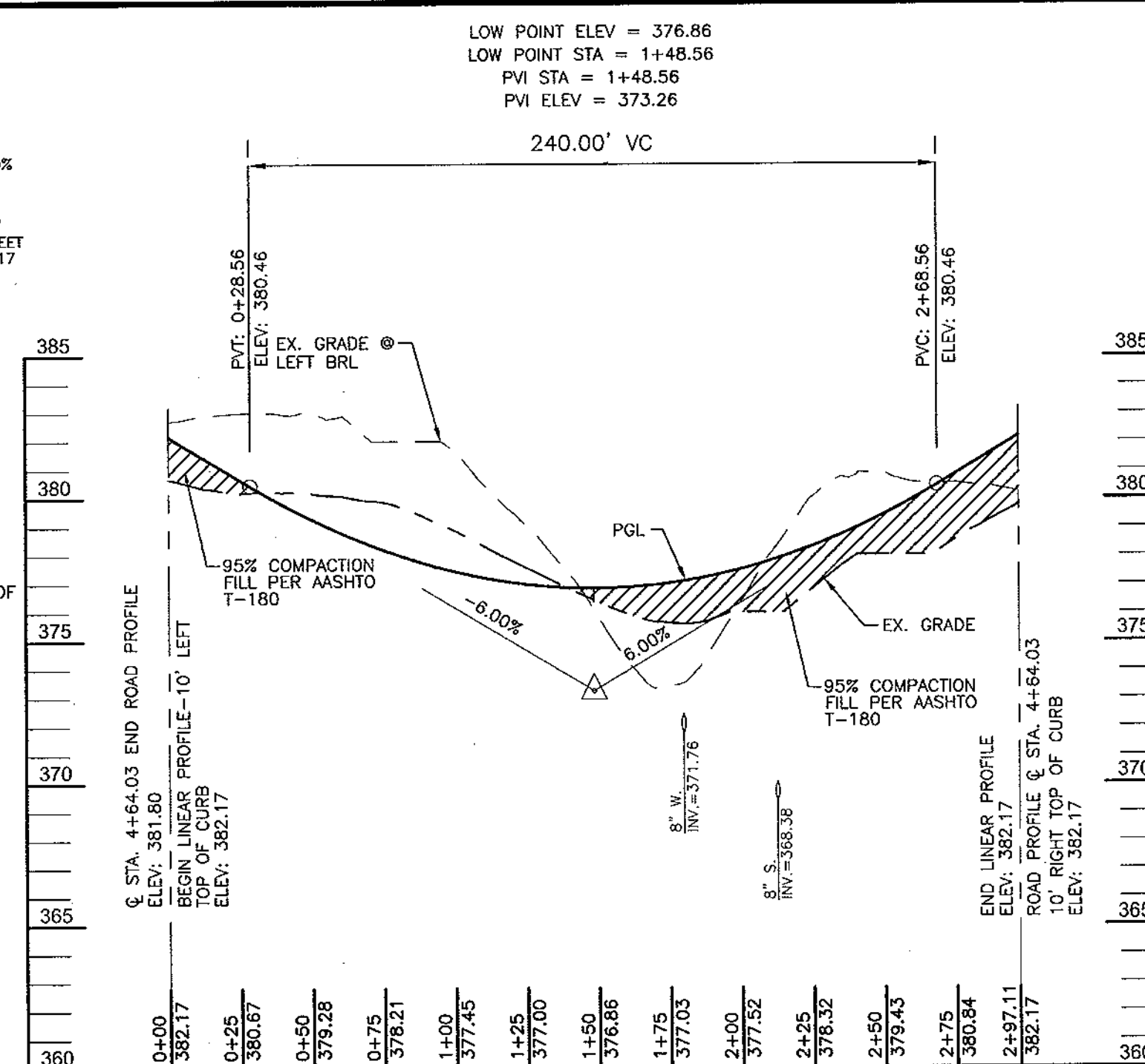


P-2 LIGHT DUTY PAVING SECTION
N.T.S.

FULL DEPTH BIT. CONC. ALTERNATE
GRANULAR BASE ALTERNATES



MARKING PLAN FOR KERGER ROAD IMPROVEMENTS
SCALE: 1"=50'



LINEAR PROFILE JOSIE COURT

PUBLIC ACCESS PLACE
DESIGN SPEED: 15 MPH
SCALE: 1"=5' VERT.
1"=50' HORIZ.

DWG. NO.	STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
2 OF 17	ILCHESTER WOODS WAY	2+39		R6-1 "ONE WAY" WITH (3) W1-8, CHEVRON ALIGNMENT SIGNS, MOUNTED BELOW FABRICATE ON SINGLE 36" x 30" SHEET; MOUNT WITH TOP OF SIGN 5' ABOVE ROAD SURFACE
2 OF 17	HARVEY LANE	0+10		
2 OF 17	HARVEY LANE	1+52	15' RIGHT	"R2-1 SPEED LIMIT 25 MPH"
2 OF 17	HARVEY LANE	3+80	15' RIGHT	W1-L/W13-1 "10 MPH" (MOUNTED BELOW)
2 OF 17	HARVEY LANE	7+81	18' LEFT	"D3, ST. NAME SIGN 'DAWN'S WAY' NOTE: MOUNT TO STREET LIGHT POLE
4 OF 17	JOSIE COURT	0+41	20' LEFT	"R1-1 STOP"
4 OF 17	JOSIE COURT	0+31	30' RIGHT	D3 "STOP" *ST. NAME SIGN ASSEMBLY

KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
	102	ACER RUBRUM 'AUTUMN FLAME'	2 1/2"-3" CAL. B & B	

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
HARVEY LANE	2228/40	56	56
JOSIE COURT	1172/40	29	29
ILCHESTER WOODS WAY	503/40	13	13
KERGER ROAD	139/40	4	4
DAWN'S WAY	795/40	20	20

NO.	REVISION	DATE

ROAD CONSTRUCTION PLAN AND PROFILES
DENNIS PRESERVE LOTS 1-58

TAX MAP 31 BLOCK 21 PARCEL '226'
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: RHV
DRAWN BY: CMH
CHECKED BY: RHV
DATE: SEPTEMBER 2004
SCALE: AS SHOWN
W.O. NO.: 2017019.0

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
CnB2	CHILLUM-FAIRFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
CnD3	CHILLUM-FAIRFAX LOAMS, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
EnB2	ELLSBORO LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EnC2	ELLSBORO LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C
KhC2	KEYPORT SILT LOAM, 3 TO 10 PERCENT SLOPES, MODERATELY ERODED	C
LhB2	LEGORE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
LpC3	LEGORE SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
M	MIXED ALLUVIAL LAND	B
MrE	MONTALTO AND RELAY SOILS, 15 TO 45 PERCENT SLOPES	C
ScD	SANDY AND CLAYEY LAND, MODERATELY SLOPING	-
SIB2	SASSAFRAS LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
SIC2	SASSAFRAS LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B
SSE	SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES	B
WdB	WATCHUNG SILT LOAM, 3 TO 8 PERCENT SLOPES	D

MAPS 20 & 25 OF THE HOWARD COUNTY SOIL SURVEY



LEGEND	
EXISTING CONTOUR	--- 440 ---
PROPOSED CONTOUR	--- 417 ---
SPOT ELEVATION	+82.53
DIRECTION OF FLOW	→
EXISTING TREES TO REMAIN	(Tree symbol)
SIGNS/LIGHT POLES	+ POST-TOP
PROPOSED STREET TREE	(Circle symbol)
SOILS	SIB2, SSE
AREA OF 15 TO 24.9 PERCENT SLOPES	(Hatched pattern)
AREA OF 24 PERCENT OR GREATER SLOPES	(Dotted pattern)
PROP. PUBLIC UTILITY EASEMENT	(Dashed line)
PROP. PUBLIC STREET & UTILITY EASEMENT	(Dotted line)
PROP. PUBLIC OR PRIVATE ACCESS EASEMENT	(Dashed line)
PROP. FOREST CONSERVATION AREA (RETENTION)	(Cross-hatched pattern)
PROP. FOREST CONSERVATION AREA (REFORESTATION)	(Diagonal lines)
PUBLIC 100-YR FLOODPLAIN DRAINAGE & UTILITY EASEMENT	(Dotted line)
EXISTING WETLANDS	(Wavy pattern)
SUPER SILT FENCE	SSF
LIMIT OF DISTURBANCE	LOD
EROSION CONTROL MATTING EARTHDIKE	(Dashed line)
STABILIZED CONSTRUCTION ENTRANCE	(Stippled pattern)
GABION INFLOW PROTECTION	(Cross-hatched pattern)
TREE PROTECTION FENCE	TPF
PROPOSED DRYWELL	(Square symbol)

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. ... 10-19-04
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
... 10/27/04
 Chief, Division of Land Development Date

... 10/25/04
 Chief, Development Engineering Division Date

These plans have been reviewed for HOWARD SOIL CONSERVATION DISTRICT and meet technical requirements for small pond construction and soil erosion and sediment control.

USDA-Natural Resources Conservation Service Date *9/27/04*

These plans for small pond construction and soil erosion and sediment control meet the requirements of the HOWARD SOIL CONSERVATION DISTRICT.

Howard Soil Conservation District Date *9/27/04*

DEVELOPER'S CERTIFICATE

"I/we certify that all development and construction will be done according to this plan of development for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of 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. I 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."

... 9/14/04
 Signature of Developer Date

ENGINEER'S CERTIFICATE

"I hereby certify that this plan for pond construction and sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District. 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."

... 9/15/04
 Signature of Engineer Date
 Robert H. Vogel

BASIN #1
 DRAINAGE AREA: 15.10 AC
 WET STORAGE REQUIRED: 27180 CF
 DRY STORAGE PROVIDED: 27400 CF
 TOTAL STORAGE PROVIDED: 54580 CF
 CREST ELEV.: 380.40
 TOP OF EMBANKMENT: 374.50
 CLEAN OUT ELEV.: 375.40
 Q₁ (EX.): 1.2 CFS
 Q₁ (DEV.): 1.2 CFS
 SEE SHEET 7 OF 17 FOR DETAILS

BASIN #2
 DRAINAGE AREA: 7.44 AC
 WET STORAGE REQUIRED: 13392 CF
 DRY STORAGE PROVIDED: 13392 CF
 TOTAL STORAGE PROVIDED: 26784 CF
 CREST ELEV.: 371.50
 TOP OF EMBANKMENT: 374.50
 CLEAN OUT ELEV.: 368.13
 Q₁ (EX.): 1 CFS
 Q₁ (DEV.): 1.2 CFS
 SEE SHEET 7 OF 17 FOR DETAILS

BASIN #3
 DRAINAGE AREA: 15.10 AC
 WET STORAGE REQUIRED: 27180 CF
 DRY STORAGE PROVIDED: 27400 CF
 TOTAL STORAGE PROVIDED: 54580 CF
 CREST ELEV.: 380.40
 TOP OF EMBANKMENT: 374.50
 CLEAN OUT ELEV.: 375.40
 Q₁ (EX.): 2.45 CFS
 Q₁ (TSWM): 2.30 CFS

NO.	REGRADE LOTS 26-32	DATE
	REVISION	10/06

GRADING AND SEDIMENT & EROSION CONTROL PLAN
DENNIS PRESERVE
 LOTS 1-58

TAX MAP 31 BLOCK 21 PARCEL '226'
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

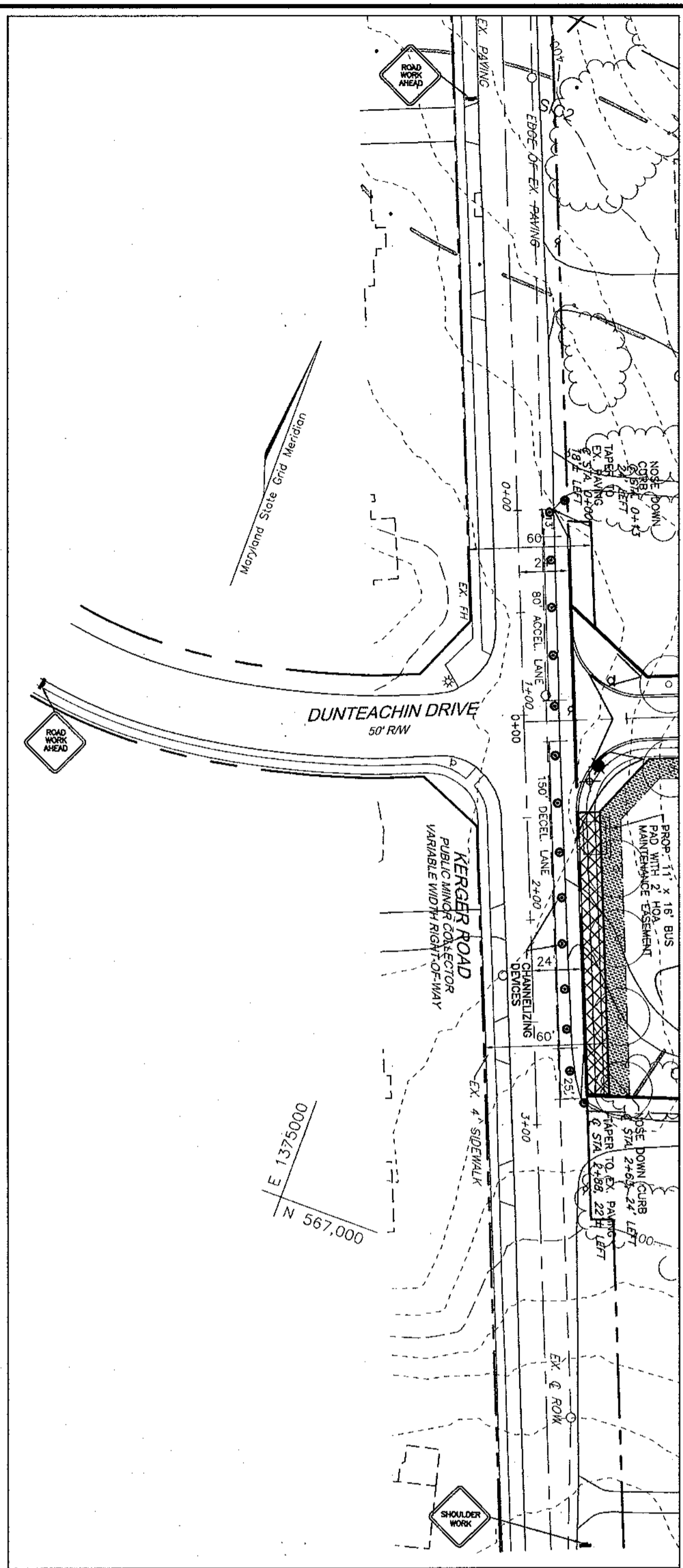
ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RHV
 DRAWN BY: CMH
 CHECKED BY: RHV
 DATE: SEPTEMBER 2004
 SCALE: 1"=50'
 W.O. NO.: 2017019.0

DEVELOPER
 ELLICOTT CITY LAND HOLDINGS, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21043
 ATTN: MR. DONALD R. REUMER
 (410) 480-9105

OWNER
 DENNIS PRESERVE, LLC
 ELLICOTT CITY LAND HOLDINGS, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MD 21043
 410-480-9105

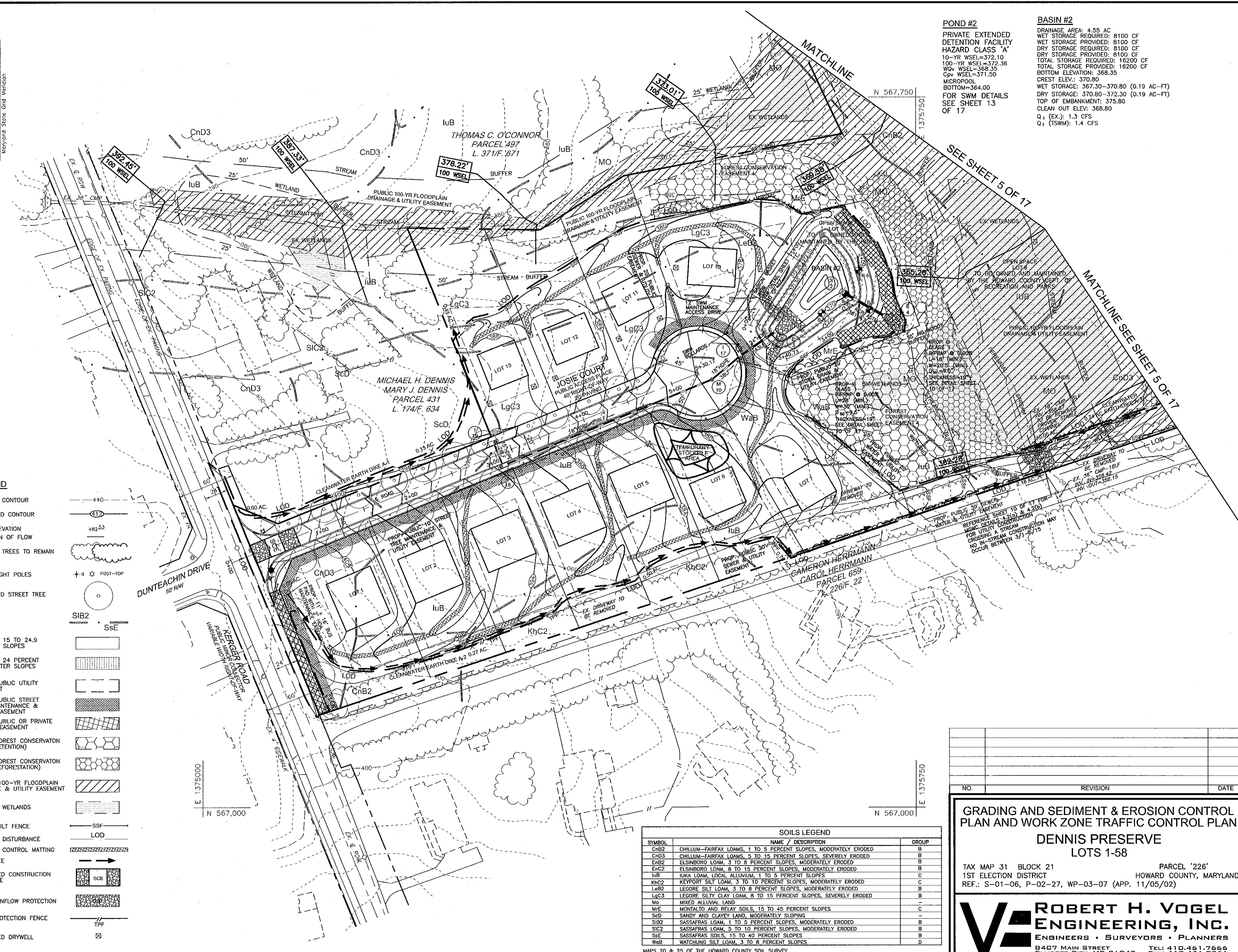
5 SHEET OF 17



WORK ZONE TRAFFIC CONTROL PLAN FOR KERGER ROAD IMPROVEMENTS
SCALE: 1"=50'

LEGEND

EXISTING CONTOUR	440
PROPOSED CONTOUR	412
SPOT ELEVATION	182.53
DIRECTION OF FLOW	(Arrow symbol)
EXISTING TREES TO REMAIN	(Tree symbol)
SIGNS/LIGHT POLES	+ 4 POST-TOP
PROPOSED STREET TREE	(Circle symbol)
SOILS	SIB2, SsE
AREA OF 15 TO 24.9 PERCENT SLOPES	(Hatched pattern)
AREA OF 24 PERCENT OR GREATER SLOPES	(Dotted pattern)
PROP. PUBLIC UTILITY EASEMENT	(Dashed line)
PROP. PUBLIC STREET TREE MAINTENANCE & UTILITY EASEMENT	(Hatched pattern)
PROP. PUBLIC OR PRIVATE ACCESS EASEMENT	(Dotted pattern)
PROP. FOREST CONSERVATION AREA (RETENTION)	(Hatched pattern)
PROP. FOREST CONSERVATION AREA (REFORESTATION)	(Dotted pattern)
PUBLIC 100-YR FLOODPLAIN DRAINAGE & UTILITY EASEMENT	(Hatched pattern)
EXISTING WETLANDS	(Wavy pattern)
SUPER SILT FENCE	SSF
LIMIT OF DISTURBANCE	LOD
EROSION CONTROL MATTING	(Hatched pattern)
EARTHDIKE	(Arrow symbol)
STABILIZED CONSTRUCTION ENTRANCE	SCE
GABION INFLOW PROTECTION	(Hatched pattern)
TREE PROTECTION FENCE	TPF
PROPOSED DRYWELL	(Square symbol)



POND #2
PRIVATE EXTENDED DETENTION FACILITY
HAZARD CLASS 'A'
10-YR WSEL=372.10
100-YR WSEL=372.36
WQ WSEL=368.35
Cpv WSEL=371.50
MICROPOND
BOTTOM=364.00
FOR SWM DETAILS SEE SHEET 13 OF 17

BASIN #2
DRAINAGE AREA: 4.55 AC
WET STORAGE REQUIRED: 8100 CF
WET STORAGE PROVIDED: 8100 CF
DRY STORAGE REQUIRED: 8100 CF
TOTAL STORAGE REQUIRED: 16200 CF
TOTAL STORAGE PROVIDED: 16200 CF
BOTTOM ELEVATION: 368.35
CREST ELEV: 370.80
WET STORAGE: 367.30-370.80 (0.19 AC-FT)
DRY STORAGE: 370.80-372.30 (0.19 AC-FT)
TOP OF EMBANKMENT: 375.80
CLEAN OUT ELEV: 368.80
Q₁ (EX): 1.3 CFS
Q₁ (TSM): 1.4 CFS

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP
CnB2	CHILLUM-FAIRFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
CnD3	CHILLUM-FAIRFAX LOAMS, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
EnB2	ELLSBORO LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EnC2	ELLSBORO LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
LuB	LUKA LOAM, LOCAL ALLUVIAL, 1 TO 5 PERCENT SLOPES	C
KhC2	KETCHUM SILT LOAM, 3 TO 10 PERCENT SLOPES, MODERATELY ERODED	C
LuB2	LEGORE SILTY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
LgC3	LEGORE SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
Mo	MIXED ALLUVIAL LAND	-
Mx	MONTAJO AND RELAY SOILS, 15 TO 45 PERCENT SLOPES	C
ScD	SANDY AND CLAYEY LAND, MODERATELY SLOPING	-
SIB2	SASSAFRAS LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
SIC2	SASSAFRAS LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B
SsE	SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES	B
WaB	WATCHUNG SILTY LOAM, 3 TO 8 PERCENT SLOPES	D

MAPS 20 & 25 OF THE HOWARD COUNTY SOIL SURVEY

APPROVED: DEPARTMENT OF PUBLIC WORKS
William F. Vukobrat 10-19-04
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cecilia Hamilton 10/27/04
Chief, Division of Land Development Date

John Deane 10/25/04
Chief, Development Engineering Division Date

These plans have been reviewed for HOWARD SOIL CONSERVATION DISTRICT and meet technical requirements for small pond construction and soil erosion and sediment control

Jim Myers 9/27/04
USDA-Natural Resources Conservation Service Date

These plans for small pond construction and soil erosion and sediment control meet the requirements of the HOWARD SOIL CONSERVATION DISTRICT.

John A. Kelly 9/22/04
Howard Soil Conservation District Date

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan of development for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of 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. I 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.

Donald R. Rau 9/14/04
Signature of Developer Date

ENGINEER'S CERTIFICATE

"I hereby certify that this plan for pond construction and sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District. 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.

Robert H. Vogel 9/15/04
Signature of Engineer Date

DEVELOPER
ELICOTT CITY LAND HOLDINGS, LLC
8000 MAIN STREET
ELICOTT CITY, MARYLAND 21043
ATTN: MR. DONALD R. REUWER
(410) 480-9105

OWNER
DENNIS PRESERVE, LLC
ELICOTT CITY LAND HOLDINGS, LLC
8000 MAIN STREET
ELICOTT CITY, MD 21043
410-480-5105

NO.	REVISION	DATE

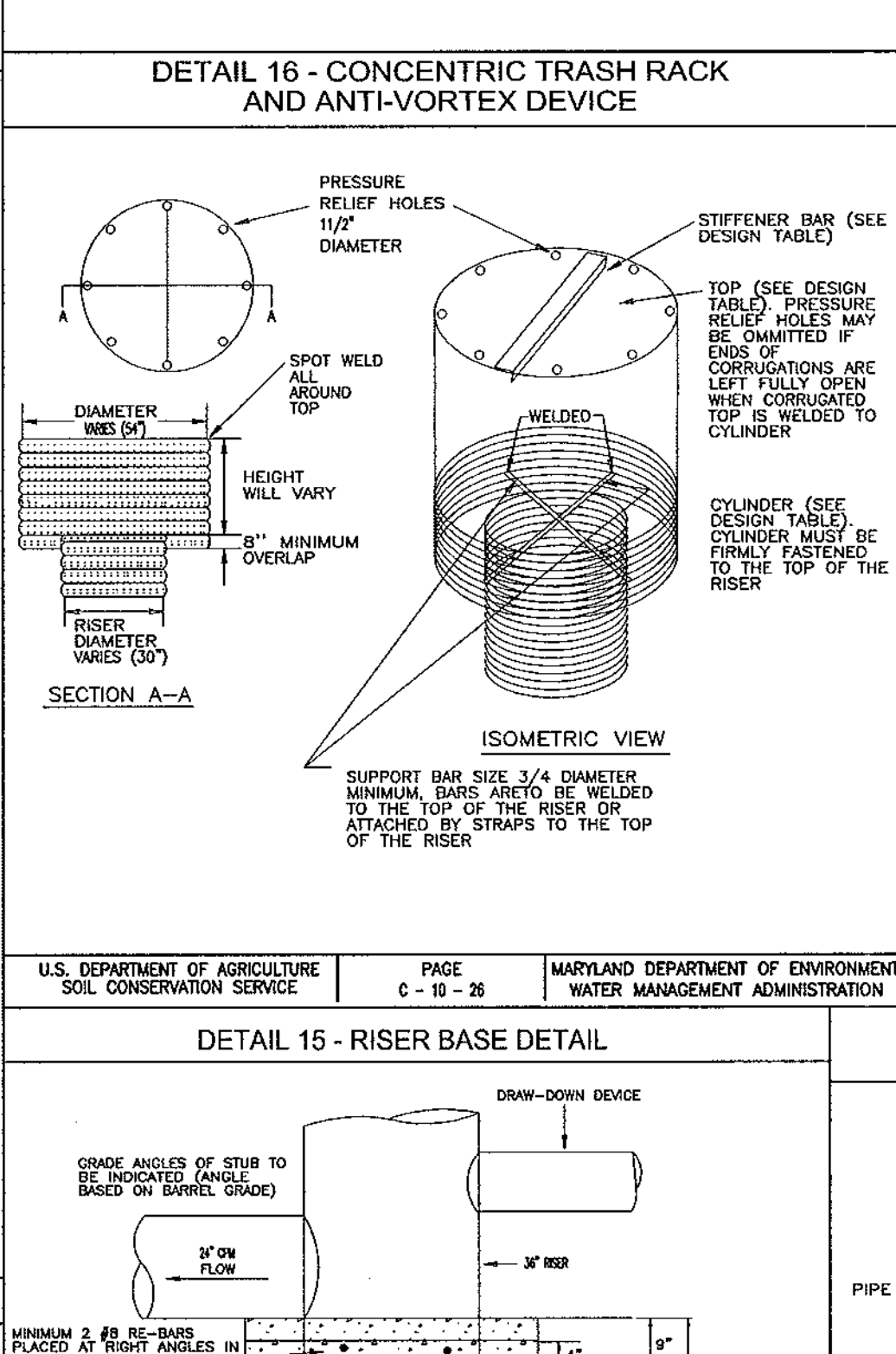
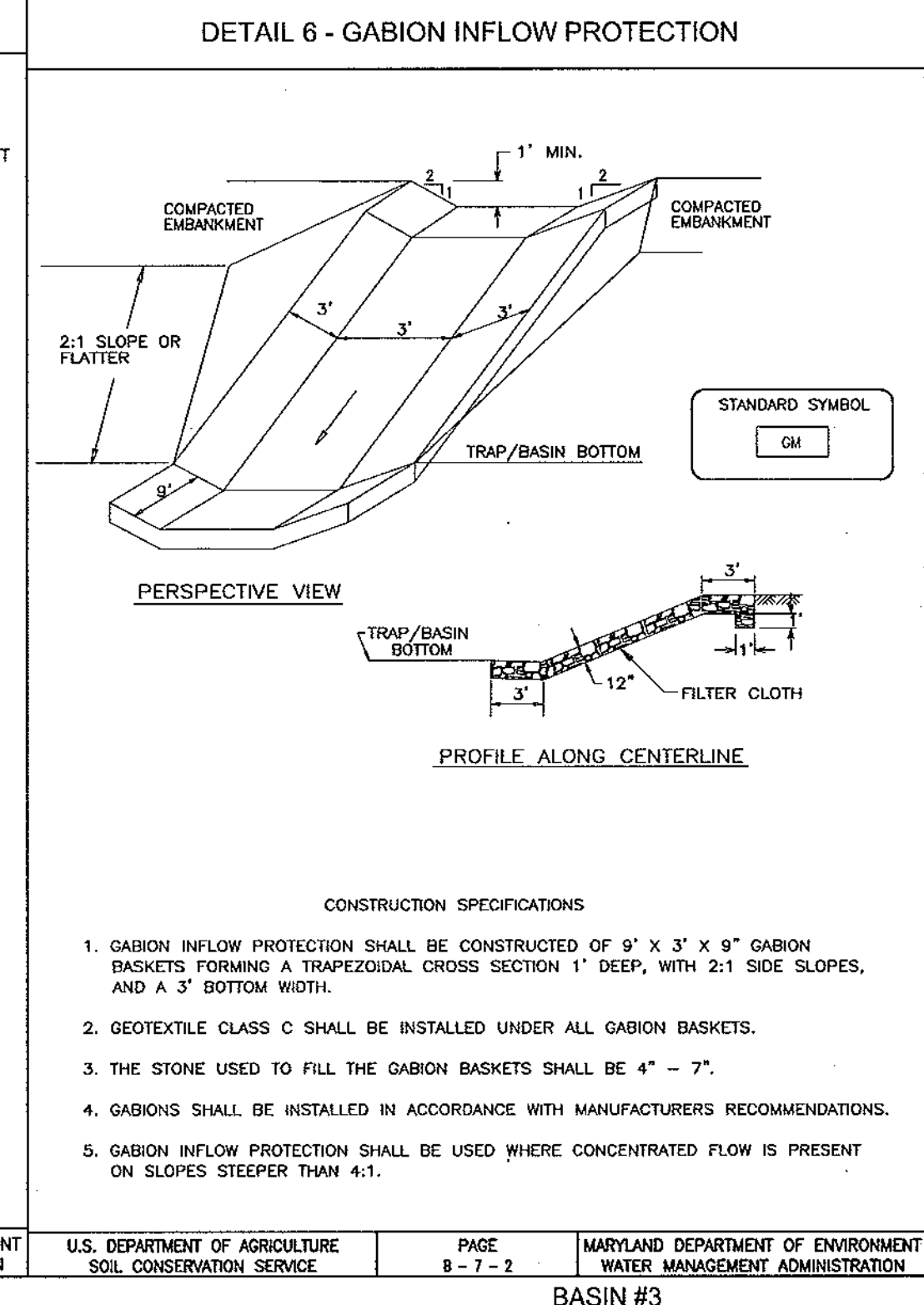
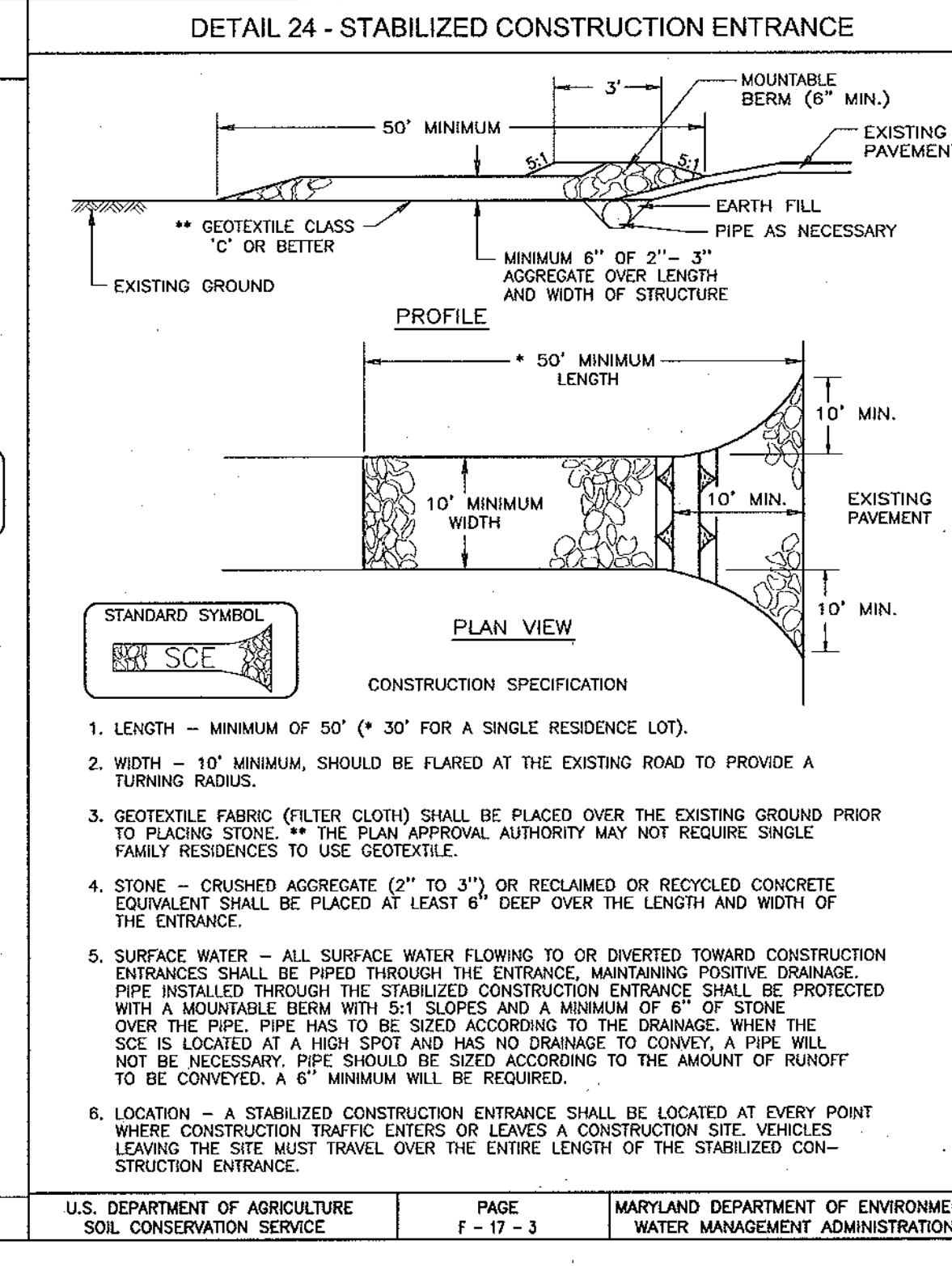
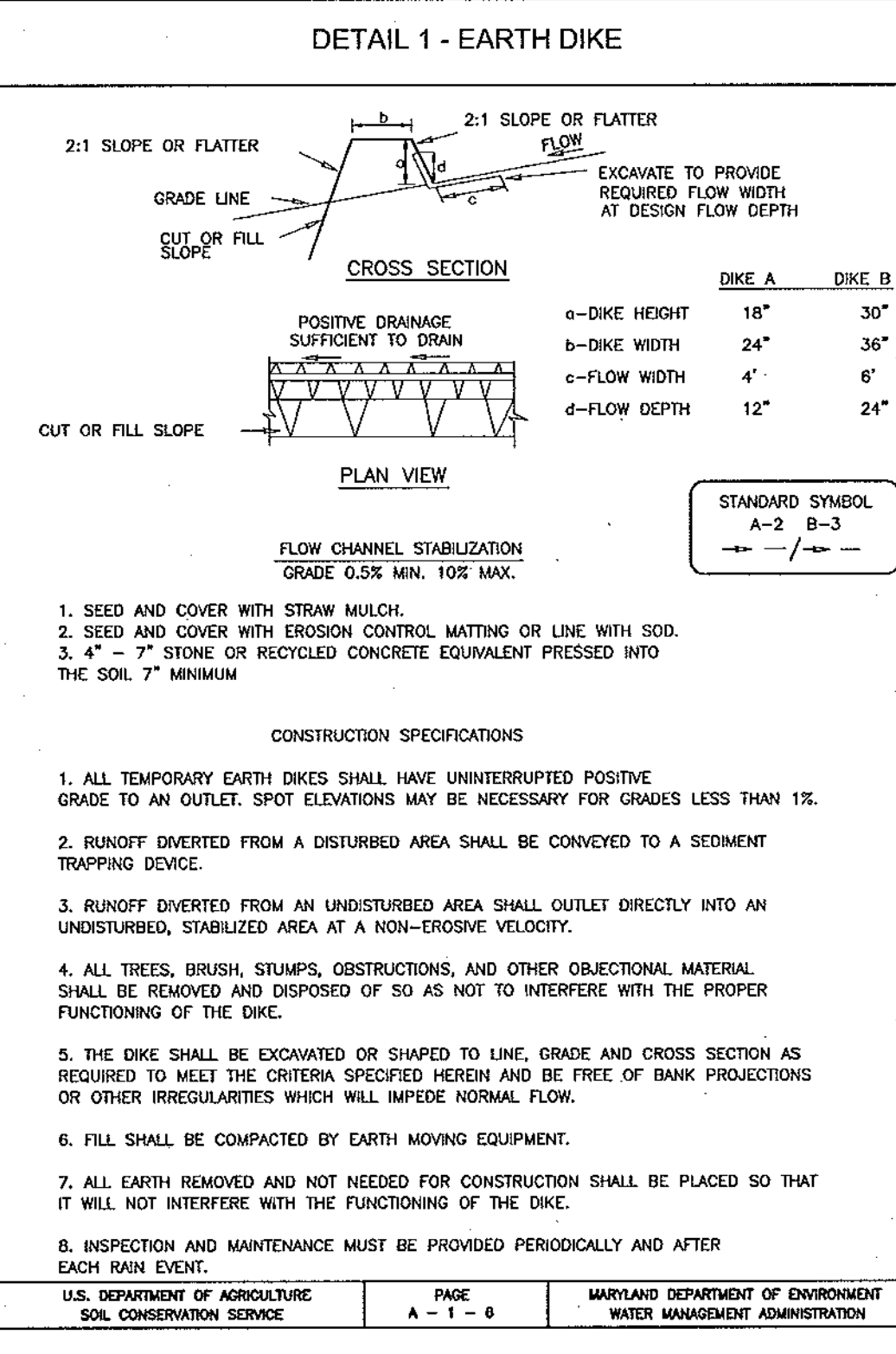
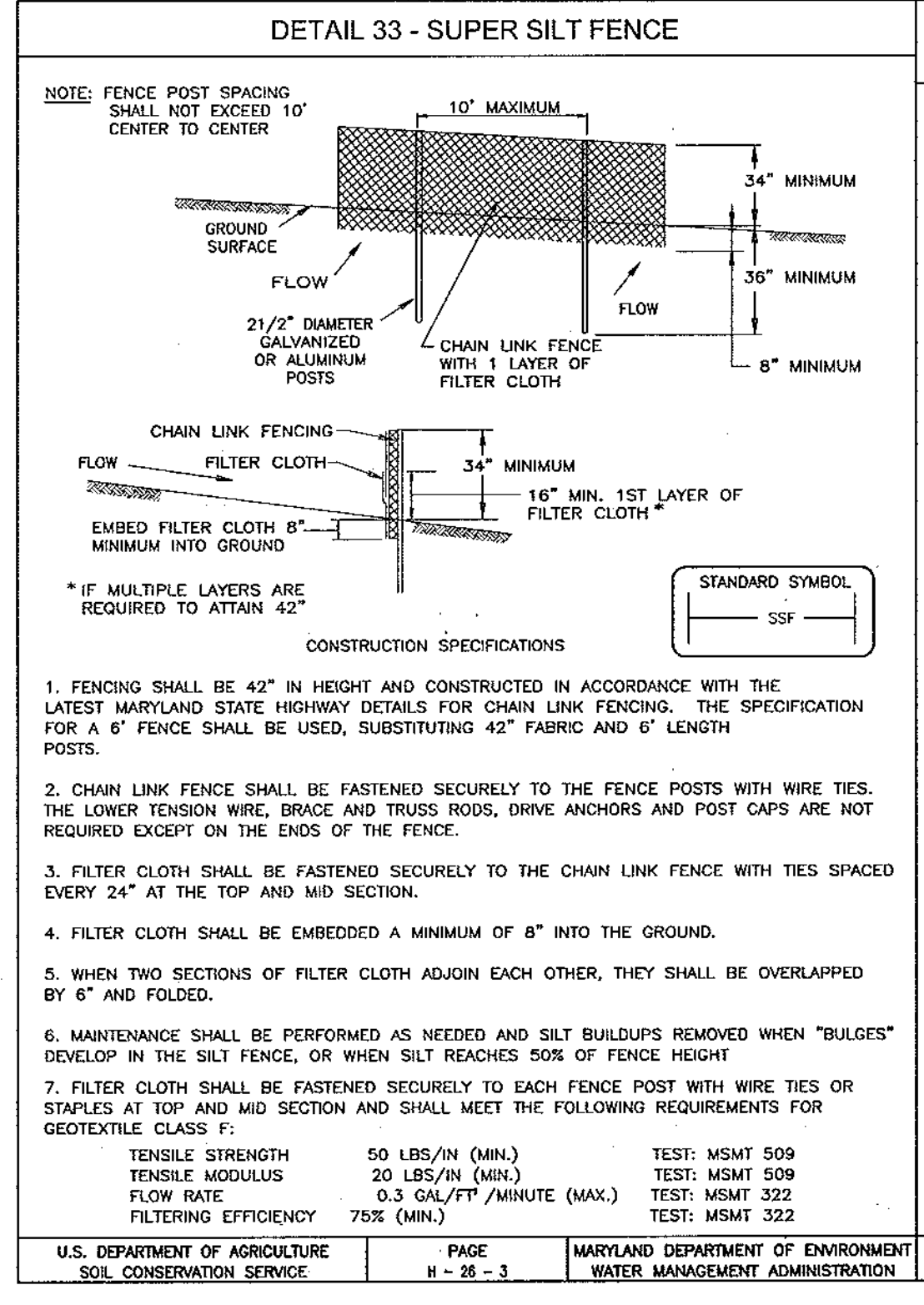
GRADING AND SEDIMENT & EROSION CONTROL PLAN AND WORK ZONE TRAFFIC CONTROL PLAN
DENNIS PRESERVE
LOTS 1-58

