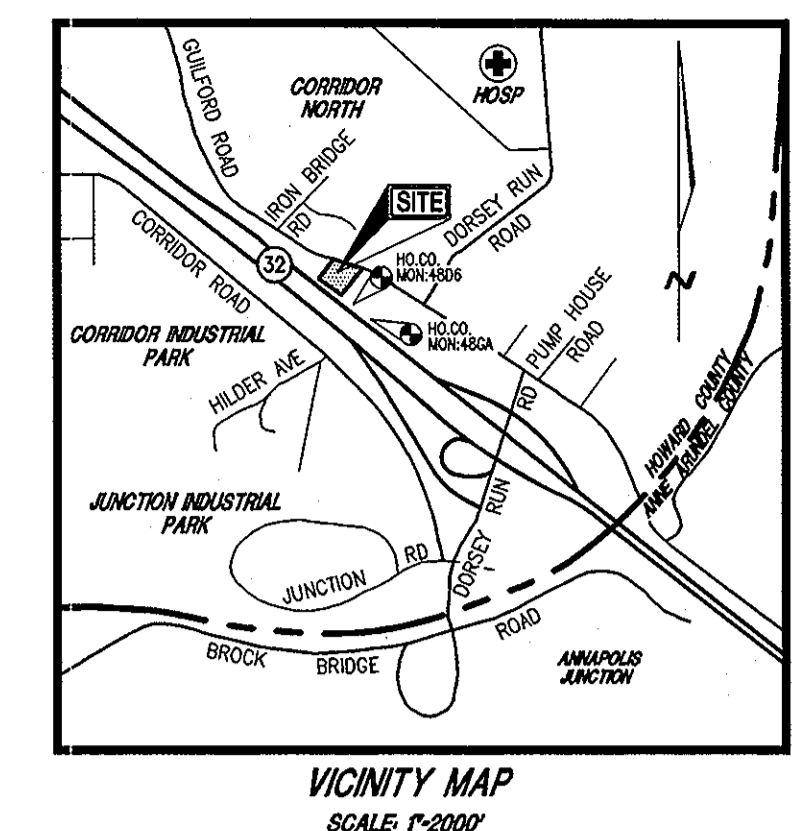


# Bob's BMW MOTORCYCLES

## SITE DEVELOPMENT PLAN



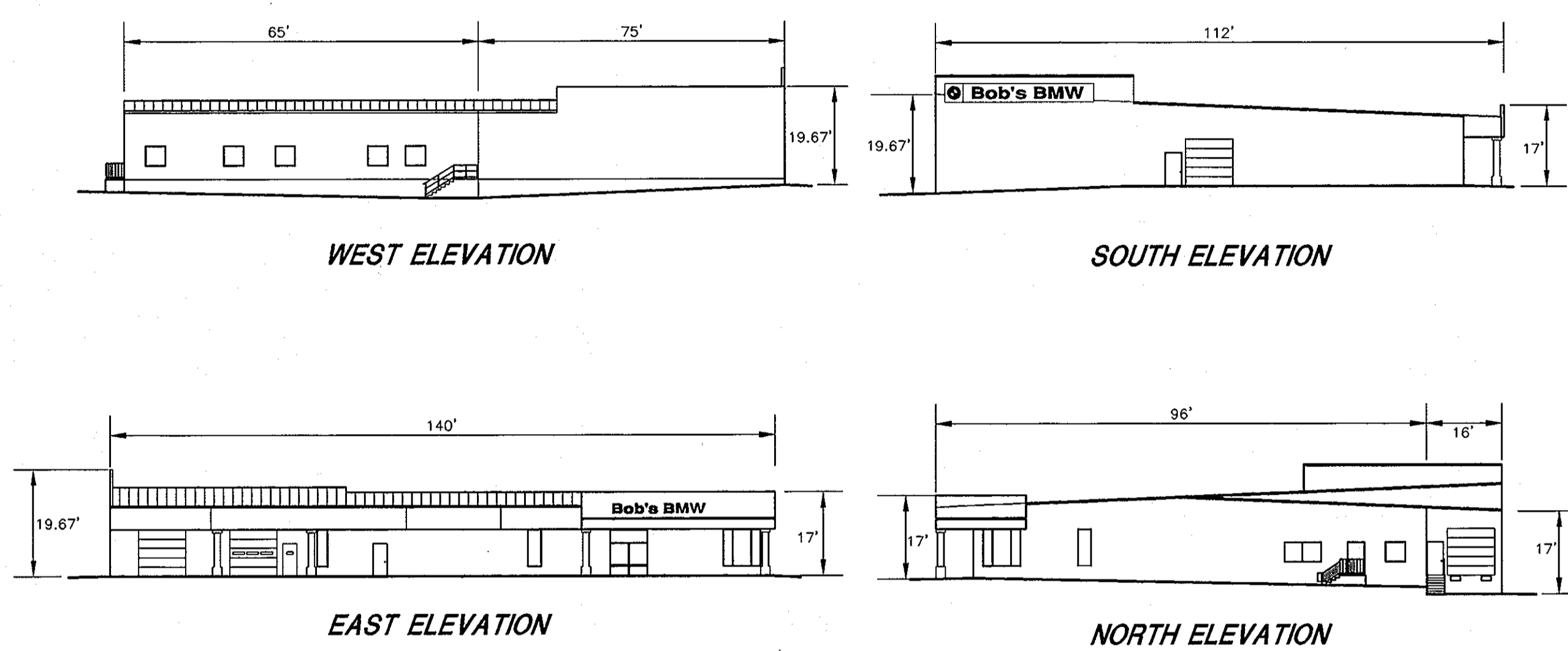
### GENERAL NOTES

- 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 "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
 

MISS UTILITY:	1-800-257-7777
C & P TELEPHONE COMPANY:	725-9976
HOWARD COUNTY BUREAU OF UTILITIES:	313-2366
AT&T CABLE LOCATION DIVISION:	393-3553
B.G.&E. CO. CONTRACTOR SERVICES:	850-4620
B.G.&E. CO. UNDERGROUND DAMAGE CONTROL:	787-4820
STATE HIGHWAY ADMINISTRATION:	531-5533
- SITE ANALYSIS:
  - AREA OF PARCEL = 2.21 AC
  - PRESENT ZONING: M-2
  - USE OF STRUCTURE: MOTORCYCLE SALES AND SERVICE
  - BUILDING AREA: 14,840 SQ.FT.
- PROJECT BACKGROUND:
  - MAXIMUM NUMBER OF EMPLOYEES: 20
  - BUILDING COVERAGE ON SITE: 0.34 AC OR 0.16% OF GROSS AREA
  - PAVED PARKING LOT/AREA ON SITE: 0.56 AC OR 25% OF GROSS AREA
  - AREA OF LANDSCAPE ISLAND: 0.014 AC = 600 SQ.FT.
- LOCATION: GUILFORD, MARYLAND TAX MAP: 48 PARCELS: 103 & 26  
ZONING: M-2  
SECTION/AREA: N/A  
SITE AREA: 2.21 AC  
DPZ REFERENCES: ADMINISTRATIVE VARIANCE # A.A. 97-12 & F-98-78
- 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 START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3,500 P.S.I.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES.
- SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOILS TEST.
- ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11-4 VOLUME I OF HOWARD COUNTY DESIGN MANUAL.
- COORDINATES AND ELEVATIONS ARE BASED ON HOWARD COUNTY MONUMENTS 48D6 AND 48CA (NAD 83)
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- EXISTING TOPOGRAPHY IS FROM A TOPOGRAPHIC SURVEY PERFORMED BY MARKS AND VOGEL ASSOCIATES, INC. IN FEB 1997.
- ALL PAVING TO BE MINIMUM LIGHT DUTY PAVING UNLESS OTHERWISE NOTED (SEE DETAIL SHEET 2)
- ALL CURB AND GUTTER TO BE HOWARD COUNTY STANDARD CONCRETE OR BITUMINOUS (SEE DETAIL SHEET 2), UNLESS OTHERWISE SPECIFIED.
- CONTRACTOR RESPONSIBLE TO CONSTRUCT ALL HANDICAP PARKING AND HANDICAP ACCESS ROUTES IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
- WHERE DRAINAGE FLOWS AWAY FROM CURB, CONTRACTOR TO REVERSE THE GUTTER PAN.
- PUBLIC WATER AVAILABLE ALONG GUILFORD ROAD (12" WATER) CONTRACT NO. 24-1358-D.
- PUBLIC SEWER AVAILABLE ALONG GUILFORD ROAD (8" SEWER) CONTRACT NO. 652-W
- PER ADMINISTRATIVE ADJUSTMENT CASE NO. 97-12 (APPROVED AUGUST 1997) THE CONTRACT PURCHASER IS GRANTED A REDUCTION TO THE REQUIRED STRUCTURE AND USE SETBACKS FROM AN EXTERNAL PUBLIC STREET RIGHT-OF-WAY FROM 50 FEET TO 40 FEET FOR A BUILDING, AND FROM 30 FEET TO 24 FEET FOR A PARKING LOT.
- HOWARD COUNTY HEALTH DEPARTMENT TO BE CONTACTED FOR ABANDONMENT PROCESS IF WELL AND OR SEPTIC SYSTEM IS ENCOUNTERED.
- THERE ARE NO WETLANDS LOCATED ON SITE IN ACCORDANCE WITH FIELD INVESTIGATION PERFORMED BY THE EXPLORATION RESEARCH, INC. DATED SEPTEMBER 22, 1997
- STORMWATER MANAGEMENT POND IS PRIVATE. WATER QUALITY PROVIDED BY EXTENDED DETENTION OF THE 1-YEAR STORM QUANTITY CONTROL OF THE 2, 10, AND 25 YEAR STORMS. POND IS HAZARD CLASSIFICATION TYPE 'A'.
- ALL EXTERIOR LIGHTING SHALL CONFORM TO ZONING REGULATIONS SECTION 134.

### SHEET INDEX

SHT. NO.	DESCRIPTION
1	COVER
2	SITE LAYOUT
3	GRADING, SEDIMENT & EROSION CONTROL
4	PROFILES & DETAILS
5	DRAINAGE AREA & SOILS MAP
6	LANDSCAPE PLAN
7	SWM NOTES AND DETAILS
8	NOTES & DETAILS



### BUILDING ELEVATIONS

NOT TO SCALE

ADDRESS CHART	
PARCEL	STREET ADDRESS
103 & 26	10720 GUILFORD ROAD

### OPERATION AND MAINTENANCE SCHEDULE FOR STORMWATER MANAGEMENT DETENTION FACILITY

- STORMWATER MANAGEMENT FACILITY ROUTINE MAINTENANCE
- FACILITY WILL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO BE DETERMINE IT IS FUNCTIONING PROPERLY.
  - TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHOULD BE MOWED AS NEEDED.
  - DEBRIS AND LITTER NEXT TO THE OUTLET STRUCTURE SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
  - VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS RIPRAP OUTLET AREAS SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
- STORMWATER MANAGEMENT FACILITY NON-ROUTINE MAINTENANCE
- STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
  - SEDIMENT SHOULD BE REMOVED WHEN ITS ACCUMULATION SIGNIFICANTLY REDUCES THE DESIGN STORAGE. INTERFERENCE WITH THE FUNCTION OF THE RISER, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, OR WHEN DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

### "AS-BUILT" CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS APPROVED PLANS AND SPECIFICATIONS.

ROBERT H. VOGEL, P.E. NO. 16193

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING ACCEPTED INDUSTRY PRACTICES.

### PARKING TABULATION (ZONED M-2)

	REQUIRED	PROPOSED
VEHICLE SALES & ANCILLARY USES; 11,280 SqFt	23 SPACES	30 SPACES
2 SPACES/1,000 SqFt	15 SPACES	15 SPACES
VEHICLE SERVICE; 5 BAYS= 3 SPACES PER BAY	38 SPACES	45 SPACES
TOTAL SPACES REQUIRED (BY USE)	76 SPACES	90 SPACES
HANDICAP SPACES	2 SPACES	2 SPACES
TOTAL SPACES	78 SPACES	92 SPACES

### OWNER

H.H.H. ENTERPRISES L.L.C.  
ROBERT HEING, (MEMBER)  
9533 WHITE SPRING WAY  
COLUMBIA, MD. 21046  
TELE: (410) 490-0258



REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE: 6/1/98  
 THESE PLANS FOR SMALL POND CONSTRUCTION SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 HOWARD SCD DATE: 6/1/98

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

6/2/98 DATE  
 DIRECTOR  
 6/1/98 DATE  
 CHIEF, LAND DEVELOPMENT  
 5/20/98 DATE  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

PERMIT INFORMATION CHART					
SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER			
BOB'S BMW MOTORCYCLES	N/A	103 & 26			
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
1318B	13	M-2	48	6	6064
WATER CODE		SEWER CODE			
B-02		4150000			

NO.	REVISION	DATE

### Bob's BMW MOTORCYCLES

#### SITE DEVELOPMENT PLAN

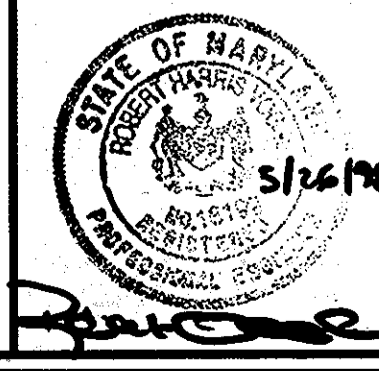
#### COVER SHEET

TAX MAP #48 REFERENCE: AA# 97-12 & SDP-98-78  
 PARCELS 103 & 26 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

### MARKS & VOGEL ASSOCIATES, INC.

ENGINEERS - SURVEYORS - PLANNERS

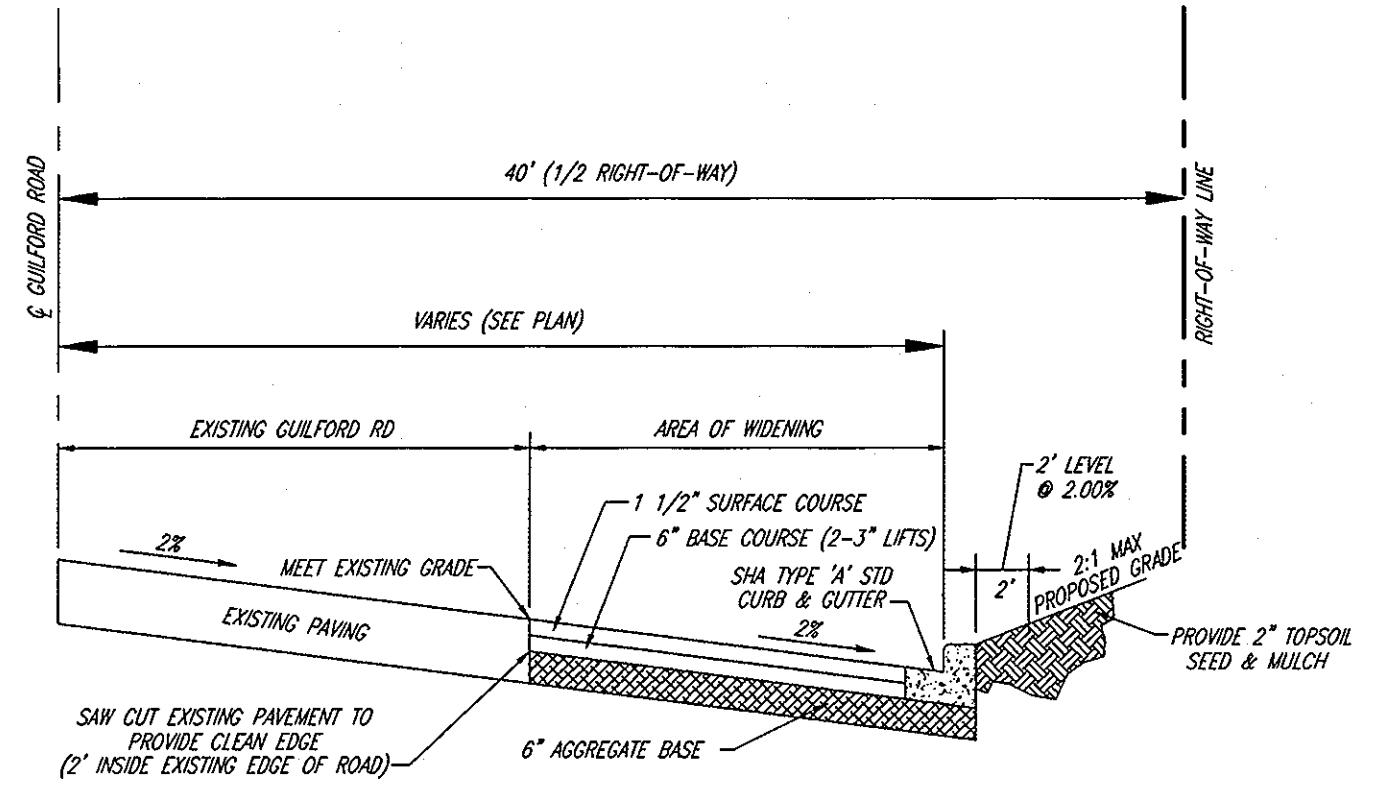
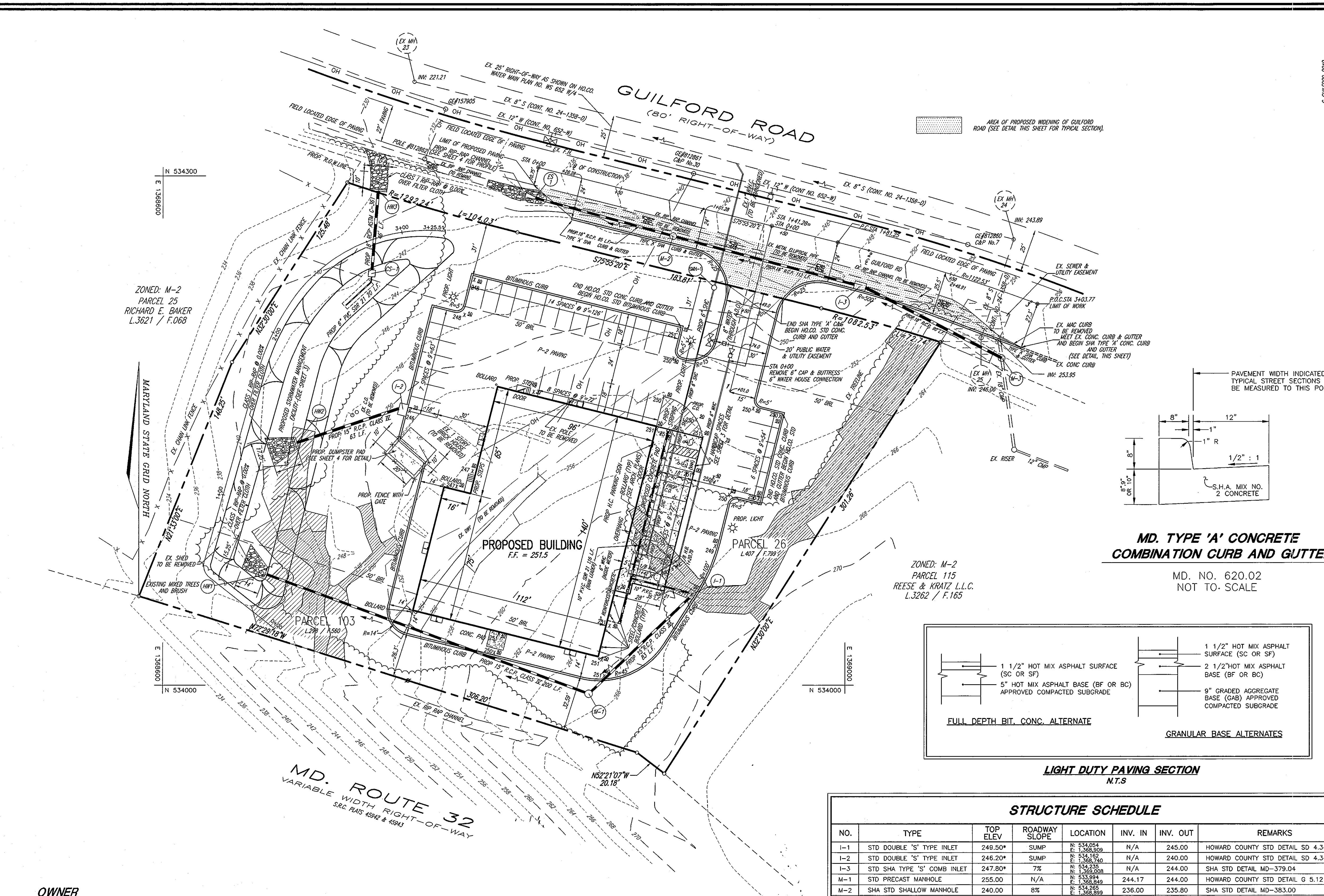
3691 PARK AVENUE, SUITE 101 ELLICOTT CITY, MARYLAND 21043 TELEPHONE: (410) 461-5828 FAX: (410) 465-3968



