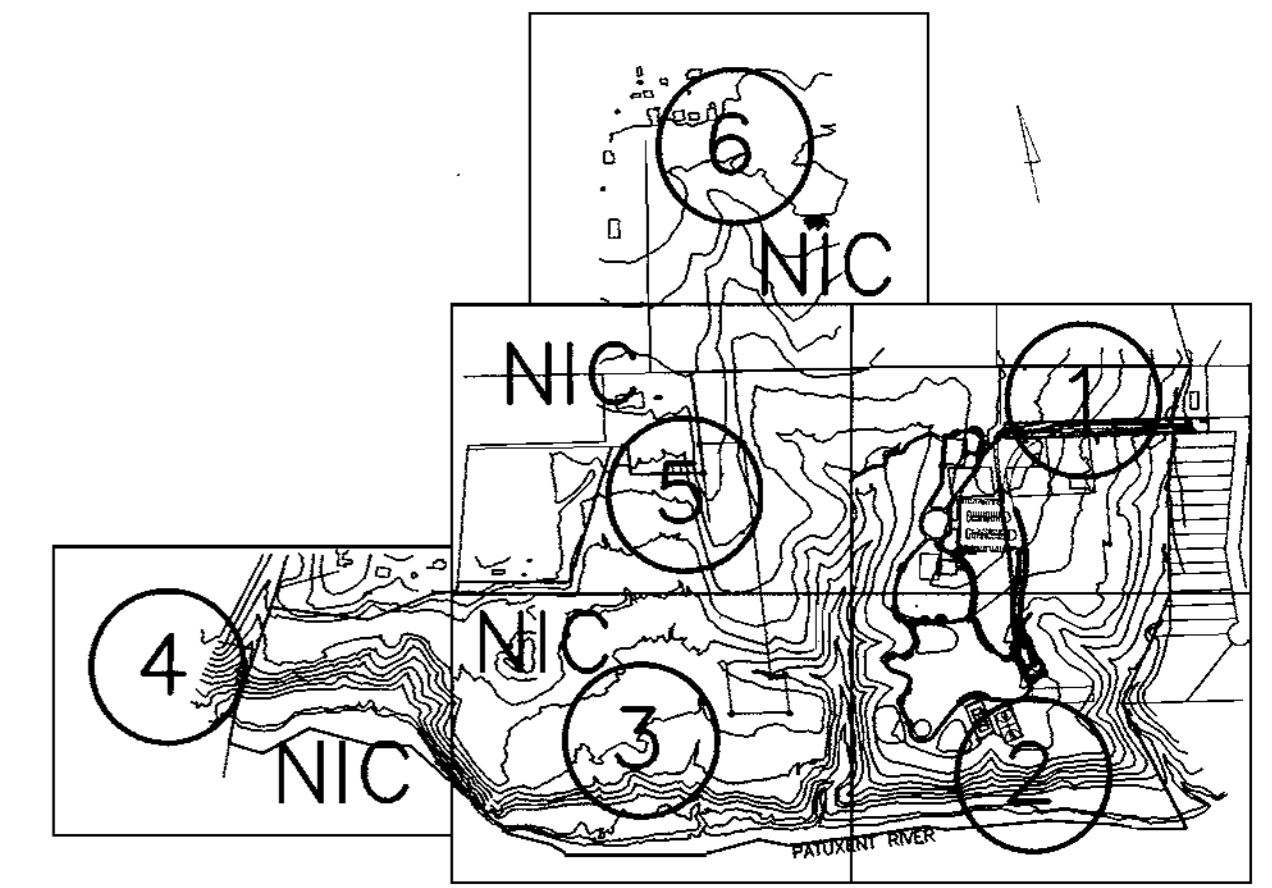


SITE DEVELOPMENT PLAN

HIGH RIDGE PARK

HOWARD COUNTY CAPITAL PROJECT NO. N-3064

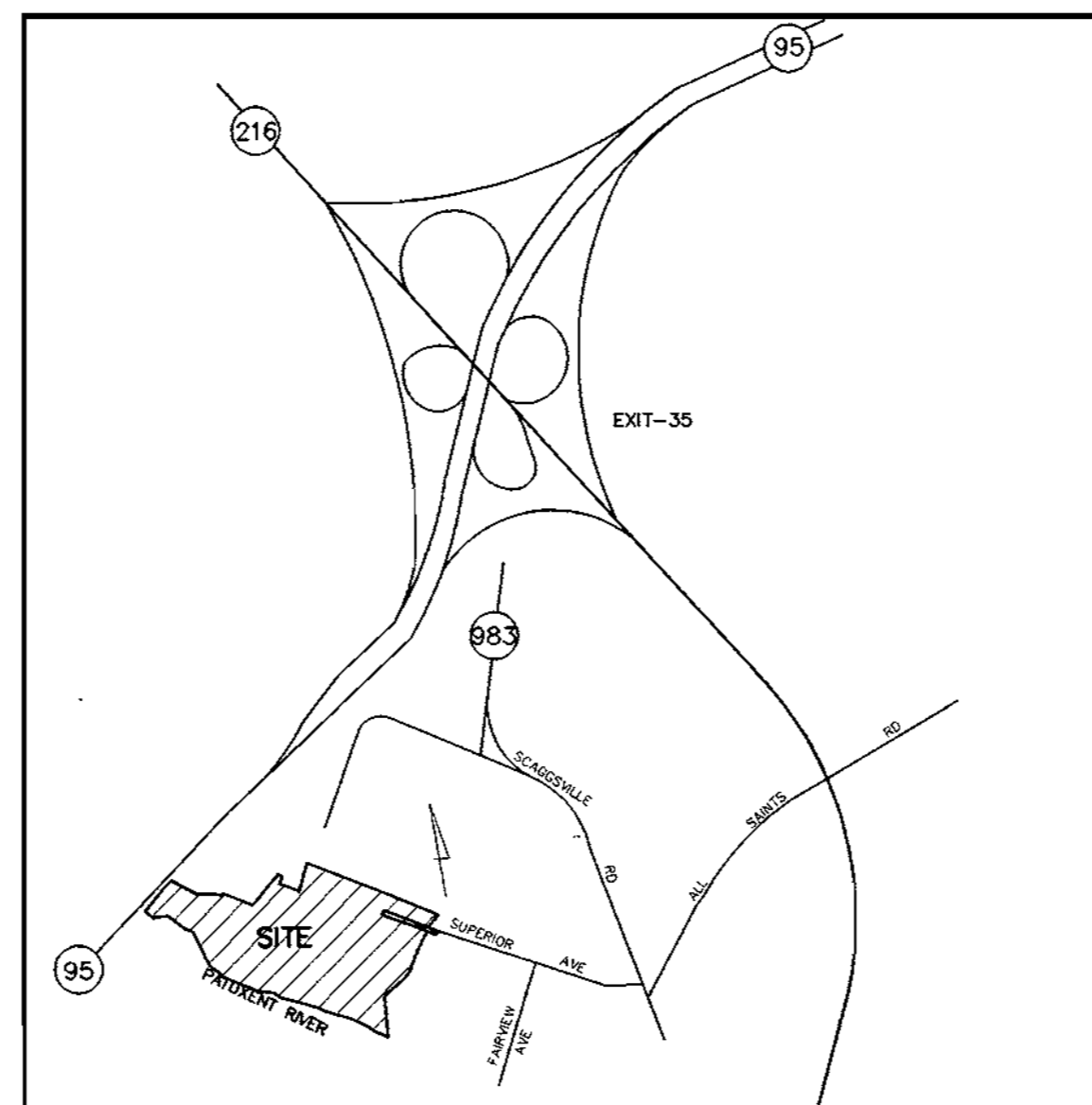
HOWARD COUNTY, MARYLAND



KEY MAP

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY AND MSHA STANDARDS AND SPECIFICATIONS WHERE APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
4. ALL PLAN DIMENSIONS ARE TO THE EDGES OF PAVED SURFACES UNLESS OTHERWISE NOTED.
5. HORIZONTAL DATUM: MARYLAND STATE PLANE COORDINATE GRID. BASED ON NORTH AMERICAN ADJUSTMENT OF 1983.
6. VERTICAL DATUM: MEAN SEA LEVEL OF U.S.C. & G SURVEY (1929 ADJUSTMENT).
7. TOPOGRAPHIC SURVEY PERFORMED BY FREDERICK WARD ASSOCIATES, INC. JANUARY 1997 COORDINATES USED ON THIS DRAWING REFER TO THE MARYLAND COORDINATE SYSTEM NAD 27.
8. PUBLIC WATER AND SEWER ARE AVAILABLE ON SITE. THE CONTRACT NUMBERS ARE 24-3818 FOR WATER AND SEWER. BOTH UTILITIES ARE IN THE LITTLE PATUXENT DRAINAGE AREA.
9. EXISTING UTILITIES WERE FIELD LOCATED IN CONJUNCTION WITH THE TOPOGRAPHIC SURVEY.
10. THE SITE LAYOUT SHEET SHOWS THE ENTIRE PARK PROPERTY AT 1" = 200' SCALE. CONSTRUCTION WILL OCCUR ON PLAN SHEETS 1 & 2. THE ENTIRE SITE IS SHOWN ON THE LAYOUT BELOW AND AT 1" = 200' IN THE SET OF DRAWINGS.
11. A TRAFFIC CONTROL PLAN MAY BE REQUIRED, AND IF REQUIRED MUST BE APPROVED FOR THIS PROJECT PRIOR TO CONSTRUCTION. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
12. STORMWATER MANAGEMENT IS PROVIDED BY AN EXTENDED DETENTION AND BIO-RETENTION AREA TO BE OWNED AND MAINTAINED BY HOWARD COUNTY.
13. WETLANDS DELINEATION BY FREDERICK WARD & ASSOCIATES, OCT., 1992. APPROVED BY MARYLAND DEPARTMENT OF THE ENVIRONMENT, APRIL 20, 1998, PERMIT NO. 98-NT-0108.
14. NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
15. THE LIMITS OF THE 100 YEAR FLOOD PLAIN AS SHOWN HEREON ARE FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL NO. 240044-0045 B EFFECTIVE DATE DECEMBER 4, 1986).
16. THE OBLIGATIONS OF FOREST CONSERVATION HAVE BEEN MET BY THE RETENTION OF 27.37 ACRES OF FOREST. FOREST CONSERVATION EASEMENT, AS SHOWN ON A FOREST CONSERVATION PLAT OF EASEMENT AND RECORDED IN THE LAND RECORDS OF HOWARD COUNTY.
17. THIS PARK IS A "CARRY IN CARRY OUT" PARK, MEANING THAT PARK PATRONS ARE RESPONSIBLE FOR THEIR OWN TRASH.
18. THE WATER LINE IS TO BE CONSTRUCTED AS A SEPARATE CONTRACT (#24-3818).
19. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN ANY WETLAND AREA, WETLAND BUFFER, FLOODPLAIN AREA, OR STREAM BUFFERS WITHOUT APPROVAL OF THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.



VICINITY MAP

SCALE 1" = 2000'

SITE ANALYSIS

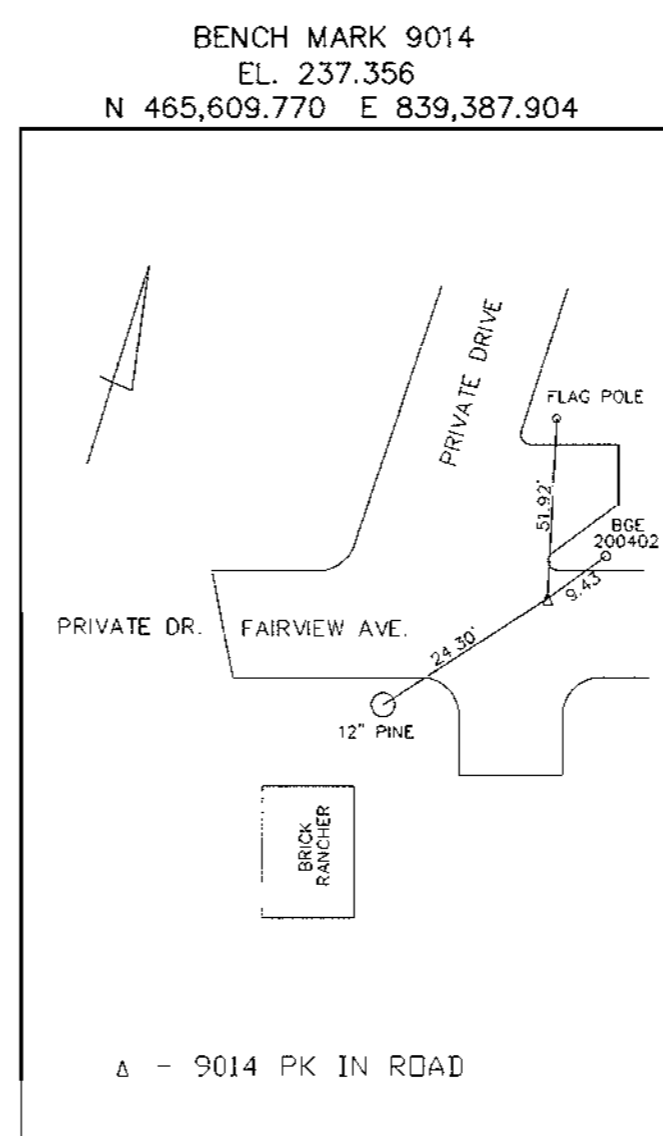
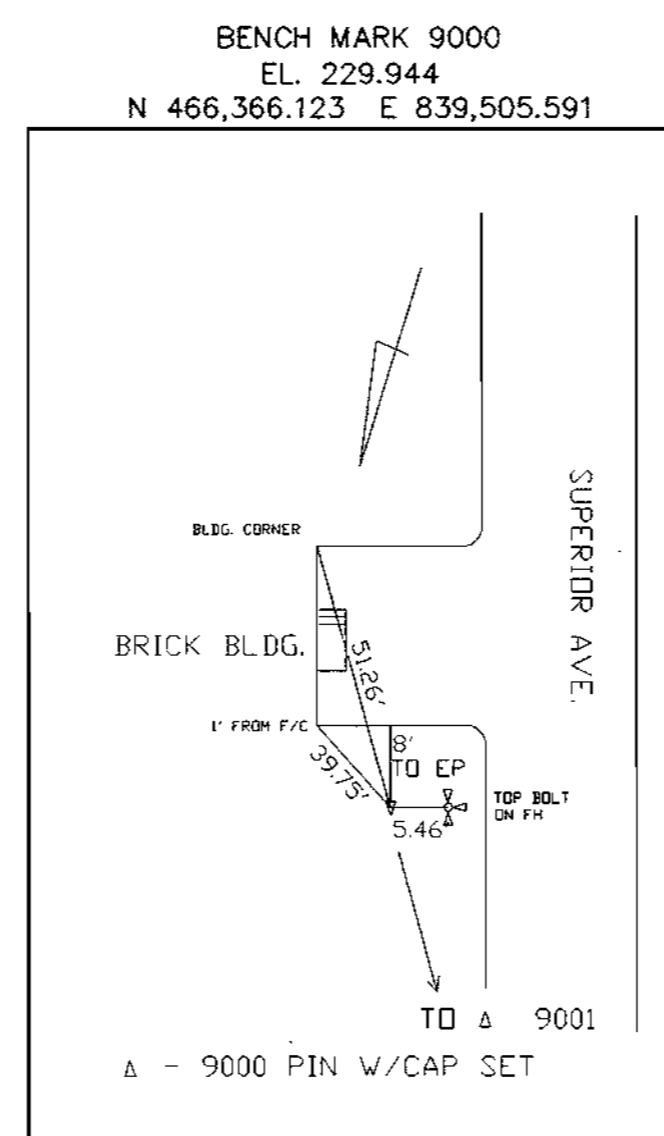
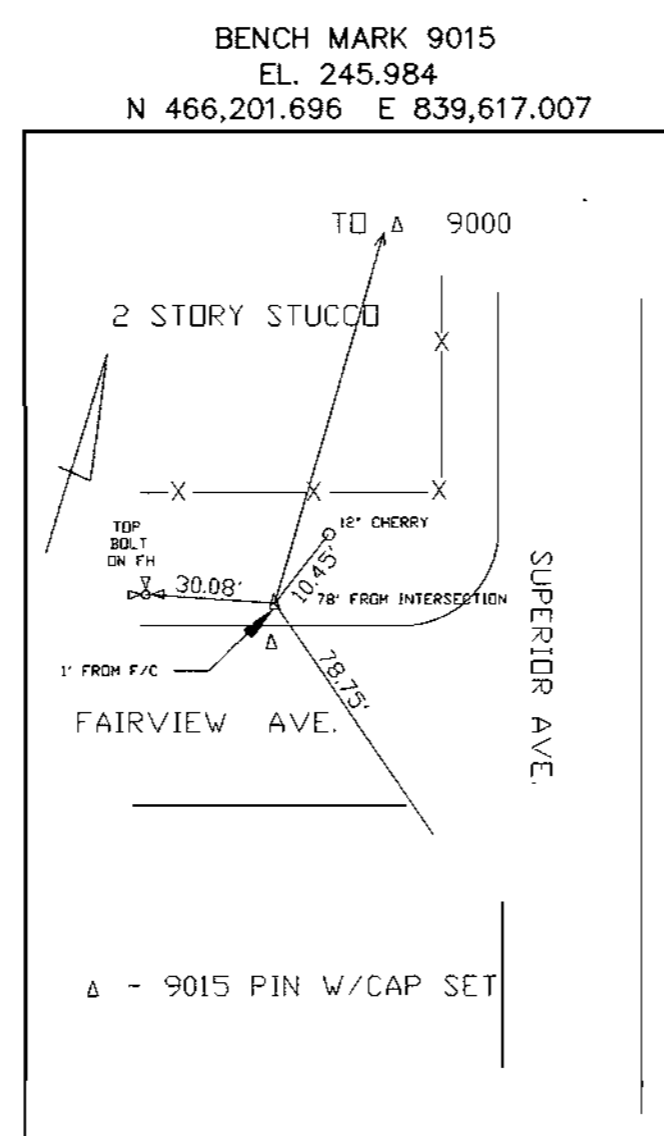
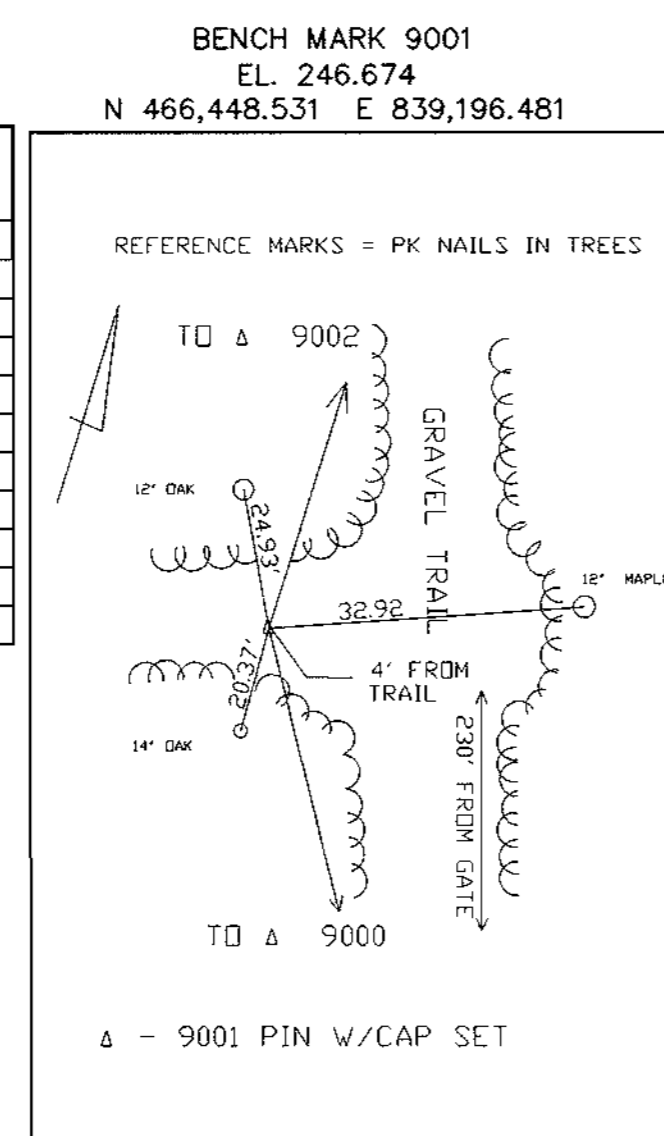
TOTAL SITE ACREAGE: 88.425 100 YEAR FLOOD PLAIN 4.96
 AREA TO BE DISTURBED: 10.6 ACRES

- PROPOSED FACILITIES:
- BASKETBALL COURT
 - TENNIS COURT
 - PICNIC, OPEN PLAY, HORSESHOES
 - RESTROOM/ SHELTER
 - 103 TOTAL PARKING / INCLUDES 6 HANDICAPPED

PROPERTY REFERENCES

TAX MAP	PARCEL	DESCRIPTION	DEED LIBER/FOLIO	AREA (ACRES)
50	2	RIVER HILL ROAD/CLYDE MILLS JR.	936/1	16.487
50	3(474)*	RIVER HILL ROAD	946/696	2.504
50	364	PATUXENT RIVER ABOVE DAM	1072/144	26.689
50	412**	14 LOTS (BLOCK 13)	993/99	3.380
50	412**	13 LOTS (PART OF BLOCK 5)	1037/50	2.755
50	412**	LOTS 1-4 (PART OF BLOCK 6)	925/715	0.689
50	412**	2 LOTS 17 & 18 (PART OF BLOCK 6)	1087/114	0.344
50	412**	LOTS 8 & 9 (PART OF BLOCK 10)	1028/556	0.344
50	412**	118 LOTS (BLOCKS 4-12 & 14)	1028/556	34.422
50	412	SUPERIOR AVE. R/W	216/33	0.811
		TOTAL		88.425

* TAX MAP SHOWS PARCEL 3. HOWEVER, DEED REFERENCE UNDER PARCEL 474.
 ** THE PAPER LOTS IN THE LAUREL HEIGHTS SUBDIVISION WERE ABANDONED BY DEED RECORDED IN THE LAND RECORDS OF HOWARD COUNTY AS SHOWN.



SHEET NO.	DESCRIPTION
1	COVER SHEET
2	OVERALL SITE PLAN
3	SITE PLAN (SP 1 OF 2)
4	SITE PLAN (SP 2 OF 2)
5	PARKING LOT AND PLAYGROUND PLAN
6	ROAD PROFILE
7	STORM DRAIN PROFILES
8	SITE PLAN DETAILS
9	STORMDRAIN DRAINAGE AREA MAP
10	SANITARY SEWER PROFILE
11	EROSION AND SEDIMENT CONTROL PLAN
12	EROSION AND SEDIMENT CONTROL PLAN
13	EROSION AND SEDIMENT CONTROL DETAILS
14	EROSION AND SEDIMENT CONTROL DETAILS
15	STORMWATER MANAGEMENT POND PLAN
16	STORMWATER MANAGEMENT POND DETAILS
17	STORMWATER MANAGEMENT NOTES
18	PRE-DEVELOPMENT DRAINAGE AREA MAP
19	POST - DEVELOPMENT DRAINAGE AREA MAP
20	LANDSCAPE PLANTING & FOREST CONSERVATION PLAN
21	LANDSCAPE PLANTING & FOREST CONSERVATION PLAN
22	FOREST CONSERVATION DETAILS
23	LANDSCAPE PLANTING DETAILS
24	TENNIS COURT & BASKETBALL COURT DETAILS

DATE	NUMBER	REVISION DESCRIPTION
1/19/2000	1	PLANNING & ZONING COMMENTS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature] 11/15/00
 CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4/17/01
 CHIEF-DIVISION OF LAND DEVELOPMENT DATE

[Signature] 4/18/01
 DIRECTOR DATE

APPROVED: DEPARTMENT OF RECREATION AND PARKS

[Signature] 10-25-00
 DIRECTOR DATE

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 10/27/00
 SIGNATURE OF DEVELOPER DATE

OWNER:
 HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS:
 7120 OAKLAND MILL
 COLUMBIA, MD 21046
 PHONE: 410-313-4687

DEVELOPER:
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS:
 3450 COURTHOUSE DRIVE
 ELLICOTT CITY, MD 21043
 PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS

GEF

GRACE E. FIELDER & ASSOCIATES, CHARTERED
 PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
 8101 SANDY SPRING ROAD
 SUITE 104
 LAUREL, MARYLAND 20707

PHONE: 301-470-2544
 FAX: 301-470-2545

DATE

[Signature]

PROFESSIONAL SEAL

FREDERICK WARD ASSOCIATES INC.
 ENGINEERS ARCHITECTS SURVEYORS
 5 SOUTH MAIN STREET BEL AIR, MARYLAND 21014 (410)879-0390

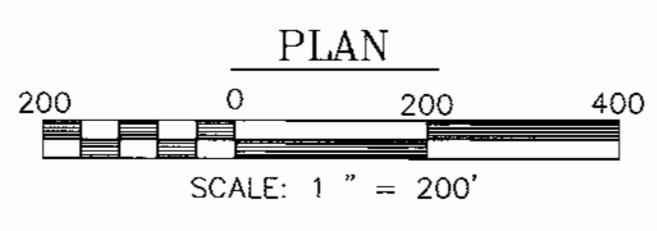
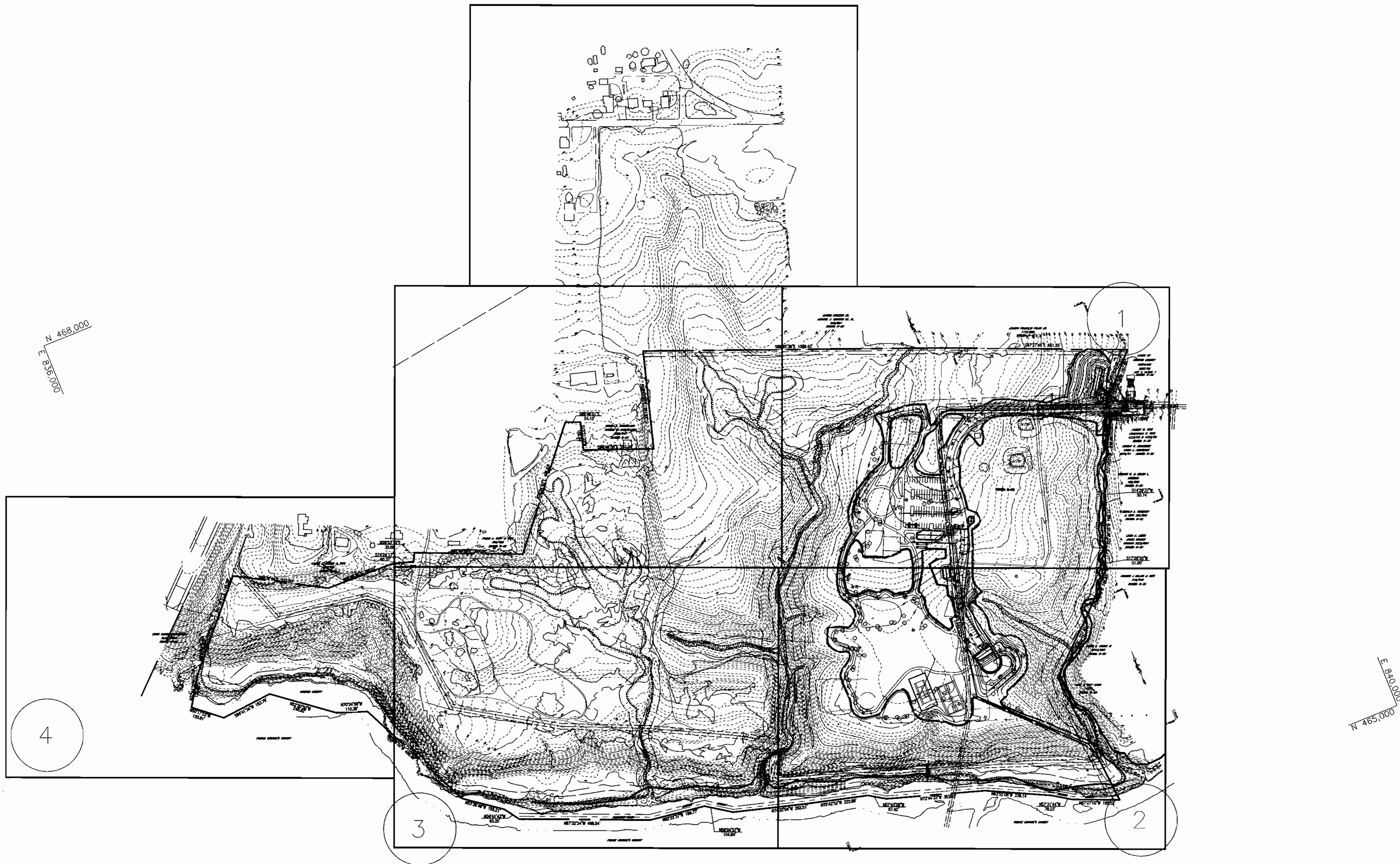
CENSUS TRACT NO: 6069.03 WATER CODE: C08
 PLAT NO. SEE PLAT LIST SEWER CODE: 7170900

TAX MAP 50, GRID 1 & 2
 ZONED R-20 & R-SC
 ELECTION DISTRICT 6 HOWARD COUNTY, MARYLAND

TITLE
 HIGH RIDGE PARK
 COVER SHEET

DESIGN BY: GEF	SCALE: AS SHOWN	PROJECT NO: GEF 92003
DRAWN BY: NRB	DATE: 04/02/00	DRAWING NUMBER
CHECKED BY: GEF	APPROVED: TMP	1 OF 24

THIS SET IN NAD-27



THIS OVERALL SITE INDICATES THE LOCATION OF SHEET 1 AND 2 WHICH ARE INCLUDED IN THIS SET OF DRAWINGS

DATE:	NUMBER:	REVISION DESCRIPTION:
1/19/2000	1	PLANNING & ZONING COMMENTS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

John Damann 11/15/00
 CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE

Sindy Howard 1/17/01
 CHIEF-DIVISION OF LAND DEVELOPMENT DATE

David Scott 1/18/01
 DIRECTOR DATE

APPROVED: DEPARTMENT OF RECREATION AND PARKS

George J. Arthur 10-26-00
 DIRECTOR DATE

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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.

James P. [Signature] 10/27/00
 SIGNATURE OF DEVELOPER DATE

OWNER

HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS:
 7120 OAKLAND MILL
 COLUMBIA, MD 21046
 PHONE: 410-313-4700

DEVELOPER

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS:
 3450 COURTHOUSE DRIVE
 ELLICOTT CITY, MD 21043
 PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS

GEF

GRACE E. FIELDER & ASSOCIATES, CHARTERED PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
 8101 SANDY SPRING ROAD
 SUITE 104
 LAUREL, MARYLAND 20707

PHONE: 301-470-2544
 FAX: 301-470-2545

FREDERICK WARD ASSOCIATES INC.
 ENGINEERS ARCHITECTS SURVEYORS
 5 SOUTH MAIN STREET BEL AIR, MARYLAND 21014 (410)879-2990

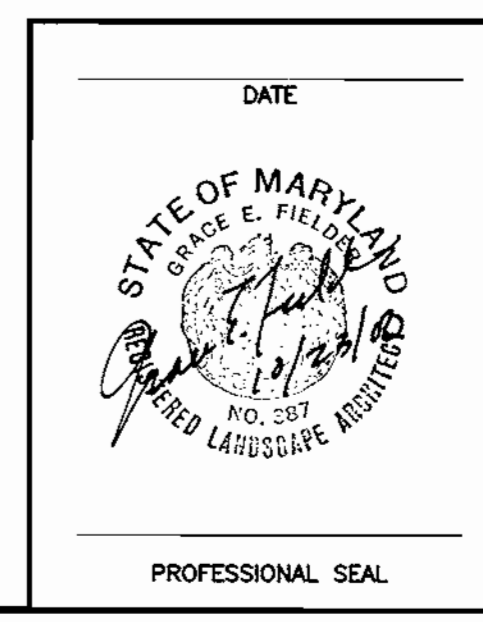
GENIUS TRACT NO.: 8068.03 WATER CODE: C06
 PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 7170900

TAX MAP 50, GRID 1 & 2
 ZONED R-20 & R-SC
 ELECTION DISTRICT 6 HOWARD COUNTY, MARYLAND

TITLE

HIGH RIDGE PARK
 OVERALL SITE PLAN

DESIGN BY: GEF	SCALE: 1"=200	PROJECT NO.:
DRAWN BY: GEF	DATE: 04/02/00	DRAWING NUMBER:
CHECKED BY: GEF	APPROVED: GEF	2 OF 24



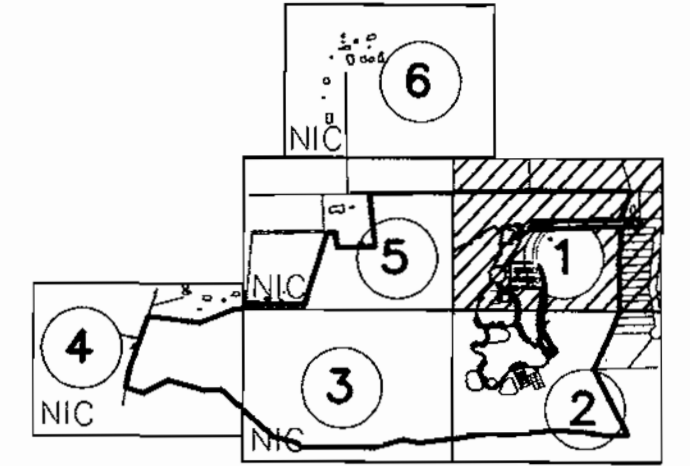
SDP 003 4

overcal.dwg 09/12/2000 09:42:06 AM EDT

MARTIN KRAESKI JR.
MICHAEL J. KRAESKI ET. AL.
6/19/591
ZONED: R-SC

R-SC BUILDING RESTRICTION LINES
FRONT: 20' (FROM LOCAL STREET) STRUCTURE
SIDE: 7.5' STRUCTURE
REAR: 30' STRUCTURE
FOR USES OTHER THAN
SFD: 20' SETBACK USE

JOSEPH FRANKLIN PYLES JR.
1177/525
ZONED: R-SC

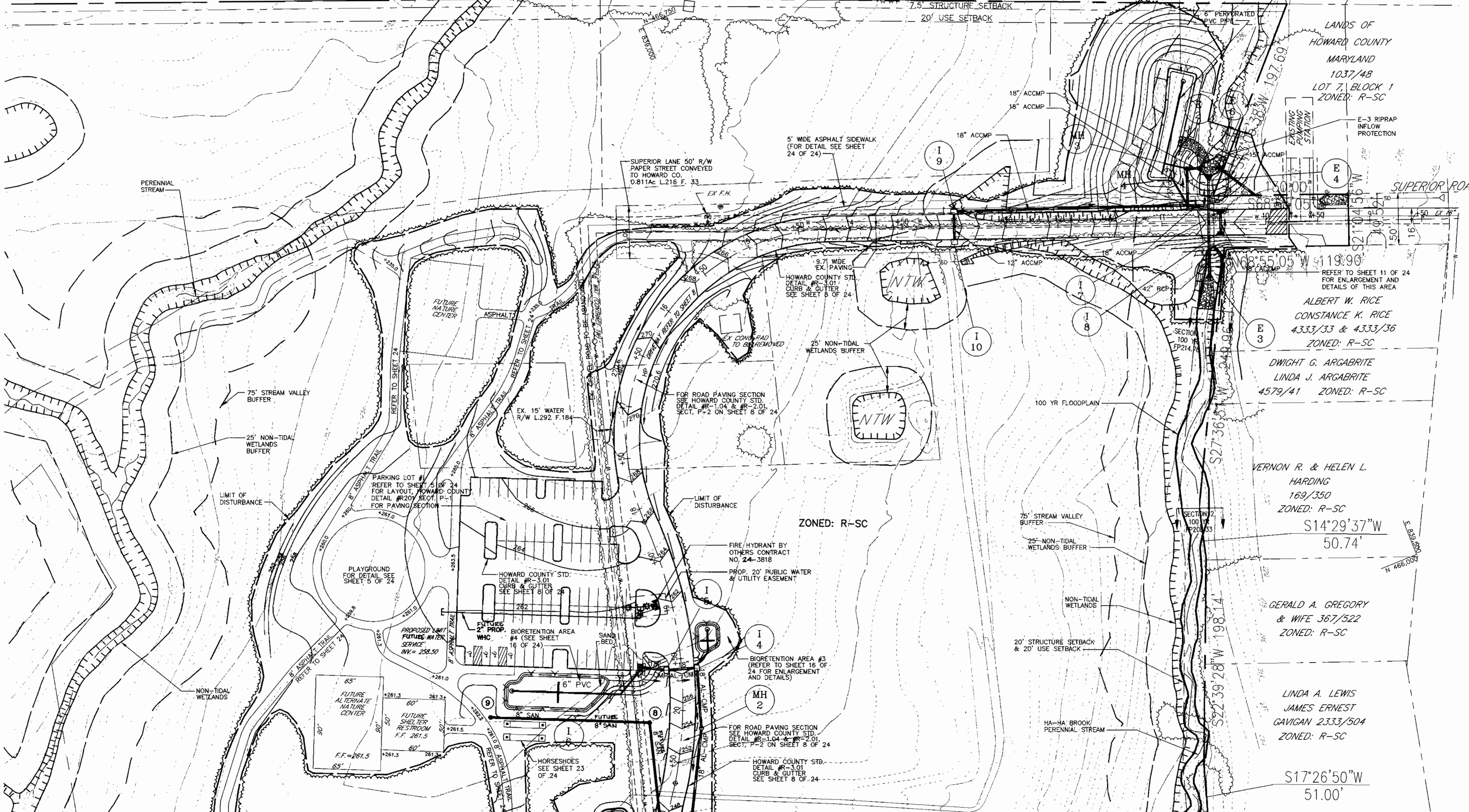


KEY MAP

35°39'E 1069.45'

S67°27'45"E 661.25'

10' x 71' BIORETENTION AREA #5
FOR SECTION SEE SHEET 11
OF 24



DATE:	NUMBER:	REVISION DESCRIPTION:
		APPROVED: DEPARTMENT OF PLANNING AND ZONING
		CHIEF-DEVELOPMENT ENGINEERING DIVISION
		CHIEF-DIVISION OF LAND DEVELOPMENT
		APPROVED: DEPARTMENT OF RECREATION AND PARKS

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

ALBERT W. RICE
CONSTANCE K. RICE
4333/33 & 4333/36
ZONED: R-SC

DWIGHT G. ARGABRITE
LINDA J. ARGABRITE
4579/41 ZONED: R-SC

VERNON R. & HELEN L. HARDING
169/350
ZONED: R-SC

GERALD A. GREGORY
& WIFE 367/522
ZONED: R-SC

LINDA A. LEWIS
JAMES ERNEST
GAVIGAN 2333/504
ZONED: R-SC

BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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.

JAMES ERNEST
SIGNATURE OF DEVELOPER 10/27/00
DATE

OWNER:
HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS:
7120 OAKLAND MILL
COLUMBIA, MD 21046
PHONE: 410-313-4700

DEVELOPER:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS:
3450 COURTHOUSE DRIVE
ELlicOTT CITY, MD 21043
PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS

GEF

GRACE E. FIELDER & ASSOCIATES, CHARTERED PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
14201 LAUREL PARK DRIVE
SUITE 105
LAUREL, MARYLAND 20707

PHONE: 301-470-2544
FAX: 301-470-2545

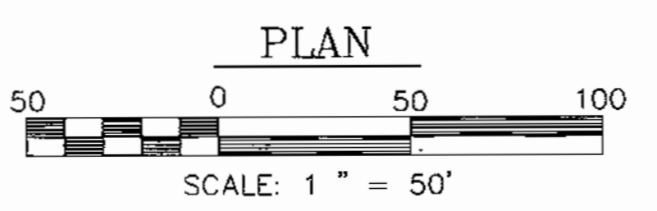
FREDERICK WARD ASSOCIATES INC.
ENGINEERS ARCHITECTS SURVEYORS
5 SOUTH MAIN STREET BEL AIR, MARYLAND 21014 (410)879-2990

CENSUS TRACT NO.: 6069.03	WATER CODE: C06	
PLAT NO. SEE SHEET 1 OF 25	SEWER CODE: 7170900	
TAX MAP 50, GRID 1 & 2		
ZONED R-20 & R-SC		
ELECTION DISTRICT 6 HOWARD COUNTY, MARYLAND		
TITLE: HIGH RIDGE PARK SITE PLAN		
DESIGN BY: GEF	SCALE: AS SHOWN	PROJECT NO.:
DRAWN BY: GEF	DATE: 04/02/00	DRAWING NUMBER:
CHECKED BY: GEF	APPROVED: GEF	3 OF 24

LEGEND

- LIMIT OF DISTURBANCE (SAME AS TREE PROTECTION FENCE)
- SF- SILT FENCE
- 250 PROP CONTOUR
- 250 EX CONTOUR
- TSOS PROP. EARTH DIKE
- STONE OUTLET STRUCTURE
- EXISTING TREE LINE
- LIMIT OF CLEARING
- LIMIT OF NONTIDAL WETLANDS
- LIMIT OF 25' NONTIDAL WETLAND BUFFER
- LIMIT OF 75' STREAM BUFFER
- STABILIZED CONSTRUCTION ENTRANCE

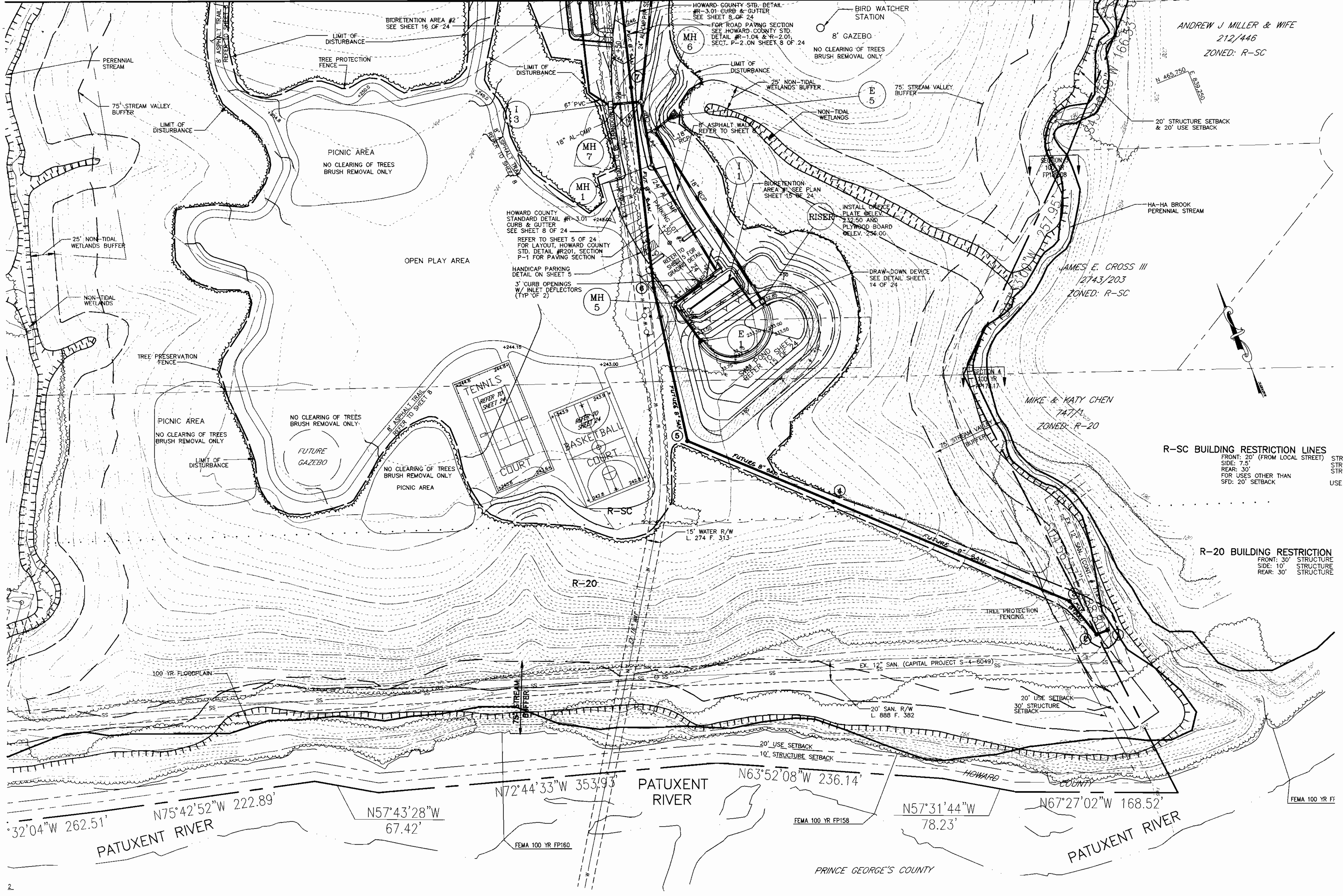
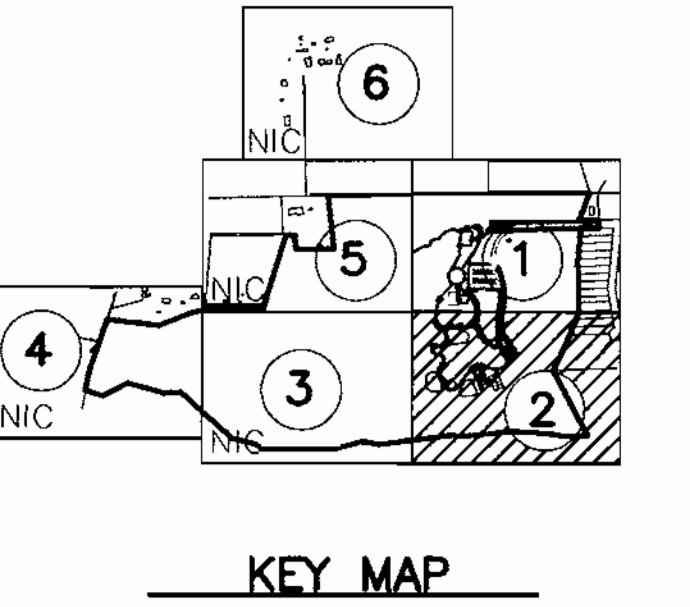
MATCH LINE SEE SHEET 4



STATE OF MARYLAND
GRACE E. FIELDER
REGISTERED PROFESSIONAL ENGINEER
10/23/00

SDP 0034

MATCH LINE SEE SHEET 3



ANDREW J. MILLER & WIFE
212/446
ZONED: R-SC

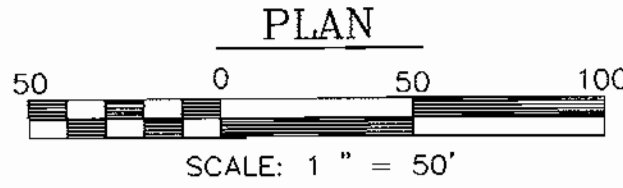
JAMES E. CROSS III
2743/203
ZONED: R-SC

MIKE & KATY CHEN
7474
ZONED: R-20

R-SC BUILDING RESTRICTION LINES
FRONT: 20' (FROM LOCAL STREET)
SIDE: 7.5' STRUCTURE
REAR: 30' STRUCTURE
FOR USES OTHER THAN
SFD: 20' SETBACK USE

R-20 BUILDING RESTRICTION
FRONT: 30' STRUCTURE
SIDE: 10' STRUCTURE
REAR: 30' STRUCTURE

- LIMIT OF DISTURBANCE (SAME AS TREE PROTECTION FENCE)
- SF SILT FENCE
- 250 PROP CONTOUR
- 250 EX CONTOUR
- TSOS PROP. EARTH DIKE
- STONE OUTLET STRUCTURE
- EXISTING TREE LINE
- LIMIT OF CLEARING
- LIMIT OF NONTIDAL WETLANDS
- LIMIT OF 25' NONTIDAL WETLAND BUFFER
- LIMIT OF 75' STREAM BUFFER
- STABILIZED CONSTRUCTION ENTRANCE



DATE	NUMBER	REVISION DESCRIPTION
APPROVED: DEPARTMENT OF PLANNING AND ZONING		
		11/15/00 DATE
		1/17/01 DATE
		1/18/01 DATE
APPROVED: DEPARTMENT OF RECREATION AND PARKS		
		10-26-00 DATE

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

SIGNATURE OF ENGINEER DATE

BY THE DEVELOPER:
I WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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.