TAX MAP 31 BLOCK 21 PARCEL '226'
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELICOTT CITY, MD 21043 TEL: 410.481.7666
FAX: 410.481.8966

DESIGN BY: RHV
DRAWN BY: CMH
CHECKED BY: RHV
DATE: SEPTEMBER 2004
SCALE: 1"=50'
W.O. NO.: 2017019.0

6 SHEET OF 17



DETAIL 16 CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE (continued)

TRASH RACK CYLINDER DIAM. THICK. IN. GAGE	H. IN.	MINIMUM SIZE SUPPORT BAR	MINIMUM TOP THICKNESS	STIFFENER	
12	18	16	6	#6 REBAR	16 GA.
15	21	16	7	-	-
18	27	16	8	-	-
21	30	16	11	-	-
24	36	16	13	-	-
27	42	16	15	-	-
30,36	54	14	17	#8 REBAR	12 GA.
42	60	14	19	-	-
48	72	12	21	1-1/4" PIPE OR 1-1/4" X 1/4" ANGLE	10 GA.
54	78	12	23	-	-
60	90	12	29	1-1/2" PIPE OR 1-1/2" X 1/4" ANGLE	8 GA.
66	96	10	33	2" PIPE OR 2X2X1/8 ANGLE	8 GA. W/STIFFENER
72	102	10	38	-	-
78	114	10	39	2-1/2" PIPE OR 2-1/2" X 1/4" ANGLE	-
84	120	10	42	2-1/2" PIPE OR 2-1/2" X 1/2" X 1/4" ANGLE	2-1/2" X 2-1/2" X 3/16 ANGLE

NOTE: THE ABOVE TRASH RACK AND ANTI-VORTEX DEVICE INFORMATION IS ONLY FOR CORRUGATED METAL PIPE. CONCRETE RISERS MUST MEET THE REQUIREMENTS OF MD 37B.

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

DEFINITION
PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETABLE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIAL TOXIC TO PLANTS, AND/OR UNDESIRABLE SOIL COMPOSITION.

CONDITIONS WHERE PRACTICE APPLICABLE

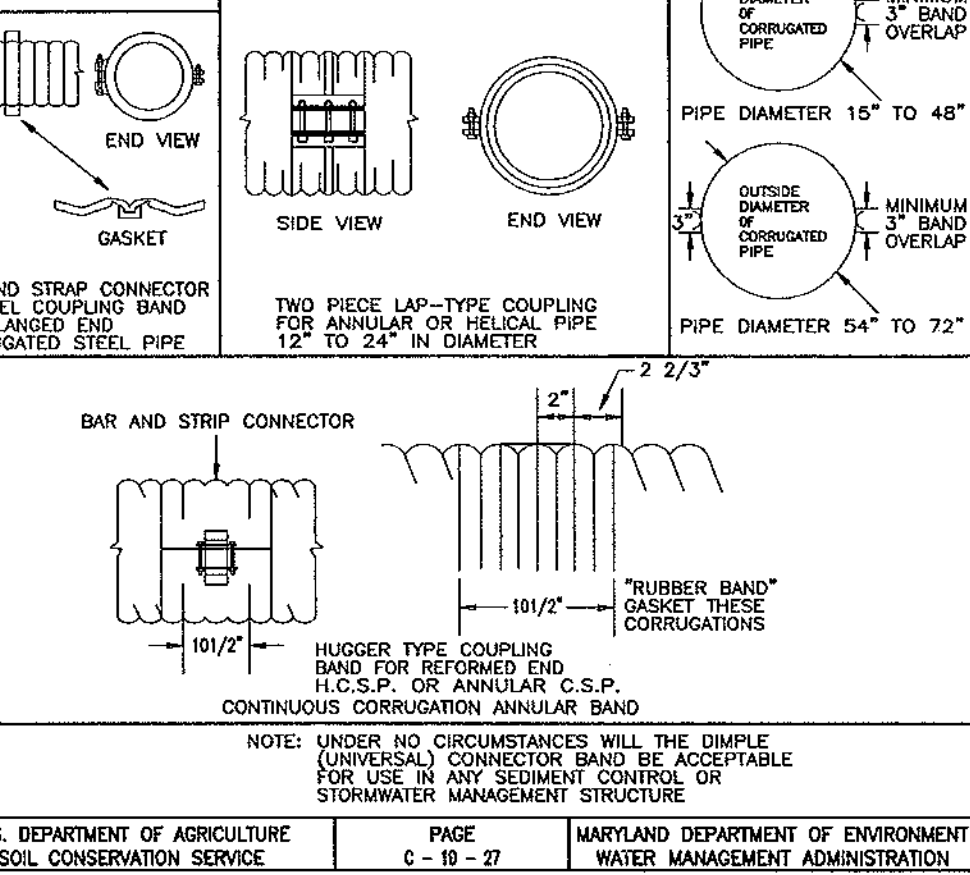
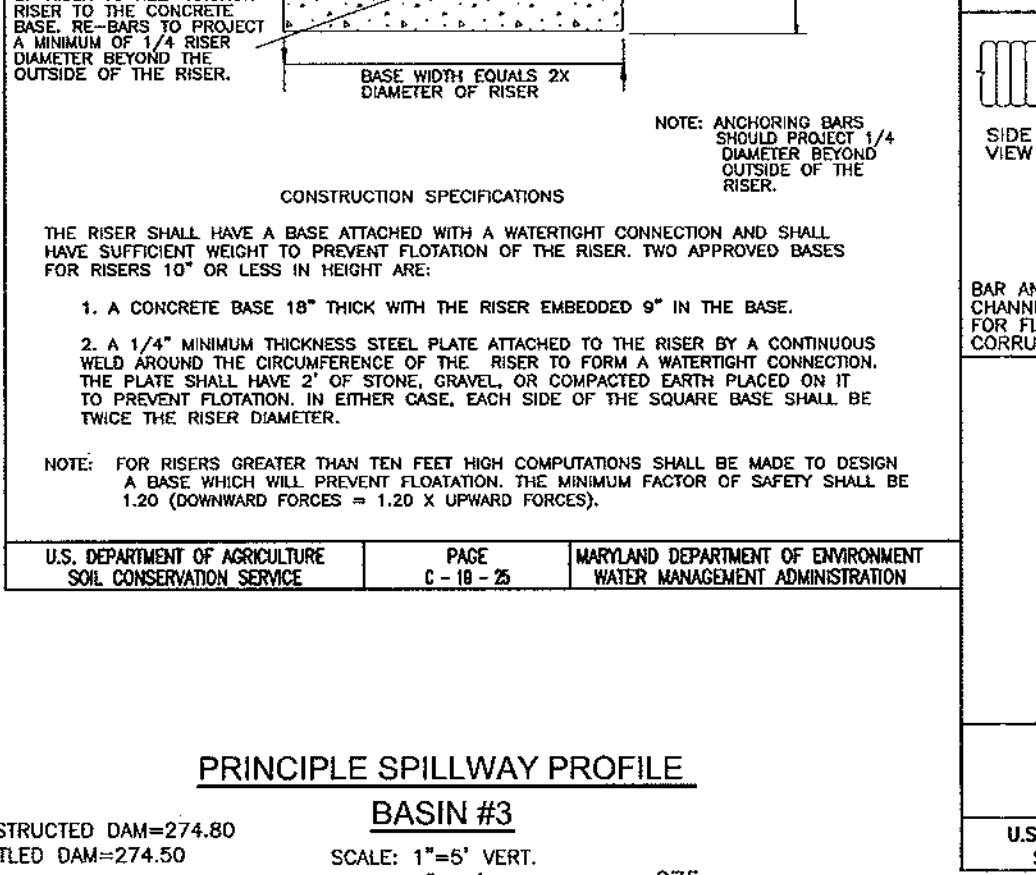
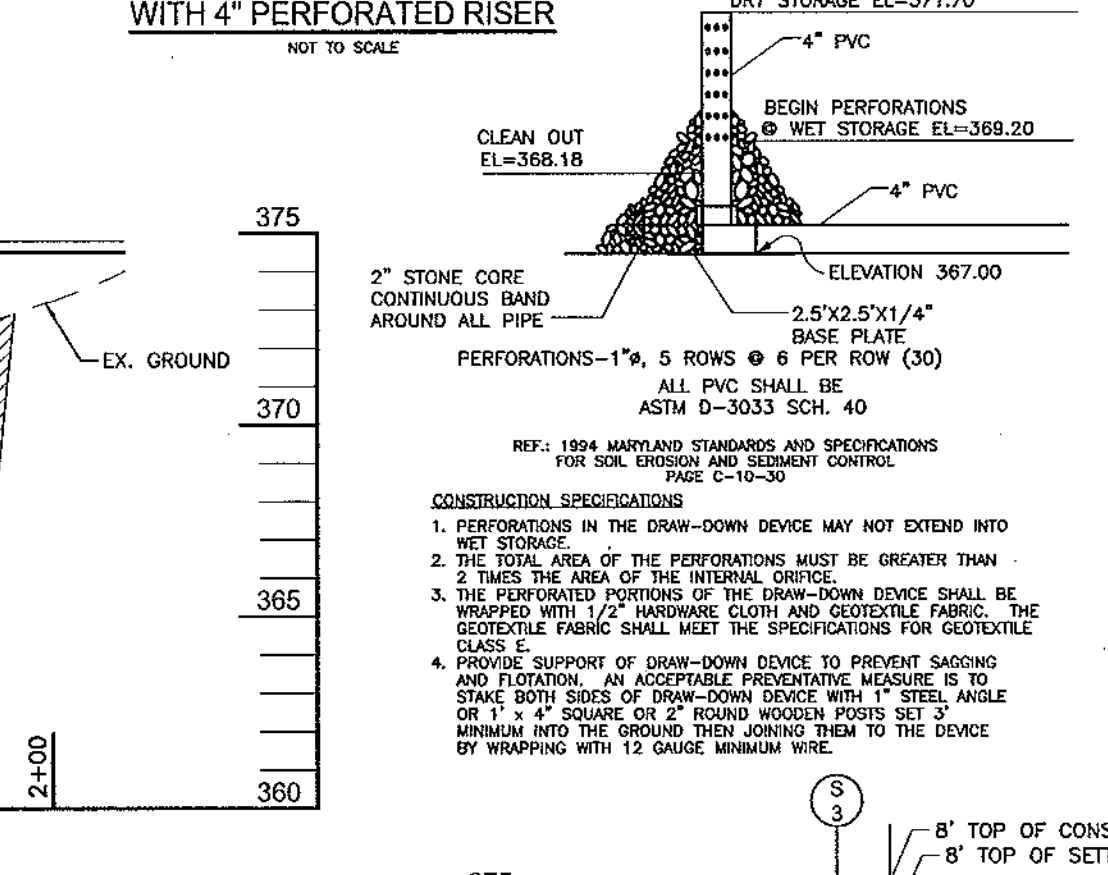
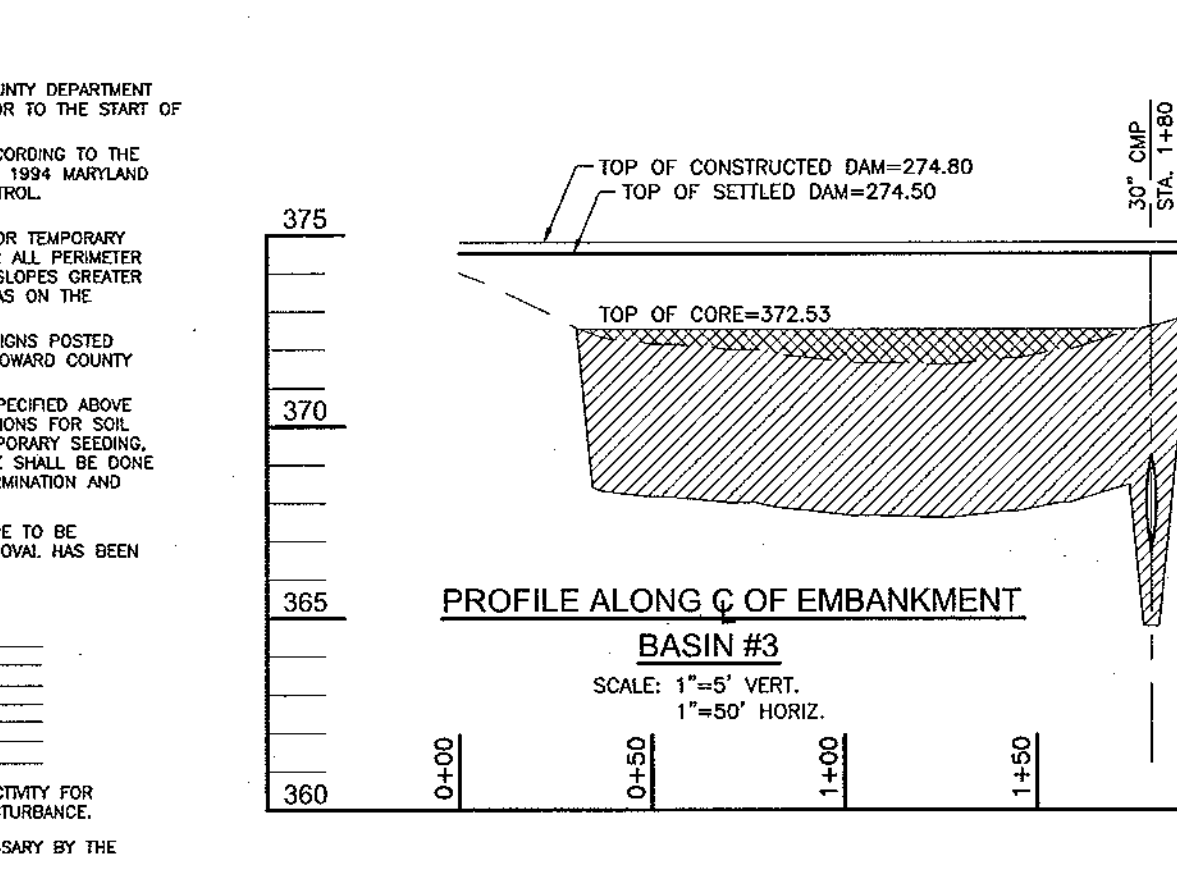
- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANTS OR TOXIC PRESERVATION.
 - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR APPROPRIATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-NRCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
- TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, SAND, OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURES AND SHALL CONTAIN LESS THAN 0.5% BY VOLUME OF CONCRETE, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1" AND 1/2" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERBERIS GRASS, QUACKGRASS, JOHNSONGRASS, MUSTERSEED, POISON IVY, RHIZOMA, OR OTHERS AS SPECIFIED.
 - WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQ. FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMITY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.
- FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
 - FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 - ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS OBTAINING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 - PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUPPORTIVE LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
 - ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 5.0 PERCENT BY WEIGHT.
 - TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
 - SOIL SHOULD BE SEED SOON AFTER PLACED ON SITE WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS CONTAINING HIGH CONCENTRATIONS OF TOXIC MATERIALS. THIS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF TOXIC MATERIALS.
 - NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS AS RECOMMENDED BY THE APPROVED APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

SEEDING CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- ALL VEGETATION AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTRIBUTION, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN (7) CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, FLOOD SLOPES, AND ALL SLOPES GREATER THAN 3:1, (9) 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 TO BE MAINTAINED IN ACCORDANCE WITH A MINIMUM THICKNESS OF 4" SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SOODING OR SEEDING CAN BE PERFORMED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOIL APPLICATIONS SHALL BE CORRECTED TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GROWING AND SEEDING PRESERVATION.
- SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:
 - PREPARED: APPLY 2 TONS PER ACRE DOLOMITE LIMESTONE (92 LBS/1000 SQ.FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL AT THE TIME OF SEEDING. APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ.FT.).
 - ACCEPTABLE: APPLY 2 TONS PER ACRE DOLOMITE LIMESTONE (92 LBS/1000 SQ.FT.) AND APPLY 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.
- MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ.FT.) OF UNLIMITED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING ANCHORS TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.
- MALTING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ.FT.) OF UNLIMITED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING ANCHORS TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.
- REFER TO THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.



APPROVED: DEPARTMENT OF PUBLIC WORKS
William F. Walsh 10-19-04
Chief, Bureau of Highways

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 10/27/04
Chief, Division of Land Development

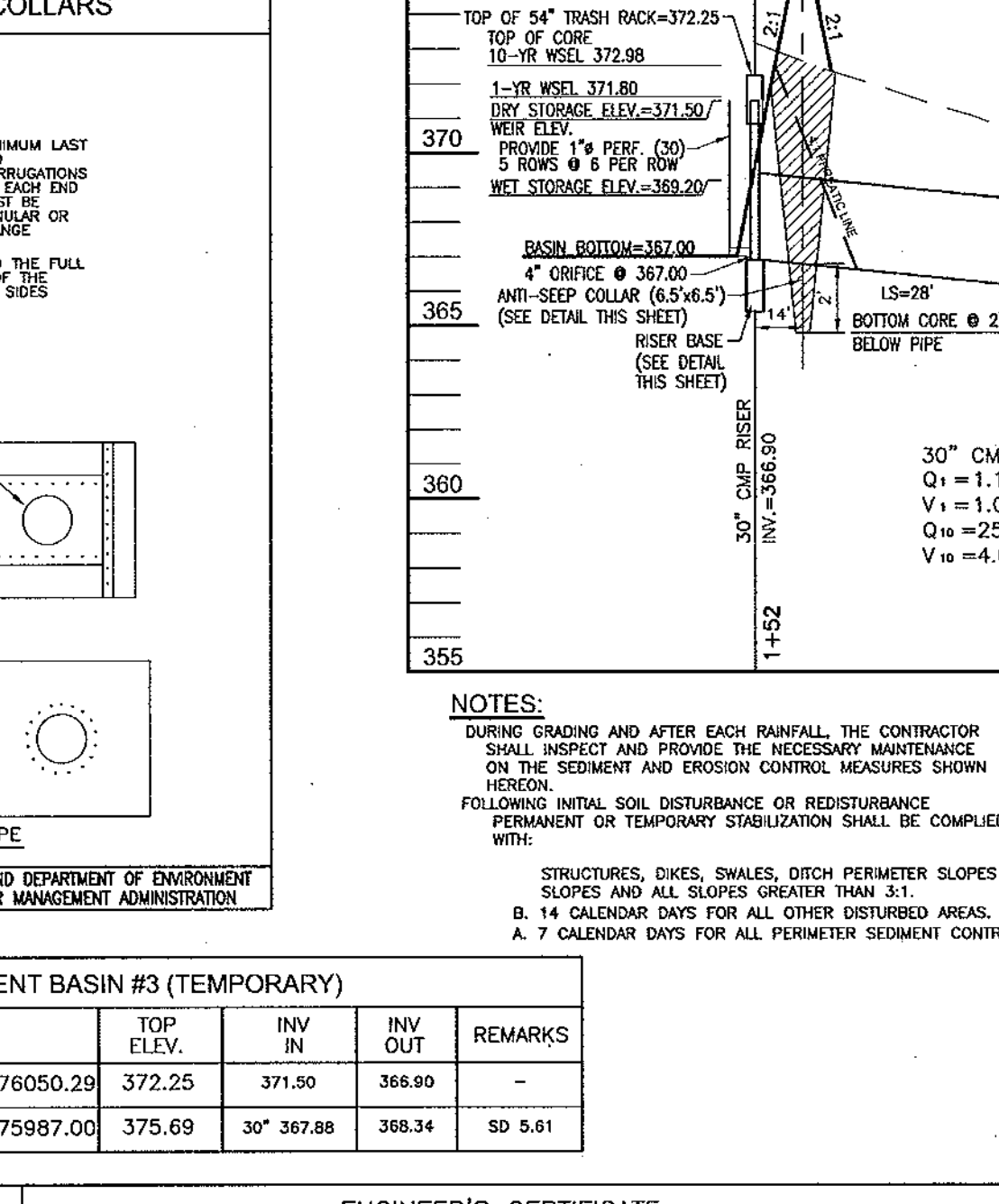
APPROVED: DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT
Robert H. Vogel 10/25/04
Chief, Development Engineering Division

APPROVED: DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE
Jim Magallon 9/27/04
USDA-Natural Resources Conservation Service

APPROVED: DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT
Robert H. Vogel 9/22/04
Howard Soil Conservation District

STRUCTURE SCHEDULE FOR SEDIMENT BASIN #3 (TEMPORARY)

NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
S-3	SEE DETAIL 16, THIS SHEET	N 567719.40, E 1376050.29	372.25	371.50	368.90	-
E-5	30" METAL END SECTION	N 567581.49, E 1375987.00	375.69	30' 367.88	368.34	SD 5.61



DEVELOPER

ELLIOTT CITY LAND HOLDINGS, LLC
8000 MAIN STREET
ELLIOTT CITY, MARYLAND 21043
ATTN: MR. DONALD R. REWLER
(410) 480-9105

OWNER

DENNIS PRE SERVE, LLC
ELLIOTT CITY LAND HOLDINGS, LLC
8000 MAIN STREET
ELLIOTT CITY, MD 21043
410-480-9105

TEMP. PIPE SCHEDULE

PIPE SIZE	TYPE	TOTAL LENGTH
30"	CMP	152 LF

SEDIMENT AND EROSION CONTROL DETAILS

DENNIS PRESERVE

LOTS 1-58

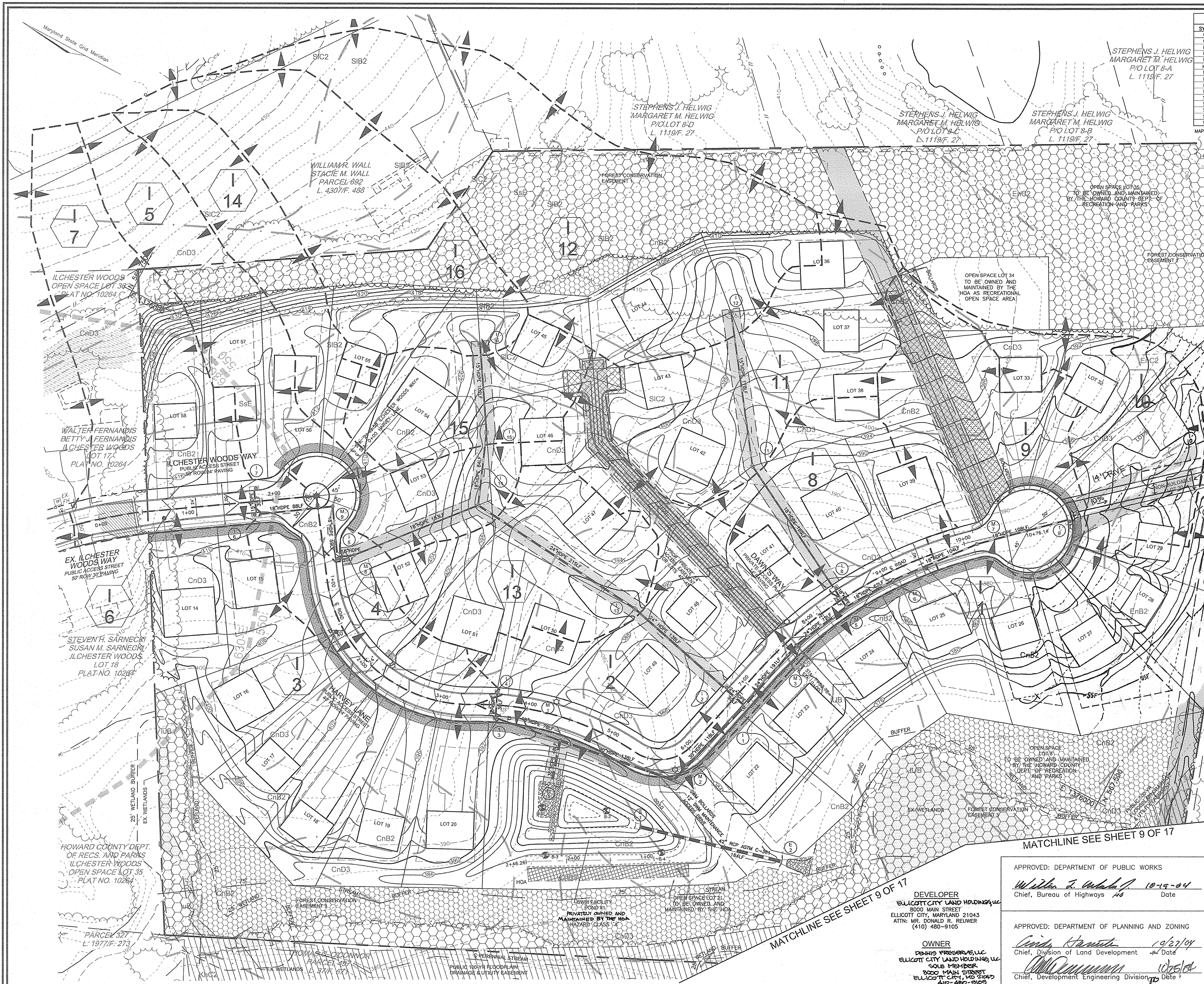
TAX MAP 31 BLOCK 21
1ST ELECTION DISTRICT
REF: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

PARCEL '226'
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.

ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLIOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

DESIGN BY: RHV
DRAWN BY: CMH
CHECKED BY: RIV
DATE: SEPTEMBER 2004
SCALE: AS SHOWN
W.O. NO.: 2017019.0
7 SHEET OF 17



SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
CnB2	CHILLUM-FAIRFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
CnD3	CHILLUM-FAIRFAX LOAMS, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
EnB2	ELSNBORO LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EnC2	ELSNBORO LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
LuB	LUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C
KnC2	KEYPORT SILT LOAM, 3 TO 10 PERCENT SLOPES, MODERATELY ERODED	C
LaB2	LEGORE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
LaC3	LEGORE SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
M2	MIXED ALLUVIAL LAND	-
M/E	MONTALTO AND RELAY SOILS, 15 TO 45 PERCENT SLOPES	C
SdC	SANDY AND CLAYEY LAND, MODERATELY SLOPING	-
SIB2	SASSAFRAS LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
SIC2	SASSAFRAS LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B
SsE	SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES	B
WbB	WATCHUNG SILT LOAM, 3 TO 8 PERCENT SLOPES	D

MAPS 20 & 25 OF THE HOWARD COUNTY SOIL SURVEY
 JAMES S. SCALIO
 ANNE E. HUDSON
 PARCEL 687
 L. 1128/F. 304

LEGEND	
EXISTING CONTOUR	---440---
PROPOSED CONTOUR	---440---
SPOT ELEVATION	+82.53
DIRECTION OF FLOW	→
EXISTING TREES TO REMAIN	(Tree symbol)
SIGNS/LIGHT POLES	+ + POST-10P
PROPOSED STREET TREE	(Tree symbol)
SOILS	SIB2, SsE
AREA OF 15 TO 24.9 PERCENT SLOPES	(Hatched pattern)
AREA OF 24 PERCENT OR GREATER SLOPES	(Hatched pattern)
PROP. PUBLIC UTILITY EASEMENT	(Hatched pattern)
DRAINAGE DIVIDE	↑

DRAINAGE AREA TABULATIONS						
NO.	AREA	'C'	% IMP.	SOIL TYPE	ZONE	
I-1	0.31 AC.	0.89	77%	B/C	R-20	
I-2	1.56 AC.	0.35	39%	B	R-20	
I-3	0.33 AC.	0.54	62%	B	R-20	
I-4	0.39 AC.	0.36	40%	B	R-20	
I-5	1.01 AC.	0.31	34%	B	R-20	
I-6	0.12 AC.	0.61	64%	B	R-20	
I-7	1.38 AC.	0.29	33%	B	R-20	
I-8	0.83 AC.	0.30	33%	B	R-20	
I-9	1.14 AC.	0.31	39%	B	R-20	
I-11	1.25 AC.	0.26	30%	B	R-20	
I-12	2.48 AC.	0.22	18%	B	R-20	
I-13	0.96 AC.	0.26	30%	B	R-20	
I-14	1.07 AC.	0.25	28%	B	R-20	
I-15	0.71 AC.	0.26	30%	B	R-20	
I-16	1.50 AC.	0.19	8%	B	R-20	
I-17	1.75 AC.	0.36	39%	B/C/D	R-20	
I-18	0.91 AC.	0.36	38%	B/C	R-20	
I-19	0.49 AC.	0.38	41%	B	R-20	

NO.	REGRADE LOTS 26-32	DATE	1.20.06
REVISION			

STORM DRAIN DRAINAGE AREA MAP
DENNIS PRESERVE
 LOTS 1-58

TAX MAP 31 BLOCK 21 PARCEL '226'
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELICOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RHV
 DRAWN BY: CMH
 CHECKED BY: RHV
 DATE: SEPTEMBER 2004
 SCALE: 1"=50'
 W.O. NO.: 2017019.0

8 SHEET OF 17

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. ... 10-19-04
 Chief, Bureau of Highways

APPROVED: DEPARTMENT OF PLANNING AND ZONING
... 10/27/04
 Chief, Division of Land Development

APPROVED: DEPARTMENT OF PLANNING AND ZONING
... 10/25/04
 Chief, Development Engineering Division

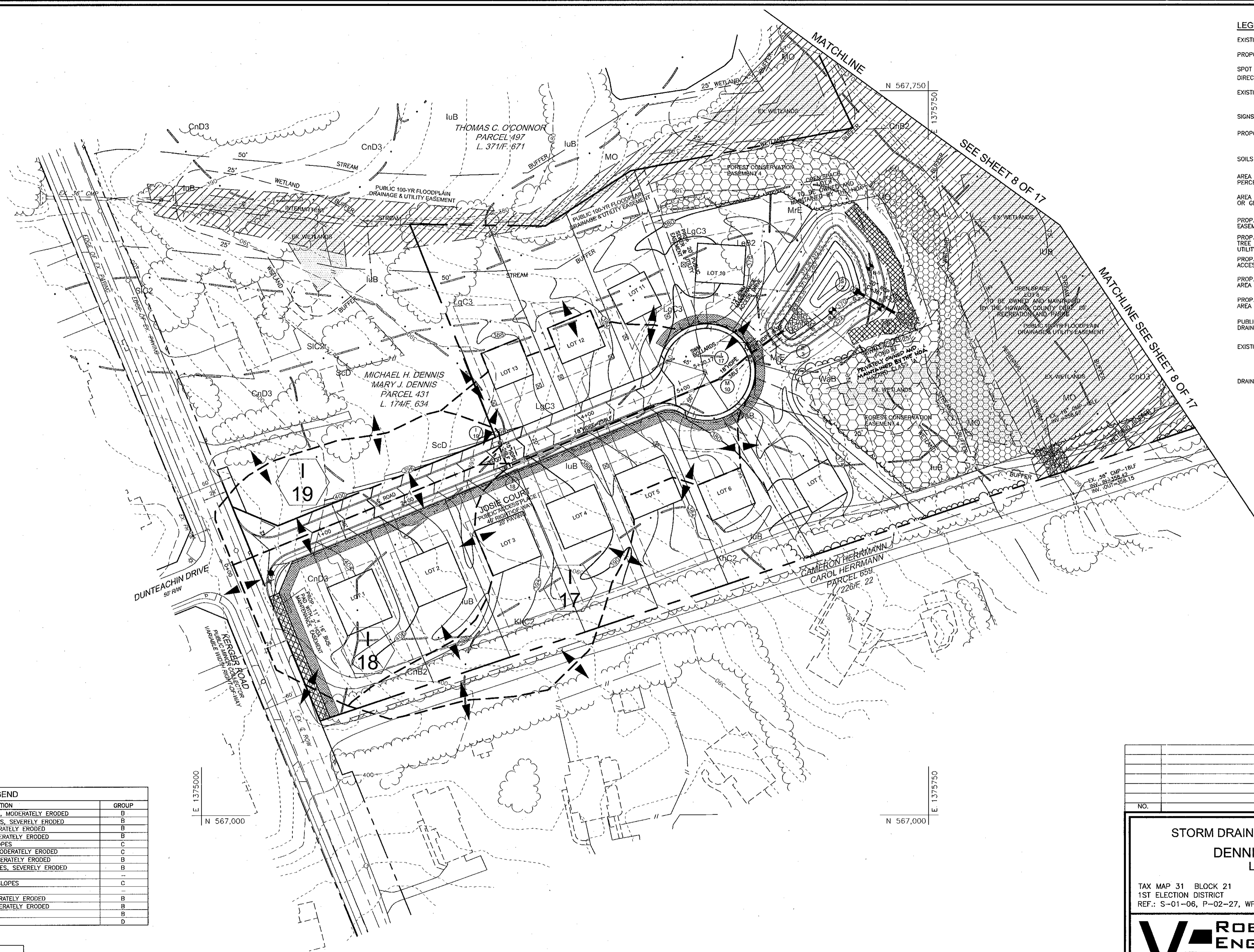
DEVELOPER
 ELICOTT CITY LAND HOLDINGS, LLC
 8000 MAIN STREET
 ELICOTT CITY, MARYLAND 21043
 ATTN: MR. DONALD R. REUWER
 (410) 480-9105

OWNER
 DENNIS PRESERVE, LLC
 ELICOTT CITY LAND HOLDINGS, LLC
 SOLE MEMBER
 8000 MAIN STREET
 ELICOTT CITY, MD 21043
 410-480-9105

MATCHLINE SEE SHEET 9 OF 17

MATCHLINE SEE SHEET 9 OF 17

Howard State Grid Meridian



LEGEND

- EXISTING CONTOUR: --- 440 ---
- PROPOSED CONTOUR: --- 417 ---
- SPOT ELEVATION: +82.53
- DIRECTION OF FLOW: [Symbol]
- EXISTING TREES TO REMAIN: [Symbol]
- SIGNS/LIGHT POLES: + 4 POST-TOP
- PROPOSED STREET TREE: [Symbol]
- SOILS: SIB2, S5E
- AREA OF 15 TO 24.9 PERCENT SLOPES: [Symbol]
- AREA OF 24 PERCENT OR GREATER SLOPES: [Symbol]
- PROP. PUBLIC UTILITY EASEMENT: [Symbol]
- PROP. PUBLIC STREET TREE MAINTENANCE & UTILITY EASEMENT: [Symbol]
- PROP. PUBLIC OR PRIVATE ACCESS EASEMENT: [Symbol]
- PROP. FOREST CONSERVATION AREA (RETENTION): [Symbol]
- PROP. FOREST CONSERVATION AREA (REFORESTATION): [Symbol]
- PUBLIC 100-YR FLOODPLAIN DRAINAGE & UTILITY EASEMENT: [Symbol]
- EXISTING WETLANDS: [Symbol]
- DRAINAGE DIVIDE: [Symbol]

DRAINAGE AREA TABULATIONS

NO.	AREA	'C'	% IMP.	SOIL TYPE	ZONE
I-1	0.31 AC.	0.69	77%	B/C	R-20
I-2	1.56 AC.	0.35	39%	B	R-20
I-3	0.33 AC.	0.54	62%	B	R-20
I-4	0.39 AC.	0.36	40%	B	R-20
I-5	1.01 AC.	0.31	34%	B	R-20
I-6	0.12 AC.	0.61	64%	B	R-20
I-7	1.38 AC.	0.29	33%	B	R-20
I-8	0.83 AC.	0.30	33%	B	R-20
I-9	1.14 AC.	0.31	39%	B	R-20
I-10	0.89 AC.	0.26	29%	B	R-20
I-11	1.25 AC.	0.26	30%	B	R-20
I-12	2.48 AC.	0.22	18%	B	R-20
I-13	0.96 AC.	0.26	30%	B	R-20
I-14	1.07 AC.	0.25	28%	B	R-20
I-15	0.71 AC.	0.26	30%	B	R-20
I-16	1.50 AC.	0.19	8%	B	R-20
I-17	1.75 AC.	0.36	39%	B/C/D	R-20
I-18	0.91 AC.	0.36	38%	B/C	R-20
I-19	0.49 AC.	0.38	41%	B	R-20

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP
CnB2	CHILLUM-FAIRFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
CnD3	CHILLUM-FAIRFAX LOAMS, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
EnB2	ELSINBORO LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EnC2	ELSINBORO LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C
KhC2	KEYPORT SILT LOAM, 3 TO 10 PERCENT SLOPES, MODERATELY ERODED	C
LsB2	LEGORE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
LqC3	LEGORE SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
Mo	MIXED ALLUVIAL LAND	-
MfE	MONTALTO AND RELAY SOILS, 15 TO 45 PERCENT SLOPES	C
SdD	SANDY AND CLAYEY LAND, MODERATELY SLOPING	-
SIB2	SASSAFRAS LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
SIC2	SASSAFRAS LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B
S5E	SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES	B
Wob	WATCHUNG SILT LOAM, 3 TO 8 PERCENT SLOPES	D

MAPS 20 & 25 OF THE HOWARD COUNTY SOIL SURVEY

APPROVED: DEPARTMENT OF PUBLIC WORKS
W. J. ... 10-15-04
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
... 10/27/04
 Chief, Division of Land Development Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
... 10/27/04
 Chief, Development Engineering Division Date

NO.	REVISION	DATE

STORM DRAIN DRAINAGE AREA MAP
DENNIS PRESERVE
 LOTS 1-58

TAX MAP 31 BLOCK 21 PARCEL '226'
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

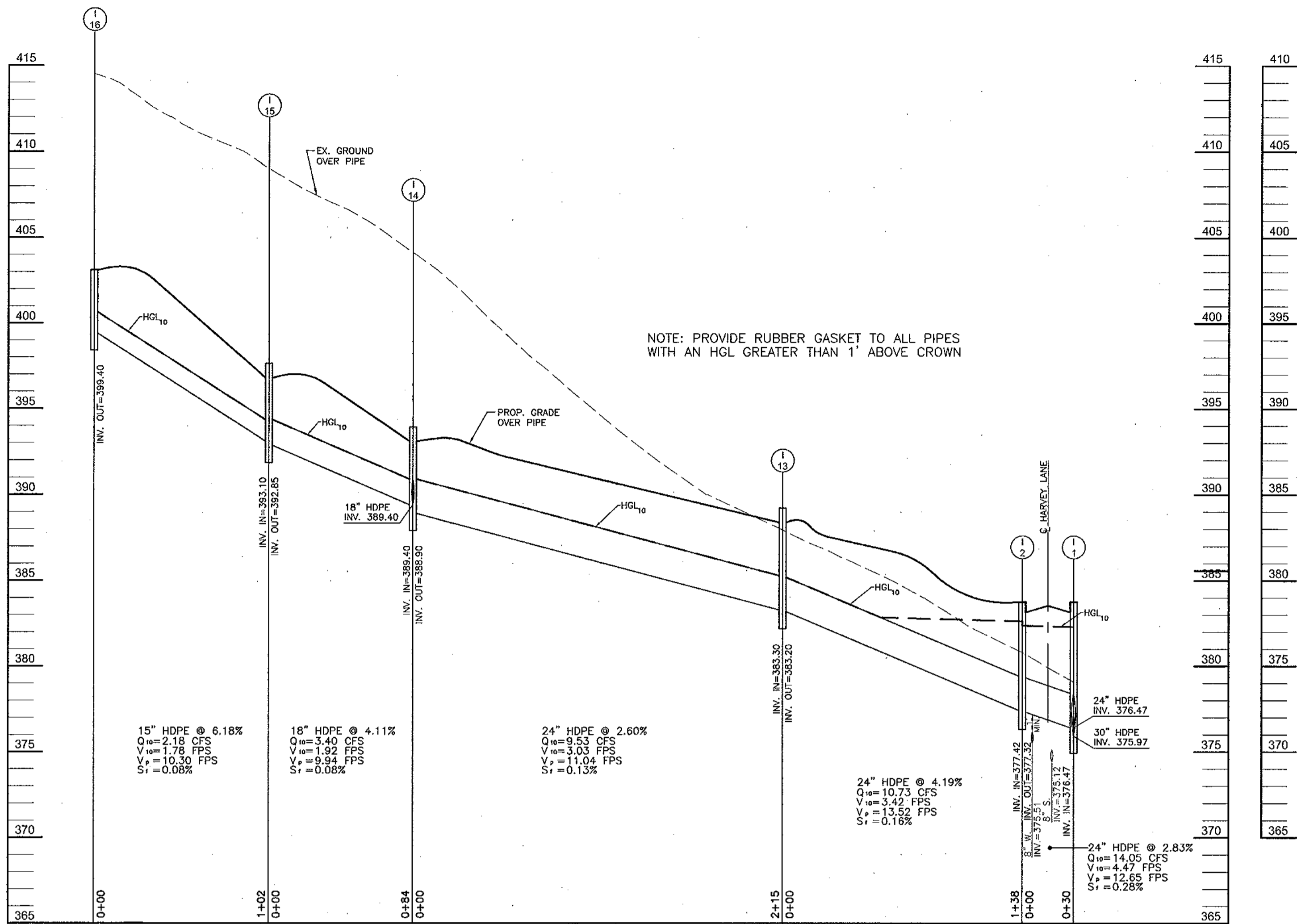
ROBERT H. VOGEL
ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.0961

DEVELOPER
 ELLICOTT CITY LAND HOLDINGS, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21043
 ATTN: MR. DONALD R. REUWER
 (410) 480-9105

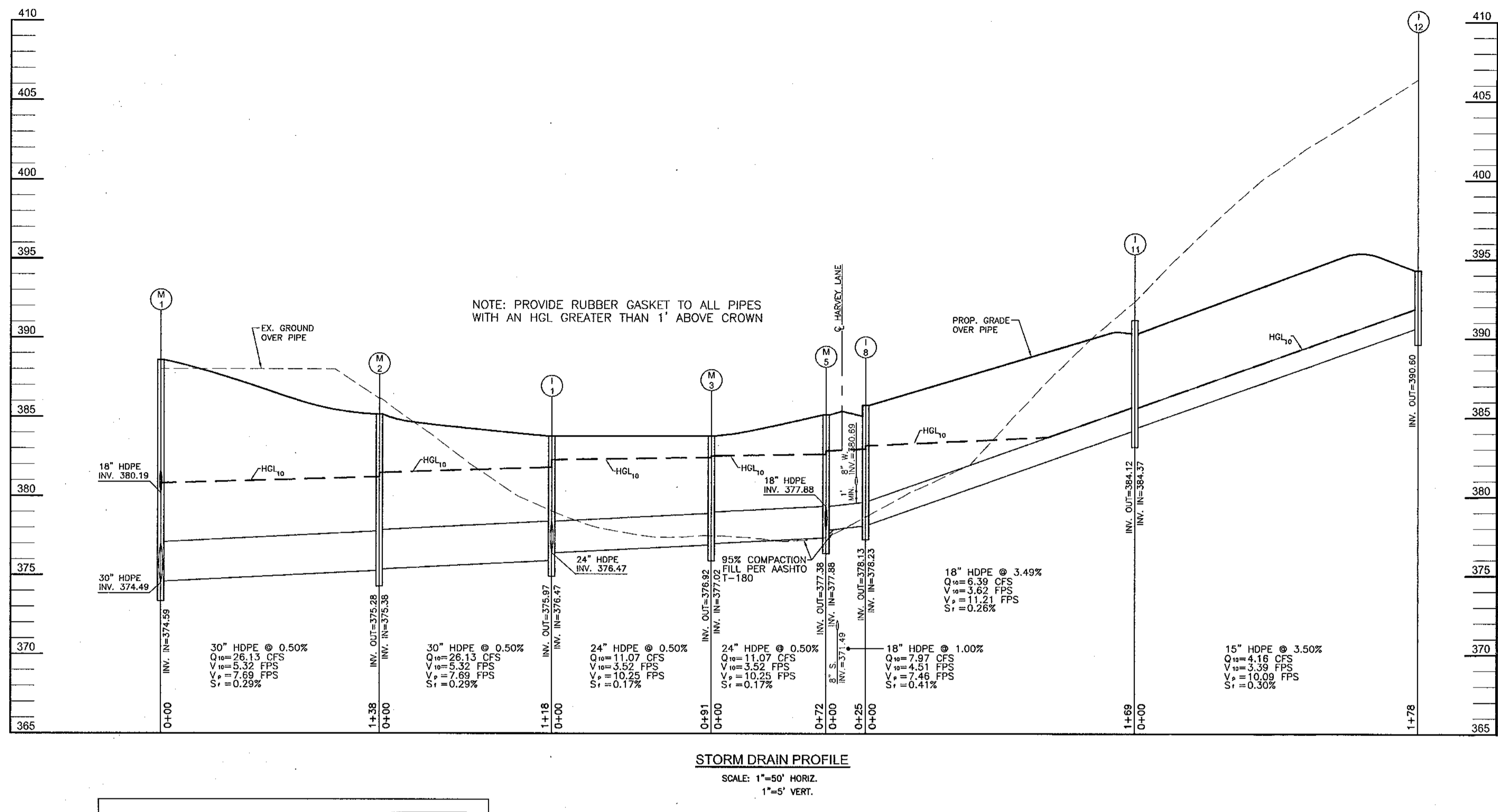
OWNER
 DENNIS PRESERVE, LLC
 ELLICOTT CITY LAND HOLDINGS, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MD 21043
 410-480-9105

DESIGN BY: RHV
 DRAWN BY: CMH
 CHECKED BY: RHV
 DATE: SEPTEMBER 2004
 SCALE: 1"=50'
 W.O. NO.: 2017019.0

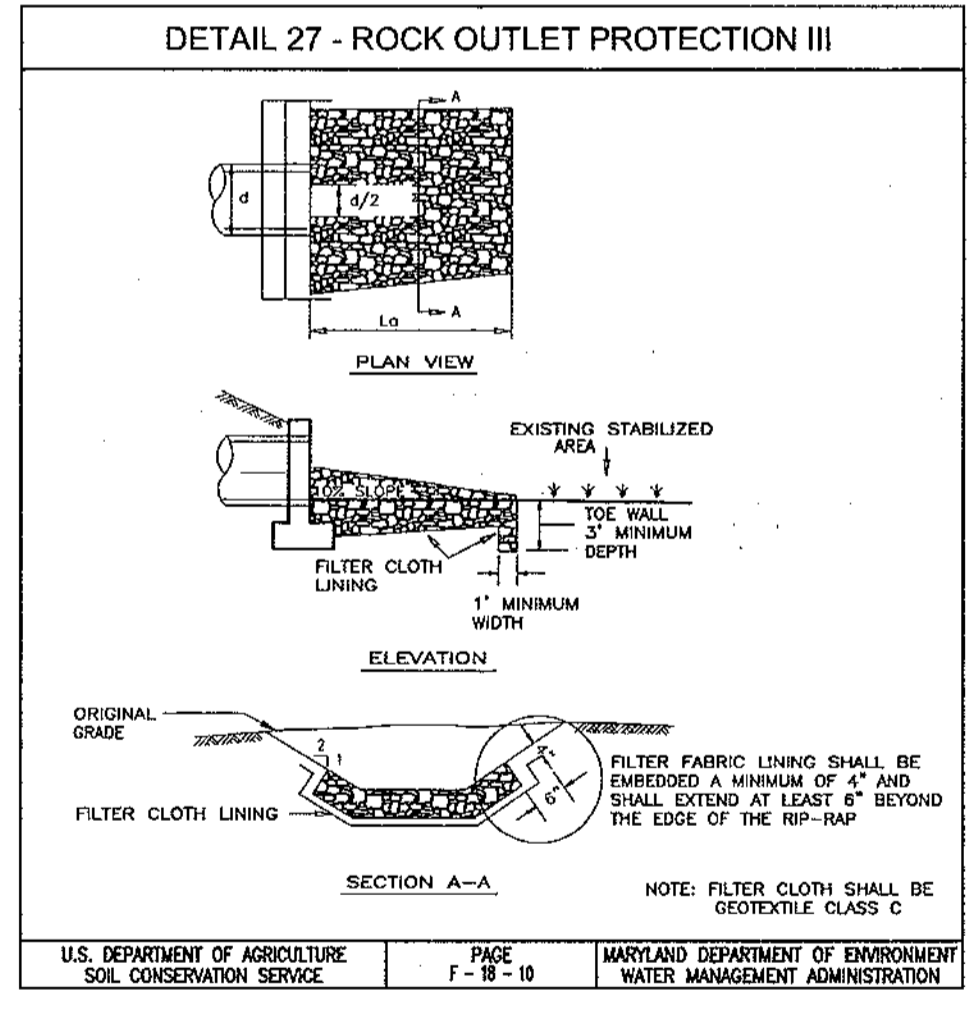
9 SHEET OF 17



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



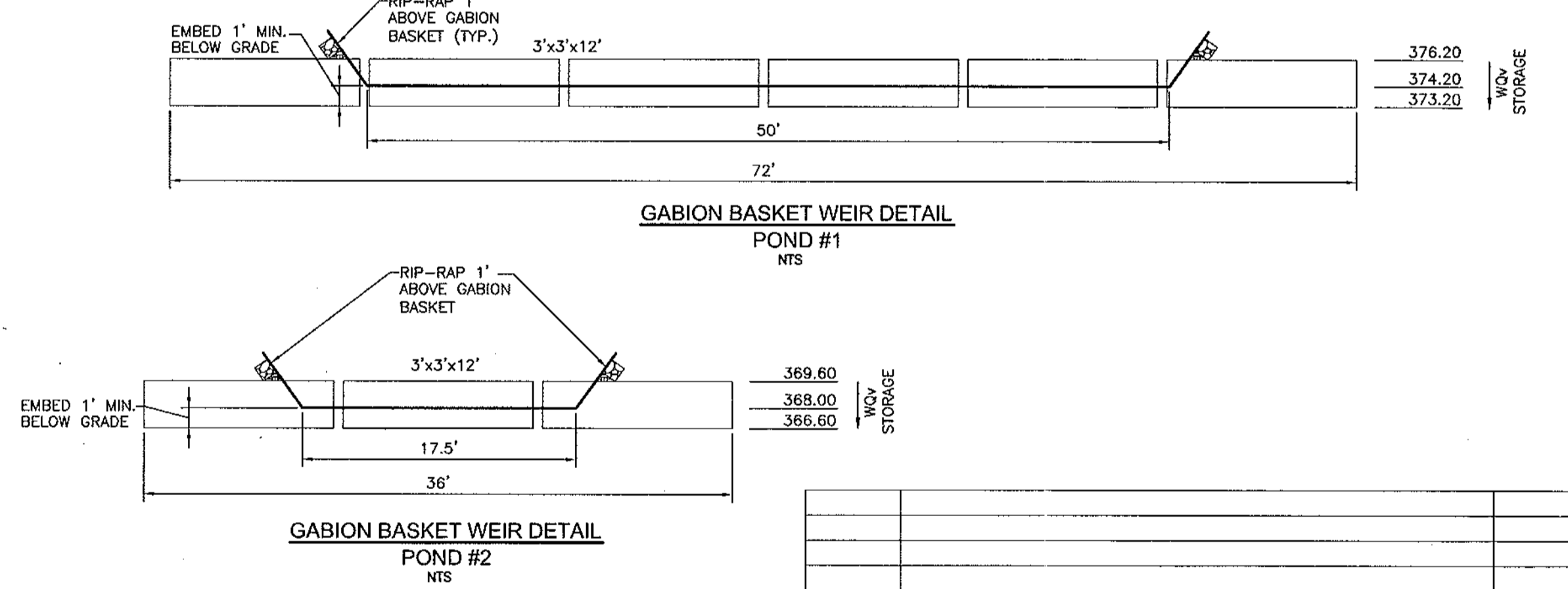
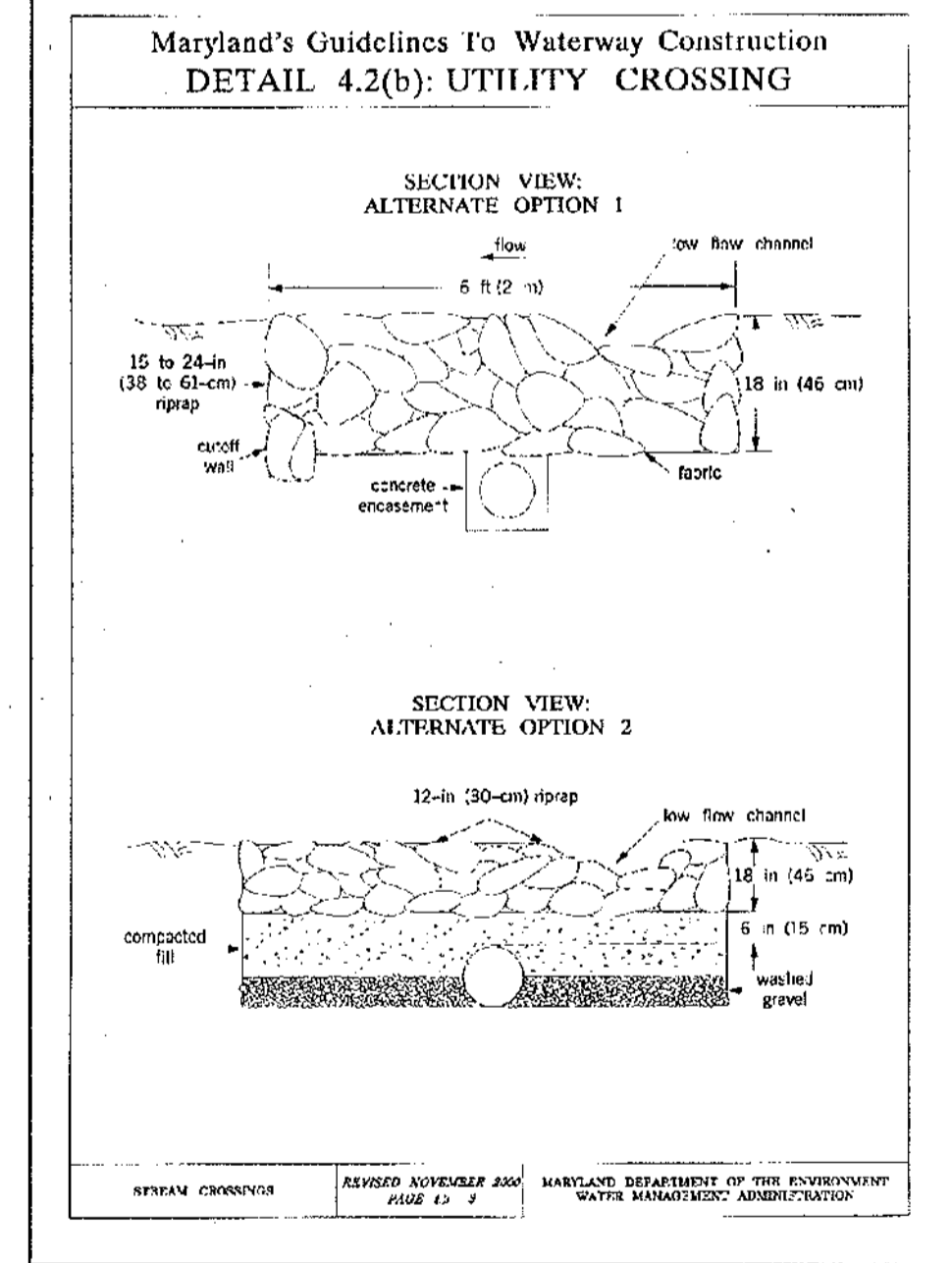
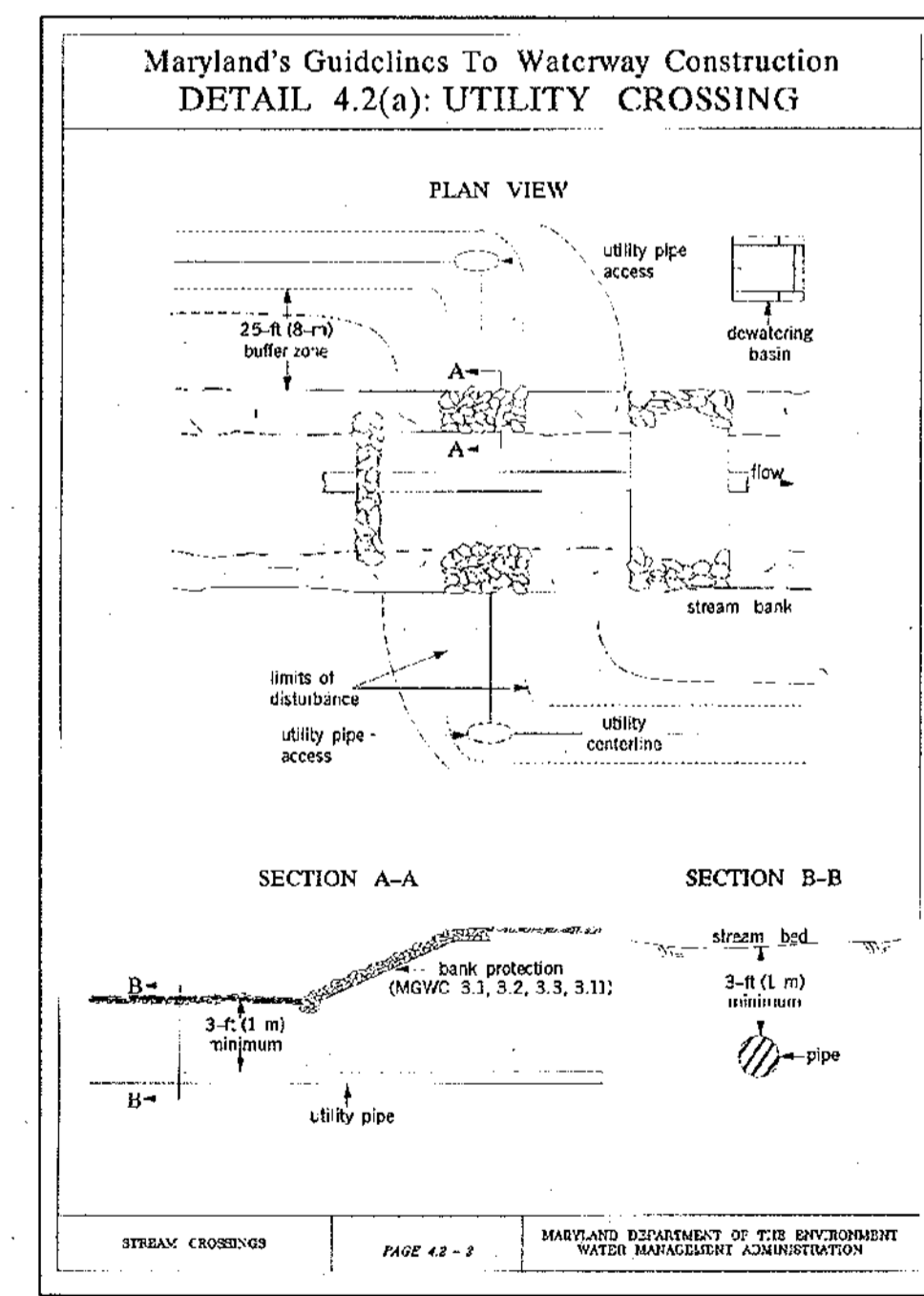
STORM DRAIN PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.



ROCK OUTLET PROTECTION
CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR THE FILTER, RIP-RAP, OR GABION SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
2. THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIP-RAP OR FILTER.
3. GEOTEXTILE SHALL BE PROTECTED FROM PUNCHING, CUTTING, OR TEARING. ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE SHALL BE REPAIRED BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. ALL OVERLAPS WHETHER FOR REPAIRS OR FOR JOINING TWO PIECES OF GEOTEXTILE SHALL BE A MINIMUM OF ONE FOOT.
4. STONE FOR THE RIP-RAP OR GABION OUTLETS MAY BE PLACED BY EQUIPMENT. THEY SHALL BE CONSTRUCTED TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. THE STONE FOR RIP-RAP OR GABION OUTLETS SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. RIP-RAP SHALL BE PLACED IN A MANNER TO PREVENT DAMAGE TO THE FILTER BLANKET OR GEOTEXTILE. HAND PLACEMENT WILL BE REQUIRED TO THE EXTENT NECESSARY TO PREVENT DAMAGE TO THE PERMANENT WORKS.
5. THE STONE SHALL BE PLACED SO THAT IT BLENDS IN WITH THE EXISTING GROUND. IF THE STONE IS PLACED TOO HIGH THEN THE FLOW WILL BE FORCED OUT OF THE CHANNEL AND SCOUR ADJACENT TO THE STONE WILL OCCUR.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-18-10 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

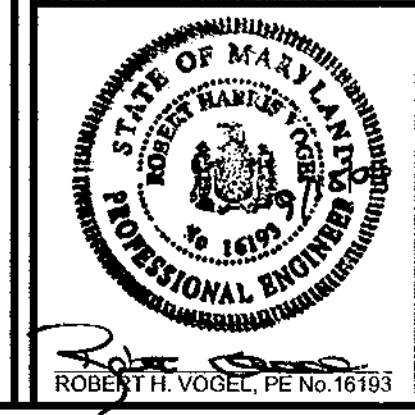


NO.	REVISION	DATE

STORM DRAIN PROFILES
DENNIS PRESERVE
LOTS 1-58

TAX MAP 31 BLOCK 21 PARCEL '226'
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

ROBERT H. VOGEL
ENGINEERS, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELLICOTT CITY, MD 21043 FAX: 410.461.8961



DESIGN BY: RHV
DRAWN BY: CMH
CHECKED BY: RHV
DATE: SEPTEMBER 2004
SCALE: AS SHOWN
W.O. NO.: 2017019.0

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Candy Hamilton 10/27/04
Chief, Division of Land Development Date

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. ... 10-19-04
Chief, Bureau of Highways Date

DESCRIPTION
THE WORK SHOULD CONSIST OF INSTALLING EROSION CONTROL DEVICES IN AND ADJACENT TO THE CONSTRUCTION OF UTILITY CROSSINGS.

