

INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	ROAD PLAN & PROFILE
3	GRADING AND SEDIMENT CONTROL PLAN
4	DRAINAGE AREA MAP
5	STORM DRAIN PROFILES
6	SWM PLAN & DETAILS
7	LANDSCAPE & FOREST CONSERVATION PLAN



VICINITY MAP
SCALE: 1" = 600'

GENERAL NOTES :

- All work shall be performed in accordance with the Howard County Design Manual, Vol. IV (Standard Specifications and Details for Construction).
- Approximate location of existing utilities are shown. The contractor shall take all necessary precautions to protect the existing utilities and maintain uninterrupted service. Any damage incurred due to Contractor's operation shall be repaired immediately at the Contractor's expense.
- The Contractor shall test pit existing utilities at least five (5) days before starting work shown on these drawings.
- Contractor shall notify the following Utilities at least five (5) days before starting work on these drawings:

MISS UTILITY	1-800-257-7777
BELL TELEPHONE SYSTEM	393-3649
LONG DISTANCE CABLE DIVISION	393-3553 or 3553
BALTIMORE GAS & ELECTRIC CO.	539-8000 ext. 691
COLONIAL PIPELINE	795-1390
HOWARD COUNTY BUREAU OF UTILITIES	992-2366
HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION	313-1872

 (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)
- All inlets shall be constructed in accordance with Howard County Standards.
- All street curb returns shall have a 35' radius unless otherwise noted.
- Storm drain trenches within the road right-of-way shall be backfilled and compacted in accordance with Howard County Design Manual, Vol. IV.e. Standard Specifications and Details for Construction.
- Installation of traffic control devices, marking, and signing shall be in accordance with the most current edition of the MUTCO.
- Pipe shall not be installed by the contractor until the length called for at each station has been approved by the Engineer in the field.
- Designed traffic speed in accordance with the American Association of State Highway Official Standards.
- All elevations shown are based on U.S.C. and G.S. mean sea level Datum, 1929.
- All fill areas within the roadway and under structures to be compacted to a minimum of 95% compaction, per AASHTO T-180 Method.
- All pipe elevations shown are invert elevation.
- Profile station shall be adjusted as necessary to conform to plan dimensions.
- Subject property zoned R-20 PER 10-18-95 Comprehensive Zoning plan.
- Field run topography and boundary survey was prepared by W.L. Meekins, Inc. 1-27-95. Boundary survey was subsequently verified by R.C. Kelly & Assoc. on 3-15-98.
- All horizontal controls are based on NAD 83, vertical controls on NAVD 29 per Howard County Bench Marks # 37BA and 37BB.
 37BA N 563785.632 FT., E 1376343.279 FT. ELEV. = 394.753 FT
 37BB N 563663.428 FT., E 1378040.570 FT. ELEV. = 373.811 FT
 NOTE : UNLESS OTHERWISE STATED ALL HOWARD COUNTY SURVEY CONTROLS ARE STANDARD STAMPED (BRASS OR ALUMINUM) DISC SET ON TOP OF CONC. (3" DEEP) CYLINDRIC BASE, USUALLY THE DISC IS SET 1" OR 2" BELOW TERRAIN SURFACE.
- No pipe shall be laid until lines of excavation have been brought within 6" of finished grade.
- All storm drain pipe bedding shall be as shown in fig. 11.4 Vol. I of Howard County Design Manual unless otherwise noted.
- See Department of Planning and Zoning File No. # S-95-17, P-97-05 & F-98-77.
- The Forest Conservation Easement has been established to fulfill the requirements of Section 16.1200 of the Howard County Code Forest Conservation Act. No clearing, grading or construction is permitted within the Forest Conservation Easement. Except as shown on the approved road drawings. However, forest management practice as defined in the Deed of Forest Conservation are allowed.
- No clearing, grading & construction within the wetland buffer, stream buffer, forest conservation easement and floodplain area.

FINAL CONSTRUCTION PLAN ROCKBURN RUN

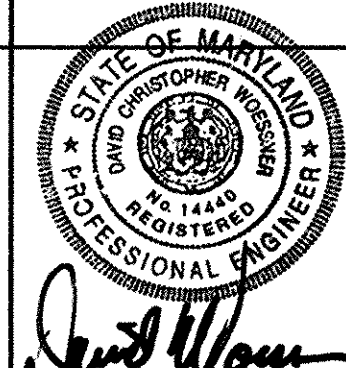
LOTS 1-16

A SUBDIVISION OF PARCEL 51

1st ELECTION DISTRICT TAX MAP 37, GRID/BLOCK #5

HOWARD COUNTY, MARYLAND

NO.	DATE	REVISION
APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING		
		<i>Cindy Hamilton</i> 5/11/98 DATE
		<i>John Vancura</i> 4/28/98 DATE
APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS		
		<i>Andrew M. Dineen</i> 4-23-98 DATE



DES :	DRN :	CHK :	DATE :
D.C.W.	A.V.G.	J.H.E.	4-6-98

DEVELOPER:	OWNER:
MR. L. RAY RACHUBA DUCKETTS LANE J.V. 946-A MARMICH CT. ELDERSBURG, MD. 21784	KATHLEEN M. BOWEN 3414 CENTENNIAL LANE ELLCOTT CITY, MARYLAND 21042

COVER PAGE

600'SCALE' MAP NO. 37 BLOCK NO. 21

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to these plans, and that all responsible personnel involved in the construction of the project will have a Certificate of attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on site inspection by the Howard Soil Conservation District or their authorized Agent as are necessary.

David Wynn 4/2/98
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

"I hereby certify that this plan for Soil, Erosion and Sediment control represents a practical and workable plan based on my knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District.

David Wynn 4-7-98
SIGNATURE OF ENGINEER DATE

PREPARED BY :

AMERICAN LAND DEVELOPMENT AND ENGINEERING INC.
CIVIL ENGINEERING CONSULTANTS
AND LAND PLANNER

8205 FURROW AVENUE TEL (410) 992-8204
ELLCOTT CITY, MD. 21042 FAX (410) 481-9135

ROCKBURN RUN
LOTS 1-16
A SUBDIVISION OF PARCEL 51
S-95-17, P-97-05, F-98-77
1st ELECTION DISTRICT TAX MAP 37, GRID/BLOCK #5
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 7

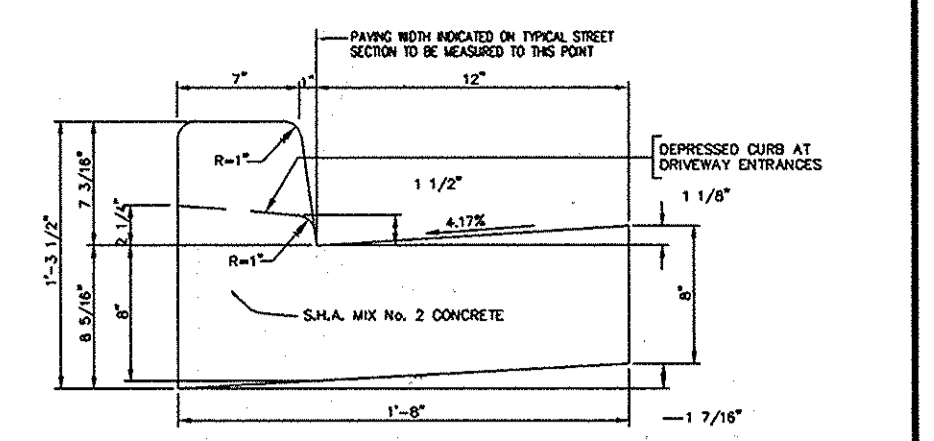
STREET LIGHTS

SYMBOL	DESCRIPTION
○	150 - WATTS HPS VAPOR PENDANT FIXTURE (CUTOFF) MOUNTED ON 30' ON A BRONZE FIBERGLASS POLE USING A 1/2" ABA.
☆	100 WATTS "TRADITIONARE" HPS VAPOR POST TOP FIXTURE ON 14' BLACK FIBERGLASS POLE.

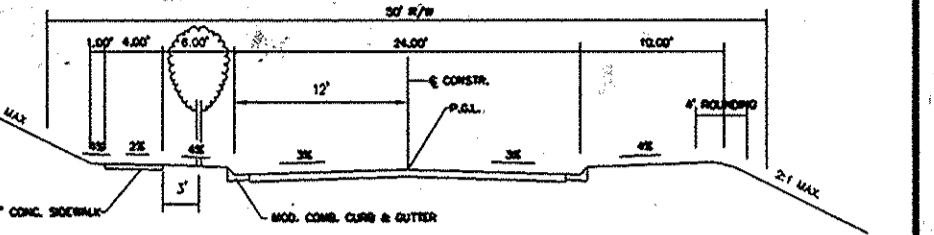
CARL A. STRAIN AND WIFE
6275 MONTGOMERY RD.
ELK RIDGE, MD. 21227
L191 / F.261
6.0 AC.
ZONE R-20
PARCEL 50

CURVE DATA

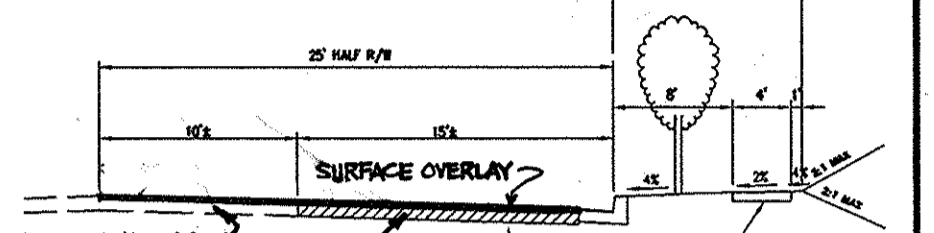
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
C1	750.00'	148.71'	74.60'	148.46'	N11°24'28"E	11°21'38"
C2	496.11'	124.80'	62.73'	124.47'	N24°17'41"E	14°24'47"