DESIGN BY: M.D.M.  
 DRAWN BY: M.D.M.  
 CHECKED BY: R.H.V.  
 DATE: JAN, 1998  
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 W.O. NO.: 96-59

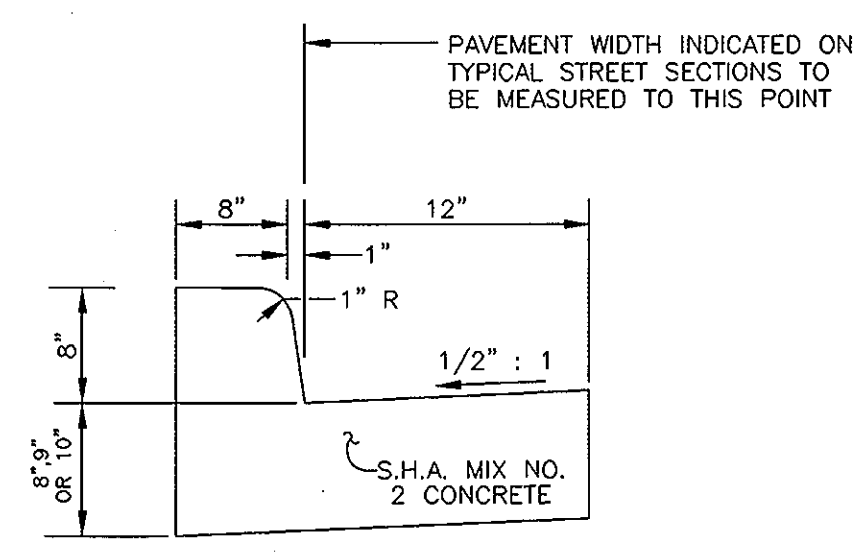
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PARCEL 25  
RICHARD E. BAKER  
L.3621 / F.068

ZONED: M-2  
PARCEL 115  
REESE & KRATZ L.L.C.  
L.3262 / F.165



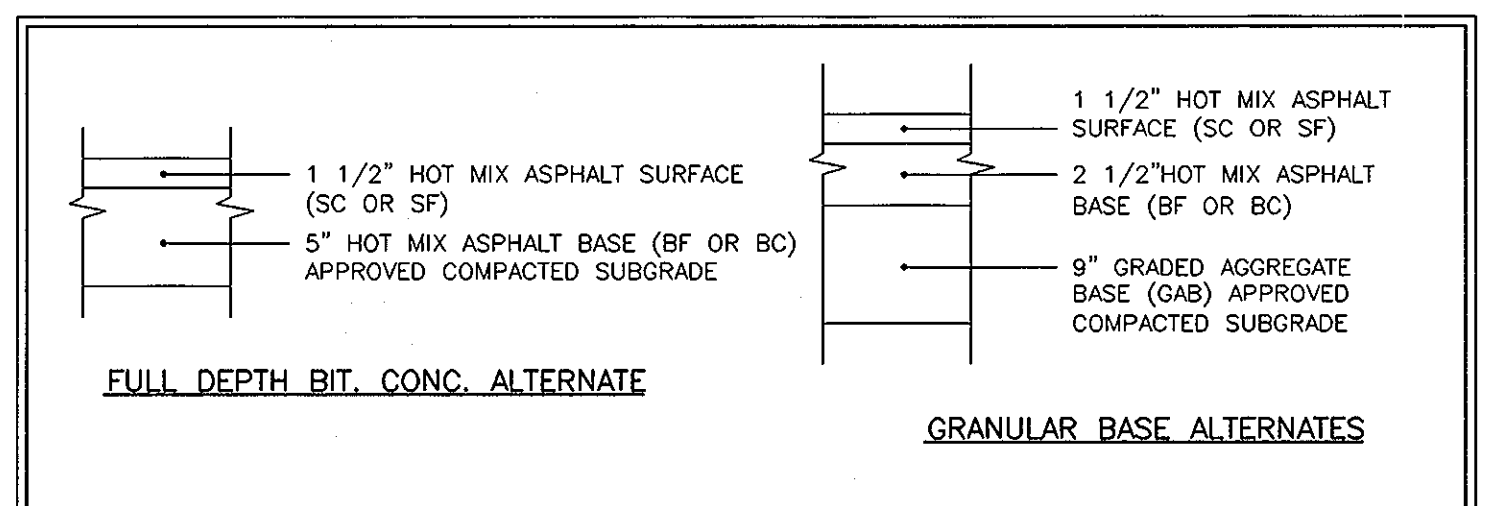
NOTE: CONTRACTOR TO PROVIDE CERTIFICATION TO AASHTO STANDARD MP 1-93, TABLE 1 FOR PERFORMANCE GRADE ASPHALT BINDER (PG 64-22).

TYPICAL SECTION OF PROPOSED WIDENING  
GUILFORD ROAD  
NOT TO SCALE

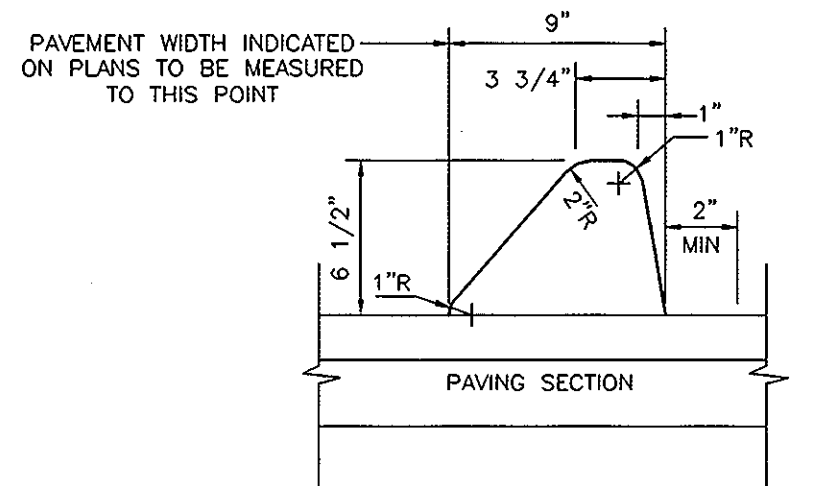


MD. TYPE 'A' CONCRETE  
COMBINATION CURB AND GUTTER  
NOT TO SCALE

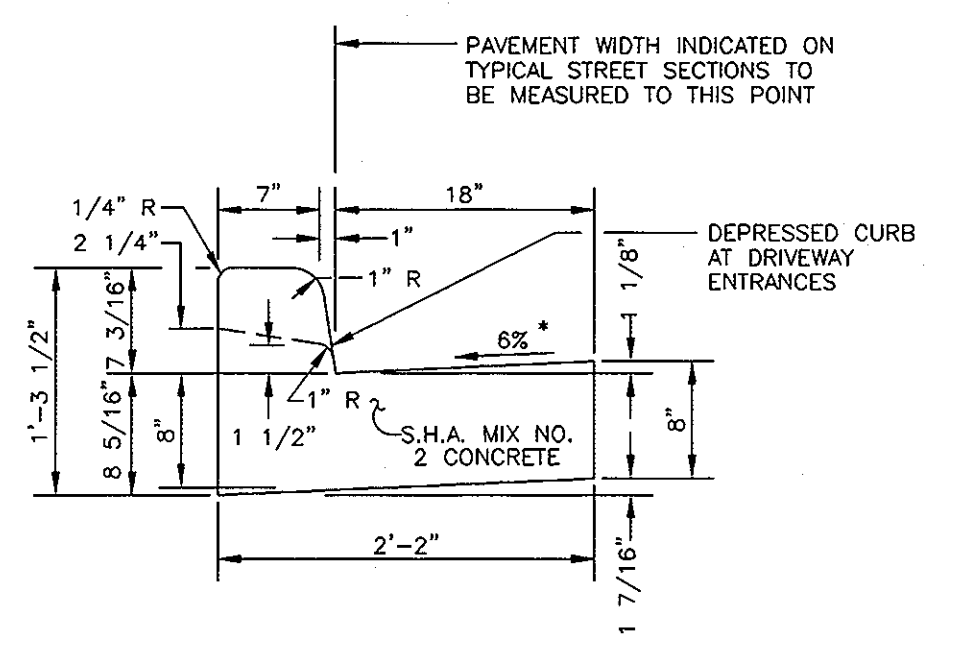
MD. NO. 620.02  
NOT TO SCALE



LIGHT DUTY PAVING SECTION  
N.T.S.



STANDARD BITUMINOUS CURB  
HOWARD COUNTY STANDARD R-3.03  
NOT TO SCALE



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

OWNER  
H.H.H. ENTERPRISES L.L.C.  
ROBERT HENIG, (MEMBER)  
9533 WHITE SPRING WAY  
COLUMBIA, MD. 21046  
TELE: (410) 490-0258

- LEGEND**
- 484 — EXISTING CONTOUR
  - - - 484 - - - PROPOSED CONTOUR
  - ▨ P-2 PAVING (SEE THIS SHEET FOR DETAIL)
  - ☼ PROPOSED DOUBLE HEAD 400 WATT METAL HALIDE FIXTURES ON 25 FT POLE MOUNTED ON SCREW IN BASE.
  - PROPOSED 70 WATT METAL HALIDE CANOPY LIGHT @ 10'
  - ▨ 15 TO 24.9% SLOPES
  - ▨ 25% OR GREATER SLOPES
  - PROPOSED STORM DRAIN
  - ▨ PROPOSED CONCRETE

NOTE: ALL HOLO. STD CONCRETE CURB AND GUTTER TO BE IN CONFORMANCE WITH HOWARD COUNTY STD R-3.01.  
ALL BITUMINOUS CURB TO BE IN CONFORMANCE WITH HOWARD COUNTY STD R-3.03.

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.  
USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE  
THESE PLANS FOR SMALL POND CONSTRUCTION SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
HOWARD SCD DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
DIRECTOR DATE  
CHIEF, LAND DEVELOPMENT DATE  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

STRUCTURE SCHEDULE							
NO.	TYPE	TOP ELEV.	ROADWAY SLOPE	LOCATION	INV. IN	INV. OUT	REMARKS
I-1	STD DOUBLE 'S' TYPE INLET	249.50*	SUMP	N 534,054 E 1,368,809	N/A	245.00	HOWARD COUNTY STD DETAIL SD 4.34
I-2	STD DOUBLE 'S' TYPE INLET	246.20*	SUMP	N 534,192 E 1,368,740	N/A	240.00	HOWARD COUNTY STD DETAIL SD 4.34
I-3	STD SHA TYPE 'S' COMB INLET	247.80**	7%	N 534,255 E 1,369,008	N/A	244.00	SHA STD DETAIL MD-379.04
M-1	STD PRECAST MANHOLE	255.00	N/A	N 533,994 E 1,368,849	N/A	244.17	HOWARD COUNTY STD DETAIL G 5.12
M-2	SHA STD SHALLOW MANHOLE	240.00	8%	N 534,265 E 1,368,859	N/A	235.80	SHA STD DETAIL MD-383.00
M-3	SHA STD SHALLOW MANHOLE	258.00	N/A	N 534,193 E 1,369,092	254.2	254.00	SHA STD DETAIL MD-383.00
HW-1	TYPE 'E' HEADWALL (CIR. PIPE)	N/A	N/A	N 534,065 E 1,369,690	N/A	235.00	HOWARD COUNTY STD DETAIL SD 5.31
HW-2	TYPE 'C' ENDWALL	N/A	N/A	N 534,157 E 1,369,099	N/A	235.00	HOWARD COUNTY STD DETAIL SD 5.21
HW-3	TYPE 'C' ENDWALL	N/A	N/A	N 534,281 E 1,368,725	N/A	234.11	HOWARD COUNTY STD DETAIL SD 5.21
ES-1	SHA 18" STD CONC END SECTION	235.00	N/A	N 534,281 E 1,368,818	N/A	233.50	SHA STD DETAIL MD-368.01
GS-1	STORMWATER MANAGEMENT RISER	242.00**	N/A	N 534,242 E 1,368,721	SEE DETAIL	234.80	SEE DETAIL SHEET 7
SMH-1	STD SEWER MANHOLE	245.33	N/A	N 534,234 E 1,368,823	N/A	241.70	SHA STD DETAIL MD-368.01

\* TOP OF GRATE / \*\* TOP OF RISER

NO.	REVISION	DATE

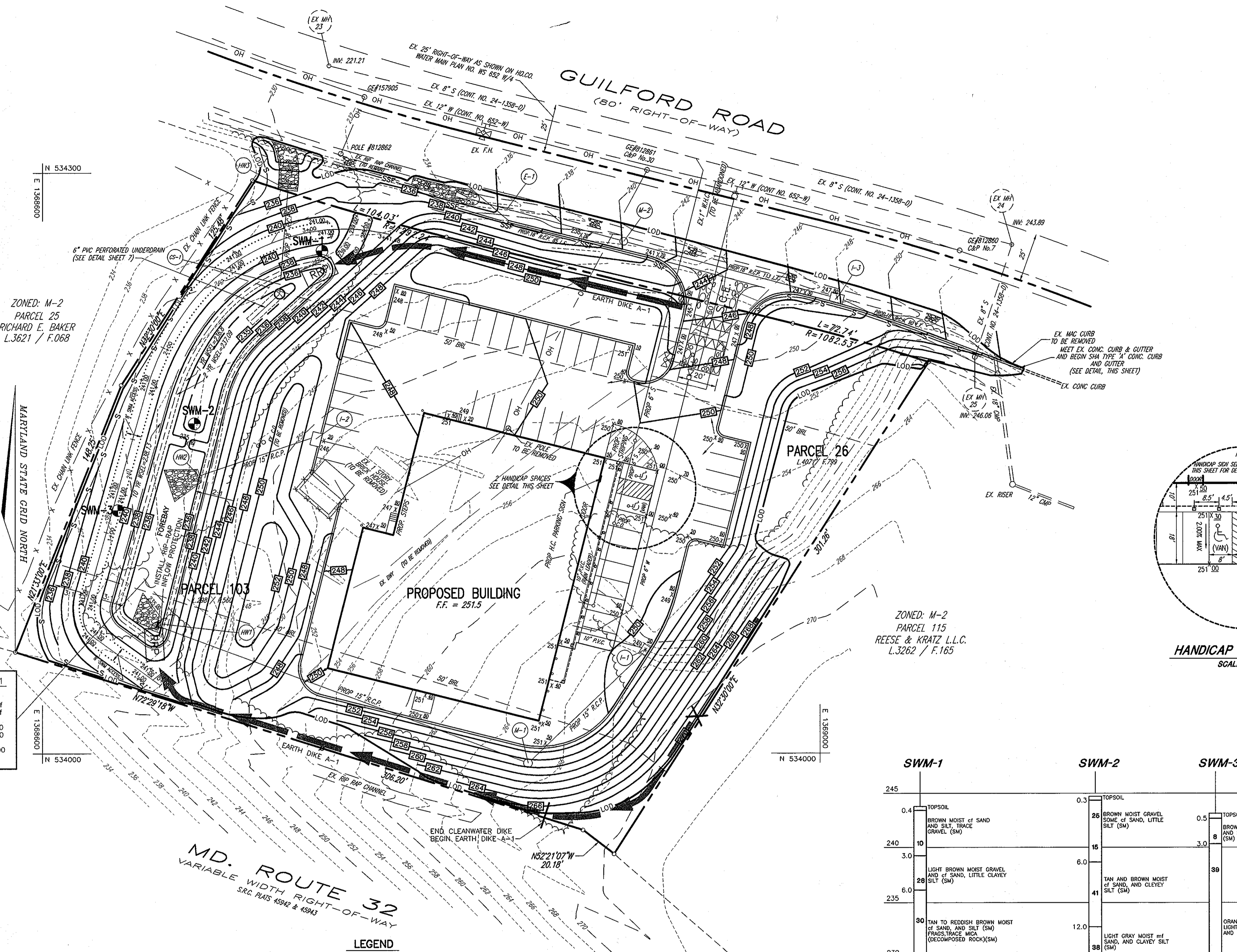
**Bob's BMW MOTORCYCLES**  
SITE DEVELOPMENT PLAN  
SITE LAYOUT  
TAX MAP #48 REFERENCE: AA# 97-12 & SDP-98-78  
PARCELS 103 & 26 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**MARKS & VOGEL ASSOCIATES, INC.**  
ENGINEERS - SURVEYORS - PLANNERS  
3691 PARK AVENUE, SUITE 101  
ELLICOTT CITY, MARYLAND 21043  
TELEPHONE: (410) 461-5828  
FAX: (410) 465-3968

DESIGN BY: M.D.M.  
DRAWN BY: M.D.M.  
CHECKED BY: R.H.V.  
DATE: JAN, 1998  
SCALE: 1"=30'  
W.O. NO.: 96-59

2 SHEET OF 8

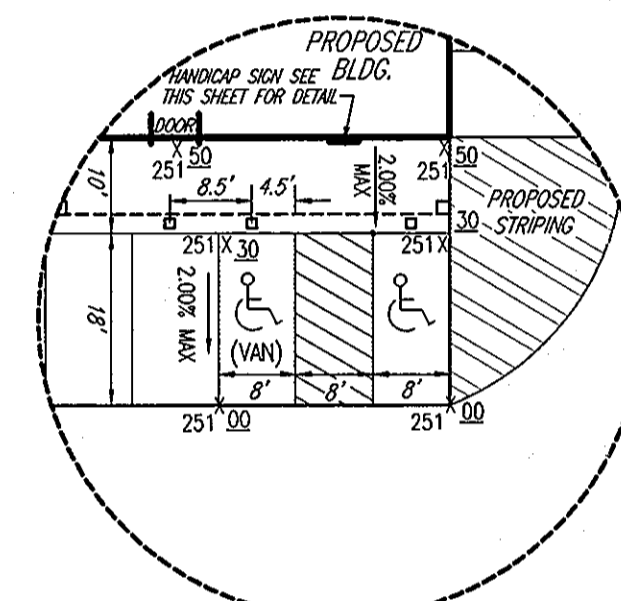
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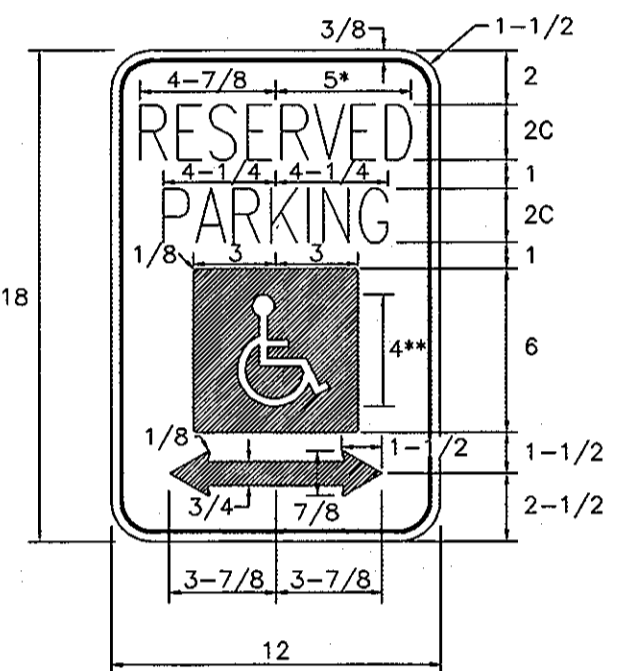
SEQUENCE OF CONSTRUCTION	DURATION
1. OBTAIN GRADING PERMIT	3 DAYS
2. NOTIFY HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENCES, AND PERMITS (313-1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK	1 DAY
3. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE	1 DAY
4. INSTALL SILT FENCE AND CLEANWATER DIKES	3 DAYS
5. BEGIN CLEARING AND GRADING OF SWMF / SEDIMENT BASIN	1 WEEK
6. INSTALL EARTH DIKES AND SLOPE PROTECTION INTO BASIN	3 DAYS
7. BEGIN SITE CLEARING AND GRADING AND REMOVE EXISTING STRUCTURES	4 DAYS
8. INSTALL WATER, SEWER AND STORMDRAIN SYSTEM	1 WEEK
9. FINE GRADE SITE AND CONSTRUCT BUILDING	3 MONTHS
10. DURING BUILDING CONSTRUCTION, INSTALL CURB & GUTTER, PAVING AND SIDEWALKS	1 WEEK
11. STABILIZE ANY DISTURBED AREAS AND INSTALL LANDSCAPING	1 WEEK
12. WITH BUILDING CONSTRUCTION AND PAVING COMPLETE, FLUSH STORMDRAIN SYSTEM AND CONVERT SEDIMENT BASIN TO FINAL STORM WATER MANAGEMENT FACILITIES. REMOVE TEMPORARY DEWATERING DEVICE AND REPLACE WITH PERMANENT EXTENDED DETENTION UNDERDRAIN.	4 DAYS
13. DURING GRADING AND AFTER EACH RAINFALL, THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROL MEASURES SHOWN HEREON.	
14. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:	
A. 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.	
B. 14 CALENDAR DAYS FOR ALL OTHER DISTURBED AREAS.	
15. UPON STABILIZATION OF ALL DISTURBED AREAS AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL STRUCTURES.	1 DAY