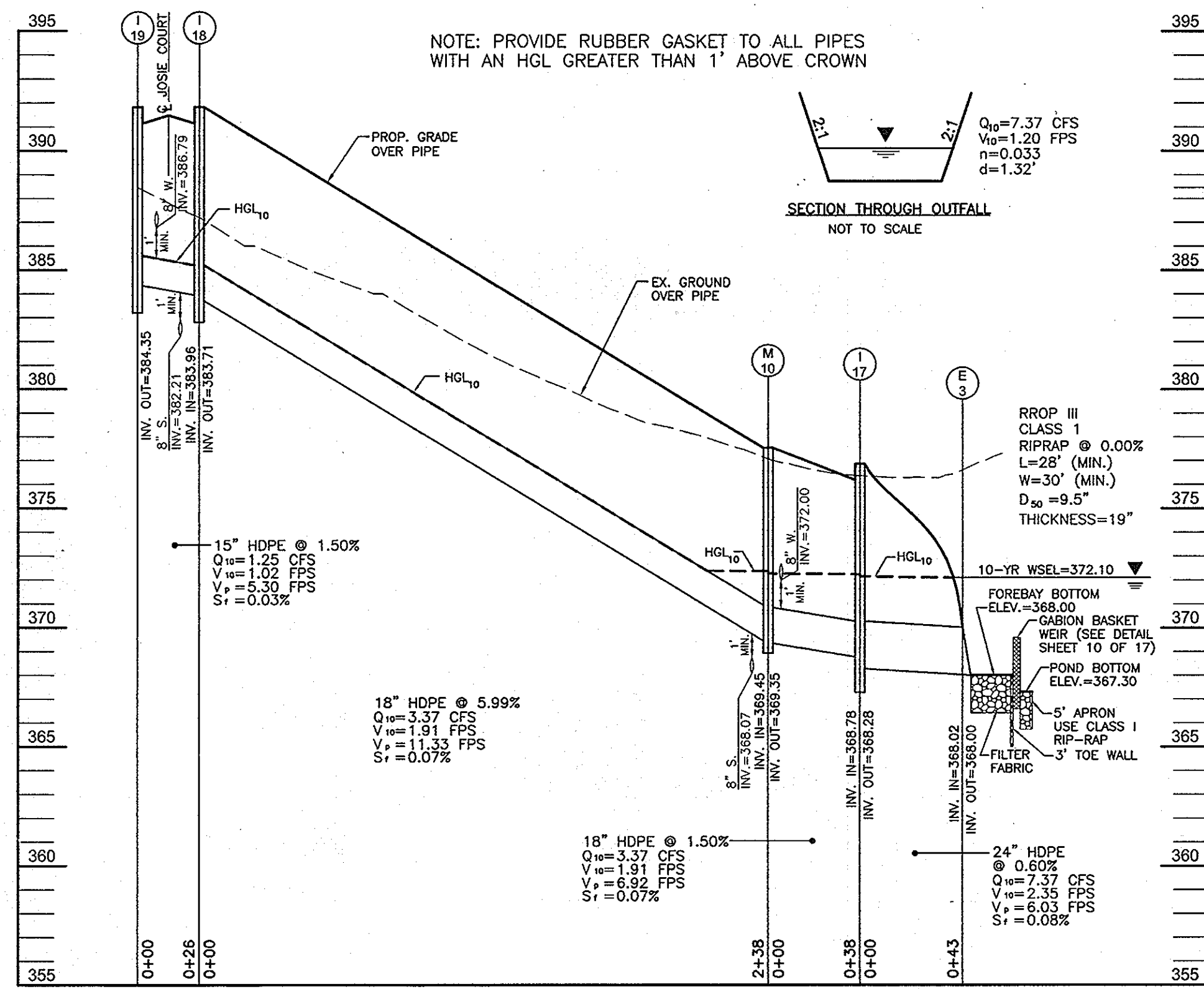
INSTALLATION GUIDELINES

ALL EROSION AND SEDIMENT CONTROL DEVICES, INCLUDING DEWATERING BASINS, SHOULD BE IMPLEMENTED AS THE FIRST ORDER OF BUSINESS ACCORDING TO A PLAN APPROVED BY THE WMA OR LOCAL AUTHORITY. (SEE THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.) THE PROPOSED CONSTRUCTION SEQUENCE IS AS FOLLOWS (REFER TO DETAIL 4.2):

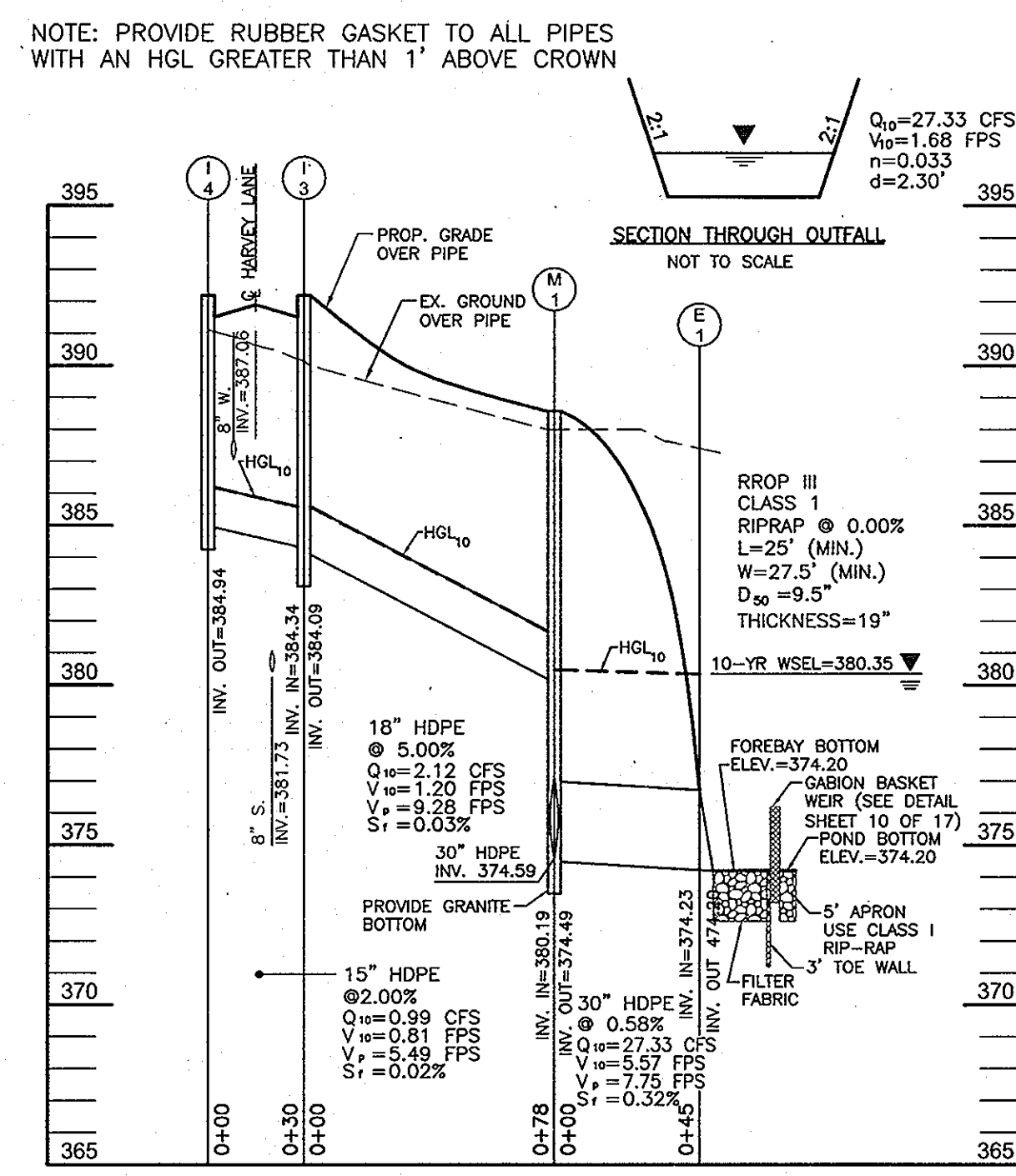
1. THE CONTRACTOR SHOULD INSURE THAT A CONTINUOUS PERIMETER CONTROL BARRIER IS IN PLACE TO MINIMIZE THE AMOUNT OF POLLUTANTS ENTERING THE FLOW. A DIVERSION PIPE AS SHOWN IN MGWC 1.4; DIVERSION PIPE OR OTHER MEASURE SHOULD BE INSTALLED AND SANDBAG OR STONE BARRIERS AS SHOWN IN MGWC 1.5; SANDBAG/STONE DIVERSION SHOULD BE CONSTRUCTED ACCORDING TO SPECIFICATIONS TO DIVERT THE STREAMFLOW.
2. EXCAVATED TOPSOIL AND SUBSOIL SHOULD BE KEPT SEPARATE, PLACED ON THE UPLAND SIDE OF THE EXCAVATION, AND REPLACED IN THEIR NATURAL ORDER.
3. ALL CONSTRUCTION SHOULD TAKE PLACE DURING STREAM LOW FLOWS. THE LENGTH OF CONSTRUCTION TIME SHOULD BE LIMITED TO A MAXIMUM OF 5 CONSECUTIVE DAYS FOR EACH CROSSING.
4. ALL UTILITY CROSSINGS SHOULD BE PLACED A MINIMUM OF 3 FEET (1 METER) BENEATH THE STREAM BED UNLESS AN ALTERNATE SECTION IS SPECIFICALLY APPROVED BY THE WMA. FOR INSTANCES WHERE A 3-FOOT COVER IS NOT Viable, TWO ALTERNATE STABILIZATION OPTIONS ARE GIVEN IN DETAIL 4.2. A LOW FLOW CHANNEL SHALL BE CONSTRUCTED THROUGH ALL RIP-RAP PLACEMENTS ACROSS THE STREAM BED.
5. THE STREAM SHOULD BE DIVERTED BY AN APPROVED TEMPORARY STREAM DIVERSION. THE CONSTRUCTION AREA SHOULD BE DEWATERED, AND ANY DISTURBED BANKS SHOULD BE STABILIZED. THE CONTRACTOR MAY ELECT TO CONSTRUCT THE UTILITY CROSSING IN TWO STAGES. IN THIS CASE, THE WMA APPROVED FLOW BARRIER MAY BE CONSTRUCTED TO KEEP THE CONSTRUCTION AREA DRY.
6. ONCE THE CROSSING IS COMPLETED, THE DIVERSION SHOULD BE REMOVED FROM UPSTREAM TO DOWNSTREAM. SEDIMENT CONTROL DEVICES, INCLUDING PERIMETER EROSION CONTROL, ARE TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED IN ACCORDANCE WITH AN APPROVED SEDIMENT AND EROSION CONTROL PLAN AND INSPECTION AUTHORITY APPROVES THEIR REMOVAL.

DEVELOPER
ELLICOTT CITY LAND HOLDINGS, LLC
8000 MAIN STREET
ELLICOTT CITY, MARYLAND 21043
ATTN: MR. DONALD R. REUWER
(410) 480-9105

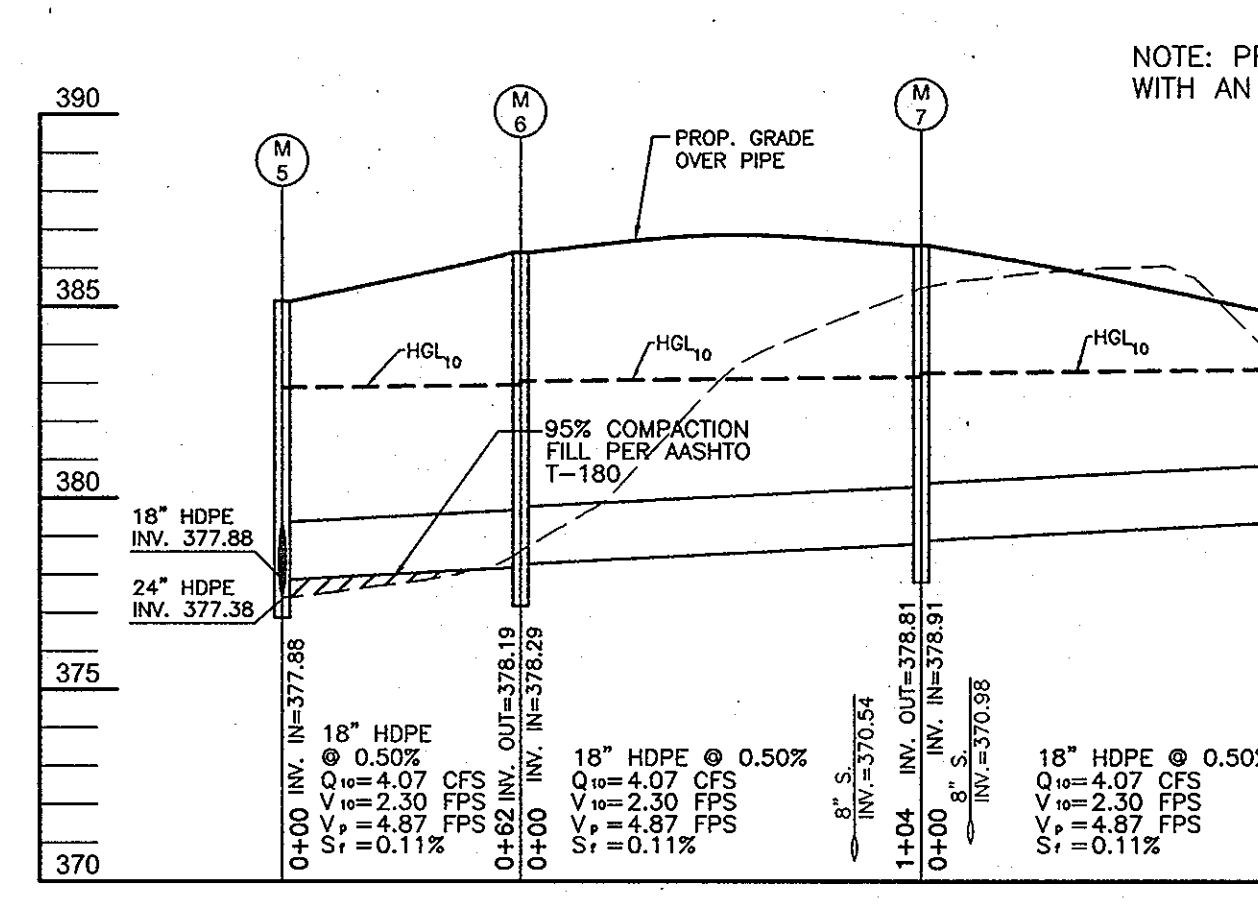
OWNER
DENNIS PRESERVE, LLC
ELLICOTT CITY LAND HOLDINGS, LLC
SOLE MEMBER
8000 MAIN STREET
ELLICOTT CITY, MD 21043
410.480-9105



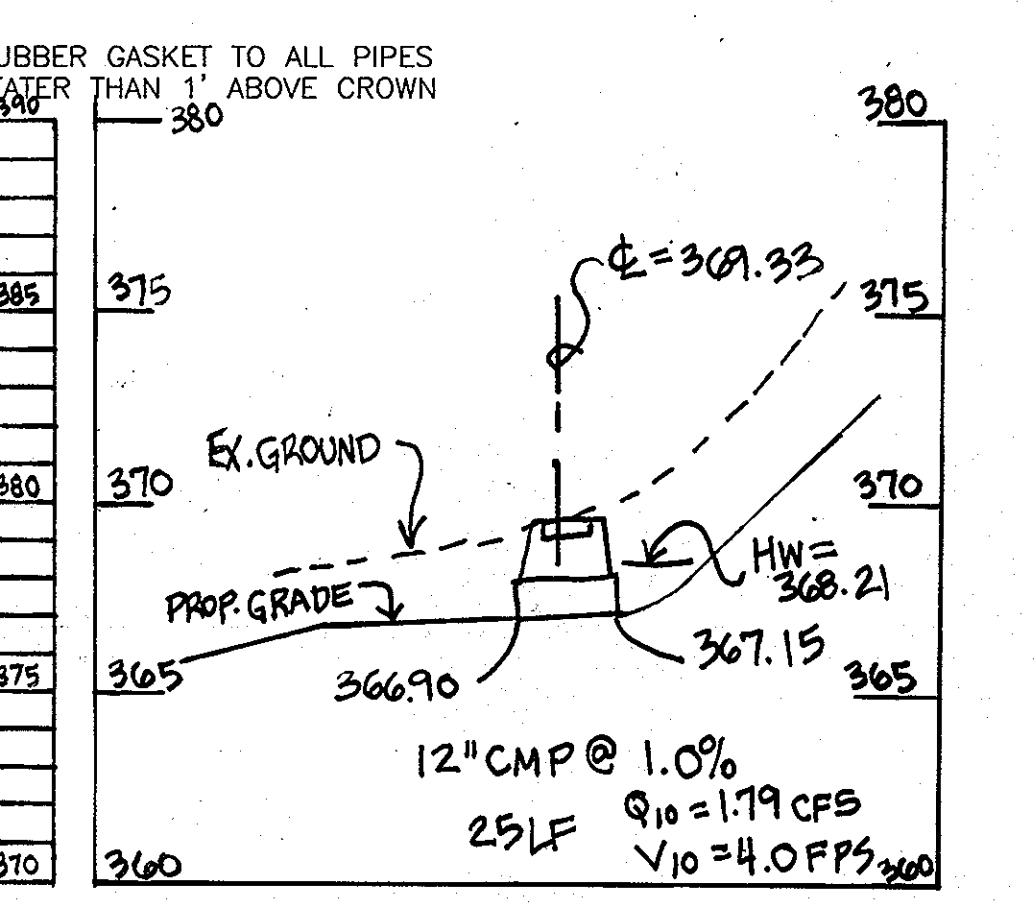
STORM DRAIN PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.



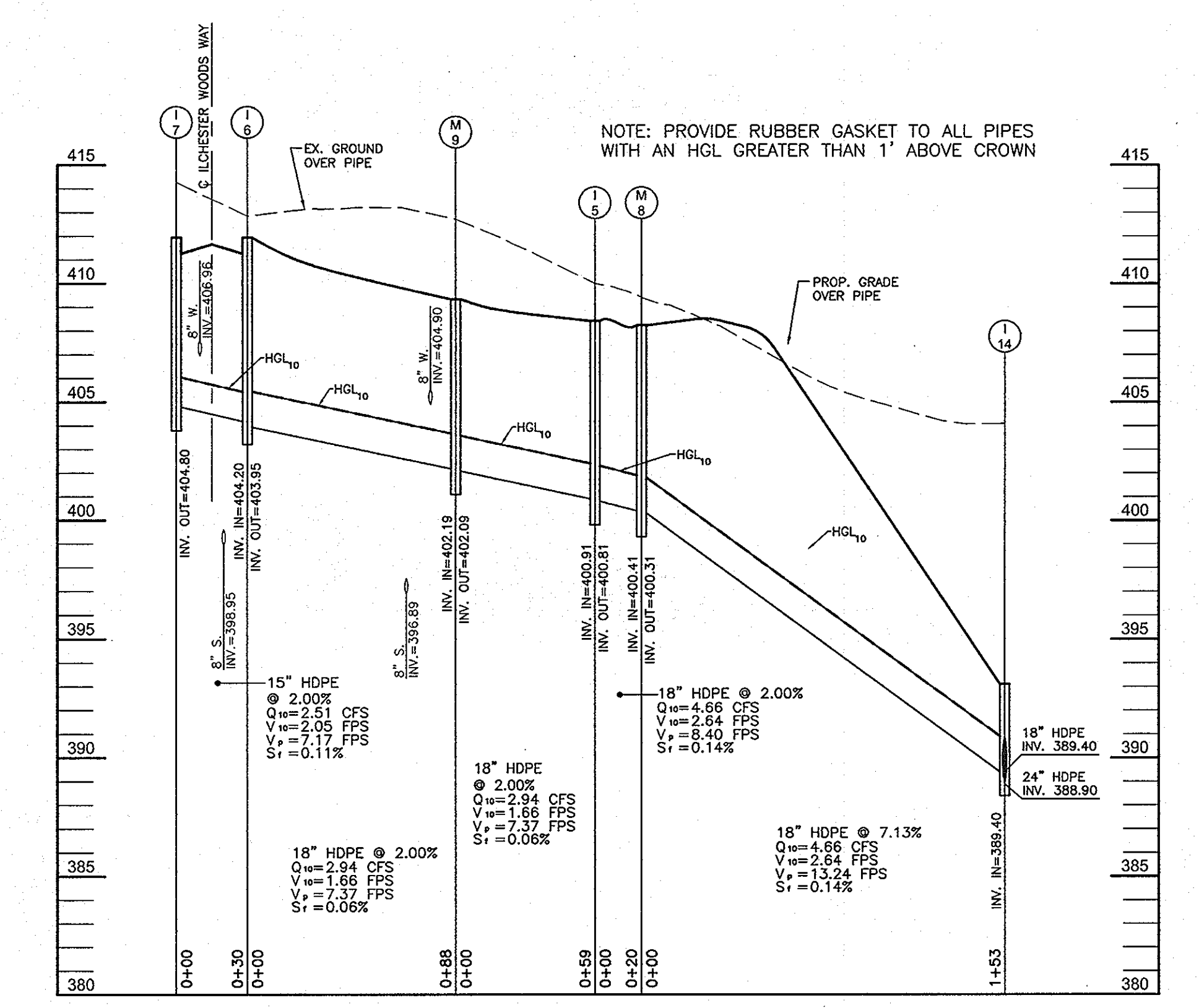
STORM DRAIN PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.



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



CULVERT PROFILE (USE IN COMMON)
SCALE: HOR.: 1"=50'
VERT.: 1"=5'



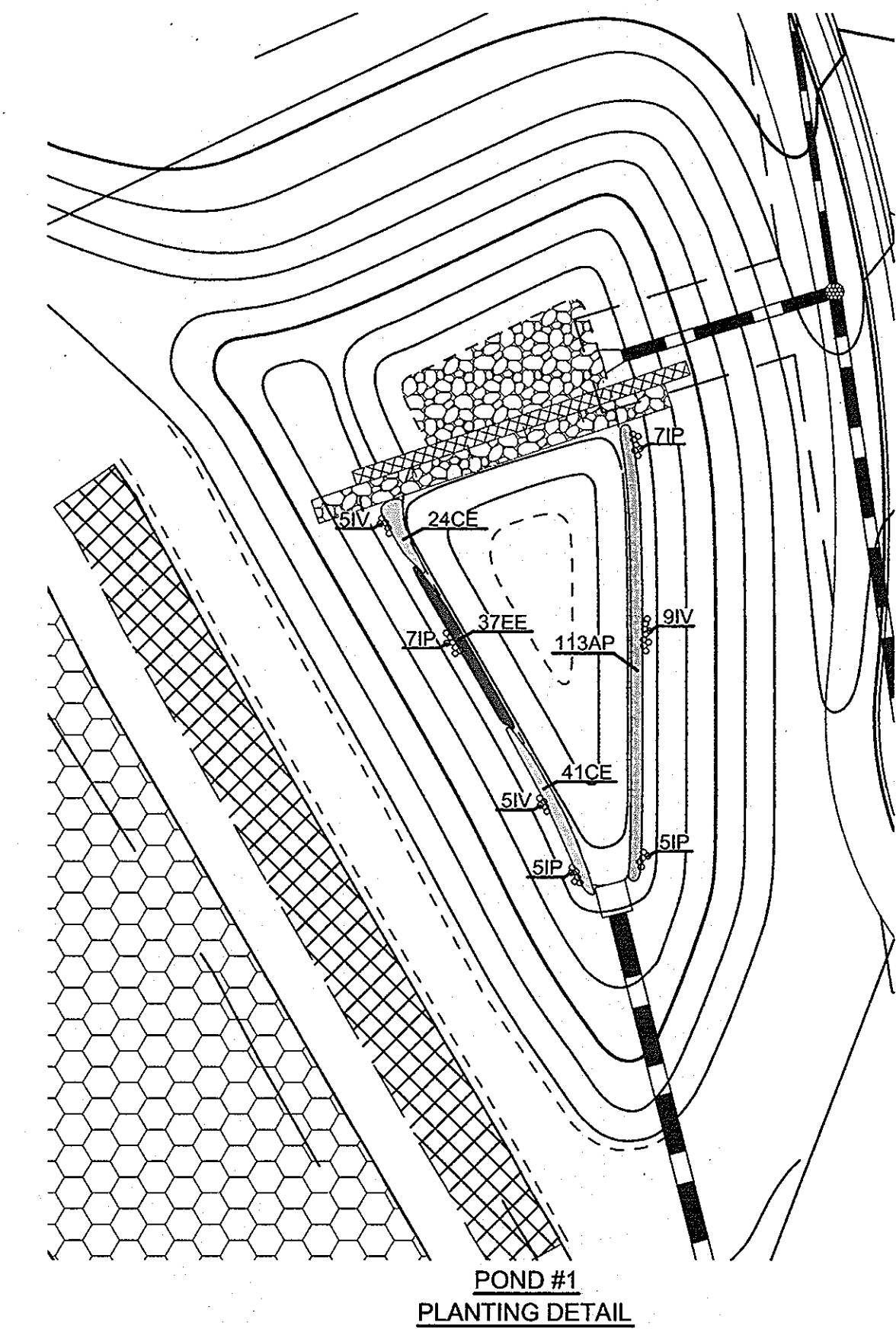
STORM DRAIN PROFILE
SCALE: 1"=50' HORIZ.
1"=5' VERT.

STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
E-1	30" CONCRETE END SECTION	N 568062.96 E 1375730.52	376.73	30" 374.23	374.20	SD 5.51
E-2	42" CONCRETE END SECTION	N 567789.02, E 1375769.44	375.69	42" 372.19	372.12	SD 5.51
E-3	24" CONCRETE END SECTION	N 567501.48 E 1375600.81	370.02	24" 368.02	368.00	SD 5.51
E-4	30" CONCRETE END SECTION	N 567519.80, E 1375115.54	369.06	30" 366.56	366.50	SD 5.51
I-1	TYPE 'A-10' INLET	CL STA. 6+79.22-12.43' R.	363.78	24" 376.47	30" 375.97	SD 4.41
I-2	TYPE 'A-10' INLET	CL STA. 6+79.22-12.43' L.	363.78	24" 376.47	24" 377.42	SD 4.41
I-3	TYPE 'A-5' INLET	CL STA. 3+64.50-12.43' R.	391.52	15" 384.34	18" 384.09	SD 4.40
I-4	TYPE 'A-5' INLET	CL STA. 3+64.50-12.43' L.	391.52	15" 384.34	15" 384.94	SD 4.40
I-5	TYPE 'A-5' INLET	CL STA. 0+72.76-12.43' L.	408.06	18" 400.91	18" 400.81	SD 4.40
I-6	TYPE 'A-10' INLET	CL STA. 1+79.51-12.43' R.	411.94	10" 404.20	10" 403.95	SD 4.41
I-7	TYPE 'A-10' INLET	CL STA. 1+79.51-12.43' L.	411.94	10" 404.20	15" 404.80	SD 4.41
I-8	TYPE 'A-10' INLET	CL STA. 8+45.31-12.43' L.	385.10	18" 378.23	18" 378.13	SD 4.41
I-9	TYPE 'A-10' INLET	LP STA. 1+44.72	385.14	15" 379.70	18" 379.45	SD 4.41
I-11	TYPE 'D' INLET	N 568029.59 E 1376155.17	391.13	10" 384.37	18" 384.12	SD 4.39
I-12	YARD INLET	N 568134.11 E 1376299.69	394.30	15" 390.60	SD 4.14	
I-13	TYPE 'D' INLET	N 568071.60 E 1375947.46	389.23	24" 383.30	24" 383.20	SD 4.39
I-14	TYPE 'D' INLET	N 568285.48 E 1375968.45	393.93	18" 389.40	24" 388.90	SD 4.39
I-15	TYPE 'D' INLET	N 568316.08 E 1376046.50	397.63	15" 393.10	18" 392.85	SD 4.39
I-16	YARD INLET	N 568370.27 E 1376132.73	403.10	15" 399.40	SD 4.14	
I-17	TYPE 'A-10' INLET	LP STA. 1+49.31	376.86	18" 368.78	24" 368.28	SD 4.41
I-18	TYPE 'A-10' INLET	CL STA. 3+02.91-10.43' R.	391.82	15" 383.96	18" 383.71	SD 4.41
I-19	TYPE 'A-10' INLET	CL STA. 3+02.91-10.43' L.	391.82	15" 383.96	15" 384.35	SD 4.41
M-1	STANDARD 5' MANHOLE	CL STA. 4+47.31-26.21' R.	388.53	18" 380.19	30" 374.59	SD 5.13
M-2	STANDARD 5' MANHOLE	CL STA. 5+74.47-25.22' R.	385.16	30" 375.38	30" 375.28	SD 5.13
M-3	STANDARD 5' MANHOLE	CL STA. 7+71.70-9.88' R.	383.81	24" 377.02	24" 376.92	SD 5.13
M-5	STANDARD 5' MANHOLE	CL STA. 8+45.31-9.95' R.	385.14	18" 377.88	24" 377.38	SD 5.13
M-6	STANDARD 5' MANHOLE	CL STA. 9+08.57-9.81' R.	386.41	18" 378.29	18" 378.19	SD 5.13
M-7	STANDARD 5' MANHOLE	CL STA. 10+14.30-4.08' R.	386.60	18" 378.91	18" 378.81	SD 5.13
M-8	STANDARD 5' MANHOLE	N 568383.67 E 1375851.64	408.24	18" 400.41	18" 400.31	SD 5.13
M-9	STANDARD 5' MANHOLE	CL STA. 0+13.92-16.99' L.	409.34	18" 402.19	18" 402.09	SD 5.13
M-10	STANDARD 5' MANHOLE	N 567451.90 E 1375535.74	377.53	18" 369.45	18" 369.35	SD 5.13
S-1	CONTROL STRUCTURE	N 567951.23 E 1375728.75	383.63	2.5' 375.10	42" 373.50	SEE DETAIL 12 OF 17
S-2	CONTROL STRUCTURE	N 567544.20 E 1375672.69	374.30	1.6' 388.40	30" 387.05	SEE DETAIL 13 OF 17

PIPE SCHEDULE		
PIPE SIZE	TYPE	TOTAL LENGTH
15"	HDPE	528 LF
18"	HDPE	1228 LF
24"	HDPE	388 LF
30"	HDPE	301 LF
30"	RCP ASTM C-361	47 LF
42"	RCP ASTM C-361	164 LF

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chief, Division of Land Development
 Date: 10/25/04

APPROVED: DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways
 Date: 10-19-04

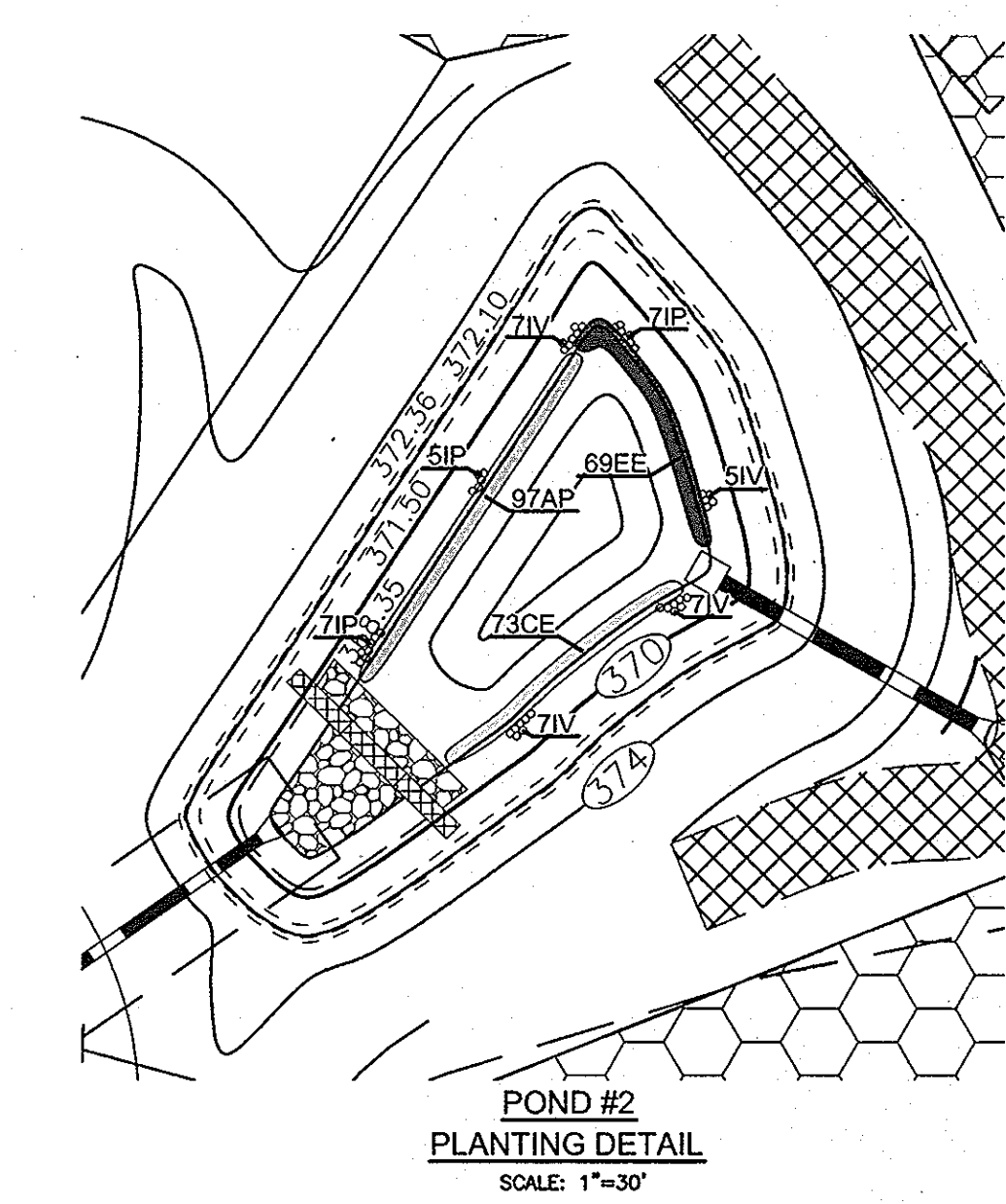


10' DEEP POND #1 LANDSCAPE SCHEDULE				
KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
IP	24	Iris pseudacaris Yellow Water Iris	plug	1.5' oc
IV	19	Iris versicolor Blue Flag (wear gloves)	plug	1.5' oc
AP	113	Alisma plantago-aquatica Water Plantain	plug	2' oc
CE	64	Cyperus esculentus Yellow Nut Sedge	plug	2' oc
EE	37	Eleocharis equisetoides Knotted Spike Rush	rhizome	2' oc

ADD THREE INCHES OF TOPSOIL TO PLANTING AREA. STABILIZE WITH 40 POUNDS PER ACRE OF A HYDROSEED MIX (WET MIX AND MEADOW MIX) FROM SYLVIA NATIVE NURSERY OR EQUAL. ALL PLANT MATERIALS TO CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LCAMW SPECIFICATIONS.