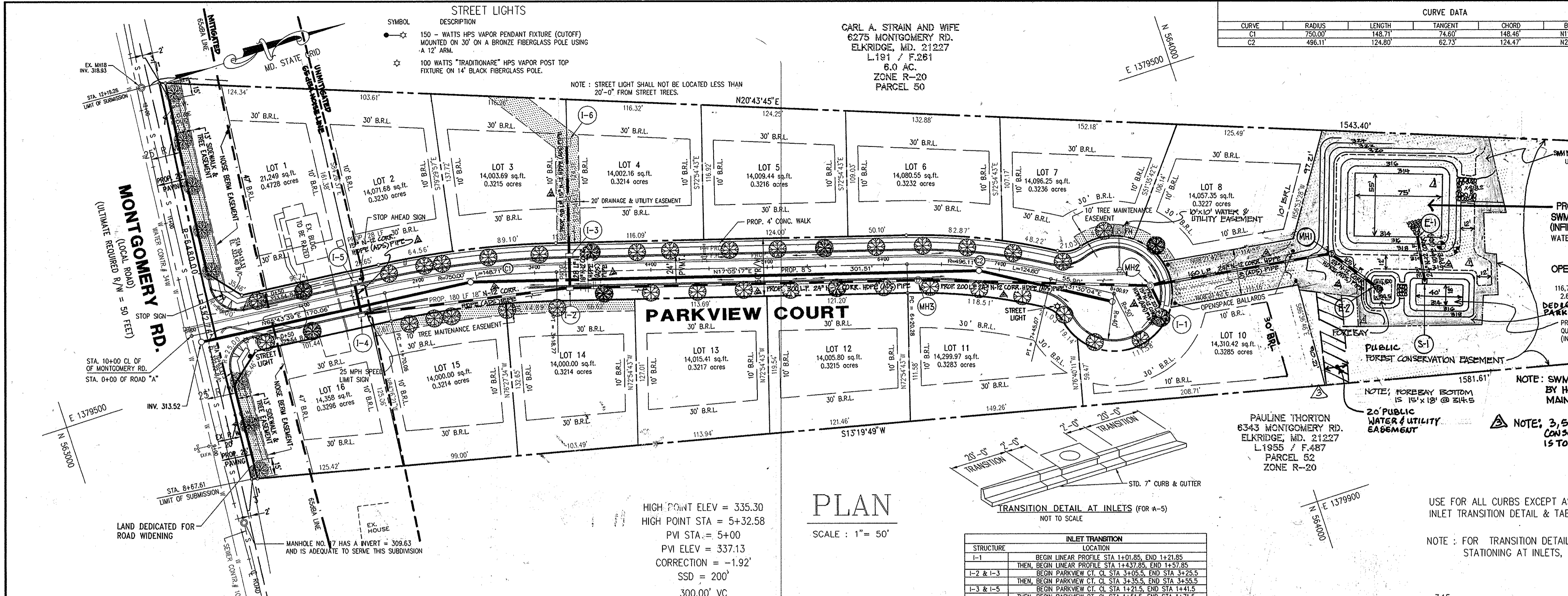
STANDARD 7" COMBINATION CURB AND GUTTER
NOT TO SCALE. NOTE: STD. 7" COMB. CURB & GUTTER TO BE USED AT INLETS ONLY.



TYPICAL SECTION ROAD "A"
STA. 0+25 TO 7+40.56
DESIGN SPEED - 30 MPH

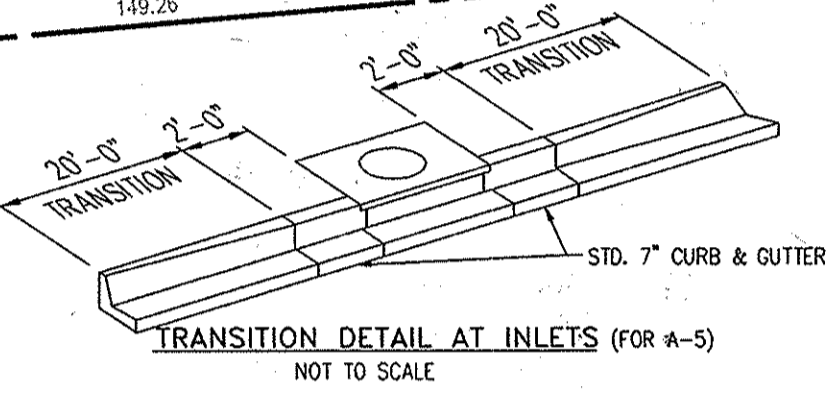


MODIFIED COMBINATION CURB AND GUTTER
NOT TO SCALE. NOTE: MODIFIED COMBINATION CURB & GUTTER TO BE USED ONLY ALONG PARKVIEW CT. & MONTGOMERY RD. EXCEPT AT INLETS AND TRANSITION THEREFROM.



HIGH POINT ELEV = 335.30
HIGH POINT STA = 5+32.58
PVI STA = 5+00
PVI ELEV = 337.13
CORRECTION = -1.92'
SSD = 200'
300.00' VC

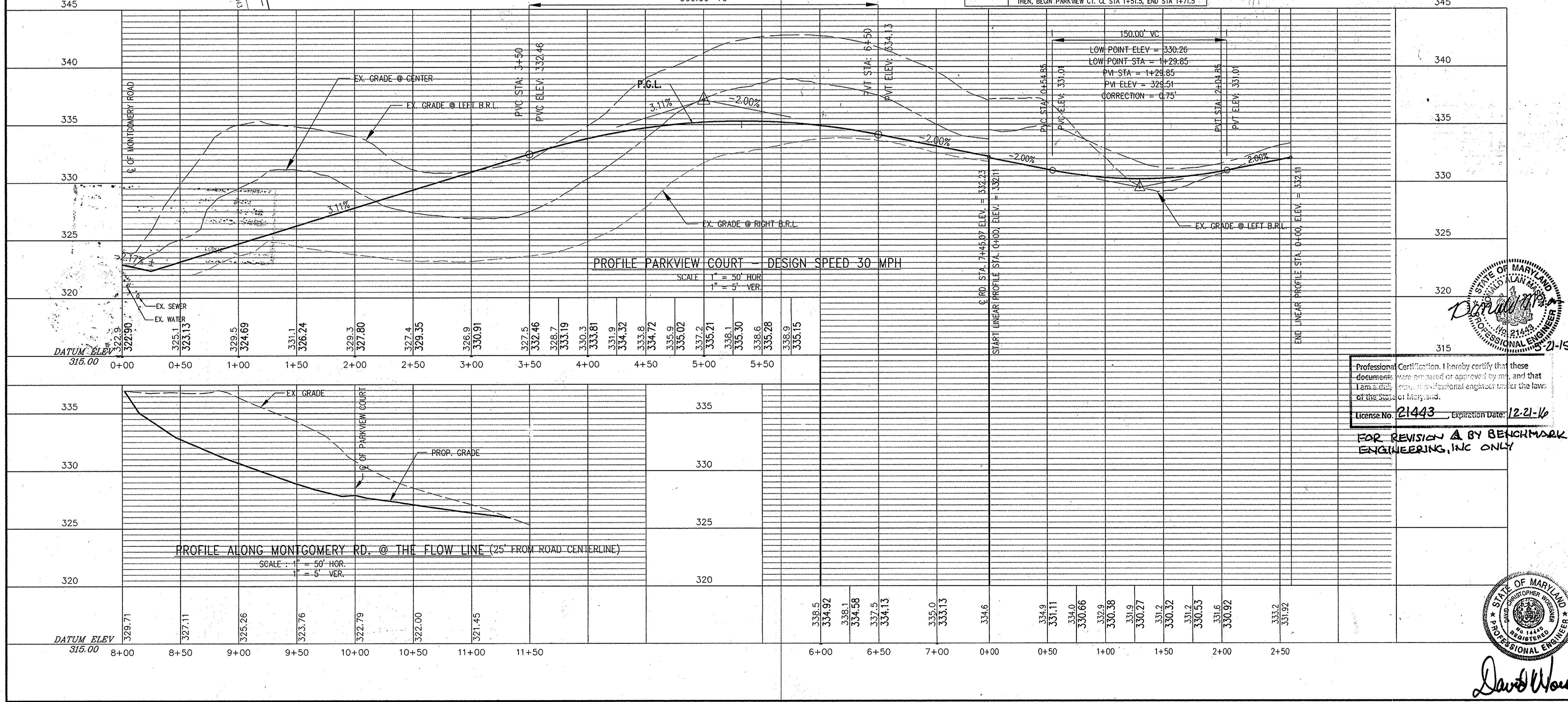
PLAN
SCALE: 1" = 50'



INLET TRANSITION

STRUCTURE	LOCATION
1-1	BEGON LINEAR PROFILE STA 1+01.85, END 1+21.85 THEN, BEGON LINEAR PROFILE STA 1+43.78, END 1+57.85
1-2 & 1-3	BEGON PARKVIEW CT. CL. STA. 3+05.5, END STA. 3+25.5
1-3 & 1-5	THEN, BEGON PARKVIEW CT. CL. STA. 3+35.5, END STA. 3+55.5 BEGON PARKVIEW CT. CL. STA. 1+21.5, END STA. 1+41.5
	THEN, BEGON PARKVIEW CT. CL. STA. 1+51.5, END STA. 1+71.5

USE FOR ALL CURBS EXCEPT AS NOTED ON THE INLET TRANSITION DETAIL & TABLE
NOTE: FOR TRANSITION DETAIL AND STATIONING AT INLETS, SEE THIS SHEET



STREET TREE CHART

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	LOCATION
8	○	QUERCUS RUBRA	NORTHERN RED OAK	PARKVIEW CT.
8	○	QUERCUS RUBRA	NORTHERN RED OAK	MONTGOMERY RD.
33	○	ACER RUBRUM	AUTUMN FLAME RED MAPLE	PARKVIEW CT.

49 TOTAL TREES PROVIDED. REQUIRED = 1750/40 = 44 TREES

DEVELOPER'S/BUILDER'S CERTIFICATE
"I certify that all development and/or construction will be done according to these plans, and that all responsible personnel involved in the construction of the project will have a Certificate of attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on site inspection by the Howard County Conservation District or their Authorized Agent or are necessary."
7/22 4/7/98
BUILDER/DEVELOPER DATE

ENGINEER'S CERTIFICATE
"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard County Conservation District."
David Wynn 4-7-98
SIGNATURE OF ENGINEER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy Hamblin 5/11/98
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
David Wynn 4/20/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

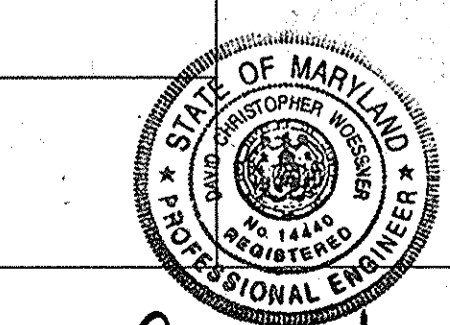
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Charles W. Mueller 4-23-98
CHIEF, BUREAU OF HIGHWAYS DATE

PROJECT NAME: ROCKBURN RUN
LOTS 1-16
F-98-17 A SUBDIVISION OF PARCEL NO. 51
P-97-05 FIRST ELECTION DISTRICT TAX MAP #37 GRID/BLOCK # 5
S-95-17 HOWARD COUNTY, MARYLAND.