ZONED: M-2  
PARCEL 25  
RICHARD E. BAKER  
L.3621 / F.068

ZONED: M-2  
PARCEL 115  
REESE & KRATZ L.L.C.  
L.3262 / F.165



HANDICAP RAMP DETAIL  
SCALE 1"=20'



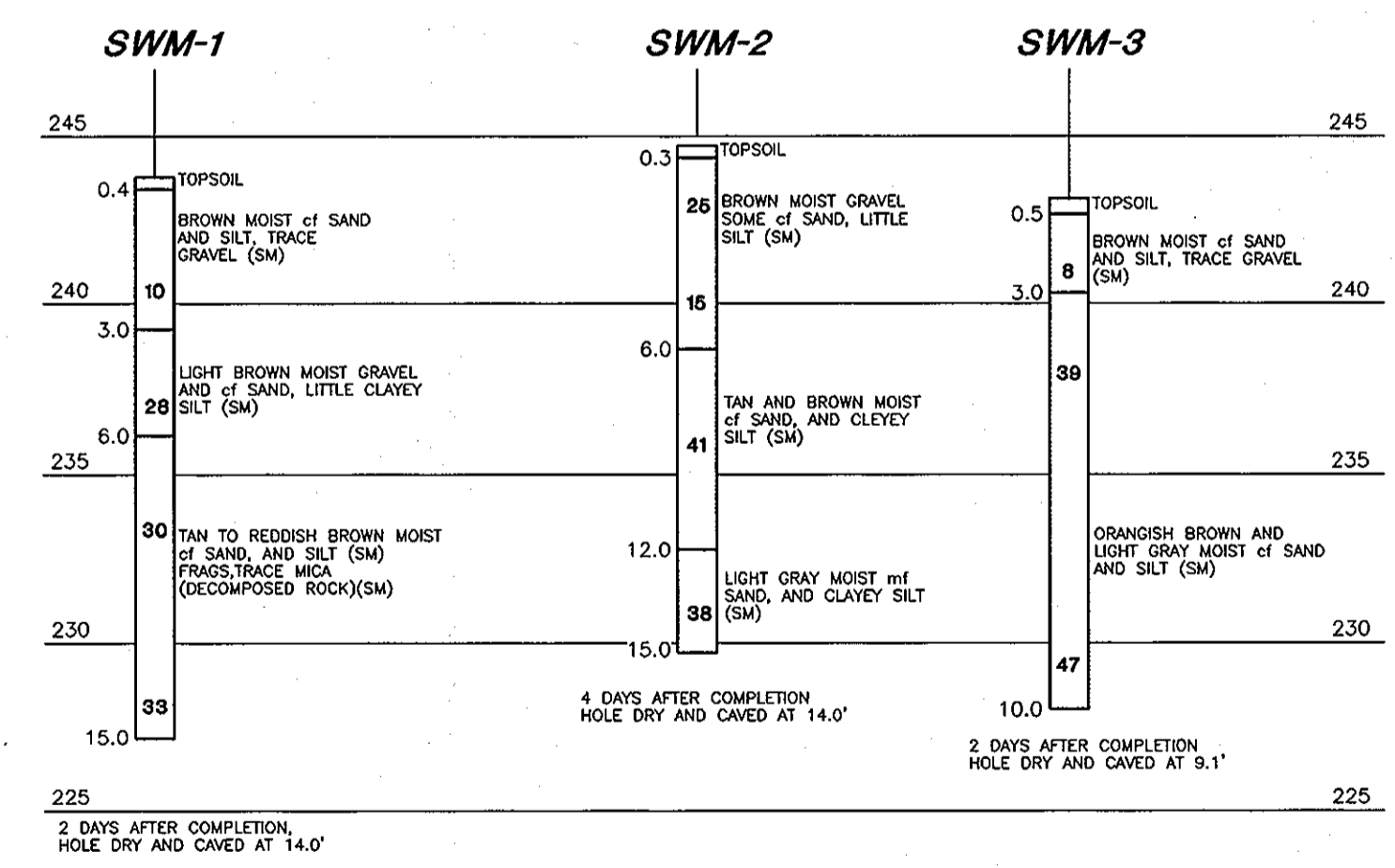
\* REDUCE SPACING 50%  
\*\* SEE SYMBOL 1860 FOR SYMBOL DESIGN (ALL DIMENSIONS FOR SIGN IN INCHES)

COLORS:  
LEGEND AND BORDER - GREEN  
WHITE SYMBOL ON BLUE BACKGROUND  
BACKGROUND - WHITE

REFERENCE: STATE OF MARYLAND STANDARD HIGHWAY SIGNS BOOKLET MARYLAND DEPARTMENT OF TRANSPORTATION.

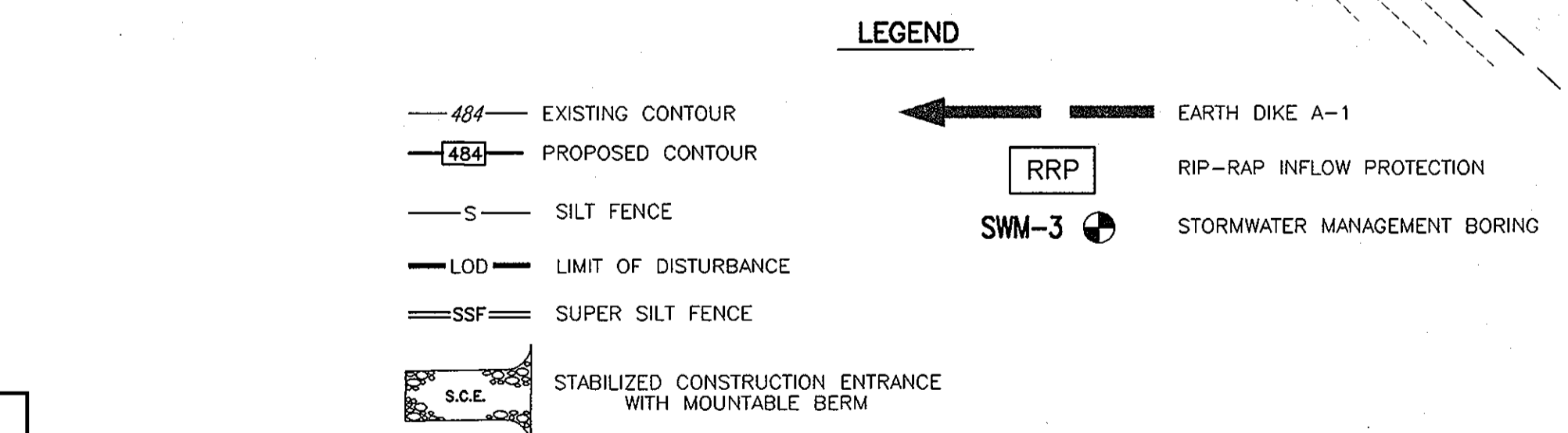
HANDICAP SIGN  
NOT TO SCALE

SEDIMENT BASIN NO. 1  
DRAINAGE AREA: 1.9 AC  
STORAGE REQUIRED: 6840 CF  
STORAGE PROVIDED: 6840 CF  
WEIR ELEV.: 238.00  
STORAGE ELEV. (WET) 236.70  
STORAGE ELEV. (DRY) 237.50  
BOTTOM ELEV.: 235.00  
TOP OF EMBANKMENT: 242.00  
CLEANOUT ELEV.: 236.40



S.W.M. BORING PROFILES  
NOT TO SCALE

OWNER  
H.H.H. ENTERPRISES L.L.C.  
ROBERT HENIS, (MEMBER)  
9533 WHITE SPRING WAY  
COLUMBIA, MD. 21046  
TELE: (410) 490-0258



ENGINEER'S CERTIFICATE  
"I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Signature: Robert H. Vogels  
Date: 5/26/98

DEVELOPER'S CERTIFICATE  
"I, THE DEVELOPER, CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Signature: [Signature]  
Date: 5/26/98

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Signature: Cheryl Simmons  
Date: 6/1/98  
USDA-NATURAL RESOURCES CONSERVATION SERVICE

Signature: Robert W. Ziehm  
Date: 6/1/98  
HOWARD SCD

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: [Signature]  
Date: 6/2/98  
DIRECTOR

Signature: [Signature]  
Date: 6/2/98  
CHIEF, LAND DEVELOPMENT

Signature: [Signature]  
Date: 5/20/98  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

PERMIT INFORMATION CHART					
SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER			
BOB'S BMW MOTORCYCLES	N/A	103 & 26			
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
131EB	13	M-2	48	6	6064
WATER CODE	B-02		SEWER CODE 4150000		

NO.	REVISION	DATE

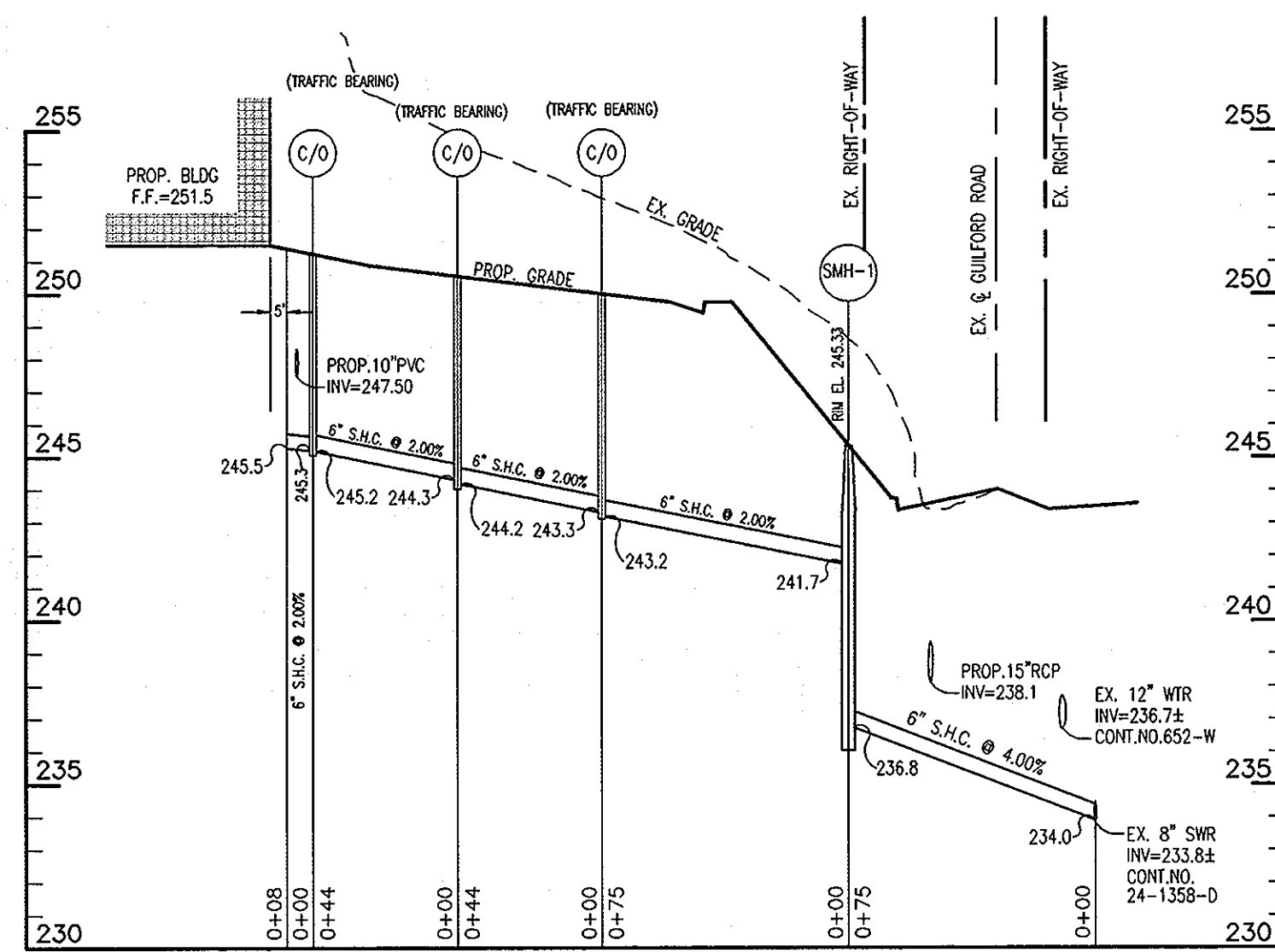
Bob's BMW MOTORCYCLES  
SITE DEVELOPMENT PLAN  
GRADING, SEDIMENT & EROSION CONTROL  
TAX MAP #48 REFERENCE: AA# 97-12 & SDP-98-78  
PARCELS 103 & 26 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

MARKS & VOGEL ASSOCIATES, INC.  
ENGINEERS - SURVEYORS - PLANNERS  
3691 PARK AVENUE, SUITE 101 ELLICOTT CITY, MARYLAND 21043  
TELEPHONE: (410) 461-5828 FAX: (410) 465-3986

DESIGN BY: M.D.M.  
DRAWN BY: M.D.M.  
CHECKED BY: R.H.V.  
DATE: JAN, 1998  
SCALE: 1"=30'  
W.O. NO.: 96-59

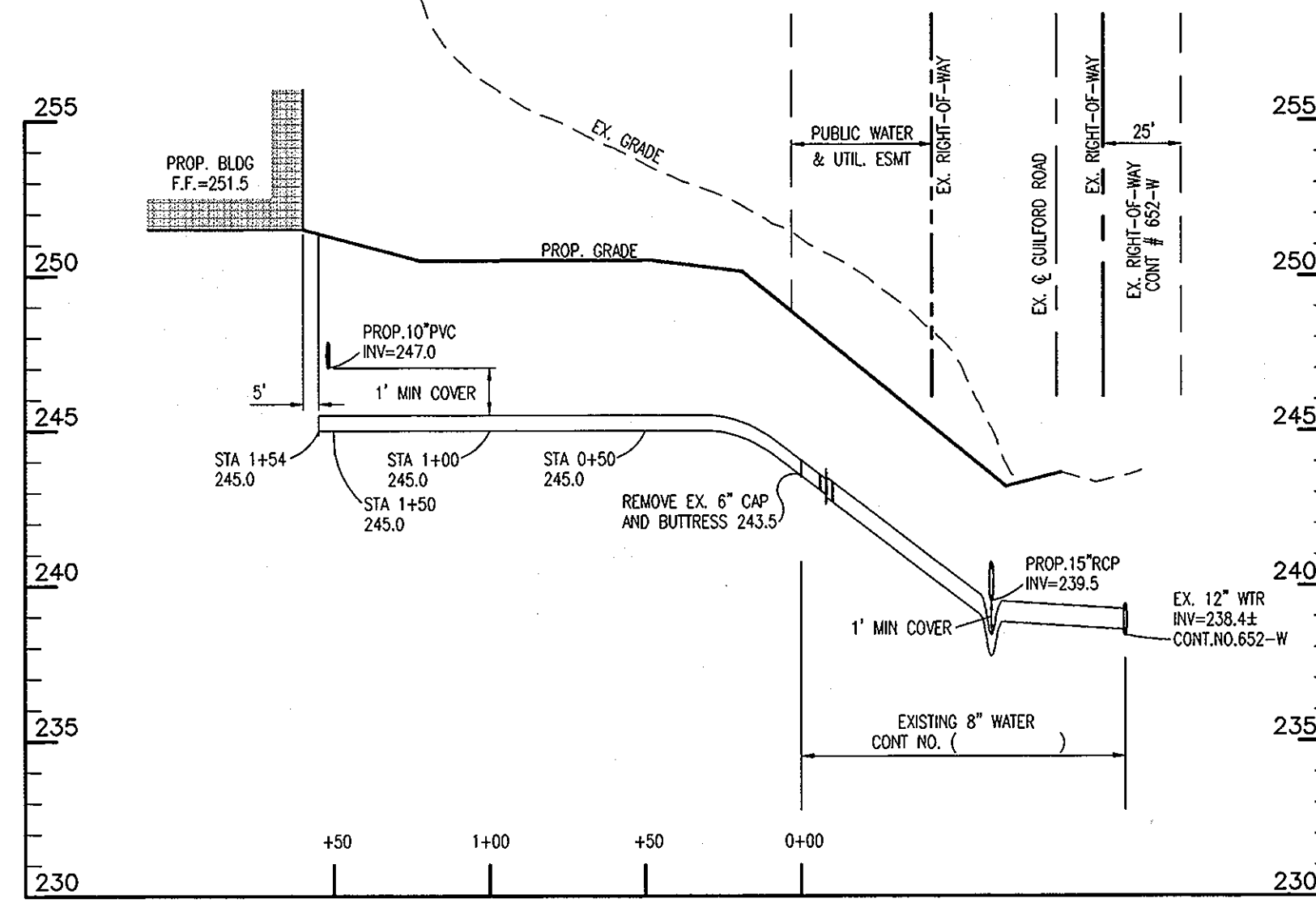
3 SHEET OF 8

ACAD FILE: C:\ACAD\BOB\B08\SHTS\SDP.DWG



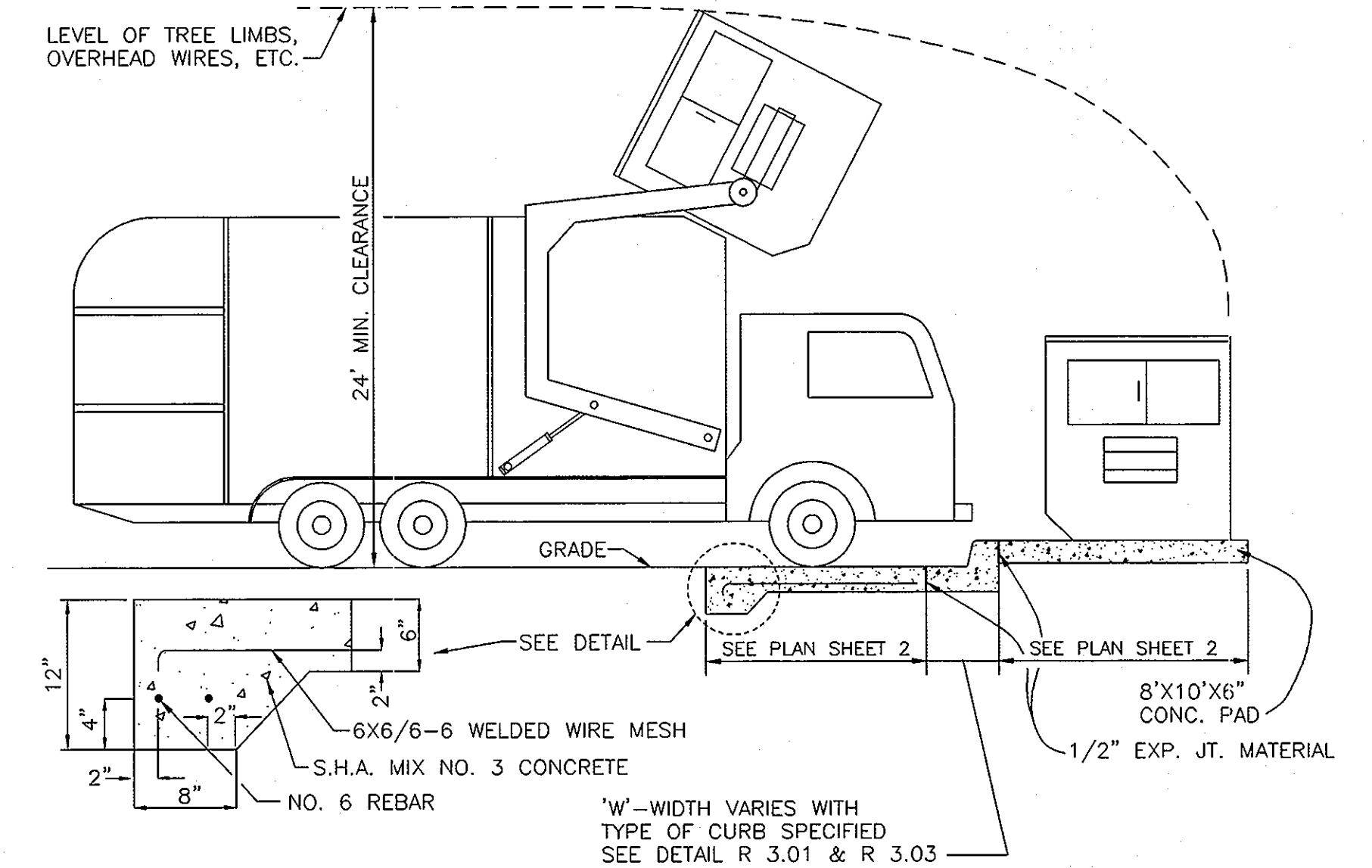
**PROPOSED 6" SEWER PROFILE**

SCALE:  
HOR: 1"=50'  
VERT: 1"=5'