1' POND #2 LANDSCAPE SCHEDULE				
KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
IP	19	Iris pseudacaris Yellow Water Iris	plug	1.5' oc
IV	26	Iris versicolor Blue Flag (wear gloves)	plug	1.5' oc
AP	97	Alisma plantago-aquatica Water Plantain	plug	2' oc
CE	73	Cyperus esculentus Yellow Nut Sedge	plug	2' oc
EE	69	Eleocharis equisetoides Knotted Spike Rush	rhizome	2' oc

ADD THREE INCHES OF TOPSOIL TO PLANTING AREA. STABILIZE WITH 40 POUNDS PER ACRE OF A HYDROSEED MIX (WET MIX AND MEADOW MIX) FROM SYLVIA NATIVE NURSERY OR EQUAL. ALL PLANT MATERIALS TO CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LCAMW SPECIFICATIONS.



NO.	REVISION	DATE
1	REMOVE STORM DRAIN FROM I-9 TO I-10	1-20-06

STORM DRAIN PROFILES
 DENNIS PRESERVE
 LOTS 1-58

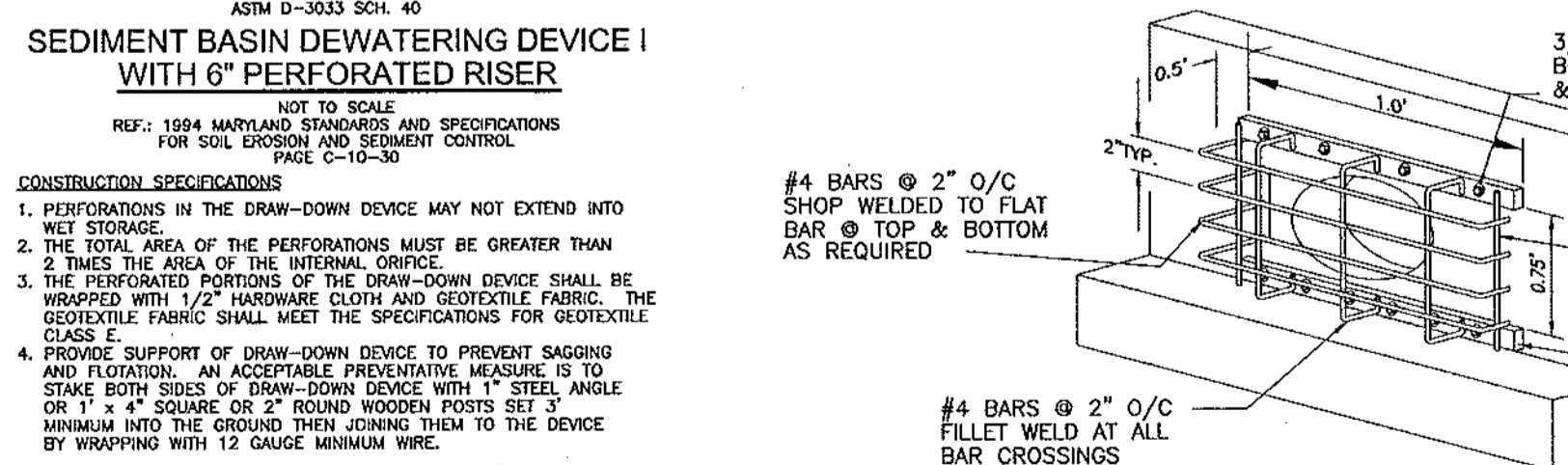
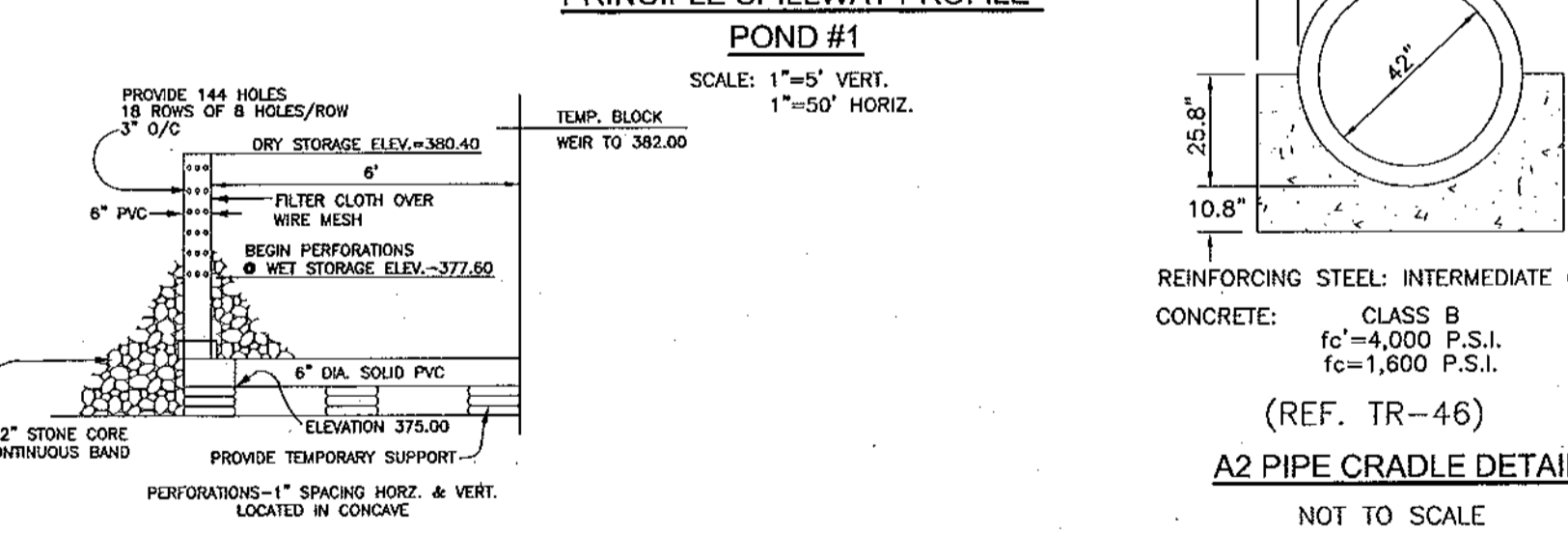
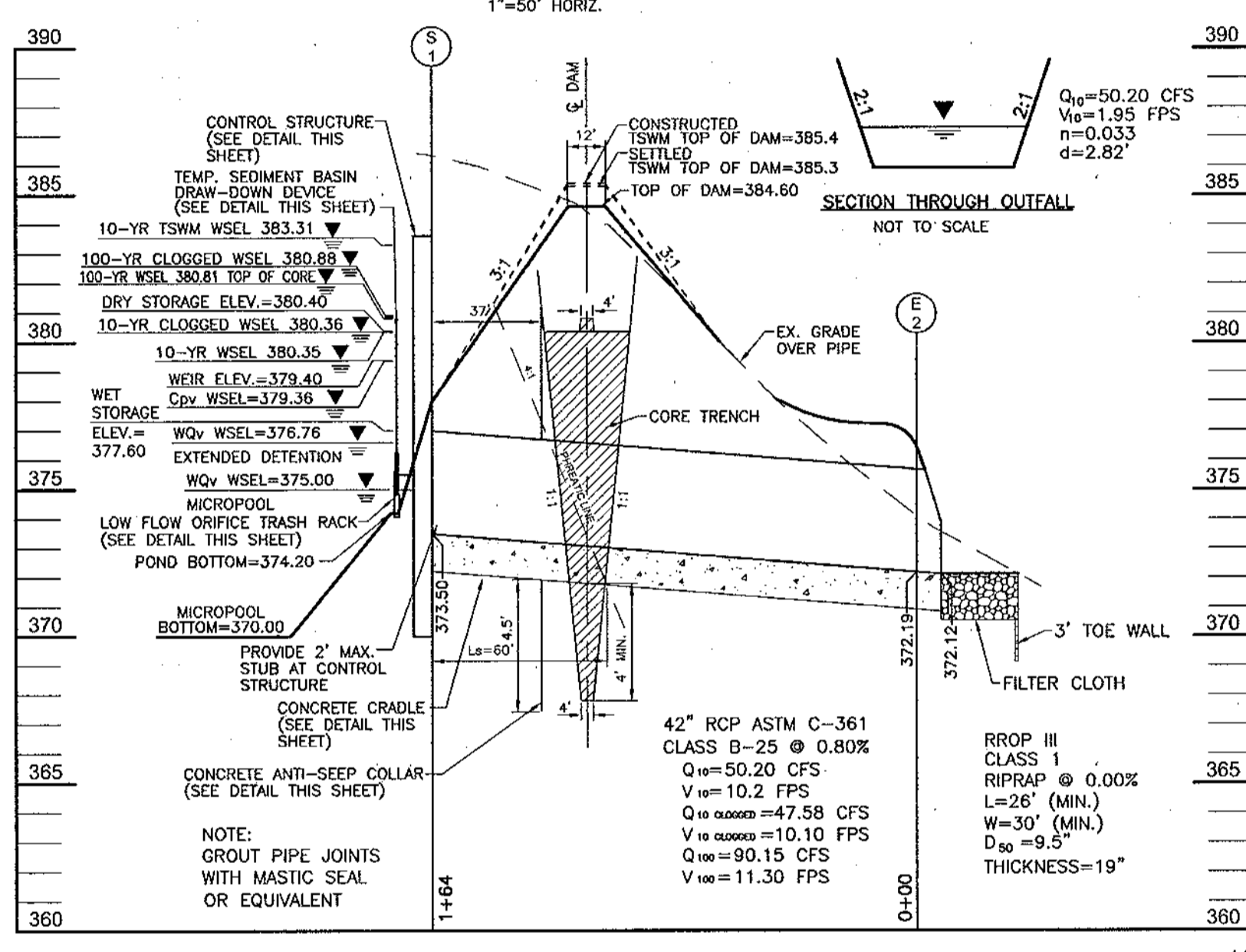
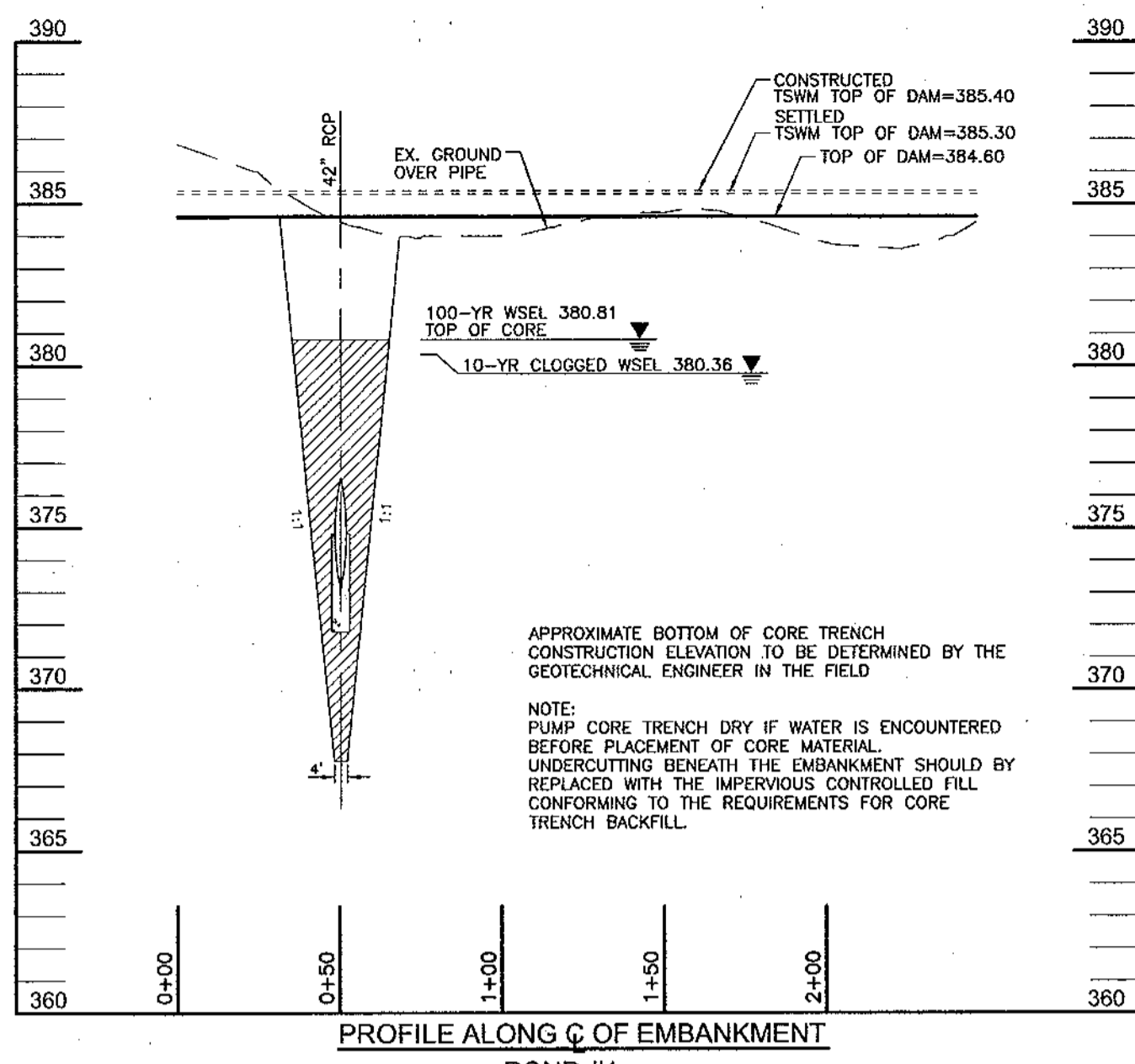
TAX MAP 31 BLOCK 21 PARCEL '226'
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

ROBERT H. VOGEL
 ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

DESIGNER: RIV
 DRAWN BY: CMH
 CHECKED BY: RIV
 DATE: SEPTEMBER 2003
 SCALE: AS SHOWN
 W.G. NO.: 2017019.0

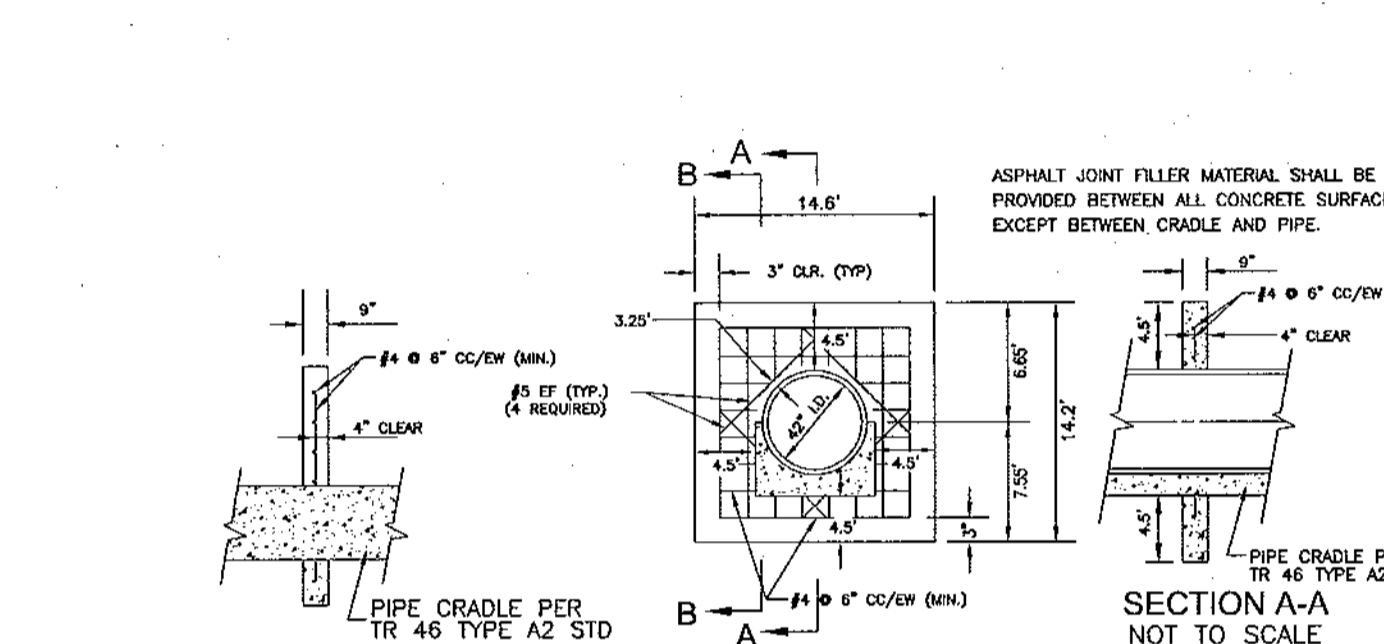
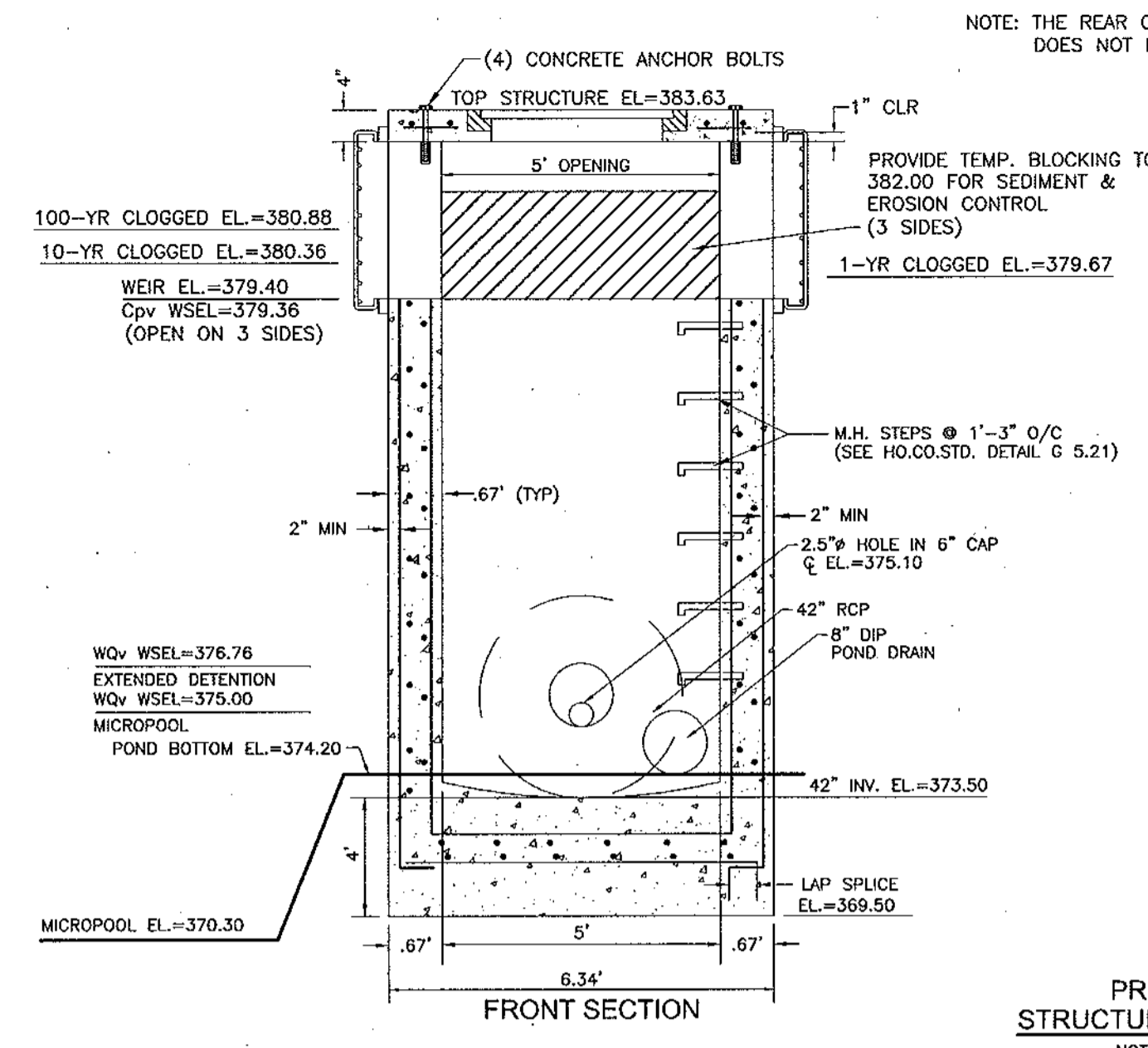
11 SHEET OF 17



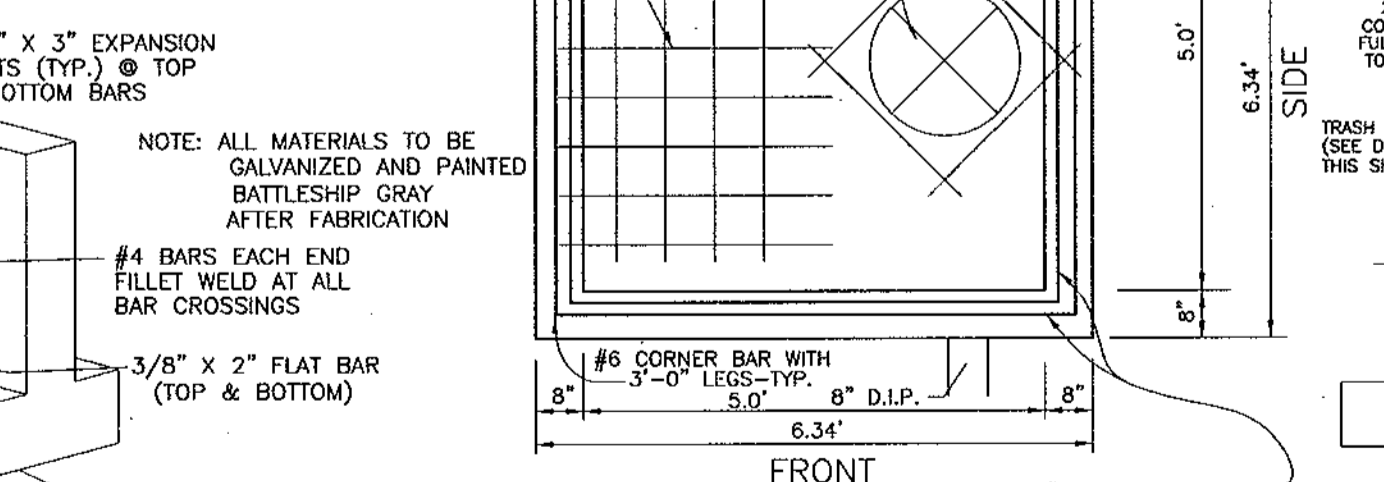
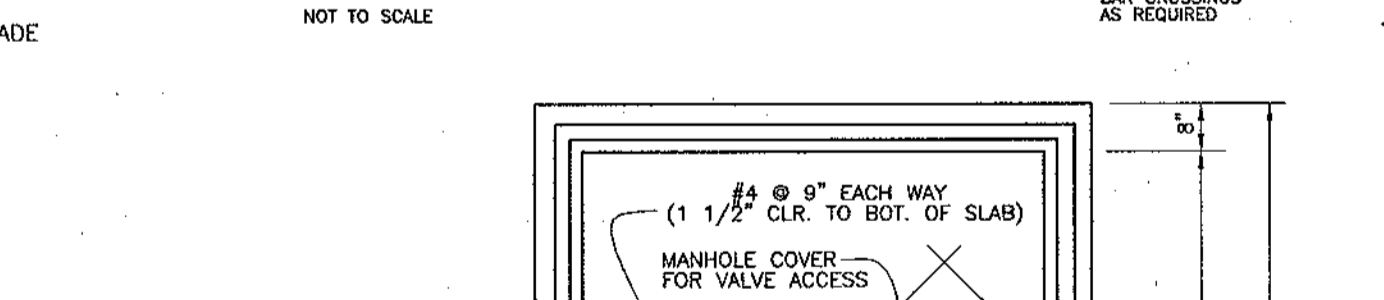
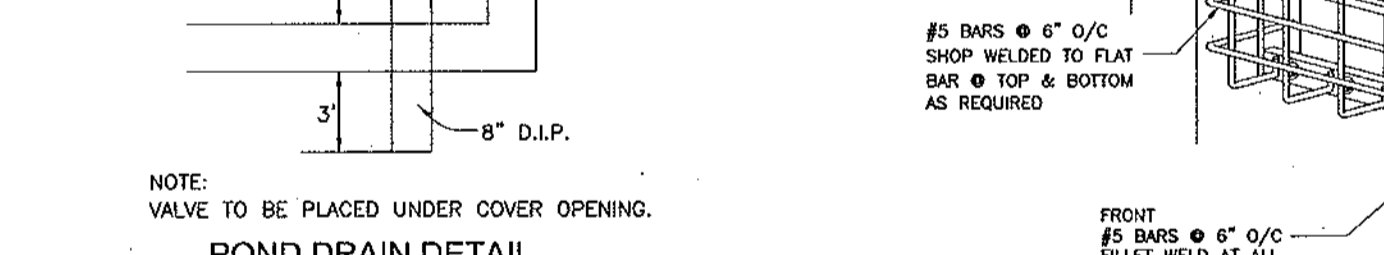
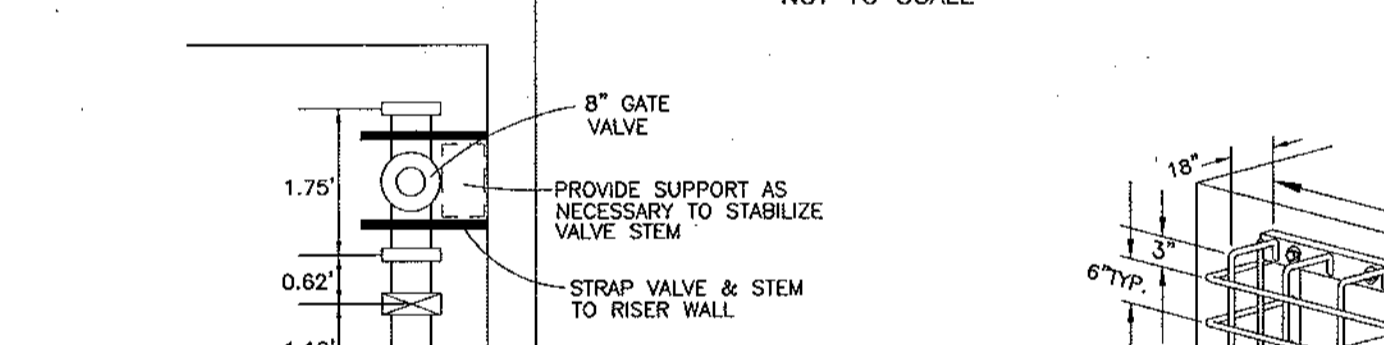
APPROVED: DEPARTMENT OF PUBLIC WORKS
William T. Mahan 10-19-04
 Chief, Bureau of Highways

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cinda Hamilton 10/27/04
 Chief, Division of Land Development

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Michael J. ... 10/25/04
 Chief, Development Engineering Division

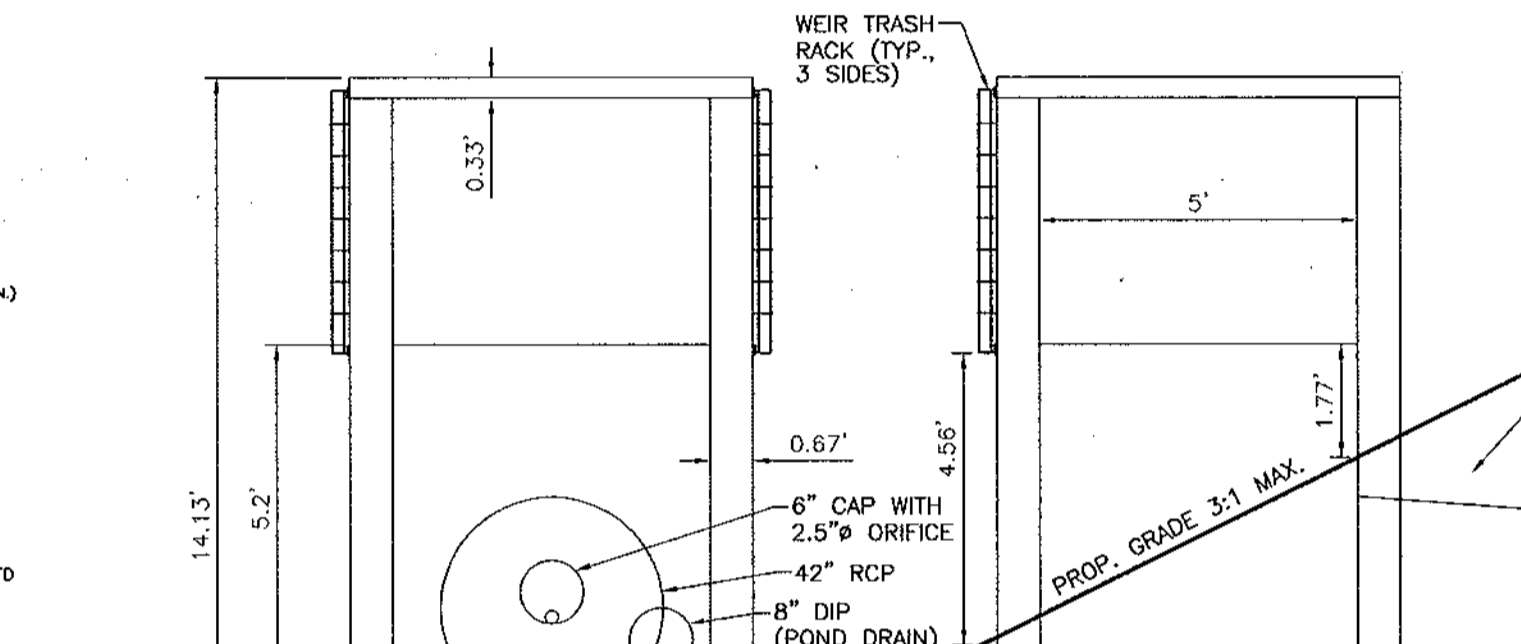
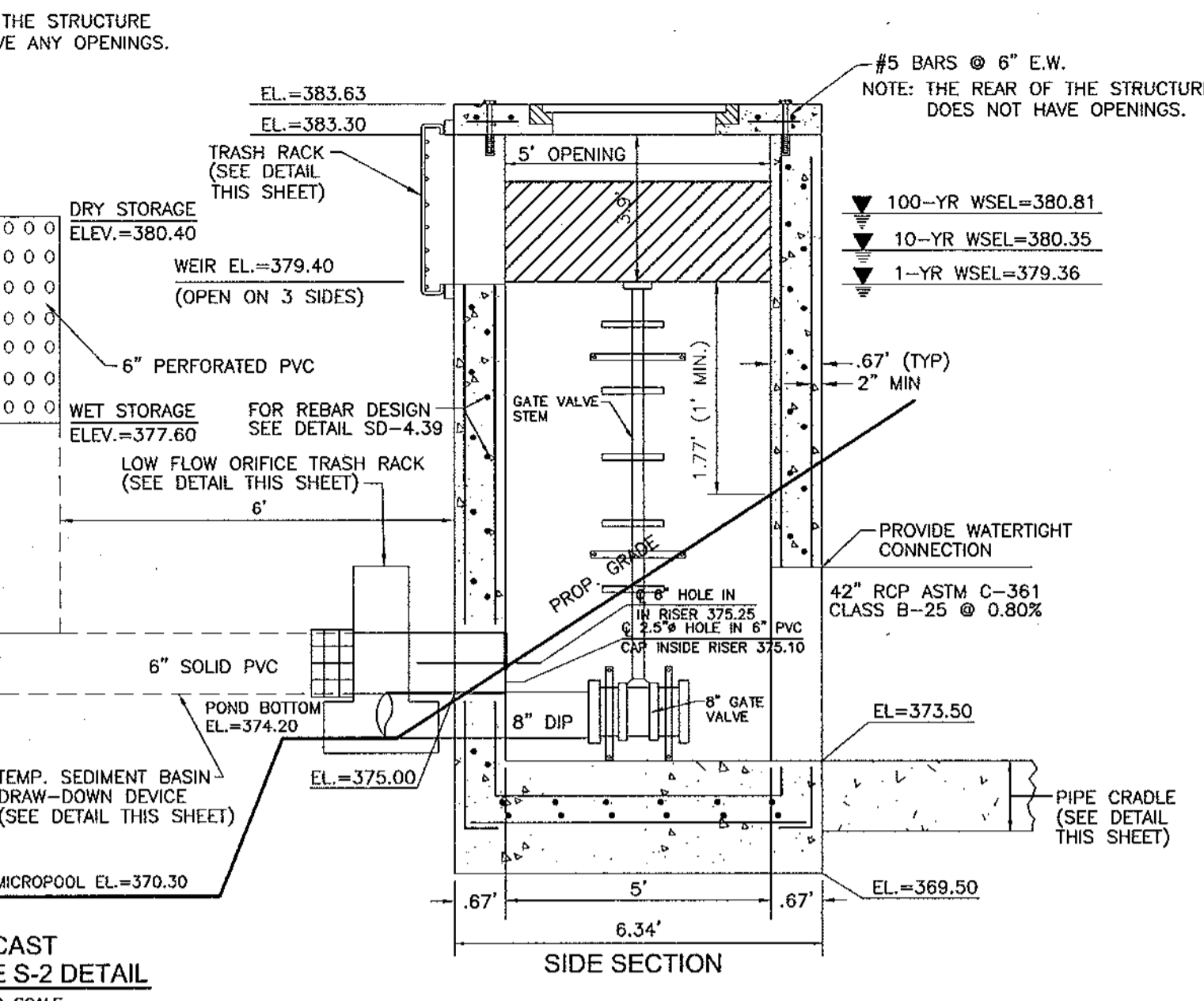


1. ANTI-SEEP COLLARS SHOULD BE PLACED WITHIN THE SATURATION ZONE.
 2. ALL ANTI-SEEP COLLARS AND THEIR CONNECTIONS TO THE CONDUIT SHALL BE WATER TIGHT AND MADE OF COMPATIBLE WITH THE CONDUIT.
 3. COLLARS DIMENSIONS SHALL EXCEED A MIN. OF 2\"/>