TITLE: ROAD PLAN AND PROFILE
DEVELOPER: MR. L. RAY RACHUBA
DUCKETTS LANE J.V.
946-A MARMON CT.
ELDBURGH, MD. 21784
OWNER: KATHLEEN M. BOWEN
3414 CENTENNIAL LANE
ELLCOTT CITY, MARYLAND 21042
PREPARED BY: AMERICAN LAND DEVELOPMENT AND ENGINEERING INC.
9505 FURROW AVE.
BELLICO CITY, MD. 21048
TEL. (410) 986-8505
FAX. (410) 461-9135
DES.: D.C.W. JOB :
DRW.: AVG. PROJ. :
CHK.: D.C.W. DATE: 4-6-98
SCALE: 1" = 50'
SHEET 2 OF 7



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 21443 Expiration Date: 12-21-16
FOR REVISION A BY BENCHMARK ENGINEERING, INC ONLY



David Wynn

PROJECT NAME: ROCKBURN RUN
 LOTS 1-16
 A SUBDIVISION OF PARCEL NO. 51
 FIRST ELECTION DISTRICT TAX MAP #37 GRID/BLOCK # 5
 HOWARD COUNTY, MARYLAND.

TITLE: STORM DRAINS & DRAINAGE AREA MAP

DEVELOPER: MR. L. RAY RACHUBA
 DUCKETTS LANE J.V.
 945-A MARMON CT.
 ELDERSBURG, MD. 21784

OWNER: KATHLEEN M. BOWEN
 3414 CENTENNIAL LANE
 ELLICOTT CITY, MARYLAND 21042

PREPARED BY: AMERICAN LAND DEVELOPMENT AND ENGINEERING INC.
 9305 FURROW AVE.
 ELLICOTT CITY, MD. 21043
 TEL. (410) 992-8205
 FAX (410) 461-0135

DES.: D.C.W. JOB: SCALE: SHEET 4 OF 7
 DRW.: AVG. PROJ.: DATE: 4-6-98 1" = 50'

CHK.: D.C.W.

- LEGEND:
- ← ← ← ← DRAINAGE DIVIDE
 - → → → FLOW PATH
 - SOIL BOUNDARY
 - PROP. STORM DRAIN
 - PROP. DRAINAGE SWALE

SOILS LEGEND

SYMBOLS	TYPE	MAPPING UNIT
CmB2	B	Chillum Silt Loam
CmC2	B	Chillum Silt Loam
EvB	A	Evesboro Loamy Sand
EvC	A	Evesboro Loamy Sand
Fa	D	Fallsington Loam
IuB	C	Iuka Loam
Mo	D	Mixed Alluvial Land
SIB2	B	Sassafras Loam
SIC2	B	Sassafras Loam

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cathy Hamilton 5/1/98
 CHIEF, DIVISION OF DEVELOPMENT DATE

Michael Drummond 4/20/98
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Andrew M. Dwyer 4-23-98
 CHIEF, BUREAU OF HIGHWAYS DATE

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David W. [Signature] 4/9/98
 BUILDER/DEVELOPER DATE

ENGINEER'S CERTIFICATE

"I hereby certify that this plan for Soil, Erosion and Sediment control represents a practical and workable plan based on my knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District.

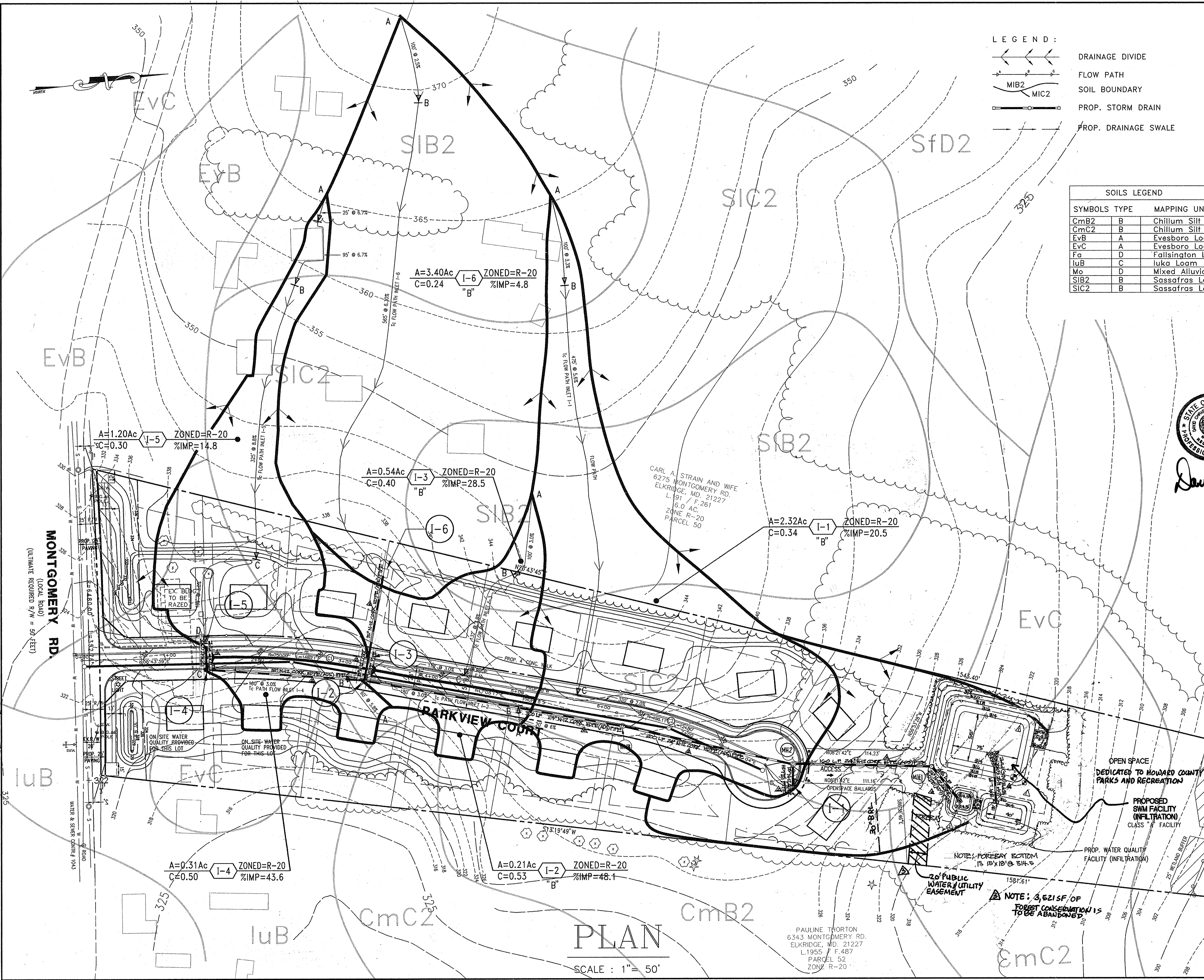
David W. [Signature] 4-7-98
 SIGNATURE OF ENGINEER DATE

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 21443 Expiration Date: 12-21-16

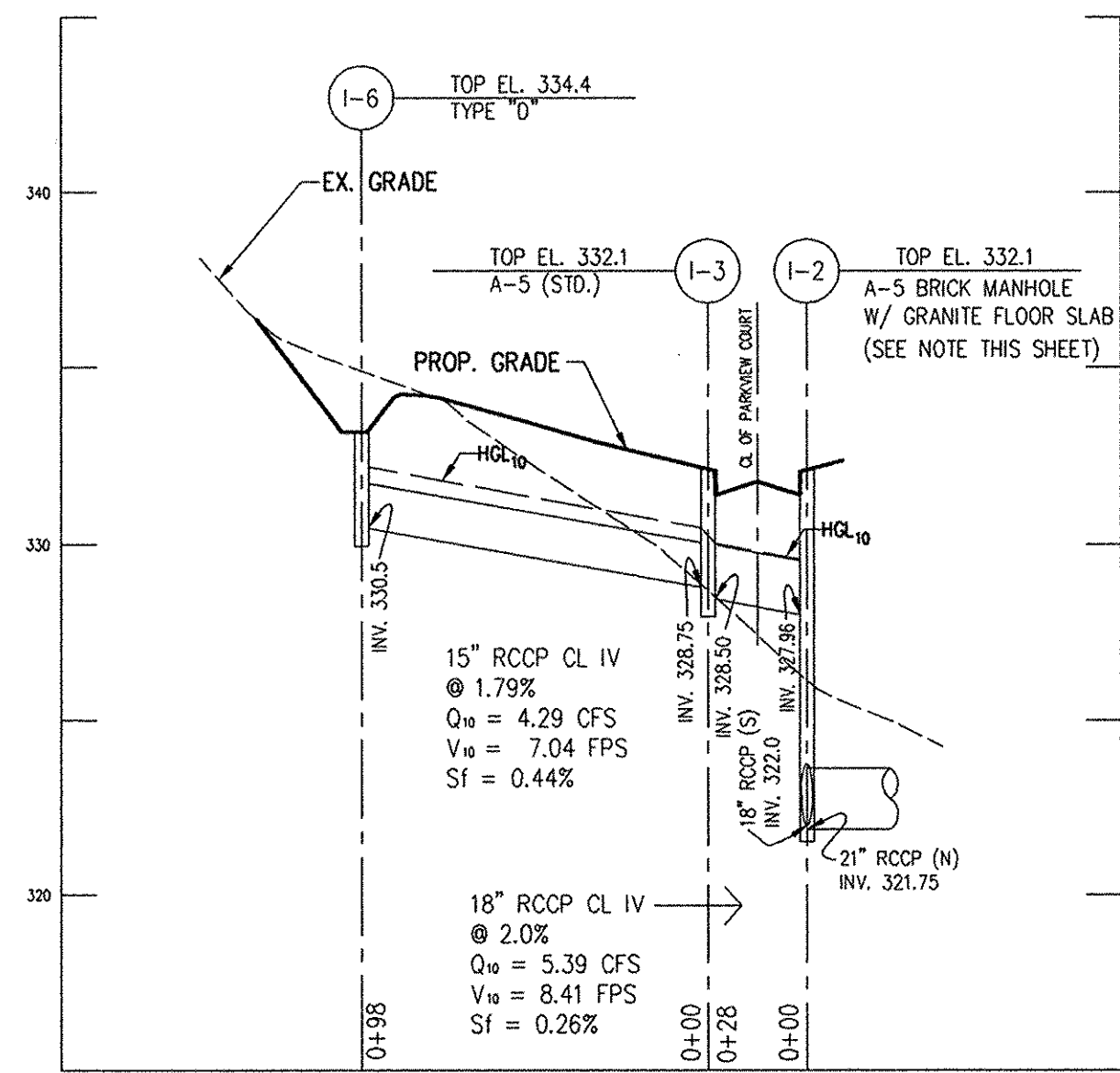
FOR REVISION BY BENEFICIAL ENGINEERING, INC. ONLY

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 License No. 21443
 Expiration Date: 12-21-16