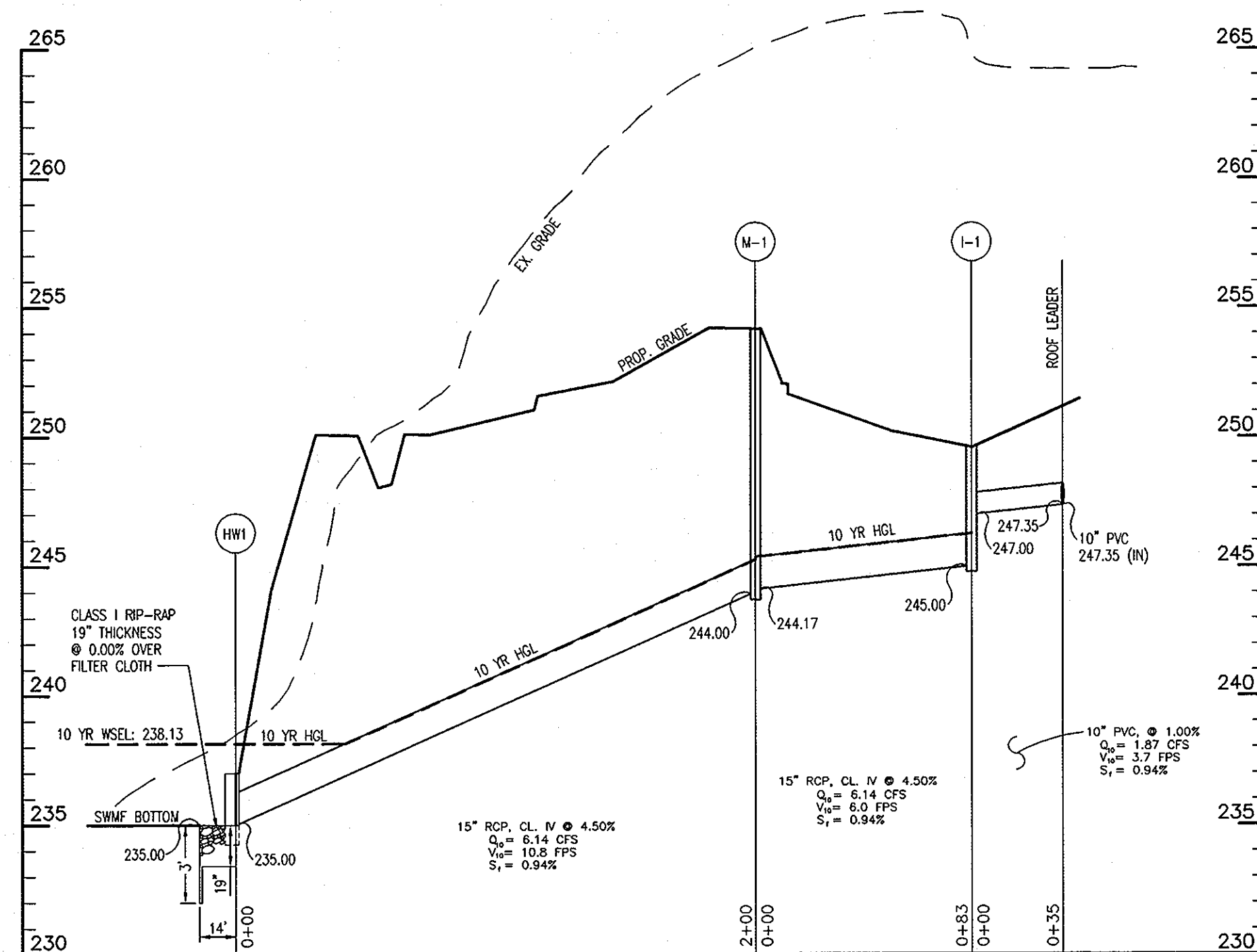
**PROPOSED WATER PROFILE**

SCALE:  
HOR: 1"=50'  
VERT: 1"=5'



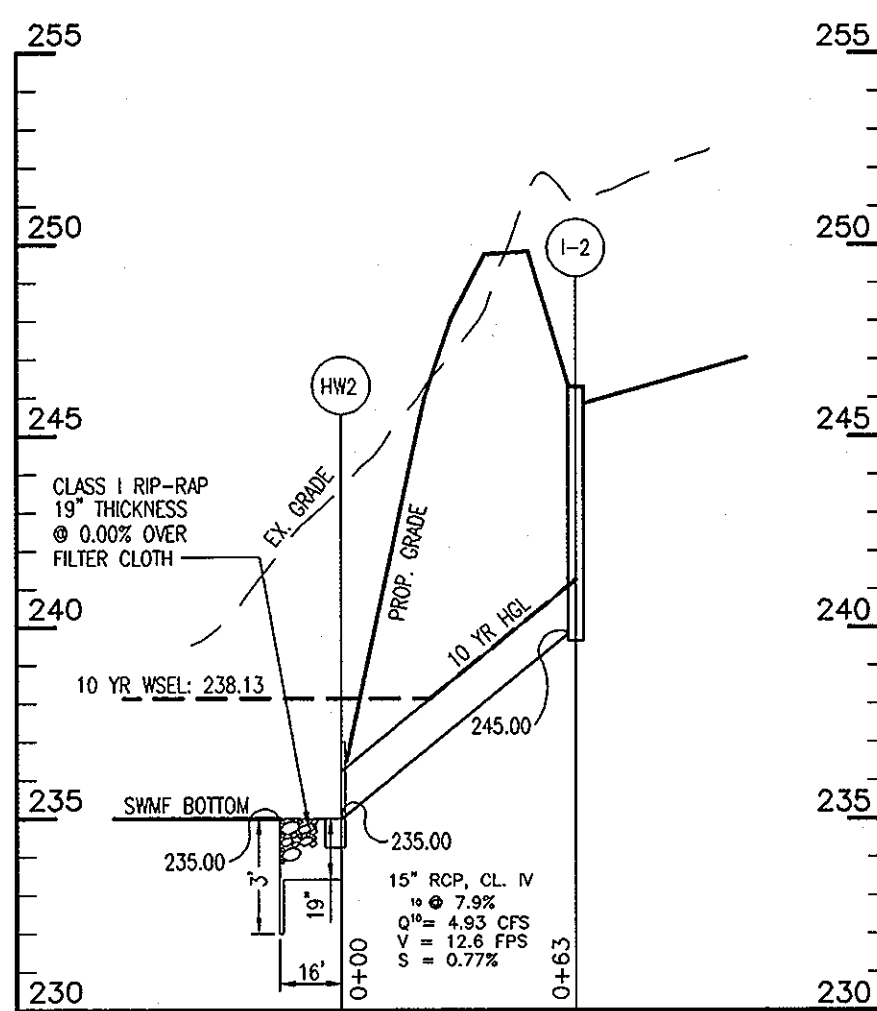
**SOLID WASTE SERVICE PAD**

HOWARD COUNTY STD. R 11.01  
NOT TO SCALE



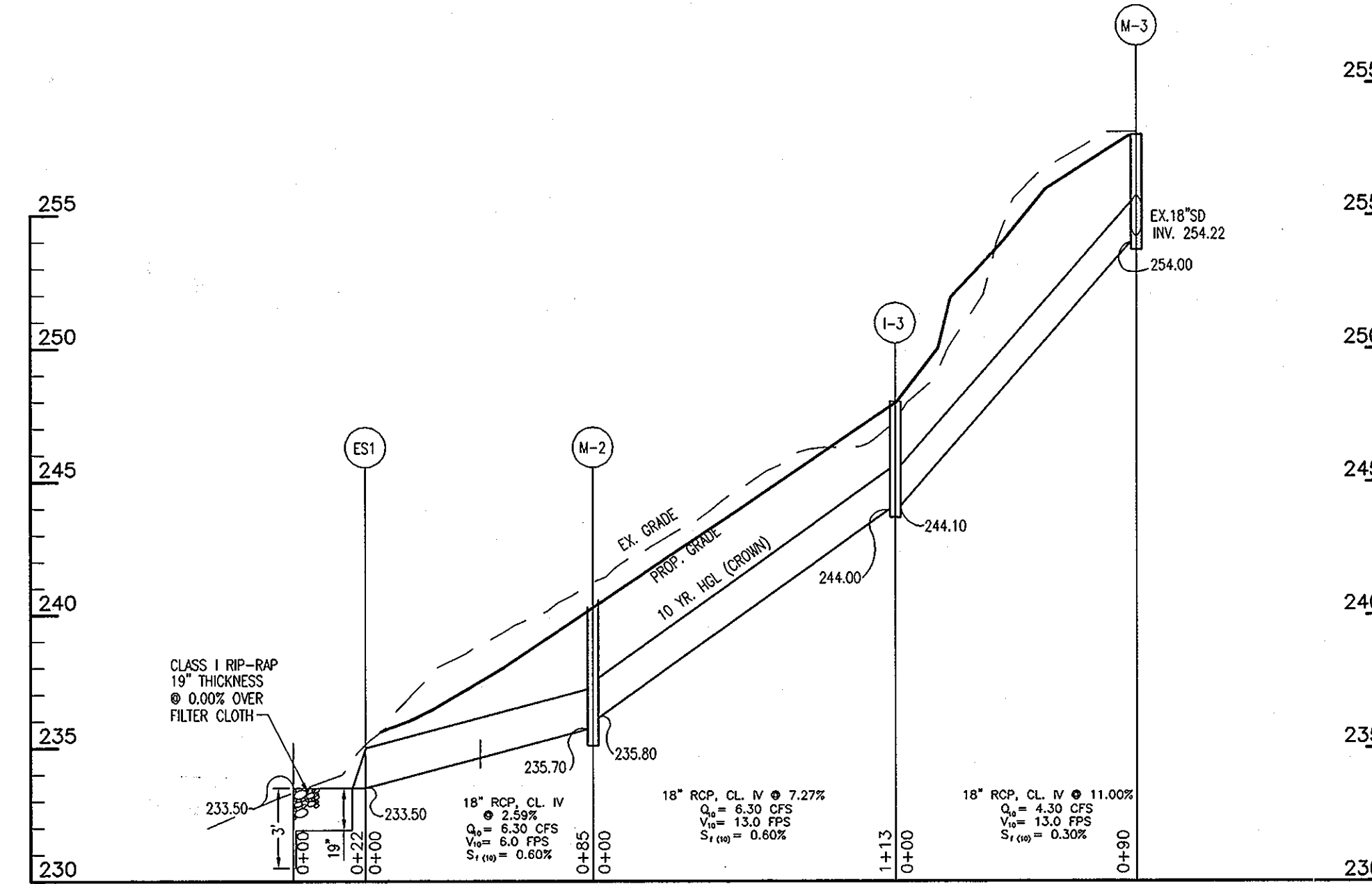
**STORM DRAIN PROFILE**

SCALE:  
HOR: 1"=50'  
VERT: 1"=5'



**STORM DRAIN PROFILE**

SCALE:  
HOR: 1"=50'  
VERT: 1"=5'



**SHA STORM DRAIN PROFILE (ALONG GUILFORD ROAD)**

SCALE:  
HOR: 1"=50'  
VERT: 1"=5'

**OWNER**  
H.H.H. ENTERPRISES L.L.C.  
ROBERT HENIG, (MEMBER)  
9533 WHITE SPRING WAY  
COLUMBIA, MD. 21046  
TELE: (410) 490-0258

NO.	REVISION	DATE

**Bob's BMW MOTORCYCLES**  
SITE DEVELOPMENT PLAN  
PROFILES AND DETAILS

TAX MAP #48 REFERENCE: AA# 97-12 & SDP-98-78  
PARCELS 103 & 26 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**MARKS & VOGEL ASSOCIATES, INC.**  
ENGINEERS - SURVEYORS - PLANNERS

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DESIGN BY: M.D.M.  
DRAWN BY: M.D.M.  
CHECKED BY: R.H.V.  
DATE: JAN, 1998  
SCALE: AS SHOWN  
W.O. NO.: 96-59



REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

*Chief Simmons* 6/1/98  
USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*Robert W. Ziegler* 6/1/98  
HOWARD SCD DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Joseph Baetta* 6/2/98  
DIRECTOR DATE

*Andie Hamilton* 6/2/98  
CHIEF, LAND DEVELOPMENT DATE

*William Drayman* 5/20/98  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

SUBDIVISION NAME		SECTION/AREA	PARCEL NUMBER		
BOB'S BMW MOTORCYCLES		N/A	103 & 26		
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE	ELECT. DIST.	CENSUS TR.
131B	13	M-2	48	6	6064
WATER CODE		SEWER CODE			
B-02		4150000			

ZONED: M-2  
 PARCEL 25  
 RICHARD E. BAKER  
 L.3621 / F.068

ZONED: M-2  
 PARCEL 115  
 REESE & KRATZ L.L.C.  
 L.3262 / F.165

**OWNER**  
 H.H.H. ENTERPRISES L.L.C.  
 ROBERT HENIG, (MEMBER)  
 9533 WHITE SPRING WAY  
 COLUMBIA, MD. 21046  
 TELE: (410) 490-0258

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	TYPE
SfC2	SASSAFRAS GRAVELLY SANDY LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B
SfB2	SASSAFRAS GRAVELLY SANDY LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED	B

LEGEND	
— 484 —	EXISTING CONTOUR
— 484 —	PROPOSED CONTOUR
—	PROPOSED CONCRETE CURB
- - -	SOIL TYPE DIVISION LINE
- - -	DRAINAGE AREA DIVIDE
MDS	SOIL TYPE

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA - NATURAL RESOURCES CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SCD

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Joseph R. Butler* 6/2/98  
 DIRECTOR DATE

*Cindy Hamilton* 6/2/98  
 CHIEF, LAND DEVELOPMENT DATE

*Charles Simmons* 6/1/98  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

SUBDIVISION NAME		SECTION/AREA	PARCEL NUMBER
BOB'S BMW MOTORCYCLES		N/A	103 & 26
PLAT NO.	BLOCK NO.	ZONE	TAX/ZONE
1318B	13	M-2	48
ELECT. DIST.		CENSUS TR.	
6		6064	
WATER CODE		SEWER CODE	
8-02		4150000	

NO.	REVISION	DATE

**Bob's BMW MOTORCYCLES**

**SITE DEVELOPMENT PLAN**  
**DRAINAGE AREA & SOILS MAP**

TAX MAP #48 REFERENCE: AA# 97-12 & SDP-98-78  
 PARCELS 103 & 26 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

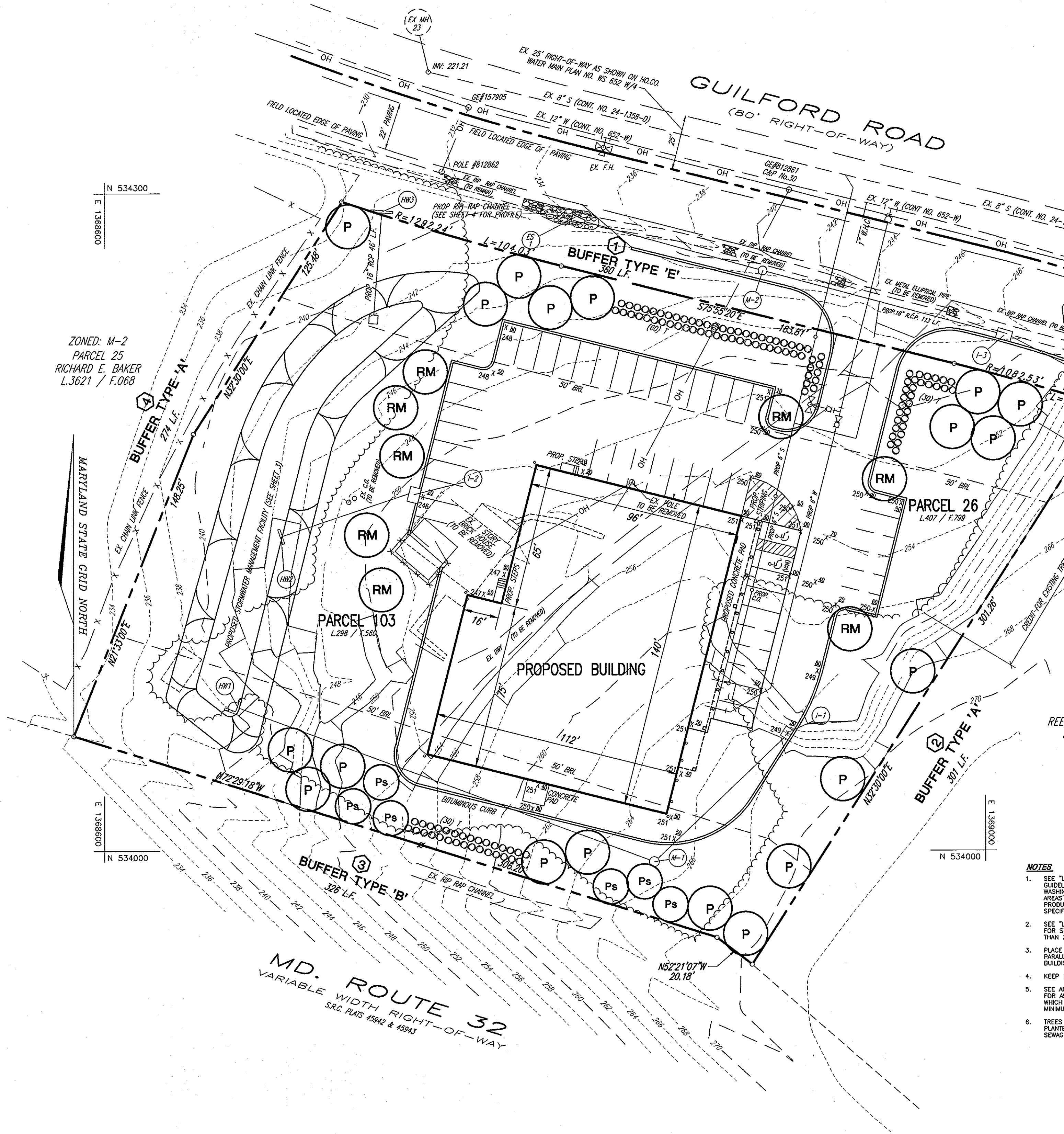
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 DATE: JAN, 1998  
 SCALE: 1"=30'  
 W.O. NO.: 96-59

5 SHEET OF 8

ACAD FILE: C:\ACAD\BOB'S BMW\SDP.DWG



**PLANTING NOTES**

- PLANTS, RELATED MATERIALS, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN.
- ALL PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED AND HAVE A VIGOROUS ROOT SYSTEM. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS PLANTS FREE FROM DEFECTS, DECAY, DISFIGURING ROOTS, SUNSCALD INJURIES, ABRASIONS OF THE BARK, PLANT DISEASE, INSECT PEST EGGS, BOXERS AND ALL FORMS OF INFESTATION OR OBJECTIONABLE DISFIGUREMENTS. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGER GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORKED LEADERS WILL NOT BE ACCEPTED. ALL PLANTS SHALL BE FRESHLY DUG; NO HEEL-IN PLANTS OR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.
- UNLESS OTHERWISE SPECIFIED, ALL PLANT MATERIAL SHALL CONFORM TO "AMERICAN STANDARD FOR NURSERY STOCK" ANSI Z601-1-1986, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INCLUDING ALL ADDENDA.