SIGNATURE OF DEVELOPER DATE

OWNER:
HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS:
7120 OAKLAND MILL
COLUMBIA, MD 21046
PHONE: 410-313-4700

DEVELOPER:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS:
3450 COURTHOUSE DRIVE
ELLCOTT CITY, MD 21043
PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS

GEF

GRACE E. FIELDER & ASSOCIATES, CHARTERED PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
14201 LAUREL PARK DRIVE
SUITE 105
LAUREL, MARYLAND 20707
PHONE: 301-470-2544
FAX: 301-470-2545

FREDERICK WARD ASSOCIATES INC.
ENGINEERS ARCHITECTS SURVEYORS
5 SOUTH MAIN STREET BEL AIR, MARYLAND 21014 (410)797-0990

CENSUS TRACT NO.: 8069.03 WATER CODE: C06
PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 7170900

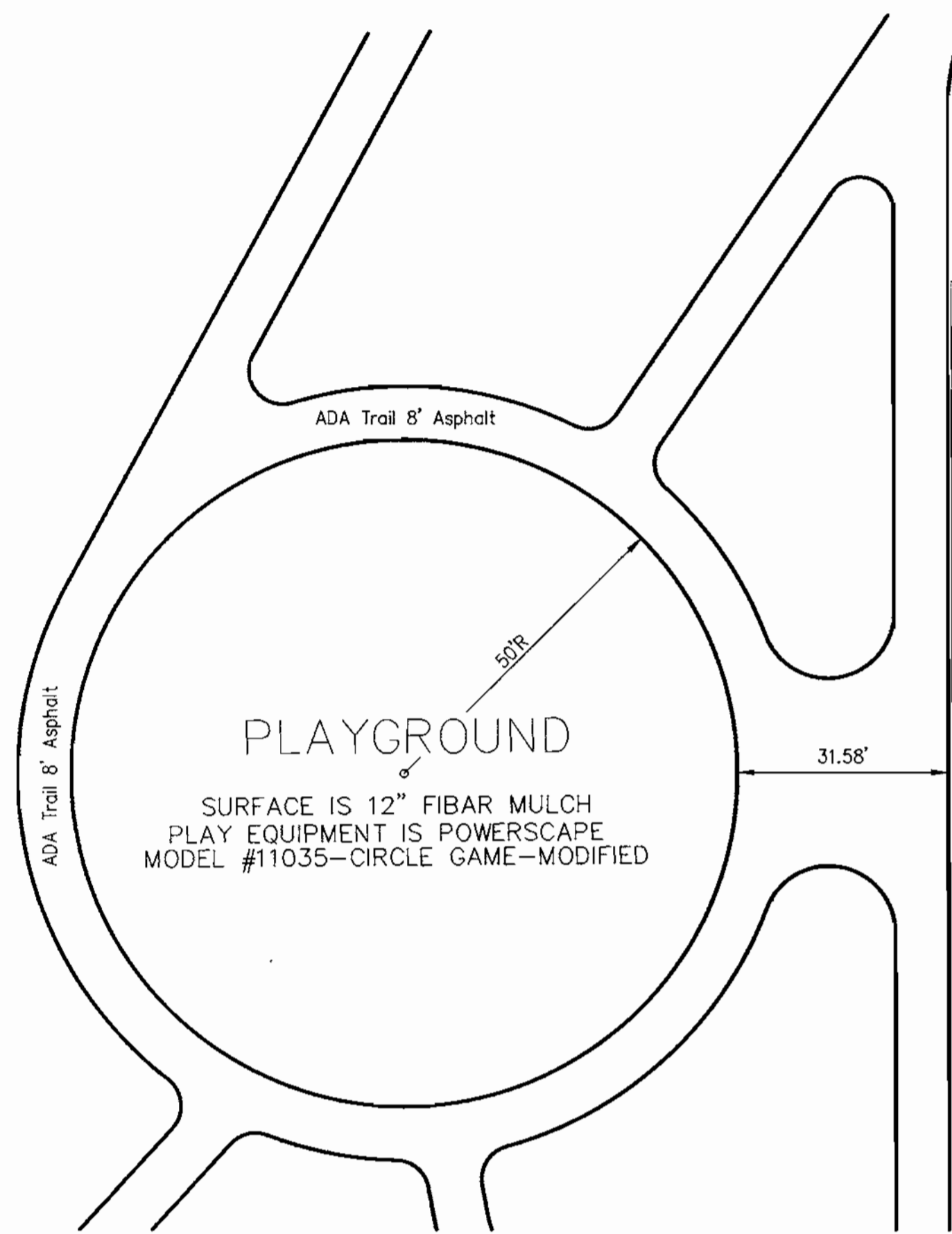
TAX MAP 50, GRID 1 & 2
ZONED R-20 & R-SC
ELECTION DISTRICT 6 HOWARD COUNTY, MARYLAND

TITLE
HIGH RIDGE PARK
SITE PLAN

DESIGN BY: GEF	SCALE: AS SHOWN	PROJECT NO.:
DRAWN BY: GEF	DATE: 04/02/00	DRAWING NUMBER
CHECKED BY: GEF	APPROVED: GEF	4 OF 24



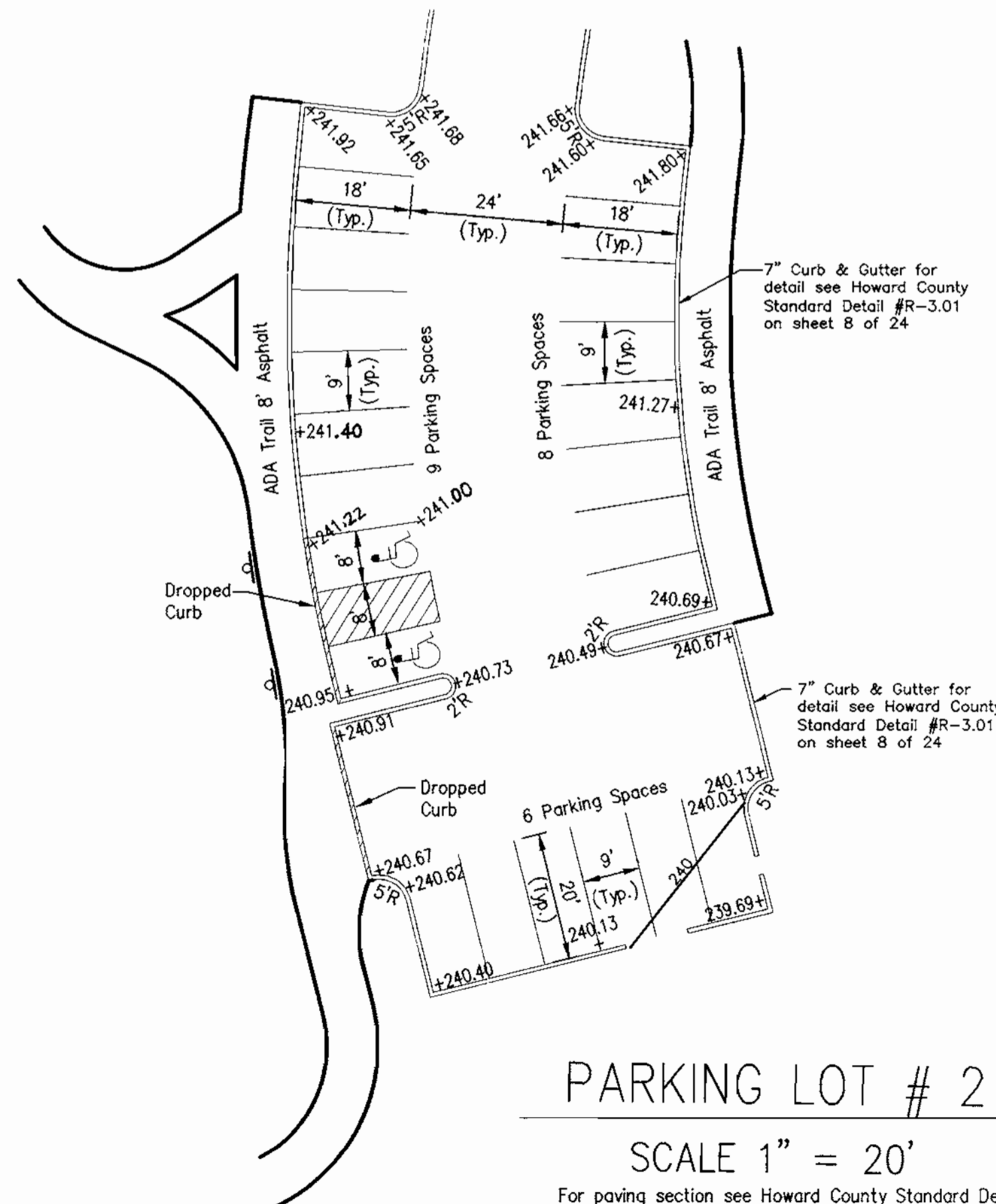
SDP0054



PLAYGROUND

SCALE 1" = 20'

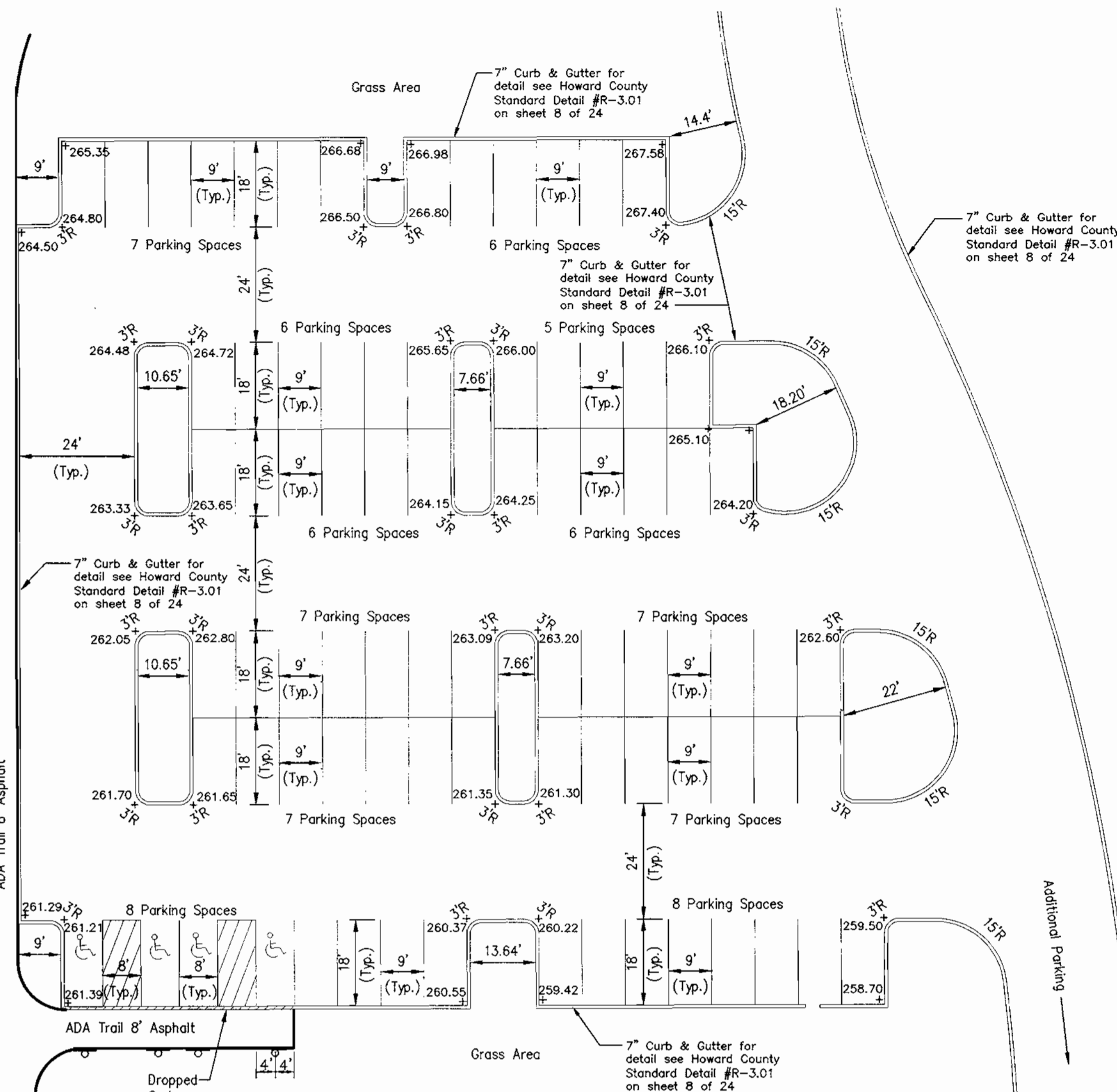
PLAYGROUND EQUIPMENT LIST		
QUAN.	NUMBER	DESCRIPTION/ MANUFACTURER
1	11035	POWERSCAPE MODEL- CIRCLE GAME



PARKING LOT # 2

SCALE 1" = 20'

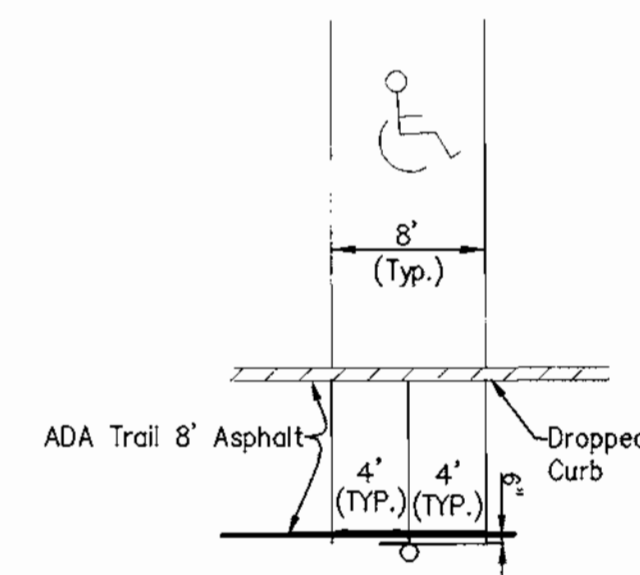
For paving section see Howard County Standard Details #R-201, Section P-1 on sheet 8 of 24



PARKING LOT # 1

SCALE 1" = 20'

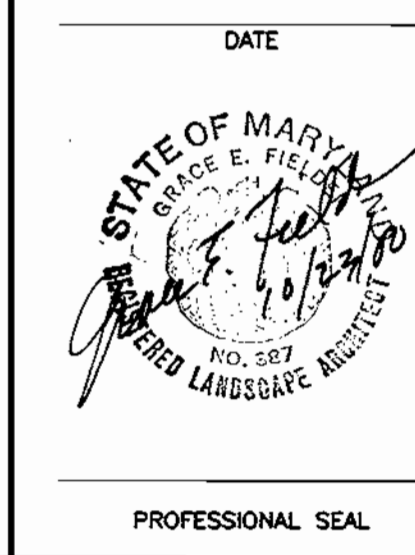
For paving section see Howard County Standard Details #R-201, Section P-1 on sheet 8 of 24



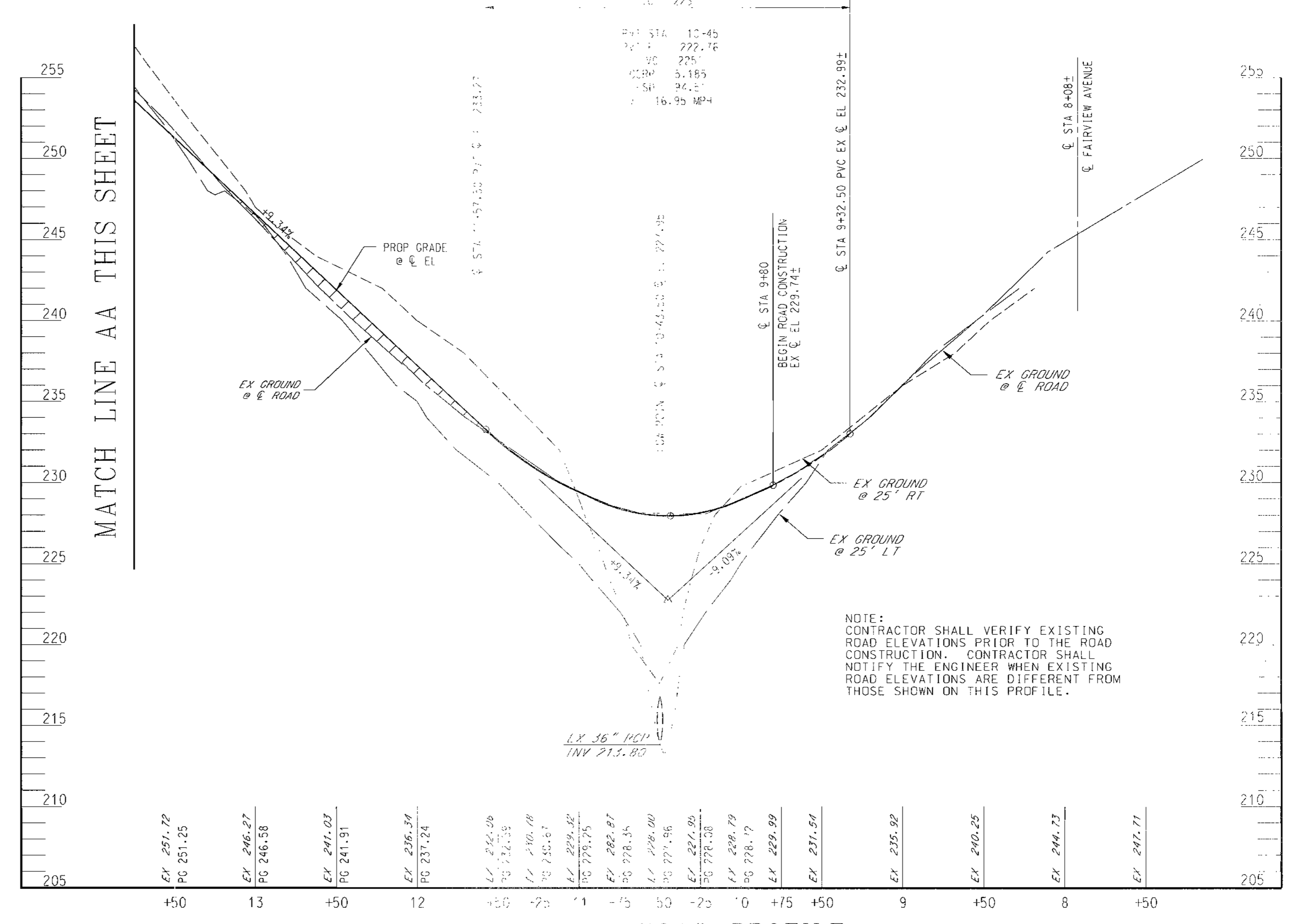
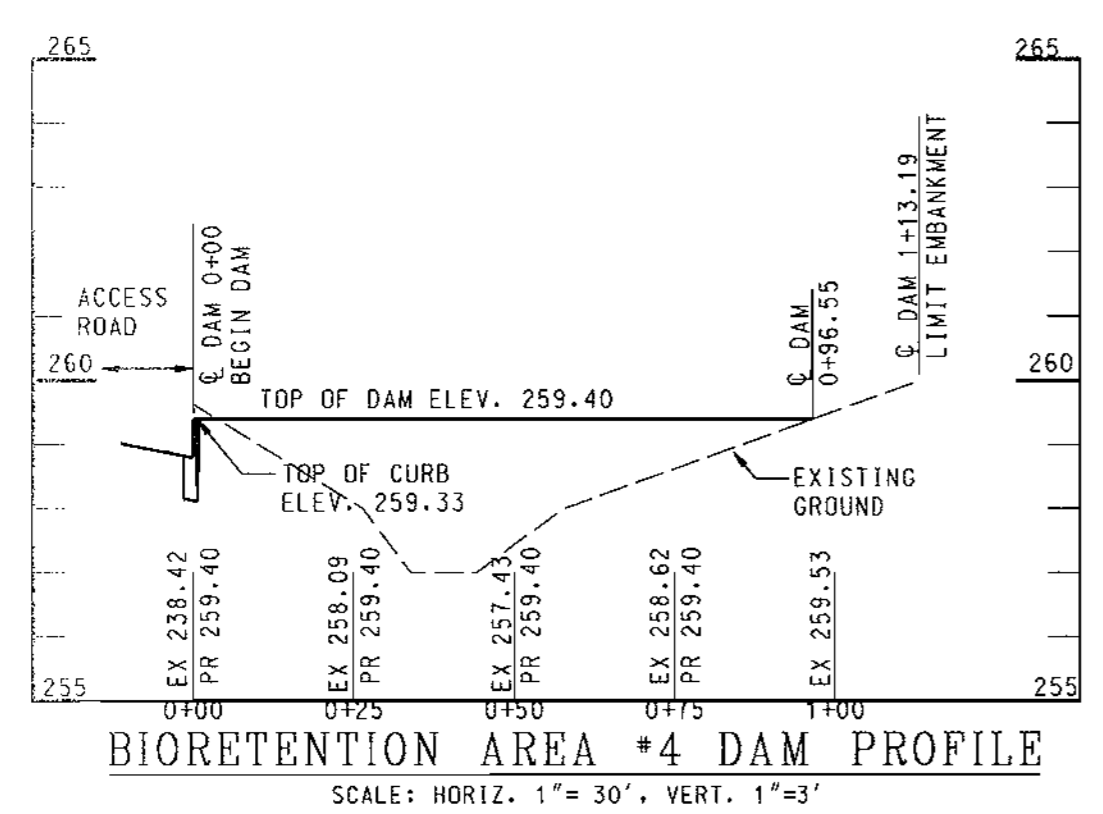
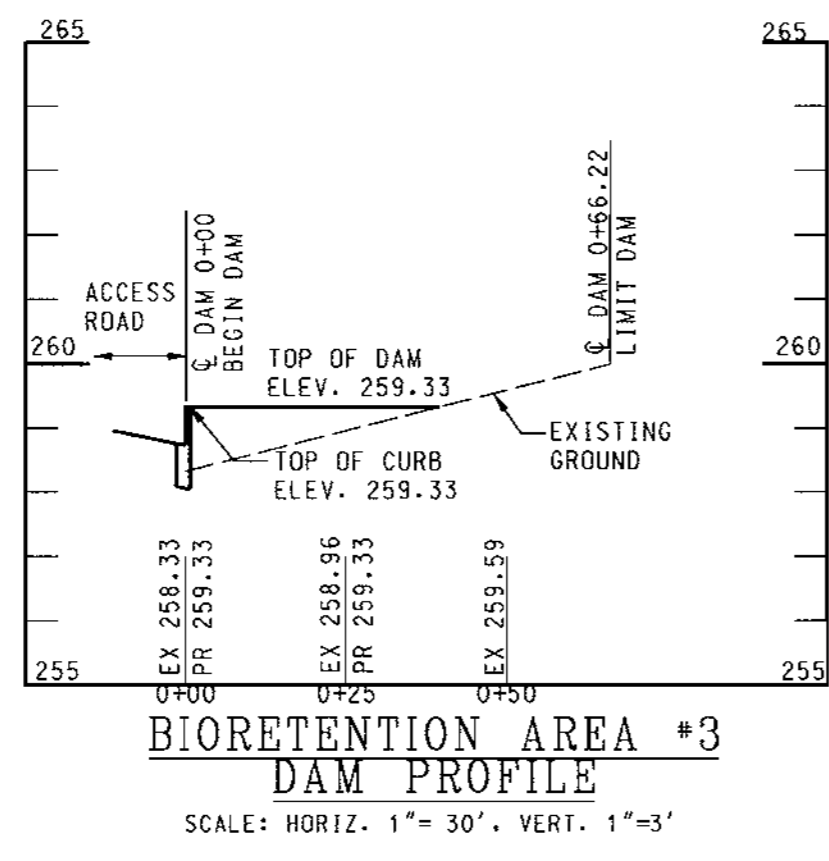
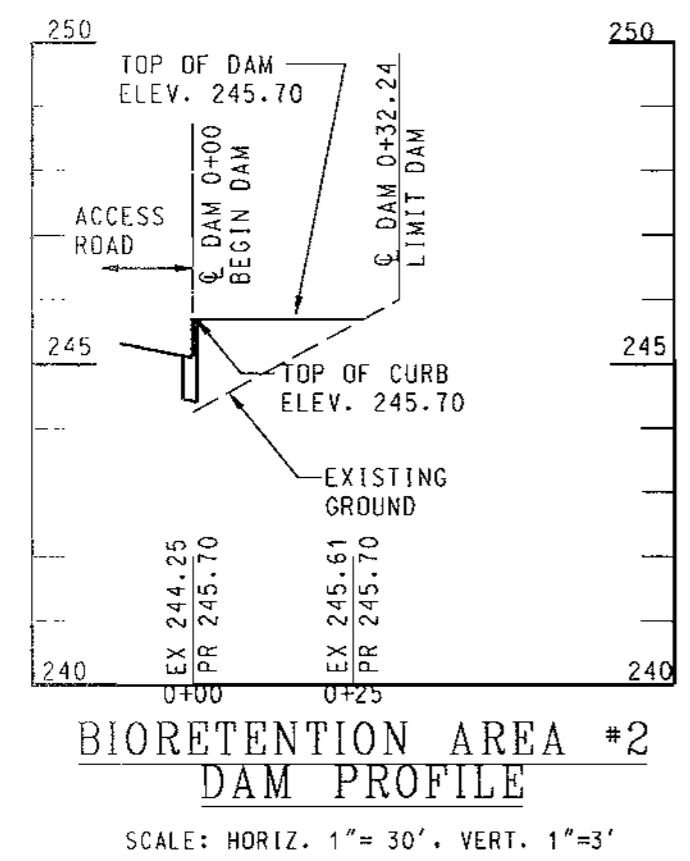
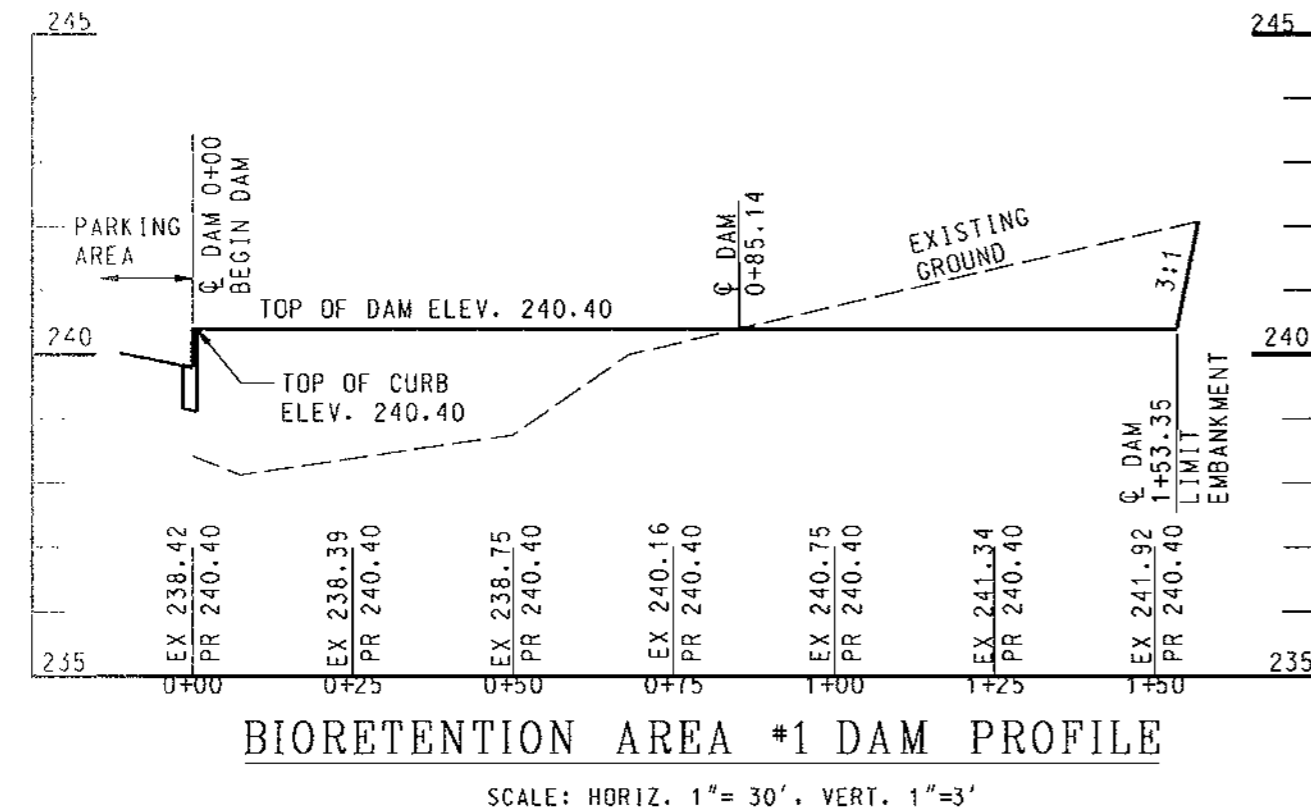
SIGN LOCATION

NTS

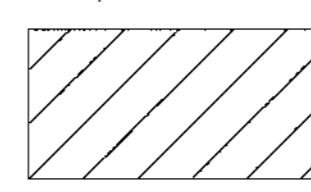
DATE	NUMBER	REVISION DESCRIPTION
		APPROVED: DEPARTMENT OF PLANNING AND ZONING
		CHIEF-DEVELOPMENT ENGINEERING DIVISION
		CHIEF-DIVISION OF LAND DEVELOPMENT
		DIRECTOR
		APPROVED: DEPARTMENT OF RECREATION AND PARKS
		DIRECTOR
BY THE ENGINEER:		
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.		
SIGNATURE OF ENGINEER		DATE
BY THE DEVELOPER:		
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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.		
SIGNATURE OF DEVELOPER		DATE
OWNER		
HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS: 7120 OAKLAND MILL COLUMBIA, MD 21046 PHONE: 410-313-4700		
DEVELOPER		
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS: 3450 COURTHOUSE DRIVE ELLCOTT CITY, MD 21043 PHONE: 410-313-2014		
PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS		
GEF		
GRACE E. FIELDER & ASSOCIATES, CHARTERED PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS 8101 SANDY SPRING ROAD SUITE 104 LAUREL, MARYLAND 20707 PHONE: 301-470-2544 FAX: 301-470-2545		
FREDERICK WARD ASSOCIATES INC. ENGINEERS ARCHITECTS SURVEYORS 5 SOUTH MAIN STREET BEL AIR, MARYLAND 21014 (410)879-2898		
CENSUS TRACT NO.: 6069.03 WATER CODE: C06 PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 7170900		
TAX MAP 50, GRID 1 & 2 ZONED R-20 & R-SC ELECTION DISTRICT 6 HOWARD COUNTY, MARYLAND		
TITLE HIGH RIDGE PARK PARKING LOT AND PLAYGROUND PLAN DETAIL CAPITAL PROJECT N 3064		
DESIGN BY: GEF	SCALE: AS SHOWN	PROJECT NO.:
DRAWN BY: GEF/NB/CV	DATE: 04/02/00	DRAWING NUMBER
CHECKED BY: GEF	APPROVED: GEF	5 OF 24

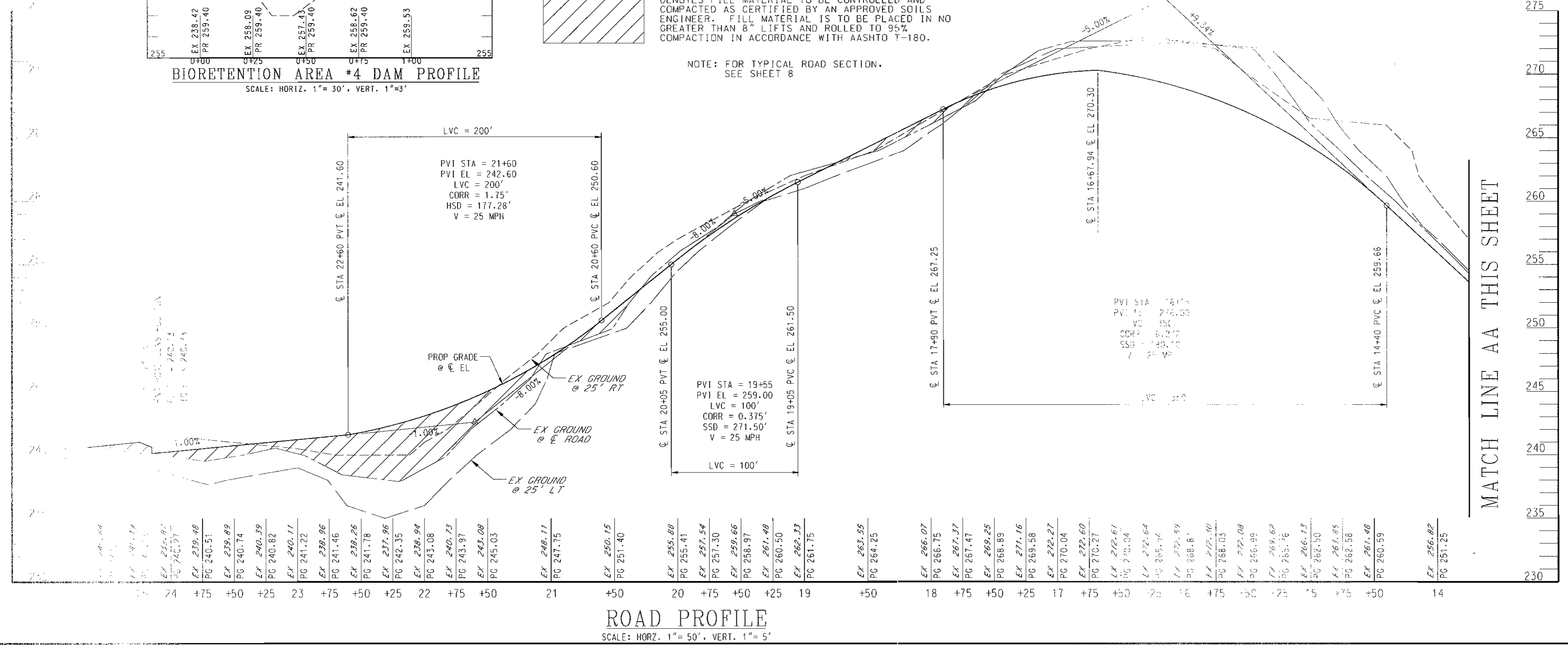



SDP 0034



NOTE: CONTRACTOR SHALL VERIFY EXISTING ROAD ELEVATIONS PRIOR TO THE ROAD CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN EXISTING ROAD ELEVATIONS ARE DIFFERENT FROM THOSE SHOWN ON THIS PROFILE.


 DENOTES FILL MATERIAL TO BE CONTROLLED AND COMPACTED AS CERTIFIED BY AN APPROVED SOILS ENGINEER. FILL MATERIAL IS TO BE PLACED IN NO GREATER THAN 8" LIFTS AND ROLLED TO 95% COMPACTION IN ACCORDANCE WITH AASHTO T-180.
 NOTE: FOR TYPICAL ROAD SECTION, SEE SHEET 8



3/3/00
 DATE

 17299
 PROFESSIONAL ENGR. NO.

SDP #
PLANNING BOARD APPROVAL

DATE	NUMBER	REVISION DESCRIPTION
11/15/00		APPROVED: DEPARTMENT OF PLANNING AND ZONING
1/17/01		CHIEF-DEVELOPMENT ENGINEERING DIVISION
1/18/01		CHIEF-DIVISION OF LAND DEVELOPMENT
		DIRECTOR

APPROVED: DEPARTMENT OF RECREATION AND PARKS

 DIRECTOR 10-26-00 DATE

THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 SIGNATURE OF ENGINEER: _____ DATE: _____

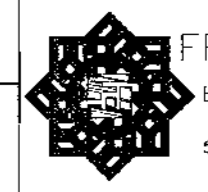
BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEVELOPMENT BY THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
 SIGNATURE OF DEVELOPER: _____ DATE: _____

OWNER
 HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
 7120 OAKLAND MILL
 COLUMBIA, MD 21046
 PHONE: 410-313-4700

DEVELOPER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 3450 COURTHOUSE DRIVE
 ELLICOTT CITY, MD 21043
 PHONE: 410-313-2014

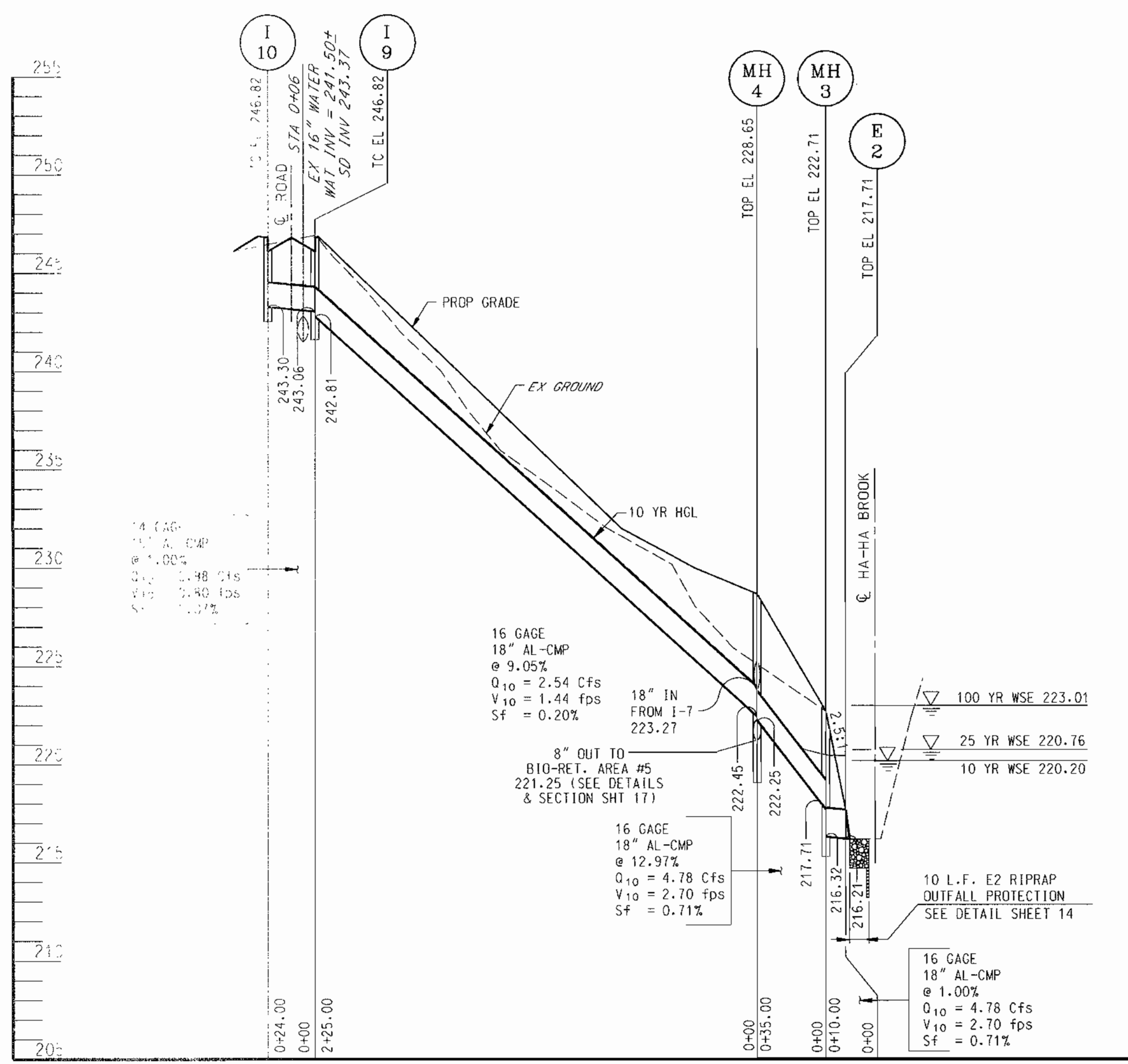
PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS

GEF
 GRACE E. FIELDER & ASSOCIATES, CHARTERED PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
 8101 SANDY SPRING ROAD
 SUITE 104
 LAUREL, MARYLAND 20701
 PHONE: 301-470-2544
 FAX: 301-470-2545

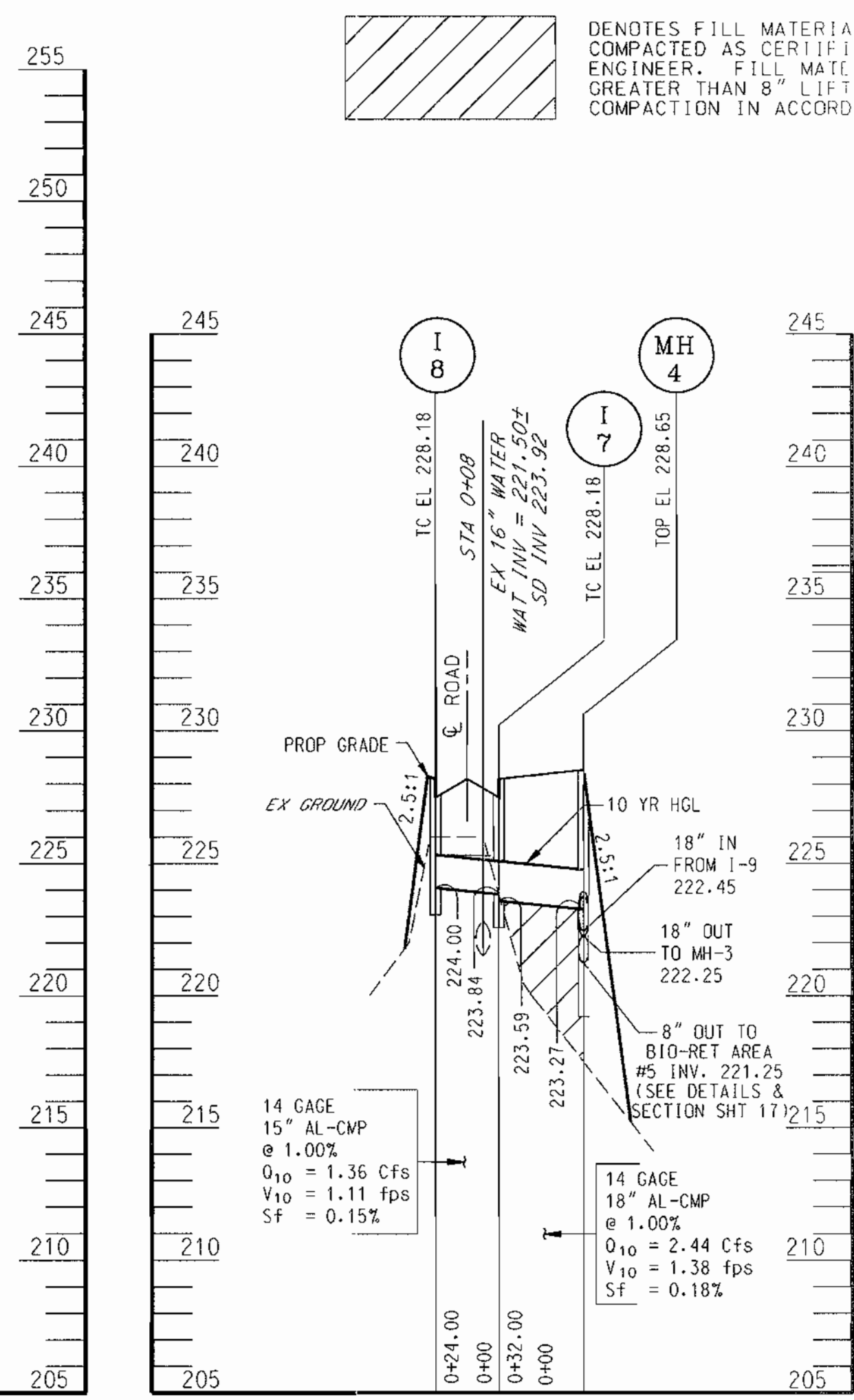
 FREDERICK WARD ASSOCIATES INC.
 ENGINEERS ARCHITECTS SURVEYORS
 5 SOUTH MAIN STREET RE: BAL, MD 21036 (410) 679-2090

CENSUS TRACT NO.: 6069.03	ADIR CODE: 006	
PLAT NO. SEE SHEET 1 OF 25	MAP CODE: 2110000	
TAX MAP 50, GRID 1A		
ZONED R-20 & 30		
ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE: HIGH RIDGE PARK ROAD PROFILE		
DESIGN BY: GEF/MR	SCALE: AS SHOWN	PROJECT NO.:
DRAWN BY: NB/CV/GEF	DATE: 04/02/00	DRAWING NUMBER
CHECKED BY: GEF/RD	APPROVED: GEF	6 OF 24