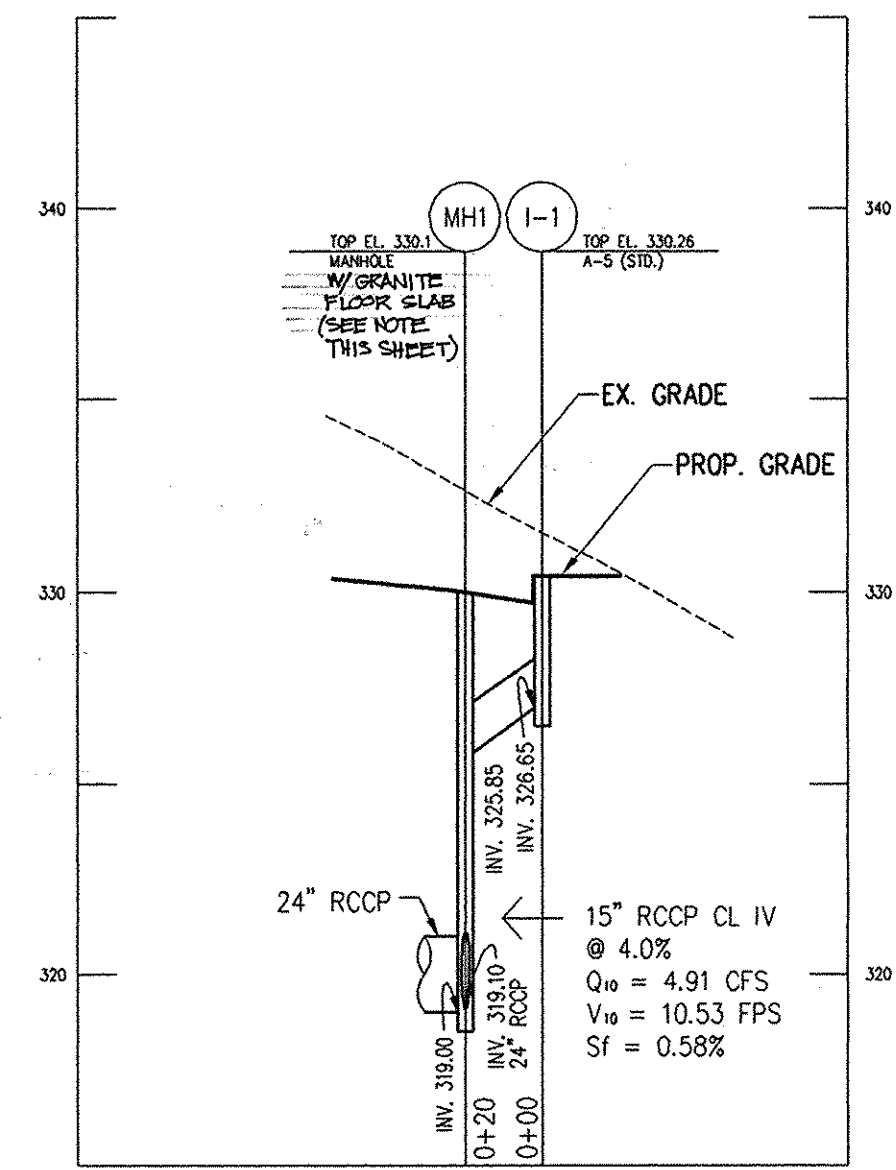


PLAN
 SCALE: 1" = 50'

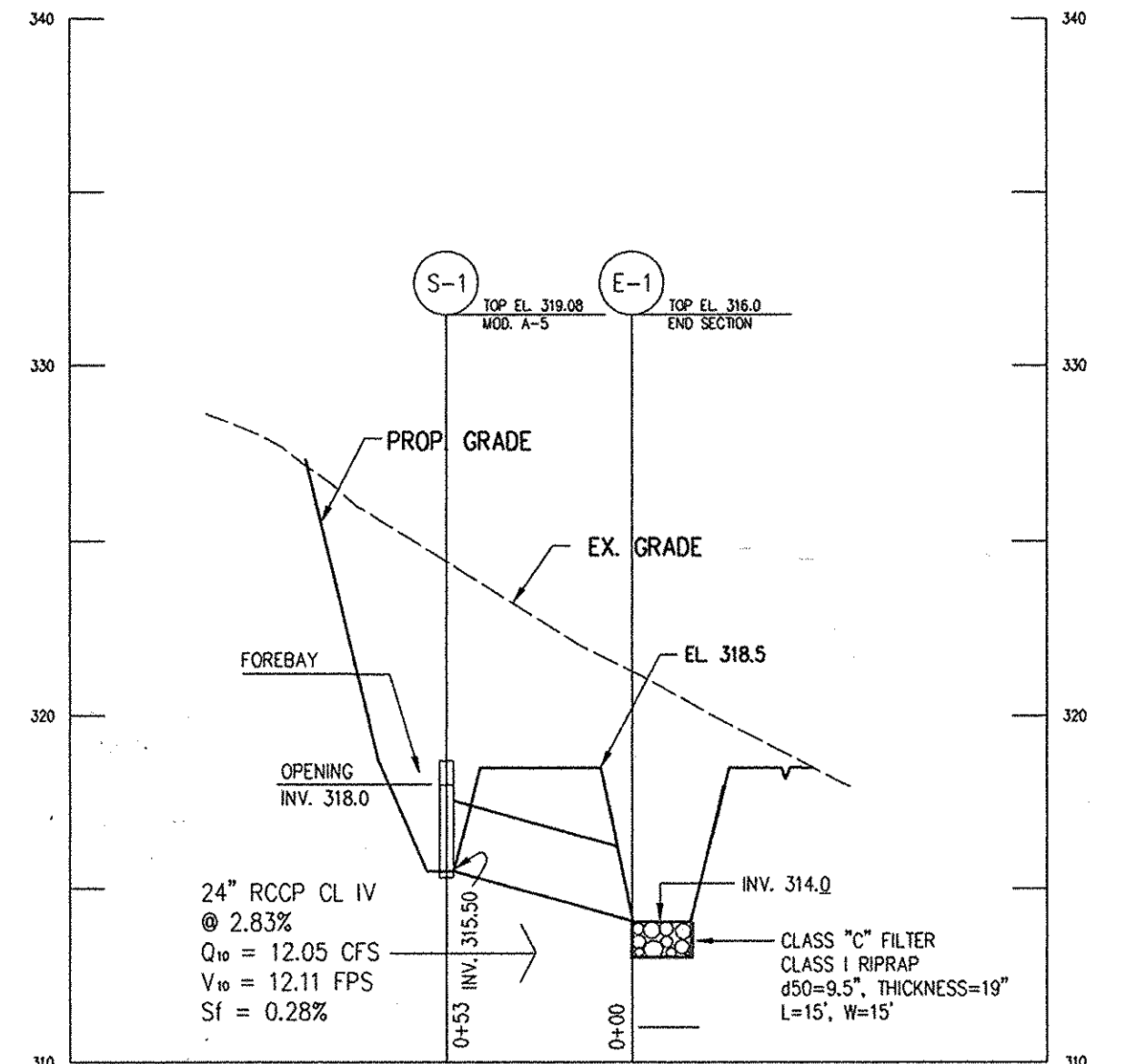
PAULINE THORNTON
 6343 MONTGOMERY RD.
 ELK RIDGE, MD. 21227
 L1955 / F.487
 PARCEL 52
 ZONE R-20



SCALE: 1" = 50' HOR.
1" = 5' VER.

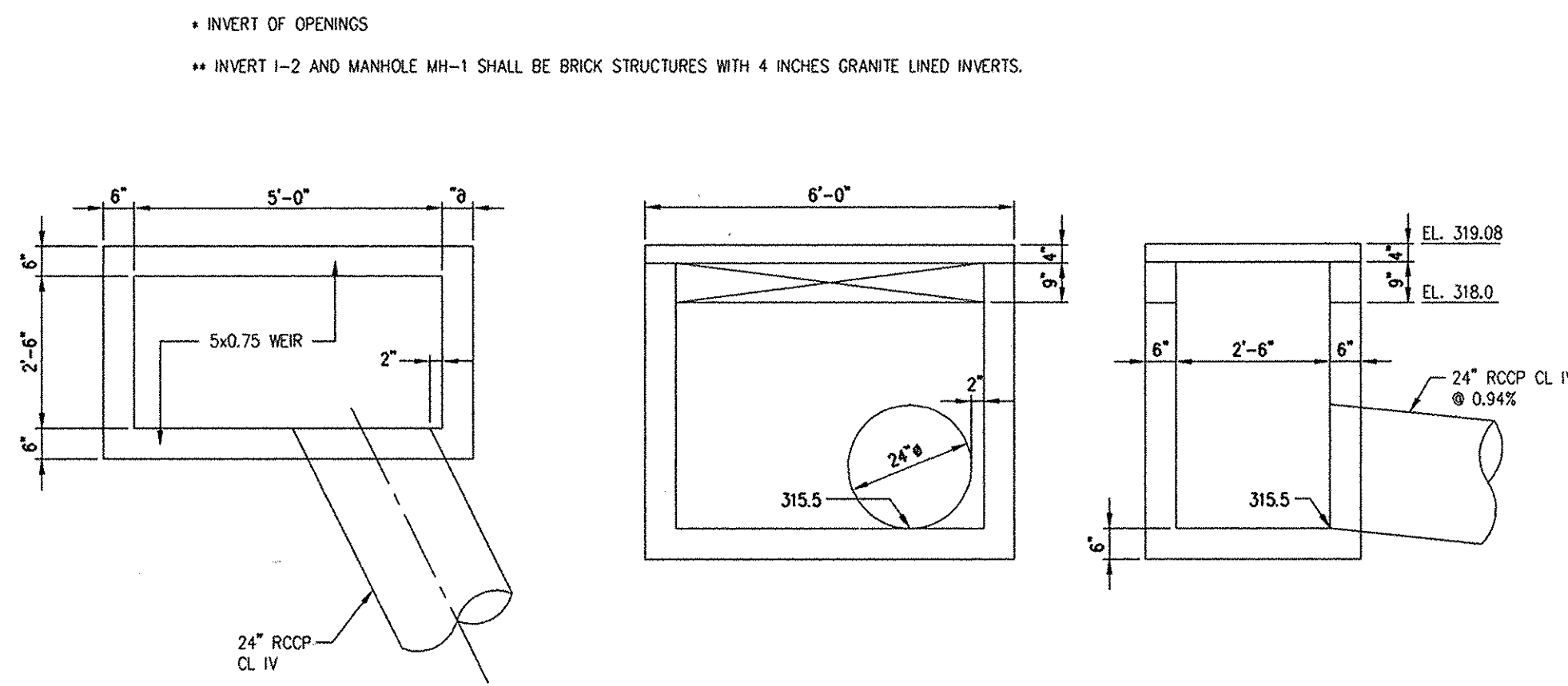


SCALE: 1" = 50' HOR.
1" = 5' VER.