**PLANTING NOTES (CONT)**

- UNLESS OTHERWISE SPECIFIED, ALL GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATIONS SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" (HEREINAFTER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS, SEPTEMBER, 1981, INCLUDING ALL ADDENDA.
- CONTRACTOR SHALL BE REQUIRED TO GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE IN ACCORDANCE WITH THE APPROPRIATE SECTION OF THE LANDSCAPE GUIDELINES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES, UTILITY CONTRACTORS AND "MISS UTILITY" A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO UTILITIES AND MAY MAKE MINOR ADJUSTMENTS IN SPACING AND LOCATION OF PLANTING MATERIALS TO AVOID CONFLICTS WITH UTILITIES.
- PLANTING BED SHALL BE MULCHED WITH 3" OF SHREDDED HARDWOOD BARK MULCH. GROUND COVER BEDS SHALL BE MULCHED TO A DEPTH OF 2".
- ALL AREAS WITHIN THE CONTRACT LIMIT NOT COVERED BY BUILDING, PAVING, PLANTING BEDS OR OTHERWISE DESIGNATED ON THE PLANS SHALL BE SEEDED AND MULCHED OR SODDED IN ACCORDANCE WITH "1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", PERMANENT SEEDING SPECIFICATIONS (SEE SHEET 6), INCLUDING ALL ADDENDA, AS DIRECTED BY THE OWNER.
- CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL MATERIALS IN THE PROPER PLANTING SEASON FOR EACH PLANT TYPE.
- PLANTING MIX SHALL BE DONE AS FOLLOWS:  
 DECIDUOUS PLANTS - TWO PARTS TOP SOIL, ONE PART WELL-ROTTED COW OR HORSE MANURE, ADD 3 LBS. OF STANDARD 10-10-10 FERTILIZER PER CUBIC YARD OF PLANTING MIX.  
 EVERGREEN PLANTS - TWO PARTS TOPSOIL, ONE PART HUMUS OR OTHER APPROVED ORGANIC MATERIAL, ADD 3 LBS. OF EVERGREEN (ACIDIC) FERTILIZER PER CUBIC YARD OF PLANTING MIX.  
 TOPSOIL SHALL CONFORM TO LANDSCAPE GUIDELINES.

**LANDSCAPE SCHEDULE**

KEY	QTY	BOTANICAL NAME	SIZE	CONT
P	19	QUERCUS PALUSTRIS / PIN OAK	2-1/2"-3" CAL	B+B
RM	8	ACER RUBRUM/OCTOBER GLORY/ OCTOBER GLORY RED MAPLE	2 1/2"-3" CAL	B+B
Ps	6	PINUS STROBUS/EASTERN WHITE PINE	2 1/2"-3" CAL	B+B
T	120	TAXUS CUSPIDATA 'NANA'/DWARF JAPANESE YEW	18"-24" HT	B+B

**SCHEDULE B  
PARKING LOT INTERNAL LANDSCAPING**

NUMBER OF PARKING SPACES	47
NUMBER OF TREES + ISLANDS REQUIRED	1/20 SPACES=3 (600 SQ.FT.)
NUMBER OF TREES PROVIDED	3
SHADE TREES	0
OTHER TREES (2:1 SUBSTITUTION)	0
SHRUBS (10:1 SUBSTITUTION)	0

**SCHEDULE A  
PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROADWAY		ADJACENT TO PERIMETER PROPERTIES	
	①	③	②	④
LANDSCAPE TYPE	E	B	A	A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	360'	326'	301'	274'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	105'*	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED				
SHADE TREES	1:40=9	1:50=7	1:60=3	1:60=5
EVERGREEN TREES	0	0	0	0
SHRUBS	1:4=90	0	0	0
NUMBER OF PLANTS PROVIDED				
SHADE TREES	9	7	3	5
EVERGREEN TREES	0	0	0	0
OTHER TREES (2:1 SUBSTITUTION)	0	0	0	0
SHRUBS (10:1 SUBSTITUTION)	90	30	0	0

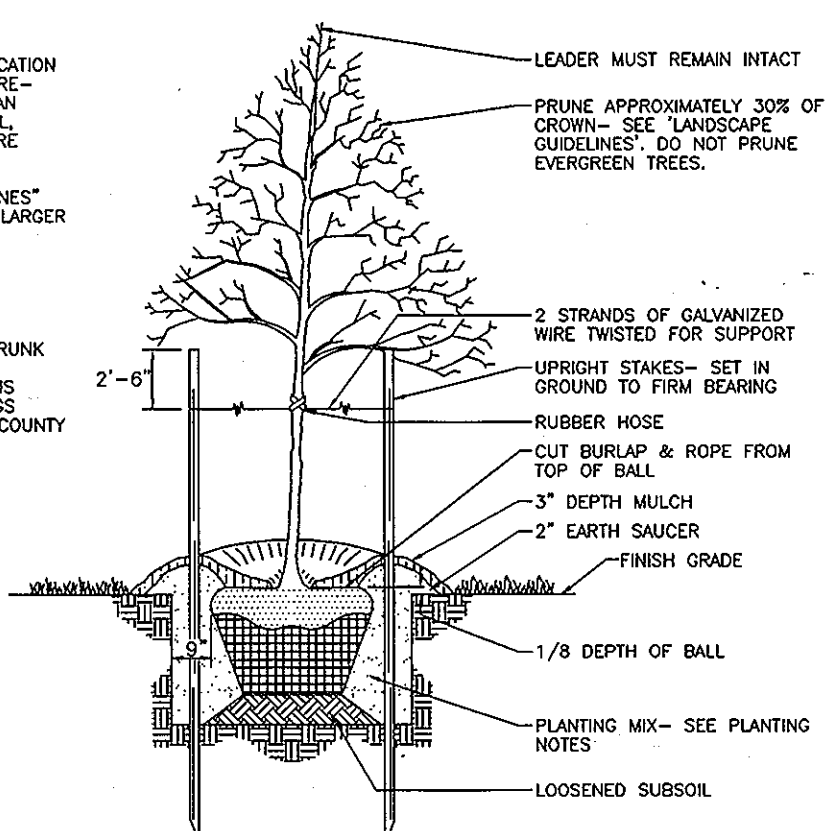
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)

**FOREST CONSERVATION WORKSHEET**

- BASIC SITE DATA**
  - GROSS SITE AREA: 2.2 AC
  - AREA WITHIN 100 YEAR FLOODPLAIN: 0.0 AC
  - AREA WITHIN AGR. USE OR PRES. PARCEL: 0.0 AC
  - NET TRACT AREA: 2.2 AC
  - LAND USE CATEGORY (R-RLD, R-RMD, R-S, C/A/O, I): M-2
- INFORMATION FOR CALCULATIONS**
  - A. NET TRACT AREA: 2.2 AC
  - B. REFORESTATION THRESHOLD (15% X A): 0.3 AC
  - C. AFFORESTATION MINIMUM (15% X A): 0.3 AC
  - D. EXISTING FOREST ON NET TRACT AREA: 0.7 AC
  - E. FOREST AREAS TO BE CLEARED: 0.7 AC
  - F. FOREST AREAS TO BE RETAINED: 0.0 AC
- REFORESTATION CALCULATIONS**
  - A. NET TRACT AREA: 2.2 AC
  - B. REFORESTATION THRESHOLD (15% X A): 0.3 AC
  - D. EXISTING FOREST ON NET TRACT AREA: 0.7 AC
  - E. FOREST AREAS TO BE CLEARED: 0.7 AC
  - F. FOREST AREAS TO BE RETAINED: 0.0 AC
  - G. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD (G-F, IF F EQUALS OR IS GREATER THAN B, ALTERNATE 1) (G-B, IF F IS LESS THAN B, ALTERNATE 2): 0.3 AC
  - H. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD (B-F, IF APPLICABLE): 0.0 AC
  - I. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD (F-B, RETENTION CREDIT, IF APPLICABLE): 0.0 AC

**SELECT THE ALTERNATIVE THAT APPLIES:**

- CLEARING ABOVE THE THRESHOLD ONLY**  
 IF FOREST AREAS TO BE RETAINED EQUAL OR ARE GREATER THAN THE REFORESTATION THRESHOLD (IF F EQUALS OR IS GREATER THAN B), THE FOLLOWING CALCULATIONS APPLY:  
 REFORESTATION FOR CLEARING ABOVE THRESHOLD: G X 1/4  
 CREDIT FOR FOREST AREAS RETAINED ABOVE THRESHOLD: 1 = RETENTION CREDIT  
 TOTAL REFORESTATION REQUIRED: (G X 1/4) - 1
- CLEARING BELOW THE THRESHOLD**  
 IF FOREST AREAS TO BE RETAINED ARE LESS THAN THE REFORESTATION THRESHOLD (IF F IS LESS THAN B), THE FOLLOWING CALCULATIONS APPLY:  
 REFORESTATION FOR CLEARING ABOVE THRESHOLD: G X 1/4  
 REFORESTATION FOR CLEARING BELOW THRESHOLD: H X 2  
 TOTAL REFORESTATION REQUIRED: (G X 1/4) + (H X 2)



**TREE PLANTING AND STAKING**  
DECIDUOUS AND EVERGREEN TREES UP TO 2-1/2" CALIPER NOT TO SCALE

- NOTES**
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
  - FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$4,500.00 (\$100 PER TREE)
  - THE CONTRACTOR IS TO EXERCISE CAUTION WHEN INSTALLING LANDSCAPING IN CLOSE PROXIMITY TO SITE UTILITIES.

THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH THE APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

APPROVED: *Carol Simmons* 6/1/98  
 USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: *Robert W. Zehm* 6/1/98  
 HOWARD SCD DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Carol Simmons* 6/2/98  
 DIRECTOR DATE

*Cathy Hamilton* 6/2/98  
 CHIEF, LAND DEVELOPMENT DATE

*John DeWitt* 5/26/98  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER
BOB'S BMW MOTORCYCLES	N/A	103 & 26
PLAT NO.	BLOCK NO.	ZONE
1318B	13	M-2
		TAX/ZONE
		48
		ELECT. DIST.
		6
		CENSUS TR.
		6064
		WATER CODE
		8-02
		SEWER CODE
		4150000

**Bob's BMW MOTORCYCLES**  
 SITE DEVELOPMENT PLAN  
 LANDSCAPE PLAN

TAX MAP #48 REFERENCE: AA# 97-12 & SDP-98-78  
 PARCELS 103 & 26 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**MARKS & VOGEL ASSOCIATES, INC.**  
 ENGINEERS - SURVEYORS - PLANNERS

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 W.O. NO.: 96-59

6 SHEET OF 8

**STORMWATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS**

**I. SITE PREPARATION**

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL, ALL TREES, VEGETATION, ROOTS AND OTHER OBSTRUCTIVE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHOULDER BANKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBSTRUCTIVE MATERIAL. UNLESS OTHERWISE DESIGNATED ON THE PLANS, TREES, BRUSH AND STUMPS SHALL BE CUT TO APPROXIMATELY LEVEL WITH THE GROUND SURFACE. FOR DRY STORMWATER MANAGEMENT PONDS, A MINIMUM OF A 50 FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE CLEARED.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

**II. EARTH FILL**

**MATERIAL**  
THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBSTRUCTIVE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND CUT OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION SO, CL, OR C. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGN AND CONSTRUCTION ARE SUPERVISED BY A GEOTECHNICAL ENGINEER.

**PLACEMENT**

AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL MATERIALS. FILL SHALL BE PLACED IN 8" MAXIMUM THICKNESS (BEFORE COMPACTING) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMISSIBLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

**COMPACTION**

THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TRUCK TRACK OF THE EQUIPMENT OR CONSTRUCTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TYRED OR WOODRUM TIRE TRACKS SHALL BE USED TO COMPACT THE FILL. MOISTURE SO THAT IT FORMED INTO A BALL, IT WILL NOT CRUMBLE YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT.

WHERE A MINIMUM REQUIRED DENSITY IS SPECIFIED, IT SHALL NOT BE LESS THAN 85% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN ±2% OF THE OPTIMUM EACH LAYER OF FILL SHALL BE COMPACTED TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY ASTM METHOD T-99.

**CUT OFF TRENCH**

THE CUT OFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE GOVERNED BY THE EQUIPMENT USED FOR EXCAVATION, WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW THE FINISHED GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY.

**III. STRUCTURAL BACKFILL**

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADDING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR MANUALLY OPERATED COMPACTION EQUIPMENT. THE MATERIAL NEEDED TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE AT NO TIME. THE OPERATOR OF THE OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET HORIZONTALLY TO ANY PART OF A STRUCTURE UNLESS UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE, UNLESS THERE IS A COMPLETE FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE.

**IV. PIPES**

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

**A. CORRUGATED METAL PIPE**

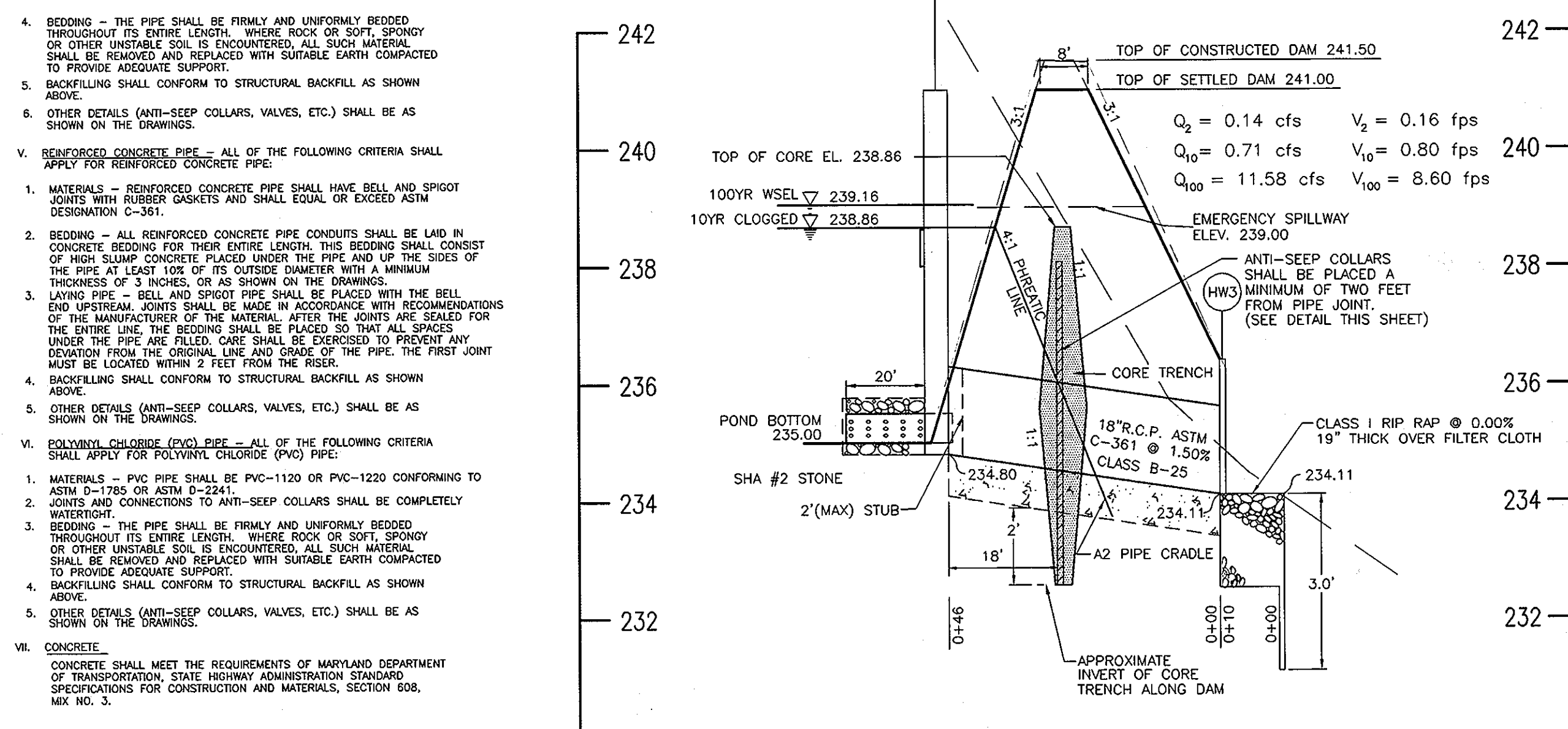
ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE:  
1. MATERIALS - (STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL BE GALVANIZED AND FULLY BITUMINOUS COATED AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION M-183 TYPE A WITH WATER TIGHT COUPLING BANDS. ANY BITUMINOUS COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND.  
STEEL PIPES WITH POLYMERIC COATING SHALL HAVE A MINIMUM COATING THICKNESS OF 0.01 INCH (0.254 MM) ON BOTH SIDES OF THE PIPE. THE FOLLOWING COATINGS OR AN APPROVED EQUAL MAY BE USED: NEON, PLASTI-COTE, BLUE-GLAD AND BETH-CON. CORRUGATED STEEL PIPE SHALL MEET THE REQUIREMENTS OF ASTM M-245 AND M-246.  
MATERIALS - (ALUMINUM PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION M-188 OR M-211 WITH WATER TIGHT COUPLING BANDS OR FLANGES. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER. HOT DIP GALVANIZED BEATS MAY BE USED FOR CONNECTIONS. THE PA OF THE SURROUNDING SOILS SHALL BE BETWEEN 4 AND 9.

**B. COUPLING BANDS, ANTI-SEEP COLLARS, END SECTIONS, ETC.**

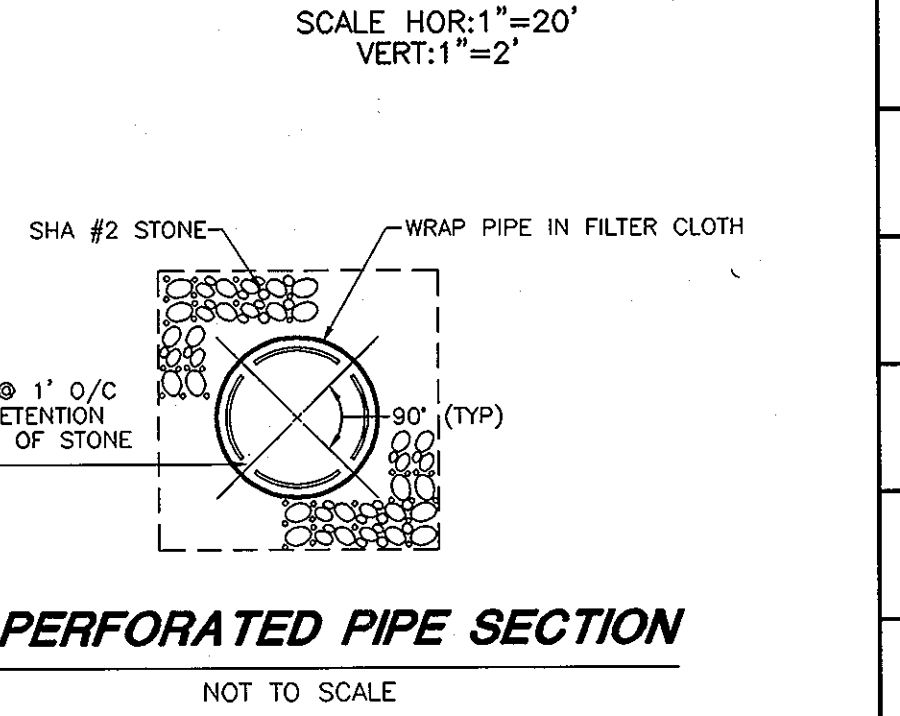
MUST BE COMPOSED OF THE SAME MATERIAL AS THE PIPE. METALS MUST BE INSULATED FROM DISSIMILAR MATERIALS WITH USE OF RUBBER OR PLASTIC INSULATING MATERIALS AT LEAST 24 MILS IN THICKNESS.  
CONNECTIONS - ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATER TIGHT. THE DRAIN PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WHEN THE PIPE AND RISER ARE METAL. ANTI-SEEP COLLARS SHALL BE CONNECTED TO THE PIPE IN SUCH A MANNER AS TO BE COMPLETELY WATER TIGHT. GASKET BANDS ARE NOT CONSIDERED TO BE WATER TIGHT.  
ALL CONNECTIONS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THE END OF EACH PIPE SHALL BE RE-ROLLED AN ADEQUATE NUMBER OF CORRUGATIONS TO ACCOMMODATE THE BAND WITH THE FOLLOWING CONNECTIONS ARE ACCEPTABLE:  
FOR PIPES LESS THAN 48" IN DIAMETER: FLANGES ON BOTH ENDS OF THE PIPE, A 12" WIDE STANDING LAP THE BAND WITH 12" WIDE BY 1/8" THICK CLOSED CELL CIRCULAR NEOPRENE GASKET; AND A 12" WIDE HUGGER TYPE BAND WITH G-RING GASKETS HAVING A MINIMUM DIAMETER OF 1/2" GREATER THAN THE CORROSION DEPTH. PIPES 48" IN DIAMETER AND LARGER SHALL BE CONNECTED BY A 24" LONG ANNULAR CORRUGATED BAND USING RODS OR LUGS. A 12" WIDE BY 1/8" THICK CLOSED CELL CIRCULAR NEOPRENE GASKET WILL BE INSTALLED ON THE END OF EACH PIPE FOR A TOTAL OF 24".  
HELICALLY CORRUGATED PIPE SHALL HAVE EITHER CONTINUOUSLY WELDED SEAMS OR HAVE LOCK SEAMS WITH INTERNAL CALKING OR A NEOPRENE BEAD.