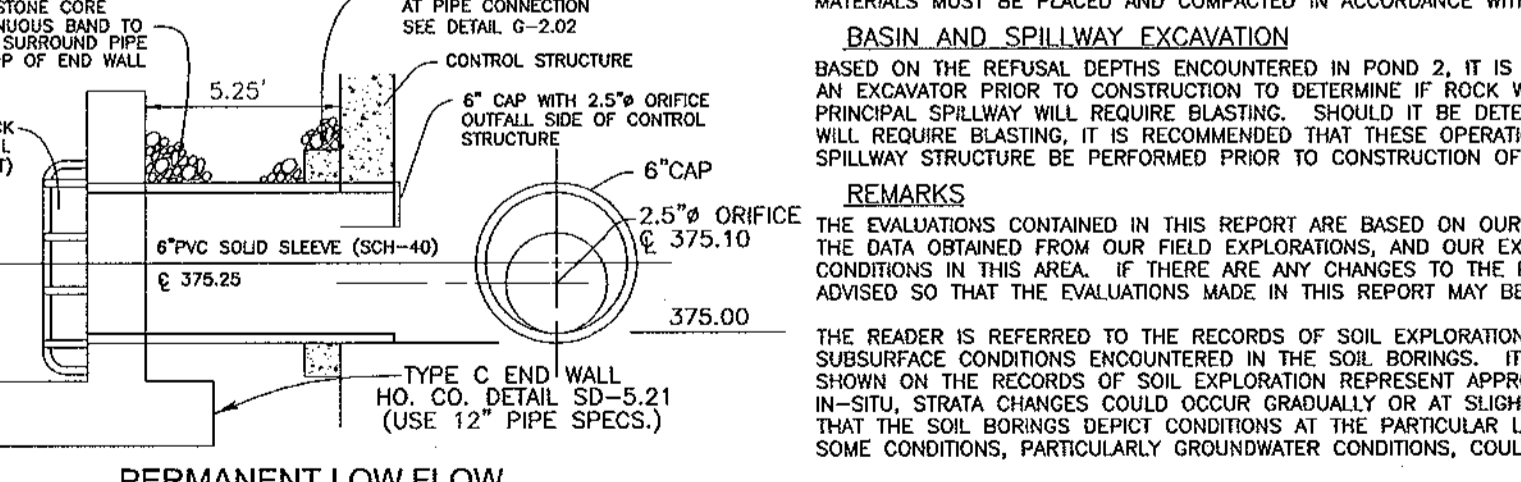
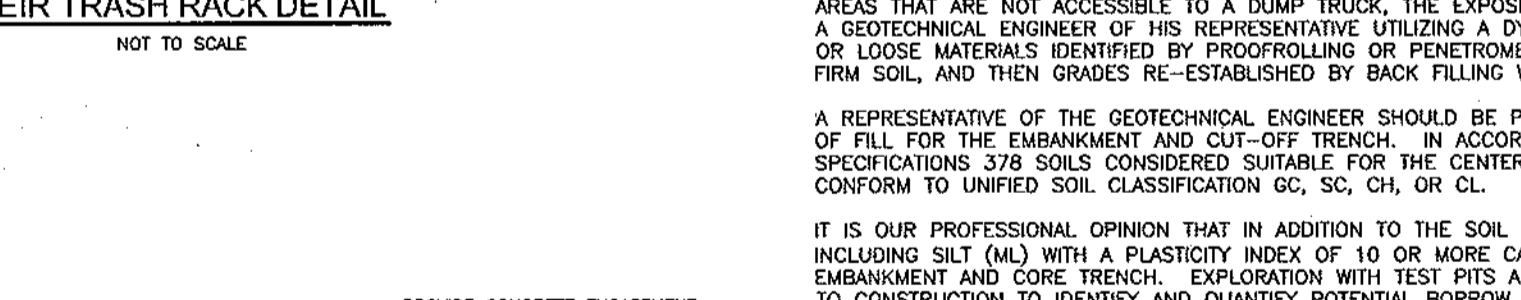
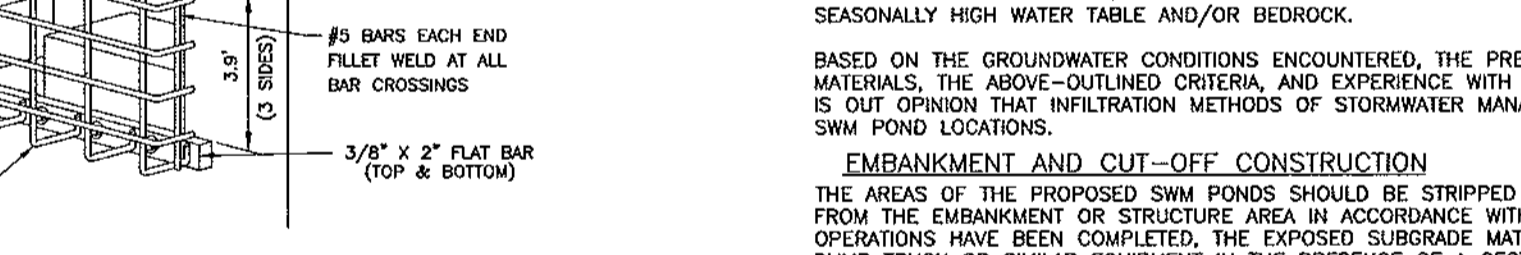
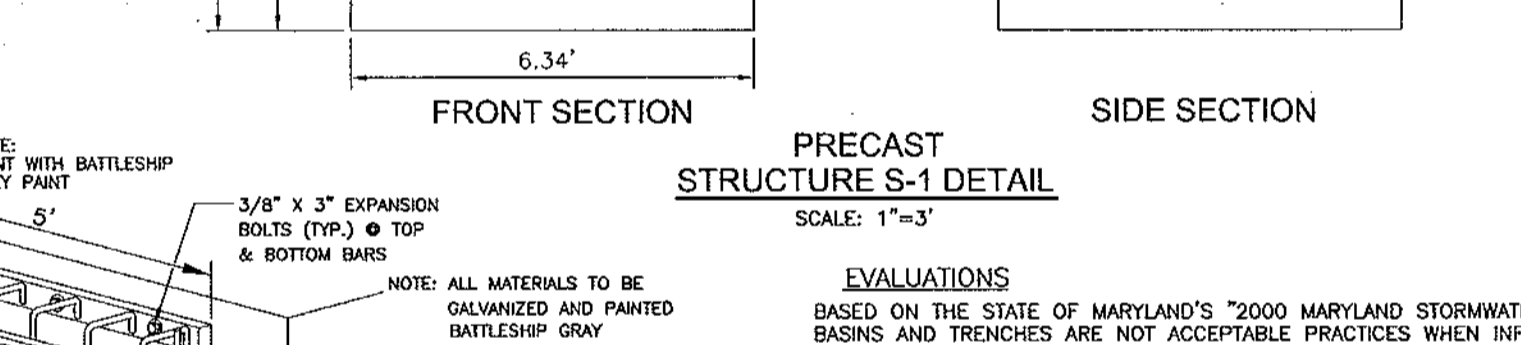


DEVELOPER
 ELLCOTT CITY LAND HOLDINGS, LLC
 8000 MAIN STREET
 ELLCOTT CITY, MARYLAND 21043
 ATTN: MR. DONALD R. REUWER
 (410) 480-9105

OWNER
 DENNIS PRESERVE, LLC
 8000 MAIN STREET
 ELLCOTT CITY, MD 21043
 410-480-9105

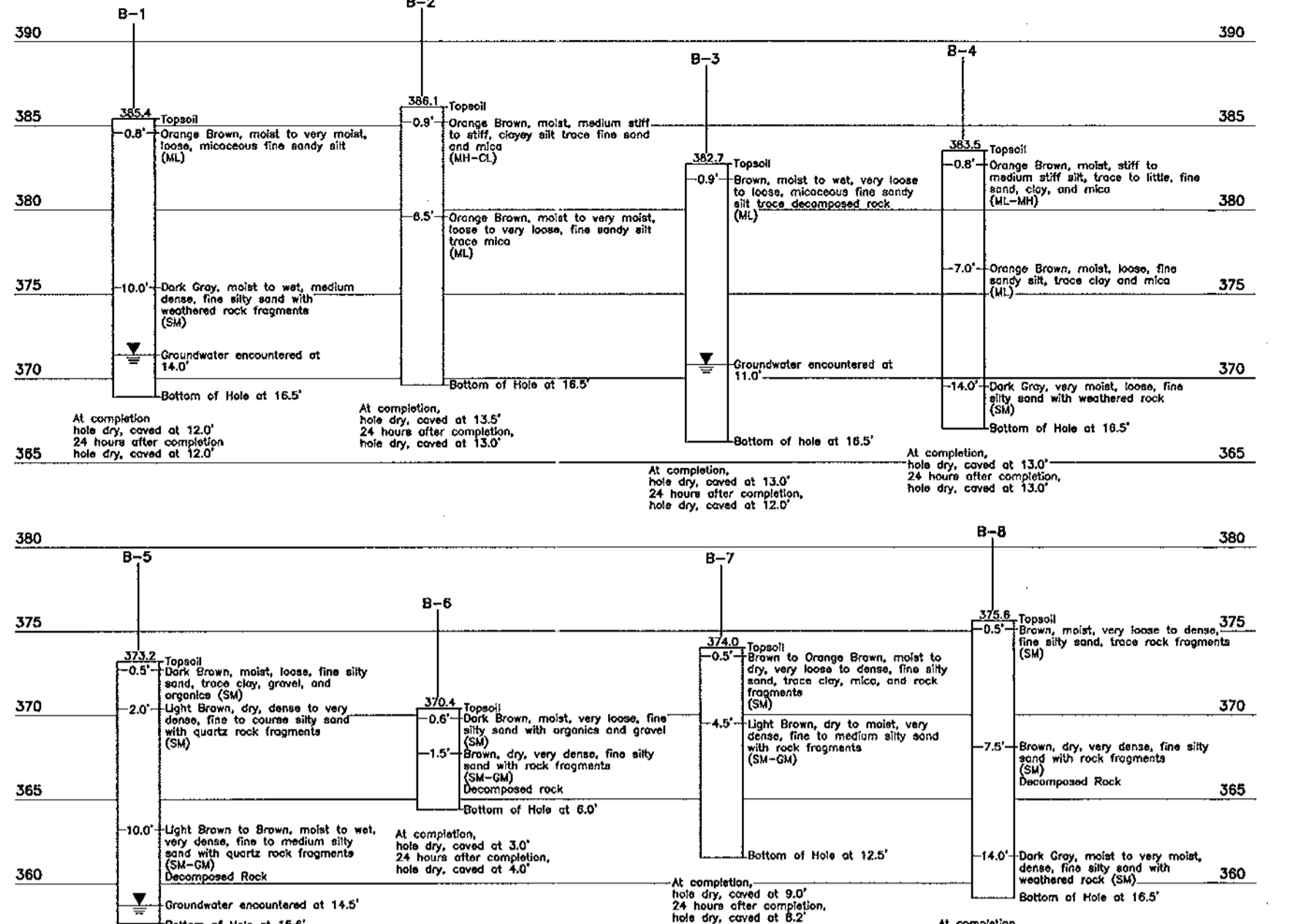


1. ANTI-SEEP COLLARS SHOULD BE PLACED WITHIN THE SATURATION ZONE.
 2. ALL ANTI-SEEP COLLARS AND THEIR CONNECTIONS TO THE CONDUIT SHALL BE WATER TIGHT AND MADE OF COMPATIBLE WITH THE CONDUIT.
 3. COLLARS DIMENSIONS SHALL EXCEED A MIN. OF 2\"/>



DEVELOPER
 ELLCOTT CITY LAND HOLDINGS, LLC
 8000 MAIN STREET
 ELLCOTT CITY, MARYLAND 21043
 ATTN: MR. DONALD R. REUWER
 (410) 480-9105

OWNER
 DENNIS PRESERVE, LLC
 8000 MAIN STREET
 ELLCOTT CITY, MD 21043
 410-480-9105



STORMWATER MANAGEMENT BORING PROFILES
 NOT TO SCALE

	1 YEAR	10 YEAR	100 YEAR
FLOW INTO POND	11.12 CFS	50.67 CFS	90.15 CFS
FLOW OUT OF POND	0.33 CFS	50.20 CFS	86.29 CFS
W.S. ELEVATION	379.36	380.35	380.81
STORAGE VOLUME	0.75 AC-FT	0.99 AC-FT	1.12 AC-FT

OPERATION, MAINTENANCE AND INSPECTION
 INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MS-378). THE POND OWNERS AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

OPERATION AND MAINTENANCE SCHEDULE FOR STORMWATER MANAGEMENT DETENTION FACILITY
 STORMWATER MANAGEMENT FACILITY ROUTINE MAINTENANCE BY HOA
 1. FACILITY WILL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS.
 2. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF FUNCTIONING PROPERLY.
 3. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOVED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. THE POND OWNERS AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

STORMWATER MANAGEMENT DETAILS
 POND #1
 DENNIS PRESERVE
 LOTS 1-58

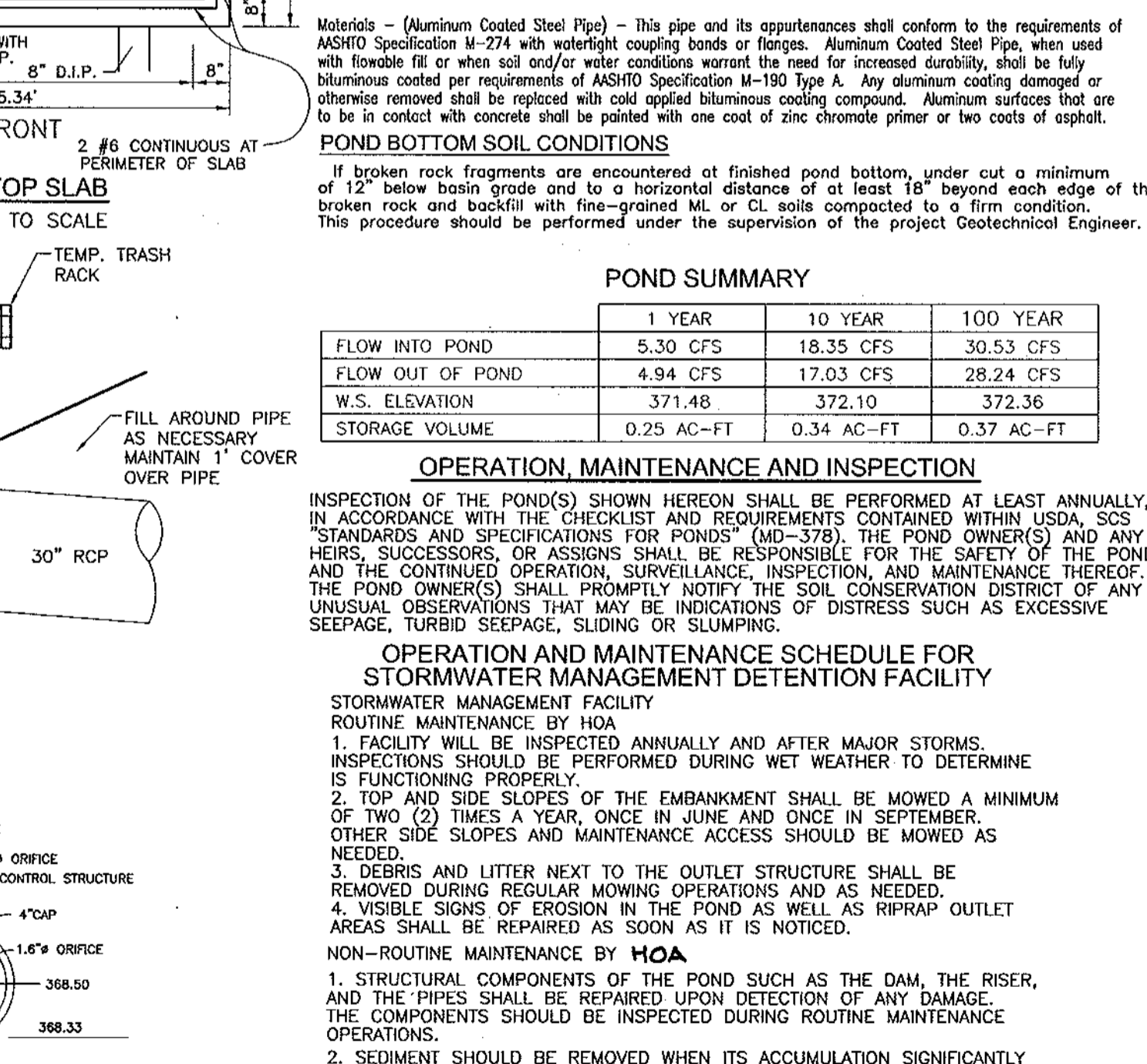
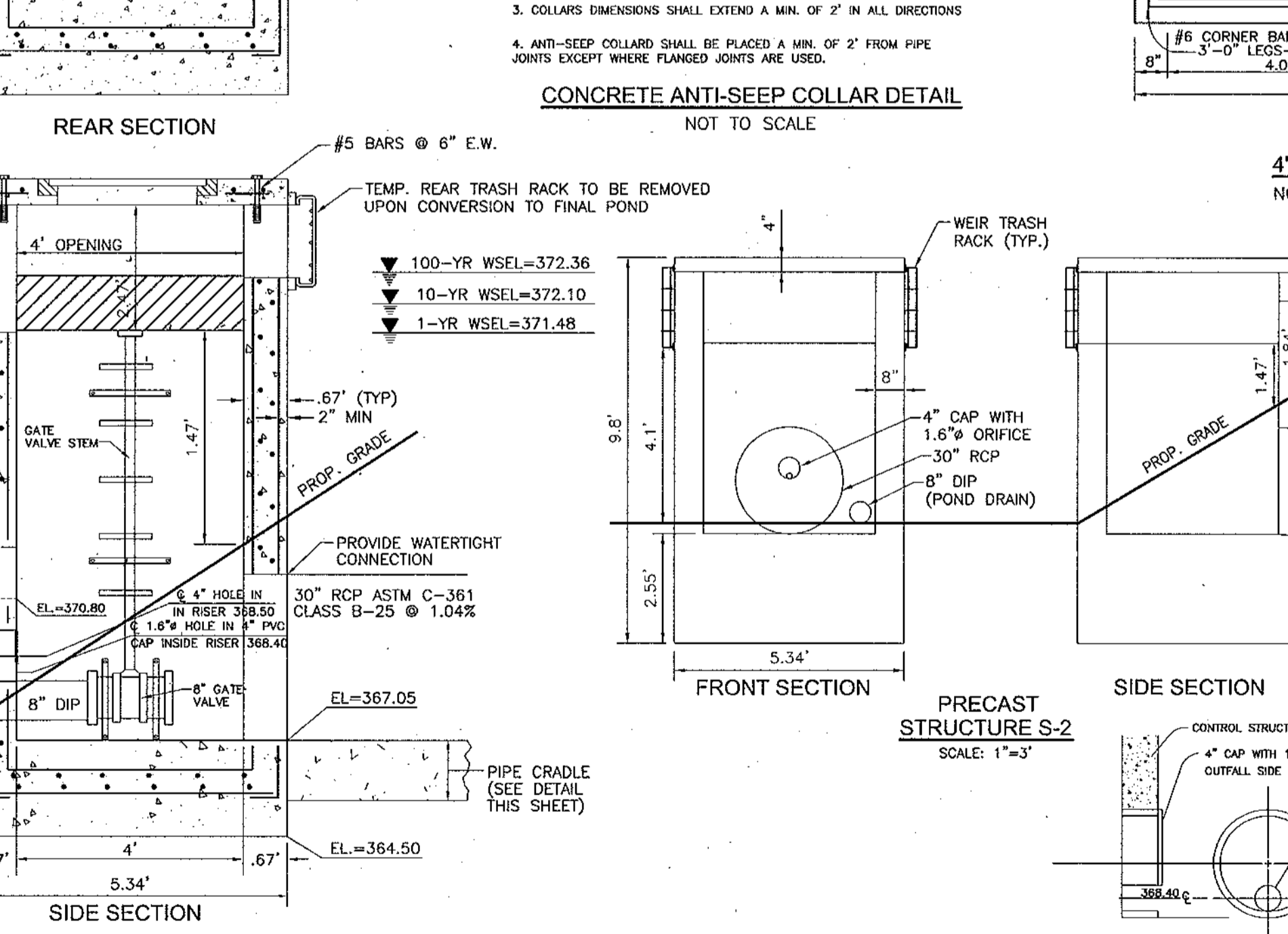
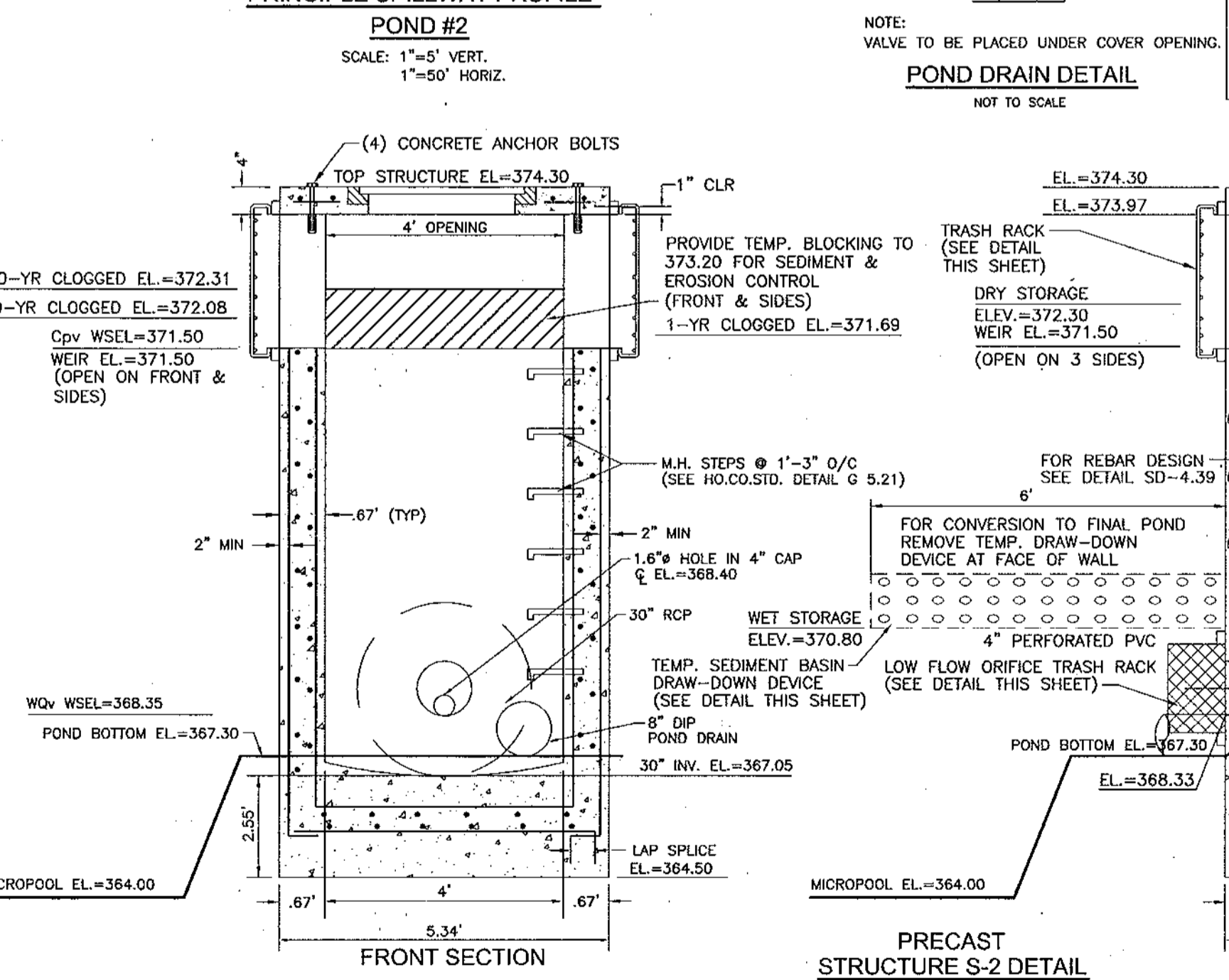
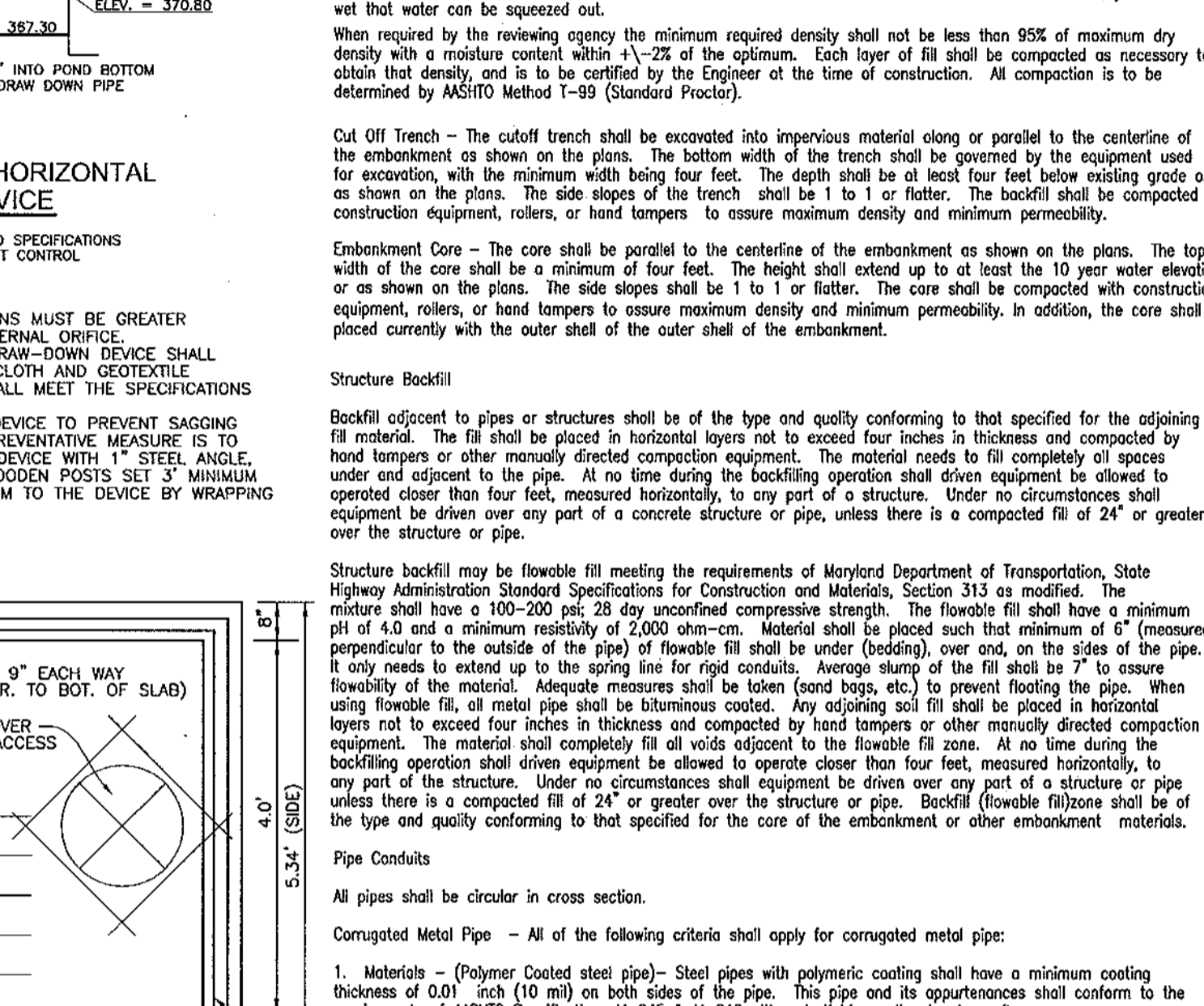
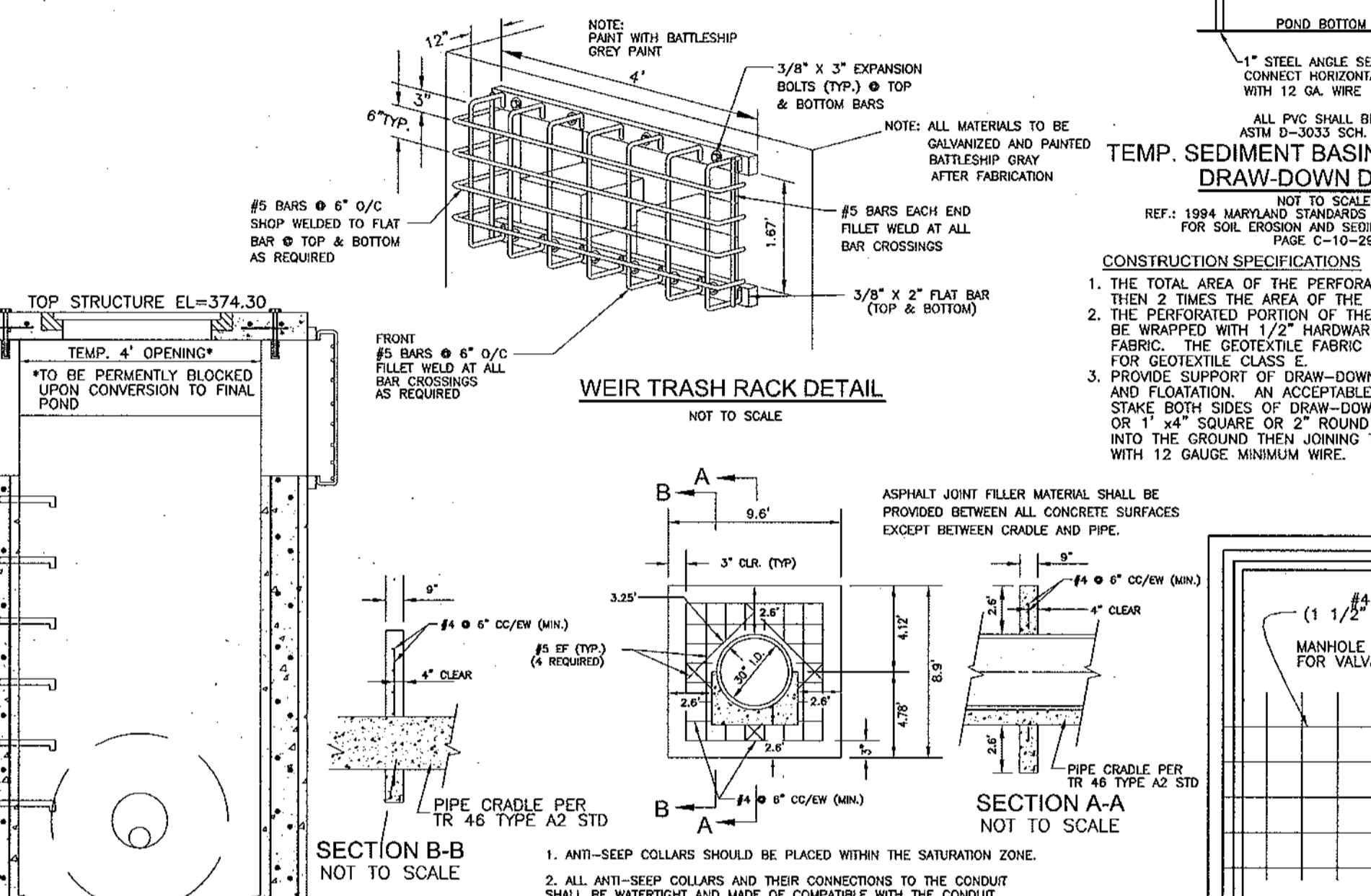
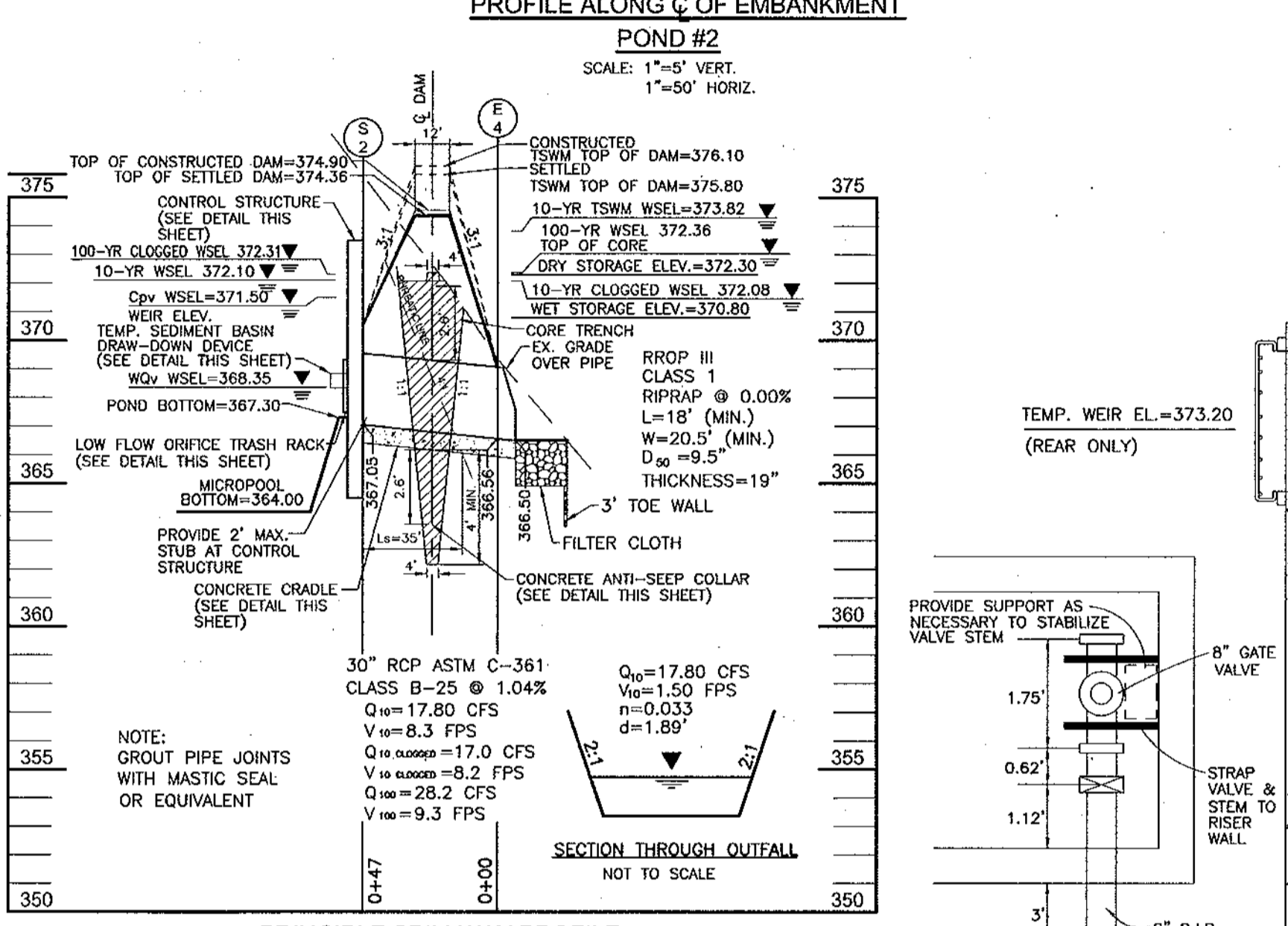
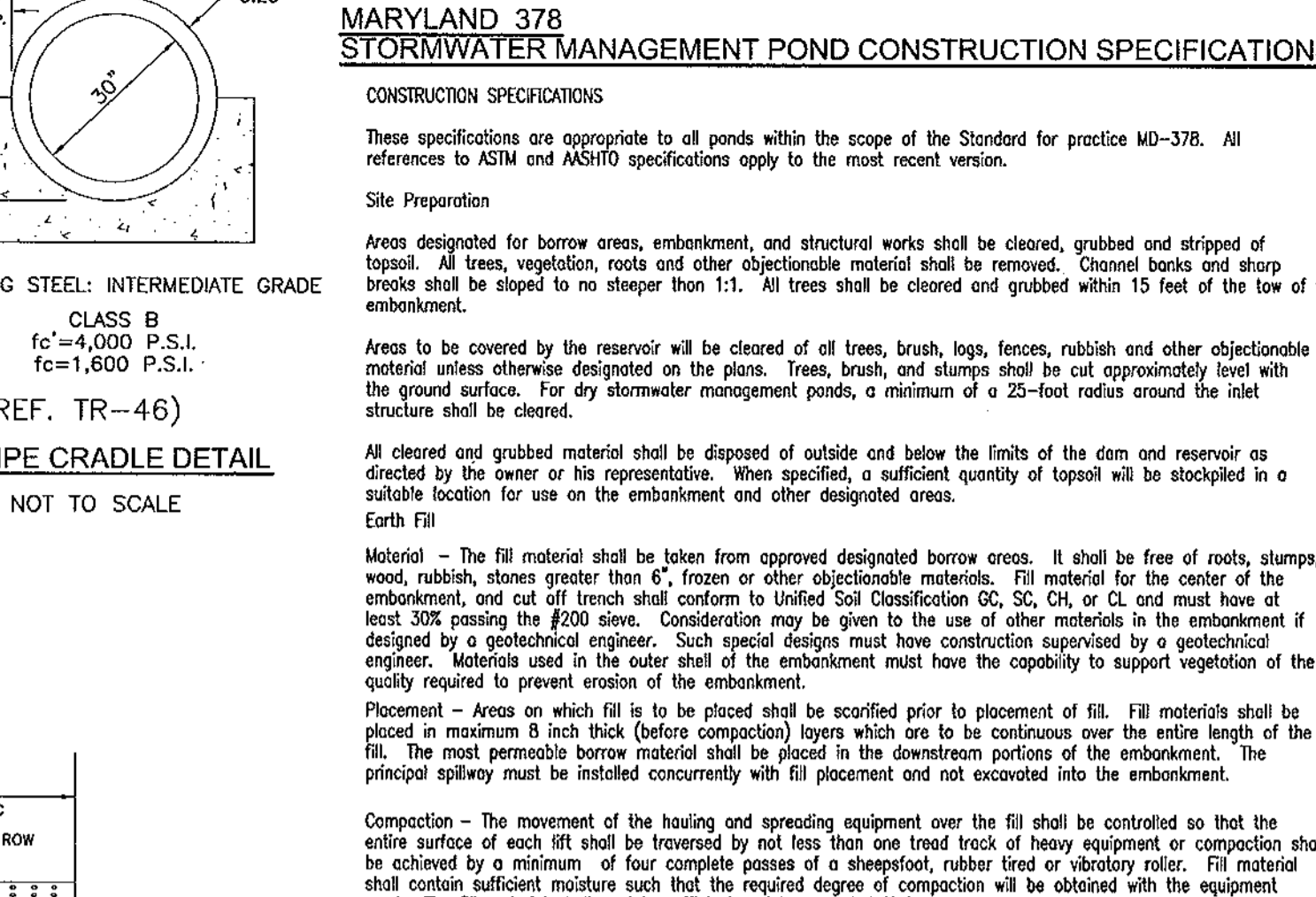
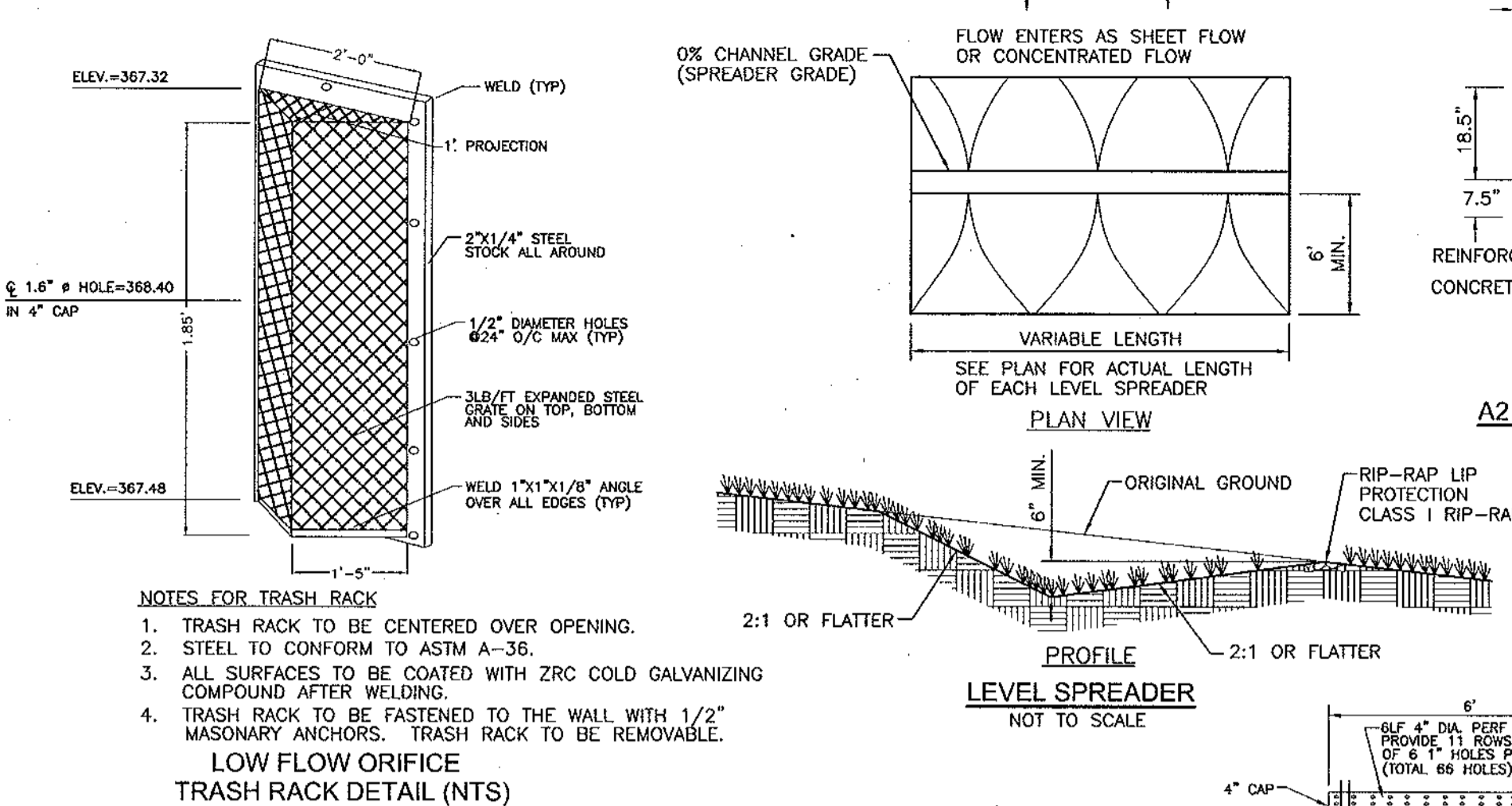
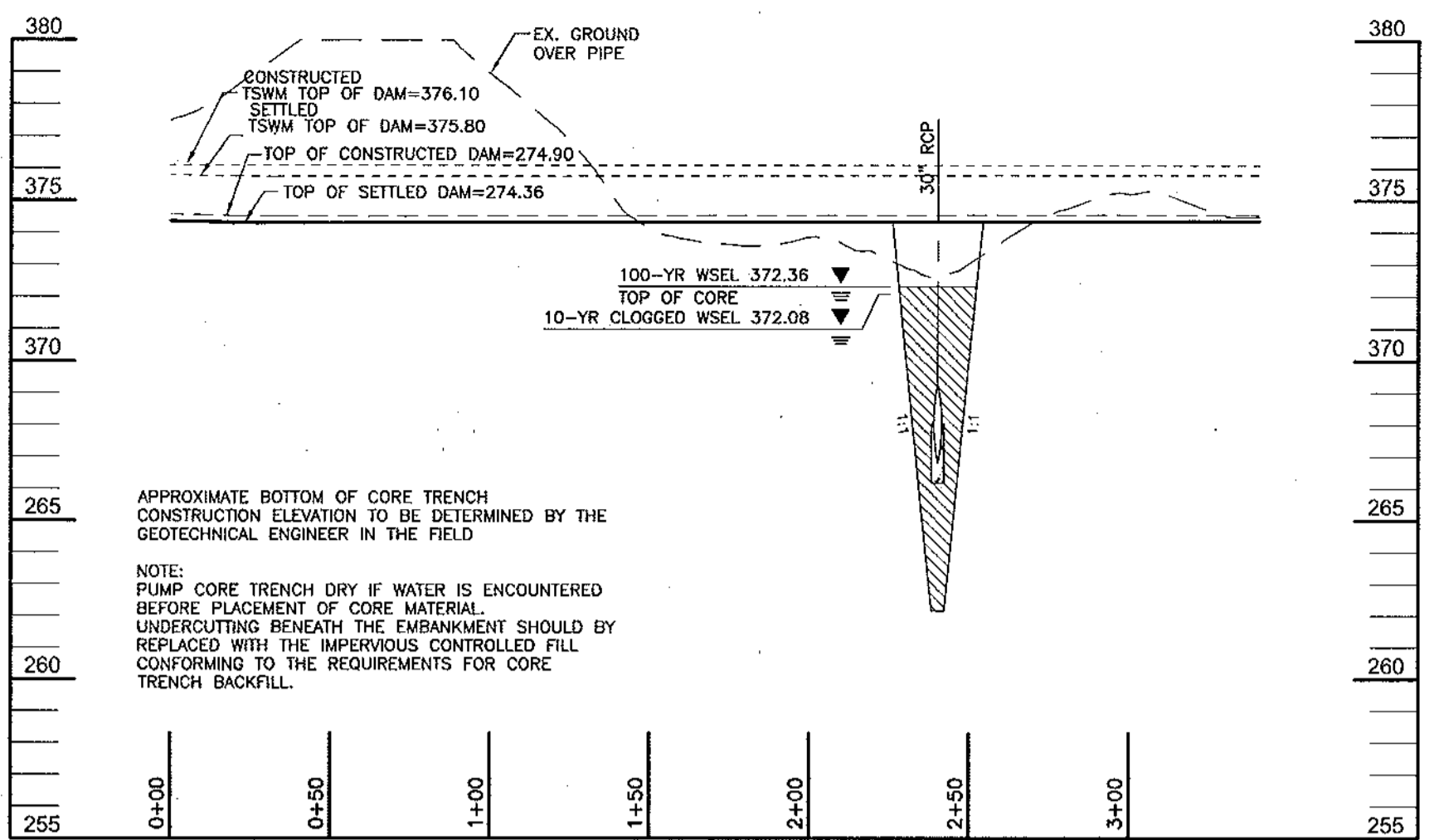
TAX MAP 31 BLOCK 21
 1ST ELECTION DISTRICT
 REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