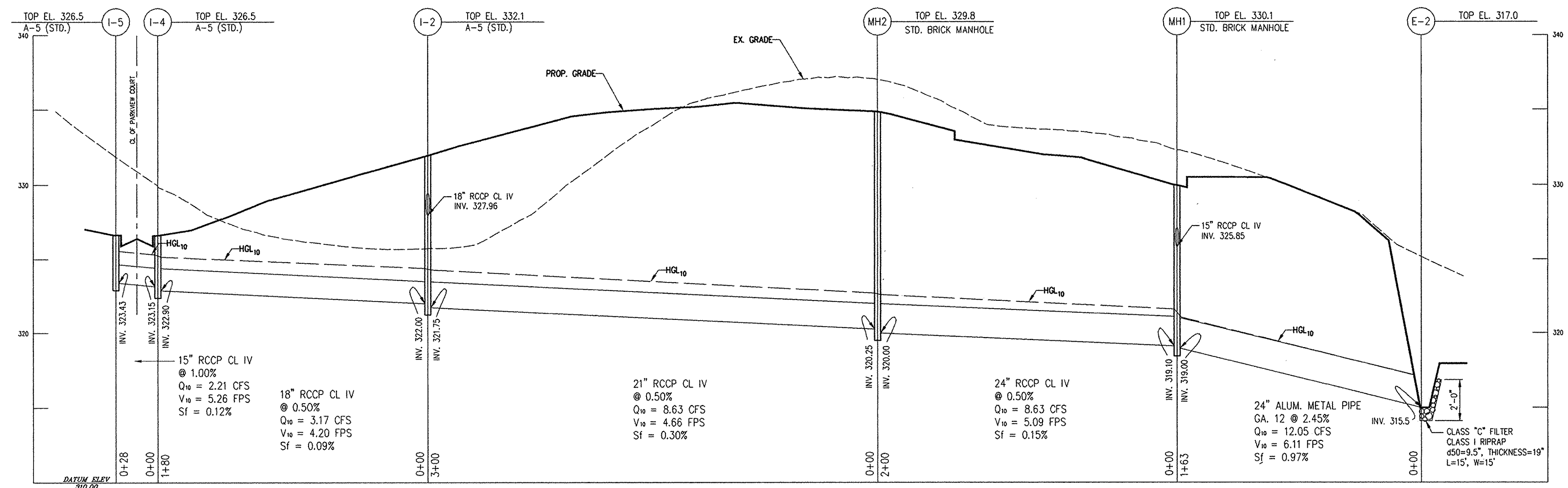


SCALE: 1" = 50' HOR.
1" = 5' VER.

STRUCTURE SCHEDULE						
NUMBER	TYPE	INV. IN	INV. OUT	TOP EL.	REMARKS	LOCATION
I-1	A-5		326.65	330.26	HO. CO. SD.4.02	IP @ CUL-DE-SAC STA 1+29, 5' LT.
I-2 **	A-5	327.96, 322.00	321.75	332.09	HO. CO. SD.4.01	STA 3+30.5, 14' RT.
I-3	A-5	328.75	328.50	332.09	HO. CO. SD.4.11	STA 3+30.5, 14' RT.
I-4	A-5	323.15	322.90	326.36	HO. CO. SD.4.02	STA 1+46.5, 14' RT.
I-5	A-5		323.43	326.36	HO. CO. SD.4.11	STA 1+46.5, 14' RT.
I-6	"0"		330.50	334.40	HO. CO. SD.4.02	STA 3+30.5, 111' LT.
MH1 **	STD.	325.85, 319.10	319.00	330.10	HO. CO. G-5.01	STA 1+09 (LINEAR PROFILE) 9' RT.
MH2	STD.	320.25	329.80	329.80	HO. CO. SD.4.02	STA 6+29.5, 14' RT.
S-1	MOD. A-5	318.0 *		319.08	HO. CO. SD.4.40	N 564083.68, E 1379699.92
E-1	END SECTION		314.00	316.00	HO. CO. SD.4.02	N 564094.98, E 1379752.25
E-2	END SECTION		315.50	317.00	HO. CO. SD.4.02	N 564086.56, E 1379683.47



MODIFIED PRECAST TYPE A-5 INLET
(HO. CO. DETAIL SD.4.40)
NOT TO SCALE



SCALE: 1" = 50' HOR.
1" = 5' VER.

NO.		DATE		REVISION	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING					
Candy Hamilton		5/11/98		DATE	
CHIEF, DIVISION OF LAND DEVELOPMENT					
[Signature]		4/23/98		DATE	
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS					
[Signature]		4-23-98		DATE	
CHIEF, BUREAU OF HIGHWAYS					
PROJECT NAME			ROCKBURN RUN		
F-98-77			LOTS 1-16		
P-97-05			A SUBDIVISION OF PARCEL NO. 51		
S-95-17			FIRST ELECTION DISTRICT TAX MAP #37 GRID/BLOCK # 5		
HOWARD COUNTY, MARYLAND					
TITLE			DEVELOPER: MR. L. RAY RACHUBA		
STORM DRAIN PROFILE			DUCKETTS LANE, J.V.		
PREPARED BY:			946-A MARIMICH CT.		
AMERICAN LAND DEVELOPMENT AND ENGINEERING INC.			ELDERSBURG, MD. 21784		
OWNER:			KATHLEEN M. BOWEN		
9205 FURROW AVENUE			3414 CENTENNIAL LANE		
ELLCOTT CITY, MD. 21042			ELLCOTT CITY, MARYLAND 21042		
TEL. (410) 862-8334			FAX. (410) 461-9135		
DES. : J.H.E.		JOB :		SCALE :	
DRW. : AVG.		PROJ. :		1" = 50'	
CHK. : D.C.W.		DATE : 4-6-98		SHEET 5 OF 7	



MAINTENANCE AND OPERATION SCHEDULE

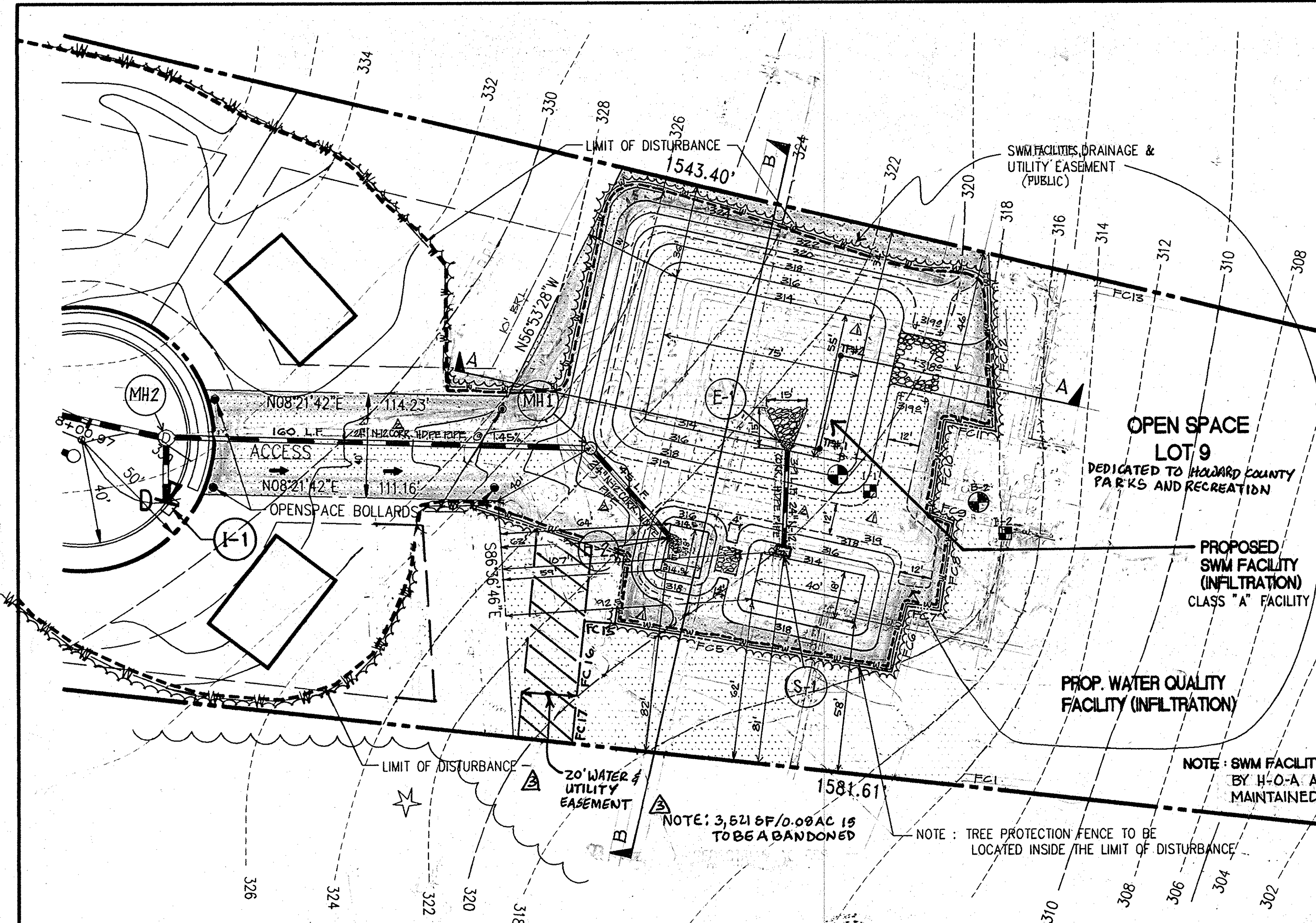
1. Drainage systems must be inspected on a routine basis to ensure that they are functioning properly. Inspection shall be done on a semiannual basis but should always be conducted following major storms, to remove accumulated paper trash and debris. The collection of trash and debris shall be done by the Homeowners Association.
2. The County shall inspect the infiltration basin annually any repair required shall be done by the County and the Home Owners Association.
3. Whenever silt has accumulated more than 4 inches in the forebay, the infiltration basin shall be cleaned of silt deposit. Removal shall be done in accordance with sediment removal in item 5 below.
4. At any time when the forebay does not drain down completely within 96 hour, corrective maintenance will be required which shall jointly be the responsibility of the County and of the Home Owners Association.
5. At least once a year, the infiltration basin shall be tilled to restore the natural infiltration capacity of the basin. Prior to tilling remove sediment. Sediment removal shall only be done when basin floor is completely dry, after the silt layer has mud-cracked and has separated from the basin floor.
6. For nonvegetated basin floor, tilling shall be done with rotary tiller or disc harrows. Light tractors shall be employed for these operations. In the event heavy equipment has caused deeper than normal compaction of the surface, these operations shall be preceded by deep plowing. In its final condition after tilling, the basin floor shall be level, smooth, and free of ridges and furrows to ease future removal of sediment and minimize the material to be removed during the future cleaning operations. A levelling drag, towed behind the equipment on the last pass will accomplish this.
7. Thorough tilling shall be done once each season, from late June to September.
8. To control vegetative growth an additional light tillage is advisable during the growing season. Precaution shall be taken to avoid any sediment accumulation into the basin floor. All tilling operation shall be preceded by careful sediment removal.
9. Vegetation on the top and side slopes shall not be allowed to exceed 18 inches in height at any time. Mowing of the basin's side slopes at least twice a year, one in June and again in September shall be done.
10. After the second year of seeding, refertilize the basin with 10-6-4 ratio fertilizer at a rate of 500 lb. per acre or 11 lb. per 1000 sq. ft.)