**MATERIALS - (POLYVINYL CHLORIDE (PVC) PIPE)**

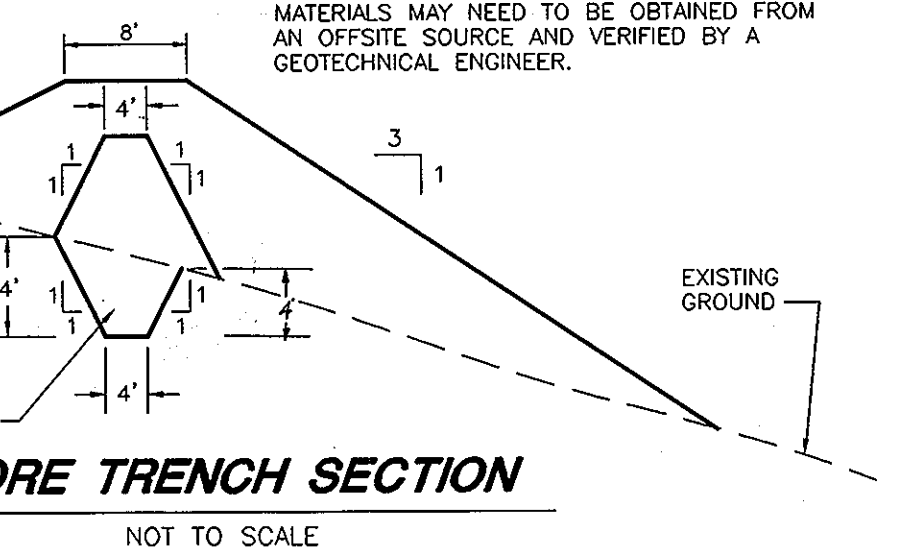
ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR POLYVINYL CHLORIDE (PVC) PIPE:  
1. MATERIALS - PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D-2781 OR D-2782. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATER TIGHT.  
2. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. THIS BEDDING SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 18" MINIMUM. THE JOINTS SHALL BE SEALED FOR THE ENTIRE LINE. THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED WITH SUFFICIENT EXCESSIVE DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 2 FEET FROM THE RISER.  
3. BACKFILLING SHALL CONFORM TO STRUCTURAL BACKFILL AS SHOWN ABOVE.  
4. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.  
5. POLYURETHANE (PU) PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR POLYURETHANE (PU) PIPE:  
1. MATERIALS - PU PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D-2781 OR D-2782. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATER TIGHT.  
2. BEDDING - THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. THIS BEDDING SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 18" MINIMUM. THE JOINTS SHALL BE SEALED FOR THE ENTIRE LINE. THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED WITH SUFFICIENT EXCESSIVE DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 2 FEET FROM THE RISER.  
3. BACKFILLING SHALL CONFORM TO STRUCTURAL BACKFILL AS SHOWN ABOVE.  
4. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.  
6. CONCRETE  
CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 608, MIX NO. 3.



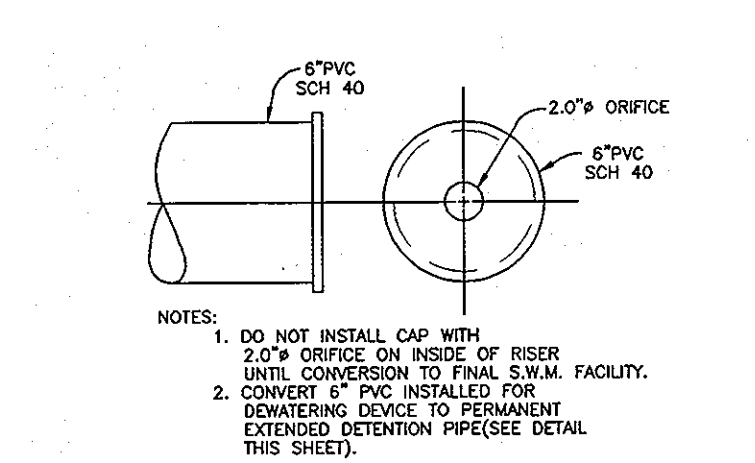
**PROFILE OF PRINCIPAL SPILLWAY**  
SCALE HOR: 1"=20'  
VERT: 1"=2'



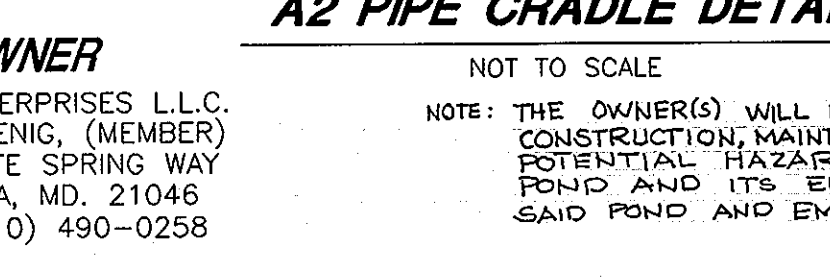
**6\"/>**



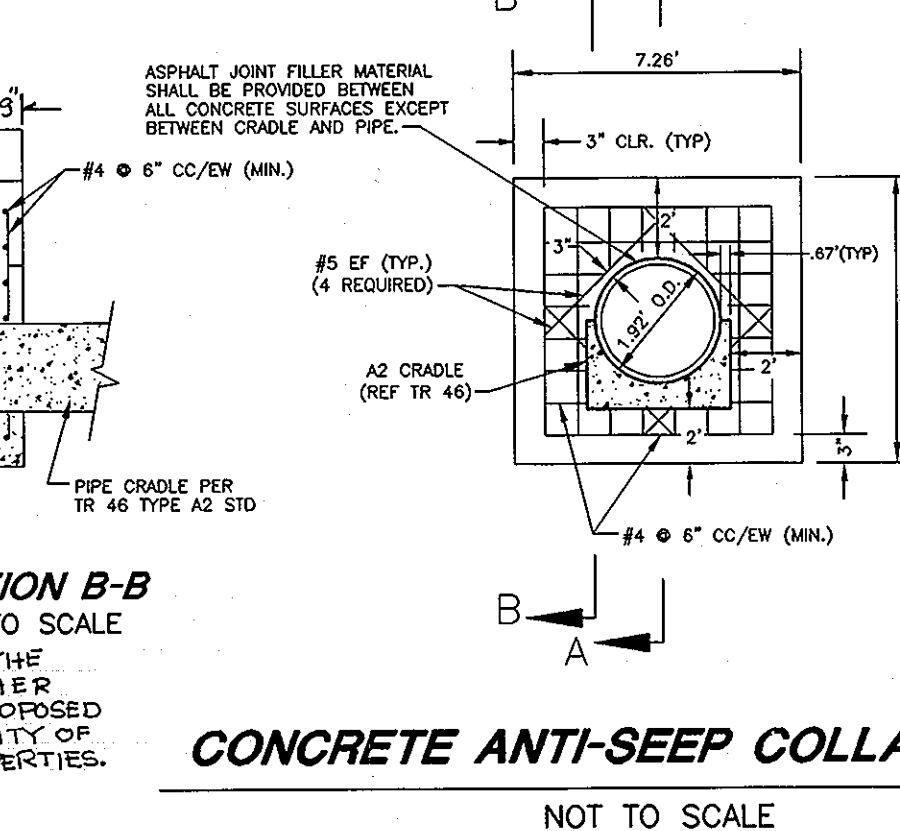
**CORE TRENCH SECTION**  
NOT TO SCALE



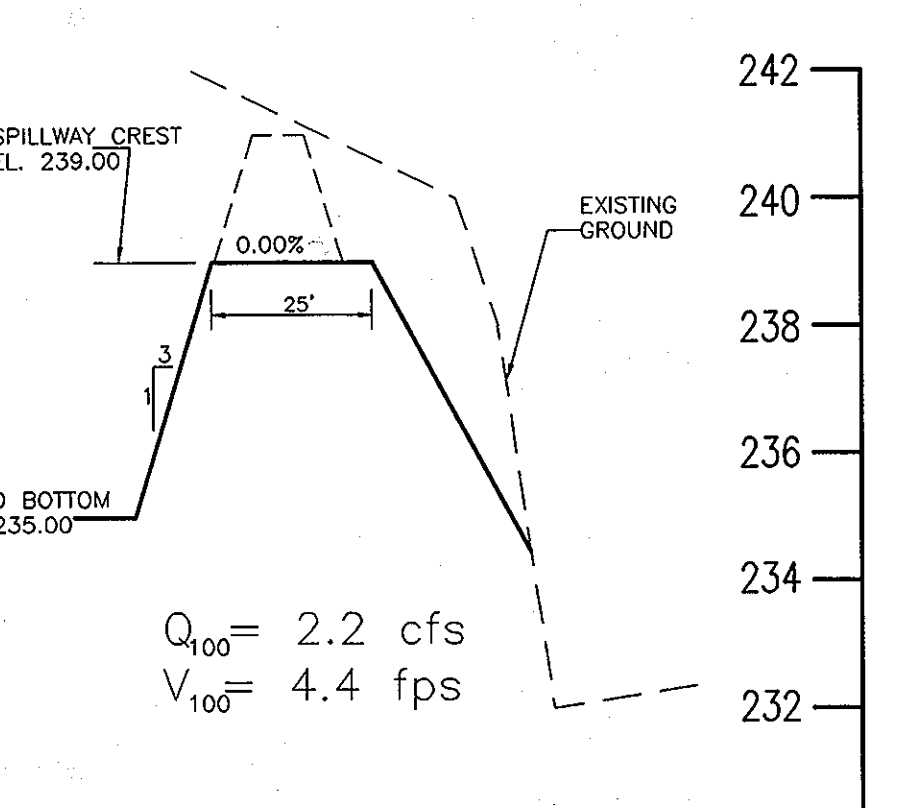
**PVC ORIFICE STRUCTURE**  
NOT TO SCALE



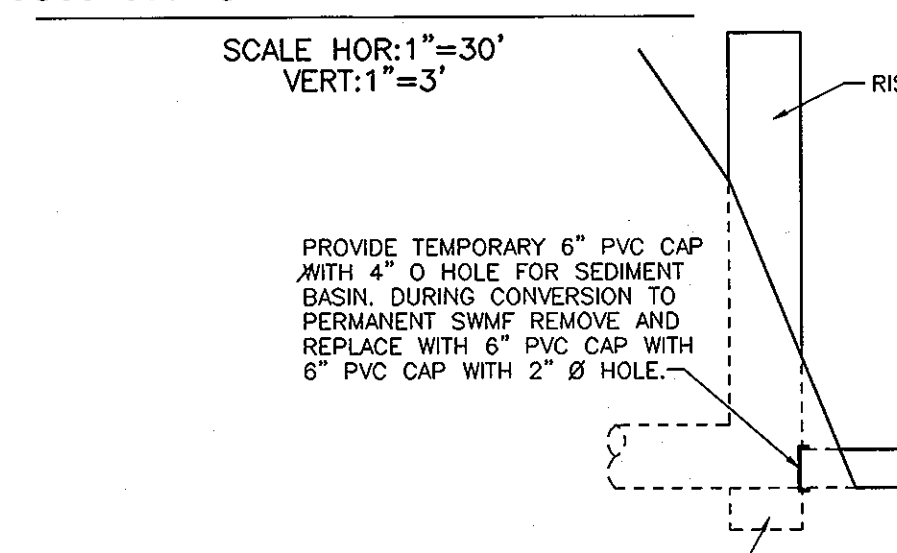
**A2 PIPE CRADLE DETAIL**  
NOT TO SCALE



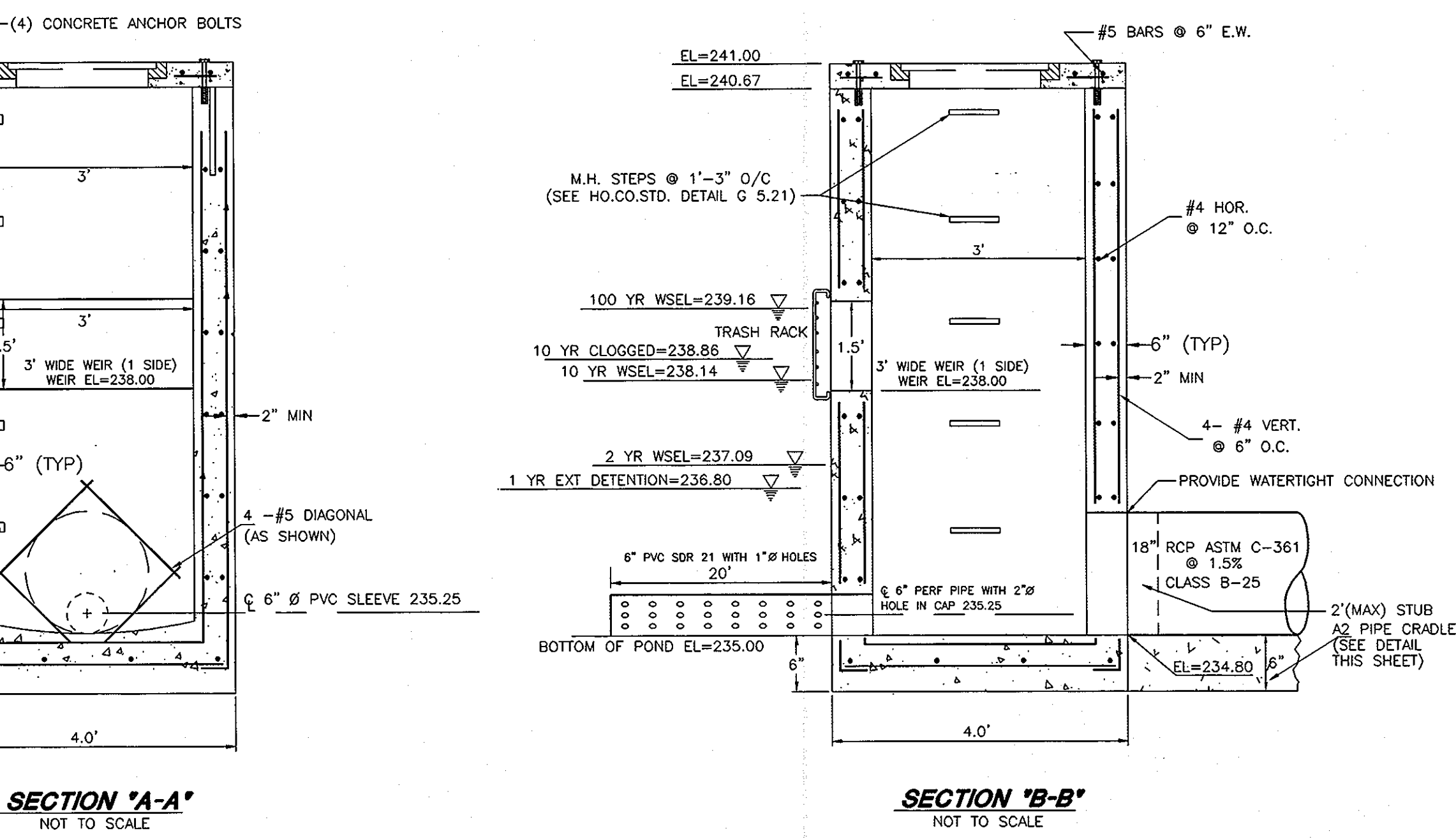
**CONCRETE ANTI-SEEP COLLAR DETAIL**  
NOT TO SCALE



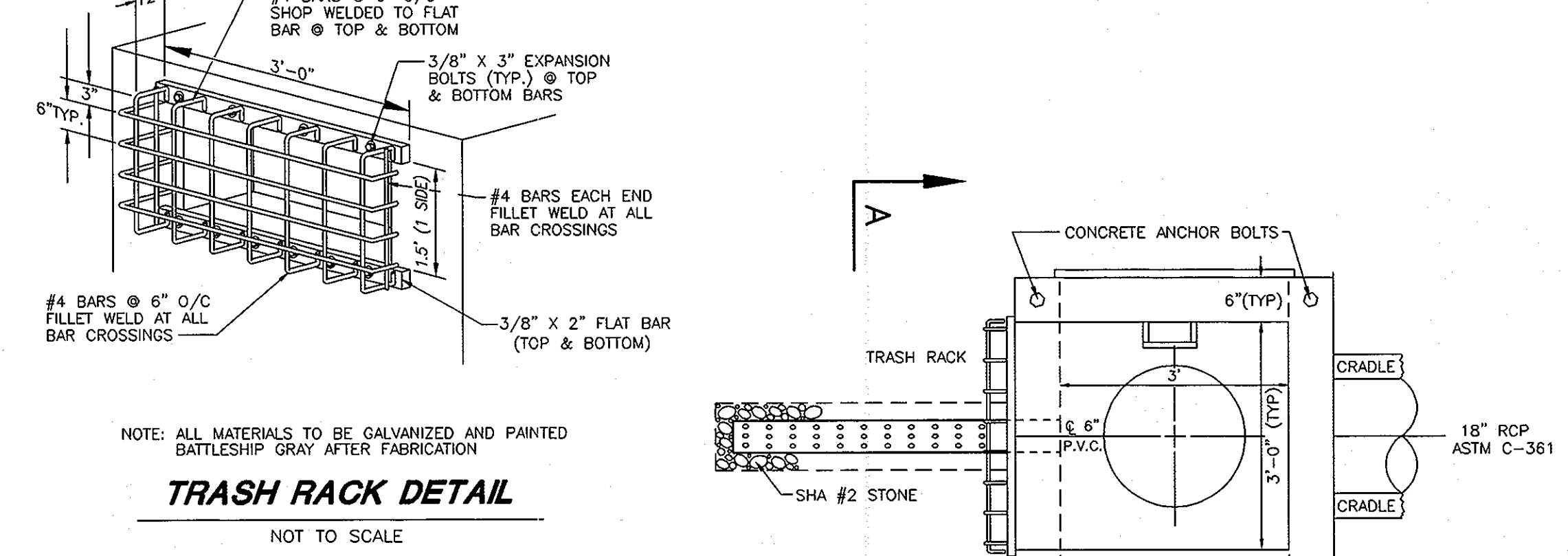
**SECTION THRU EMERGENCY SPILLWAY**  
SCALE HOR: 1"=30'  
VERT: 1"=3'



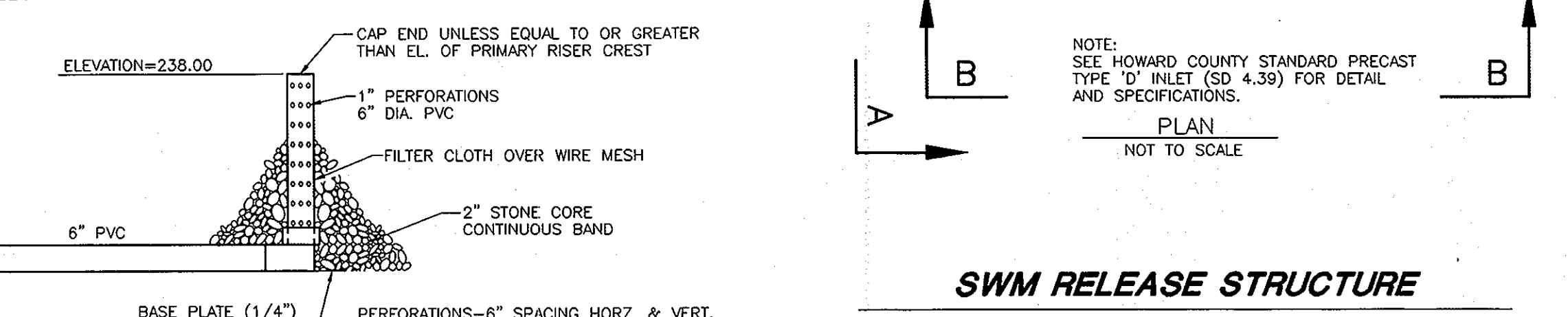
**SECTION A-A**  
NOT TO SCALE



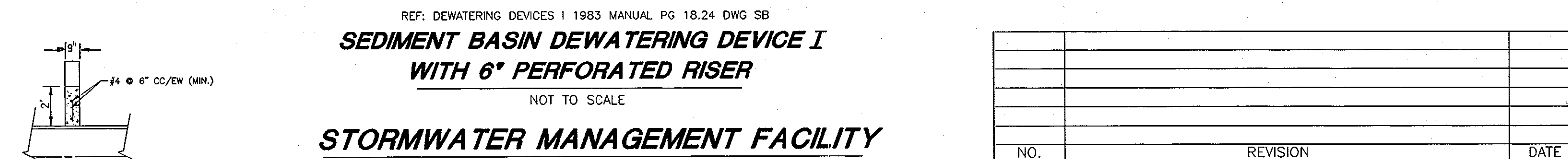
**SECTION 'A-A'** NOT TO SCALE  
**SECTION 'B-B'** NOT TO SCALE



**TRASH RACK DETAIL**  
NOT TO SCALE



**SWM RELEASE STRUCTURE**  
NOT TO SCALE  
REFERENCE HOWARD COUNTY STANDARD DETAIL SD 4.39 (SEE SHEET 8 FOR TOP SLAB DETAIL)



**SEDIMENT BASIN DEWATERING DEVICE I WITH 6\"/>**

REF: DEWATERING DEVICES I 1983 MANUAL PG 18.24 DWG SB

	Q <sub>5</sub>	Q <sub>10</sub>
EXISTING RUNOFF TO GULFORD RD (STUDY POINT 'A')	4.19 c.f.s.	9.47 c.f.s.
DEVELOPED UNMANAGED FLOW TO GULFORD ROAD	3.90 c.f.s.	7.86 c.f.s.
DEVELOPED RELEASE RATE FROM SWMF TO GULFORD RD	0.14 c.f.s.	0.71 c.f.s.
TOTAL DEVELOPED RUNOFF TO STUDY POINT 'A'	4.01 c.f.s.	8.02 c.f.s.
FACILITY STORAGE ELEVATION	237.09	238.14
FACILITY STORAGE VOLUME	0.166 AC-FT	0.25 AC-FT
EXISTING RUNOFF TO MD RTE 32 (STUDY POINT 'B')	0.40 c.f.s.	1.89 c.f.s.
DEVELOPED RUNOFF TO MD RTE 32 (STUDY POINT 'B')	0.06 c.f.s.	0.41 c.f.s.
EXISTING RUNOFF TO ADJOINING PROPERTY (WEST)	0.18 c.f.s.	0.82 c.f.s.
DEVELOPED RUNOFF TO ADJOINING PROPERTY (WEST)	0.08 c.f.s.	0.28 c.f.s.