PARCEL '226'
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
 ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLCOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

DESIGN BY: RHV
 DRAWN BY: CMH
 CHECKED BY: RHV
 DATE: SEPTEMBER 2004
 SCALE: AS SHOWN
 W.O. NO.: 2017019.0

12 SHEET OF 17



APPROVED: DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 Date: 10-19-04

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Division of Land Development
 Date: 10/25/04

These plans have been reviewed for HOWARD SOIL CONSERVATION DISTRICT and meet technical requirements for small pond construction and soil erosion and sediment control

USDA-Natural Resources Conservation Service
 Date: 9/22/04

These plans for small pond construction and soil erosion and sediment control meet the requirements of the HOWARD SOIL CONSERVATION DISTRICT.
 Date: 9/22/04

DEVELOPER'S CERTIFICATE
 I/We certify that this plan for pond construction and sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District. 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.
 Date: 9/15/04

ENGINEER'S CERTIFICATE
 I hereby certify that this plan for pond construction and sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District. 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.
 Date: 9/15/04

DEVELOPER
 ELLICOTT CITY LAND HOLDINGS, LLC
 800 MAIN STREET
 ELLICOTT CITY, MARYLAND 21043
 ATTN: MR. DONALD R. REUWER
 (410) 480-9105

OWNER
 DENNIS PRESERVE, LLC
 800 MAIN STREET
 ELLICOTT CITY, MD 21043
 410-480-9105

STORMWATER MANAGEMENT POND #2
 DENNIS PRESERVE
 LOTS 1-58

TAX MAP 31 BLOCK 21
 1ST ELECTION DISTRICT
 REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

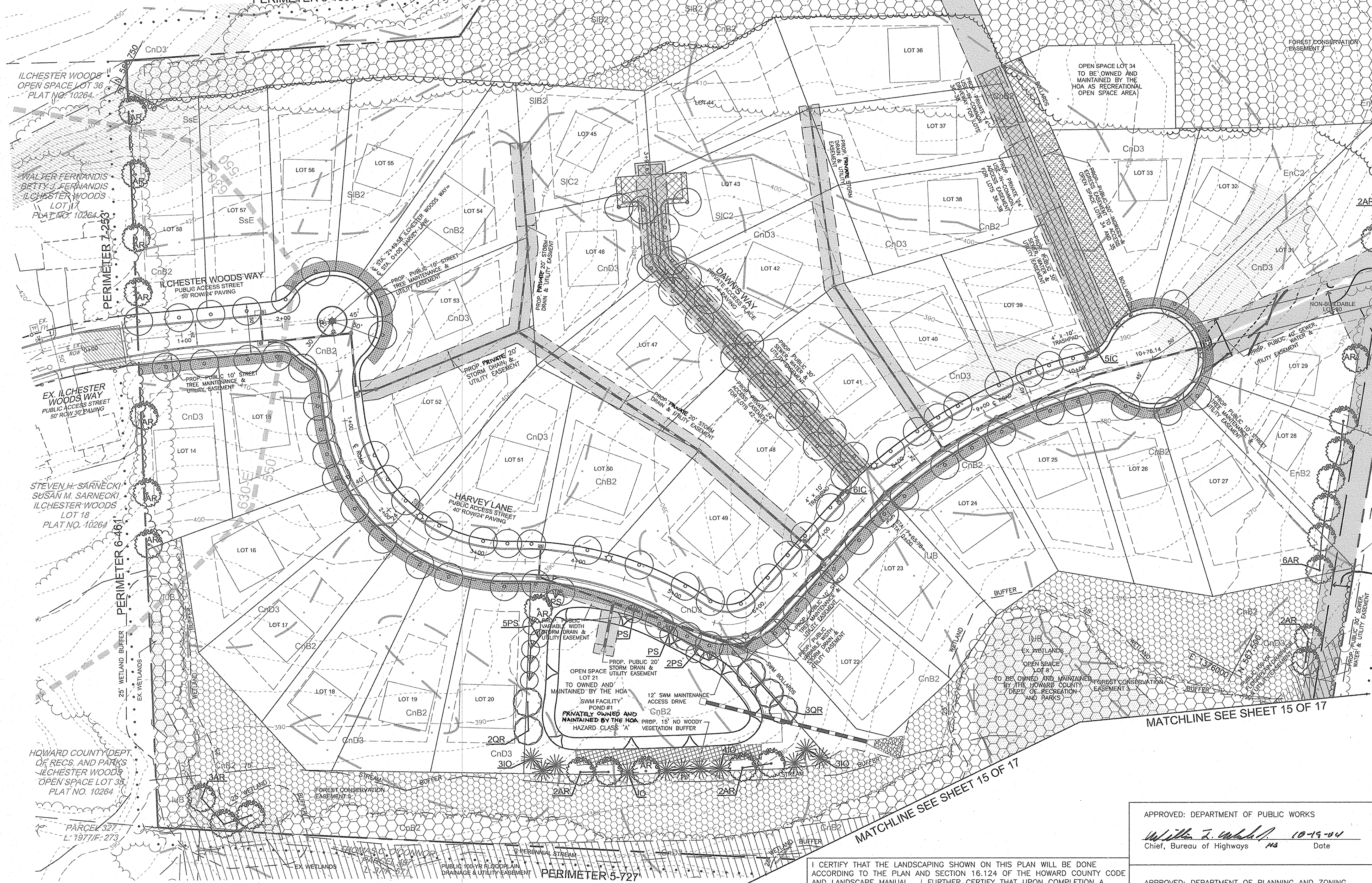
PARCEL '226'
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

DESIGN BY: RHV
 DRAWN BY: CMH
 CHECKED BY: RRV
 DATE: SEPTEMBER 2004
 SCALE: AS SHOWN
 W.O. NO.: 2017019.0
 13 SHEET OF 17

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	GROUP
CnB2	CHILLUM-FAIRFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
CnD3	CHILLUM-FAIRFAX LOAMS, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
EnB2	ELINSBORO LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EnC2	ELINSBORO LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C
KhC2	KEYPORT SILT LOAM, 3 TO 10 PERCENT SLOPES, MODERATELY ERODED	C
LoB2	LEGORE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
LcG3	LEORE SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
Md	MIXED ALLUVIAL LAND	-
MfE	MONTALTO AND RELAY SOILS, 15 TO 45 PERCENT SLOPES	C
ScD	SANDY AND CLAYEY LAND, MODERATELY SLOPING	-
SIB2	SASSAFRAS LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
SIC2	SASSAFRAS LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B
SSE	SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES	B
WbB	WATCHUNG SILT LOAM, 3 TO 8 PERCENT SLOPES	D

MAPS 20 & 25 OF THE HOWARD COUNTY SOIL SURVEY



LEGEND	
EXISTING CONTOUR	---440---
SPOT ELEVATION	482.53
DIRECTION OF FLOW	→
EXISTING TREES TO REMAIN	(Tree symbol)
SIGNS/LIGHT POLES	+4 POST-TOP
PROPOSED STREET TREE	(Circle symbol)
SOILS	SIB2, SSE
AREA OF 15 TO 24.9 PERCENT SLOPES	(Hatched pattern)
AREA OF 24 PERCENT OR GREATER SLOPES	(Dotted pattern)
PROP. PUBLIC UTILITY EASEMENT	(Horizontal line pattern)
PROP. PUBLIC STREET TREE MAINTENANCE & UTILITY EASEMENT	(Vertical line pattern)
PROP. PUBLIC OR PRIVATE ACCESS EASEMENT	(Diagonal line pattern)
PROP. FOREST CONSERVATION AREA (RETENTION)	(Cross-hatch pattern)
PROP. FOREST CONSERVATION AREA (RESTORATION)	(Stippled pattern)
PUBLIC 100-YR FLOODPLAIN DRAINAGE & UTILITY EASEMENT	(Wavy line pattern)
EXISTING WETLANDS	(Wavy line pattern)

DEVELOPER
 ELLICOTT CITY LAND HOLDINGS, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21043
 ATTN: MR. DONALD R. REUWER
 (410) 480-9105

OWNER
 DENNIS PRESERVE, LLC
 ELLICOTT CITY LAND HOLDINGS, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MD 21043
 410-480-9105

NO.	REVISION	DATE
1	REMOVE STORM DRAIN FROM I9 TO I10	1-20-06

LANDSCAPE PLAN
DENNIS PRESERVE
 LOTS 1-58

TAX MAP 31 BLOCK 21 PARCEL '226'
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

ROBERT H. VOGEL
ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410-461-7666
 ELLICOTT CITY, MD 21043 FAX: 410-461-8961

DESIGN BY:	RHV
DRAWN BY:	CMH
CHECKED BY:	RHV
DATE:	SEPTEMBER 2004
SCALE:	1"=50'
W.O. NO.:	2017019.0

I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN AND SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE-YEAR GUARANTEE OF PLANT MATERIALS WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

[Signature] 9/14/04
 OWNER/DEVELOPER DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] 10-19-04
 Chief, Bureau of Highways Date

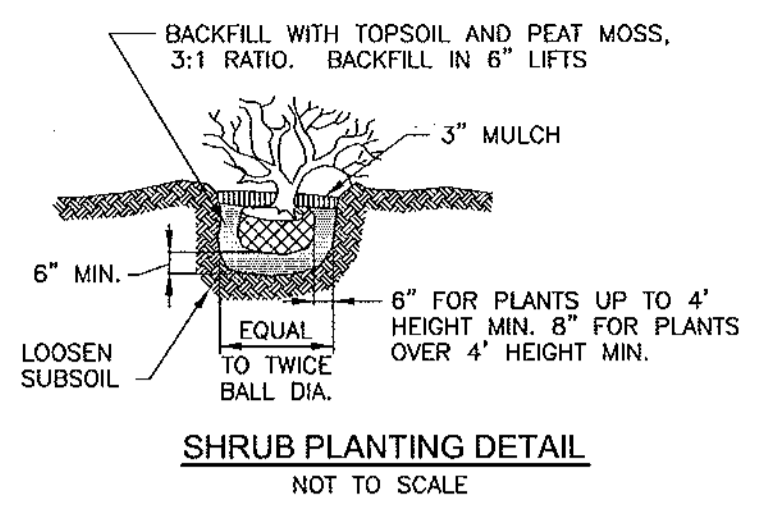
APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 10/27/04
 Chief, Division of Land Development Date

[Signature] 10/28/04
 Chief, Development Engineering Division Date

SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER (NO. YES AND LINEAR FEET)	POND #1 856 LF	POND #2 601 LF
CREDIT FOR EXISTING VEGETATION (NO. YES AND LINEAR FEET)	NO	YES* 359'
CREDIT FOR OTHER LANDSCAPING (NO. YES AND %)	YES (35%)	NO
NUMBER OF TREES REQUIRED	(479)	(242)
SHADE TREES	11 SHADE TREES	5 SHADE TREES
EVERGREEN TREES	21 EVERGREEN TREES	6 EVERGREEN TREES
NUMBER OF TREES PROVIDED	11 SHADE TREES	5 SHADE TREES
SHADE TREES	21 EVERGREEN TREES	6 EVERGREEN TREES
EVERGREEN TREES		
SHRUBS		

*EXISTING WOODS TO REMAIN



LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
AR	44	ACER RUBRUM 'OCTOBER GLORY'	2 1/2"-3" Col.	B & B
QR	7	QUERCUS RUBRA RED OAK	2 1/2"-3" Col.	B & B
PS	20	PINUS STROBUS EASTERN WHITE PINE	6' - 8' Ht.	B & B
IO	11	ILEX OPACA AMERICAN HOLLY OR EQUIV.	5' - 6' Ht.	B & B
IC	11	ILEX CRENATA 'ROTUNDFOLIA' ROUNDLEAF JAPANESE HOLLY	2 1/2" - 3" Ht.	B & B

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAS SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LANDSCAPE PLANTING SPECIFICATIONS.
 - CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
 - FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
 - CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.
- THE MAINTENANCE OF THE TRASHPADS AND THE TRASH PAD LANDSCAPE PLANTINGS ARE THE RESPONSIBILITY OF THE HOA.

DEVELOPER'S AGREEMENT

FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING PROVIDED PER THE LANDSCAPE MANUAL TO BE POSTED WITH THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$26,280.00 FOR THE REQUIRED 51 SHADE TREES, 31 EVERGREEN TREES, 11 SHRUBS, AND 20 PRIVATE STREET TREES.

NOTE:
A MINIMUM OF 20' IS REQUIRED BETWEEN ANY STREET LIGHT AND ANY TREE

STREET TREE CALCULATIONS

STREET NAME	LINEAR FEET	NO. REQUIRED	NO. PROVIDED
HARVEY LANE	2228/40	56	56
JOSIE COURT	1172/40	29	29
ILCHESTER WOODS WAY	503/40	13	13
KERGER ROAD	139/40	4	4
DAWN'S WAY	795/40	20	20
TOTAL		122	122

PRIVATE ACCESS PLACE STREET TREE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
AR	20	ACER RUBRUM 'AUTUMN FLAME'	2 1/2"-3" CAL.	B & B

PUBLIC ROAD STREET TREE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
AR	102	ACER RUBRUM 'AUTUMN FLAME'	2 1/2"-3" CAL.	B & B

NO.	REVISION	DATE

LANDSCAPE PLAN
DENNIS PRESERVE
LOTS 1-58

TAX MAP 31 BLOCK 21 PARCEL '226'
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REF: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

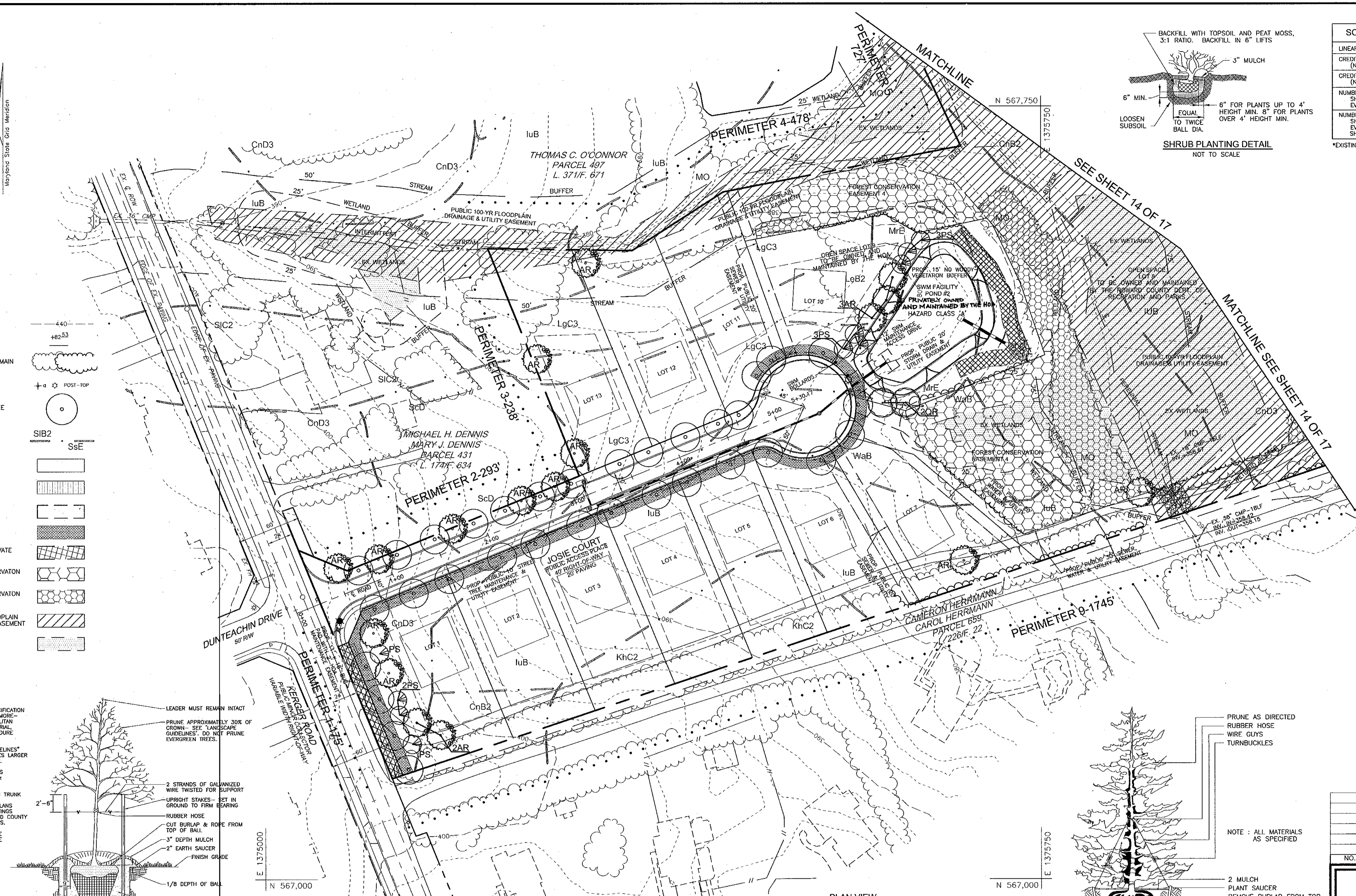
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

DEVELOPER
ELLCOTT CITY LAND HOLDINGS, LLC
8000 MAIN STREET ELLICOTT CITY, MARYLAND 21043
ATTN: MR. DONALD R. REUWER (410) 480-9105

OWNER
DENNIS PRESERVE, LLC
ELLCOTT CITY LAND HOLDINGS, LLC
8000 MAIN STREET ELLICOTT CITY, MD 21043
410-480-2105

DESIGN BY: RRV
DRAWN BY: CMH
CHECKED BY: RRV
DATE: SEPTEMBER 2004
SCALE: AS SHOWN
W.O. NO.: 2017019.0

15 SHEET OF 17

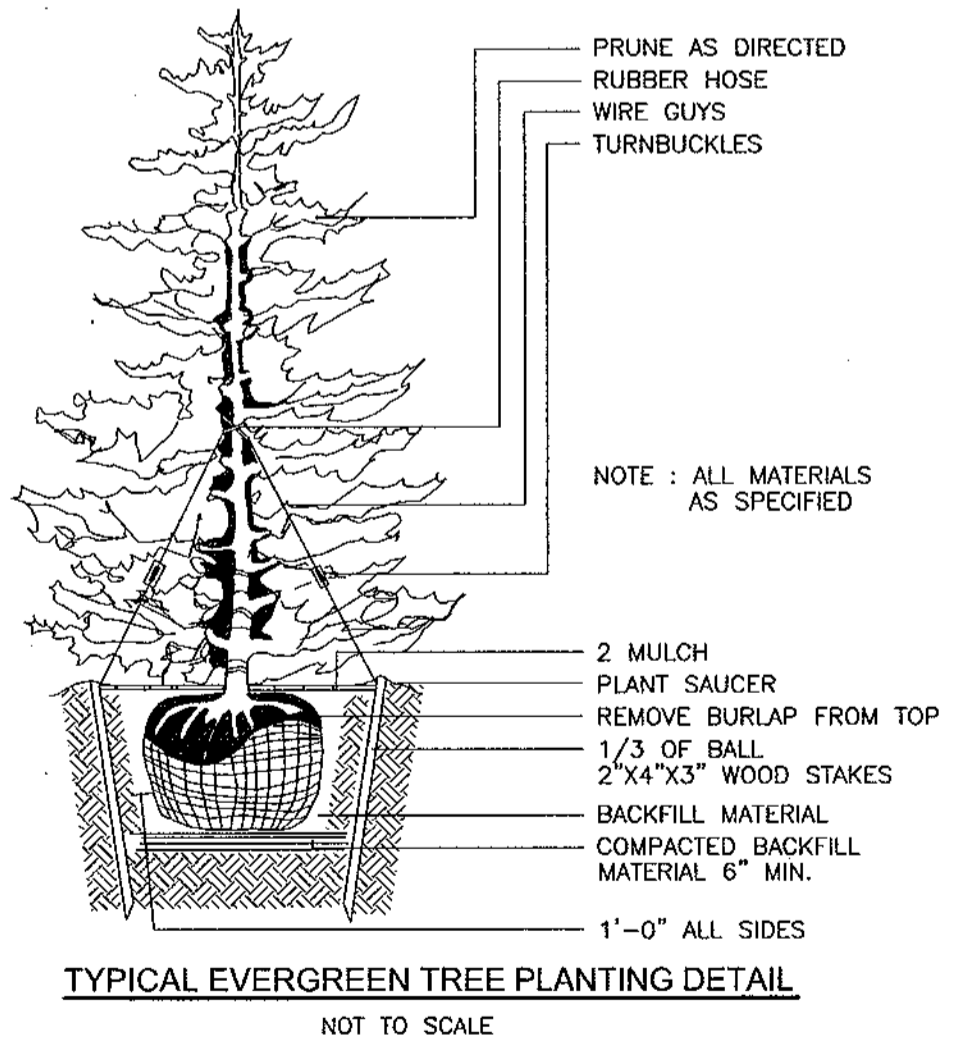
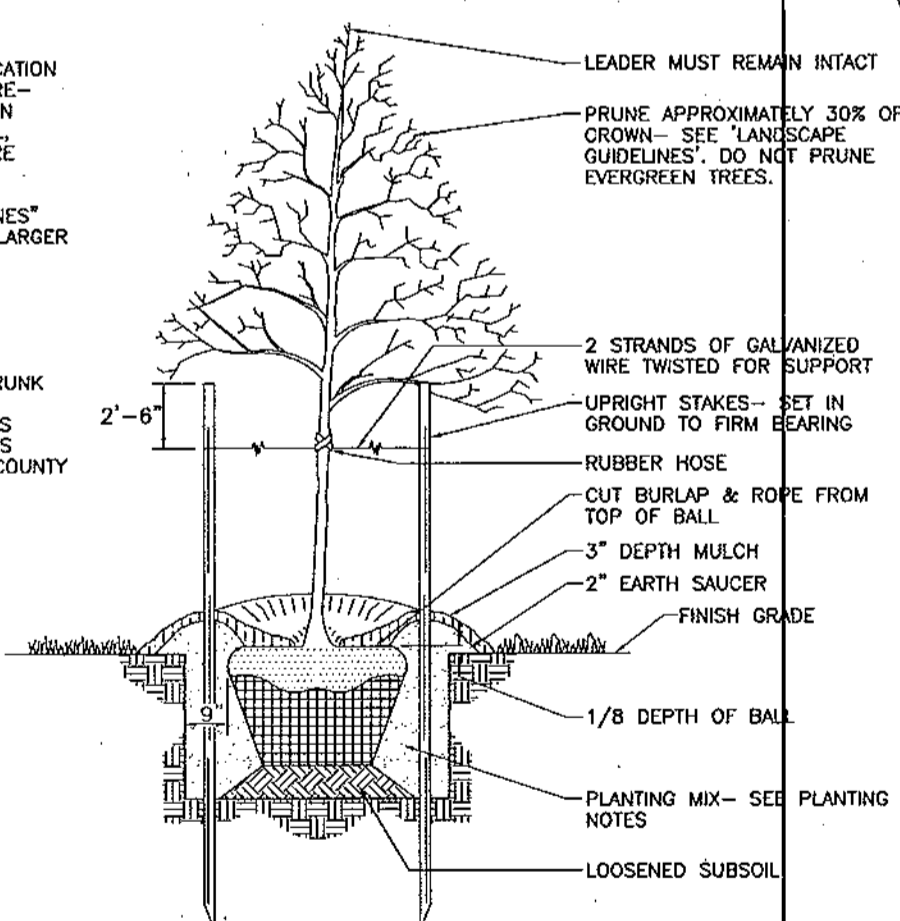


LEGEND

- EXISTING CONTOUR
- SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING TREES TO REMAIN
- SIGNS/LIGHT POLES
- PROPOSED STREET TREE
- SOILS
- AREA OF 15 TO 24.9 PERCENT SLOPES
- AREA OF 24 PERCENT OR GREATER SLOPES
- PROP. PUBLIC UTILITY EASEMENT
- PROP. PUBLIC STREET TREE MAINTENANCE & UTILITY EASEMENT
- PROP. PUBLIC OR PRIVATE ACCESS EASEMENT
- PROP. FOREST CONSERVATION AREA (RETENTION)
- PROP. FOREST CONSERVATION AREA (REFORESTATION)
- PUBLIC 100-YR FLOODPLAIN DRAINAGE & UTILITY EASEMENT
- EXISTING WETLANDS

NOTES

- SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
- SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
- PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
- KEEP MULCH 1" FROM TRUNK.
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
- TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWER EASEMENT.