LOG OF BORING NO. B-1

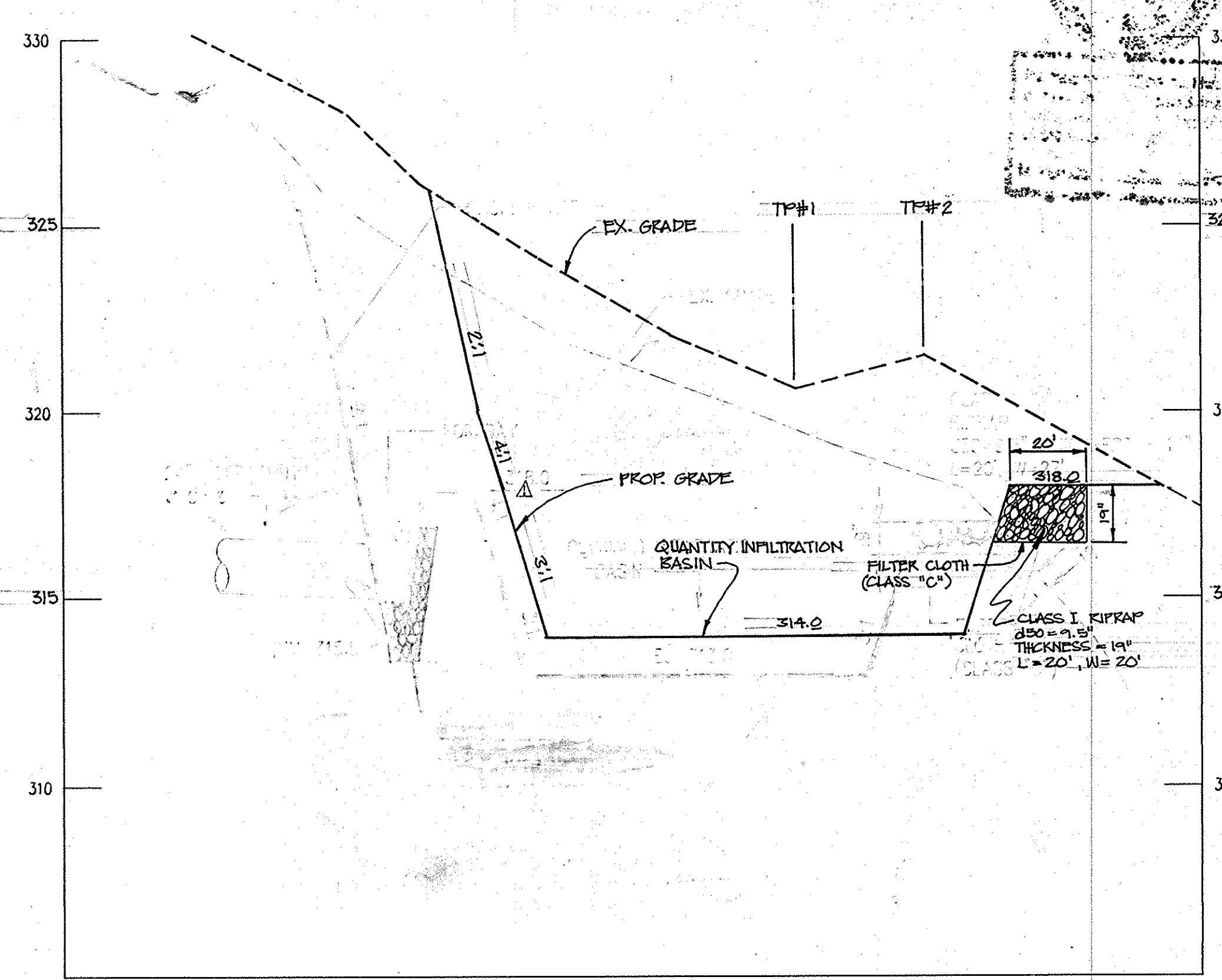
DEPTH (FEET)	SOIL TYPE	REMARKS
0.0	Surface	Top of ground surface
0.5	SS	Lightly silty sand
1.0	SS	Lightly silty sand
1.5	SS	Lightly silty sand
2.0	SS	Lightly silty sand
2.5	SS	Lightly silty sand
3.0	SS	Lightly silty sand
3.5	SS	Lightly silty sand
4.0	SS	Lightly silty sand
4.5	SS	Lightly silty sand
5.0	SS	Lightly silty sand
5.5	SS	Lightly silty sand
6.0	SS	Lightly silty sand
6.5	SS	Lightly silty sand
7.0	SS	Lightly silty sand
7.5	SS	Lightly silty sand
8.0	SS	Lightly silty sand
8.5	SS	Lightly silty sand
9.0	SS	Lightly silty sand
9.5	SS	Lightly silty sand
10.0	SS	Lightly silty sand

LOG OF BORING NO. B-2

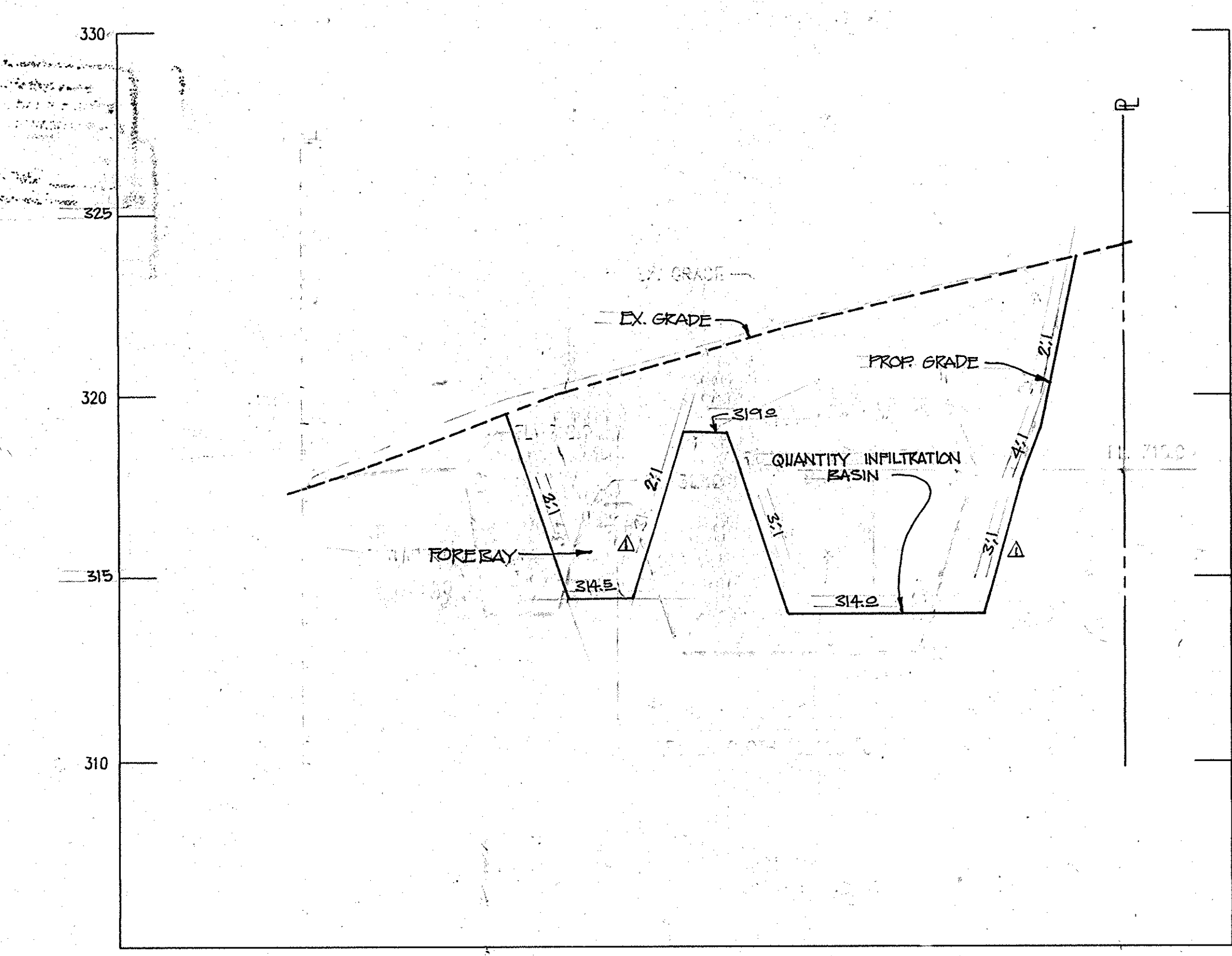
DEPTH (FEET)	SOIL TYPE	REMARKS
0.0	Surface	Top of ground surface
0.5	SS	Lightly silty sand
1.0	SS	Lightly silty sand
1.5	SS	Lightly silty sand
2.0	SS	Lightly silty sand
2.5	SS	Lightly silty sand
3.0	SS	Lightly silty sand
3.5	SS	Lightly silty sand
4.0	SS	Lightly silty sand
4.5	SS	Lightly silty sand
5.0	SS	Lightly silty sand
5.5	SS	Lightly silty sand
6.0	SS	Lightly silty sand
6.5	SS	Lightly silty sand
7.0	SS	Lightly silty sand
7.5	SS	Lightly silty sand
8.0	SS	Lightly silty sand
8.5	SS	Lightly silty sand
9.0	SS	Lightly silty sand
9.5	SS	Lightly silty sand
10.0	SS	Lightly silty sand



STORMWATER MANAGEMENT FACILITY (INFILTRATION)
SCALE: 1" = 30' HOR.