**OWNER**  
H.H.H. ENTERPRISES L.L.C.  
ROBERT HENG, (MEMBER)  
9533 WHITE SPRING WAY  
COLUMBIA, MD 21046  
TELE: (410) 490-0258

**ENGINEERS CERTIFICATE**  
I, HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

**DEVELOPER'S CERTIFICATE**  
I, I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Joseph Hamilton* 6/2/98  
DIRECTOR DATE

*Charles Hamilton* 6/2/98  
CHIEF, LAND DEVELOPMENT DATE

*Robert W. Johnson* 6/1/98  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

*Joseph Hamilton* 6/2/98  
DIRECTOR DATE

*Charles Hamilton* 6/2/98  
CHIEF, LAND DEVELOPMENT DATE

*Robert W. Johnson* 6/1/98  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**Bob's BMW MOTORCYCLES**

**SITE DEVELOPMENT PLAN**  
**SWM NOTES AND DETAILS**

TAX MAP #48 REFERENCE: AA# 97-12 & F-98- PARCELS 103 & 26 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**MARKS & VOGEL ASSOCIATES, INC.**  
ENGINEERS - SURVEYORS - PLANNERS

3691 PARK AVENUE, SUITE 101  
ELLICOTT CITY, MARYLAND 21048  
TELEPHONE: (410) 461-5828  
FAX: (410) 465-3966

SUBMISSION NAME	SECTION/AREA	PARCEL NUMBER
Bob's BMW MOTORCYCLES	N/A	103 & 26
PLAT NO. 13108	BLOCK NO. 13	ZONE M-2
	TAX/ZONE 48	ELECT. DIST. 6
		CENSUS TR. 6064
	WATER CODE B-02	SEWER CODE 4150000

DESIGN BY: M.D.M.  
DRAWN BY: J.E.R.  
CHECKED BY: R.H.V.  
DATE: SEPT, 1997  
SCALE: AS SHOWN  
W.O. NO.: 96-59

7 SHEET OF 8

ACAD FILE: C:\ACAD\B08\B08\SHIPS\DWG

**TEMPORARY SEEDING**

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

Seedbed preparation: Loosen upper three inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened.

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

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

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

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

**PERMANENT SEEDING NOTES**

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

Seedbed Preparation: Loosen upper 3 inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened.

Soil Amendments: Use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic 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 3 inches of soil. At time of seeding apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs./1000 sq. ft.).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the periods March 1 thru April 30 and August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs./1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. of Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq. ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option 1 - 2 tons per acre of well-anchored straw mulch, and seed as soon as possible in the spring. Option 2 - Use sod. Option 3 - Seed with 60 lbs. per acre Kentucky 31 Tall Fescue, and mulch with 2 tons per acre well anchored straw.

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

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

**SEDIMENT CONTROL NOTES**

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspection, License and Permits Sediment Control Division prior to the start of any construction (313-1855).
2. All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.
3. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: (a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes, and all slopes greater than 3:1, (b) 14 days as to all other disturbed or graded areas on the project site.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, sod, temporary seeding, and mulching (Sec. G). Temporary stabilization with mulch alone shall be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
7. Site Analysis
 

Total Area of Site	2.21 acres
Area to be roofed or paved	1.80 acres
Area to be vegetatively stabilized	0.90 acres
Total Cut	7,047 cu. yds.
Total Fill	1,337 cu. yds.

 Offsite waste/borrow area location To be determined by contractor, with pre-approval of the Sediment Control Inspector.
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment controls must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
11. Trenches for the construction of utilities is limited to three pipe lengths or that

**210 STANDARD 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 vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, material toxic to plants, and/or unacceptable soil gradation.

**CONDITION WHERE PRACTICE APPLIES**  
1. This practice is limited to areas having 2:1 or flatter slopes where:  
a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.  
b. 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.  
c. The original soil to be vegetated contains material toxic to plant growth.  
d. The soil is so acidic that treatment with limestone is not feasible.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

**CONSTRUCTION AND MATERIAL SPECIFICATIONS**

I. Topsoil salvaged from the existing site may be used provided that it meets the standards set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type shall be determined from the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agriculture Experiment Station.

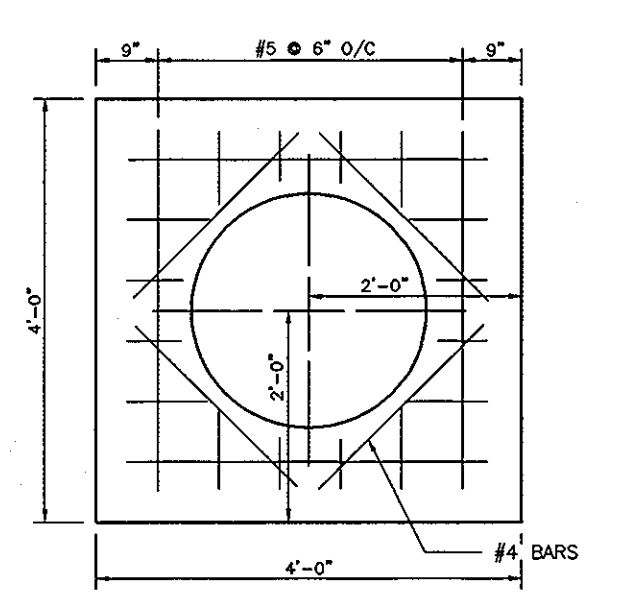
II. Topsoil Specifications - Soil to be used as topsoil must meet the following:  
i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or sandy silt. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.  
ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.  
iii. 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 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

III. For sites having disturbed areas under 5 acres:  
i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Material.  
ii. For sites having disturbed areas over 5 acres:  
i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:  
a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient time shall be prescribed to raise the pH to 6.5 or higher.  
b. Organic content of topsoil shall not be less than 1.5 percent by weight.  
c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.  
d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.

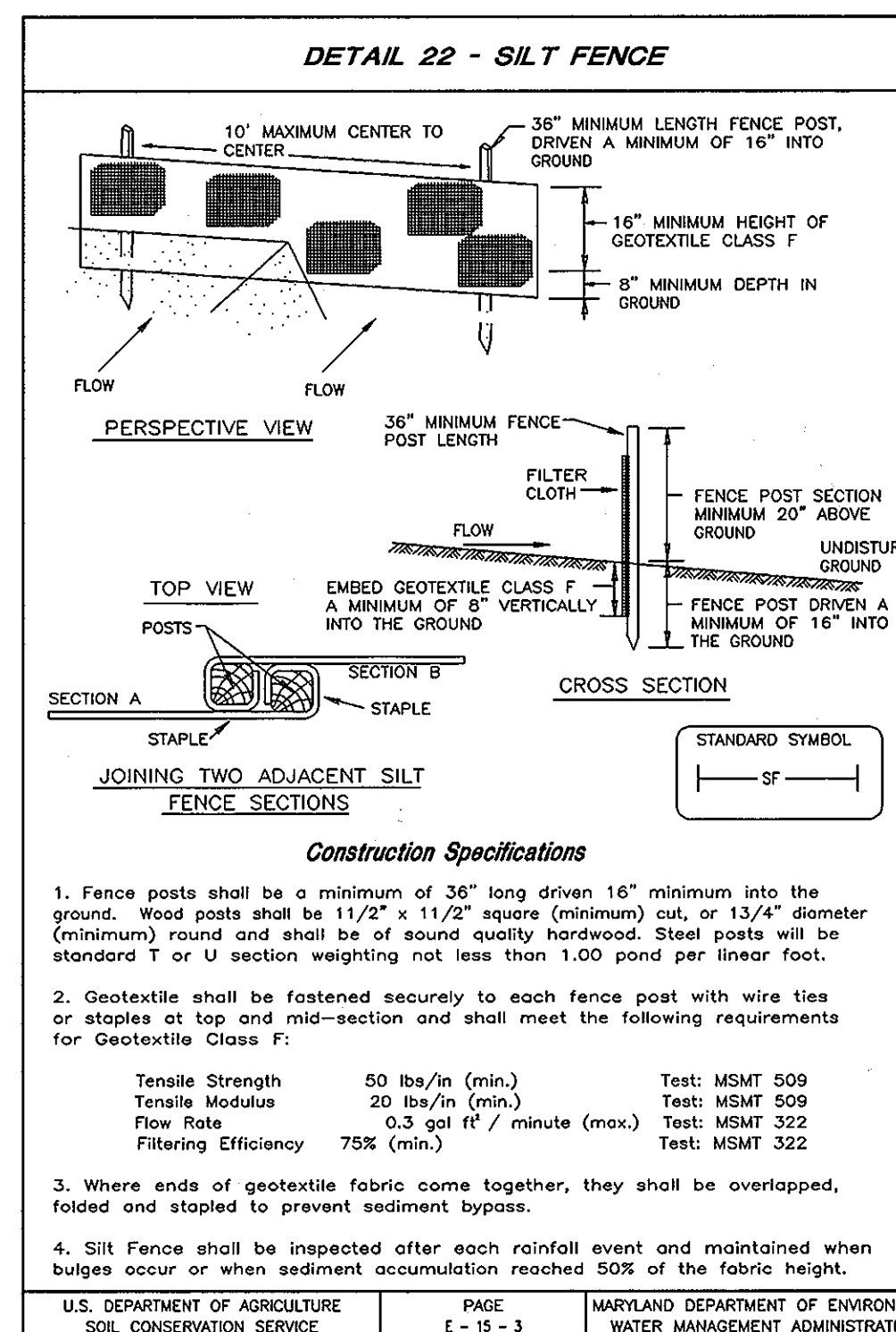
Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

**Vegetative Stabilization Methods and Materials.**

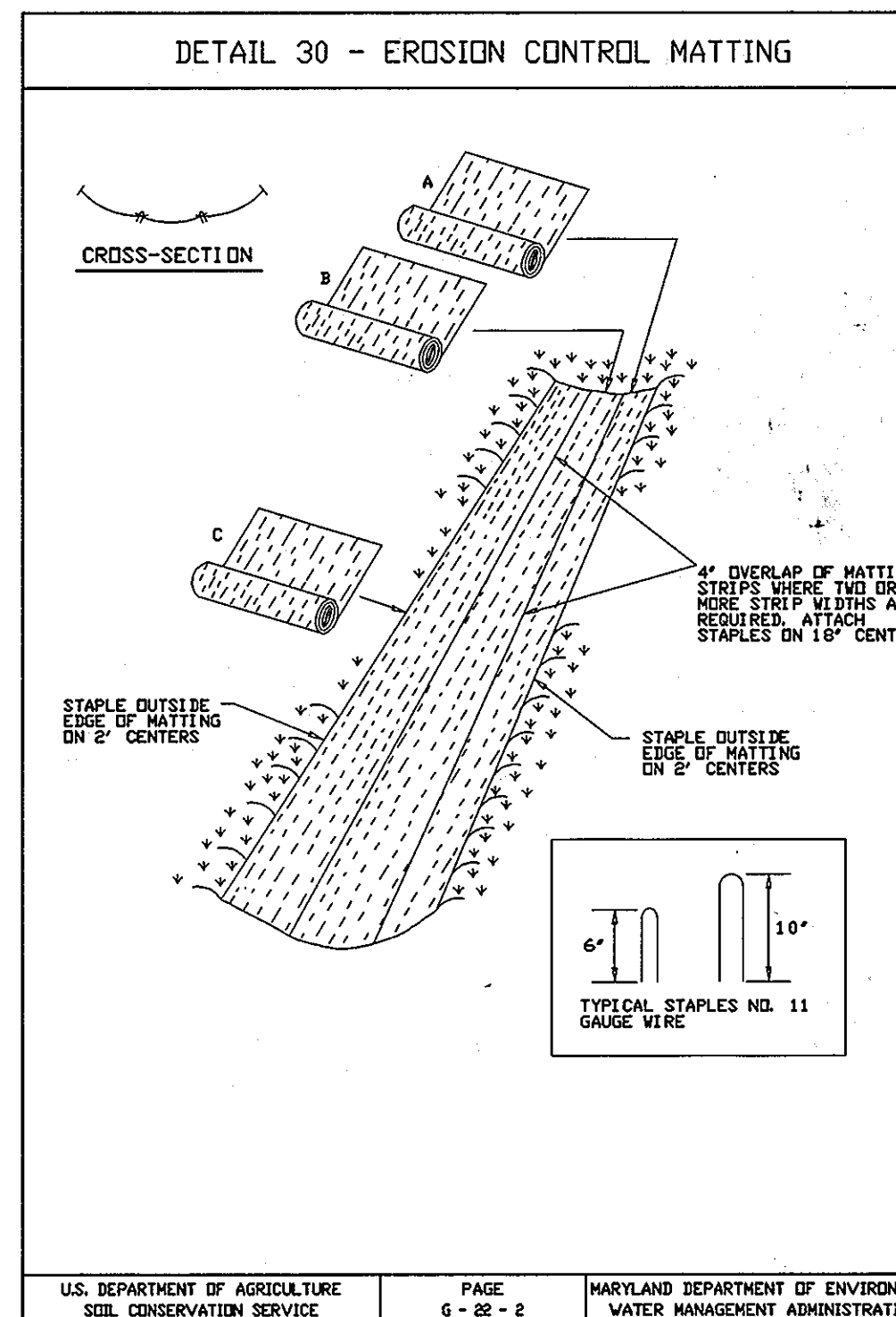
V. Topsoil Application  
i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.  
ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, about 4" to 8" higher in elevation.  
iii. Topsoil shall be uniformly distributed in a 4"-8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the formation of depressions or water pockets.  
iv. 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 grading and seeded preparation.