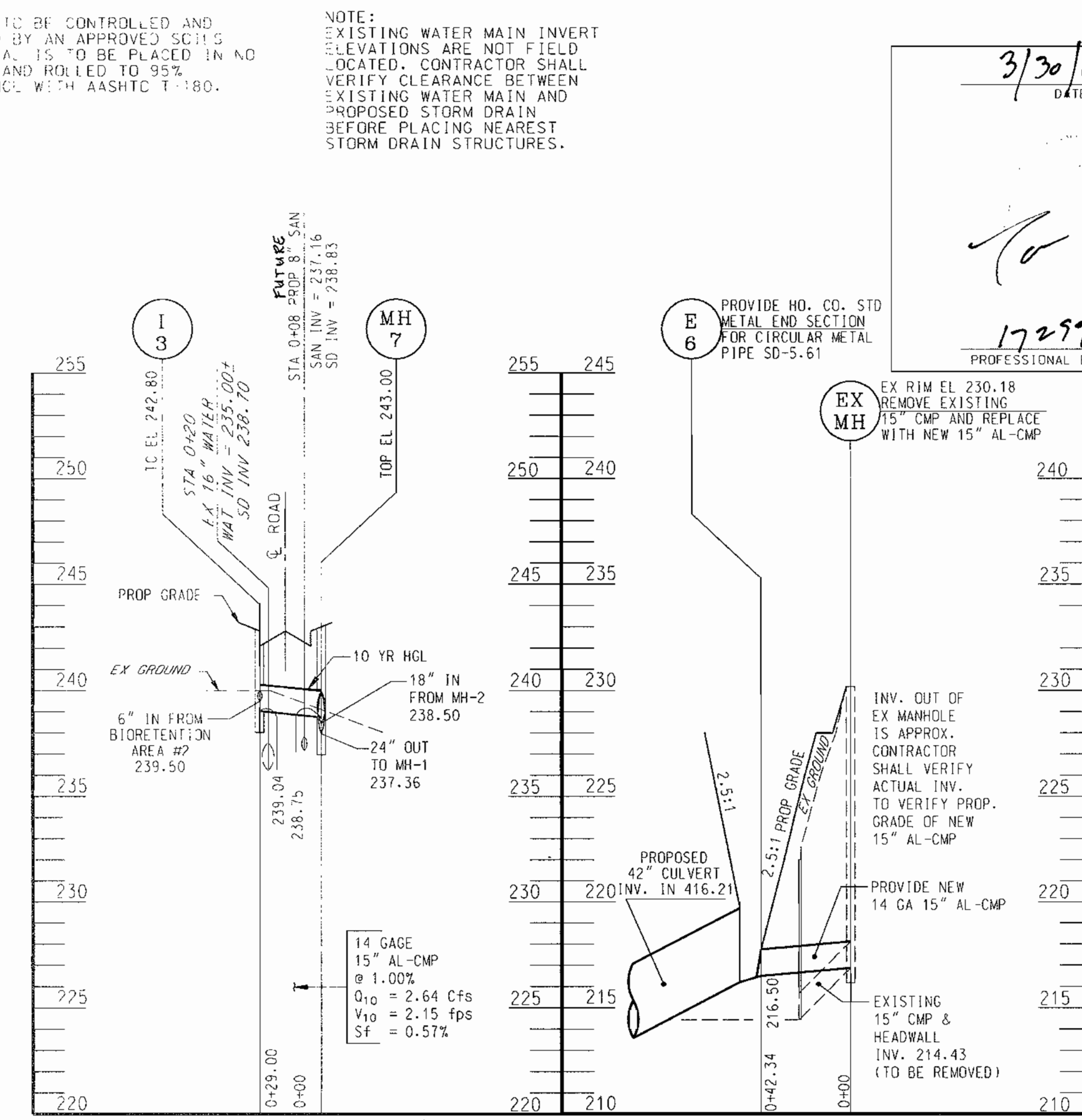
SDP0039



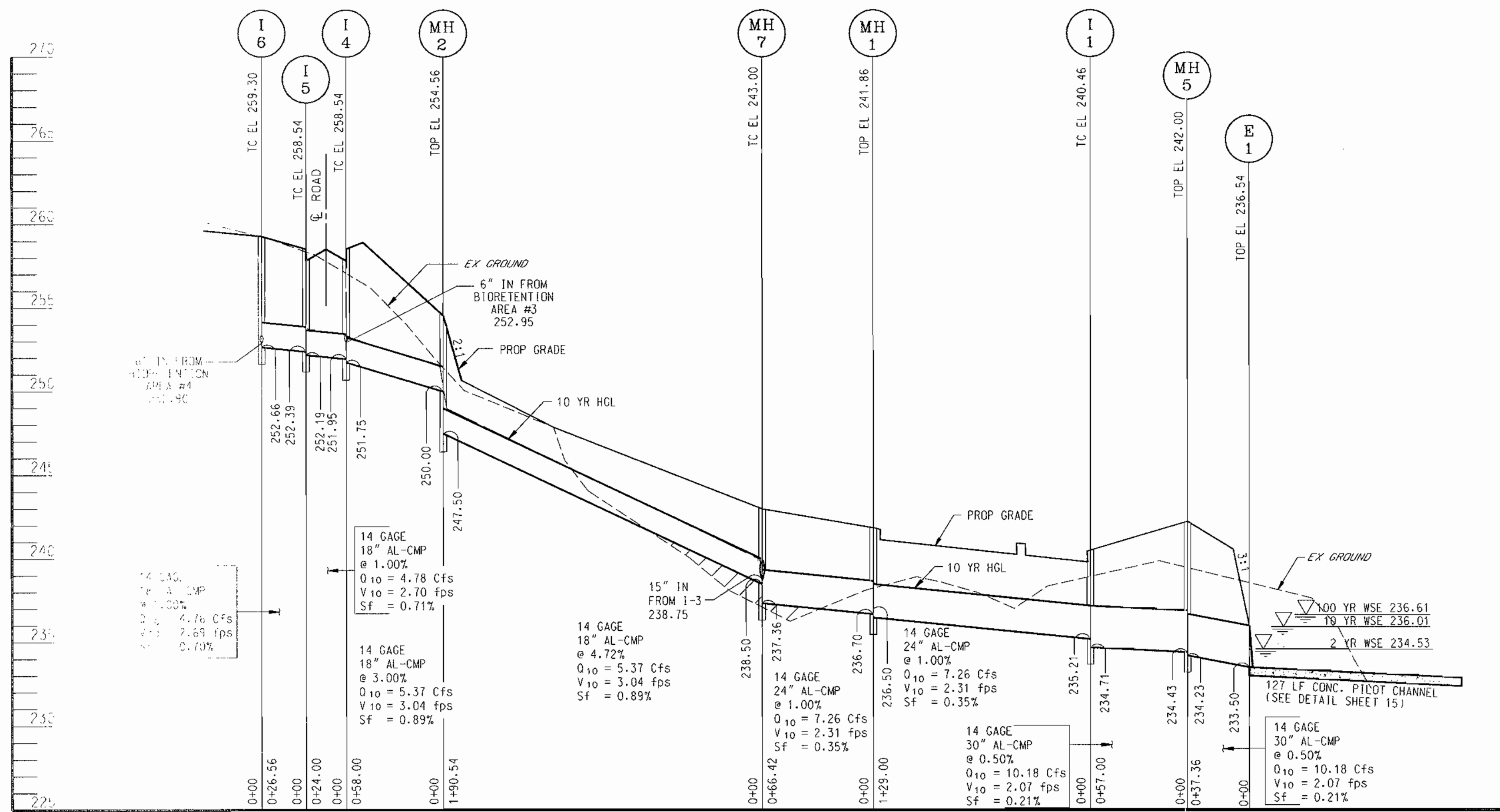
STORM DRAIN PROFILE
 SCALE: HORZ: 1" = 50'
 VERT: 1" = 5'



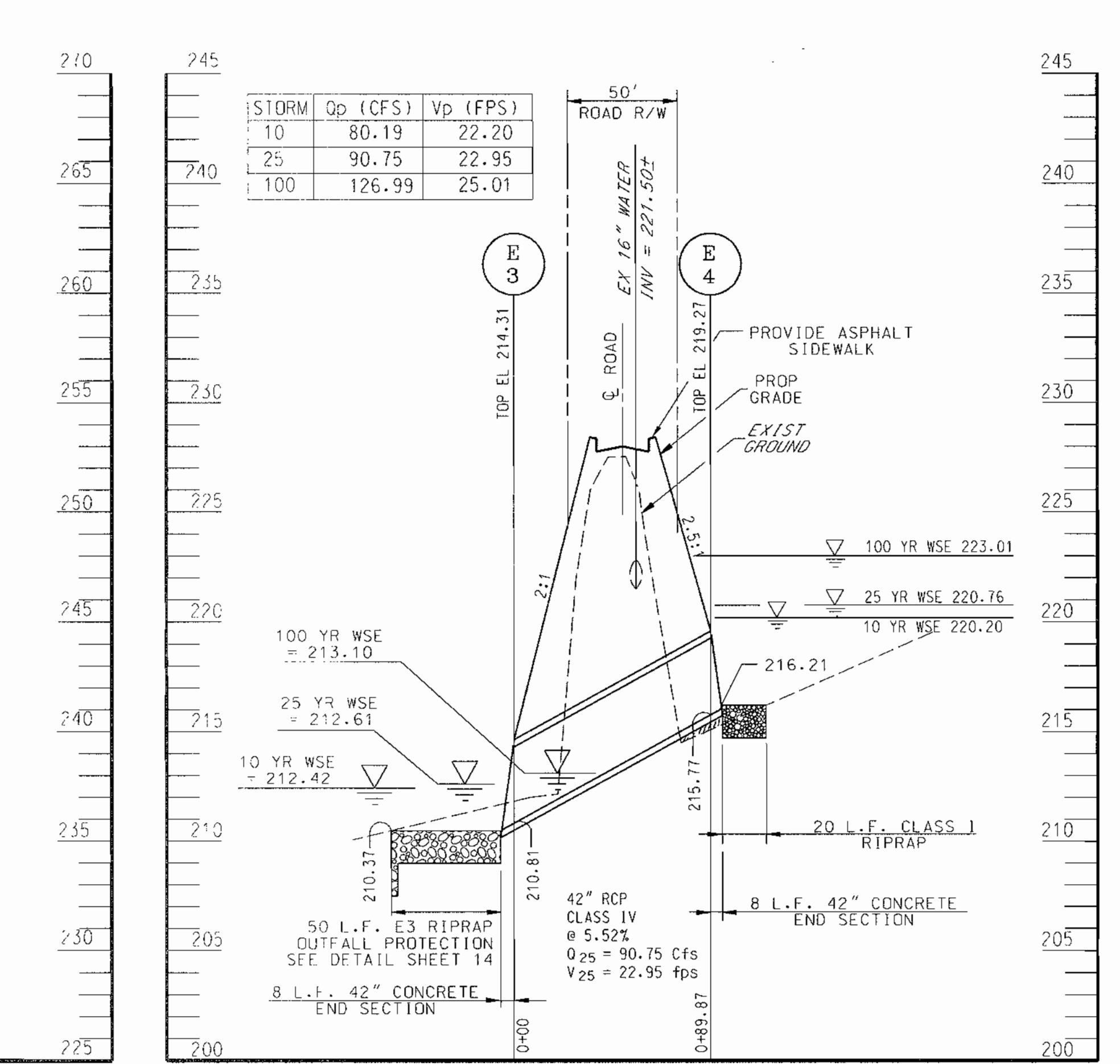
STORM DRAIN PROFILE
 SCALE: HORZ: 1" = 50'
 VERT: 1" = 5'



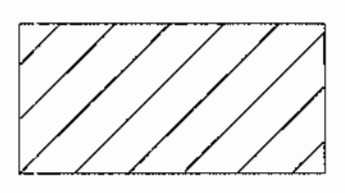
STORM DRAIN PROFILE
 SCALE: HORZ: 1" = 50'
 VERT: 1" = 5'



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



CULVERT PROFILE
 SCALE: HORZ: 1" = 50'
 VERT: 1" = 5'



DENOTES FILL MATERIAL TO BE CONTROLLED AND COMPACTED AS CERTIFIED BY AN APPROVED SOILS ENGINEER. FILL MATERIAL IS TO BE PLACED IN NO GREATER THAN 8" LIFTS AND ROLLED TO 95% COMPACTION IN ACCORDANCE WITH AASHTO T-99.

NOTE: EXISTING WATER MAIN INVERT ELEVATIONS ARE NOT FIELD LOCATED. CONTRACTOR SHALL VERIFY CLEARANCE BETWEEN EXISTING WATER MAIN AND PROPOSED STORM DRAIN BEFORE PLACING NEAREST STORM DRAIN STRUCTURES.

3/30/10
 DATE

17299
 PROFESSIONAL ENGR. NO.

DATE	NUMBER	REVISION DESCRIPTION
11/15/00		APPROVED: DEPARTMENT OF PLANNING AND ZONING
1/12/01		CHIEF-DEVELOPMENT ENGINEERING DIVISION
1/18/01		CHIEF-DIVISION OF LAND DEVELOPMENT
10/26/00		APPROVED: DEPARTMENT OF RECREATION AND PARKS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF-DEVELOPMENT ENGINEERING DIVISION
 APPROVED: DEPARTMENT OF RECREATION AND PARKS
 DIRECTOR

BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF DEVELOPER
 DATE

OWNER
 HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS:
 7120 OAKLAND MILL
 COLUMBIA, MD 21046
 PHONE: 410-313-4700

DEVELOPER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS:
 3450 COURTHOUSE DRIVE
 ELLICOTT CITY, MD 21043
 PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS

GEF
 GRACE E. FIELDER & ASSOCIATES, CHARTERED
 PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
 8101 SANDY SPRING ROAD
 SUITE 104
 LAUREL, MARYLAND 20707
 PHONE: 301-470-2544
 FAX: 301-470-2545

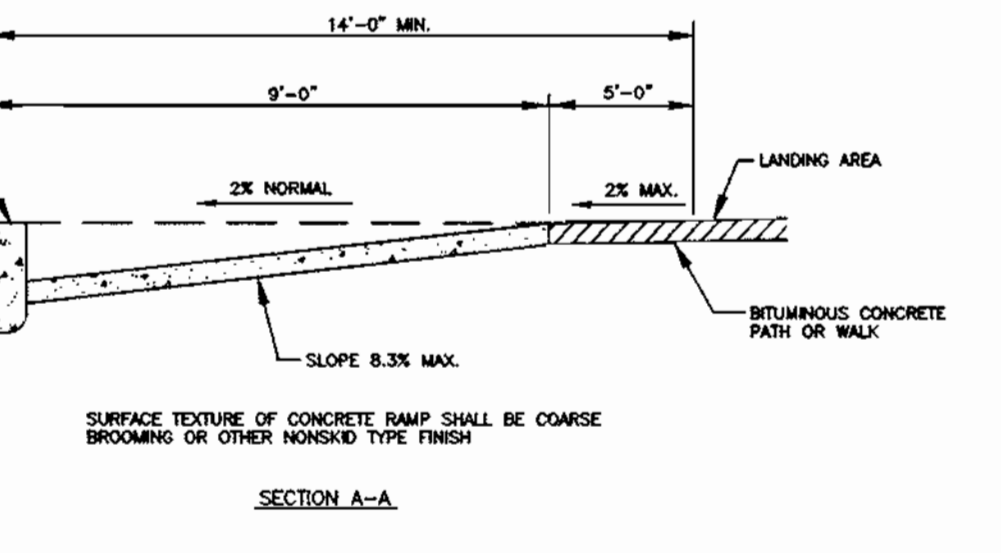
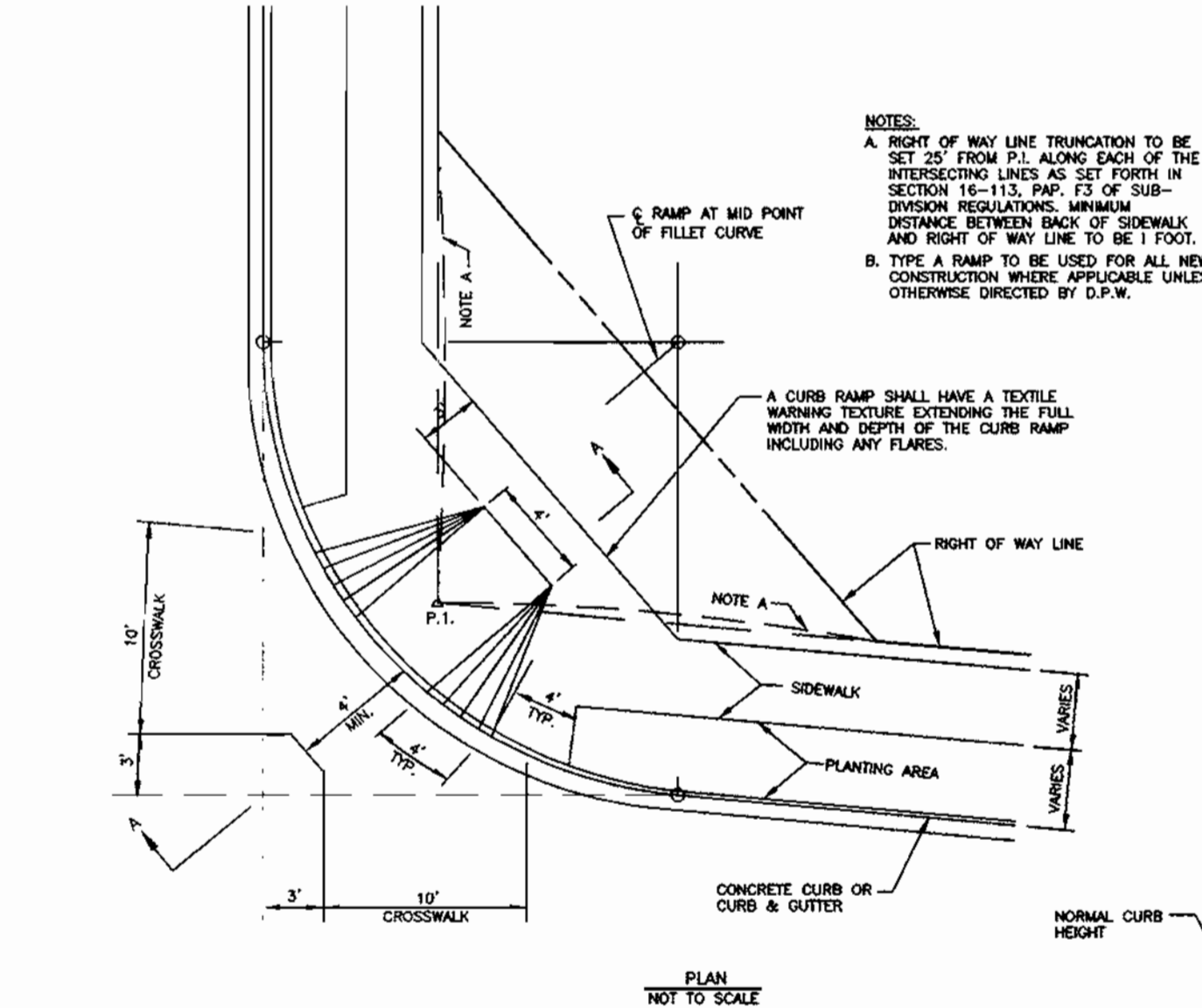
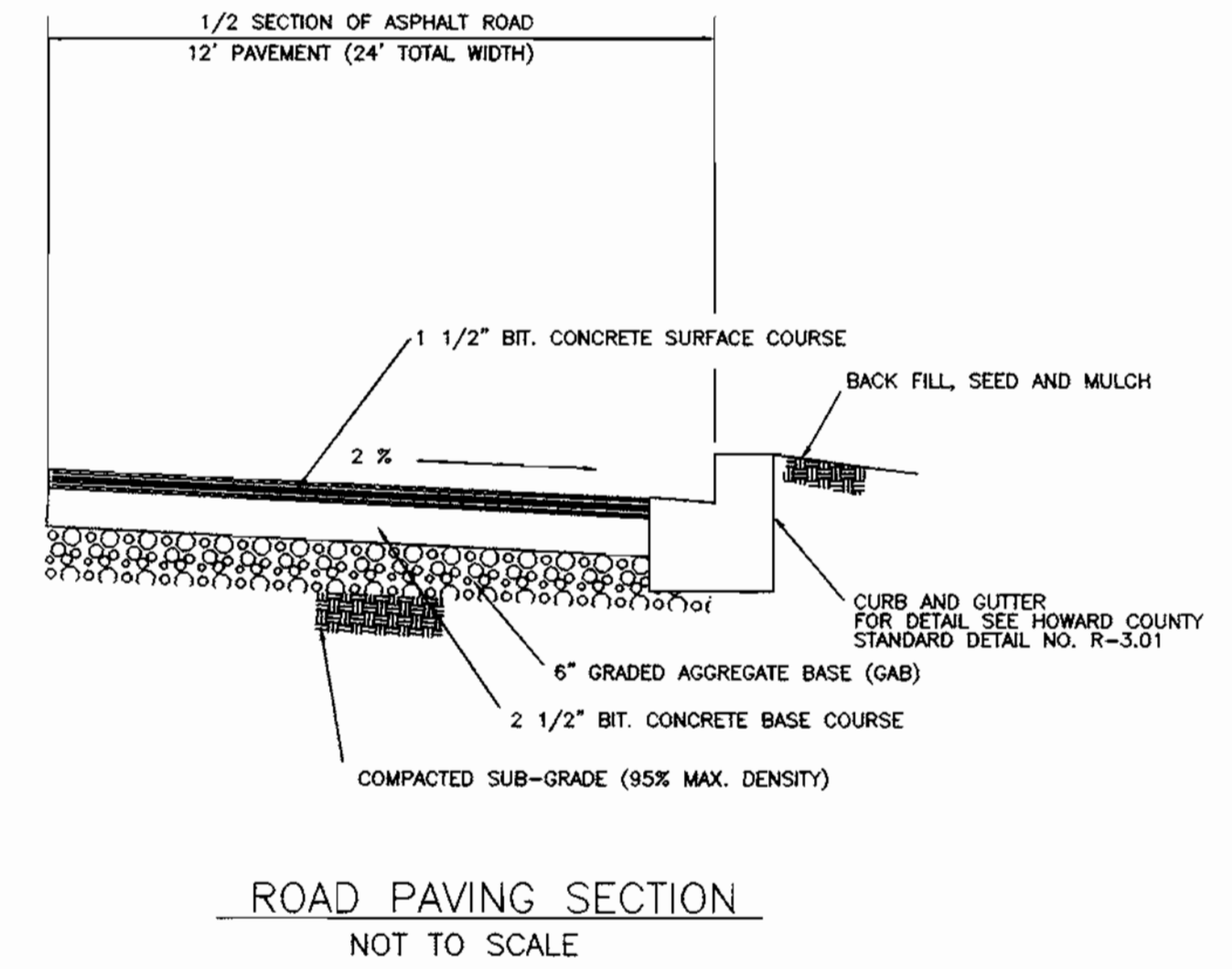
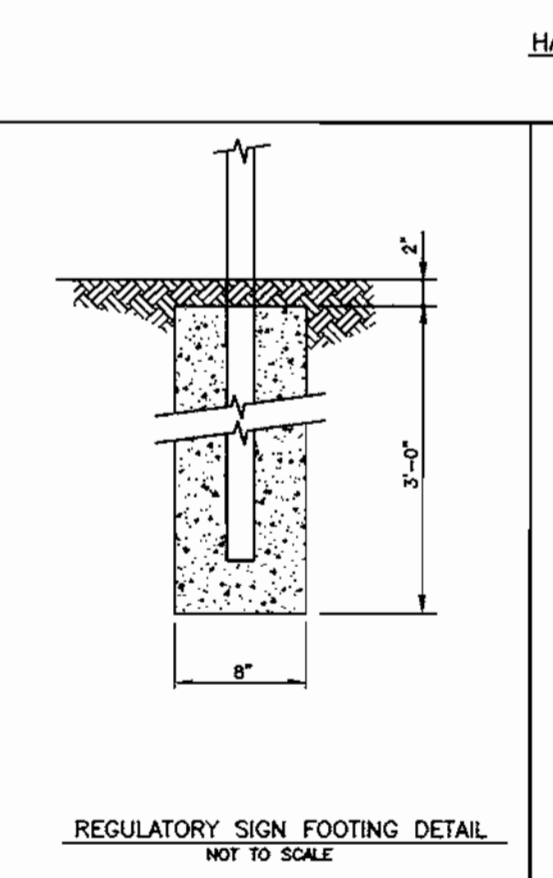
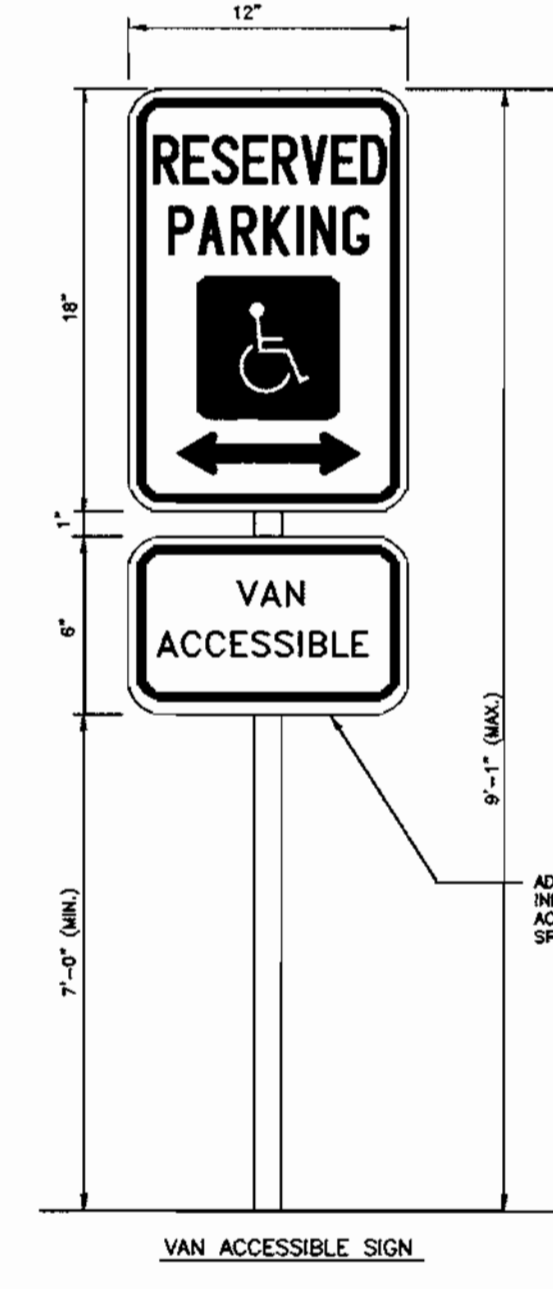
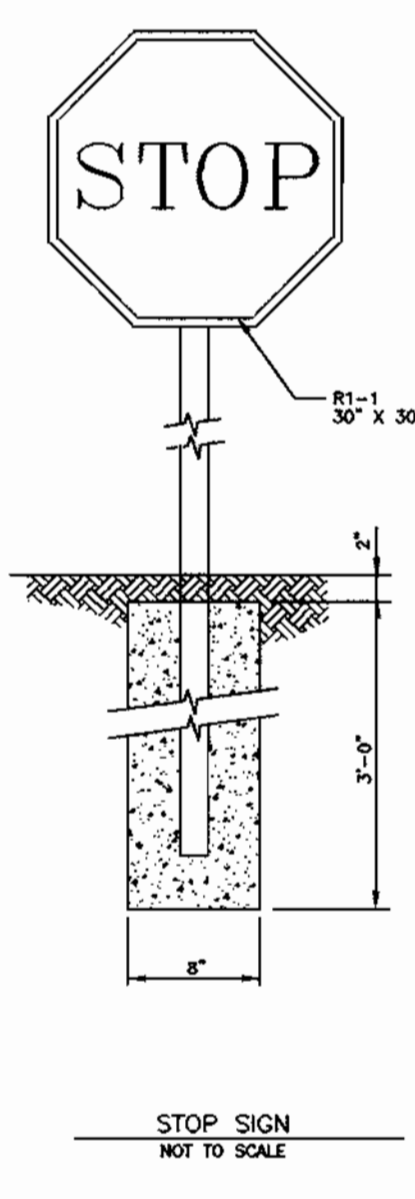
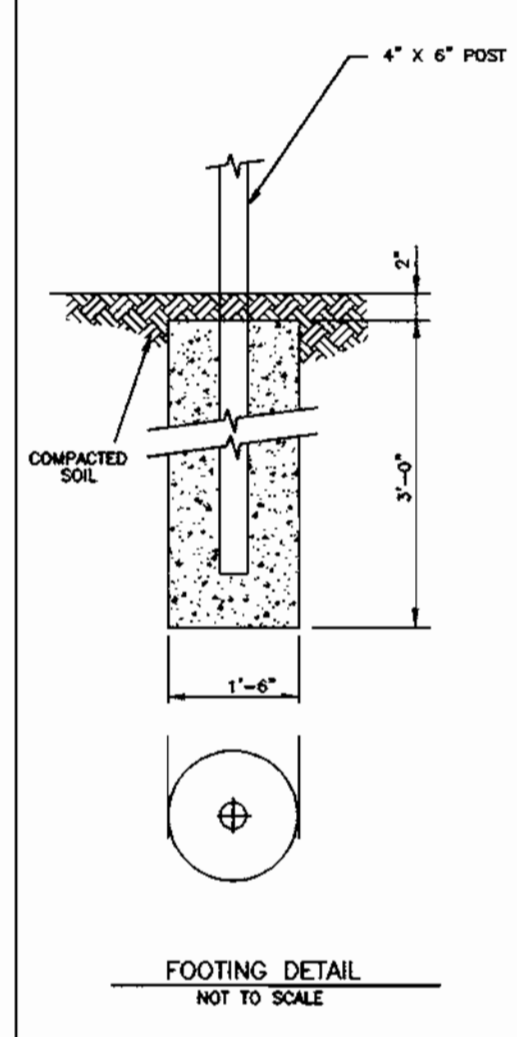
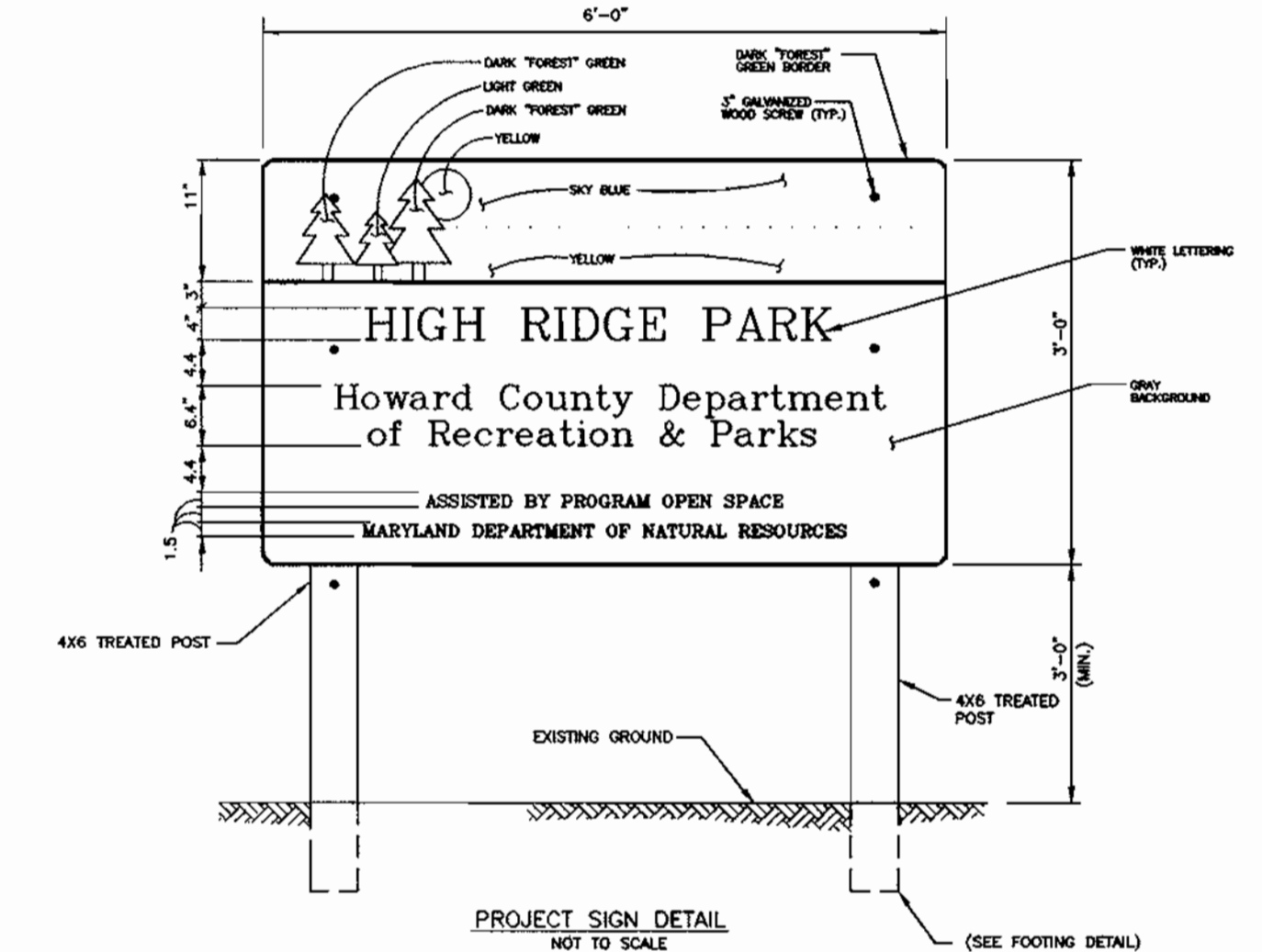
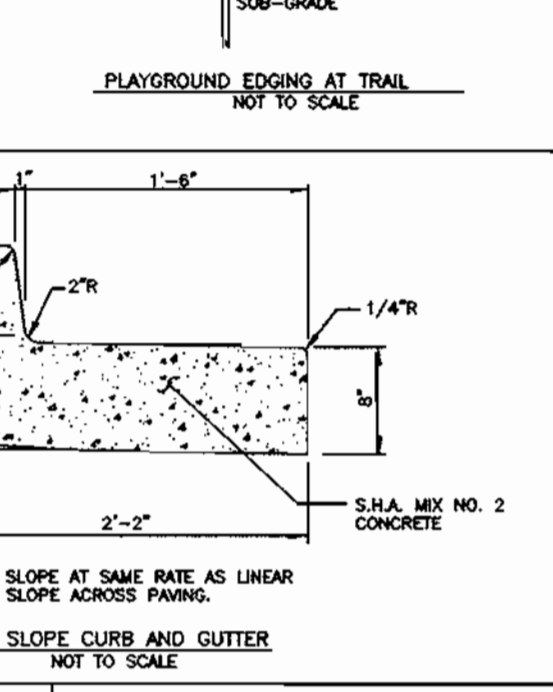
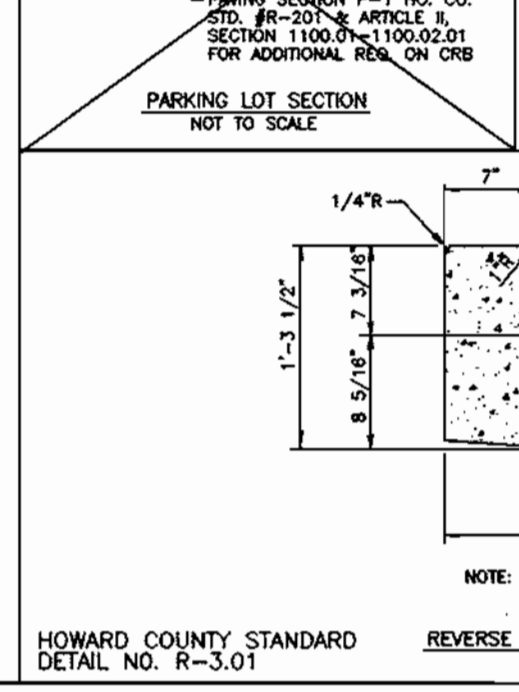
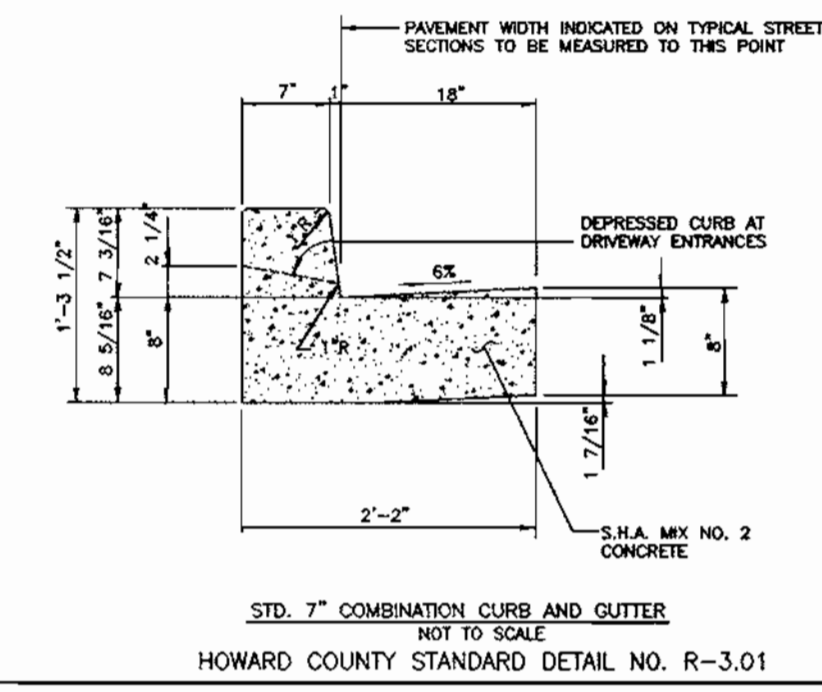
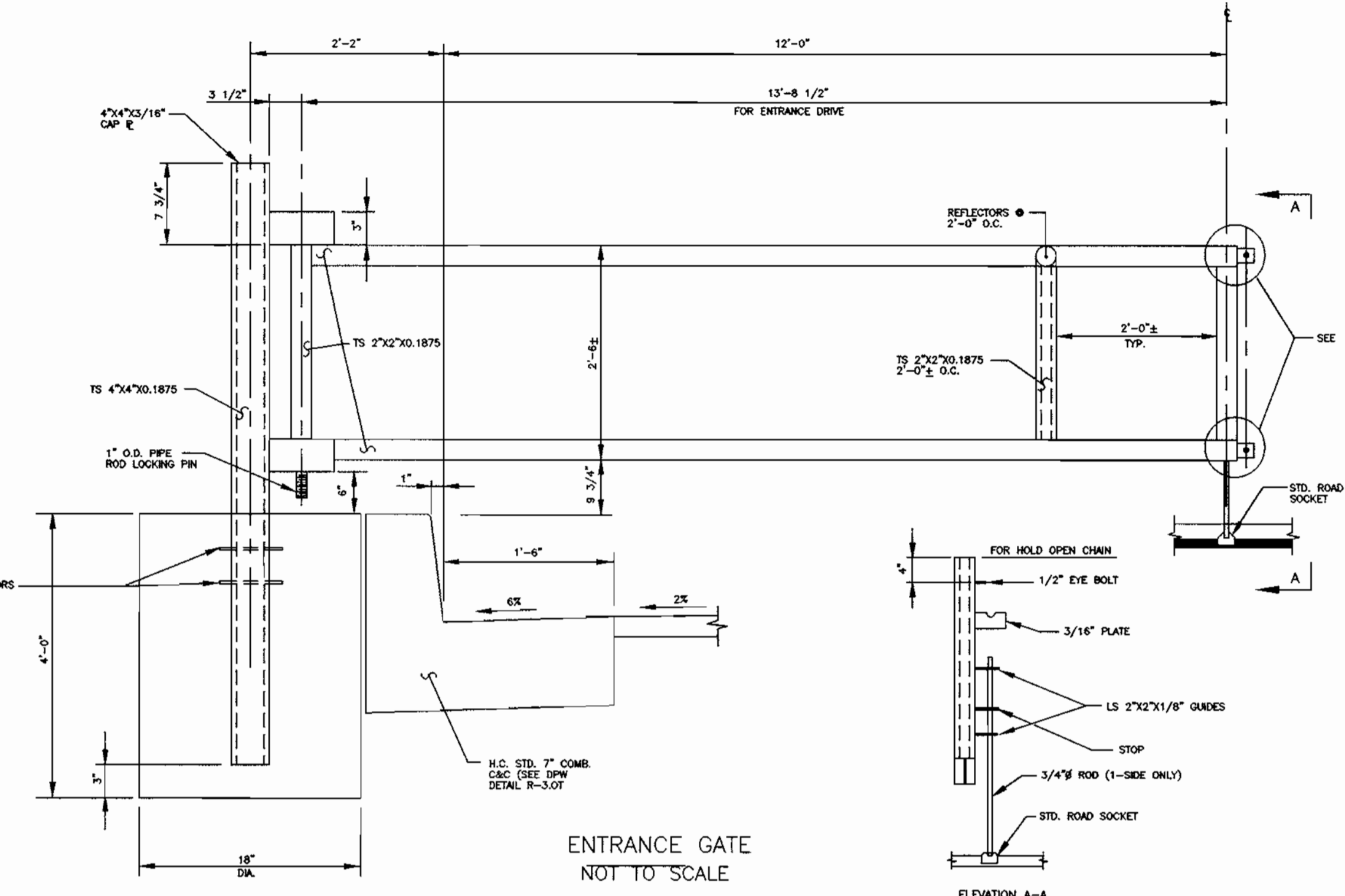
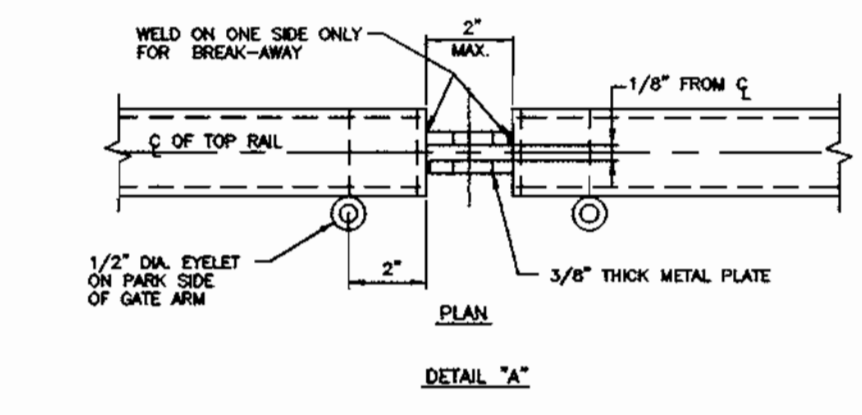
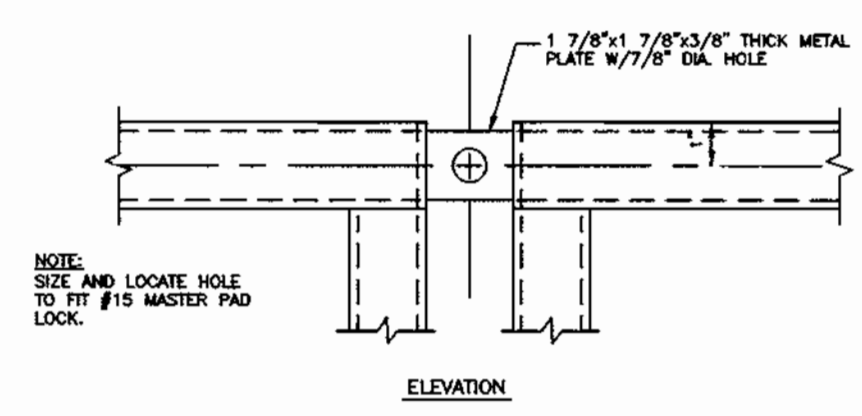
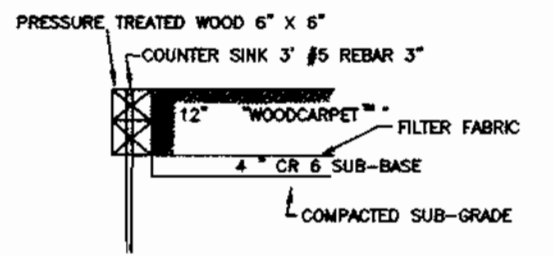
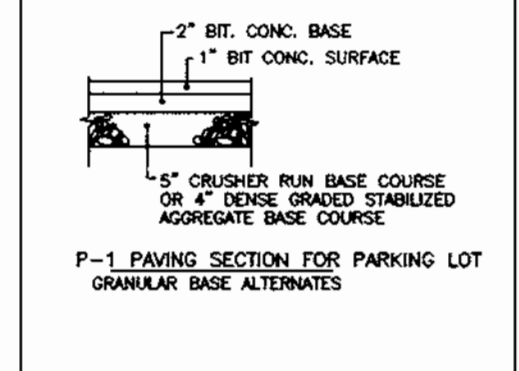
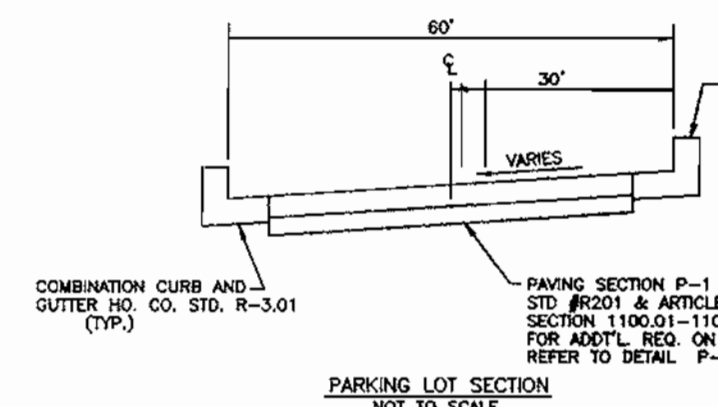
FREDERICK WARD ASSOCIATES INC.
 ENGINEERS ARCHITECTS SURVEYORS
 5 SOUTH MAIN STREET BEL AIR, MARYLAND 21014 (410)879-2090

CENSUS TRACT NO.: 5069-03 WATER CODE: 506
 PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 7170900

TAX MAP 50, GRID 1 & 2
 ZONED R-20 & R-5C
 ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
 HIGH RIDGE PARK
 STORM DRAIN PROFILES

DESIGN BY: GEF/MR SCALE: AS SHOWN PROJECT NO.:
 DRAWN BY: NB/CV/GFD DATE: 04/02/00 DRAWING NUMBER
 CHECKED BY: GEF/RD APPROVED: GEF 7 OF 24



HANDICAP RAMP DETAIL
NOT TO SCALE
HOWARD COUNTY STANDARD DETAIL NO. R-4.01

DATE:	NUMBER:	REVISION DESCRIPTION:
1/19/2000	1	PLANNING AND ZONING COMMENTS
APPROVED: DEPARTMENT OF PLANNING AND ZONING		
<i>[Signature]</i>		11/15/00
CHIEF-DEVELOPMENT ENGINEERING DIVISION		DATE
<i>[Signature]</i>		1/17/01
CHIEF-DIVISION OF LAND DEVELOPMENT		DATE
<i>[Signature]</i>		1/18/01
DIRECTOR		DATE
APPROVED: DEPARTMENT OF RECREATION AND PARKS		
<i>[Signature]</i>		10-26-00
DIRECTOR		DATE

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

SIGNATURE OF ENGINEER _____ DATE _____
BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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.