SECTION A-A THROUGH INFILTRATION BASIN
SCALE: 1" = 30' HOR.
1" = 3' VER.



SECTION B-B THROUGH INFILTRATION BASIN
SCALE: 1" = 30' HOR.
1" = 3' VER.

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 21443, Expiration Date: 12-21-16



FOR REVISION BY BENCHMARK ENGINEERING, INC. ONLY

CONSTRUCTION SEQUENCE FOR INFILTRATION BASIN

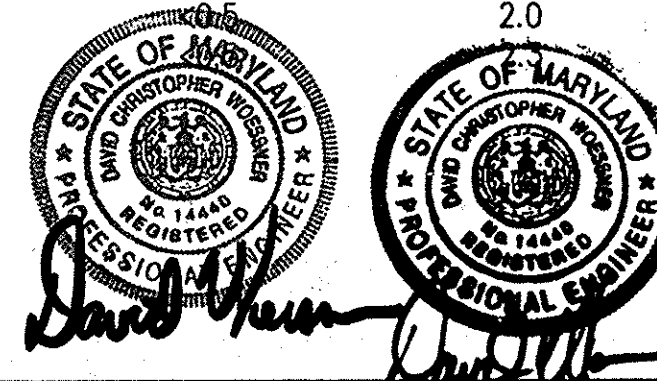
1. The area to be covered by the basin shall be cleared of all trees, brush, logs, rubbish and other objectionable materials.
2. All cleared and grubbed materials shall be disposed of no less than 25 feet within the basin limits as directed by the owner or his authorized representative or hauled off site.
3. The infiltration basin shall be used initially as a sediment trap. The initial trap excavation, therefore, shall be carried to within two (2) feet of the final basin floor or at elevation 315.0 with dimension of sixty-six by ninety feet as shown on the sediment control plans for Sediment Trap 2, Sheet 3 of 7.
4. When the grading or disturbance of all areas draining to Sediment Trap 2 have been completed and the grass permanently established, the final phase excavation shall be carried out, after approval from the sediment control inspector is obtained.
5. All accumulated sediment on the basin shall be removed and the infiltration basin excavated to the final elevation shown on the plan or 314.0 with dimension of seventy-four by ninety-nine feet and side slopes no steeper than 2 horizontal to 1 vertical. (Please see Sheet 6 of 7). Relatively light tracked equipment shall be used for this operation to avoid compaction of basin floor. The material excavated from the basin shall be placed and spread no less than 15 feet from the basin limits with the top sloping away from the basin edge.
6. After the final grading is completed, the basin floor shall be deeply tilled by means of rotary tillers or disc harrows to provide a well-aerated, highly porous surface texture.
7. If desired the infiltration basin shall be lined with a 6- to 12-inch layer of filter material such as coarse sand to help prevent the building of impervious deposits on the soil surface.
8. After the infiltration basin is excavated to the grade specified in the drawings, Sheet 6 of 7, establish dense vegetation on the basin side slopes and floor to prevent erosion and sloughing while providing a natural means of maintaining relatively high infiltration rates. Selection of suitable vegetative materials shall be done in accordance with the Maryland Standard and Specifications for Soil Erosion and Sediment Control.

SUMMARY TABLE

DRAINAGE AREA TO FACILITY - 11.23 ACRES

PEAK DISCHARGE

DESIGN PTS.	2 YR. STORM, CFS	10 YR. STORM, CFS
EXISTING CONDITION		
A	1.5	8.1
B	<0.5	3.3
C	<0.5	2.0
C1	<0.5	1.1
D	1.8	4.8
D1	<0.5	2.1
A+C	1.7	9.1
B+C1+D	2.5	9.2
DEVELOPED CONDITION		
A	1.0	3.2
B (TO POND)	5.8	19.9
POND	0.1	1.7
D	1.1	3.2
POND & D	1.1	4.6
D1	0.5	2.0



DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to these plans, and that all responsible personnel involved in the construction of the project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on site inspection by the Howard Soil Conservation District or their authorized Agent as are necessary.

David W. Hannon 4/7/98
BUILDER/DEVELOPER DATE

ENGINEER'S CERTIFICATE

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

David W. Hannon 4-7-98
SIGNATURE OF ENGINEER DATE

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for the Small Pond Construction, Soil Erosion and Sediment Control.

Cheryl Simmons 4/15/98
U.S. Natural Resources Conservation Service Date

These plans for Small Pond Construction, Soil Erosion and Sediment Control meet the requirements of the Howard County Soil Conservation District.

John R. Roberts 4/15/98
Howard Soil Conservation District Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Andy Hamilton 5/11/95
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

David W. Hannon 4/20/98
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Andrew M. Daugherty 4-23-98
CHIEF, BUREAU OF HIGHWAYS DATE

PROJECT NAME: **ROCKBURN RUN**
LOTS 1-16
F-98-77 A SUBDIVISION OF PARCEL NO. 51
P-97-05 FIRST ELECTION DISTRICT TAX MAP #37 GRID/BLOCK # 5
S-95-17 HOWARD COUNTY, MARYLAND.

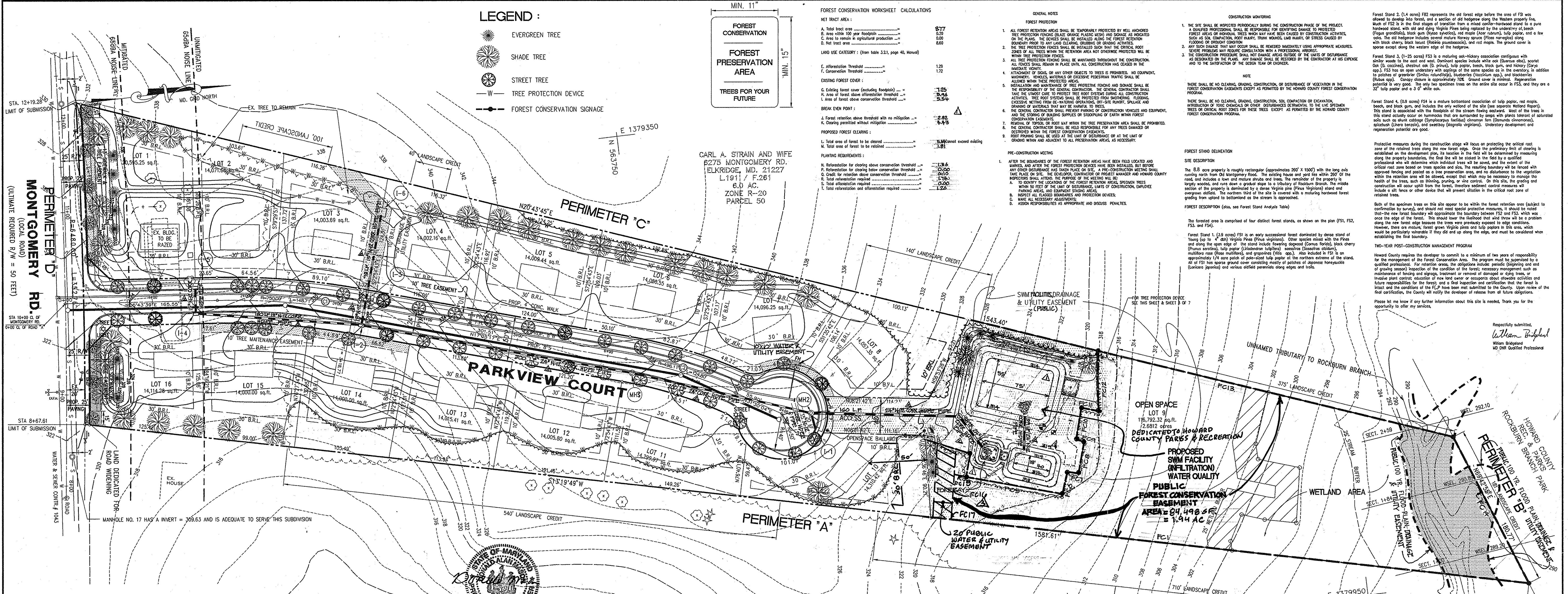
TITLE: **SWM PLAN & DETAIL**

DEVELOPER: MR. L. RAY RACHUBA
DUCKETTS LANE, J.V.
946-A MARCHMONT CT.
ELDERSBURG, MD. 21784

OWNER: KATHLEEN M. BOWEN
3414 CENTENIAL LANE
ELLCOTT CITY, MARYLAND 21042

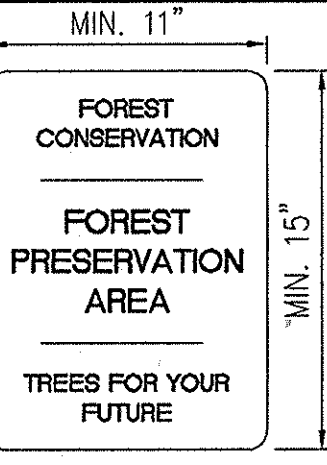
PREPARED BY: AMERICAN LAND DEVELOPMENT AND ENGINEERING, INC.
6306 FURBOW AVENUE
ELLCOTT CITY, MD. 21042
TEL. (410) 986-8504
FAX (410) 941-8135

DES.: J.H.E. JOB:
DRW.: AVG. PROJ.:
CHK.: D.C.W. DATE: 4-6-98 SCALE: AS SHOWN SHEET 6 OF 7



LEGEND :

- EVERGREEN TREE
- SHADE TREE
- STREET TREE
- TREE PROTECTION DEVICE
- FOREST CONSERVATION SIGNAGE



FOREST CONSERVATION WORKSHEET CALCULATIONS

A. Total tree area	877
B. Area within 100 feet footprint	130
C. Area to remain in agricultural production	0.00
D. Net tree area	660
LAND USE CATEGORY: (from table 2.3.1, page 40, Manual)	
E. Afforestation Threshold	1.32
F. Conservation Threshold	1.79
G. Existing forest cover (including footprint)	7.25
H. Area of forest above afforestation threshold	26.94
I. Area of forest above conservation threshold	5.47
BREAK EVEN POINT:	
J. Forest retention above threshold with no mitigation	-2.82
K. Clearing permitted without mitigation	7.47
PROPOSED FOREST CLEARING:	
L. Total area of forest to be cleared	5.88 (cannot exceed existing)
M. Total area of forest to be retained	1.81
PLANTING REQUIREMENTS:	
N. Reforestation for clearing above conservation threshold	12.8
O. Reforestation for clearing above afforestation threshold	20.0
P. Credit for retention above conservation threshold	1.78
Q. Total reforestation required	2.22
R. Total afforestation required	0.20
S. Total reforestation and afforestation required	2.42