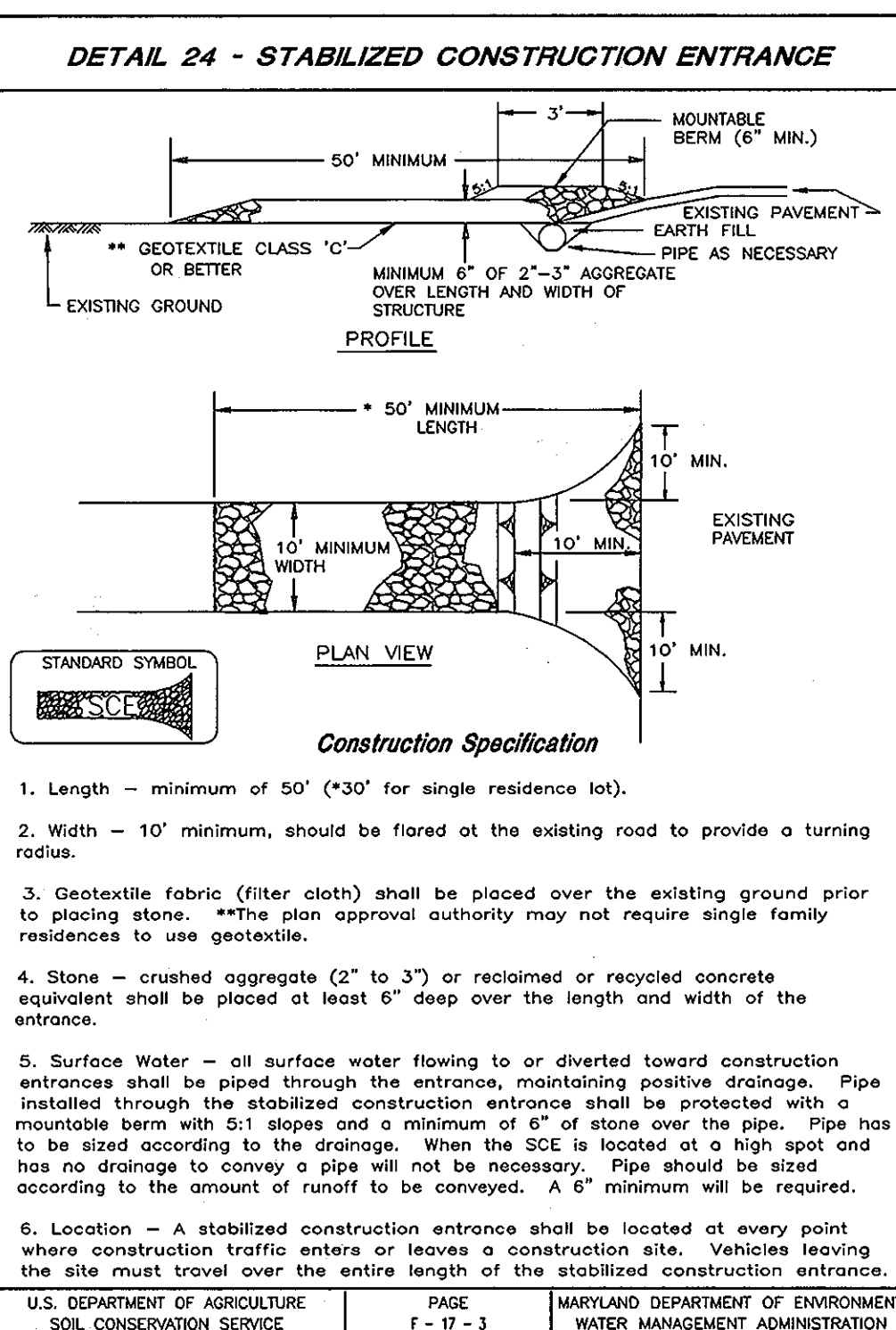
PLAN TOP SLAB, MANHOLE FRAME AND COVER  
NOT TO SCALE



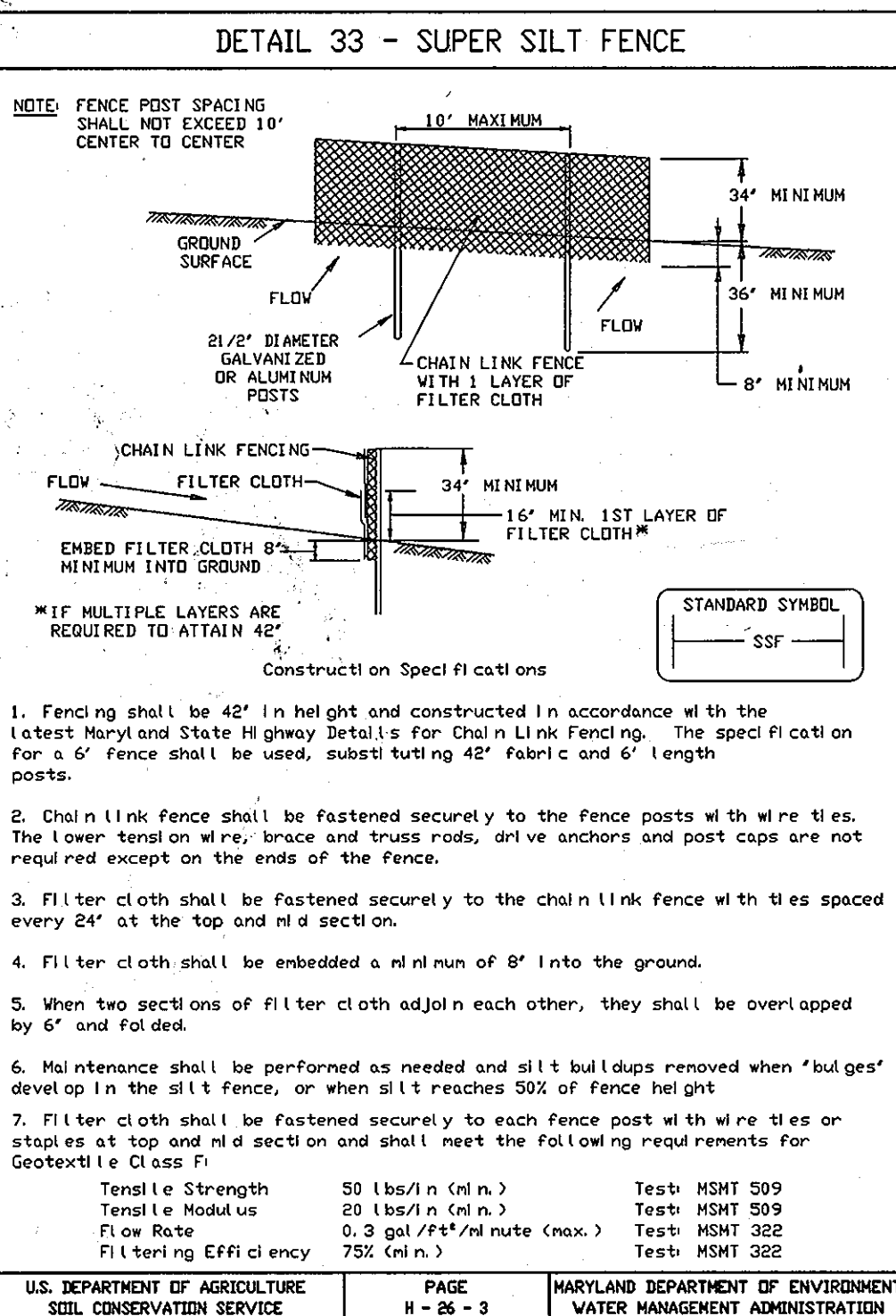
DETAIL 22 - SILT FENCE



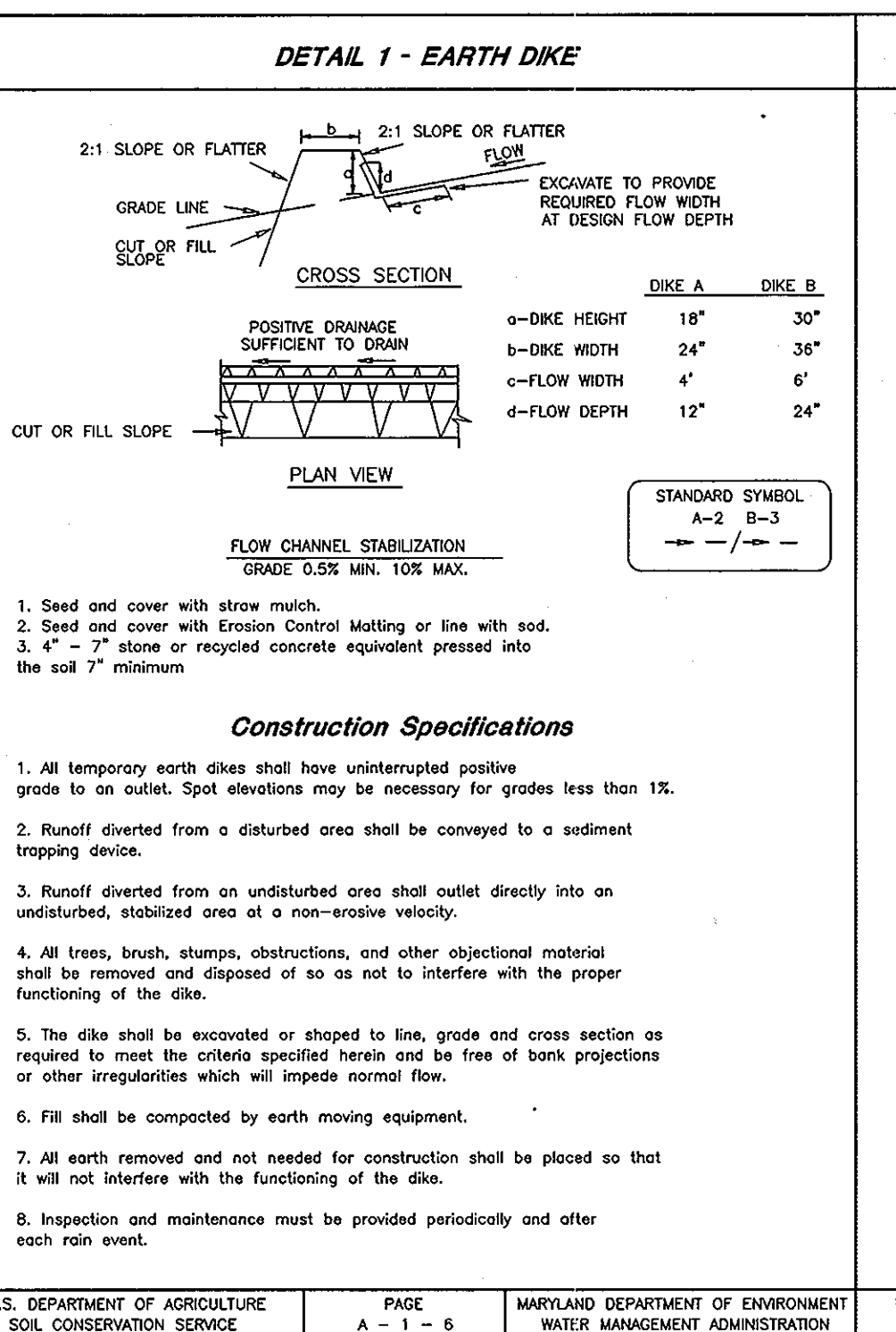
DETAIL 30 - EROSION CONTROL MATTING



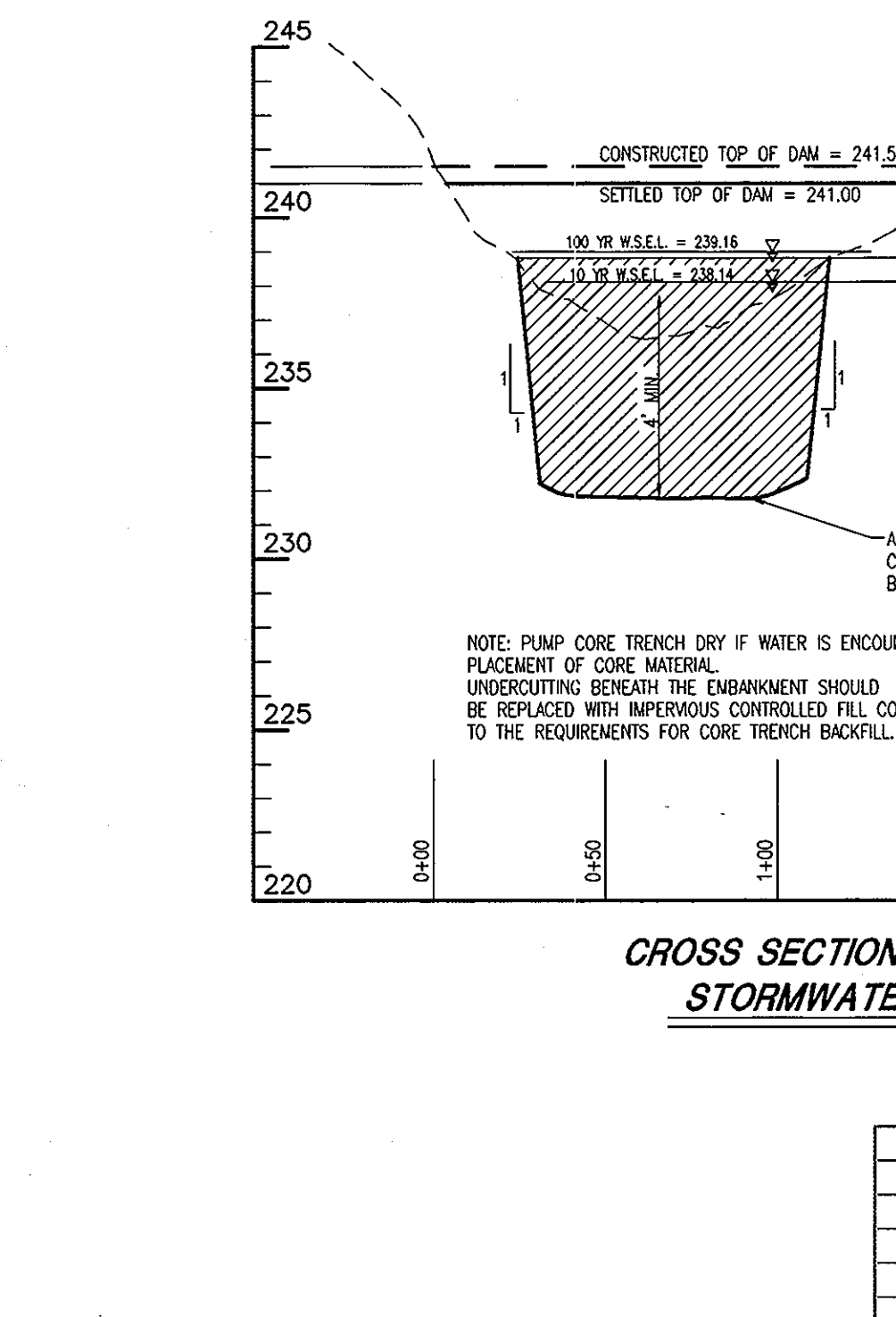
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



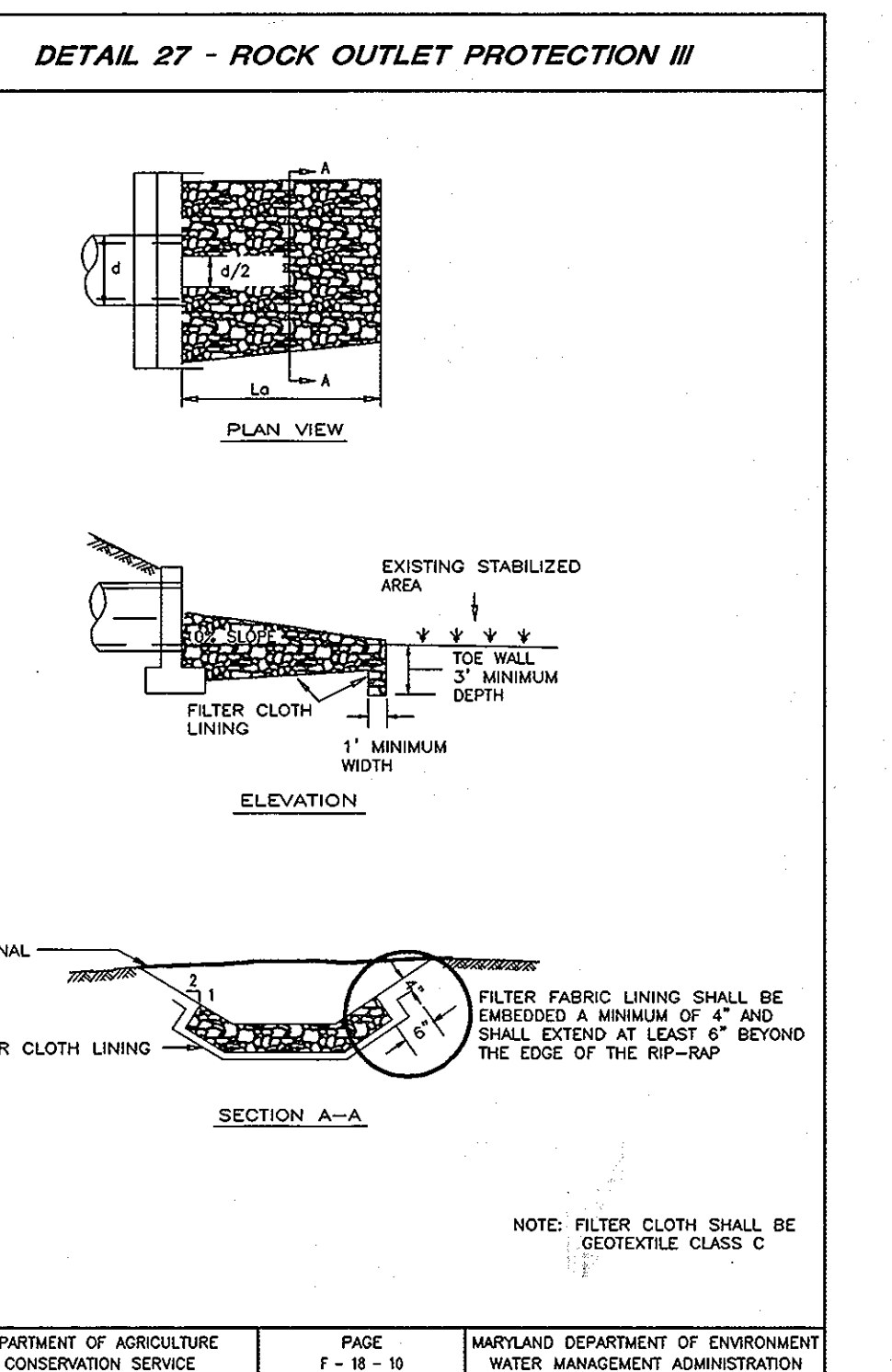
DETAIL 33 - SUPER SILT FENCE



DETAIL 1 - EARTH DIKE



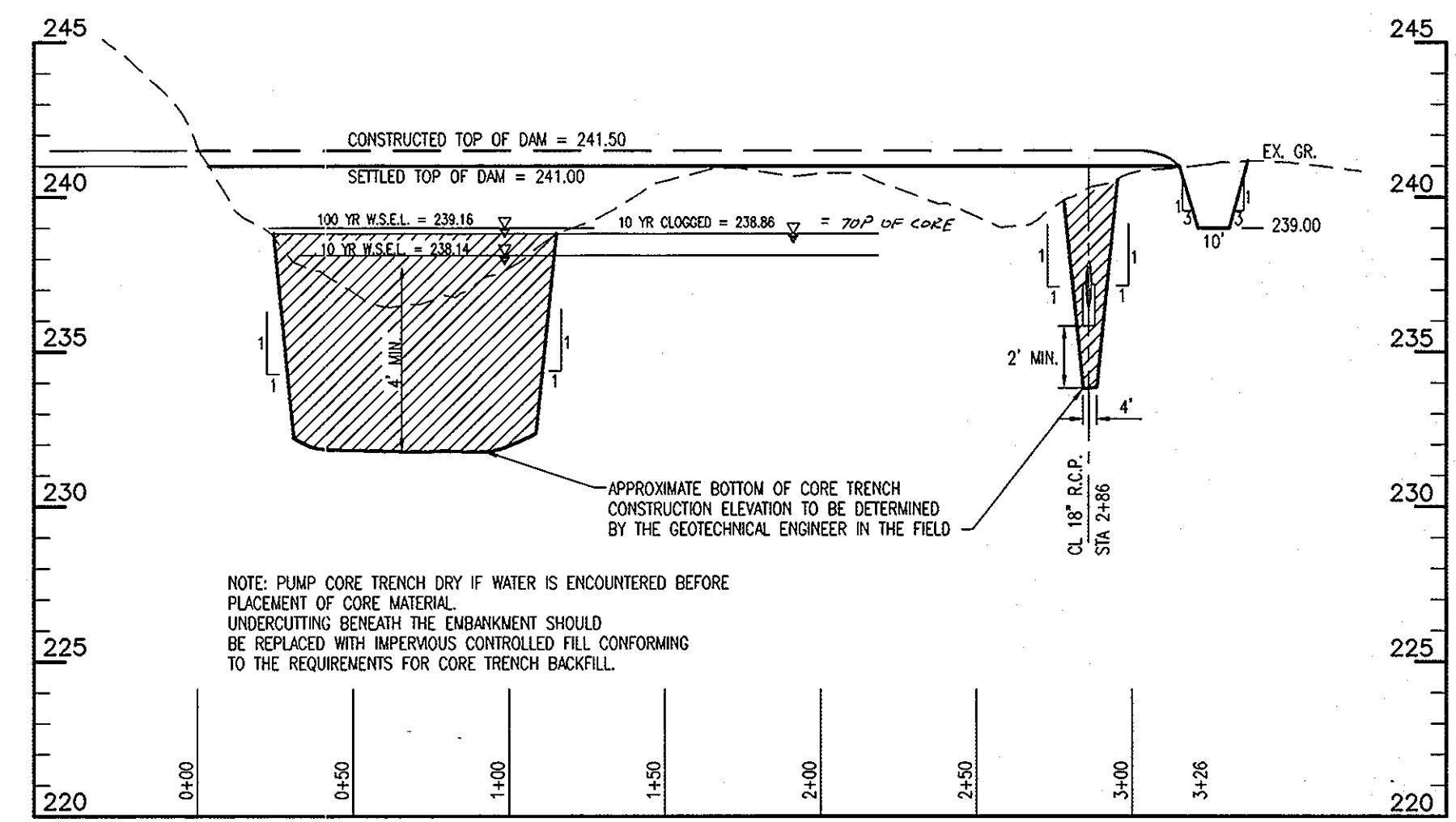
DETAIL 27 - ROCK OUTLET PROTECTION III



DETAIL 27 - ROCK OUTLET PROTECTION III

DETAIL 30 - EROSION CONTROL MATTING

DETAIL 33 - SUPER SILT FENCE



CROSS SECTION ALONG CL OF EMBANKMENT  
STORMWATER MANAGEMENT FACILITY

SCALE: HOR: 1"=50' VERT: 1"=5'

NO.	REVISION	DATE

**ENGINEERS CERTIFICATE**  
I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Robert H. Vogel 5/26/98  
SIGNATURE OF ENGINEER DATE

**DEVELOPER'S CERTIFICATE**  
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Robert W. Johnson 6/1/98  
SIGNATURE OF DEVELOPER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

J. Hamilton 6/2/98  
DIRECTOR DATE

C. Hamilton 6/2/98  
CHIEF, LAND DEVELOPMENT DATE

M. Dammann 5/30/98  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER
BOB'S BMW MOTORCYCLES	N/A	103 & 26
PLAT NO. 1318B	ZONE M-2	TAX/ZONE ELECT. DIST. 48 6
		CENSUS TR. 6064
WATER CODE B-02	SEWER CODE	4150000

**Bob's BMW MOTORCYCLES**  
SITE DEVELOPMENT PLAN  
NOTES AND DETAILS

TAX MAP #48 REFERENCE: AA# 97-12 & SDP-98-78  
PARCELS 103 & 26 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**MARKS & VOGEL ASSOCIATES, INC.**  
ENGINEERS - SURVYORS - PLANNERS

3691 PARK AVENUE, SUITE 101 ELLICOTT CITY, MARYLAND 21043  
TELEPHONE: (410) 461-5828 FAX: (410) 465-3966

DESIGN BY: M.D.M.  
DRAWN BY: M.D.M.  
CHECKED BY: R.H.V.  
DATE: JAN, 1998  
SCALE: AS SHOWN  
W.O. NO.: 96-59

8 SHEET OF 8

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