[Signature] 10/27/00
SIGNATURE OF DEVELOPER DATE

OWNER: HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS; 7120 OAKLAND MILL, COLUMBIA, MD 21046; PHONE: 410-313-4700

DEVELOPER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS; 3450 COURTHOUSE DRIVE, ELLICOTT CITY, MD 21043; PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS:
GEF
GRACE E. FIELDER & ASSOCIATES, CHARTERED PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
8101 SANDY SPRING ROAD, SUITE 104, LAUREL, MARYLAND 20707
PHONE: 301-470-2544
FAX: 301-470-2545

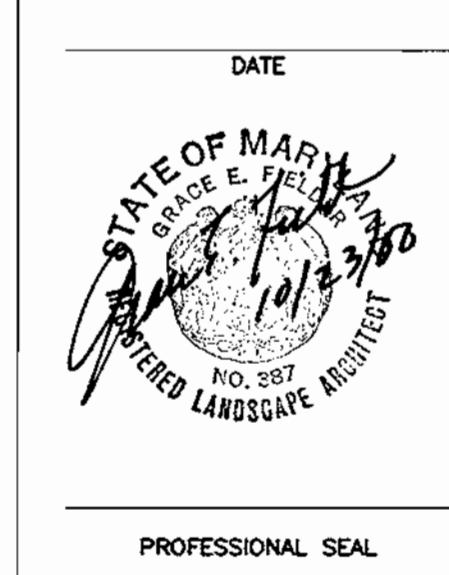
FREDERICK WARD ASSOCIATES INC.
ENGINEERS ARCHITECTS SURVEYORS
5 SOUTH MAIN STREET, BEL AIR, MARYLAND 21014 (410)879-2090

CENSUS TRACT NO.: 6069.03 WATER CODE: CDS
PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 7170900

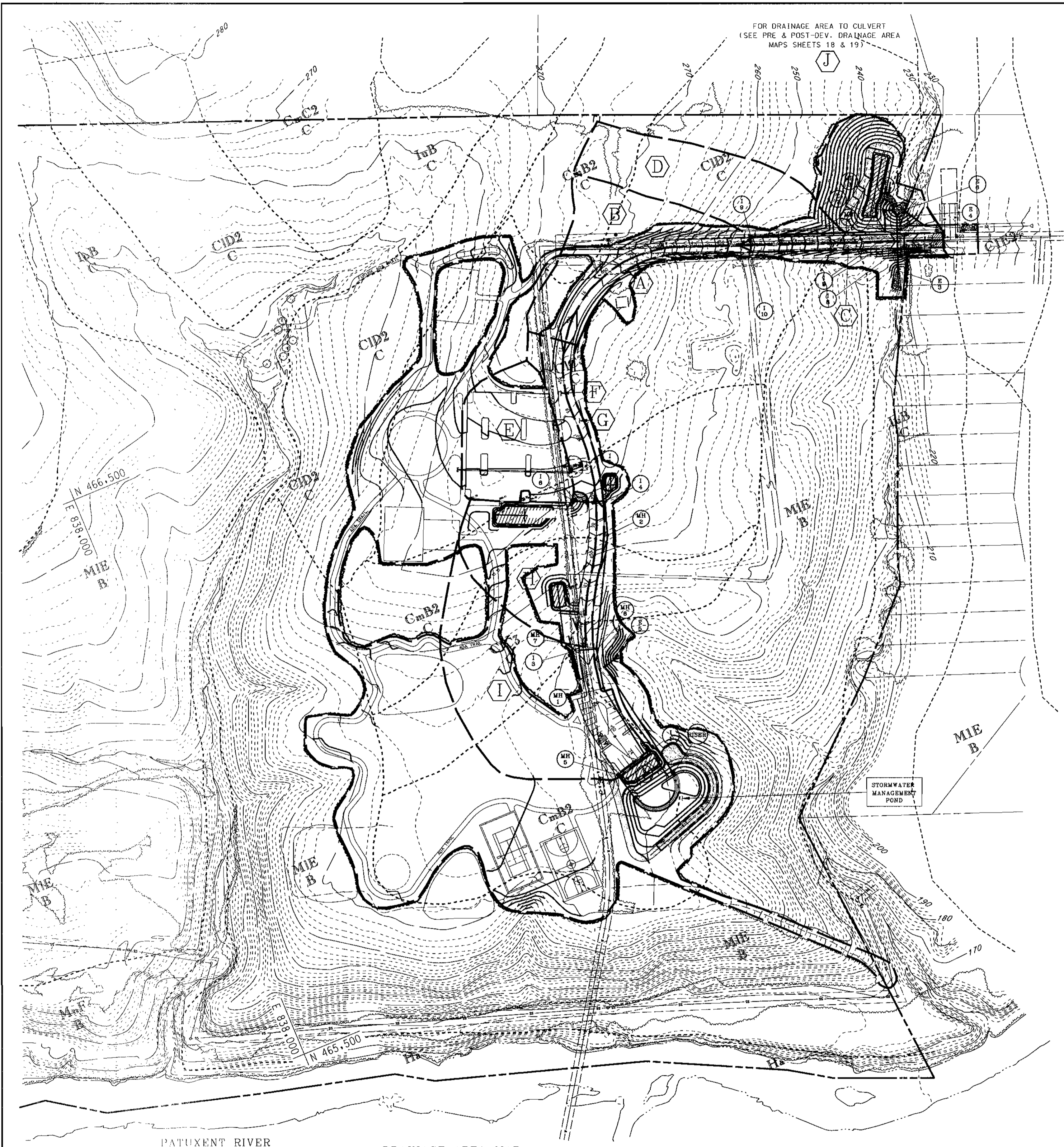
TAX MAP 50, GRID 1 & 2
ZONED R-20 & R-SC
ELECTION DISTRICT 6 HOWARD COUNTY, MARYLAND

TITLE: HIGH RIDGE PARK SITE PLAN DETAILS

DESIGN BY: GEF SCALE: AS SHOWN PROJECT NO.:
DRAWN BY: GEF/NB DATE: 04/02/00 DRAWING NUMBER:
CHECKED BY: RD/GEF APPROVED: GEF 8 OF 24



SDP 0034



FOR DRAINAGE AREA TO CULVERT
(SEE PRE & POST-DEV. DRAINAGE AREA
MAPS SHEETS 18 & 19)

STRUCTURE SCHEDULE

NO.	DESCRIPTION	INV. IN	INV. OUT	TOP ELEV.
1-1	TYPE "A-10" INLET (SD-4.02)	235.21	234.71	TC 240.29
1-2	RESERVED			
1-3	TYPE "A 5" INLET (SD-4.01)	239.50	239.04	TC 242.80
1-4	TYPE "A 5" INLET (SD-4.01)	6"-252.95 18"-251.95	251.75	TC 258.54
1-5	TYPE "A-5" INLET (SD-4.01)	252.39	252.19	TC 258.54
1-6	DOUBLE "S" COMB. INLET (SD-4.34) W/ BICYCLE SAFE RETICULAR GRATE	252.90	252.66	TC 259.30
1-7	DOUBLE "S" COMB. INLET (SD-4.34) W/ BICYCLE SAFE RETICULAR GRATE	223.84	223.59	TC 228.18
1-8	DOUBLE "S" COMB. INLET (SD-4.34) W/ BICYCLE SAFE RETICULAR GRATE	-	224.00	TC 228.18
1-9	TYPE "A-5" INLET (SD-4.01)	243.06	242.81	TC 246.82
1-10	TYPE "A-5" INLET (SD-4.01)	-	243.30	TC 246.82
MH 1	SHALLOW PRECAST MH (G-5.12)	236.70	236.50	241.86
MH 2	SHALLOW PRECAST MH (G-5.12)	250.00	247.50	254.56
MH 3	SHALLOW PRECAST MH (G-5.12)	217.71	216.32	222.71
MH 4	SHALLOW PRECAST MH (G-5.12)	18"-223.27 18"-222.45	8"-221.25 18"-222.25	228.65
MH 5	SHALLOW PRECAST MH (G-5.12)	234.43	234.23	242.00
MH 6	STANDARD PRECAST MH (G-5.12)	231.40	231.20	240.00
MH 7	SHALLOW PRECAST MH (G-5.12)	15"-238.75 18"-238.50	237.36	243.00
E 1	30" AL CMP END SECTION (SD 5.61)	234.04	234.04	236.54
E 2	18" AL CMP END SECTION (SD 5.61)	216.21	216.21	217.71
E 3	42" CONCRETE END SECTION (SD 5.52)	210.81	210.37	214.31
E 4	42" CONCRETE END SECTION (SD 5.52)	216.21	215.77	219.27
E 5	24" CONCRETE END SECTION (SD 5.52)	231.00	231.00	232.50
E 6	15" AL CMP END SECTION (SD 5.61)	216.50	216.50	217.75
E 7	8" PVC SCH 40 MITERED TO SLOPE		221.11	221.78

DATE: NUMBER REVISION DESCRIPTION

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF-DEVELOPMENT ENGINEERING DIVISION
John D. ... 11/15/00
... 1/17/01
... 1/18/01

APPROVED: DEPARTMENT OF RECREATION AND PARKS
... 10-26-00

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

SIGNATURE OF ENGINEER DATE

BY THE DEVELOPER:
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF DEVELOPER DATE

OWNER:
 HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS:
 7120 OAKLAND HILL
 COLUMBIA, MD 21046
 PHONE: 410-313-4700

DEVELOPER:
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS:
 3450 COURTHOUSE DRIVE
 ELLICOTT CITY, MD 21043
 PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
GEF
 GRACE E. FIELDER & ASSOCIATES, CHARTERED
 PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
 8101 SANDY SPRING ROAD
 SUITE 104
 LAUREL, MARYLAND 20707
 PHONE: 301-470-2544
 FAX: 301-470-2545

3/30/00
 DATE
...
 PROFESSIONAL ENGR. NO.

SDP #
 PLANNING BOARD APPROVAL

FREDERICK WARD ASSOCIATES INC.
 ENGINEERS ARCHITECTS SURVEYORS
 5 SOUTH MAIN STREET BEL AIR, MARYLAND 21034 (410)879-2090

CENSUS TRACT NO.: 6069.03 WATER CODE: ... C06
 PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: ... T170900

TAX MAP 50, GRID 1 & 2
 ZONED R-20 & R-3C
 ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
**HIGH RIDGE PARK
 STORMDRAIN DRAINAGE AREA MAP**

DESIGN BY: GEF/MR SCALE: AS SHOWN PROJECT NO.:
 DRAWN BY: NB/CV/GEF DATE: 04/02/00 DRAWING NUMBER
 CHECKED BY: GEF/RD APPROVED: GEF 9 OF 24

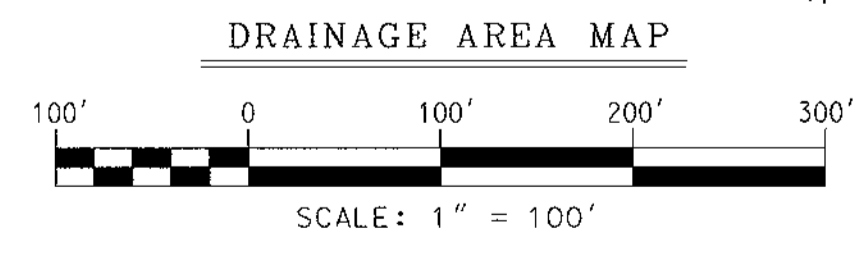
PIPE SCHEDULE

ITEM	QUANTITY	MATERIALS
6" PVC SCH 40 UNDERDRAIN & SD PIPE	540 LF	SCH 40 PVC
8" PVC SCH 40 STORM DRAIN PIPE	29 LF	SCH 40 PVC
15" AL-CMP STORM DRAIN PIPE	126 LF	AL-CMP
18" AL-CMP STORM DRAIN PIPE	602 LF	AL-CMP
24" AL-CMP STORM DRAIN PIPE	196 LF	AL-CMP
30" AL-CMP STORM DRAIN PIPE	95 LF	AL-CMP
24" RCP C-361, B-25 SWM OUTFALL PIPE	230 LF	C-361, B-25
42" RCP CULVERT PIPE	90 LF	RCP

DRAINAGE AREAS

AREA	ACRES	% IMPERVIOUS AREA	"C" FACTOR
A	0.78	71	0.69
B	0.88	26	0.37
C	0.16	100	0.86
D	0.04	15	0.24
E	0.77	87	0.78
F	0.29	58	0.58
G	0.13	100	0.87
H	0.49	15	0.27
I	1.66	26	0.37
J	28.20	22	0.24

MAP SYMBOL	MAPPING UNIT	SOIL GROUP
CmB2	CHILLUM SILT LOAM, 1 TO 5% SLOPES	C
CID2	CHILLUM GRAVELLY LOAM, 10 TO 15%	C
CIC3	CHILLUM GRAVELLY LOAM, 5 TO 10%	C
M1E	MANOR LOAM, 25 TO 45% SLOPES	B
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5% SLOPES	C

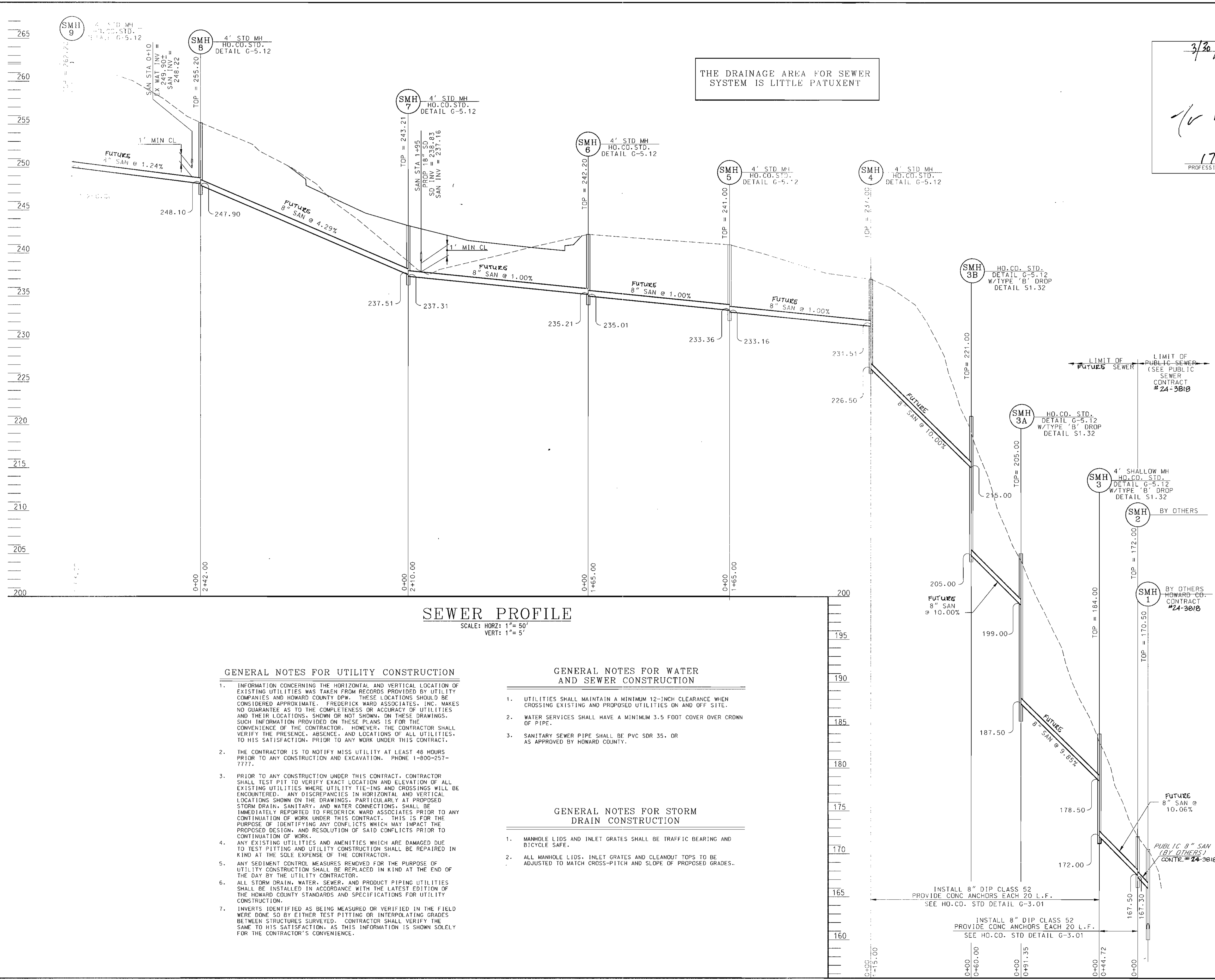


PROJECTS/22110/ENGR/CD09/ARH/0898

SDP 0034

THE DRAINAGE AREA FOR SEWER SYSTEM IS LITTLE PATUXENT

3/30/00 DATE
 17295 PROFESSIONAL ENGR. NO.



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

GENERAL NOTES FOR UTILITY CONSTRUCTION

1. INFORMATION CONCERNING THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES WAS TAKEN FROM RECORDS PROVIDED BY UTILITY COMPANIES AND HOWARD COUNTY DPW. THESE LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. FREDERICK WARD ASSOCIATES, INC. MAKES NO GUARANTEE AS TO THE COMPLETENESS OR ACCURACY OF UTILITIES AND THEIR LOCATIONS, SHOWN OR NOT SHOWN, ON THESE DRAWINGS. SUCH INFORMATION PROVIDED ON THESE PLANS IS FOR THE CONVENIENCE OF THE CONTRACTOR. HOWEVER, THE CONTRACTOR SHALL VERIFY THE PRESENCE, ABSENCE, AND LOCATIONS OF ALL UTILITIES, TO HIS SATISFACTION, PRIOR TO ANY WORK UNDER THIS CONTRACT.
2. THE CONTRACTOR IS TO NOTIFY MISS UTILITY AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION AND EXCAVATION. PHONE 1-800-257-7777.
3. PRIOR TO ANY CONSTRUCTION UNDER THIS CONTRACT, CONTRACTOR SHALL TEST PIT TO VERIFY EXACT LOCATION AND ELEVATION OF ALL EXISTING UTILITIES WHERE UTILITY TIE-INS AND CROSSINGS WILL BE ENCOUNTERED. ANY DISCREPANCIES IN HORIZONTAL AND VERTICAL LOCATIONS SHOWN ON THE DRAWINGS, PARTICULARLY AT PROPOSED STORM DRAIN, SANITARY, AND WATER CONNECTIONS, SHALL BE IMMEDIATELY REPORTED TO FREDERICK WARD ASSOCIATES PRIOR TO ANY CONTINUATION OF WORK UNDER THIS CONTRACT. THIS IS FOR THE PURPOSE OF IDENTIFYING ANY CONFLICTS WHICH MAY IMPACT THE PROPOSED DESIGN, AND RESOLUTION OF SAID CONFLICTS PRIOR TO CONTINUATION OF WORK.
4. ANY EXISTING UTILITIES AND AMENITIES WHICH ARE DAMAGED DUE TO TEST PITTING AND UTILITY CONSTRUCTION SHALL BE REPAIRED IN KIND AT THE SOLE EXPENSE OF THE CONTRACTOR.
5. ANY SEDIMENT CONTROL MEASURES REMOVED FOR THE PURPOSE OF UTILITY CONSTRUCTION SHALL BE REPLACED IN KIND AT THE END OF THE DAY BY THE UTILITY CONTRACTOR.
6. ALL STORM DRAIN, WATER, SEWER, AND PRODUCT PIPING UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS FOR UTILITY CONSTRUCTION.
7. INVERTS IDENTIFIED AS BEING MEASURED OR VERIFIED IN THE FIELD WERE DONE SO BY EITHER TEST PITTING OR INTERPOLATING GRADES BETWEEN STRUCTURES SURVEYED. CONTRACTOR SHALL VERIFY THE SAME TO HIS SATISFACTION, AS THIS INFORMATION IS SHOWN SOLELY FOR THE CONTRACTOR'S CONVENIENCE.

GENERAL NOTES FOR WATER AND SEWER CONSTRUCTION

1. UTILITIES SHALL MAINTAIN A MINIMUM 12-INCH CLEARANCE WHEN CROSSING EXISTING AND PROPOSED UTILITIES ON AND OFF SITE.
2. WATER SERVICES SHALL HAVE A MINIMUM 3.5 FOOT COVER OVER CROWN OF PIPE.
3. SANITARY SEWER PIPE SHALL BE PVC SDR 35, OR AS APPROVED BY HOWARD COUNTY.

GENERAL NOTES FOR STORM DRAIN CONSTRUCTION

1. MANHOLE LIDS AND INLET GRATES SHALL BE TRAFFIC BEARING AND BICYCLE SAFE.
2. ALL MANHOLE LIDS, INLET GRATES AND CLEANOUT TOPS TO BE ADJUSTED TO MATCH CROSS-PITCH AND SLOPE OF PROPOSED GRADES.

DATE	NUMBER	REVISION DESCRIPTION
11/15/00		APPROVED: DEPARTMENT OF PLANNING AND ZONING
11/19/01		CHIEF-DEVELOPMENT ENGINEERING DIVISION
11/28/01		CHIEF-DIVISION OF LAND DEVELOPMENT
		APPROVED: DEPARTMENT OF RECREATION AND PARKS
10/26/00		DIRECTOR

BY THE ENGINEER:
 SIGNATURE OF ENGINEER: [Signature] DATE: 11/15/00

BY THE DEVELOPER:
 SIGNATURE OF DEVELOPER: [Signature] DATE: 10/26/00

OWNER:
 HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS:
 7120 OAKLAND MELL
 COLUMBIA, MD 21046
 PHONE: 410-313-4700

DEVELOPER:
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS:
 3450 COURTHOUSE DRIVE
 ELLICOTT CITY, MD 21043
 PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
GEF
 GRACE E. FIELDER & ASSOCIATES, CHARTERED
 PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
 8101 SANDY SPRING ROAD
 SUITE 104
 LAUREL, MARYLAND 20707
 PHONE: 301-470-2544
 FAX: 301-470-2545

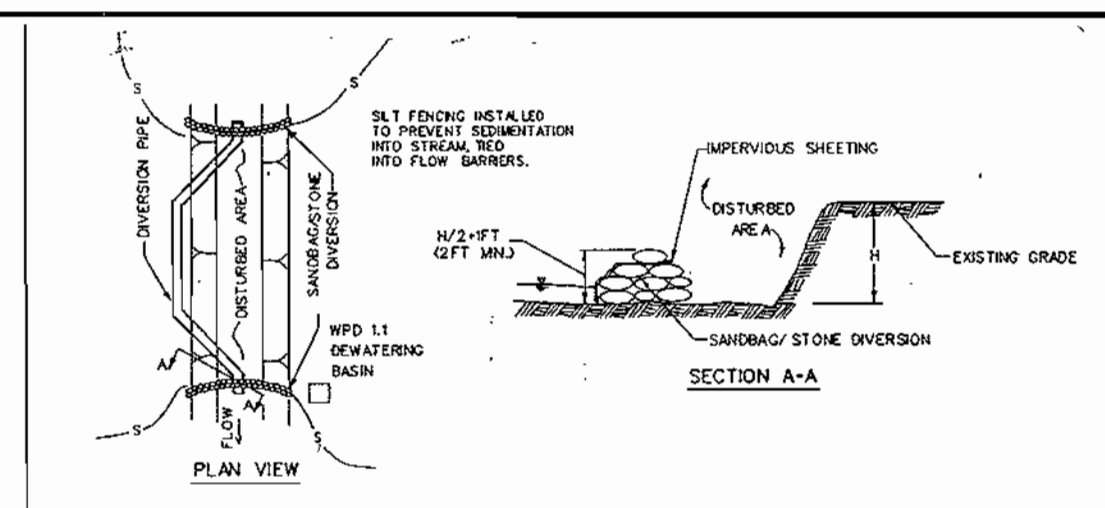
FREDERICK WARD ASSOCIATES, INC.
 ENGINEERS ARCHITECTS SURVEYORS
 5 SOUTH MAIN STREET BEL AIR, MARYLAND 21034 (410)879-2090

CENSUS TRACT NO.: 6069.03 WATER CODE: 606
 PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 7110900

TAX MAP 50, GRID 1 & 2
 ZONED R-20 & R-5C
 ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
**HIGH RIDGE PARK
 SANITARY SEWER PROFILE**

DESIGN BY: GEF/WR SCALE: AS SHOWN PROJECT NO.:
 DRAWN BY: NB/CV/GEF DATE: 04/02/00 DRAWING NUMBER
 CHECKED BY: GEF/RD APPROVED: GEF 10.02.24



I. DESCRIPTION
 THE WORK SHALL CONSIST OF INSTALLING A FLOW DIVERSION STRUCTURE WHEN CONSTRUCTION ACTIVITIES TAKE PLACE WITHIN THE STREAM CHANNEL SUCH AS CURB CONSTRUCTION OR CULVERT REPLACEMENT.

II. MATERIAL SPECIFICATIONS
 1. SANDBAGS: SANDBAGS SHALL CONSIST OF MATERIALS WHICH ARE RESISTANT TO ULTRAVIOLET RADIATION, TEARING AND PUNCTURE AND MUST BE TIGHTLY TIGHTENED TO PREVENT LEAKAGE OF FILL MATERIAL. 4. SANDBAGS SHALL BE 12" X 12" X 12" IN SIZE.
 2. STONE: STONE SHALL BE HARD AND HAVE A MINIMUM DIAMETER OF 3" INCHES.
 3. SHEETING: SHEETING SHALL CONSIST OF POLYETHYLENE OR OTHER MATERIAL WHICH IS IMPERVIOUS AND RESISTANT TO PUNCTURE AND TEAR.

III. CONSTRUCTION REQUIREMENTS
 1. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF WORK.
 2. THE HEIGHT OF THE SANDBAG/STONE OVERFLOW STRUCTURE SHALL BE ONE HALF THE DISTANCE FROM THE STREAM BED TO THE BASE PLUS ONE FOOT.
 3. IF NECESSARY, SILT FENCE OR STRAWBLES SHALL BE PLACED ON A SLOPE TO PROTECT THE SANDBAG/STONE OVERFLOW STRUCTURE.
 4. ALL EXCAVATED MATERIALS SHALL BE PROPOSED OF IN A SED APPROVED GEOTECHNICAL AREA OUTSIDE THE 100-YEAR FLOODPLAIN UNLESS OTHERWISE APPROVED ON THE PLANS BY THE WPD.
 5. ALL OVERFLOW OF THE CONSTRUCTION AREA SHALL BE PUMPED TO A DEWATERING BASIN UPSTREAM OR OTHERWISE APPROVED BY THE PLANS BY THE WPD.
 6. SHEETING SHALL BE OVERLAPPED A MINIMUM OF 18 INCHES.
 7. THE OVERFLOW PIPE SHALL HAVE A MINIMUM DIAMETER OF SUFFICIENT SIZE TO CONVEY THE NORMAL STREAM FLOW.
 8. IF NECESSARY, SILT FENCE OR STRAWBLES SHALL BE INSTALLED AROUND THE PERIMETER OF THE WORK AREA.
 9. SEDIMENT CONTROL DEVICES ARE TO REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THE INSPECTING AUTHORITY APPROVES THEIR REMOVAL.

SEDIMENT TRAP - ST II
 TYPE: STONE OUTLET - ST II
 PRE-DEV. AREA = 2.50 AC
 POST-DEV. AREA = 3.50 AC
 PROVIDED VOLUME = 7,300 CU. FT.
 "WET" STORAGE = 7,300 CU. FT.
 "DRY" STORAGE = PROVIDED SSF AROUND SED. TRAP EMBANKMENT.
 CLEANOUT ELEV = 222.44
 DISTANCE FROM WEIR CREST ELEV TO CLEANOUT = 0.96 FT.
 PERMANENT POOL ELEV = 223.40
 WEIR CREST ELEV = 223.40
 TOP OF EMBANKMENT = 224.50
 WEIR LENGTH, FT (4 x AREA) = 14 FT
 BOTTOM ELEVATION = 221.11

PHASE I CULVERT CONSTRUCTION
 SEE SEQUENCE OF CULVERT CONSTRUCTION ON SHEET 13

PHASE I CULVERT CONSTRUCTION
 L.O.D. SHALL BE MINIMUM AREA SUFFICIENT TO CONSTRUCT CULVERT CROSSING. NO OTHER DISTURBANCE SHALL BE ALLOWED UNTIL CULVERT IS INSTALLED, BACKFILLED AND STABILIZED.

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.
 Signature: *Jeffrey W. Sarloving* 12/26/00
 U.S. NATURE RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS AS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: *J. A. Wainfield* 12/26/00
 HOWARD COUNTY

DATE: NUMBER REVISION DESCRIPTION

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *Michael Dammann* 11/15/00
 CHIEF DEVELOPMENT ENGINEERING DIVISION

Signature: *Wendy Harniss* 11/20/01
 CHIEF DIVISION OF LAND DEVELOPMENT

Signature: *Paul Smith* 11/16/01
 DATE

APPROVED: DEPARTMENT OF RECREATION AND PARKS
 Signature: *Garof. Arsham* 10/26/00
 DIRECTOR

BY THE ENGINEER:
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Signature: *Tom M. Pi* 3/30/00
 SIGNATURE OF ENGINEER

BY THE DEVELOPER:
 "I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."

Signature: *James J. Lewis* 10/27/00
 SIGNATURE OF DEVELOPER

OWNER
 HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS:
 7120 OAKLAND MILL COLUMBIA, MD 21046
 PHONE: 410-313-4700

DEVELOPER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS:
 3450 COURTHOUSE DRIVE ELLICOTT CITY, MD 21043
 PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS

GEF
 GRACE E. FIELDER & ASSOCIATES, CHARTERED PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
 8101 SANDY SPRING ROAD SUITE 100 LAUREL, MARYLAND 20107
 PHONE: 301-470-2544 FAX: 301-470-2545

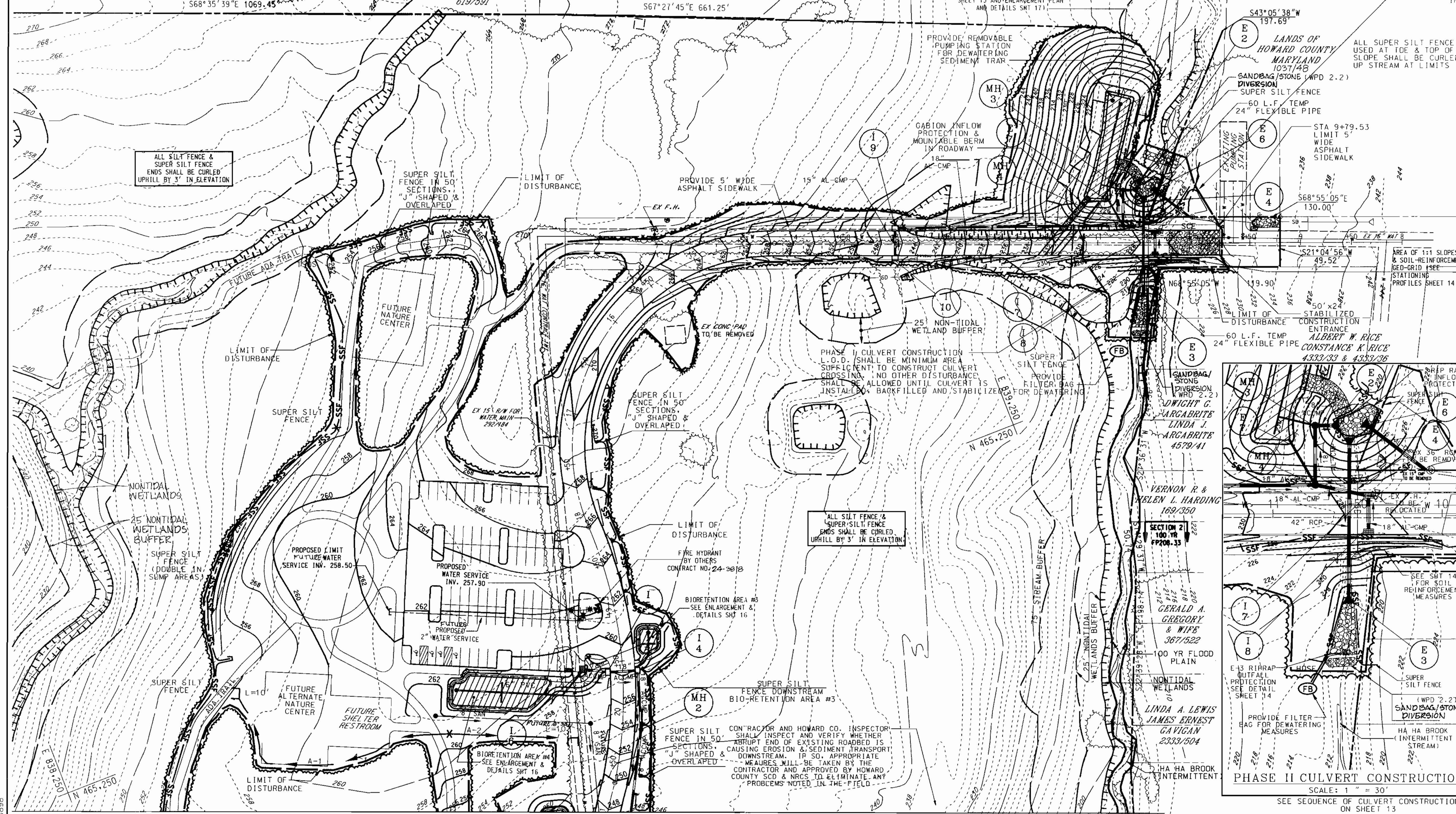
FREDERICK WARD ASSOCIATES INC.
 ENGINEERS ARCHITECTS SURVEYORS
 5 SOUTH MAIN STREET BEL AIR, MARYLAND 21034 410/879-2900

CENSUS TRACT NO.: 6069-03 WATER CODE: C06
 PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 7170950

TAX MAP 50, GRID 1 & 2
 ZONED R-20 & R-5C
 ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
 HIGH RIDGE PARK
 EROSION AND SEDIMENT CONTROL PLAN

DESIGN BY: GEF/MR SCALE: AS SHOWN PROJECT NO.:
 DRAWN BY: NB/CV/GEF DATE: 04/02/00 DRAWING NUMBER
 CHECKED BY: GEF/RD APPROVED: GEF 11 OF 24



ALL SILT FENCE & SUPER SILT FENCE ENDS SHALL BE CURLED UPHILL BY 3' IN ELEVATION

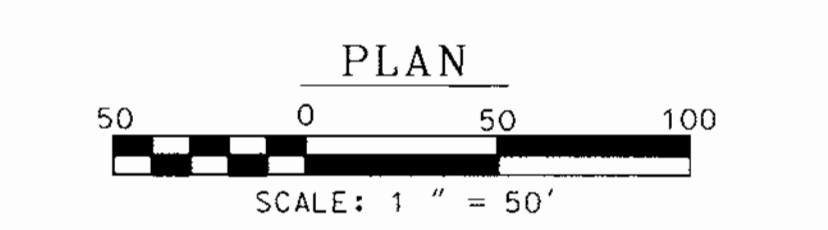
ALL SILT FENCE & SUPER SILT FENCE ENDS SHALL BE CURLED UPHILL BY 3' IN ELEVATION

ALL SILT FENCE & SUPER SILT FENCE ENDS SHALL BE CURLED UPHILL BY 3' IN ELEVATION

LEGEND

- SF- LIMIT OF DISTURBANCE
- SF- SILT FENCE
- 250- PROP CONTOUR
- 290- EX CONTOUR
- SC- STABILIZED CONSTRUCTION
- ENTR- ENTRANCE
- SDS- STONE OUTLET STRUCTURE
- EXIST- EXISTING TREE LINE
- LCL- LIMIT OF CLEARING
- NWL- LIMIT OF NONTIDAL WETLANDS
- NWB- LIMIT OF 25' NONTIDAL WELAND BUFFER
- S75- LIMIT OF 75' STREAM BUFFER

MATCH LINE SEE SHEET 12

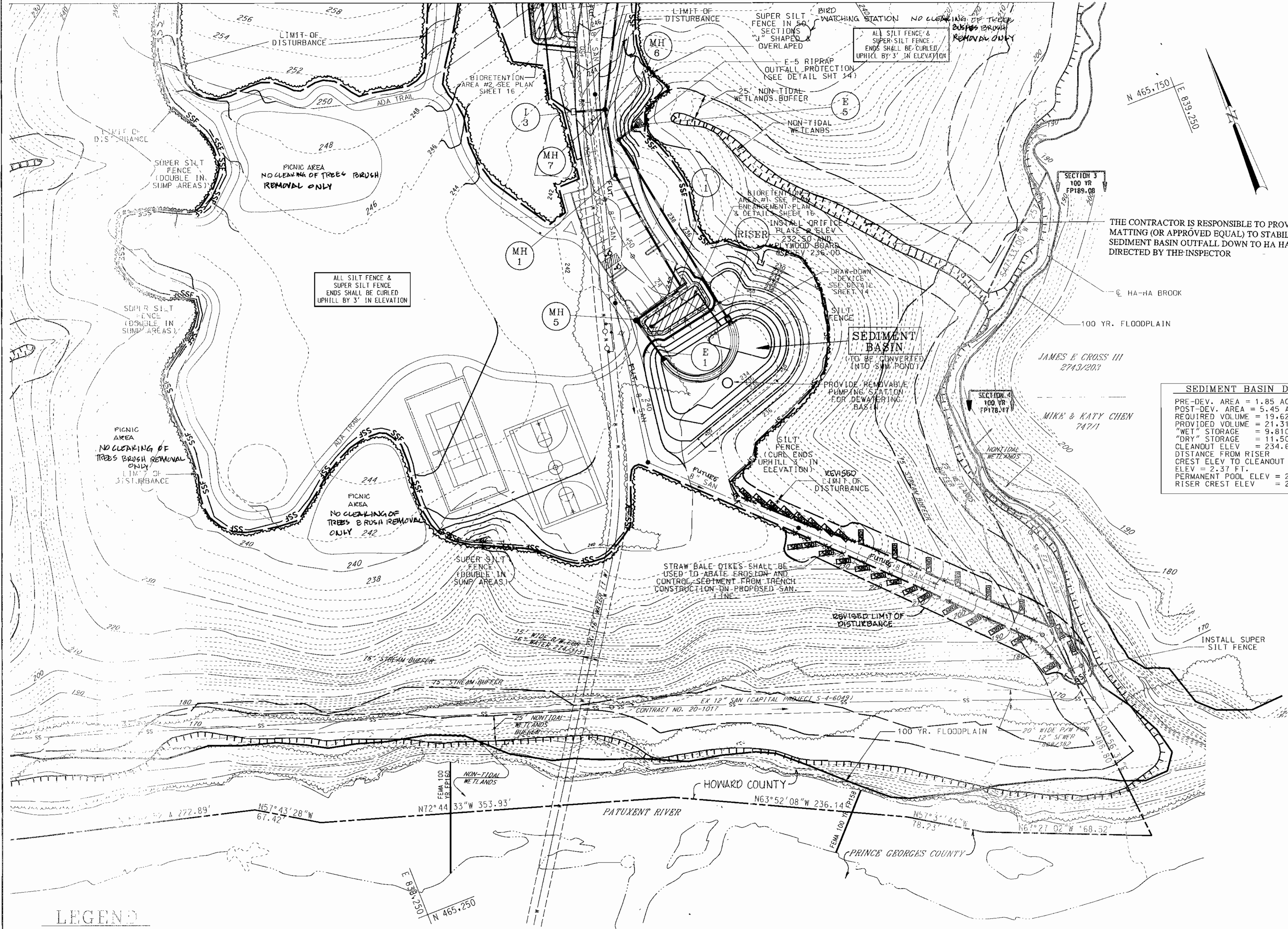


PLAN
 SCALE: 1" = 50'

V:\PROJECTS\5492310\ENGR\CD\1\WPH\ 0898

SDP 0034

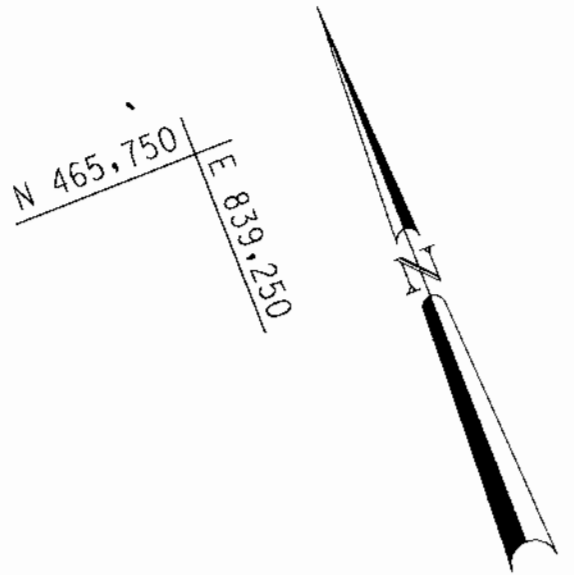
MATCH LINE SEE SHEET 11



SEDIMENT BASIN DATA

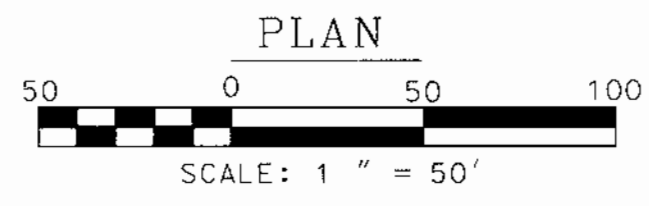
PRE-DEV. AREA = 1.85 AC
 POST-DEV. AREA = 5.45 AC
 REQUIRED VOLUME = 19,620 CU.FT.
 PROVIDED VOLUME = 21,312 CU.FT.
 "WET" STORAGE = 9,810 CU.FT.
 "DRY" STORAGE = 11,502 CU.FT.
 CLEANOUT ELEV = 234.60
 DISTANCE FROM RISER CREST ELEV TO CLEANOUT ELEV = 2.37 FT.
 PERMANENT POOL ELEV = 234.87
 RISER CREST ELEV = 236.97

THE CONTRACTOR IS RESPONSIBLE TO PROVIDE SOIL STABILIZATION MATTING (OR APPROVED EQUAL) TO STABILIZE EXISTING SWALE AT SEDIMENT BASIN OUTFALL DOWN TO HA HA BROOK AS NECESSARY OR AS DIRECTED BY THE INSPECTOR



LEGEND

	LIMIT OF DISTURBANCE		EXISTING TREE LINE
	SUPER SILT FENCE		LIMIT OF CLEARING
	SILT FENCE		LIMIT OF NONTIDAL WETLANDS
	25' NONTIDAL WETLAND BUFFER		LIMIT OF 25' NONTIDAL WETLAND BUFFER
	75' STREAM BUFFER		LIMIT OF 75' STREAM BUFFER



REVIEWED FOR HOWARD S.C.D. & MEE'S TECHNICAL REQUIREMENTS.
 S. H. Warfield 12/26/00
 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Geoffrey W. Skovring 12/26/00
 DATE

DATE	NUMBER	REVISION DESCRIPTION
11/19/00		APPROVED: DEPARTMENT OF PLANNING AND ZONING
1/17/01		CHIEF DEVELOPMENT ENGINEERING DIVISION
1/18/01		DIRECTOR

APPROVED: DEPARTMENT OF RECREATION AND PARKS
 Guy J. Cochran 10/26/00
 DATE

BY THE ENGINEER:
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

To M.P. 3/30/00
 SIGNATURE OF ENGINEER

BY THE DEVELOPER:
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

James J. Lew 10/27/00
 SIGNATURE OF DEVELOPER

OWNER
 HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
 7120 OAKLAND MILL
 COLUMBIA, MD 21046
 PHONE: 410-313-4700

DEVELOPER
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 3450 COURTHOUSE DRIVE
 ELLICOTT CITY, MD 21045
 PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS

GEF

GRACE E. FIELDER & ASSOCIATES, CHARTERED
 PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
 8101 SANDY SPRING ROAD
 SUITE 104
 LAUREL, MARYLAND 20707
 PHONE: 301-470-2544
 FAX: 301-470-2545

3/30/00
 DATE

 PROFESSIONAL ENGR. NO.

SDP #
 PLANNING BOARD APPROVAL

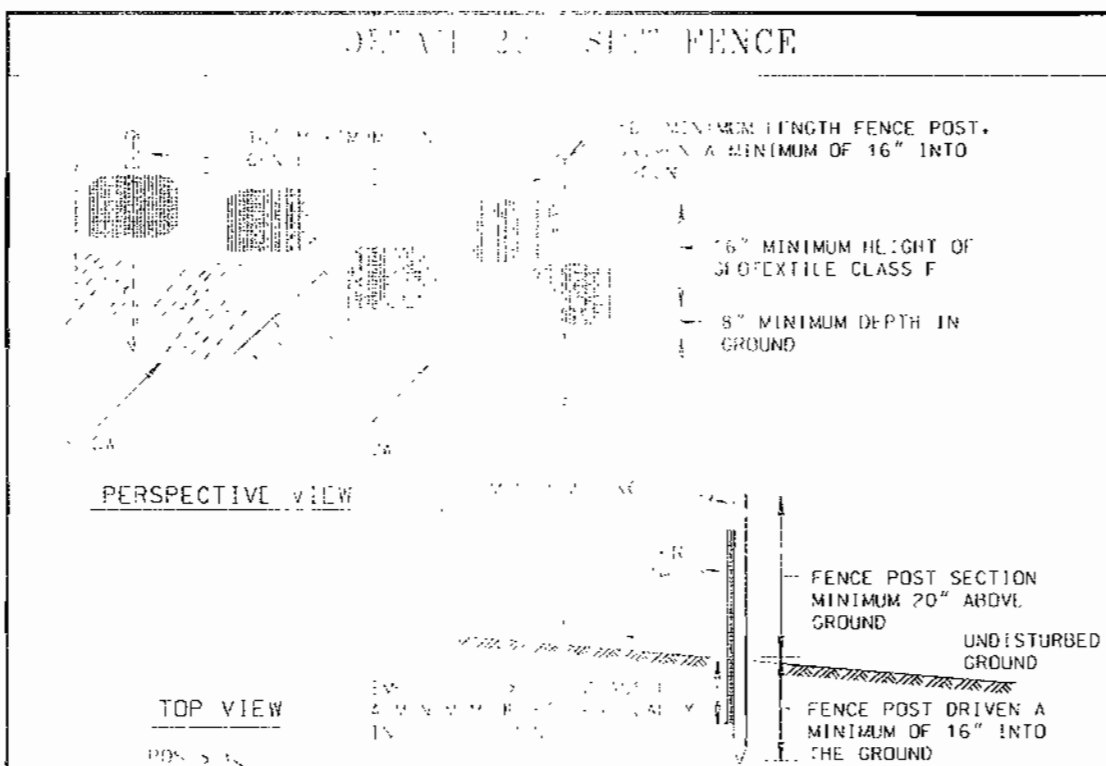
FREDERICK WARD ASSOCIATES INC.
 ENGINEERS ARCHITECTS SURVEYORS
 5 SOUTH MAIN STREET BEL AIR, MARYLAND 21034 (410)879-2090

CENSUS TRACT NO.: 6069.03 WATER CODE: C06
 PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 3170900
 TAX MAP 50, GRID 1 & 2
 ZONED R-20 & R-5C
 ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
 HIGH RIDGE PARK
 EROSION AND SEDIMENT CONTROL PLAN

DESIGN BY: GEF/MR SCALE: AS SHOWN PROJECT NO.:
 DRAWN BY: NB/CV/GEF DATE: 04/02/00 DRAWING NUMBER
 CHECKED BY: GEF/RD APPROVED: GEF '2 OF 24

SDP0034



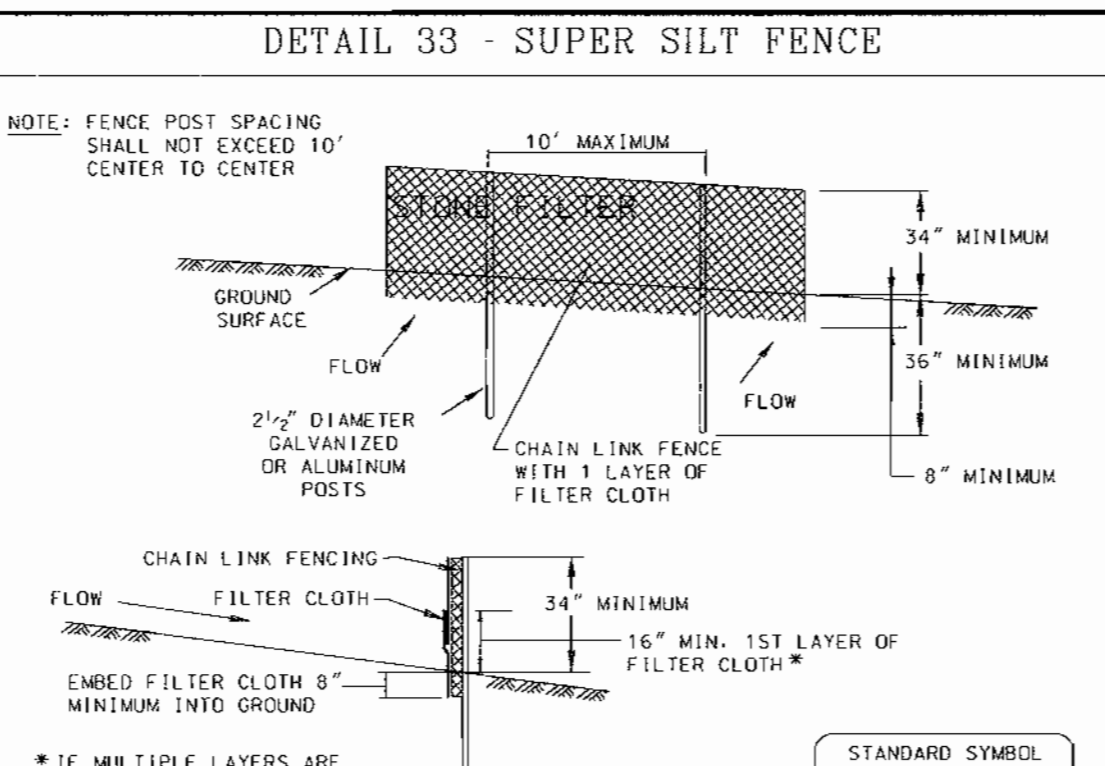
DETAIL 20 - SILT FENCE

PERPECTIVE VIEW
TOP VIEW
CROSS SECTION

JOINING TWO ADJACENT SILT FENCE SECTIONS

1. Posts shall be spaced at a maximum of 10' into the ground. Posts shall be of a minimum height of 16' above the ground. Posts shall be of a minimum diameter of 1 1/2" diameter galvanized steel pipe. Posts shall be driven into the ground to a minimum depth of 16" into the ground.

2. Posts shall be spaced at a maximum of 10' into the ground. Posts shall be of a minimum height of 16' above the ground. Posts shall be of a minimum diameter of 1 1/2" diameter galvanized steel pipe. Posts shall be driven into the ground to a minimum depth of 16" into the ground.