SCHEDULE A: PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS**	2	3	4	5	6	7	8	9
PERIMETER/FRONTAGE DESIGNATION	B	A	A	A	A	A	A	A	A
LANDSCAPE TYPE	B	A	A	A	A	A	A	A	A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	175	293	238	478	727	461	253	1387	1745
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	NO	YES* 98'	YES* 405'	YES* 558'	YES* 293'	YES* 30'	YES* 1387'	YES* 951'
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED (F REMAINING)									
SHADE TREES	1:50 4	1:60 5	1:60 2	1:60 1	1:60 3	1:60 3	1:60 4	1:60 0	1:60 13
EVERGREEN TREES	1:40 4	-	-	-	-	-	-	-	-
NUMBER OF PLANTS PROVIDED									
SHADE TREES	4	5	2	1	3	3	4	-	13
EVERGREEN TREES	4	-	-	-	-	-	-	-	-
OTHER TREES (2:1 SUBSTITUTION)	-	-	-	-	-	-	-	-	-
SHRUBS (10:1 SUBSTITUTION)	-	-	-	-	-	-	-	-	-
DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED	-	-	-	-	-	-	-	-	-

* EXISTING WOODS TO REMAIN
** LOT 15 BUFFER TO ADJACENT ROAD TO BE PROVIDED AT SITE DEVELOPMENT STAGE.

APPROVED: DEPARTMENT OF PUBLIC WORKS
William T. Uhlir 10-19-04
Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamata 10/27/04
Chief, Division of Land Development Date
William T. Uhlir 10/25/04
Chief, Development Engineering Division Date

I CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN AND SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR WARRANTY OF PLANT MATERIALS WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING

Robert H. Vogel 7/14/04
OWNER/DEVELOPER DATE

SYMBOL	NAME / DESCRIPTION	GROUP
CnB2	CHILLUM-FAIRFAX LOAMS, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
CnD3	CHILLUM-FAIRFAX LOAMS, 5 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
EnB2	ELSNBORO LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EnC2	ELSNBORO LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
LuB	LUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C
KnC2	KEYPORT SILT LOAM, 3 TO 10 PERCENT SLOPES, MODERATELY ERODED	C
LeB2	LEGOIRE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
LcC3	LEGOIRE SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
Mf	MIXED ALLUVIAL LAND	C
Me	MONTALTO AND RELAY SOILS, 15 TO 45 PERCENT SLOPES	C
Sd	SANDY AND CLAYEY SAND, MODERATELY SLOPING	-
SIB2	SASSAFRAS LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B
SIC2	SASSAFRAS LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B
SsE	SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES	B
Wb	WATCHUNG SILT LOAM, 3 TO 8 PERCENT SLOPES	D

MAPS 20 & 25 OF THE HOWARD COUNTY SOIL SURVEY



LEGEND	
EXISTING CONTOUR	--- 440 ---
SPOT ELEVATION	482.53
DIRECTION OF FLOW	→
PROPOSED CONTOUR	--- 417 ---
EXISTING TREES TO REMAIN	(Tree symbol)
TREE PROTECTION FENCE	T/P
SIGNS/LIGHT POLES	+ 4 POST-TOP
PROPOSED STREET TREE	(Tree symbol)
SOILS	SIB2, SsE
AREA OF 15 TO 24.9 PERCENT SLOPES	(Hatched pattern)
AREA OF 24 PERCENT OR GREATER SLOPES	(Hatched pattern)
PROP. PUBLIC UTILITY EASEMENT	(Hatched pattern)
PROP. PUBLIC STREET TREE MAINTENANCE & UTILITY EASEMENT	(Hatched pattern)
PROP. PUBLIC OR PRIVATE ACCESS EASEMENT	(Hatched pattern)
PROP. FOREST CONSERVATION AREA (RETENTION)	(Hatched pattern)
PROP. FOREST CONSERVATION AREA (REFORESTATION)	(Hatched pattern)
PUBLIC 100-YR FLOODPLAIN DRAINAGE & UTILITY EASEMENT	(Hatched pattern)
EXISTING WETLANDS	(Hatched pattern)
LIMIT OF DISTURBANCE	LOD
SUPER SILT FENCE	SSF

LEGEND
 EXISTING CONTOUR
 SPOT ELEVATION
 DIRECTION OF FLOW
 PROPOSED CONTOUR
 EXISTING TREES TO REMAIN
 TREE PROTECTION FENCE
 SIGNS/LIGHT POLES
 PROPOSED STREET TREE
 SOILS
 AREA OF 15 TO 24.9 PERCENT SLOPES
 AREA OF 24 PERCENT OR GREATER SLOPES
 PROP. PUBLIC UTILITY EASEMENT
 PROP. PUBLIC STREET TREE MAINTENANCE & UTILITY EASEMENT
 PROP. PUBLIC OR PRIVATE ACCESS EASEMENT
 PROP. FOREST CONSERVATION AREA (RETENTION)
 PROP. FOREST CONSERVATION AREA (REFORESTATION)
 PUBLIC 100-YR FLOODPLAIN DRAINAGE & UTILITY EASEMENT
 EXISTING WETLANDS
 LIMIT OF DISTURBANCE
 SUPER SILT FENCE

NO.	1	REGRADE LOTS 24-32	1.30.00
REVISION			DATE

FOREST CONSERVATION PLAN
DENNIS PRESERVE
 LOTS 1-58

TAX MAP 31 BLOCK 21 PARCEL '226'
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961

APPROVED: DEPARTMENT OF PUBLIC WORKS
With 2 amendments 10-15-04
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Condy Hamstra 10/27/04
 Chief, Division of Land Development Date

APPROVED: DEPARTMENT OF PUBLIC WORKS
Don Williams 10/27/04
 Chief, Development Engineering Division Date

DEVELOPER
 ELLICOTT CITY LAND HOLDINGS, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21043
 ATTN: MR. DONALD R. REUWER
 (410) 480-9105

OWNER
 DENNIS PRESERVE, LLC
 ELLICOTT CITY LAND HOLDINGS, LLC
 SOLE MEMBER
 8000 MAIN STREET
 ELLICOTT CITY, MD 21043
 410-480-9105

DESIGN BY:	RHV
DRAWN BY:	CMH
CHECKED BY:	RHV
DATE:	SEPTEMBER 2004
SCALE:	1"=50'
W.O. NO.:	2017019.0

**HOWARD COUNTY
FOREST CONSERVATION WORKSHEET**

ZONED R-20
NET TRACT AREA:
A. TOTAL TRACT AREA = 31.37 AC
B. AREA WITHIN 100 YEAR FLOODPLAIN = 1.57 AC
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION = 0.00 AC
D. NET TRACT AREA = 29.80 AC

LAND USE CATEGORY
INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED R-ED.
ARA MDR IDA HDR MPD CIA
0 0 0 1 0 0
E. AFFOREST THRESHOLD = 15% X D = 4.47 AC
F. CONSERVATION THRESHOLD = 20% X D = 5.96 AC

EXISTING FOREST COVER:
G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) = 6.70 AC
H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD = 2.23 AC
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD = 0.74 AC

BREAK EVEN POINT:
(0.2 X I) + F = BREAK EVEN POINT (6.11 AC)
J. FOREST RETENTION WITH NO MITIGATION = 6.11 AC
K. CLEARING PERMITTED WITHOUT MITIGATION = 0.59 AC

PROPOSED FOREST CLEARING:
L. TOTAL AREA OF FOREST TO BE CLEARED = 1.81 AC
M. TOTAL AREA OF FOREST TO BE RETAINED = 4.89 AC

PLANTING REQUIREMENTS:
N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD = 0.19 AC
P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD = 2.14 AC
Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD = 0.00 AC
R. TOTAL REFORESTATION REQUIRED (N+P-Q) = 2.33 AC
S. TOTAL AFFORESTATION REQUIRED = 0.00 AC
T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED = 2.33 AC

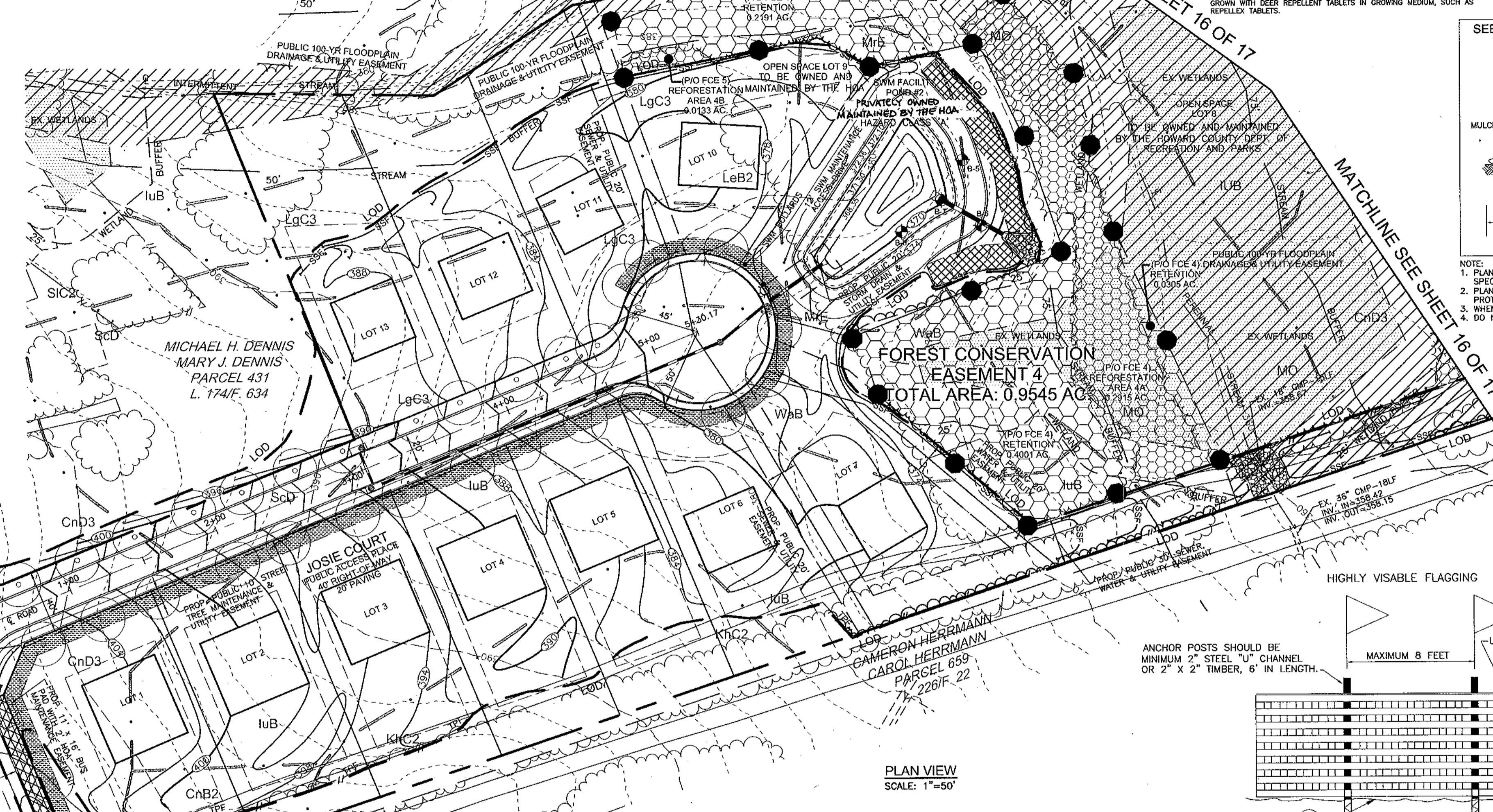
OBLIGATION TO BE FULFILLED BY ON-SITE RETENTION OF 4.89 AC. (213,008 SF), ON-SITE REFORESTATION OF 2.03 AC. (88,427 SF) AND FEE-IN-LIEU FOR THE REMAINING 0.30 AC. (13,068 SF)

NOTES
1. THE PROPERTY OUTLINE IS BASED ON A BOUNDARY SURVEY PREPARED BY FREDERICK WARD ASSOCIATES IN DECEMBER 2001.
2. THE EXISTING FEATURES AND CONTOURS SHOWN HEREON ARE BASED ON AERIAL TOPOGRAPHY PREPARED BY GREENMAN PEDERSON COMPANY, AUGUST 2001.

LEGEND

- EXISTING CONTOUR
- SPOT ELEVATION
- DIRECTION OF FLOW
- PROPOSED CONTOUR
- EXISTING TREES TO REMAIN
- TREE PROTECTION FENCE
- SIGNS/LIGHT POLES
- PROPOSED STREET TREE
- SOILS
- AREA OF 15 TO 24.9 PERCENT SLOPES
- AREA OF 24 PERCENT OR GREATER SLOPES
- PROP. PUBLIC UTILITY EASEMENT
- PROP. PUBLIC STREET TREE MAINTENANCE & UTILITY EASEMENT
- PROP. PUBLIC OR PRIVATE ACCESS EASEMENT
- PROP. FOREST CONSERVATION AREA (RETENTION)
- PROP. FOREST CONSERVATION AREA (REFORESTATION)
- PUBLIC 100-YR FLOODPLAIN DRAINAGE & UTILITY EASEMENT
- EXISTING WETLANDS
- LIMIT OF DISTURBANCE
- SUPER SILT FENCE

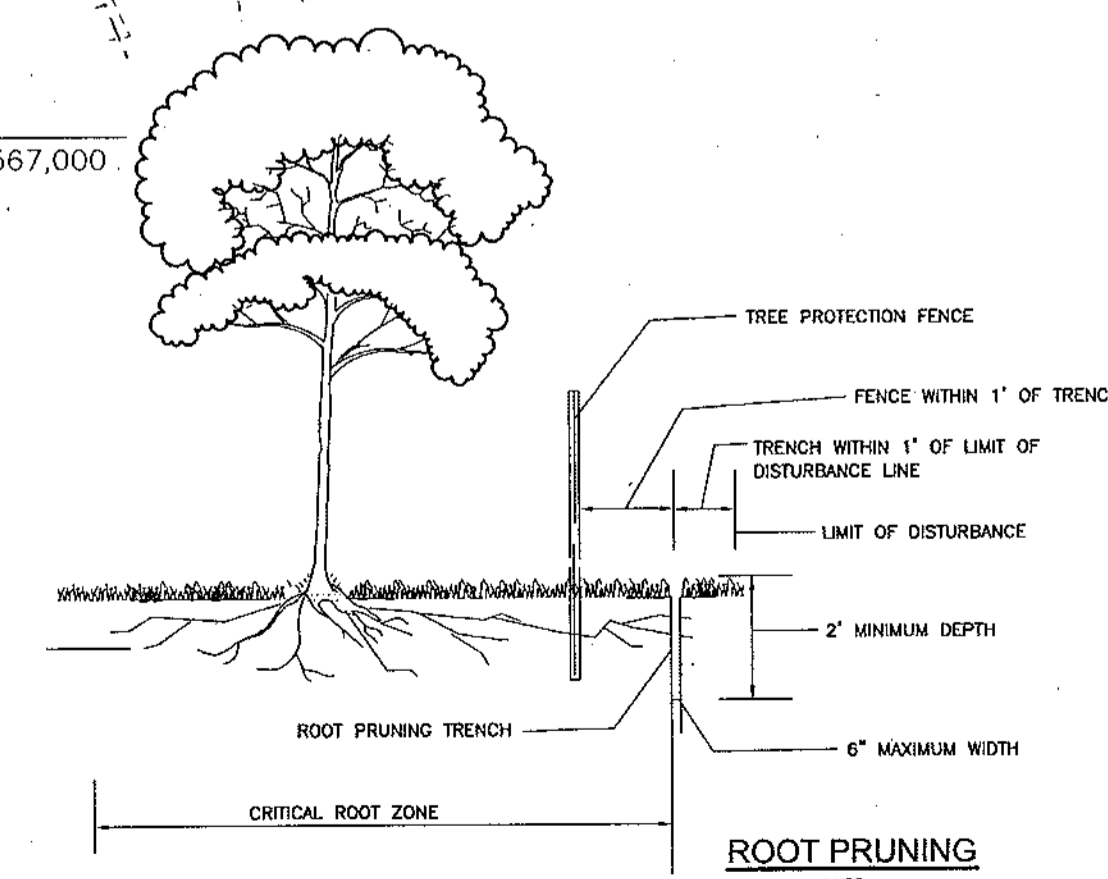
FOREST CONSERVATION EASEMENT TABLE	
FOREST CONSERVATION EASEMENT 1	
RETENTION	1.4419 AC.
REFORESTATION	0.0736 AC.
1.5155 AC. TOTAL	
FOREST CONSERVATION EASEMENT 2	
RETENTION	1.7916 AC. TOTAL
FOREST CONSERVATION EASEMENT 3	
RETENTION	1.0060 AC.
REFORESTATION	1.6516 AC.
2.6576 AC. TOTAL	
FOREST CONSERVATION EASEMENT 4	
RETENTION	0.6497 AC.
REFORESTATION	0.3048 AC.
0.9545 AC. TOTAL	
TOTAL RETENTION	4.8922 AC.
TOTAL REFORESTATION	2.0300 AC.



APPROVED: DEPARTMENT OF PUBLIC WORKS
William R. ... 10-15-04
Chief, Bureau of Highways

APPROVED: DEPARTMENT OF PLANNING AND ZONING
David ... 10/27/04
Chief, Division of Land Development

... 10/25/04
Chief, Development Engineering Division



NOTES:
1. RETENTION AREAS TO BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
2. BOUNDARIES OF RETENTION AREAS TO BE STAKED, FLAGGED AND/OR FENCED PRIOR TRENCHING.
3. EXACT LOCATION OF TRENCH SHOULD BE IDENTIFIED.
4. TRENCH SHOULD BE IMMEDIATELY BACKFILLED WITH SOIL REMOVED OR ORGANIC SOIL.
5. ROOTS SHOULD BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT.

**REFORESTATION PLANT SCHEDULE
REFORESTATION AREA 1A/0.07 AC.
(P/O FCE 1)**

PLANTING DENSITY: 0.03 AC. OF 1" CAL. TREES @ 200 PER ACRE
0.04 AC. OF WHIPS/SEEDLINGS WITH TREE SHELTERS @ 350 PER ACRE

QTY.	BOTANICAL NAME	SIZE	SPACING
6	ACER RUBRUM RED MAPLE	1" CAL.	15' x 15'
14	PLATANUS OCCIDENTALIS SYCAMORE	3-4"	11' x 11'

**REFORESTATION PLANT SCHEDULE
REFORESTATION AREA 3A/1.10 AC.
(P/O FCE 3)**

PLANTING DENSITY: 0.50 AC. OF 1" CAL. TREES @ 200 PER ACRE
0.60 AC. OF WHIPS/SEEDLINGS WITH TREE SHELTERS @ 350 PER ACRE

QTY.	BOTANICAL NAME	SIZE	SPACING
50	ACER RUBRUM RED MAPLE	1" CAL.	15' x 15'
50	LIQUIDAMBAR STRACIFLUA AMERICAN SWEETGUM	1" CAL.	15' x 15'
70	ACER RUBRUM RED MAPLE	3-4"	11' x 11'
70	PRUNUS SEROTINA BLACK CHERRY	3-4"	11' x 11'
70	QUERCUS PALUSTRIS PIN OAK	3-4"	11' x 11'

**REFORESTATION PLANT SCHEDULE
REFORESTATION AREA 3B/0.55 AC.
(P/O FCE 3)**

PLANTING DENSITY: 0.25 AC. OF 1" CAL. TREES @ 200 PER ACRE
0.30 AC. OF WHIPS/SEEDLINGS WITH TREE SHELTERS @ 350 PER ACRE

QTY.	BOTANICAL NAME	SIZE	SPACING
25	ACER RUBRUM RED MAPLE	1" CAL.	15' x 15'
25	LIQUIDAMBAR STRACIFLUA AMERICAN SWEETGUM	1" CAL.	15' x 15'
35	ACER RUBRUM RED MAPLE	3-4"	11' x 11'
35	PRUNUS SEROTINA BLACK CHERRY	3-4"	11' x 11'
35	QUERCUS PALUSTRIS PIN OAK	3-4"	11' x 11'

**REFORESTATION PLANT SCHEDULE
REFORESTATION AREA 4A/0.29 AC.
(P/O FCE 4)**

PLANTING DENSITY: 0.15 AC. OF 1" CAL. TREES @ 200 PER ACRE
0.14 AC. OF WHIPS/SEEDLINGS WITH TREE SHELTERS @ 350 PER ACRE

QTY.	BOTANICAL NAME	SIZE	SPACING
30	ACER RUBRUM RED MAPLE	1" CAL.	15' x 15'
17	PRUNUS SEROTINA BLACK CHERRY	3-4"	11' x 11'
16	ACER RUBRUM RED MAPLE	3-4"	11' x 11'
16	QUERCUS PALUSTRIS PIN OAK	3-4"	11' x 11'

**REFORESTATION PLANT SCHEDULE
REFORESTATION AREA 4B/0.01 AC.
(P/O FCE 4)**

PLANTING DENSITY: 0.01 AC. OF WHIPS/SEEDLINGS WITH TREE SHELTERS @ 350 PER ACRE

QTY.	BOTANICAL NAME	SIZE	SPACING
4	ACER RUBRUM RED MAPLE	3-4"	11' x 11'

REFORESTATION PLANTING NOTES

1. AFFORESTATION AREAS MAY BE PLANTED AS SOON AS REASONABLE TO DO SO. LATE WINTER/EARLY SPRING PLANTINGS ARE PREFERRED. EARLIEST PLANTING DATES WILL VARY FROM YEAR TO YEAR BUT PLANTING MAY GENERALLY BEGIN AS SOON AS THE GROUND IS NO LONGER FROZEN. ALTERNATE PLANTING DATES MAY BE CONSIDERED AS CONDITION WARRANTS.
2. SOIL AMENDMENTS AND FERTILIZATION RECOMMENDATIONS WILL BE MADE BASED UPON THE RESULTS OF SOIL ANALYSIS FOR NITROGEN, PHOSPHORUS, POTASSIUM, ORGANIC MATTER CONTENT AND pH. IF REQUIRED, FERTILIZER WILL BE PROVIDED USING A SLOW RELEASE, SOLUBLE 15-15-15 ANALYSIS DESIGNED TO LAST 8-9 YEARS CONTAINED IN POLYETHYLENE PERFORATED BAGS SUCH AS MANUFACTURED BY ARGO WORKS, P.O. BOX 310 HOLLIS, NY 11403 OR APPROVED EQUAL.
3. PLANT MATERIALS WILL BE PLANTED IN ACCORDANCE WITH THE PLANTING DETAILS AND PLANT SCHEDULE.
4. PLANT MATERIALS SHALL BE NURSERY GROWN AND INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO THE AMERICAN STANDARDS FOR NURSERY STOCK SPECIFICATIONS FOR SIZE, FORM, VIGOR, OR ROOTS, OR DUE TO TRUNK WOUNDS, BREAKAGE, DESICCATION, INSECT OR DISEASE MUST BE REPLACED.
5. PLANTING STOCK MUST BE PROTECTED FROM DESICCATION AT ALL TIMES PRIOR TO PLANTING. MATERIALS HELD FOR PLANTING SHALL BE MOISTENED AND PLACED IN COOL, SHADY AREAS UNTIL READY FOR PLACEMENT.
6. NEWLY PLANTED TREES MAY REQUIRE WATERING AT LEAST ONCE PER WEEK DURING THE FIRST GROWING SEASON DEPENDING ON RAINFALL IN ORDER TO GET ESTABLISHED. THE INITIAL PLANTING OPERATION SHOULD ALLOW FOR WATERING DURING INSTALLATION TO COMPLETELY SOAK BACKFILL MATERIAL.
7. MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE DIAGRAM PROVIDED AND SHALL CONSIST OF COMPOSTED, SHREDDED HARDWOOD BARK MULCH, FREE OF WOOD ALGONDS.
8. ALL NURSERY STOCK TO BE SPRAYED WITH DEER REPELLENT CONSISTING OF WAXES, SUCH AS REPPELLENT. ALL NURSERY STOCK TO BE GROWN WITH DEER REPELLENT TABLETS IN GROWING MEDIUM, SUCH AS REPPELLENT TABLETS.

REFORESTATION AREA MONITORING NOTES

1. MONTHLY VISITS DURING THE FIRST GROWING SEASON ARE TO ASSESS THE SUCCESS OF THE PLANTINGS AND TO DETERMINE IF SUPPLEMENTAL WATERING, PEST CONTROL, OR OTHER ACTIONS ARE NECESSARY. EARLY SPRING VISITS WILL DOCUMENT WINTER KILL, AND AUTUMN VISITS WILL DOCUMENT SUMMER KILL.
2. THE MINIMUM SURVIVAL RATE SHALL BE 75% OF THE TOTAL NUMBER OF TREES PLANTED PER ACRE AT THE END OF THE TWO YEAR MAINTENANCE PERIOD. WILD TREE SEEDLINGS FROM NATURAL REGENERATION ON THE PLANTING SITE MAY BE COUNDED UP TO 50% TOWARD THE TOTAL SURVIVAL NUMBER IF THE ARE HEALTHY MATING SPECIES AT LEAST 12 INCHES TALL.
3. SURVIVAL WILL BE DETERMINED BY A STRATIFIED RANDOM SAMPLING OF THE SPECIES COMPOSITION OF THE PLANTING. THE SAMPLE POPULATION SHOULD BE PROPORTIONATE TO THE AMOUNT OF EACH SPECIES IN THE ENTIRE PLANTING TO BE SAMPLED.
4. EFFECTIVE MONITORING WILL ASSESS PLANT SURVIVAL, GROWTH, DURING THE FIRST GROWING SEASON AND MAKE RECOMMENDATIONS FOR REINFORCEMENT PLANTINGS IF REQUIRED AT THAT TIME.

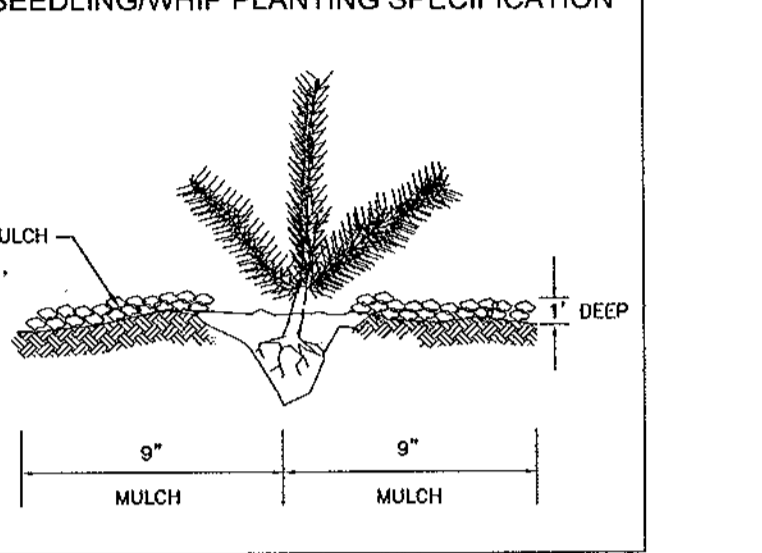
FOREST RETENTION AREAS AND NOTES

1. FORESTED STREAM AND WETLAND BUFFERS ARE RETAINED IN OPEN SPACE LOTS.
2. NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THIS SITE.
3. FORESTED AREAS ADJACENT TO FLOODPLAINS AND STREAM BUFFERS ARE SUBSTANTIALLY CHANGED IN GRADING AND RUNOFF WITHIN CONSTRUCTION/INSTALLATION AREAS WILL NOT ADVERSELY AFFECT THE SOILS WITHIN THE FOREST RETENTION AREA. SEDIMENT CONTROL MEASURES WILL BE CONCENTRATED FLOW RUNOFF TO STORMWATER MANAGEMENT FACILITIES, RETAIN SEDIMENT WITHIN THE CONSTRUCTION SITE, AND/OR REDIRECT CLEAN WATER AWAY FROM CONSTRUCTION AREAS.
4. FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE, DPZ AND THE FOREST CONSERVATION MANUAL FOR THE SUBDIVISION WILL BE FULFILLED BY THE RETENTION OF EXISTING FOREST IN THE AMOUNT OF 4.89 AC. REFORESTATION OF 2.03 AC. AND FEE-IN-LIEU FOR THE REMAINING 0.30 AC.
5. THE FOREST CONSERVATION REQUIREMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

FOREST PROTECTION NOTES

- PRE-CONSTRUCTION ACTIVITIES**
1. FOR RETENTION AREAS, INSTALL BLAZE ORANGE FENCE AND RETENTION SIGNS BEFORE CONSTRUCTION BEGINS.
 2. FENCING SHALL BE MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS THE SITUATION WARRANTS.
 3. A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNING SHALL BE PERFORMED IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.
- CONSTRUCTION PHASE**
1. NO DISTURBANCE OR DUMPING IS ALLOWED INSIDE THE TREE RETENTION AREA.
 2. NO EQUIPMENT SHALL BE OPERATED INSIDE THE TREE RETENTION AREA INCLUDING TREE CARE OPERATIONS.
 3. IN THE EVENT OF BROWNS, THE PROTECTED TREES SHALL BE MONITORED FOR SIGNS OF STRESS AND WATERED AS NEEDED.
- POST-CONSTRUCTION ACTIVITIES**
1. AT THE DISCRETION OF A QUALIFIED TREE CARE EXPERT, DAMAGES TO RETAINED TREES SHALL BE REPAIRED BY THE CONTRACTOR.
 2. FENCE REMOVAL AND STABILIZATION SHALL BE AS PER THE SEDIMENT AND EROSION CONTROL PLAN.
 3. DO NOT REMOVE SIGNS.

SEEDLING/WHIP PLANTING SPECIFICATION



- NOTE:
1. PLANT MIX TO BE 1/3 PIONEER & 2/3 MID TO LATE SUCCESSIONAL SPECIES
2. PLANT LARGER STOCK AND EVERGREENS AROUND PERIMETER TO PROTECT INTERIOR SMALLER STOCK.
3. WHEN SHRUBS ARE SPECIFIED, PLANT THEM IN CLUSTERS
4. DO NOT PLANT TREES IN A GRID PATTERN

SEQUENCE OF CONTRACTION-FOREST CONSERVATION

1. PRECONSTRUCTION MEETING/SITE WALK WITH CONTRACTORS AND OTHER RESPONSIBLE PARTIES TO DEFINE PROTECTION MEASURES TO BE UTILIZED AND TO POINT OUT PARTICULAR TREES TO BE SAVED.
2. STAKE OUT LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING LOCATIONS.
3. INSTALL TREE PROTECTION FENCING TO BE INSPECTED BY THE PROJECT ENGINEER OR THE PROJECT ECOLOGIST AND HOWARD COUNTY PLANNING AND ZONING.
4. PROCEED WITH TREE REMOVAL AND SITE IMPROVEMENTS AS PER APPROVED SEDIMENT CONTROL PLAN - TO BE INSPECTED BY HOWARD COUNTY PLANNING AND ZONING.
5. TEMPORARY TREE PROTECTION DEVICES SHALL BE REMOVED AFTER ALL FINISHED GRADING AND UTILITY CONSTRUCTION HAS OCCURRED AND WITH APPROVAL FROM THE HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

NOTES

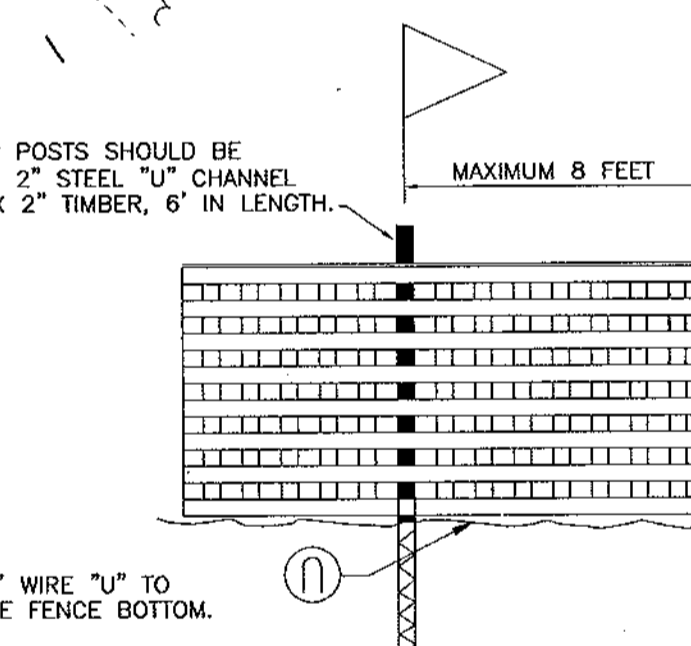
1. SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" FOR ALL MATERIAL, PRODUCT AND PROCEDURE SPECIFICATIONS.
2. SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
3. PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
4. KEEP MULCH 1" FROM TRUNK
5. SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
6. TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWAGE EASEMENT.

TREE PLANTING AND STAKING

DECIDUOUS TREES UP TO 2-1/2" CALIPER NOT TO SCALE

NO.	REVISION	DATE

BLAZE ORANGE PLASTIC MESH



NOTES:

1. FOREST PROTECTION DEVICE ONLY.
2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
4. ROOF DAMAGE SHOULD BE AVOIDED.
5. PROTECTION SIGNAGE SHOULD BE USED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

FOREST CONSERVATION PLAN
DENNIS PRESERVE
LOTS 1-58
TAX MAP 31 BLOCK 21 PARCEL '226'
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REF.: S-01-06, P-02-27, WP-03-07 (APP. 11/05/02)

ROBERT H. VOGEL ENGINEERS & SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043
TEL: 410-461-7666 FAX: 410-461-8961

DESIGN BY: RHV
DRAWN BY: CMH
CHECKED BY: RHV
DATE: SEPTEMBER 2004
SCALE: AS SHOWN
W.O. NO.: 2017019.0
17 SHEET OF 17