FOREST CONSERVATION WORKSHEET CALCULATIONS

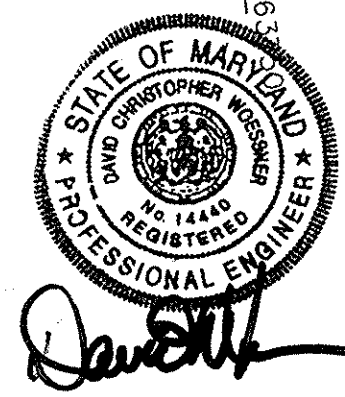
- FOREST CONSERVATION WORKSHEET CALCULATIONS**
1. ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED TREE PROTECTION FENCING (BASE GRADE PLASTIC WEDGE) AND SIGNAGE AS INDICATED ON THE PLAN. THE FENCING SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRADING OR DRIVING ACTIVITIES. THE TREE PROTECTION FENCING SHALL BE INSTALLED SUCH THAT THE CENTRAL ROOT ZONE SHALL REMAIN WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED BY THE TREE PROTECTION FENCING.
 2. THE TREE PROTECTION FENCING SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION. ALL TREES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE RETENTION AREA.
 3. AT THE END OF CONSTRUCTION, THE TREE PROTECTION FENCING SHALL BE REMOVED AND THE TREE PROTECTION FENCING SHALL BE RESTORED TO ITS ORIGINAL CONDITION.
 4. AT THE END OF CONSTRUCTION, THE TREE PROTECTION FENCING SHALL BE RESTORED TO ITS ORIGINAL CONDITION.
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 9. THE TREE PROTECTION FENCING SHALL BE RESTORED TO ITS ORIGINAL CONDITION.
 10. THE TREE PROTECTION FENCING SHALL BE RESTORED TO ITS ORIGINAL CONDITION.

CARL A. STRAIN AND WIFE
8275 MONTGOMERY RD.
ELKBRIDGE, MD. 21227
L1911 / F.261
6.0 AC.
ZONE R-20
PARCEL 50

PLAN
SCALE: 1" = 50'

PAULINE THORNTON
8343 MONTGOMERY RD.
ELKBRIDGE, MD. 21227
L1955 / F.487
PARCEL 52
ZONE R-20

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 212433 Expiration Date: 12-21-16
FOR REVISION BY BENCHMARK ENGINEERING, INC. ONLY.



FCP NOTES :

1. Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
2. Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
3. Limits of disturbance shall be restricted to areas outside the limits of temporary fencing or the FCE boundary, whichever is greater.
4. There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.

FOREST CONSERVATION DESCRIPTIONS

LINE	DIRECTION	DISTANCE
FC1	S 13°19'49" W	634.19'
FC2	N 62°22'21" W	37.43'
FC3	N 68°58'24" E	10.01'
FC4	S 75°30'16" E	26.22'
FC5	N 77°10'03" E	106.19'
FC6	N 69°21'01" W	25.61'
FC7	N 14°40'02" E	12.10'
FC8	N 74°04'03" W	34.95'
FC9	S 25°25'14" W	9.87'
FC10	N 74°00'21" W	24.75'
FC11	N 18°12'28" E	19.24'
FC12	N 25°03'04" W	61.24'
FC13	N 20°43'45" E	400.40'
FC14	N 24°42'55" E	180.71'
FC15	S 11°11'51" W	12.38'
FC16	S 72°48'29" E	37.81'
FC17	S 71°40'29" E	31.22'

SCHEDULE A

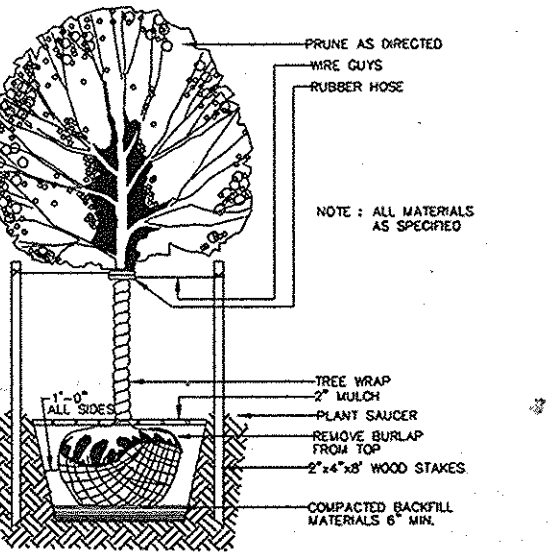
PERIMETER LANDSCAPE TYPES - BASED ON ADJACENT LAND USE

LANDSCAPE EDGE TYPE	LANDSCAPE BUFFER	SHADE TREES PER LINEAR FOOT	EVERGREEN TREES PER LINEAR FOOT	SHRUBS PER LINEAR FOOT
A	LIGHT BUFFER	1:60	0	0
B	MODERATE BUFFER	1:50	1:40	0
C	HEAVY BUFFER	1:40	1:20	0
D	SCREEN	1:60	1:10	0
E	BUFFER - PARKING ADJACENT TO ROADWAY	1:40	0	1:4

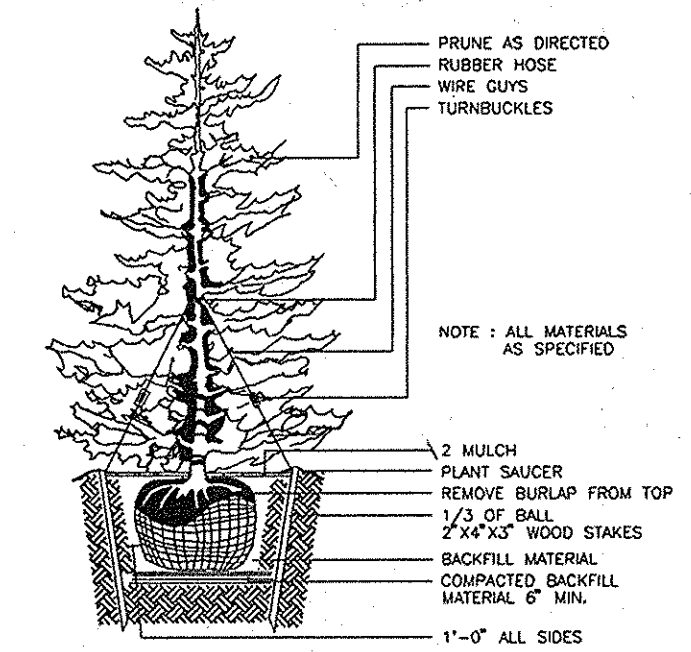
PLANT LIST

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	REMARKS
17		PINUS STROBUS	WHITE PINE	
41		QUERCUS RUBRA	N. RED OAK	
41		ACER RUBRUM	RED MAPLE	

NOTE: ALL SHADE TREES SHALL BE 2-1/2 INCH CALIPER. EVERGREEN TREES SHALL BE 6'-8' IN HEIGHT.



TYPICAL DECIDUOUS TREE PLANTING DETAIL



TYPICAL EVERGREEN TREE PLANTING DETAIL



BLAZE ORANGE PLASTIC MESH TREE PROTECTION DEVICE

NOTE: 3,521.67/0.08 AC OF FOREST CONSERVATION IS TO BE ABANDONED.

NOTES :

1. A PORTION OF THE CONSERVATION OBLIGATION INCURRED BY THIS SUBDIVISION (54,886 S.F. OF REFORESTATION) HAVE BEEN MET BY PAYMENT OF \$16,455.80 TO THE HOWARD COUNTY FOREST CONSERVATION FUND.
2. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF 5,100.00.
3. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

SCHEDULE D

SWM AREA LANDSCAPE

CATEGORY	ADJACENT TO ROADWAYS
LANDSCAPE TYPE	B
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	635
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES, 287' (448)
CREDIT FOR WALL, FENCE OR BEAM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	0
NUMBER OF PLANTS REQUIRED	0
SHADE TREES - 1:50	0
EVERGREEN TREES - 1:40	0
SHRUBS	0
NUMBER OF PLANTS PROVIDED	7
SHADE TREES	0
EVERGREEN TREES	0
OTHER TREES (2:1 SUBSTITUTE) SHRUBS (1:1 SUBSTITUTE) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	7

SCHEDULE A

PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER A	ADJACENT TO PERIMETER B	ADJACENT TO PERIMETER C	ADJACENT TO PERIMETER D
LANDSCAPE TYPE	none	A	A	A	B
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	352'	158'	181'	1543'	300'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	0	1250'	181'	655'	0
CREDIT FOR WALL, FENCE OR BEAM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	0	0	0	0	0
NUMBER OF PLANTS REQUIRED	0	6	0	15	6
SHADE TREES	0	0	0	0	0
EVERGREEN TREES	0	0	0	0	0
SHRUBS	0	0	0	0	0
NUMBER OF PLANTS PROVIDED	0	6	0	15	6
SHADE TREES	0	0	0	0	0
EVERGREEN TREES	0	0	0	0	0
OTHER TREES (2:1 SUBSTITUTE) SHRUBS (1:1 SUBSTITUTE) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	0	6	0	15	6

COMMENTS: WOODS WILL BE PRESERVED ALONG PERIMETER AS SHOWN.

NO.	DATE	REVISION
1	5-18-15	ADD 20' WATER & UTILITY EASEMENT AND ADD F.C. NOTES
2	8-18-16	CHANGE FENCE TYPE TO 1/2" ROUND RIVET FROM 1/2" ROUND RIVET TO 3/4" ROUND RIVET
3	11-18-16	REV. W.P. EASEMENT, REV. MAINT. DRAWING TO 1/2" ROUND RIVET, RELOCATE PERMITS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton, 5/11/16
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Pauline Thornton, 4/23/16
CHIEF, BUREAU OF HIGHWAYS

PROJECT NAME: ROCKBURN RUN
F-98-77
P-97-05
S-95-17

TITLE: FOREST CONSERVATION & LANDSCAPE PLAN

DEVELOPER: MR. L. RAY RACHUBA
DUCKETS LANE, J.V.
946-A MARMICH CT.
ELKBRIDGE, MD. 21784

OWNER: KATHLEEN M. BOWEN
3414 CENTENNIAL LANE
ELLCOTT CITY, MARYLAND 21042

PREPARED BY: AMERICAN LAND DEVELOPMENT AND ENGINEERING INC.
3005 PURDUM AVE
BELLICOTT CITY, MD. 21043
TEL: (410) 992-8205
FAX: (410) 401-9155

DES.: D.C.W. JOB: SCALE: 1" = 50'

DRW.: AVG. PROJ.: DATE: 3-2-98

CHK.: D.C.W. SHEET 7 OF 7