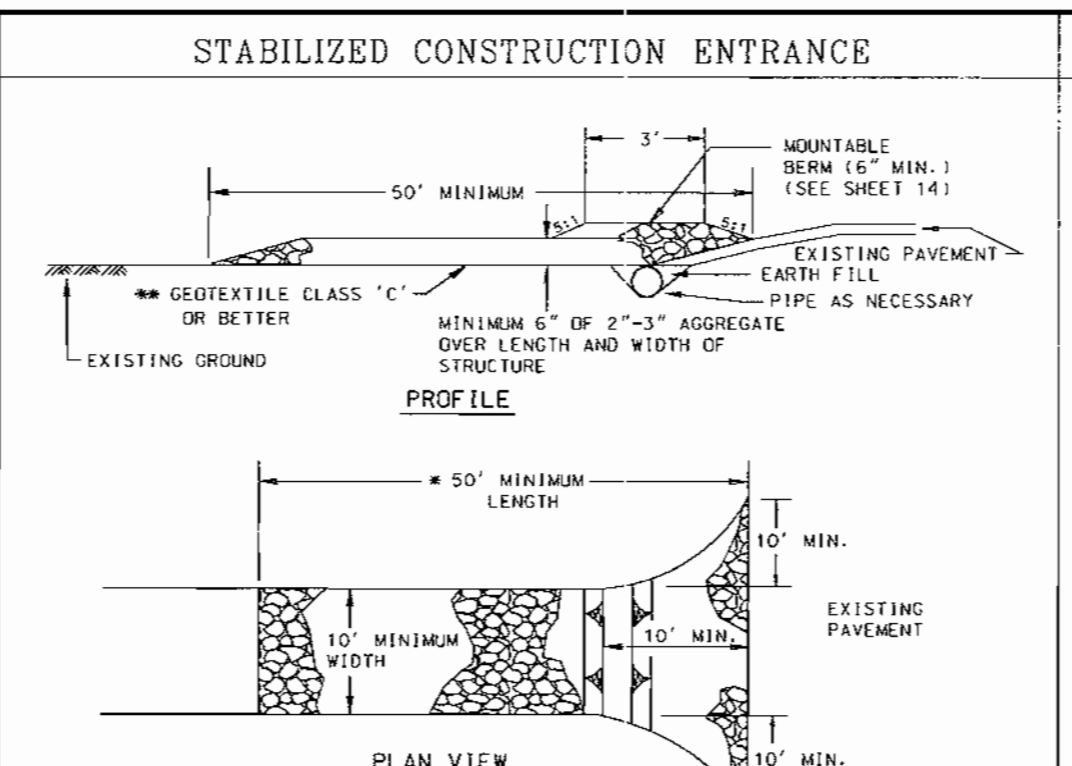


DETAIL 33 - SUPER SILT FENCE

CONSTRUCTION SPECIFICATIONS

- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 8" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
- Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

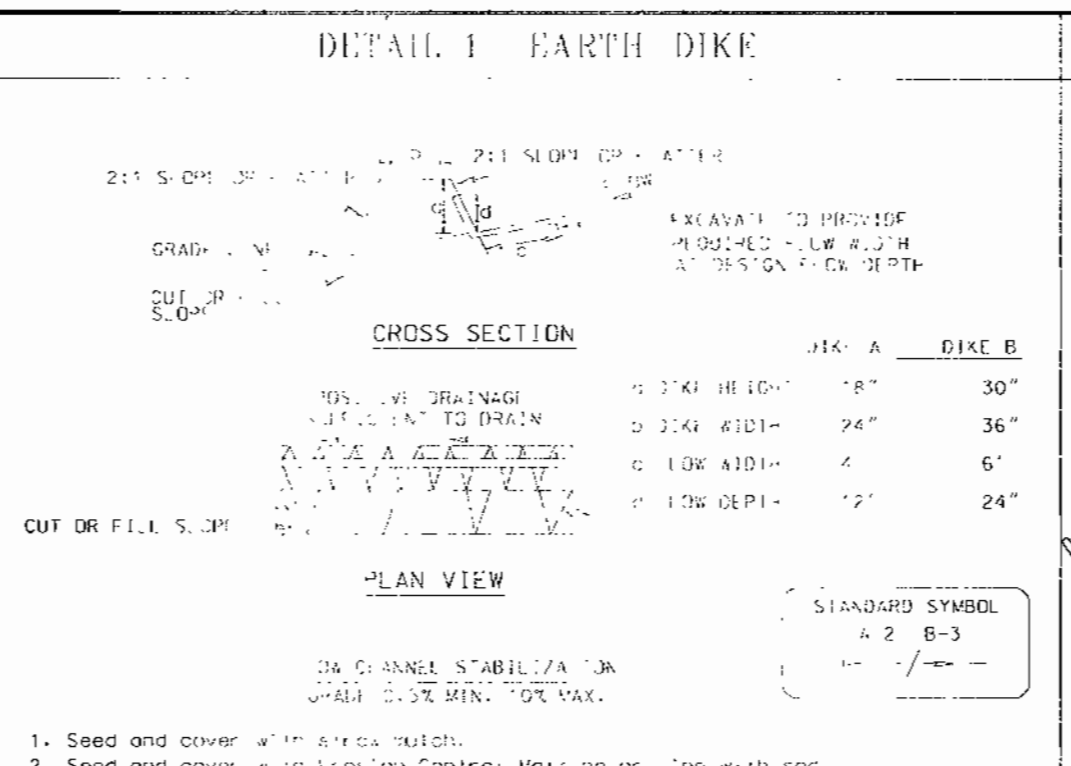
Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.5 gal/ft ² /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322



STABILIZED CONSTRUCTION ENTRANCE

CONSTRUCTION SPECIFICATION

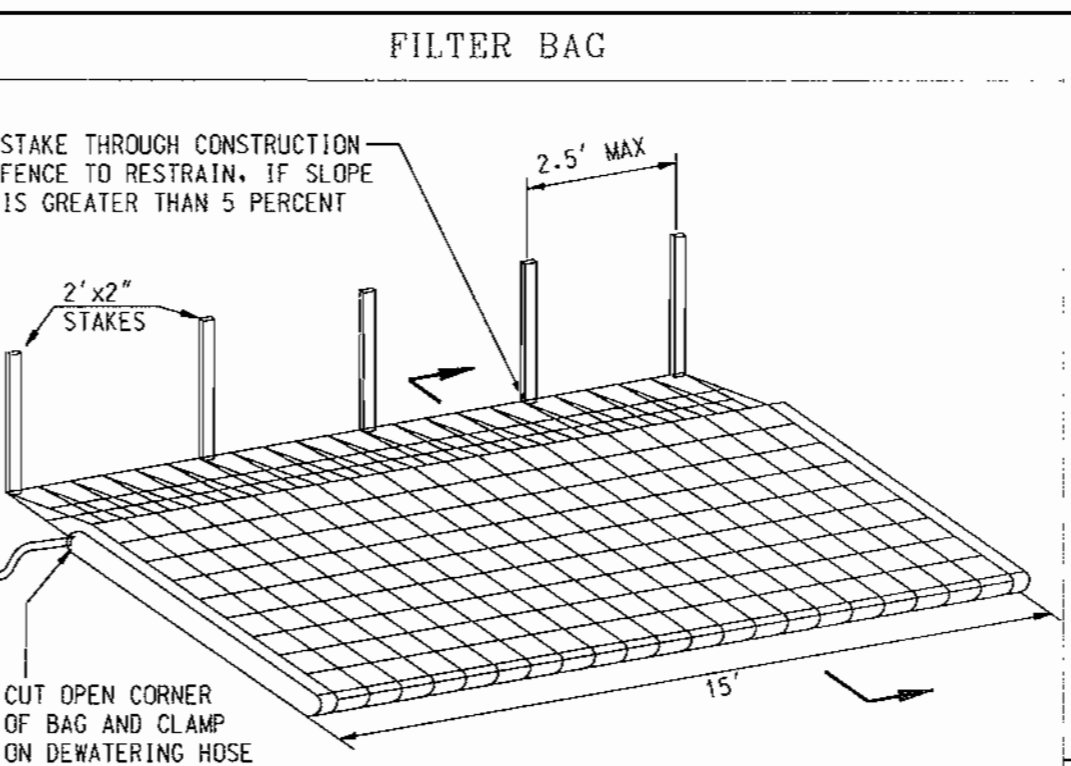
- Length - minimum of 50' (#30' for single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate (2" to 3") or recycled or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrances shall be placed through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mounded berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage which the site is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.



DETAIL 1 - EARTH DIKE

CROSS SECTION
PLAN VIEW

- Seed and cover with aggregate.
- Seed and cover with aggregate.
- 4" - 1/2" sharp sand or coarse gravel applied on top of aggregate.
- 4" - 1/2" sharp sand or coarse gravel applied on top of aggregate.
- 4" - 1/2" sharp sand or coarse gravel applied on top of aggregate.
- 4" - 1/2" sharp sand or coarse gravel applied on top of aggregate.
- 4" - 1/2" sharp sand or coarse gravel applied on top of aggregate.
- 4" - 1/2" sharp sand or coarse gravel applied on top of aggregate.



FILTER BAG

CONCRETE STRUCTURAL NOTES

- CONCRETE CONSTRUCTION SHALL BE DESIGNED, REINFORCED AND CONSTRUCTED IN ACCORDANCE WITH ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
- CONCRETE STRENGTH SHALL BE 3000 PSI MINIMUM 28 DAY COMPRESSIVE STRENGTH UNLESS OTHERWISE NOTED.
- REINFORCING STEEL SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM A615, GRADE 60.
- CONCRETE EXPOSED TO WEATHER SHALL HAVE 5X MINIMUM ENTRAINMENT AIR.
- CONTRACTOR MAY (AT HIS OWN OPTION) FURNISH THESE STRUCTURES AS A PRECAST UNIT, PROVIDED THAT SHOP DRAWINGS OF THE PRECAST STRUCTURE ARE SUBMITTED TO AND APPROVED BY THE ENGINEER-IN-CHARGE, PRIOR TO CONSTRUCTION.
- CHAMFER ALL EXPOSED CONCRETE EDGES -1 INCH.
- TRASH RACK & WEIR GRATING ASSEMBLIES SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION AND PAINTED W/ 2 COATS OF BATTLESHIP GRAY PAINT.
- IF RISER IS PRECAST, PROVIDE A WATERTIGHT COLLAR AT BARREL PIPE CONNECTION TO RISER. IF RISER IS CAST-IN-PLACE, CAST WALLS DIRECTLY AROUND BARREL PIPE TO FORM A WATERTIGHT SEAL.

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.

U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE: _____

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

HOWARD S.C.D. DATE: _____

DATE: _____ NUMBER: _____ REVISION DESCRIPTION: _____

APPROVED: DEPARTMENT OF PLANNING AND ZONING

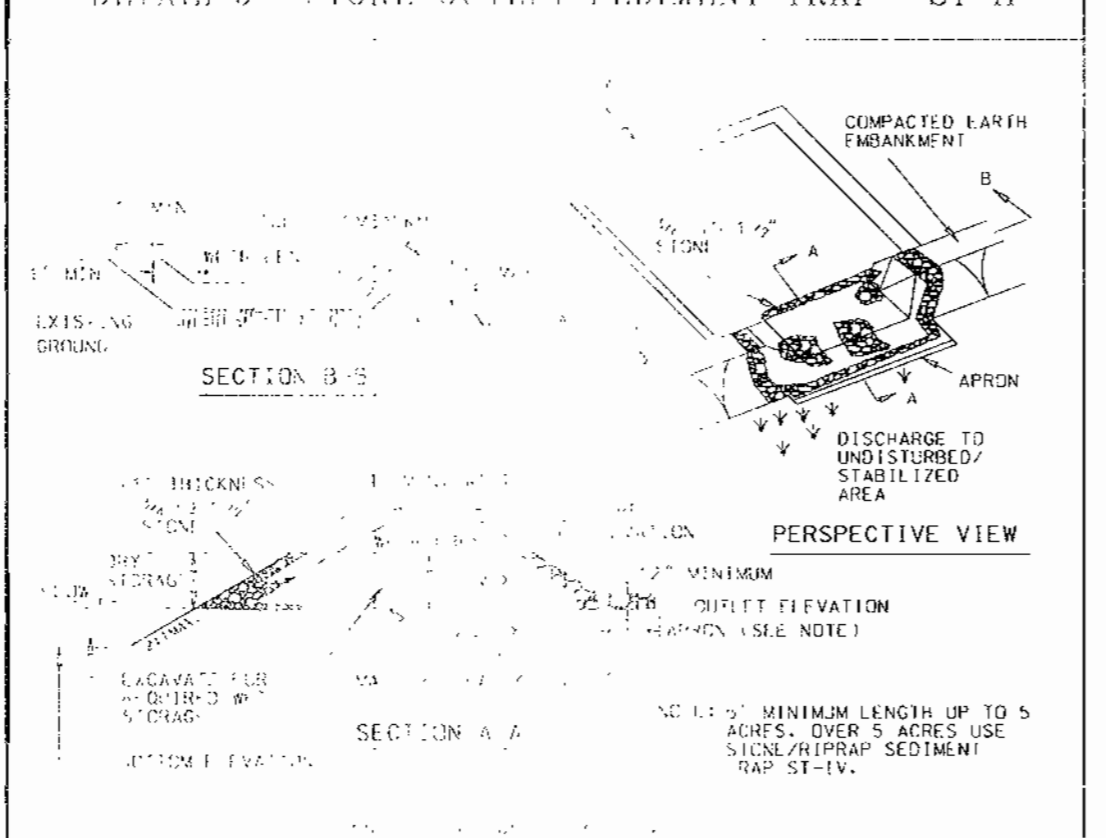
CHIEF-DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: *11/15/00*

CHIEF DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: *1/17/01*

REGULATORY: *[Signature]* DATE: *1/18/01*

APPROVED: DEPARTMENT OF RECREATION AND PARKS: _____ DATE: _____

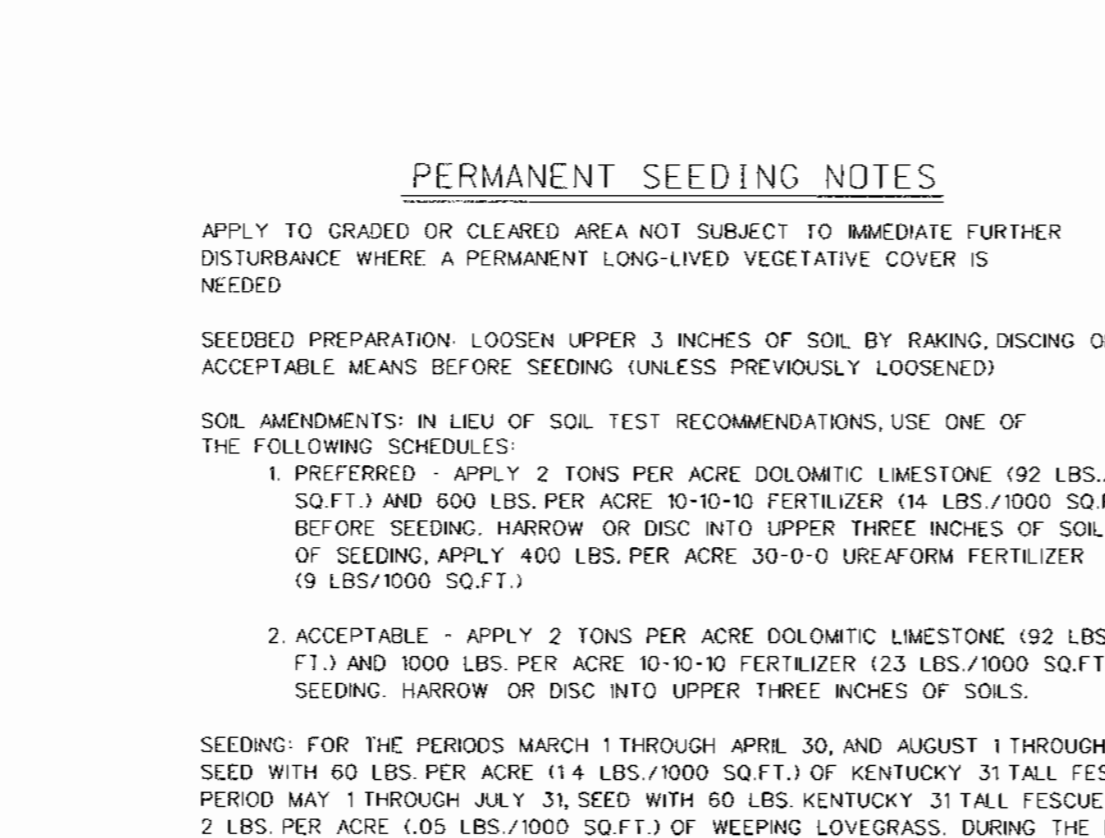
BY THE ENGINEER:
[Signature] DIRECTOR DATE: *10-26-00*



DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II

CONSTRUCTION SPECIFICATIONS

- Stone outlet shall be constructed in accordance with the latest Maryland State Highway Details for Stone Outlet Sediment Traps.
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PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREA 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 (UNLESS PREVIOUSLY LOOSENED).

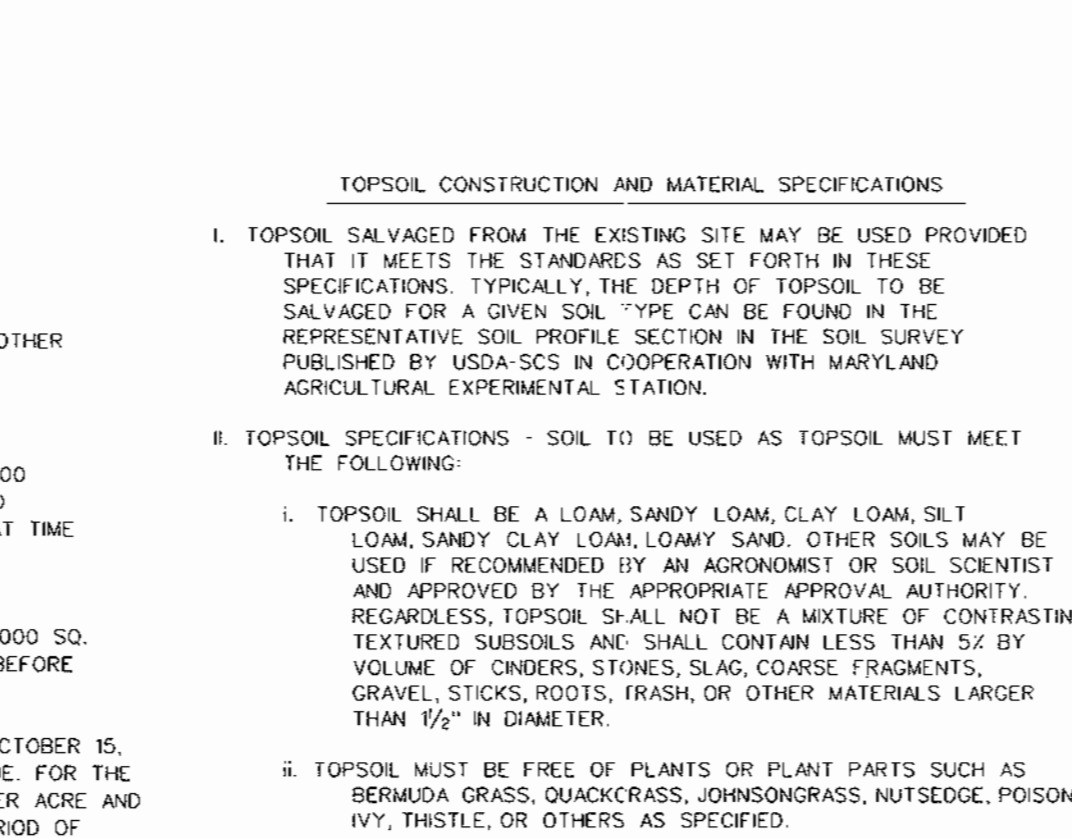
SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- 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 THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREA-FORM FERTILIZER (9 LBS./1000 SQ.FT.)
- 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 SOILS.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS. PER ACRE (14 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS./1000 SQ.FT.) OF WEeping LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH 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 SOIL, OPTION (3) SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING: APPLY 1/2" TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNWROTEN SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 2 1/2 GAL PER ACRE (5 GALS./1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREA. ON SLOPES 8 FEET OR HIGHER, USE 348 GALS. PER ACRE (48 GALS./1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDING.



TOPSOIL CONSTRUCTION AND MATERIAL SPECIFICATIONS

PRELIMINARY

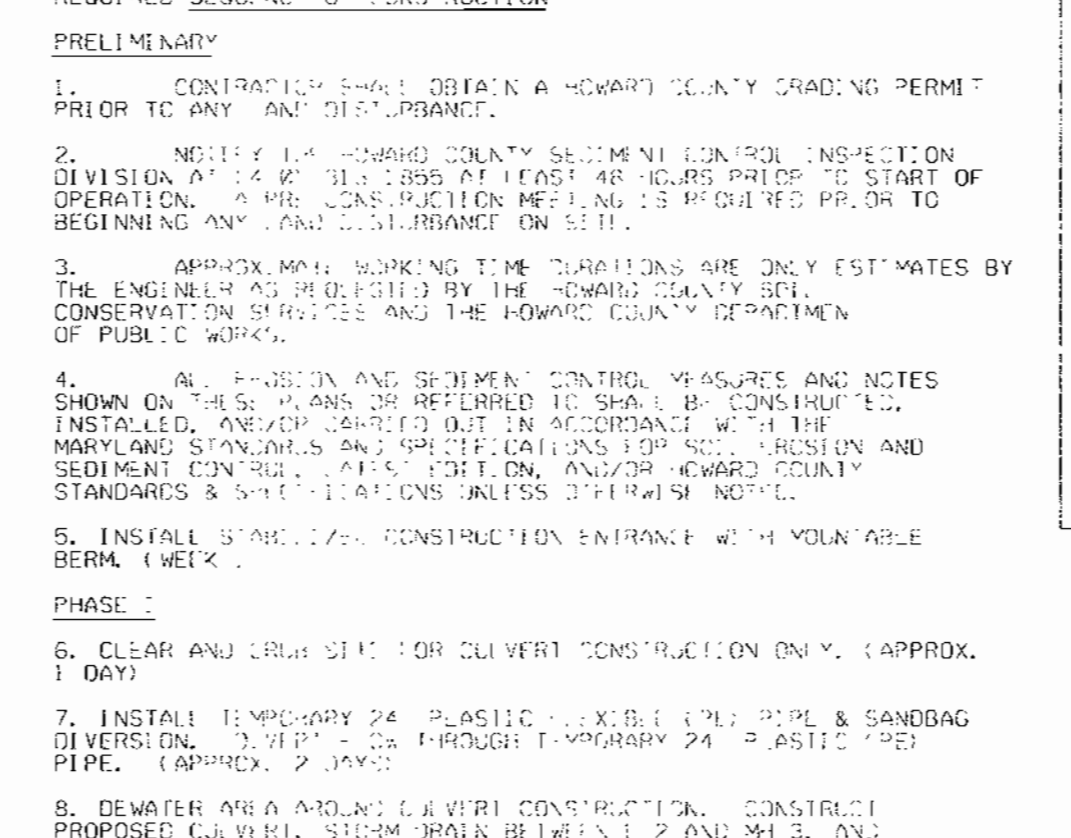
- CONTRACTOR SHALL OBTAIN A HOWARD COUNTY GRADING PERMIT PRIOR TO ANY AND ALL GRADING.
- NOTIFY LAND RESOURCE MANAGEMENT DIVISION OF HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING AT LEAST 48 HOURS PRIOR TO START OF OPERATION. OBTAIN CONSTRUCTION PERMIT AND BE REQUIRED PRIOR TO BEGINNING ANY AND ALL GRADING OR SEEDING.
- APPROXIMATE WORKING TIME ESTIMATES ARE ONLY ESTIMATES BY THE ENGINEER AND ARE NOT TO BE USED AS A BASIS FOR SCHEDULING OR BIDDING. CONSERVATION SERVICES AND THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
- ALL SEEDING AND SOIL CONTROL MEASURES AND NOTES SHOWN ON THESE PLANS ARE REFERRED TO BY THE WORDS "AS SHOWN". ALL SEEDING SHALL BE DONE IN ACCORDANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL CONSERVATION AND SEDIMENT CONTROL. PRELIMINARY AND/OR HOWARD COUNTY STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM (2" MIN.)

PHASE 1:

- CLEAR AND GRUB SITE FOR CONSTRUCTION ONLY. (APPROX. 1 DAY)
- INSTALL TEMPORARY 24" PLASTIC POLYETHYLENE PIPE & SANDBAG CURBS (APPROX. 2 DAYS) THROUGH TEMPORARY 24" PLASTIC POLYETHYLENE PIPE.
- DEWATER AND ANCHOR EXISTING CONSTRUCTION CONSTRUCTED PROPOSED CULVERT, STORM DRAIN, BARREL PIPE, AND WEIR. (APPROX. 3 WEEKS)
- CONTACT HOWARD COUNTY SEDIMENT CONTROL INSPECTOR WHEN PHASE 1 IS COMPLETE.

PHASE 2:

- DIVER WATER BACK THROUGH NEWLY INSTALLED CULVERT. (APPROX. 2 DAYS)
- REMOVE SANDBAG DIVERSION TO ALLOW STREAM FLOW THROUGH PROPOSED CULVERT.
- PLACE SANDBAG DIVERSION ON ALL OTHER STREAMS TO TEMPORARY 24" PVC PIPE TO STEADY FLOW THROUGH EXISTING CULVERT.
- REMOVE EXISTING BRICK CULVERT, BACKFILL THE TRENCH, INSTALL SURFACE DRAIN ON BOTH SIDES OF THE PROPOSED ROAD EMBANKMENT. (APPROX. 4 DAYS)
- FINE GRADE AND PROVIDE PERMANENT STABILIZATION OF THE EMBANKMENT AND ALL DISTURBED AREAS. (APPROX. 2 DAYS)
- AFTER CULVERT IS COMPLETELY INSTALLED AND STABILIZED, CONTRACTOR MAY CONTINUE WITH THE REST OF THE CONSTRUCTION WITH THE PERMISSION OF HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
- CONSTRUCT SEDIMENT CONTROL STRUCTURES THAT ARE IN THE DISTURBED AREA "A" AS SHOWN ON PLANS WITH THE FOLLOWING MODIFICATIONS: (SEE 3)
- EXCAVATE SEDIMENTATION AREA "B" TO 12" AND GRADE AS SHOWN ON THESE PLANS.
- INSTALL PERMANENT BARREL PIPE, TRASH RACK, SAND FILTER, MONITORING WELL, OR 6" DIAMETER WATERMETER W/ 2" IN. DIAMETER MET.
- DO NOT INSTALL SAND FILTER PROTECTION ON ALL DISTURBED AREAS UNTIL CONSTRUCTION OF PERMANENT SEDIMENTATION FACILITY. (SEE SPEC ITEM #21).
- INSTALL PERMANENT SEDIMENT CONTROL STRUCTURES: (SEE 4)
- STRIP AND RESEED TOPSOIL. (SEE 5) (SEE 4)
- CONSTRUCT THE FOLLOWING CHECK BASIN: (SEE 6)
- CONSTRUCT STORM DRAIN WITH 2' BARREL AND STORM DRAIN AS INDICATED ON THE APPROVED PLAN.
- GRADE SETS TO BE PROPOSED ELEVATIONS AS INDICATED ON THE SITE PLAN.
- CONSTRUCT SURFACE WATER AND INST. PAVEMENT ON THE ROADS AND PARKING LOTS.
- CONSTRUCT PROTECTION AREAS EXCEPT AREA "B" (SEE SPEC ITEM #21). INSTALL SILT FENCE/SUPER SILT FENCE AROUND THE HIGH PRIORITY AREAS TO PROTECT AGAINST CONTOURING.
- FINE GRADE AND STABILIZE SITE. (SEE 7) (SEE 4)
- AFTER SITE IS STABILIZED, OBTAIN PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTOR AND HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS TO CONSTRUCT PERMANENT SEDIMENTATION BASIN AND STORM DRAIN. (SEE 8) (SEE 2)
- EXCAVATE SEDIMENTATION AREA "B" AND INSTALL PERFORATED PVC PIPE.
- INSTALL PERFORATED PVC PIPE AND 24" BARREL. (SEE 9)
- ALL CARDBOARD PROTECTION SHALL BE IDENTIFIED AND CLEANED UP ANY DEBRIS OR DEBRIS AND/OR RIPPED AS NECESSARY TO COMPLY WITH THE PERMANENT. DO NOT INSTALL ANY OTHER DEVICES AS A RESULT OF THESE CONVERSIONS TO PERMANENT. (SEE 11) (SEE 4)
- REMOVE ALL DEBRIS AND/OR RIPPED AS NECESSARY TO COMPLY WITH THE PERMANENT. (SEE 12) (SEE 4)
- REMOVE ALL DEBRIS AND/OR RIPPED AS NECESSARY TO COMPLY WITH THE PERMANENT. (SEE 13) (SEE 4)
- REMOVE ALL DEBRIS AND/OR RIPPED AS NECESSARY TO COMPLY WITH THE PERMANENT. (SEE 14) (SEE 4)



ESTIMATE OF SEDIMENT CONTROL QUANTITIES

STABILIZED CONSTR. ENTR. : 1 EA
EARTH DIKE: 1660 L.F.
SILT FENCE: 250 L.F.
SUPER SILT FENCE: 2100 L.F.
STONE OUTLET STRUCTURES: 0 EA
STREAM BARRIERS: 1 EA
SEDIMENT BASIN (1): 21,312 CU.F.T.

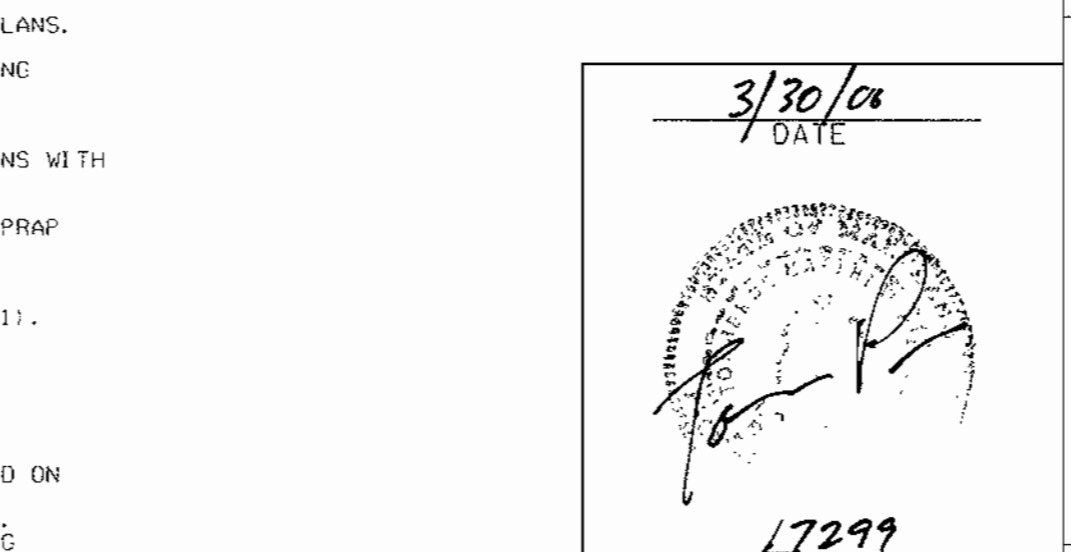
NOTE: THESE QUANTITIES ARE FOR SEDIMENT CONTROL USE ONLY. CONTRACTOR SHALL NOT RELY ON THESE QUANTITIES FOR ESTIMATING AND BIDDING PURPOSES.



**HOWARD SOIL CONSERVATION DISTRICT
STANDARD SEDIMENT CONTROL NOTES**

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION, PRIOR TO THE START OF ANY CONSTRUCTION (11-15-99)
- ALL VEGETATIVE 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.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 45 CALENDAR DAYS FOR ALL PERMEABLE SEDIMENT CONTROL STRUCTURES, DRAIN, PERMEABLE SLOPES AND ALL SLOPES STEEPER THAN 3:1 BY 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7 OF "HOWARD COUNTY DESIGN MANUAL", STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, OR PERMANENT SEEDING WITHIN THE TIME PERIOD SPECIFIED ABOVE. TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	35.00 ACRES
AREA TO BE ROOFPED OR PAVED	10.60 ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.79 ACRES
TOTAL CUT	1,048 CUBIC YARDS
TOTAL FILL	9,120 CUBIC YARDS
TOTAL TOPSOIL	10,197 CUBIC YARDS
OFFSITE WASTE/BORROW LOCATION	TO BE DETERMINED, BUT MUST BE A SITE WITH AN ACTIVE GRADING PERMIT.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS EXCEEDING 100 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED PRIOR TO COMPLETION OF INSTALLATION OF PERMEABLE EROSION AND SEDIMENT CONTROL, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK FILLED AND STABILIZED WITH ONE WORKING DAY, WHICHEVER IS SHORTER.



CONCRETE STRUCTURAL NOTES

- CONCRETE CONSTRUCTION SHALL BE DESIGNED, REINFORCED AND CONSTRUCTED IN ACCORDANCE WITH ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
- CONCRETE STRENGTH SHALL BE 3000 PSI MINIMUM 28 DAY COMPRESSIVE STRENGTH UNLESS OTHERWISE NOTED.
- REINFORCING STEEL SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM A615, GRADE 60.
- CONCRETE EXPOSED TO WEATHER SHALL HAVE 5X MINIMUM ENTRAINMENT AIR.
- CONTRACTOR MAY (AT HIS OWN OPTION) FURNISH THESE STRUCTURES AS A PRECAST UNIT, PROVIDED THAT SHOP DRAWINGS OF THE PRECAST STRUCTURE ARE SUBMITTED TO AND APPROVED BY THE ENGINEER-IN-CHARGE, PRIOR TO CONSTRUCTION.
- CHAMFER ALL EXPOSED CONCRETE EDGES -1 INCH.
- TRASH RACK & WEIR GRATING ASSEMBLIES SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION AND PAINTED W/ 2 COATS OF BATTLESHIP GRAY PAINT.
- IF RISER IS PRECAST, PROVIDE A WATERTIGHT COLLAR AT BARREL PIPE CONNECTION TO RISER. IF RISER IS CAST-IN-PLACE, CAST WALLS DIRECTLY AROUND BARREL PIPE TO FORM A WATERTIGHT SEAL.

DATE: *3/30/00*

PROFESSIONAL ENGR. NO. *17299*

SDP # *PLANING BOARD APPROVAL*

U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE: _____

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

HOWARD S.C.D. DATE: _____

DATE: _____ NUMBER: _____ REVISION DESCRIPTION: _____

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF-DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: *11/15/00*

CHIEF DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: *1/17/01*

REGULATORY: *[Signature]* DATE: *1/18/01*

APPROVED: DEPARTMENT OF RECREATION AND PARKS: _____ DATE: _____

BY THE ENGINEER:
[Signature] DIRECTOR DATE: *10-26-00*

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

[Signature] DATE: *3/30/00*
SIGNATURE OF ENGINEER

BY THE DEVELOPER:
[Signature] DATE: *10/26/00*
SIGNATURE OF DEVELOPER

OWNER: HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS: 7120 OAKLAND MILL, COLUMBIA, MD 21046, PHONE: 410-313-4700

DEVELOPER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS: 3450 COURTHOUSE DRIVE, ELLICOTT CITY, MD 21043, PHONE: 410-313-2044

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS

GEF

GRACE E. FIELDER & ASSOCIATES, CHARTERED PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
8101 SANDY SPRING ROAD, SUITE 104, AURORA, MARYLAND 20747
PHONE: 301-470-2544
FAX: 301-470-2545

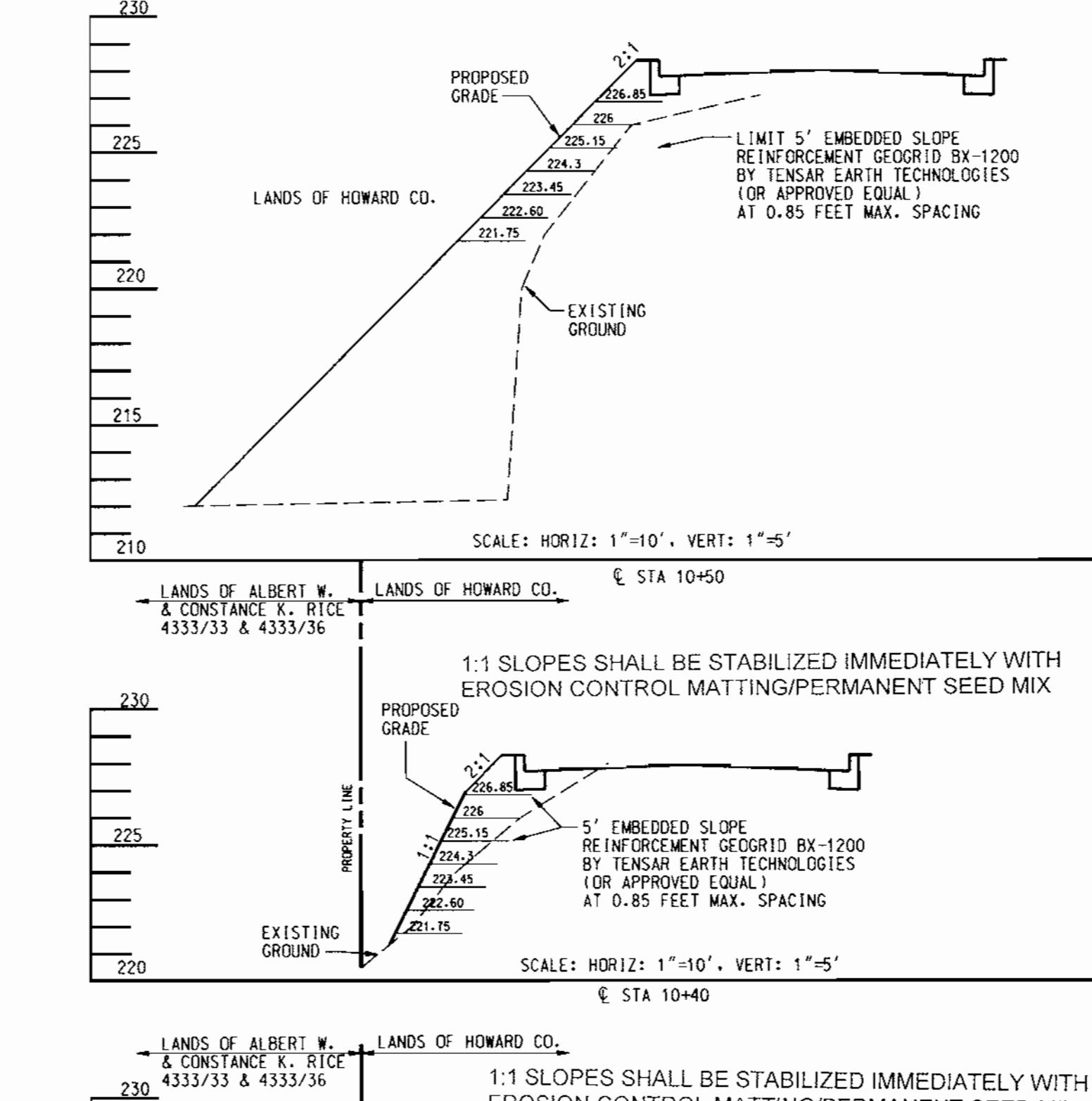
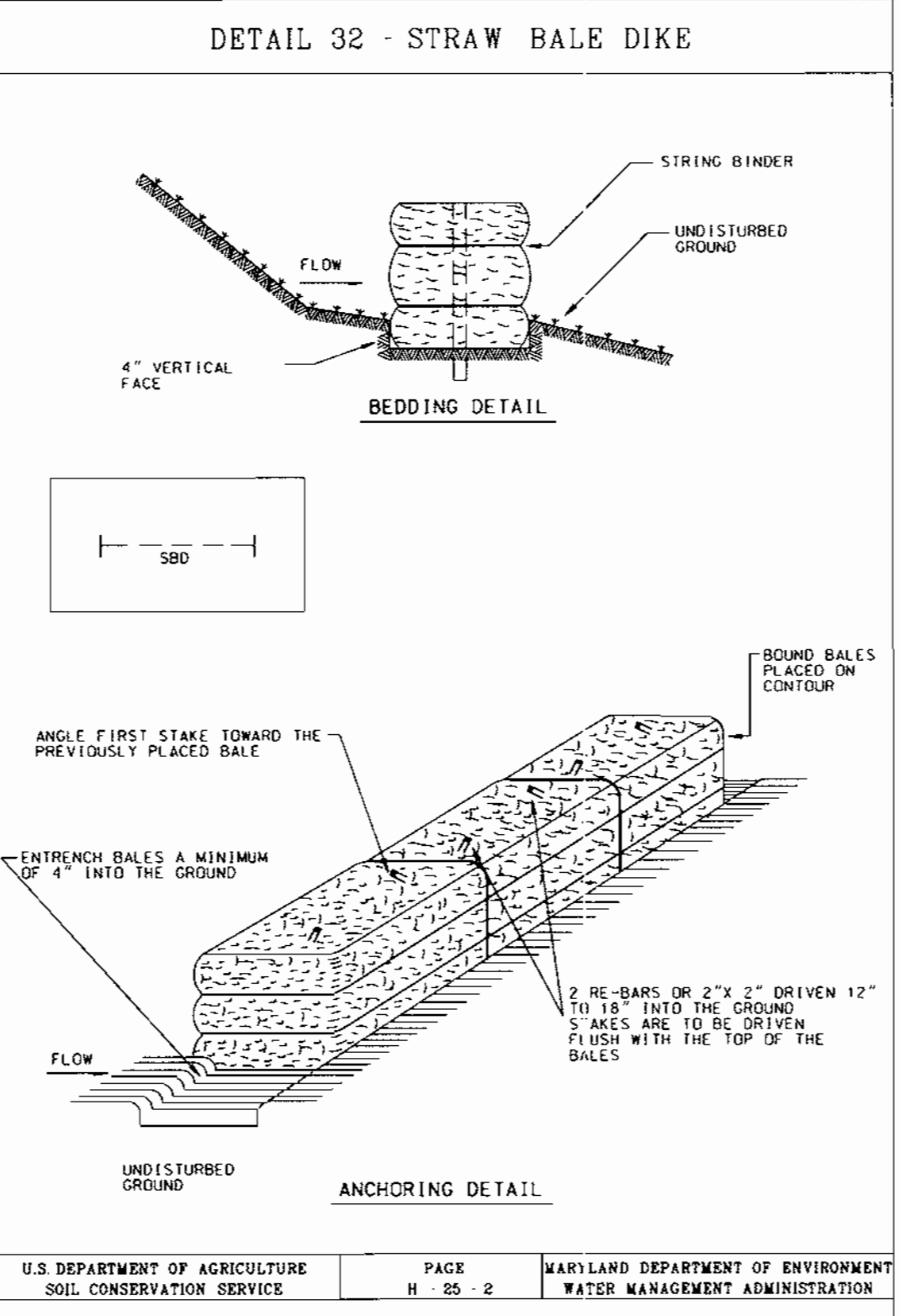
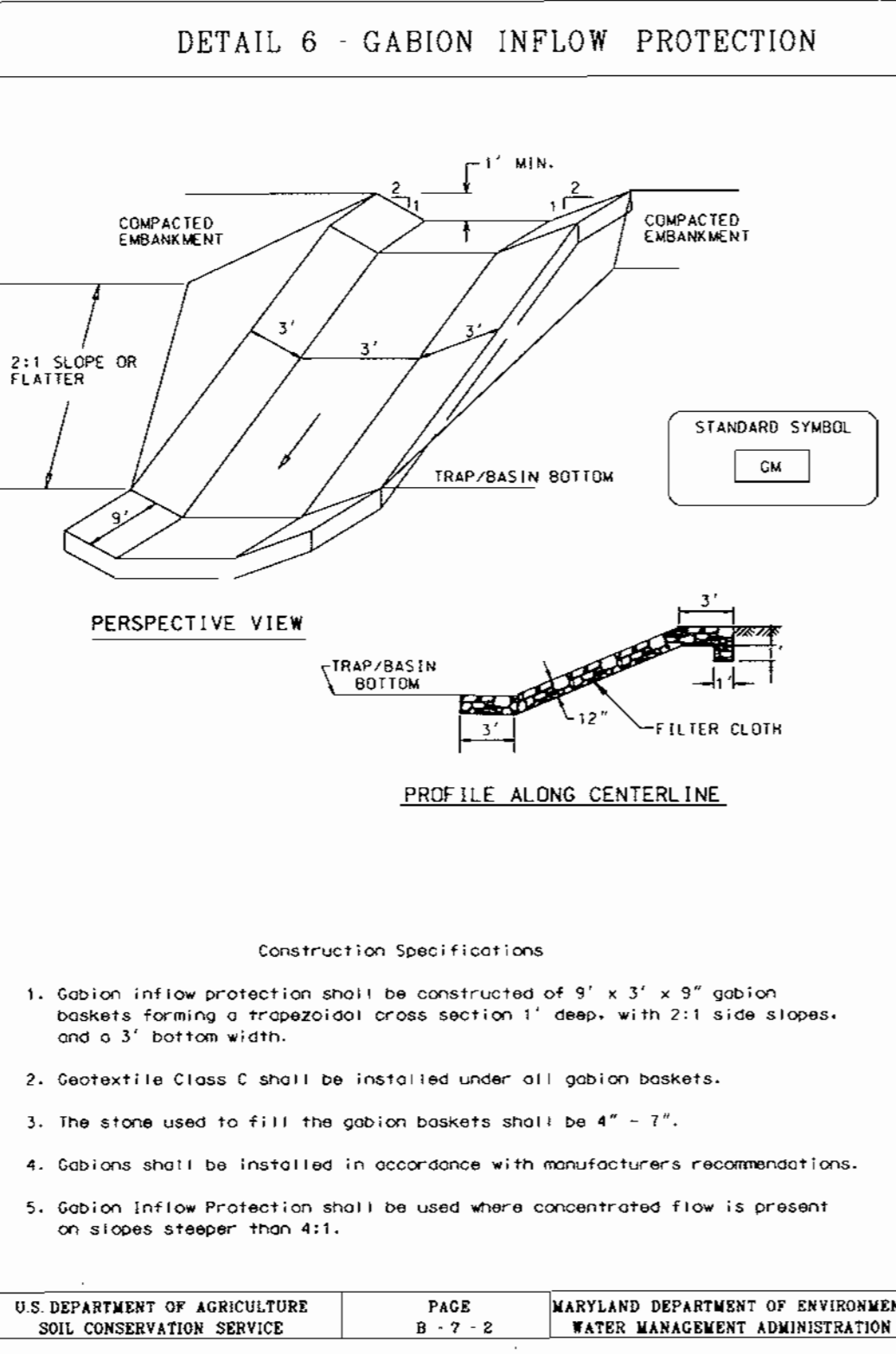
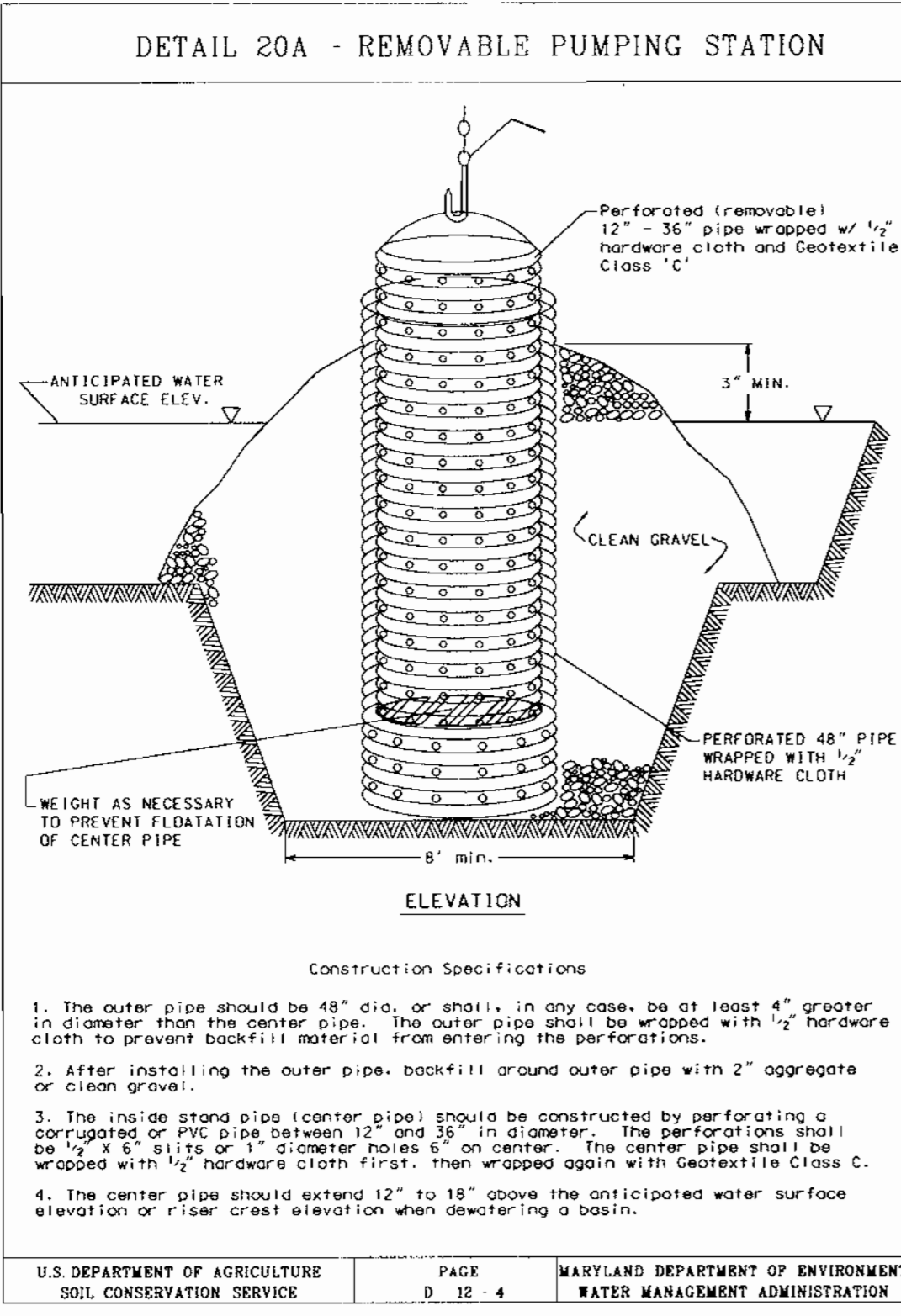
FREDERICK WARD ASSOCIATES INC.
ENGINEERS ARCHITECTS SURVEYORS
5 SOUTH MAIN STREET, BEL AIR, MARYLAND 21034 (410) 619-7090

CENSUS TRACT NO.: 6069.03 WATER CODE: C06
PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 172900

TAX MAP 50, GRID 1 & 2
ZONED R-20 & R-3C
ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: HIGH RIDGE PARK EROSION AND SEDIMENT CONTROL PLAN

DESIGN BY: GEF/MR SCALE: AS SHOWN PLOT NO. _____
DRAWN BY: NB/CV/GJF DATE: 04/02/00 DRAWING NUMBER
CHECKED BY: GEF/RD APPROVED: GEF SHEET 3 OF 24



REVIEWED FOR HOWARD S.C.D. & METS TECHNICAL REQUIREMENTS.

J. H. Welford 12/16/00
NATURAL RESOURCES CONSERVATION SERVICE DATE

Geoffrey W. Schoning 2/26/01
HOWARD S.C.D. DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
12/15/00 DATE

APPROVED: DEPARTMENT OF RECREATION AND PARKS
1/17/01 DATE

APPROVED: DEPARTMENT OF RECREATION AND PARKS
1/18/01 DATE

BY THE ENGINEER:
James P. Churn 3/30/00 DATE

BY THE DEVELOPER:
James P. Churn 10/27/00 DATE

HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS:
7120 DAKLAND MILL
COLUMBIA, MD 21046
PHONE: 410-313-4700

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS:
3450 COURTHOUSE DRIVE
ELLCOTT CITY, MD 21043
PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS

GEF
GRACE E. FIELDER & ASSOCIATES, CHARTERED
PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
8101 SANDY SPRING ROAD
SUITE 104
LAUREL, MARYLAND 20707
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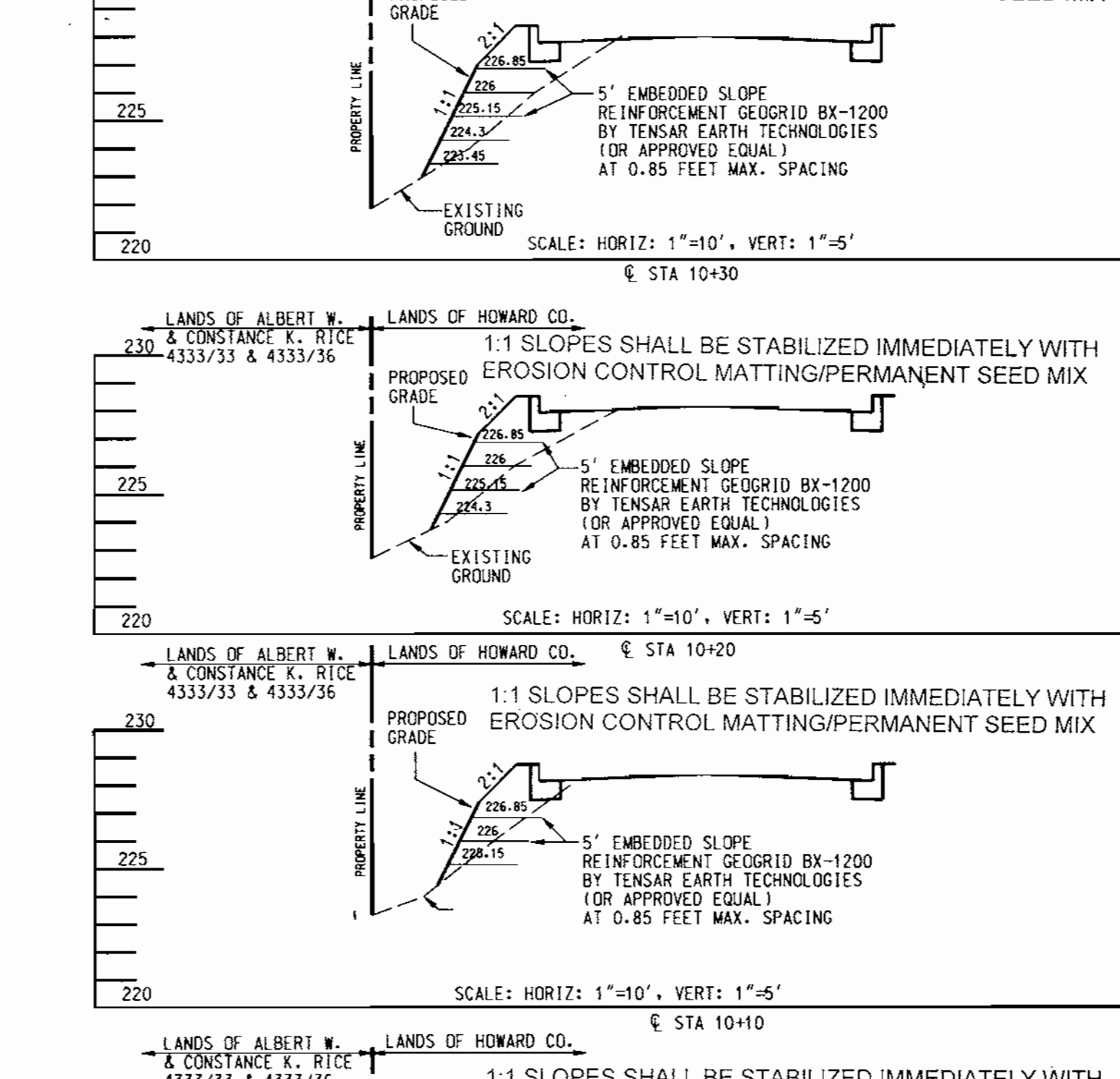
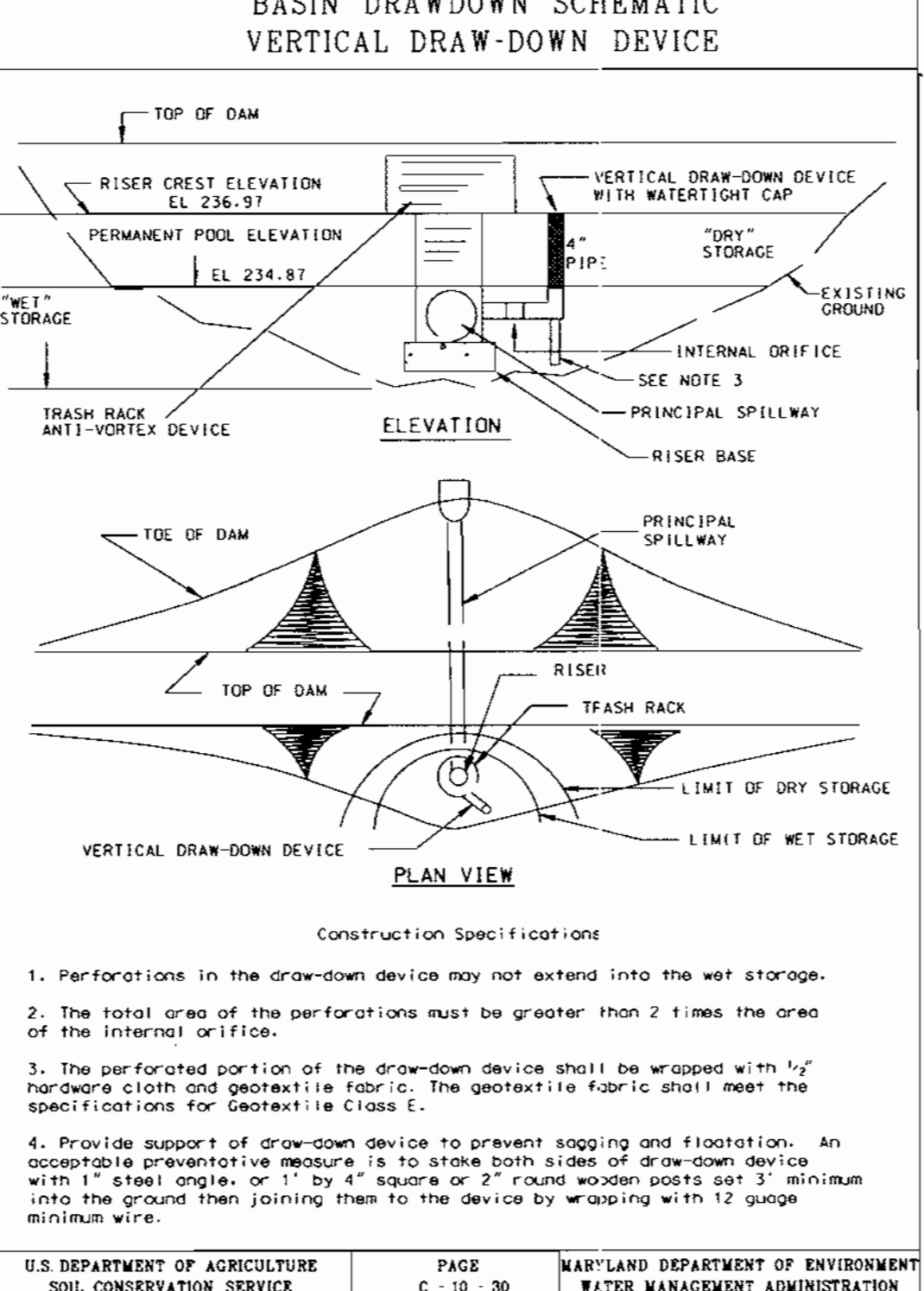
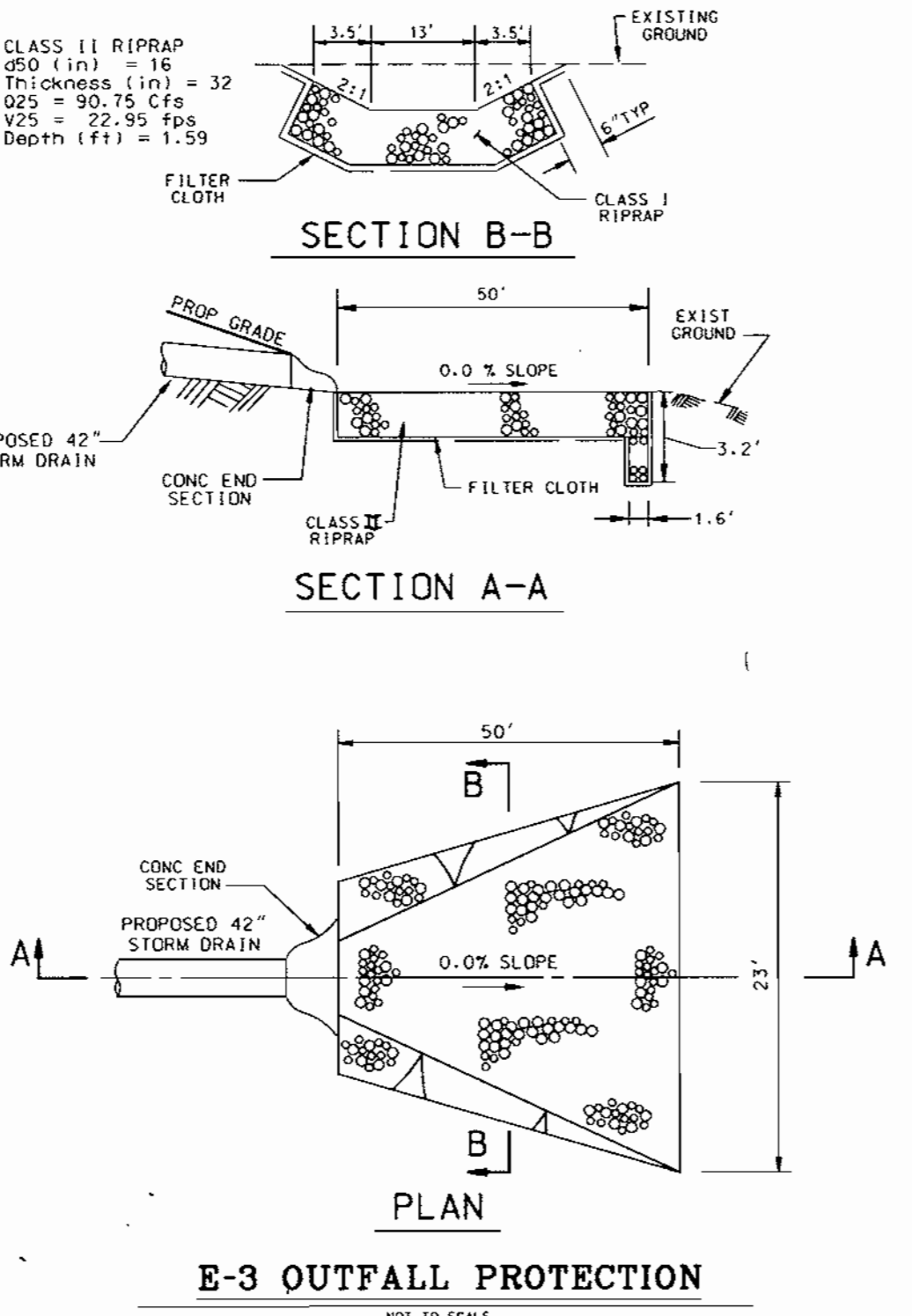
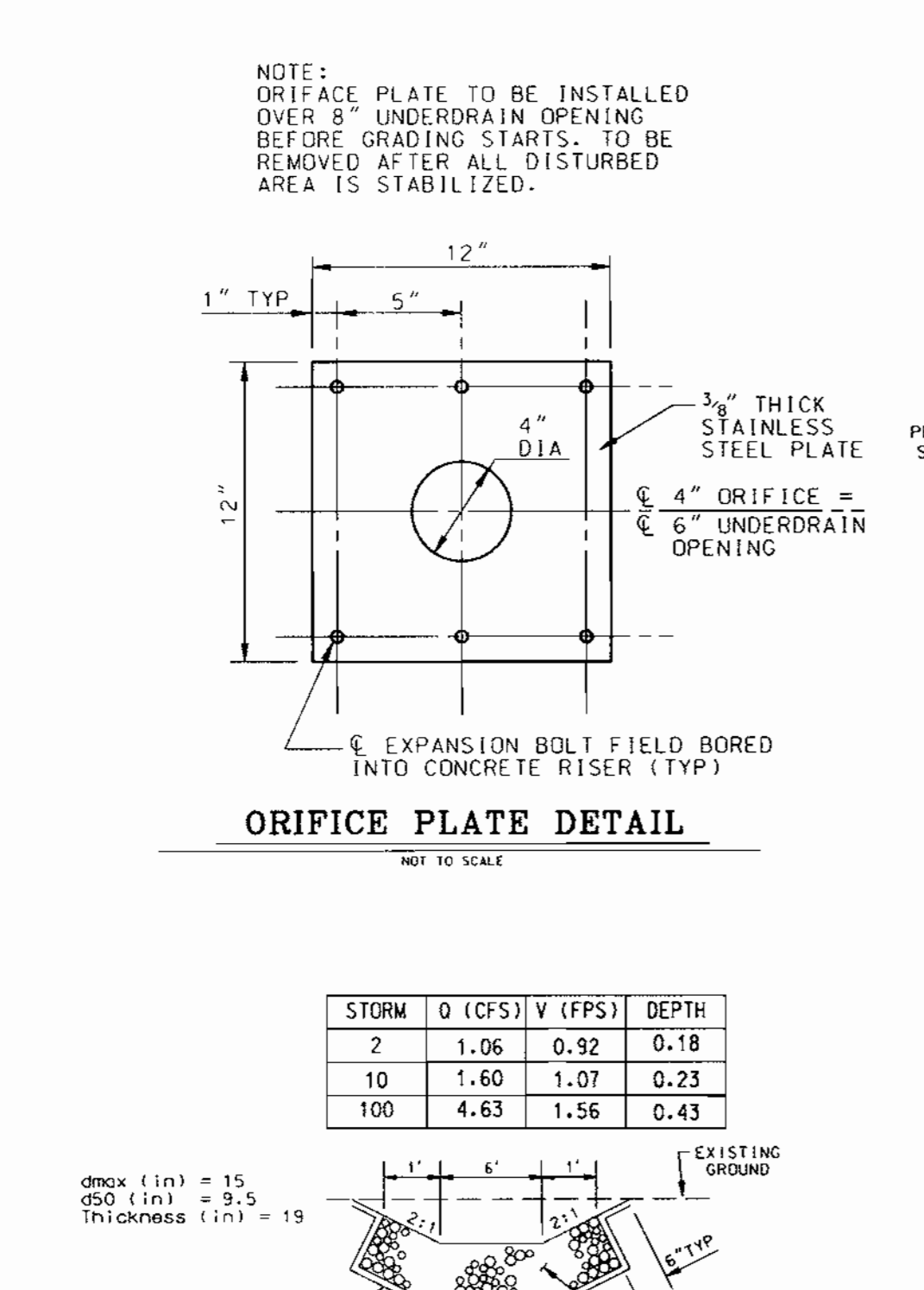
FREDERICK WARD ASSOCIATES INC.
ENGINEERS ARCHITECTS SURVEYORS
5 SOUTH MAIN STREET BEL AIR, MARYLAND 21034 (410)879-2090

CENSUS TRACT NO.: 6069-03 WATER CODE: C06
PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 7170900

TAX MAP 50, GRID 1 & 2
ZONED R-20 & R-SC
ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: HIGH RIDGE PARK
EROSION AND SEDIMENT CONTROL DETAILS

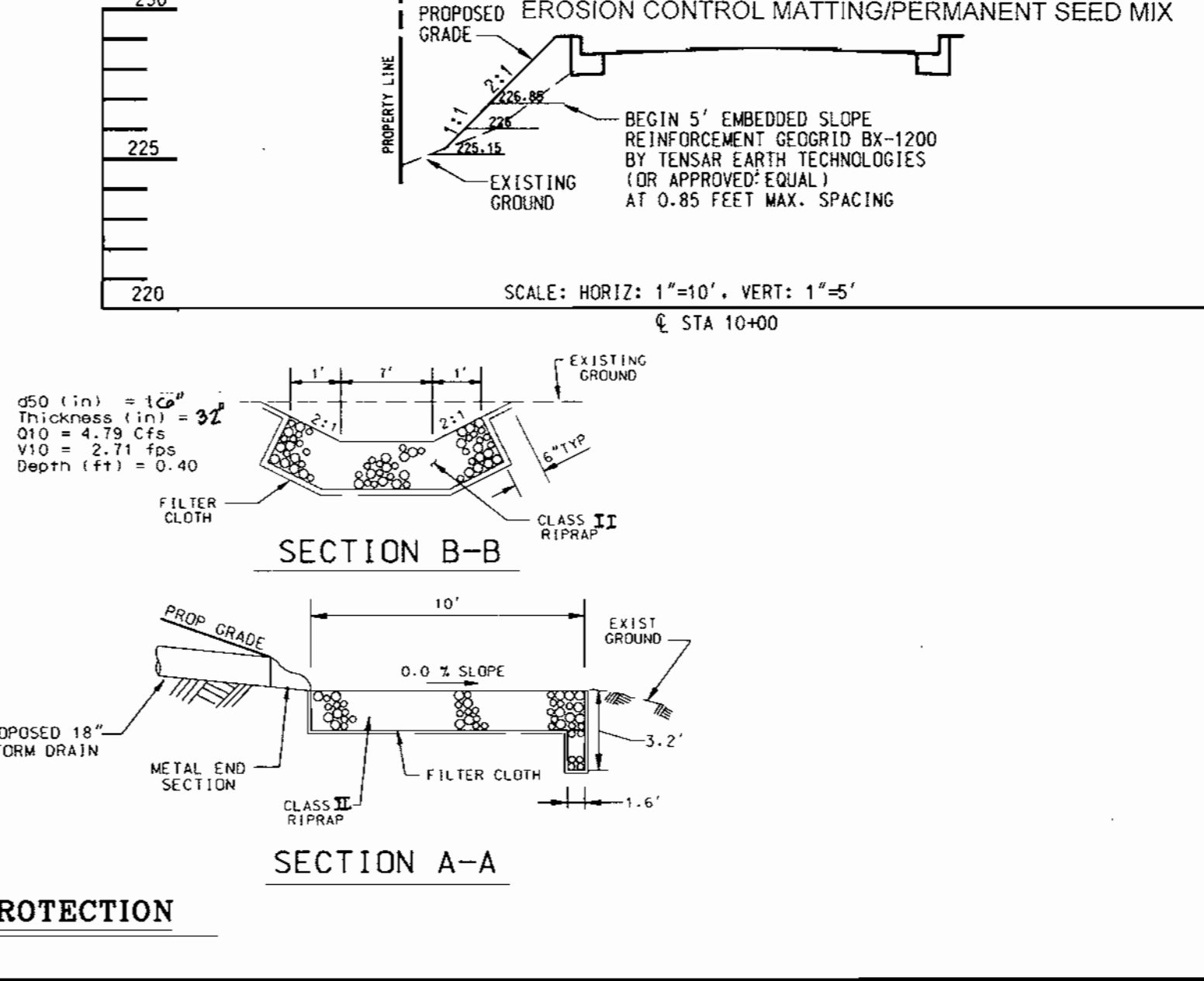
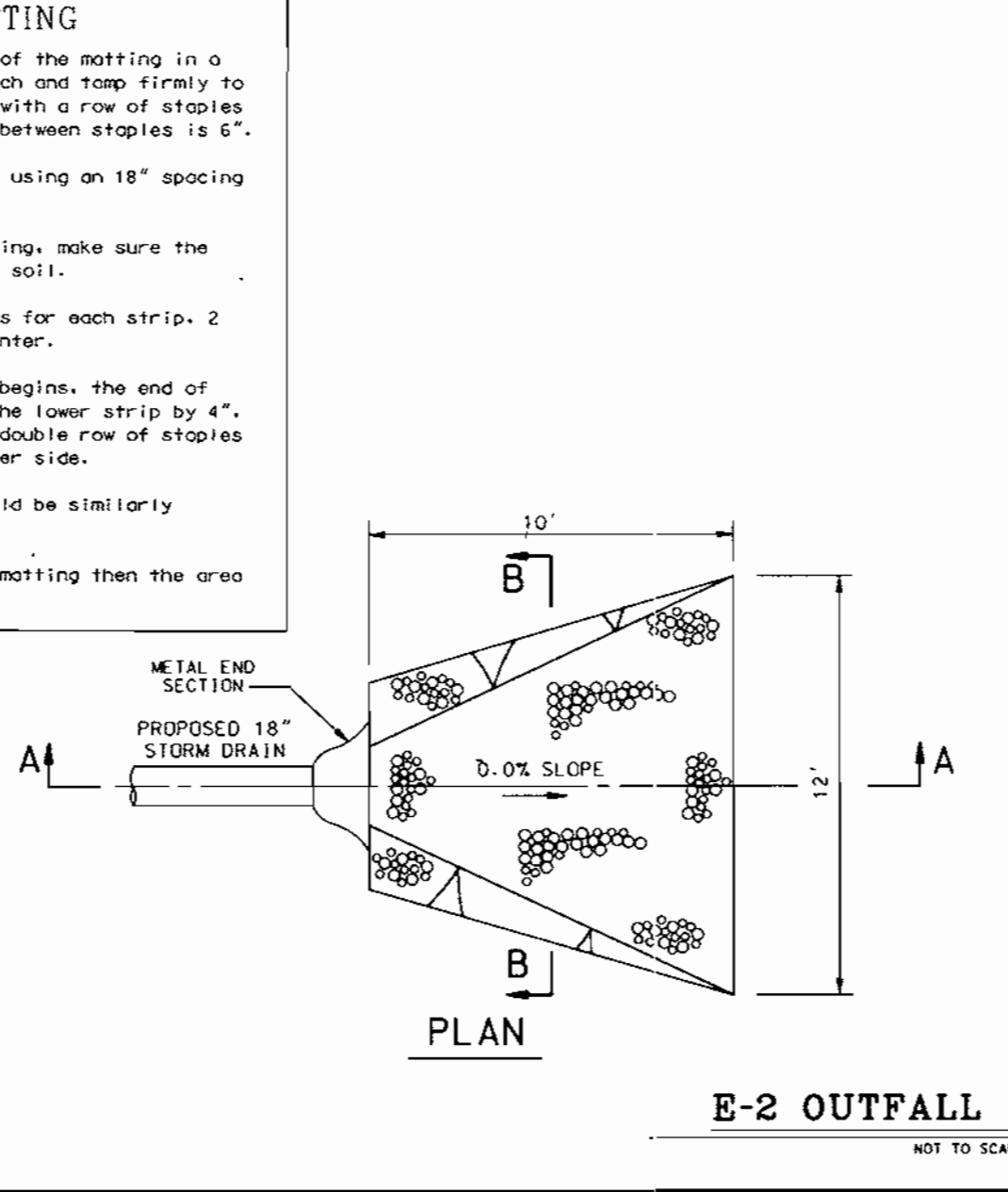
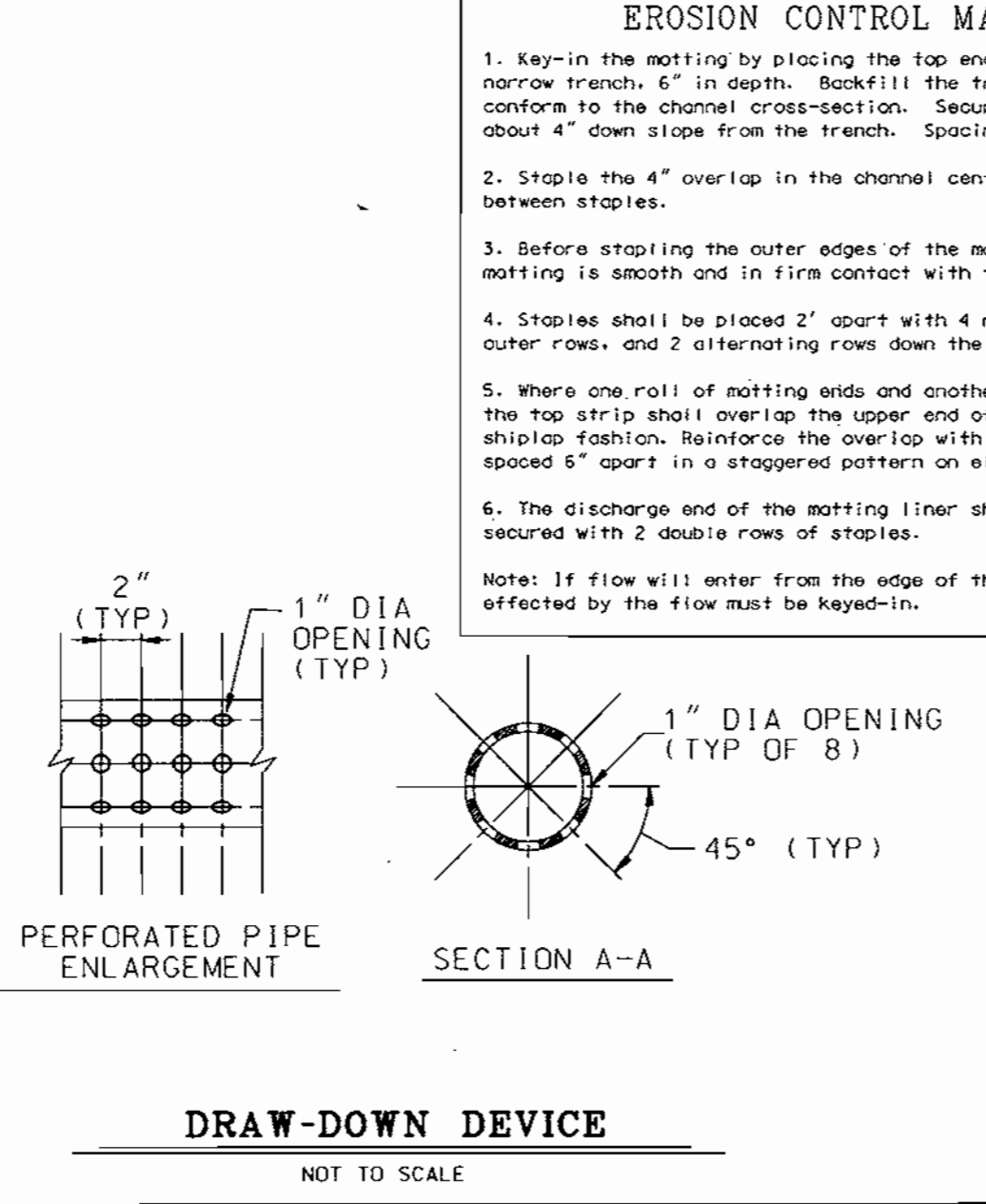
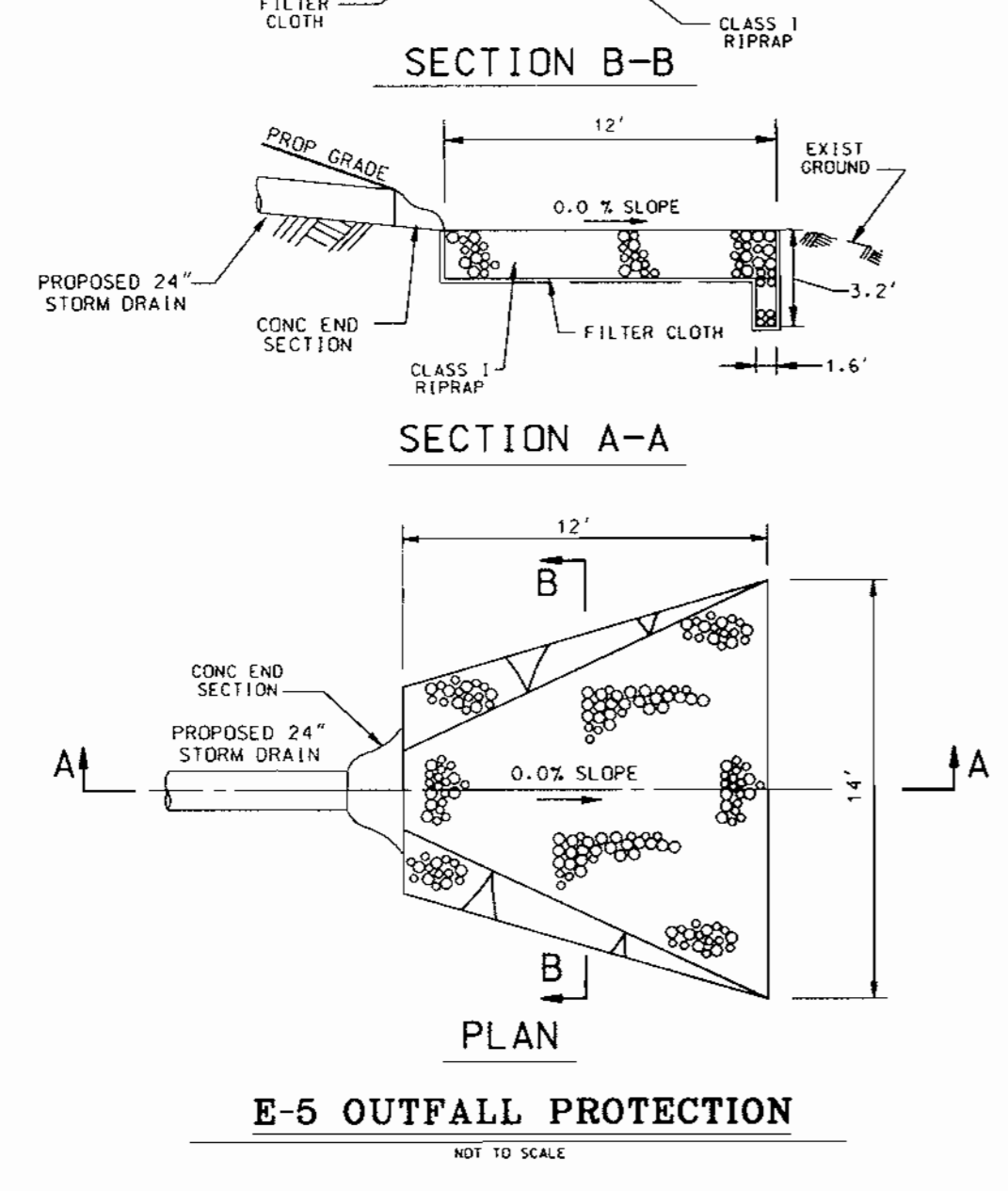
DESIGN BY: GEF/MR SCALE: AS SHOWN PROJECT NO.:
DRAWN BY: NB/CV/GEF DATE: 04/02/00 DRAWING NUMBER
CHECKED BY: GEF/RD APPROVED: GEF 14 OF 24



SDP # PLANNING BOARD APPROVAL

DATE: 3/30/00

PROFESSIONAL ENGR. NO. 17225



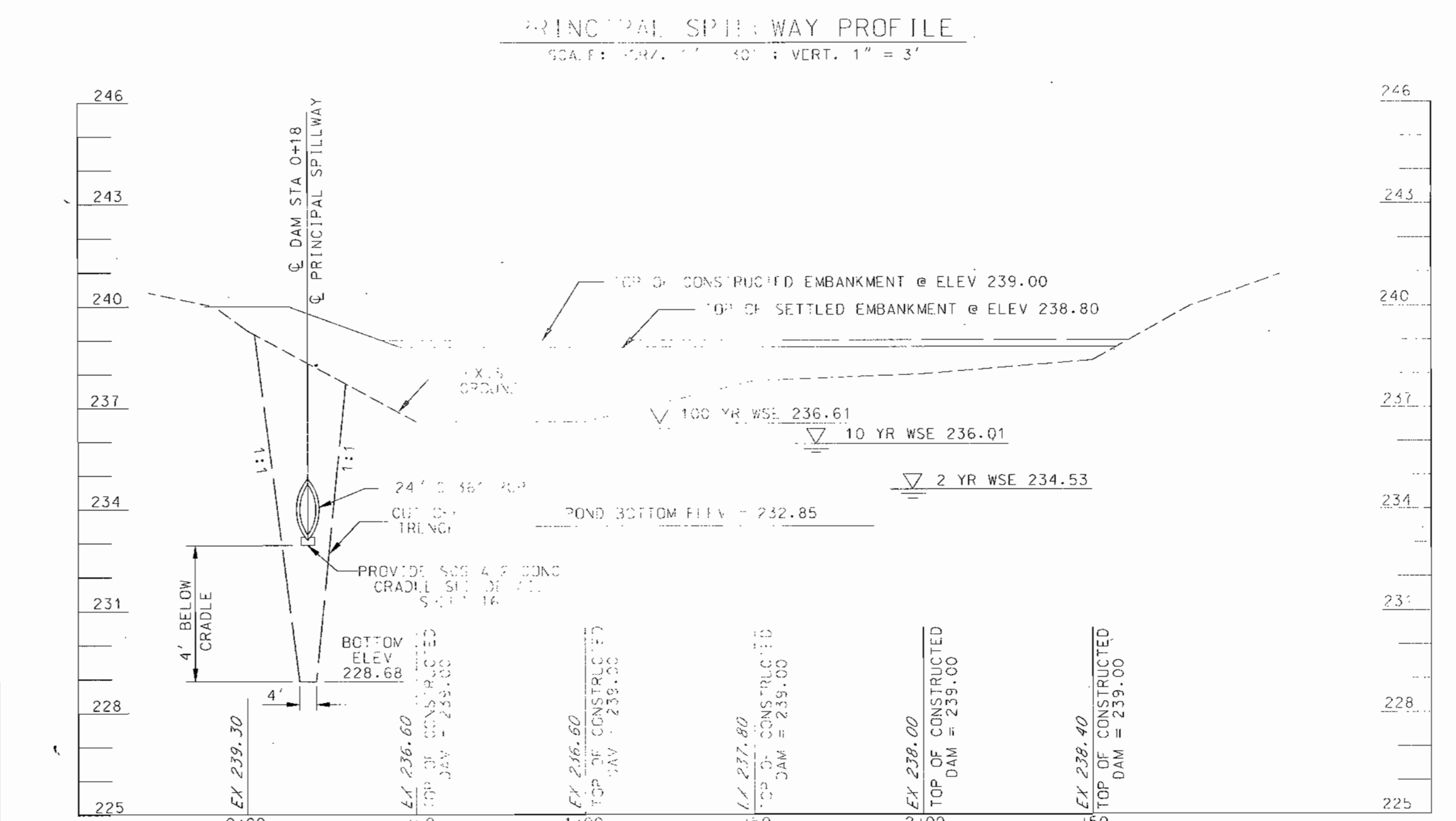
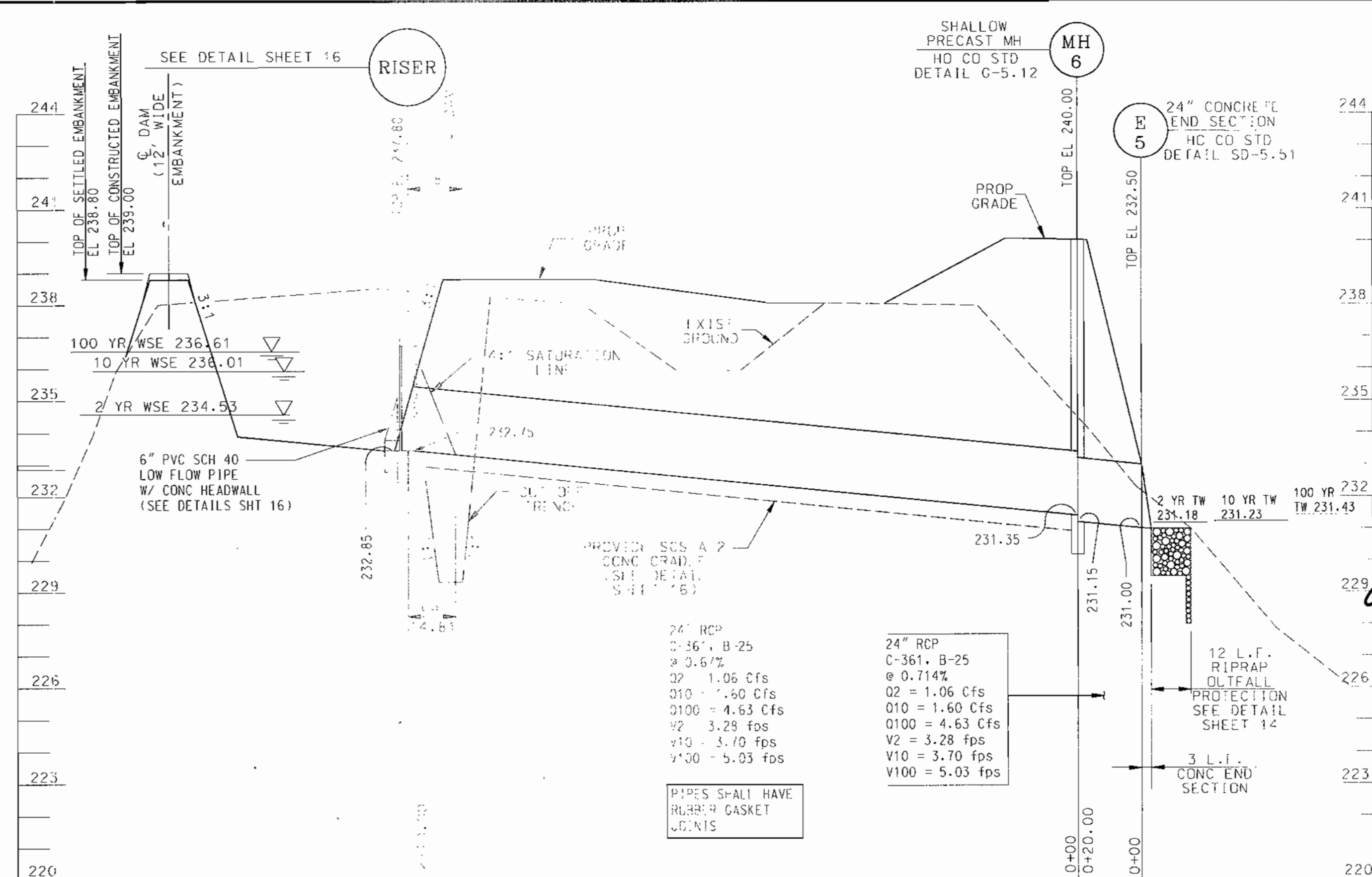
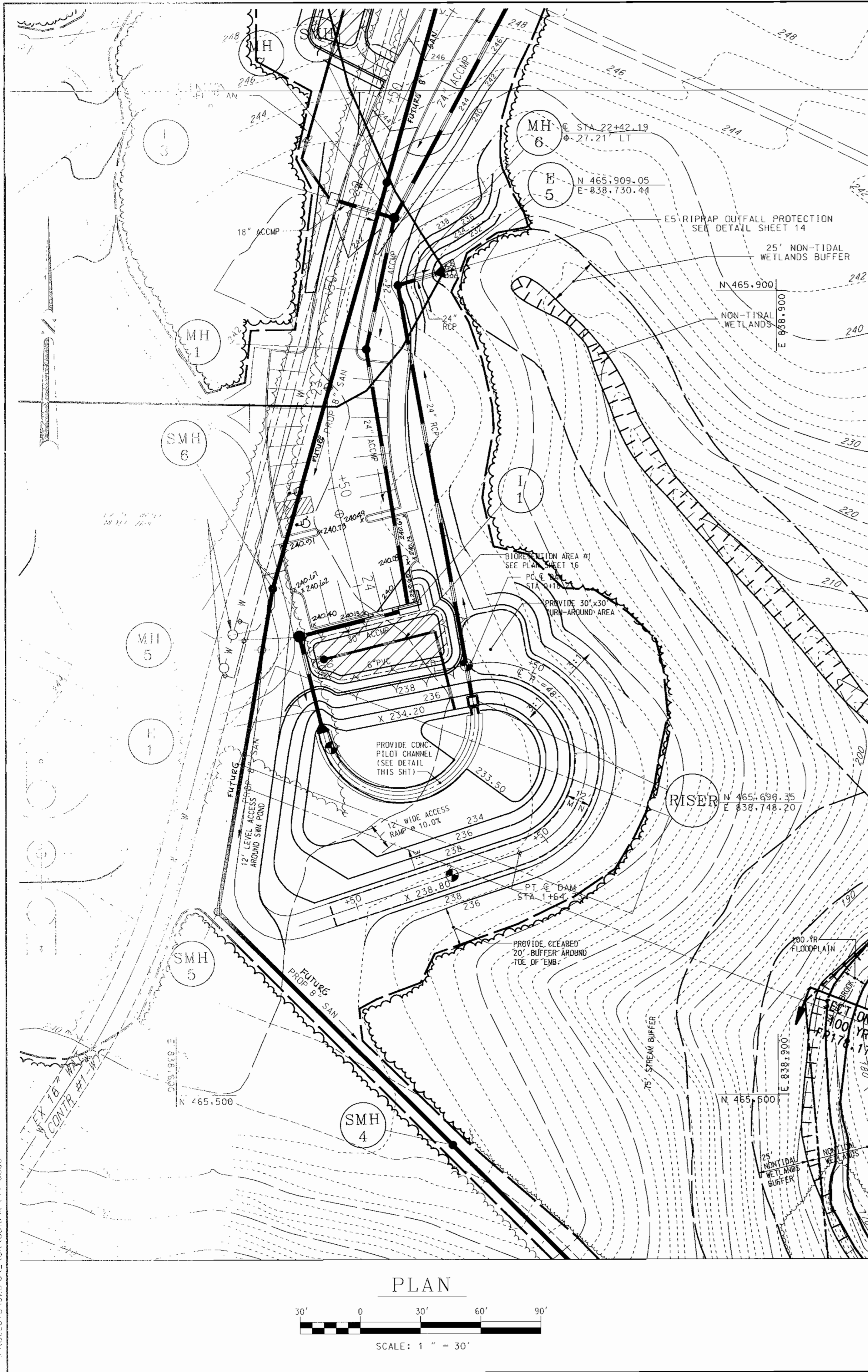
SDP # PLANNING BOARD APPROVAL

DATE: 3/30/00

PROFESSIONAL ENGR. NO. 17225

PROJECTS 92310 ENGR/CD14 V.MRH. 0898

SDP-00.34



STRUCTURE NOTES:

STRUCTURE CLASSIFICATION: CLASS "A" DRY/DETENTION FACILITY

TYPE OF STRUCTURE: FULLY EXCAVATED FACILITY PER CODE 378

EMBANKMENT AND/OR EXCAVATED: 4.28

WATERSHED AREA (ACRES): 5.95

EMBANKMENT HEIGHT (FT): 12.00

EMBANKMENT TOP WIDTH (FT): 1.25

MAXIMUM STORAGE VOLUME (AC-FT): 1.25

STORAGE HEIGHT PRODUCT (AC-SQ FT): 7.68

HYDROLOGIC CRITERIA:

	2 YEAR	10 YEAR	100 YEAR
EXISTING PEAK RUNOFF FROM ENTIRE SITE (CFS):	76.04	226.54	407.81
PROPOSED PEAK RUNOFF FROM ENTIRE SITE (CFS):	5.51	223.71	414.93
PROPOSED PEAK RUNOFF TO POND AREA #7 (CFS):	5.78	13.03	21.64
PROPOSED PEAK OUTFLOW FROM POND (CFS):	1.06	1.60	4.63
WATER SURFACE ELEVATION (FT):	234.53	236.01	236.61
STORAGE VOLUMES (AC-FT):	0.16	0.43	4.179

3/30/00 DATE

SDP # PLANNING BOARD APPROVAL

17299 PROFESSIONAL ENGR. NO.

PROVIDE CONCRETE END SECTION OF CHANNEL OR APPROVED EQUIV.

PROVIDE 4" STONE BLANKET UNDER 6" CONC. PILOT CHANNEL (SEE STRUCT. NOTES SHEET 16)

PROVIDE WELDED WIRE FABRIC - 6x6-W4.0x4.0 CENTERED IN SLAB

PILOT CHANNEL SECTION

NO. TO SCALE

Geoffrey L. Schoning 12/26/00
REVIEWER FOR HOWARD S.C.D. & METEOROLOGICAL REGISTRARS.

J. M. Wofford 12/26/00
REVIEWER FOR NATURAL RESOURCES & ENVIRONMENTAL SERVICES.

John K. Geoffrey Schoning 12/24/00
HOWARD S.C.D. & METEOROLOGICAL REGISTRARS.

DATE	NUMBER	REVISION DESCRIPTION
11/15/00		
1/17/01		
1/18/01		

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Walter D. ... 11/15/00
CHIEF-DEVELOPMENT ENGINEERING DIVISION

APPROVED: DIVISION OF LAND DEVELOPMENT
Andy ... 1/17/01
CHIEF-DIVISION OF LAND DEVELOPMENT

APPROVED: DEPARTMENT OF RECREATION AND PARKS
Jeff ... 10/26/00
DIRECTOR

BY THE ENGINEER:
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
 SIGNATURE OF ENGINEER

BY THE DEVELOPER:
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."
James ... 10/27/00
SIGNATURE OF DEVELOPER

OWNER: HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
 7120 OAKLAND MILL
 COLUMBIA, MD 21046
 PHONE: 410-313-4700

DEVELOPER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 3450 COURTHOUSE DRIVE
 ELLICOTT CITY, MD 21043
 PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS

GEF

GRACE E. FIELDER & ASSOCIATES, CHARTERED PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
 8101 SANDY SPRING ROAD
 SUITE 104
 LAUREL, MARYLAND 20707

PHONE: 301-470-2544
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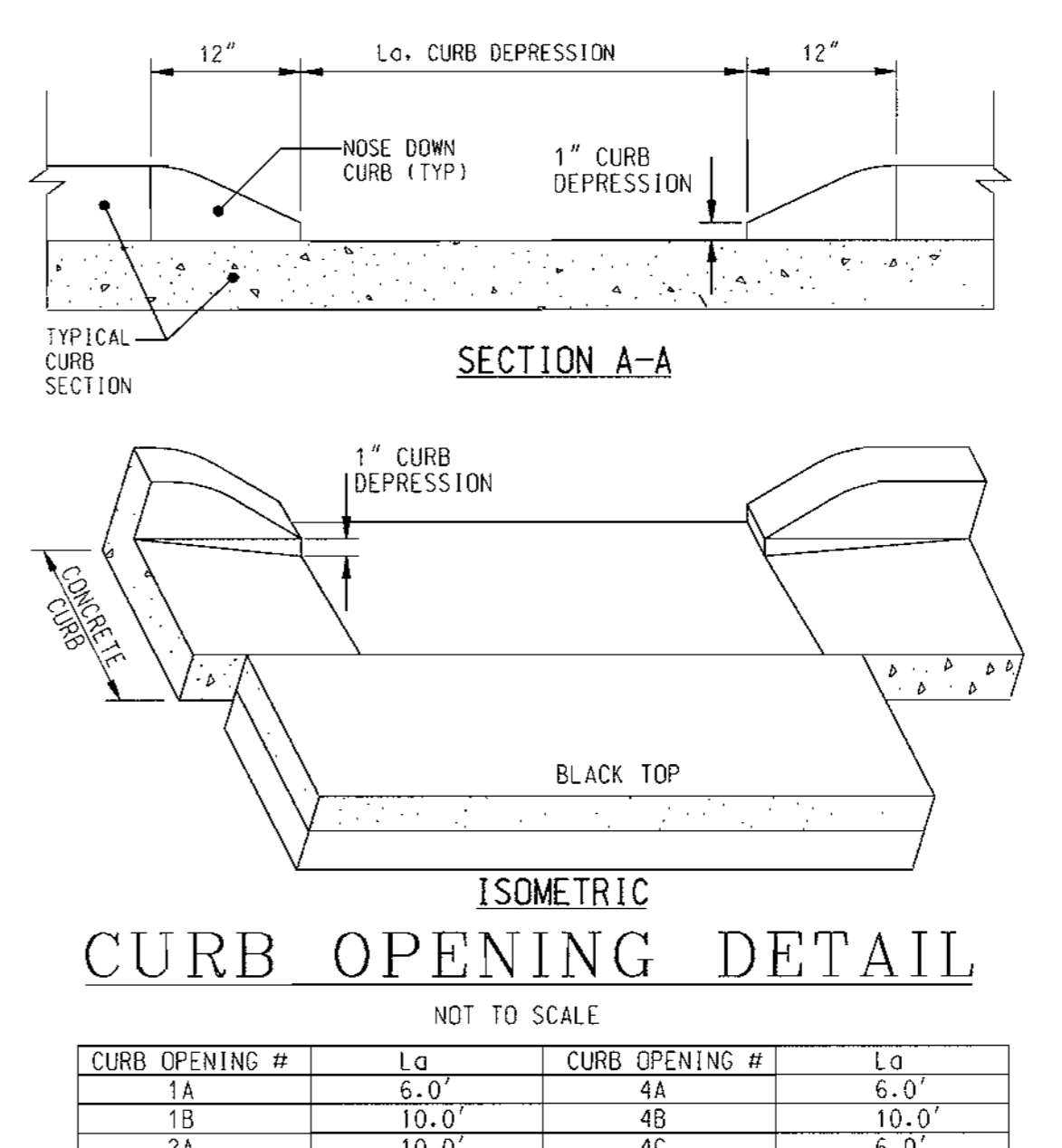
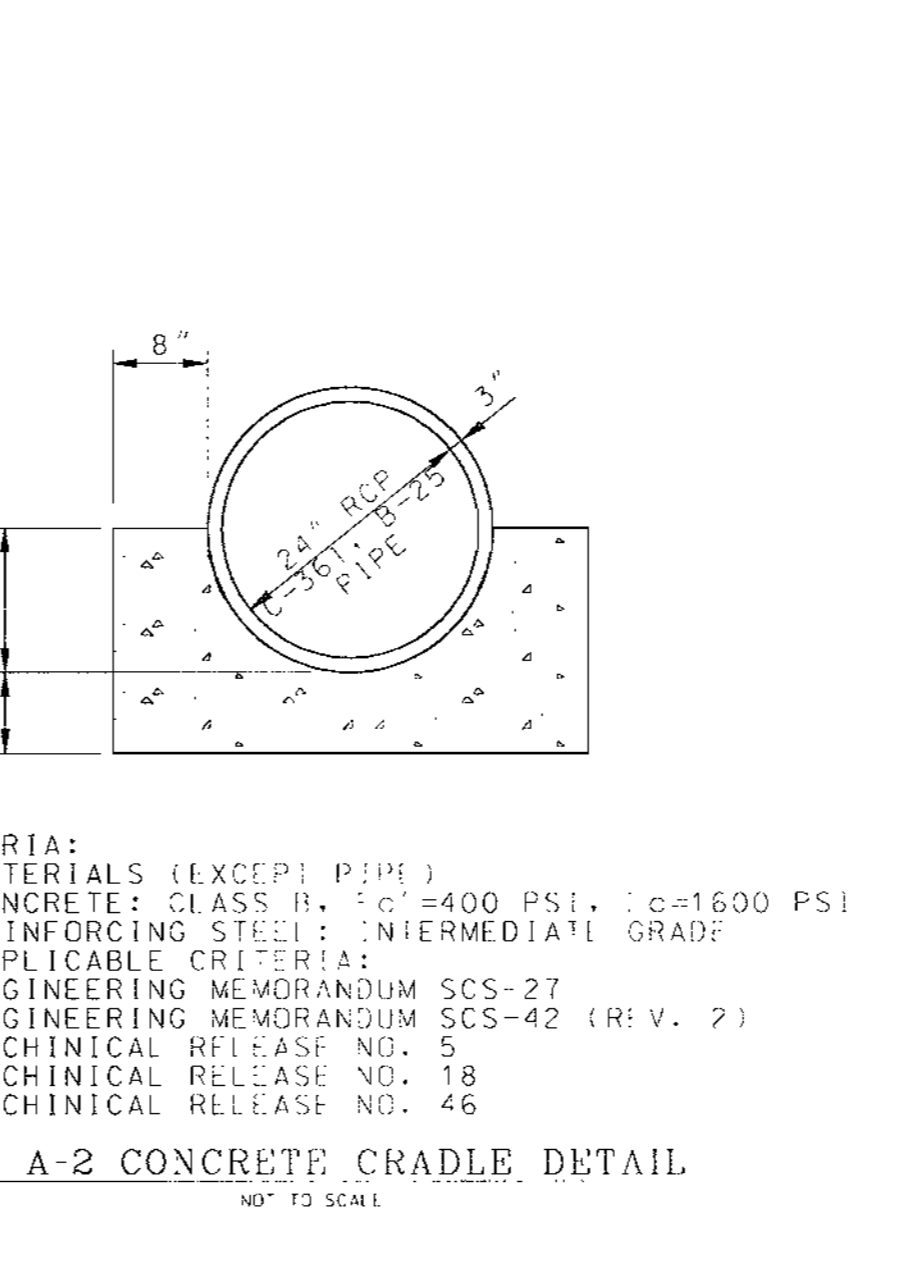
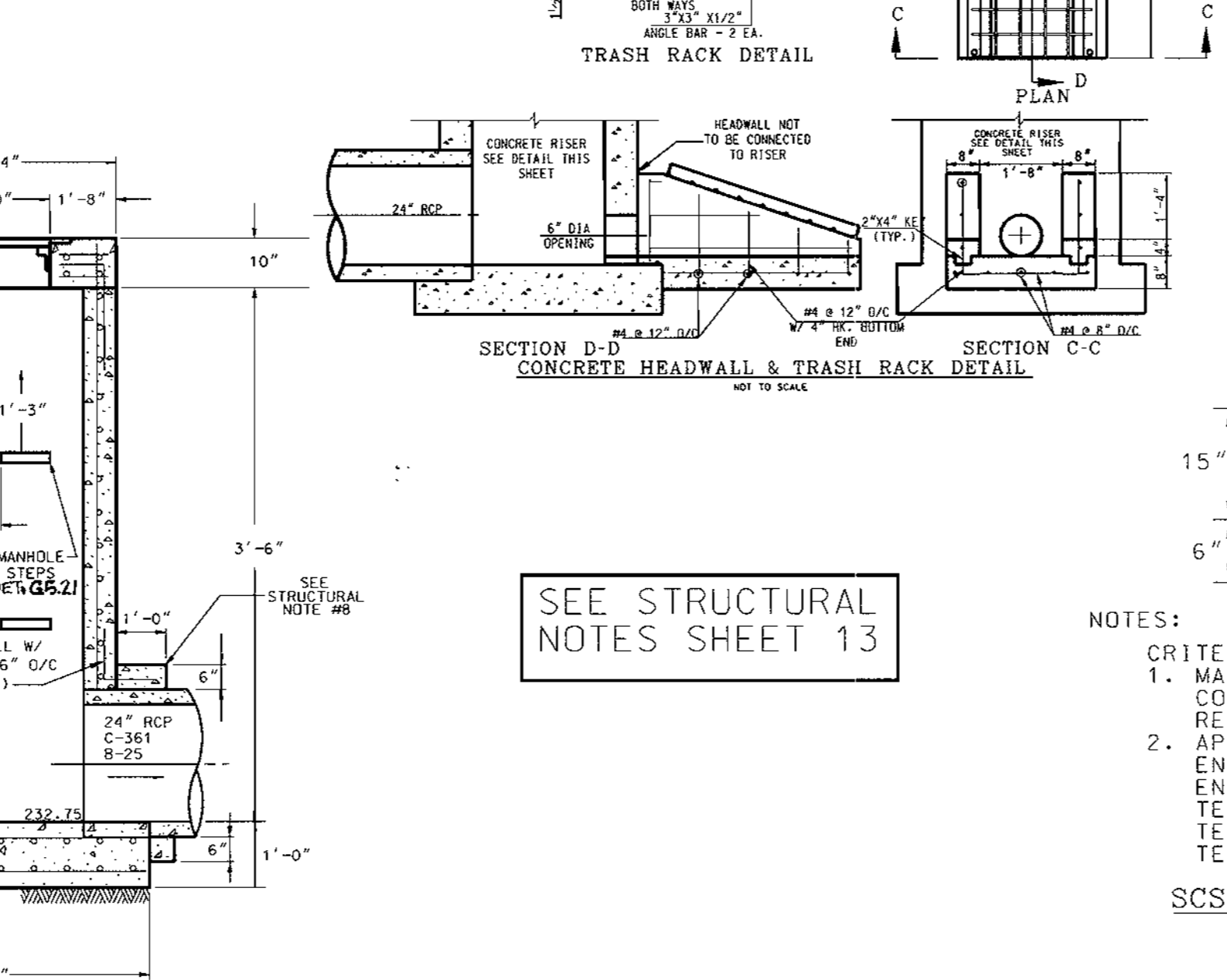
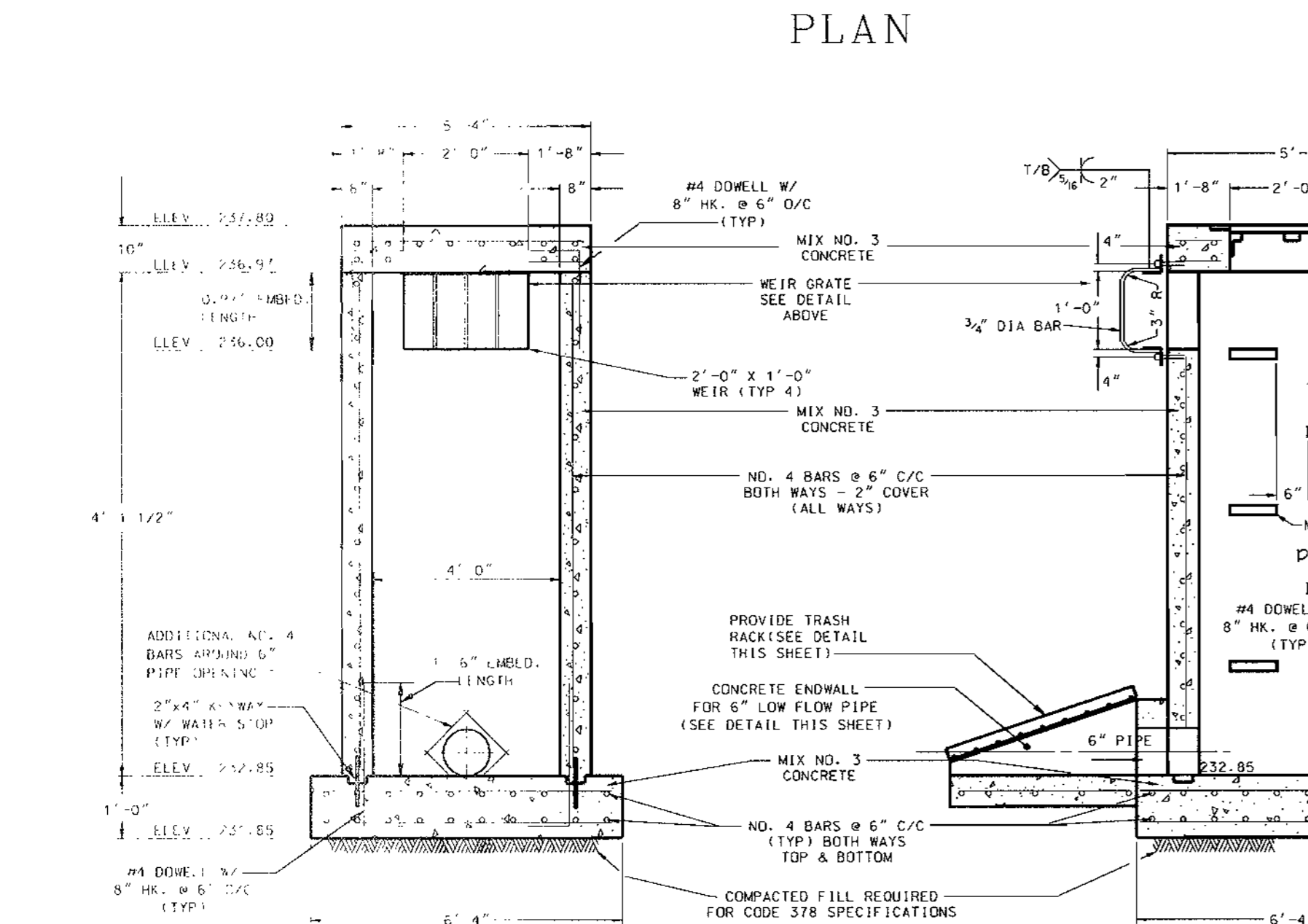
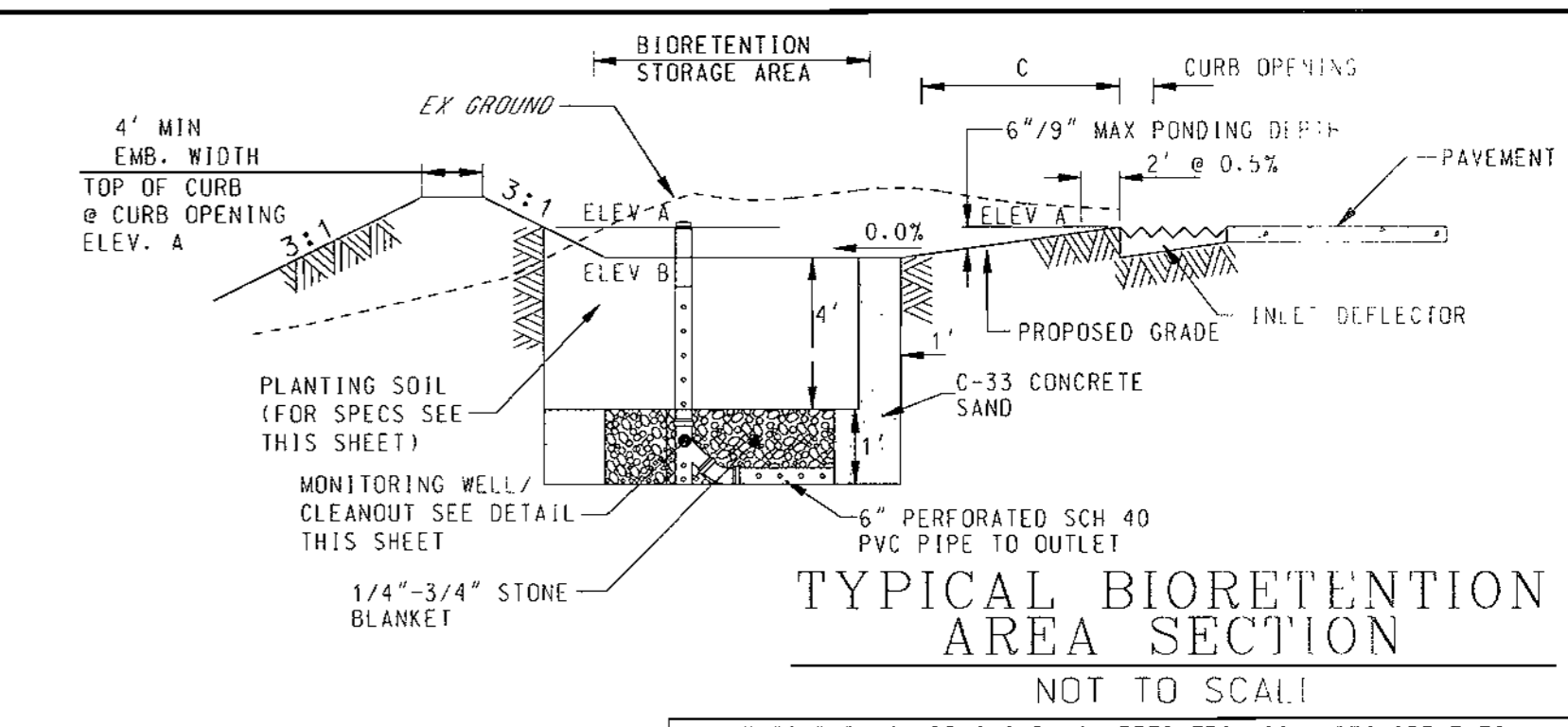
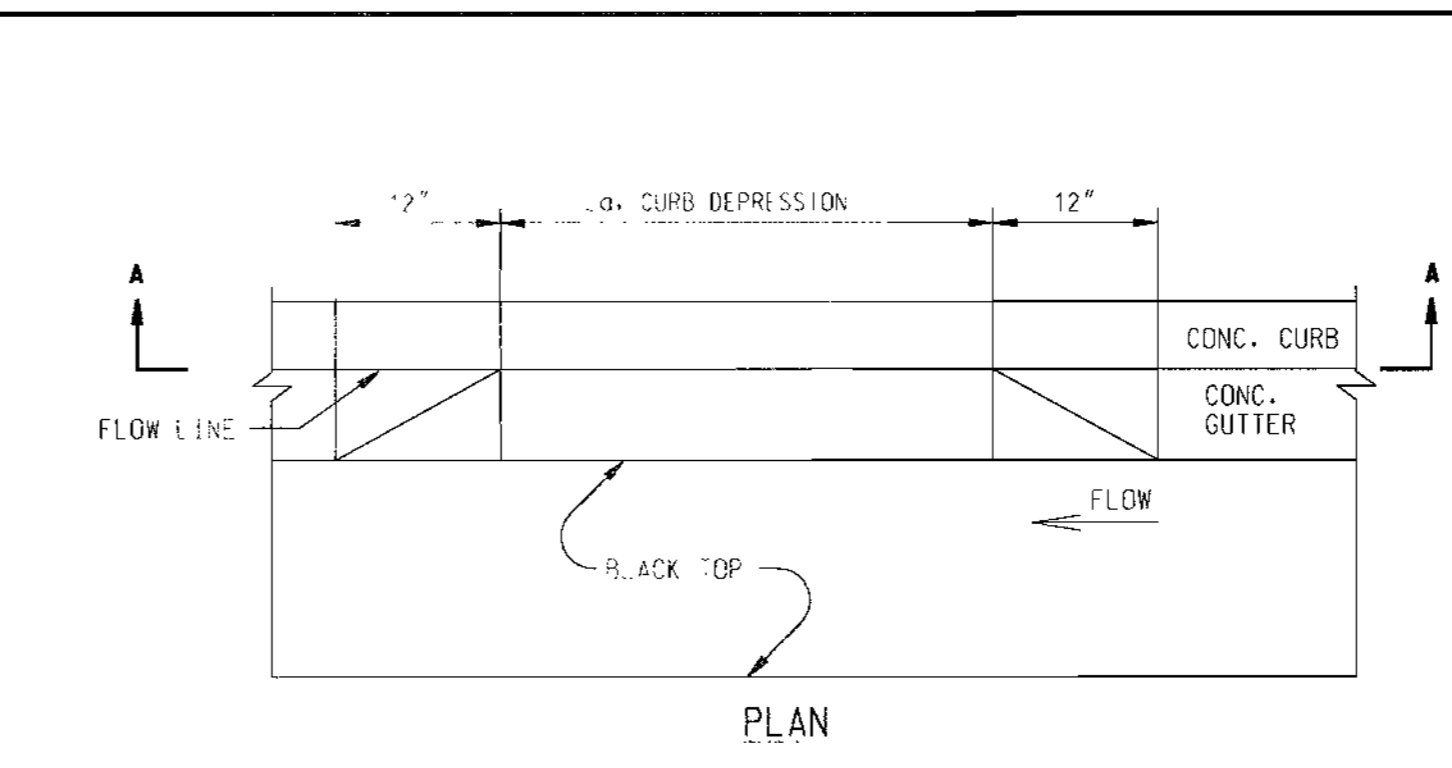
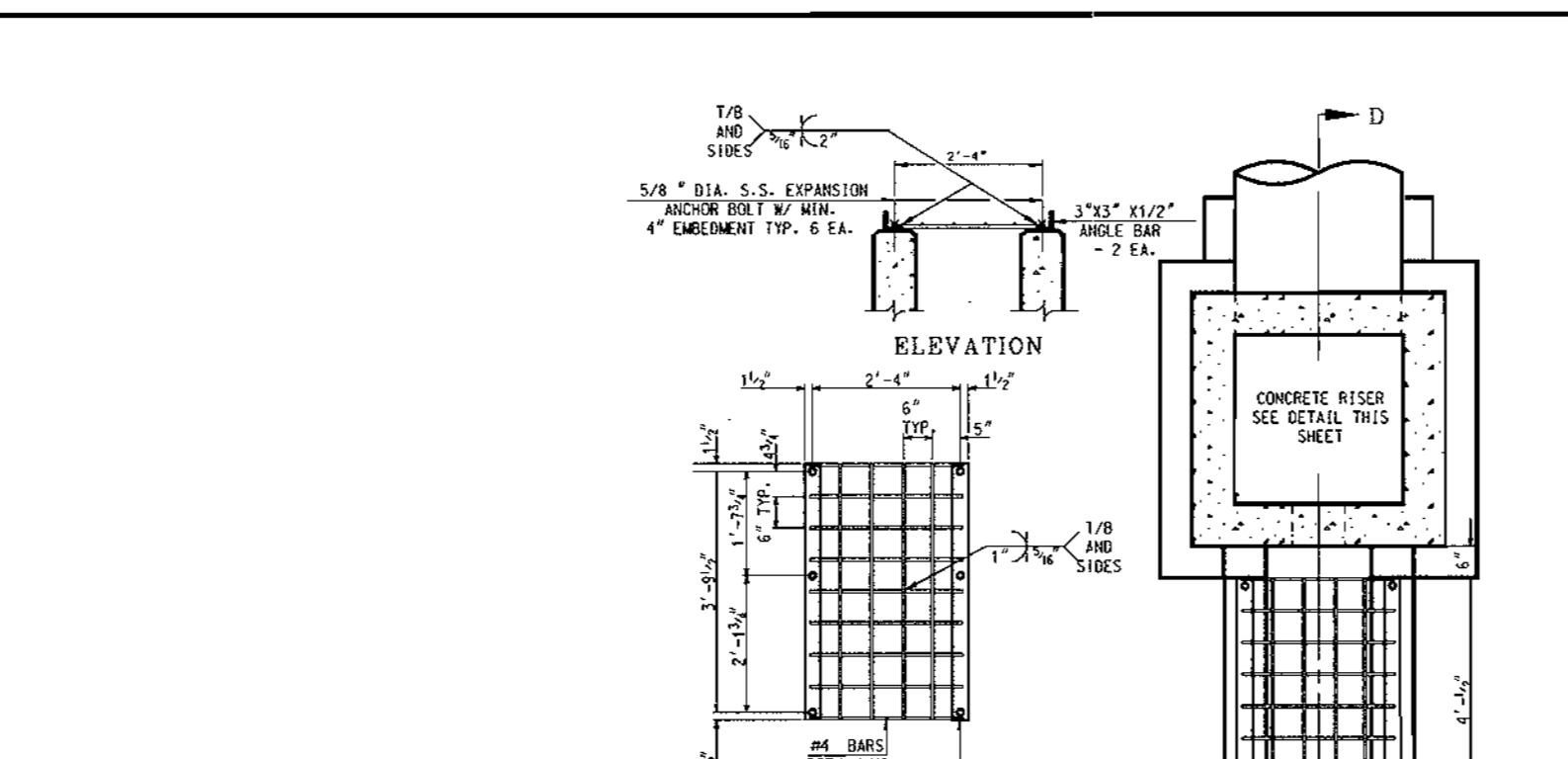
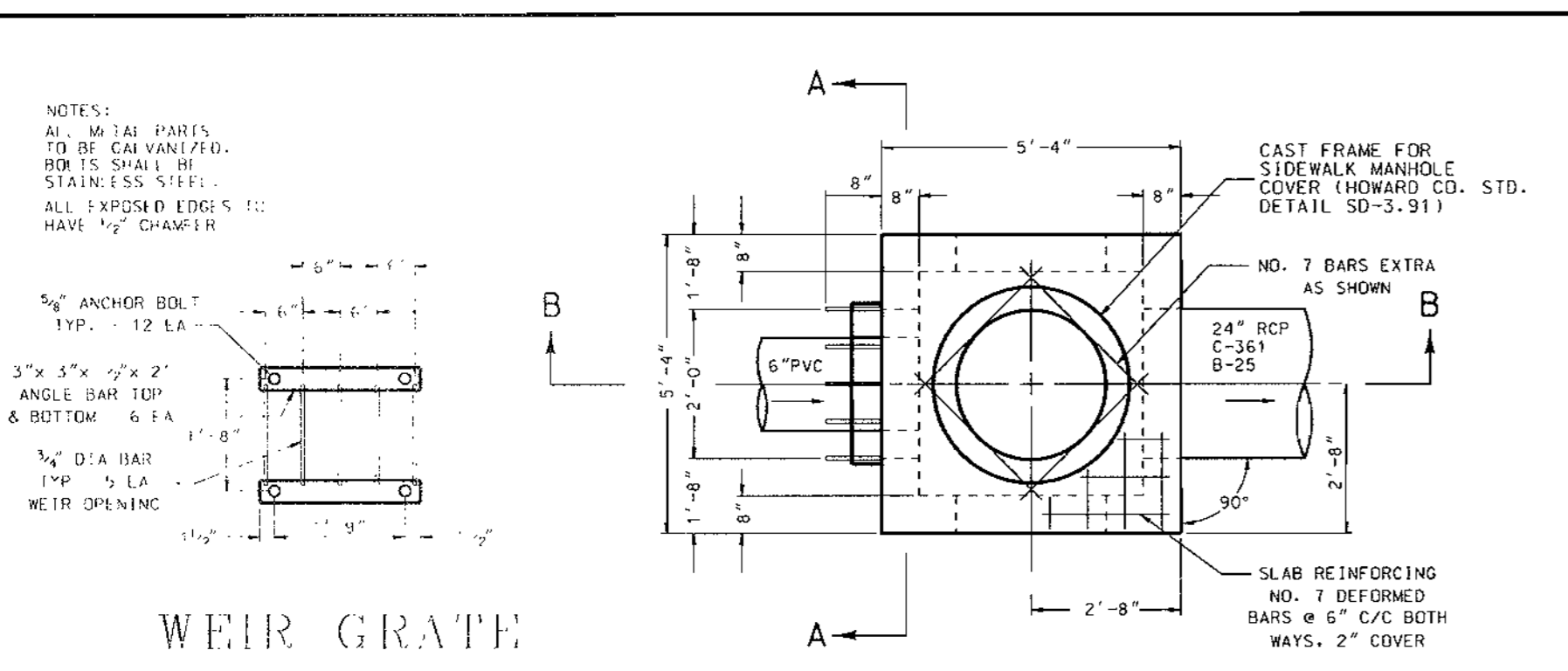
FREDERICK WARD ASSOCIATES INC.
 ENGINEERS ARCHITECTS SURVEYORS
 5 SOUTH MAIN STREET BE. AR. MARYLAND 21076 (410)779-2000

CENSUS TRACT NO.: 6069.03 WATER CODE: ...
 PLAT NO. SEC. SHEET 11 OF 25 SERIAL CODE: ...

TAX MAP 50, GRID 1 & 2
 ZONED R-20 & R-50
 ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: HIGH RIDGE PARK
 STORMWATER MANAGEMENT POND PLAN

DESIGN BY: GEF/AMR SCALE: AS SHOWN PROJECT NO.:
 DRAWN BY: NB/CV/GEF DATE: 04/02/00 DRAWING NUMBER
 CHECKED BY: GEF/RD APPROVED: GEF 15 OF 24

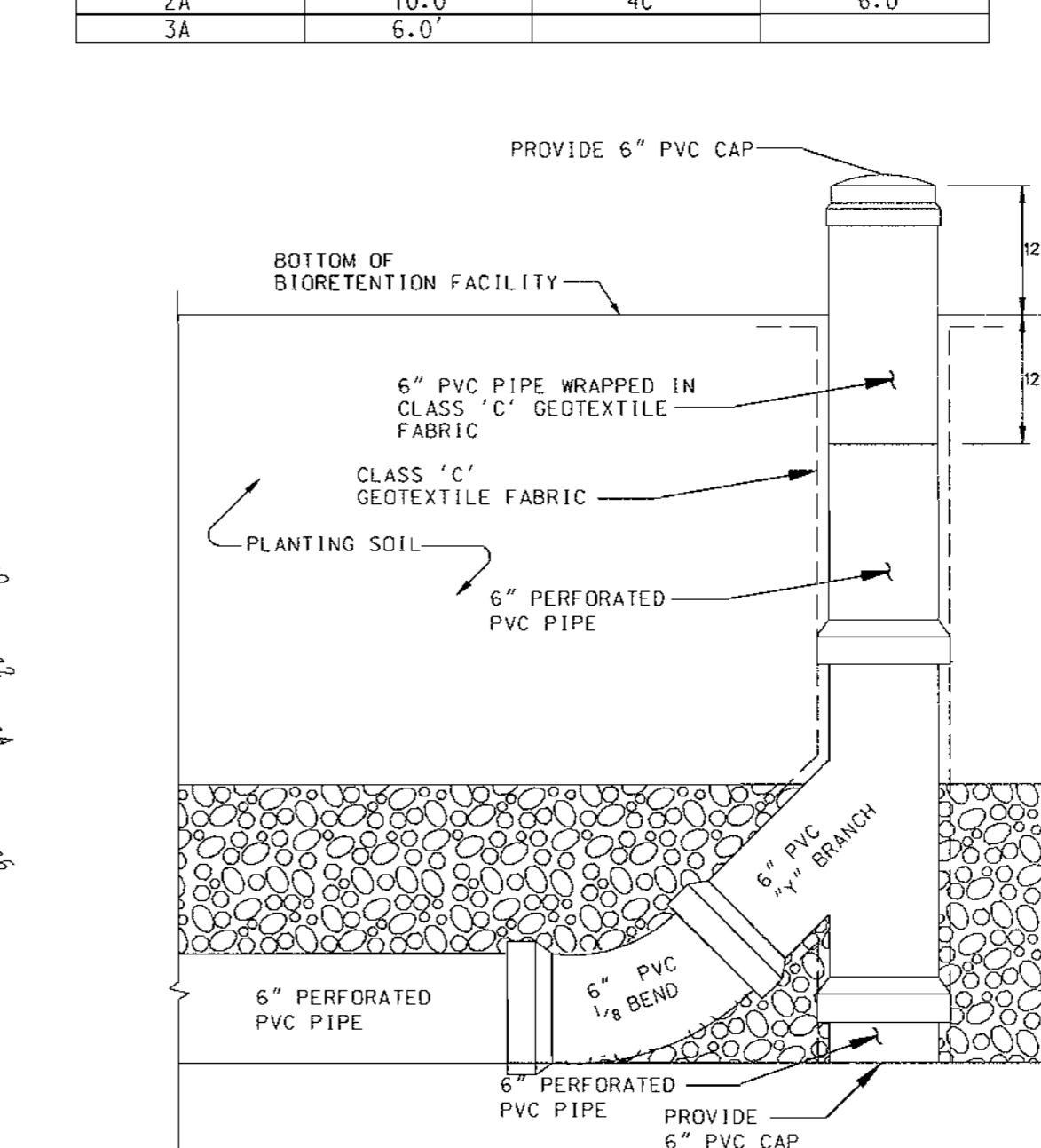
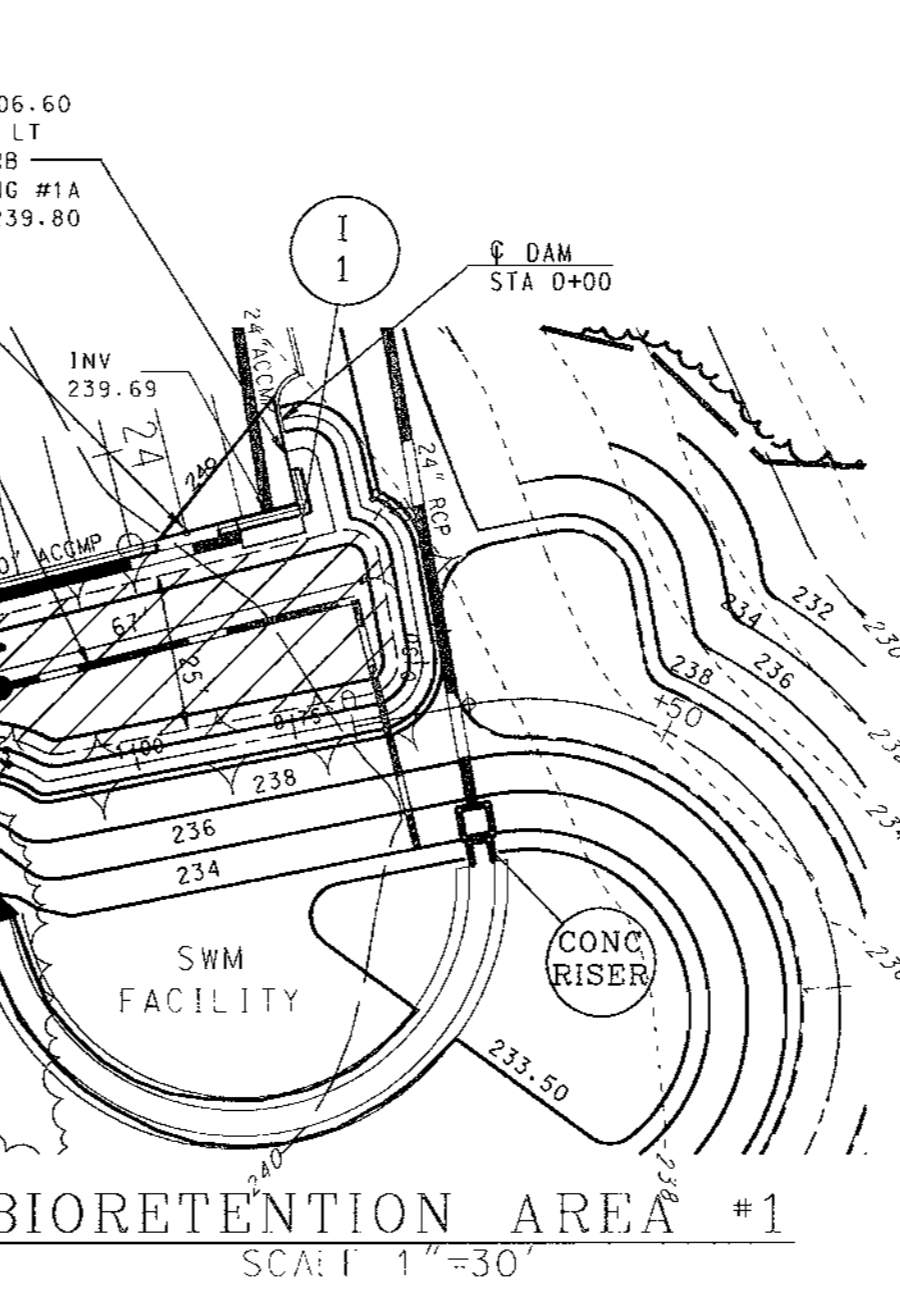
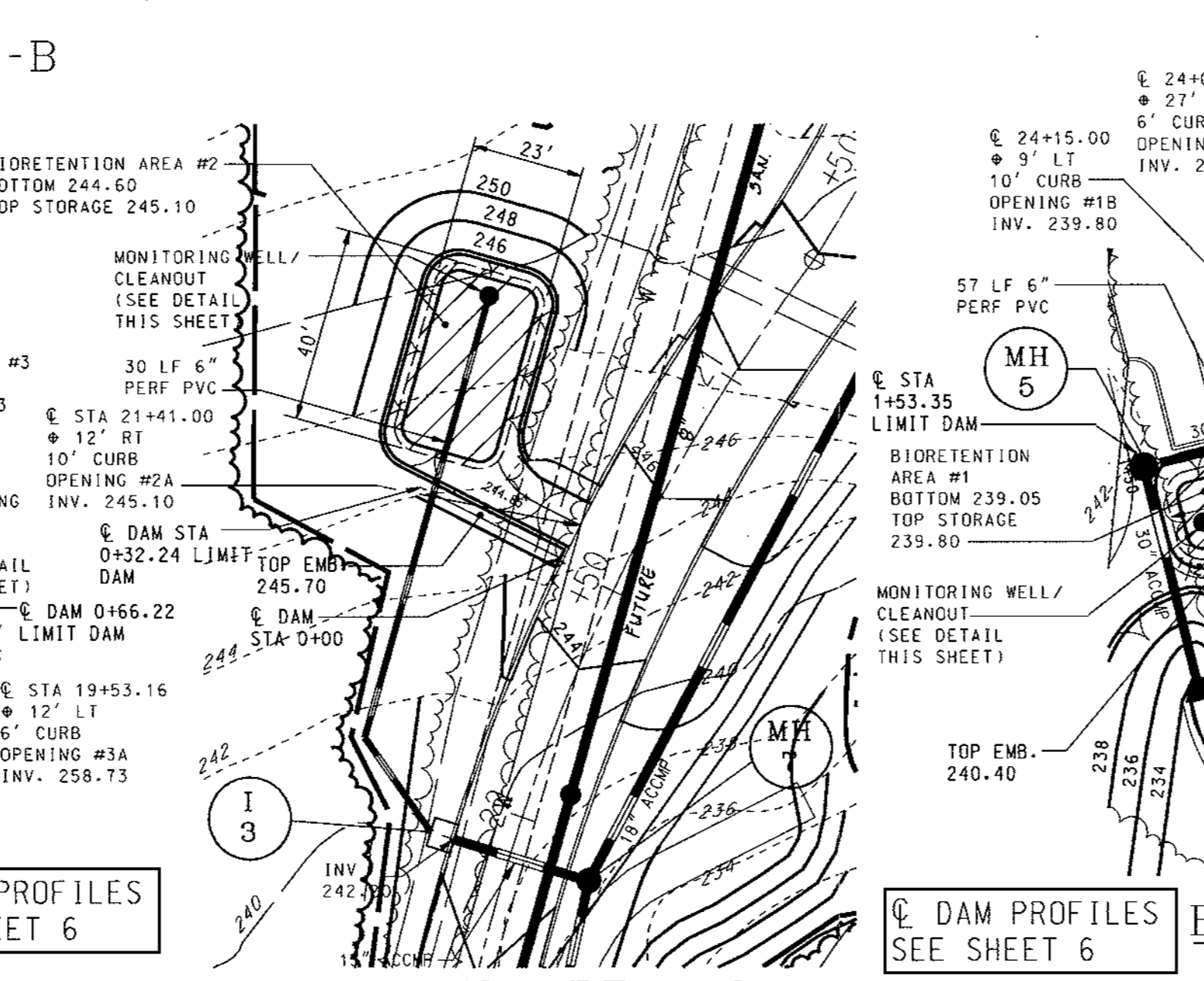
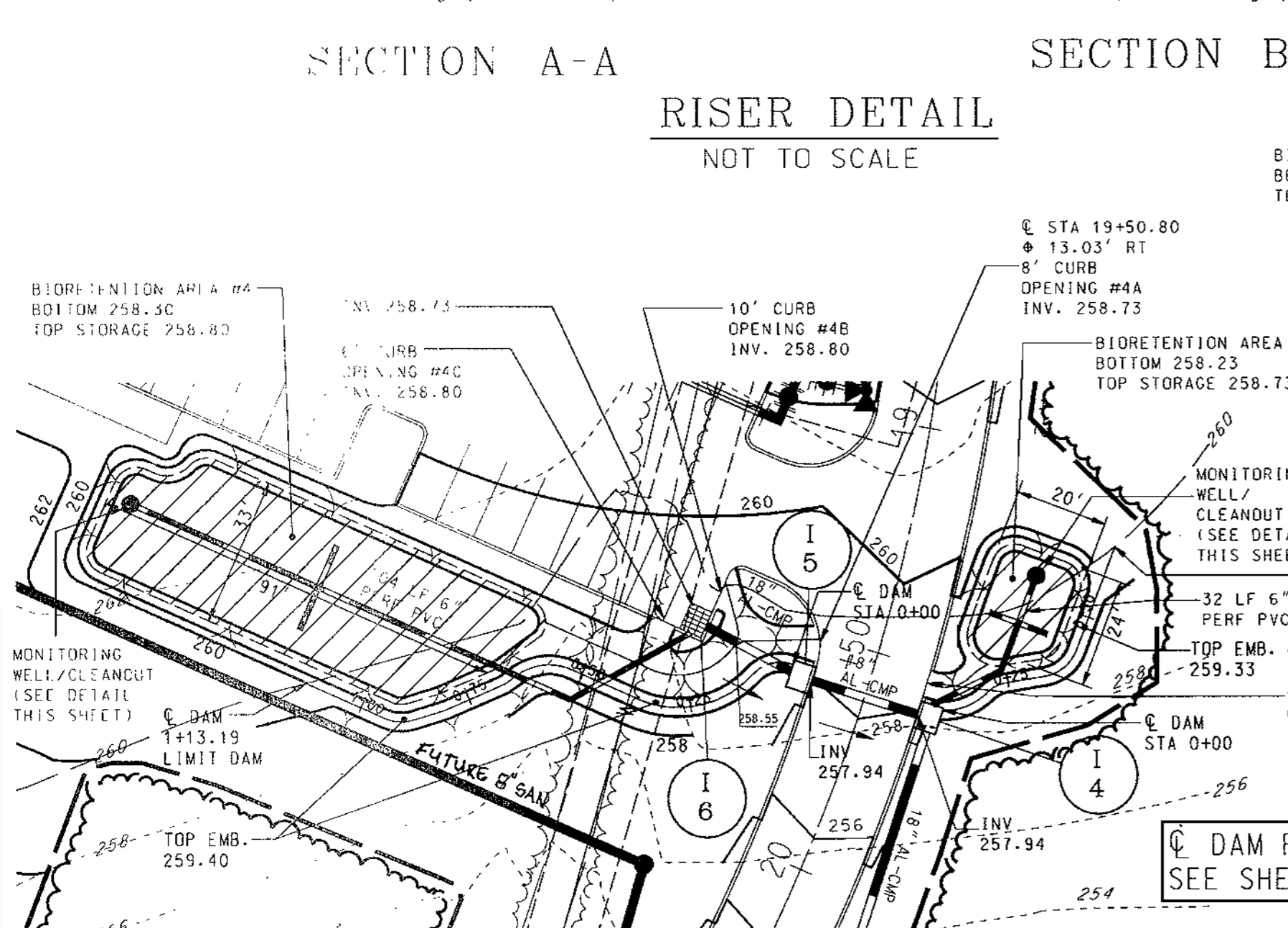


REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.

J. H. Wolf 12/26/00
 S.C.D. DATE

Geoffrey W. Shering 12/26/00
 S.C.D. DATE

DATE	NUMBER	REVISION DESCRIPTION
11/15/00		APPROVED: DEPARTMENT OF PLANNING AND ZONING
1/17/01		CHIEF-DEVELOPMENT ENGINEERING DIVISION
1/18/01		CHIEF-DIVISION OF LAND DEVELOPMENT
10-26-00		APPROVED: DEPARTMENT OF RECREATION AND PARKS
		DIRECTOR



BY THE ENGINEER:
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

BY THE DEVELOPER:
 "I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."

James J. Sherr 10/27/00
 SIGNATURE OF DEVELOPER DATE

OWNER: HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
 7120 OAKLAND MILL COLUMBIA, MD 21046
 PHONE: 410-313-4700

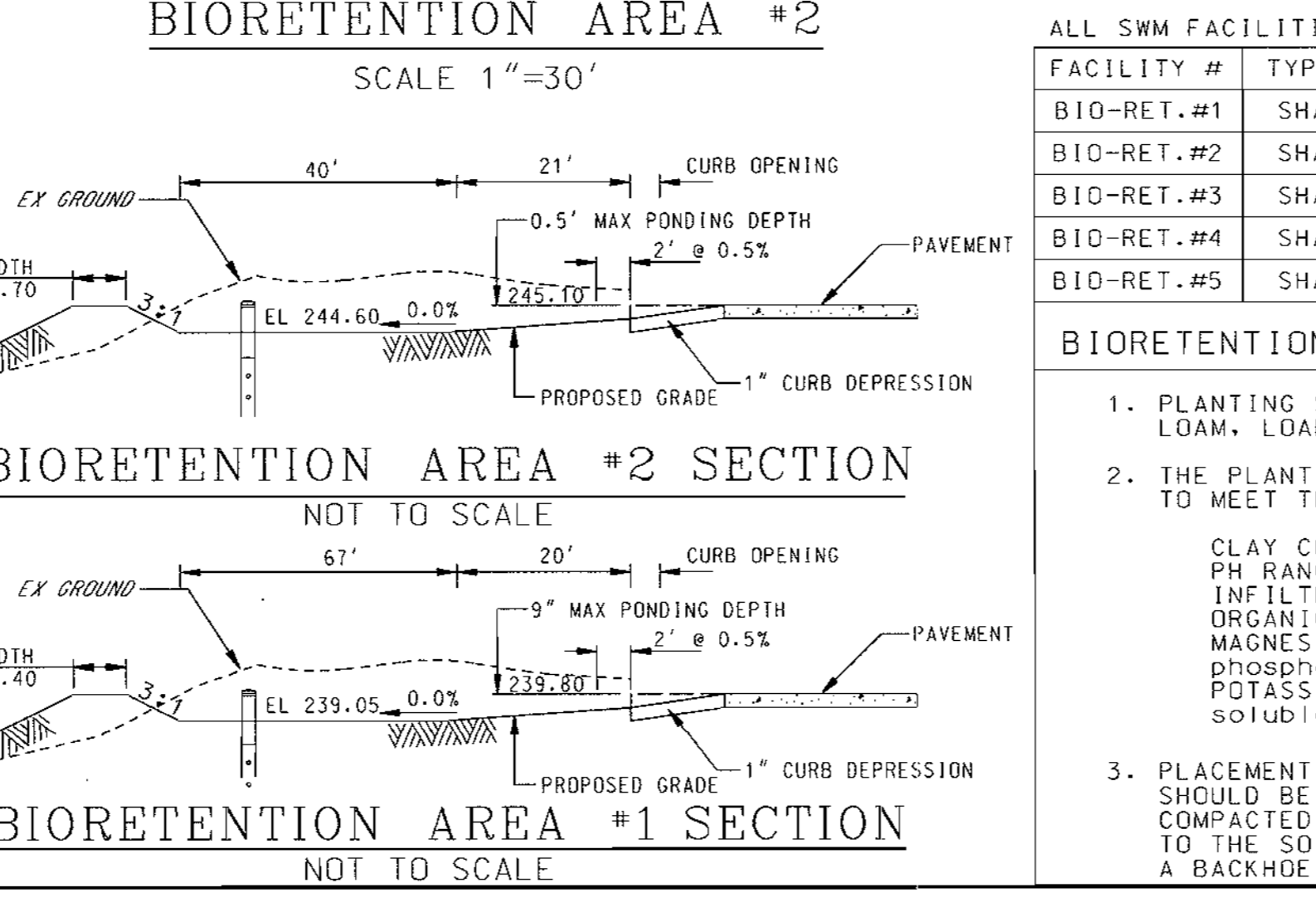
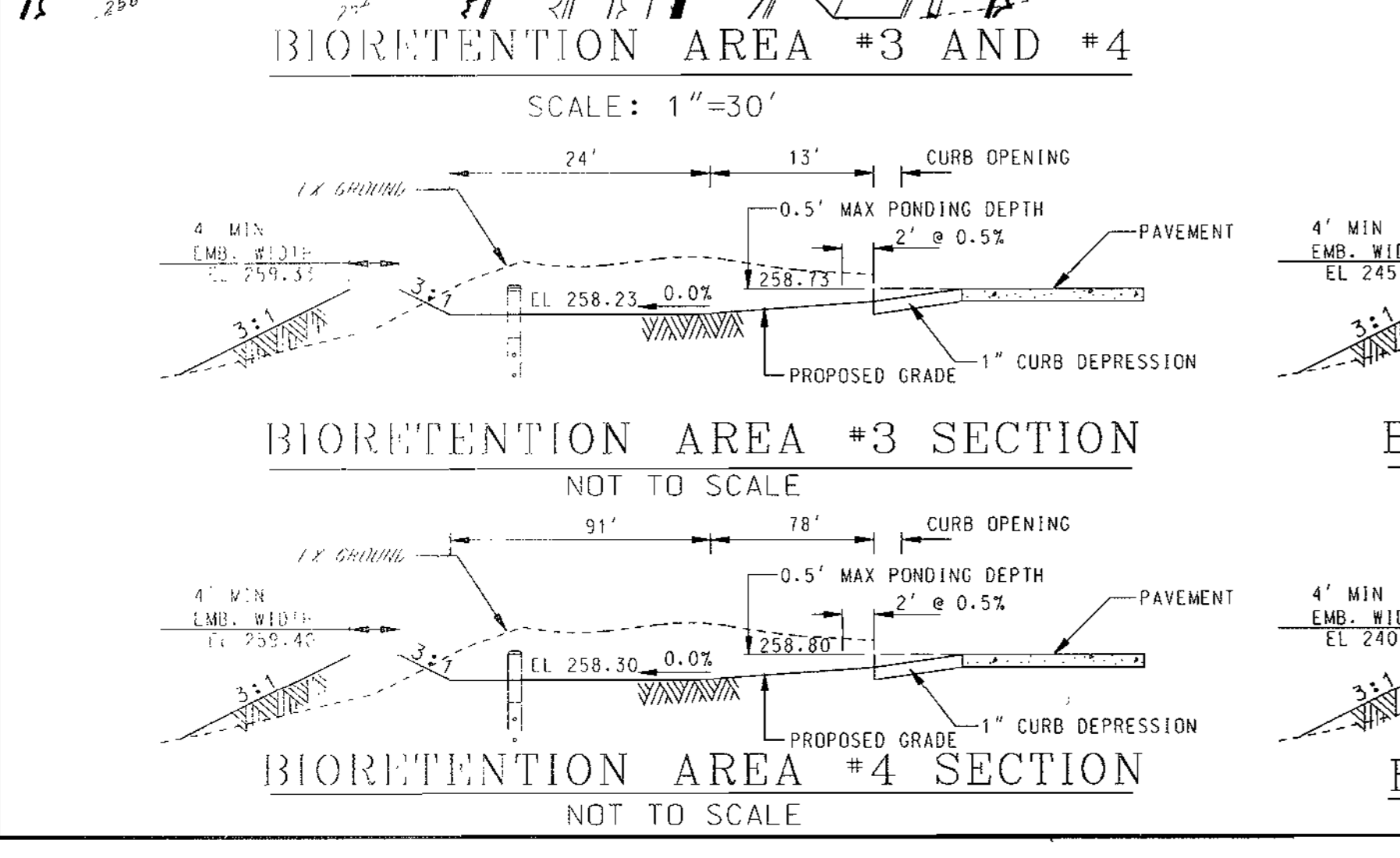
DEVELOPER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 3450 COURTHOUSE DRIVE ELLICOTT CITY, MD 21043
 PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS

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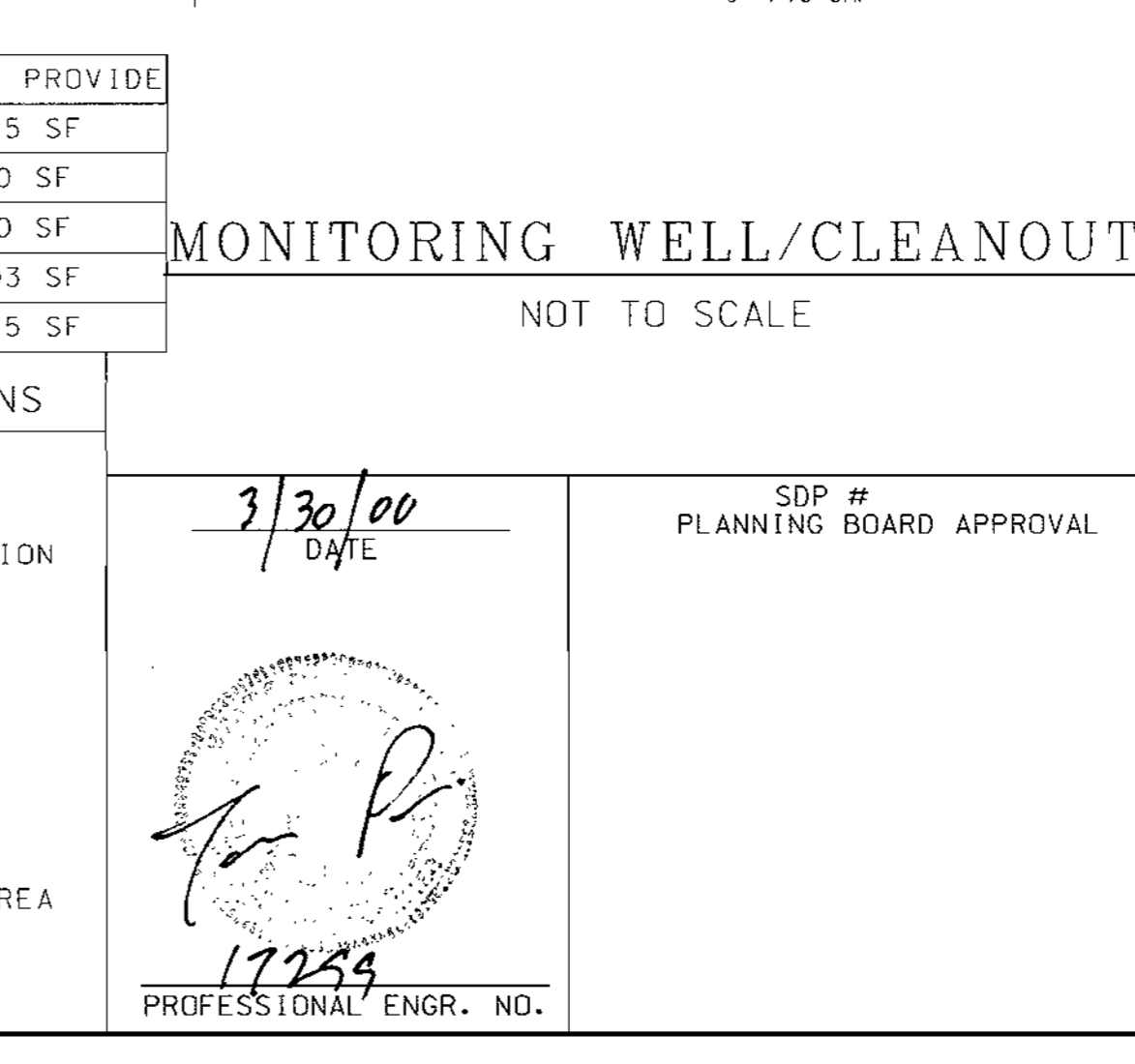


ALL SWM FACILITIES SHALL BE PUBLICALLY OWNED & MAINTAINED

FACILITY #	TYPE OF FACILITY	HAZARD	STORAGE PROVIDED	RETO. STORAGE PROVIDED
BIO-RET.#1	SHALLOW WO FAC.	A	1598 SF	1675 SF
BIO-RET.#2	SHALLOW WO FAC.	A	908 SF	920 SF
BIO-RET.#3	SHALLOW WO FAC.	A	424 SF	480 SF
BIO-RET.#4	SHALLOW WO FAC.	A	2834 SF	3003 SF
BIO-RET.#5	SHALLOW WO FAC.	A	2463 SF	2675 SF

BIORETENTION AREA PLANTING SOIL SPECIFICATIONS

- PLANTING SOILS FOR BIORETENTION SHALL HAVE SANDY LOAM, LOAMY SAND, OR LOAM TEXTURE.
- THE PLANTING SOIL SHALL BE TESTED PRIOR TO INSTALLATION TO MEET THE FOLLOWING CRITERIA:
 CLAY CONTENT: 10-25%
 PH RANGE: 5.5-6.5
 INFILTRATION RATE: 2.5 in/hr MIN
 ORGANIC MATTER: 1.5-3.0%
 MAGNESIUM (Mg): 35 lbs/ac
 PHOSPHORUS (P2O5): 100 lbs/ac
 POTASSIUM (K2O): 85 lbs/ac
 SOLUBLE SALTS: 500 ppm MAX
- PLACEMENT OF THE PLANTING SOIL IN THE BIORETENTION AREA SHOULD BE IN LIFTS OF 18 INCHES OR LESS AND LIGHTLY COMPACTED. MINIMAL COMPACTION EFFORT CAN BE APPLIED TO THE SOIL BY TAMPING WITH A BUCKET FROM A DOZER OR A BACKHOE.



3/30/00 DATE

SDP # PLANNING BOARD APPROVAL

for P

17259 PROFESSIONAL ENGR. NO.

FREDERICK WARD ASSOCIATES INC.
 ENGINEERS ARCHITECTS SURVEYORS
 5 SOUTH MAIN STREET BEL AIR, MARYLAND 21034 (410)879-2090

CENSUS TRACT NO.: 6069-03 WATER CODE: C06
 PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 7170900

TAX MAP 50, GRID 1 & 2
 ZONED R-20 & R-3C
 ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: **HIGH RIDGE PARK**
STORMWATER MANAGEMENT POND DETAILS

DESIGN BY: GEF/MR SCALE: AS SHOWN PROJECT NO.:
 DRAWN BY: NB/CF/GEF DATE: 04/02/00 DRAWING NUMBER
 CHECKED BY: GEF/RD APPROVED: GEF 16 OF 24

SPP 0034

SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

SITE PREPARATION

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15-feet of the toe of the embankment.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

EARTH FILL

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification (UC) of CH or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer.

Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread of heavy equipment. Compaction shall be achieved by a minimum of four complete passes of a sheepsfoot rubber roller or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will crumble, yet not be so wet that water can be squeezed out.

When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within +/- 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method 1-99 (Standard Proctor).

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

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10 foot elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

STRUCTURAL BACKFILL

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi 28 days unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and, on the sides of pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be protected with a minimum of 2" of concrete. Backfill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

PIPE CONDUITS

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria apply for corrugated metal pipe:

1. Materials - (Polymer Coated Steel Pipe) - Steel pipes with polymer coating shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum pipe, when used with flowable fill or when soil and/or water conditions warrant for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Not dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

3. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all ground when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber neoprene gasket when joining pipe sections. The end of each pipe shall be reinforced with an adequate number of corrugations to accommodate the bandwidth. The following type connections are acceptable for pipes less than 24-inch in diameter: Flanges on both ends of the pipe with circular 3/8-inch closed cell neoprene gasket, pre-punched to the flange bolt circles, sandwiched between adjacent flanges; a 12-inch wide standard top type band with 12-inch wide by 3/8-inch thick closed cell circular neoprene gasket; and a 12-inch wide hugger type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 24-inches in diameter or larger shall be connected by a 24-inch long circular corrugated band using a minimum of four (4) rods and lugs, 2 on each connecting pipe end. A 24-inch wide by 3/8-inch thick closed cell circular neoprene

gasket will be installed with 12 inches on the end of each pipe. Flanged joints with 3/8 inch closed cell gaskets the full width of the flange is also acceptable.

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

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

5. Backfilling shall conform to "Structure Backfill".

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

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

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

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding/cradle for their entire length. This bedding/cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 50% of its outside diameter with a minimum thickness of 6 inches. Where a concrete grade is not needed for structural reasons, flowable fill may be used as described in the "Structural Backfill" section of this standard. Gravel bedding is not permitted.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 4 feet from the riser.

7. Backfilling shall conform to "Structure Backfill".

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

Plastic Pipe - The following criteria shall apply for plastic pipe:

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4-inch - 10-inch pipe shall meet the requirements of AASHTO M252 Type S, and 12-inch through 24-inch shall meet the requirements of AASHTO M294 Type S.

2. Joints and connections to anti-seep collars shall be completely watertight.

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

4. Backfilling shall conform to "Structure Backfill".

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

Drainage Diaphragms - When a drainage diaphragm is used, a registered professional engineer will supervise the design and construction inspection.

CONCRETE

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

ROCK RIPRAP

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311.

Geotextile fabric shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09, Class C.

CARE OF WATER DURING CONSTRUCTION

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

STABILIZATION

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

EROSION AND SEDIMENT CONTROL

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

OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS

1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND FUNGUS.

2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.

3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.

4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

OPERATION AND MAINTENANCE SCHEDULE FOR PUBLICALLY OWNED AND MAINTAINED DETENTION POND.

1. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.

2. TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES PER YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHALL BE MOWED AS NEEDED.

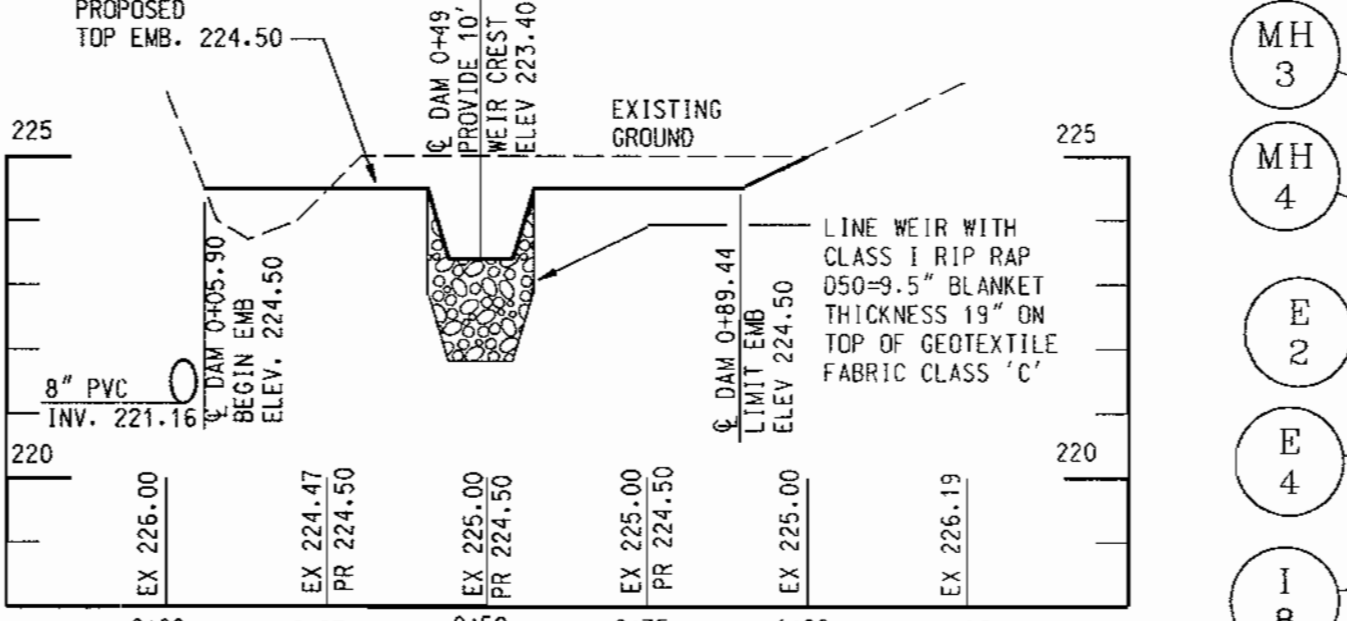
3. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.

4. VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS THE RIP-RAP OR GABION OUTLET AREA SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

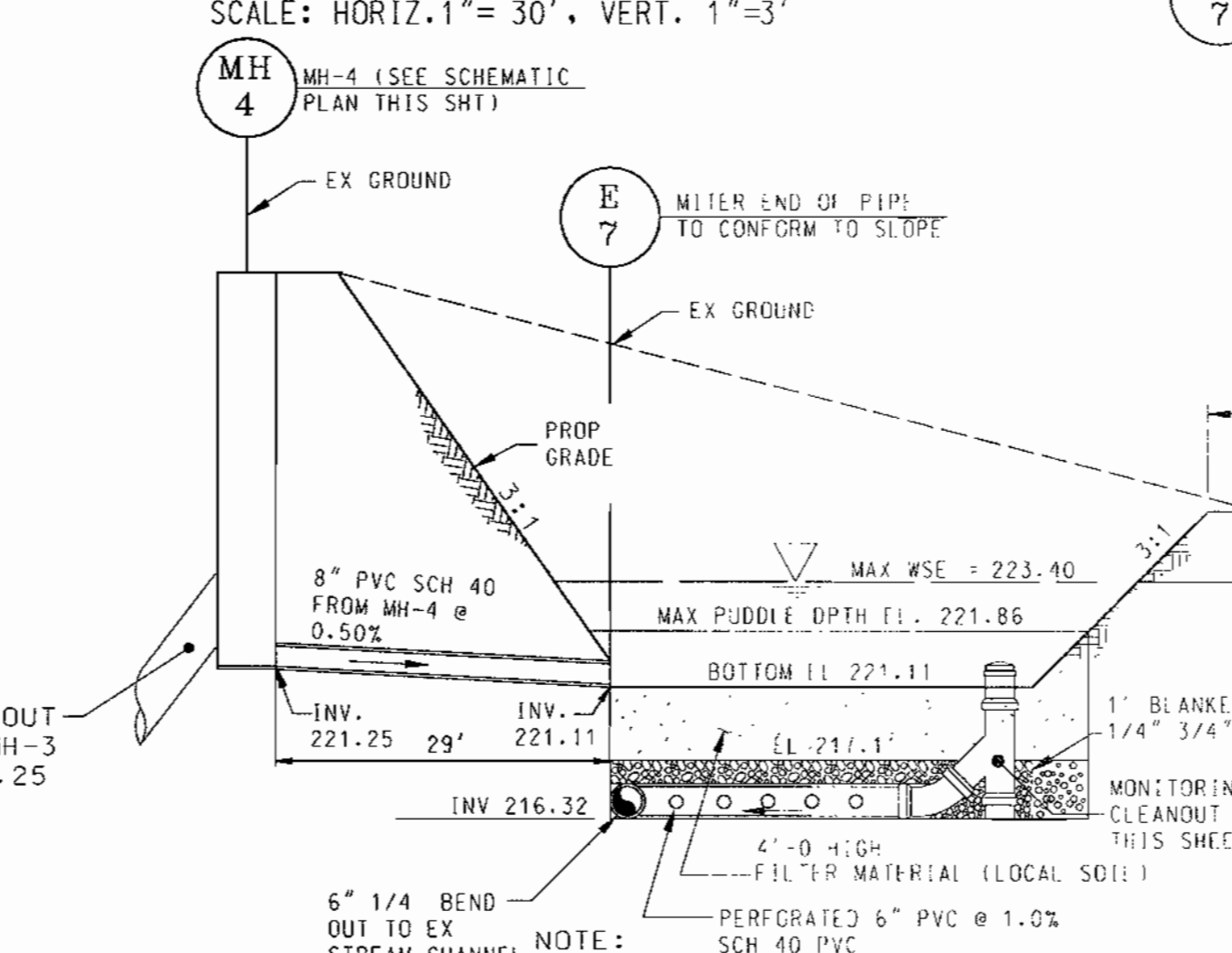
NON-ROUTINE MAINTENANCE:

1. STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHALL BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.

2. SEDIMENT SHALL BE REMOVED FROM THE POND, AND FOREBAY, NO LATER THAN WHEN THE CAPACITY OF THE POND, OR FOREBAY, IS HALF FULL OF SEDIMENT, OR, WHEN DEEMED NECESSARY FOR AESTHETIC REASONS.



BIORETENTION AREA #5 DAM PROFILE
SCALE: HORIZ. 1" = 30', VERT. 1" = 3'



PLACEMENT OF THE FILTER MATERIAL SHOULD BE BY LIFTS AND LIGHTLY COMPACTED. MINIMAL COMPACTION EFFORT CAN BE APPLIED TO THE SOIL BY TAMPING WITH A BUCKET FROM A DOZER OR A BACKHOE.

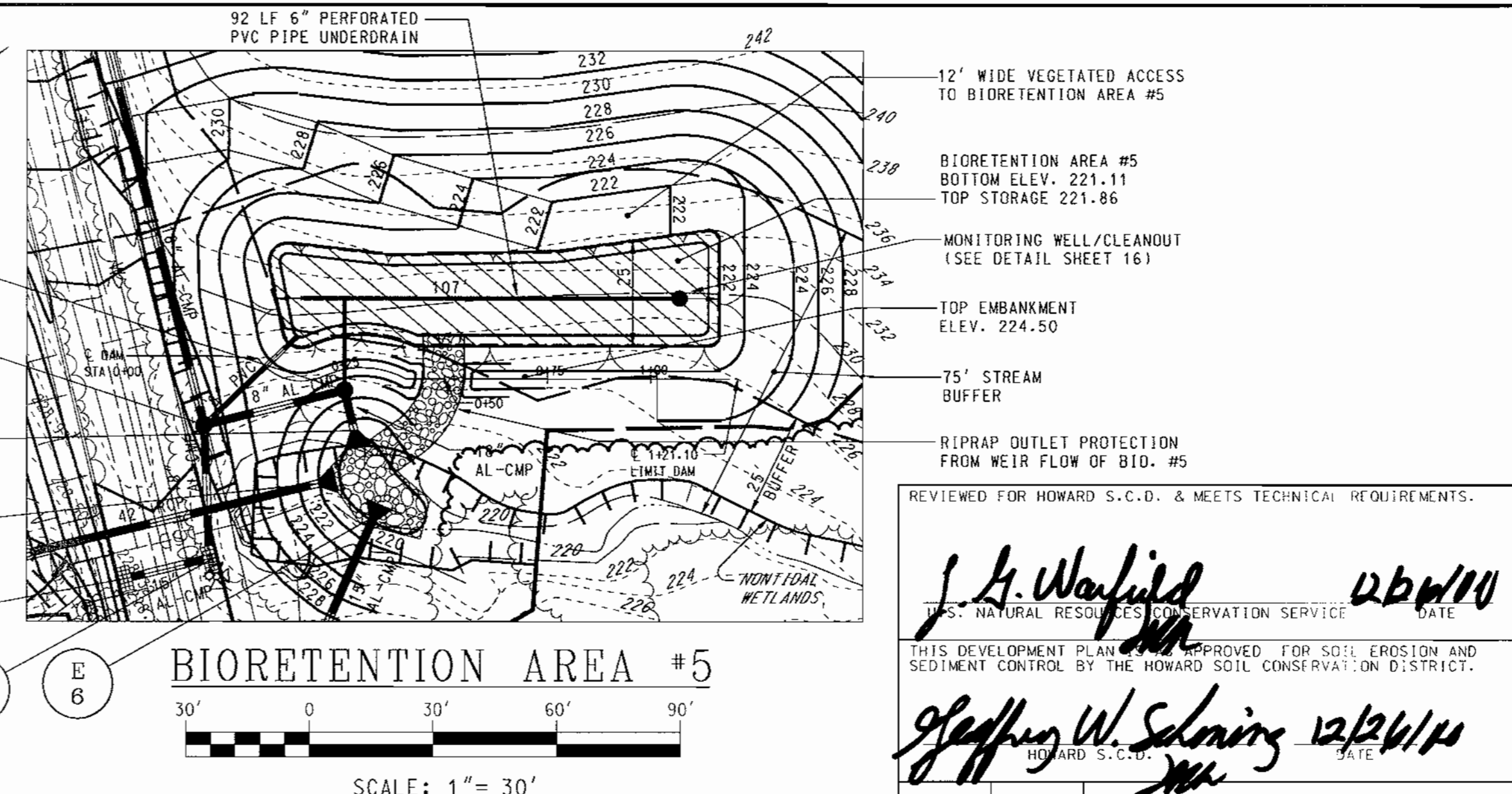
BIORETENTION AREA #5
SCALE 1" = 30'

FOR REINFORCEMENT AND OTHER SPECIFIC DESIGN REQUIREMENTS, SEE HOWARD COUNTY STANDARD DETAIL G5.12 FOR SHALLOW MANHOLE STANDARDS AND SPECIFICATIONS

SEQUENCE OF CONSTRUCTION AND INSPECTOR'S CHECK-OFF LIST FOR SWM FACILITIES

STAGE	DEVELOPER'S/ENGINEER APPROVAL		INSPECTOR'S APPROVAL	
	INITIALS	DATE	INITIALS	DATE
1. PRE-CONSTRUCTION MEETING. *				
2. POND EXCAVATION TO THE BOTTOM				
3. INSTALLATION OF STRUCTURES AND ASSOCIATED STORM DRAINAGE. *				
A. FOOTING SUBGRADE PRIOR TO POURING. *				
B. FOOTING FORMED AND STEEL SET PRIOR TO POURING. *				
C. STRUCTURE SIDES FORMED AND STEEL SET PRIOR TO POURING. *				
D. PRIOR TO TOP SLAB AND MANHOLES BEING SET ON, INSPECTOR MUST INSPECT ALL CAST-IN-PLACE AND PRE-CAST STRUCTURES FOR PROPER ASSEMBLY. *				
4. SEDIMENT BASIN CONSTRUCTION: *				
A. INSTALLATION OF 4" DRIFICE PLATE (FOR DETAIL SEE SHEET 14)				
B. INSTALLATION OF 8" DRAW-DOWN DEVICE (FOR DETAIL SEE SHEET 14)				
C. INSTALLATION OF PLYWOOD BOARD OVER WEIR TO ELEVATION 236.00 (FOR DETAIL SEE SHEET 14)				
5. SITE IS PERMANENTLY STABILIZED, ALL SEDIMENT AND DEBRIS REMOVED FROM THE STRUCTURE AND SEDIMENT BASIN CONVERTED INTO STORMWATER MANAGEMENT POND: *				
A. POND EXCAVATED TO THE BOTTOM ELEVATIONS INDICATED ON THE PLAN ON SHEET 15.				
B. 4" DRIFICE PLATE IS REMOVED				
C. 8" DRAW-DOWN DEVICE IS REMOVED AND 8" UNDERDRAIN PIPE INSTALLED.				
D. PLYWOOD BOARD IS REMOVED. INSTALLATION OF WEIR GRATE.				
6. FINAL INSPECTION. *				

4035M-4 (REV 4-89)



BIORETENTION AREA #5
SCALE: 1" = 30'

DATE	NUMBER	REVISION DESCRIPTION
		APPROVED: DEPARTMENT OF PLANNING AND ZONING
		CHIEF-DEVELOPMENT ENGINEERING DIVISION
		CHIEF-DIVISION OF LAND DEVELOPMENT
		DIRECTOR
		APPROVED: DEPARTMENT OF RECREATION AND PARKS
		DIRECTOR

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

BY THE DEVELOPER:
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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 SOIL CONSERVATION DISTRICT.

OWNER: HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS: 7120 OAKLAND MILL COLUMBIA, MD 21046 PHONE: 410-313-4700

DEVELOPER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS: 3450 COURTHOUSE DRIVE ELLICOTT CITY, MD 21043 PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS

GEF

GRACE E. FIELDER & ASSOCIATES, CHARTERED PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
8101 SANDY SPRING ROAD SUITE 104 LAUREL, MARYLAND 20707

PHONE: 301-470-2544
FAX: 301-470-2545

FREDERICK WARD ASSOCIATES INC.
ENGINEERS ARCHITECTS SURVEYORS
5 SOUTH MAIN STREET BEL AIR, MARYLAND 21034 (410) 879-2090

CENSUS TRACT NO.: 6069.03 WATER CODE: C06
PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 71709800

TAX MAP 50, GRID 1 & 2
ZONED R-20 & R-SC
ELECTION DISTRICT HOWARD COUNTY, MARYLAND

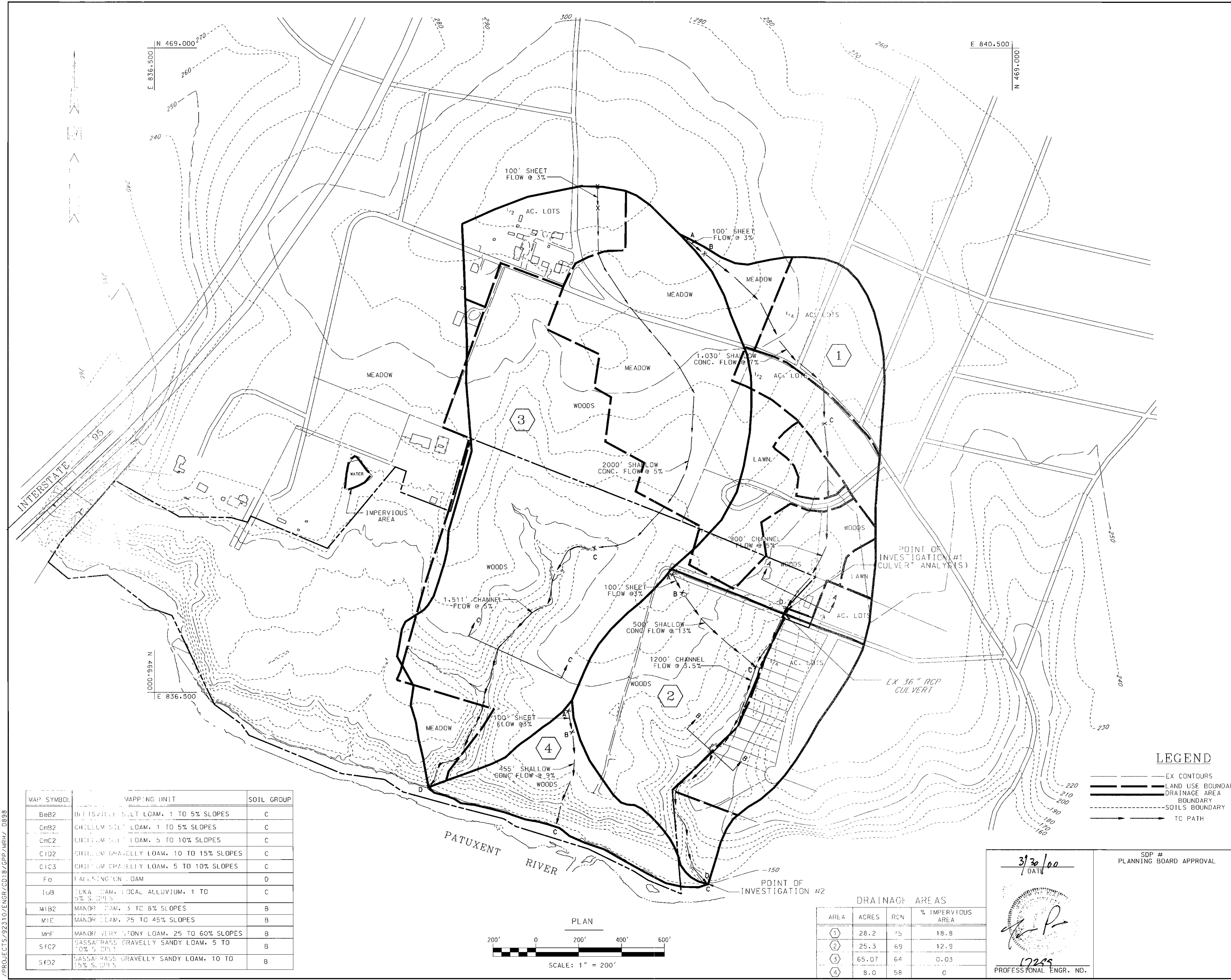
TITLE: HIGH RIDGE PARK
STORMWATER MANAGEMENT NOTES

DESIGN BY: GEF/MR SCALE: AS SHOWN PROJECT NO.:
DRAWN BY: NB/CV/GDF DATE: 04/02/00 DRAWING NUMBER
CHECKED BY: GEF/RD APPROVED: GEF 17 OF 24

PROJECT: 030210-ENGR-0017-MRHA-0899

SDP 0039

12/26/00



REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.

J. L. Wolford 12/26/00
S. NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN WAS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Gregory W. Schoney 12/26/00
HOWARD S.C.D. DATE

DATE: NUMBER REVISION DESCRIPTION
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chris Krametz 11/15/00
CHIEF-DEVELOPMENT ENGINEERING DIVISION DATE
Chris Krametz 11/17/01
CHIEF-DIVISION OF LAND DEVELOPMENT DATE
James R. Smith 11/18/01
INSPECTOR DATE

APPROVED: DEPARTMENT OF RECREATION AND PARKS
Gregory W. Schoney 10.26.00
DIRECTOR DATE

THE ENGINEER:
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
SIGNATURE OF ENGINEER DATE

BY THE DEVELOPER:
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."
James R. Smith 10/26/00
SIGNATURE OF DEVELOPER DATE

OWNER
HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
7120 OAKLAND HILL
COLUMBIA, MD 21046
PHONE: 410-313-4700

DEVELOPER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
3450 COURTHOUSE DRIVE
ELLCOTT CITY, MD 21043
PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS

GEF
GRACE E. FIELDER & ASSOCIATES, CHARTERED
PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
8101 SANDY SPRING ROAD
SUITE 104
LAUREL, MARYLAND 20707
PHONE: 301-470-2544
FAX: 301-470-2545

FREDERICK WARD ASSOCIATES INC.
ENGINEERS ARCHITECTS SURVEYORS
5 SOUTH MAIN STREET BEL AIR, MARYLAND 21034 (410)879-2000

KENSUS TRACT NO.: 6069.03 WATER CDD#: C06
PLAT NO. SEE SHEET 1 OF 25 SEWER CDD#: 1170500
TAX MAP 50, GRID 1 & 2
ZONED R-20 & R-5C
ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE
HIGH RIDGE PARK
PRE-DEVELOPMENT DRAINAGE AREA MAP
DESIGN BY: GEF/MR SCALE: AS SHOWN PROJECT NO.:
DRAWN BY: NB/CV/GEF DATE: 04/02/00 DRAWING NUMBER
CHECKED BY: GEF/RD APPROVED: GEF 18 OF 24

MAP SYMBOL	MAPPING UNIT	SOIL GROUP
BeB2	BEHINDSIVE SILET LOAM, 1 TO 5% SLOPES	C
CmB2	CHITELM SILT LOAM, 1 TO 5% SLOPES	C
CmC2	CHITELM SILT LOAM, 5 TO 10% SLOPES	C
CID2	CHITELM GRAVELLY LOAM, 10 TO 15% SLOPES	C
CIC3	CHITELM GRAVELLY LOAM, 5 TO 10% SLOPES	C
Fa	FALLSINGTON LOAM	D
IuB	ILICA SAND LOCAL ALLUVIUM, 1 TO 2% SLOPES	C
MIB2	MANOR CLAY, 5 TO 8% SLOPES	B
MIC	MANOR CLAY, 25 TO 45% SLOPES	B
MmF	MANOR VERY STONY LOAM, 25 TO 60% SLOPES	B
SfC2	SASSAPARILLA GRAVELLY SANDY LOAM, 5 TO 10% SLOPES	B
SfD2	SASSAPARILLA GRAVELLY SANDY LOAM, 10 TO 15% SLOPES	B

DRAINAGE AREAS

AREA	ACRES	RCN	% IMPERVIOUS AREA
①	28.2	75	18.8
②	25.3	69	12.9
③	65.07	64	0.03
④	8.0	58	0

3/30/00
DATE
[Signature]
PROFESSIONAL ENGR. NO.

SDP #
PLANNING BOARD APPROVAL

PROJECTS/22310/ENGR/CD/18/CPP/MRH/0898

SDP 0034



MAP SYMBOL	MAPPING UNIT	SOIL GROUP
BaB2	BULLOCK SILT LOAM, 1 TO 5% SLOPES	C
CmB2	CHILLUM SILT LOAM, 1 TO 5% SLOPES	C
CmC2	CHILLUM SILT LOAM, 5 TO 10% SLOPES	C
C.D2	CHILLUM GRAVELLY LOAM, 10 TO 15% SLOPES	C
C.C3	CHILLUM GRAVELLY LOAM, 5 TO 10% SLOPES	C
Fc	FALLS TONCK LOAM	D
IcB	JUKA CLAY, LOCAL ALLUVIUM, 1 TO 5% SLOPES	C
MIB2	MANOR CLAM, 3 TO 8% SLOPES	B
MIF	MANOR CLAM, 25 TO 45% SLOPES	B
Mm1	MANOR VERY STONY LOAM, 25 TO 60% SLOPES	B
SfC2	SASSAPARASS GRAVELLY SANDY LOAM, 5 TO 10% SLOPES	B
SfD2	SASSAPARASS GRAVELLY SANDY LOAM, 10 TO 15% SLOPES	B

AREA	ACRES	RCV	% IMPERVIOUS AREA
①	28.6	76	19.9
②	20.6	68	15.9
③	65.07	64	0.03
④	8.0	59	0.04
⑤	4.28	77	0.50

LEGEND

- EX CONTOURS
- LAND USE BOUNDARY
- DRAINAGE AREA BOUNDARY
- SOILS BOUNDARY
- TC PATH
- PROPOSED CONTOURS
- CHANNEL SECTIONS

REVIEWED FOR HOWARD S.C.D. & MEETS TECHNICAL REQUIREMENTS.

J.L. Welford 12/21/00
SPECIALIST, NATURAL RESOURCES CONSERVATION SERVICE DATE

Geoffrey W. Schwing 12/26/00
HOWARD S.C.D. DATE

DATE	NUMBER	REVISION DESCRIPTION
		APPROVED: DEPARTMENT OF PLANNING AND ZONING
		CHIEF-DEVELOPMENT ENGINEERING DIVISION
		CHIEF-DIVISION OF LAND DEVELOPMENT
		DIRECTOR
		APPROVED: DEPARTMENT OF RECREATION AND PARKS
		DIRECTOR

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

BY THE DEVELOPER:
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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."

DRAWN BY: GEF/MR
DATE: 04/02/00
SCALE: AS SHOWN
PROJECT NO.:
DRAWING NUMBER: 19 OF 24

SDP # PLANNING BOARD APPROVAL

FREDERICK WARD ASSOCIATES INC.
ENGINEERS ARCHITECTS SURVEYORS
5 SOUTH MAIN STREET BEL AIR, MARYLAND 21034 (410)879-2000

CENSUS TRACT NO.: 6069-03 WATER CODE: C06
PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 7170500

TAX MAP 50, GRID 1 & 2
ZONED R-20 & R-SC
ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: HIGH RIDGE PARK
POST-DEVELOPMENT DRAINAGE AREA MAP

17299
PROFESSIONAL ENGR. NO.

SDP 0034

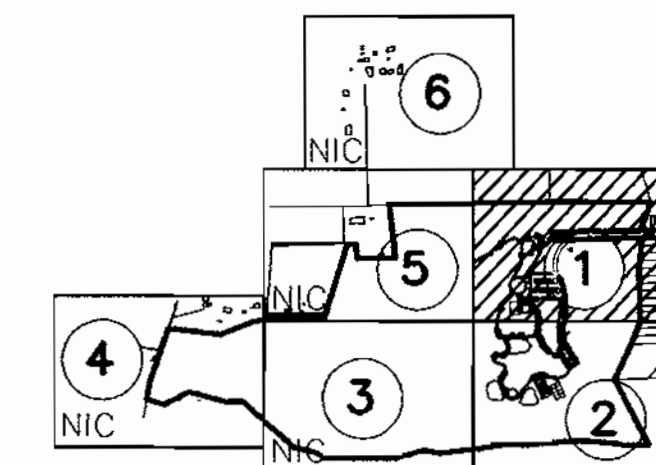
/PROJECTS/92310/ENGR/CD19/GPP/ARH/0898

MARTIN KRAESKI JR.
MICHAEL J. KRAESKI ET. AL.
6/19/91
ZONED: R-SC

R-SC BUILDING RESTRICTION LINES
FRONT: 20' (FROM LOCAL STREET)
SIDE: 7.5'
REAR: 30'
FOR USES OTHER THAN
SFD: 20' SETBACK

JOSEPH FRANKLIN PYLES JR.
1177/525
ZONED: R-SC

LANDS OF
HOWARD COUNTY
MARYLAND
1037/48
LOT 7, BLOCK 1
ZONED: R-SC

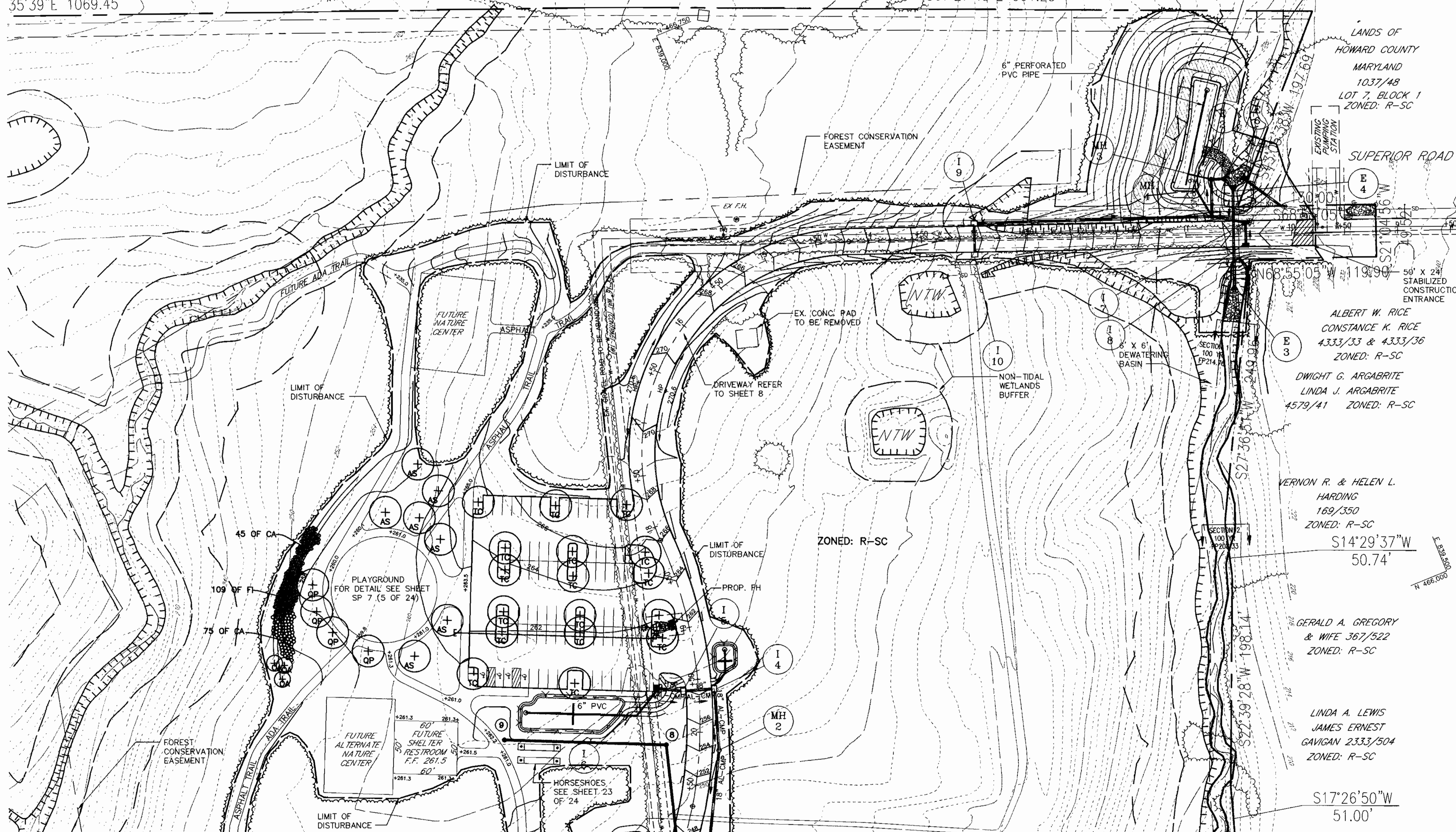


KEY MAP

35'39"E 1069.45'

S67°27'45"E 661.25'

10' X 71' BIORETENTION AREA
FOR SECTION SEE SHEET 11 OF 24



DATE:	NUMBER	REVISION DESCRIPTION
APPROVED:	DEPARTMENT OF PLANNING AND ZONING	
	<i>[Signature]</i>	11/15/00 DATE
	<i>Linda Hamda</i>	1/17/01 DATE
	<i>[Signature]</i>	1/28/01 DATE
DIRECTOR:	DEPARTMENT OF RECREATION AND PARKS	
	<i>[Signature]</i>	10-26- DATE

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

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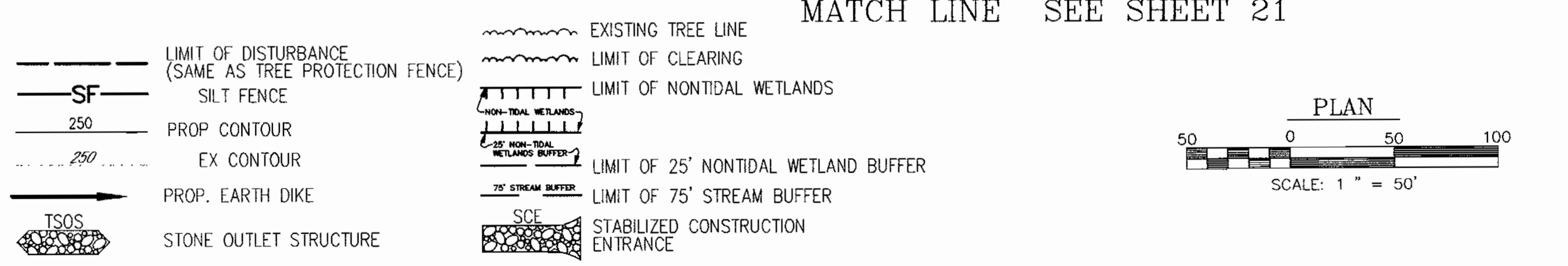
OWNER:
HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS:
7120 OAKLAND MILL
COLUMBIA, MD 21046
PHONE: 410-313-4700

DEVELOPER:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS:
3450 COURTHOUSE DRIVE
ELLCOTT CITY, MD 21043
PHONE: 410-313-2014

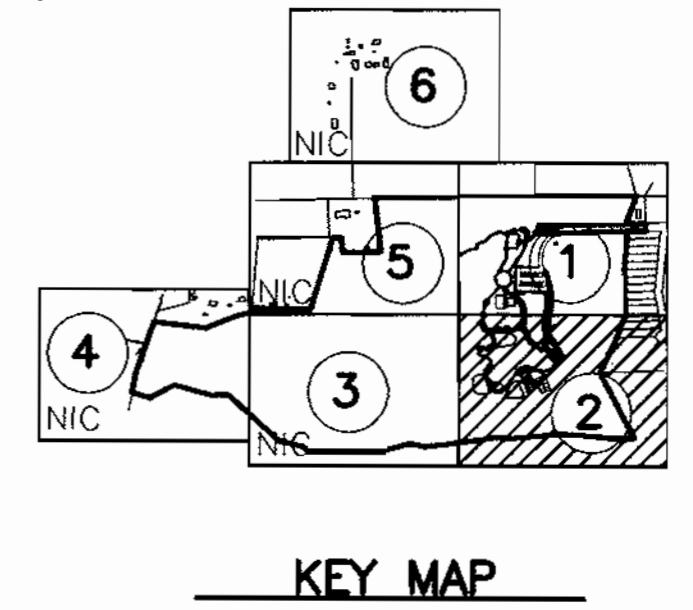
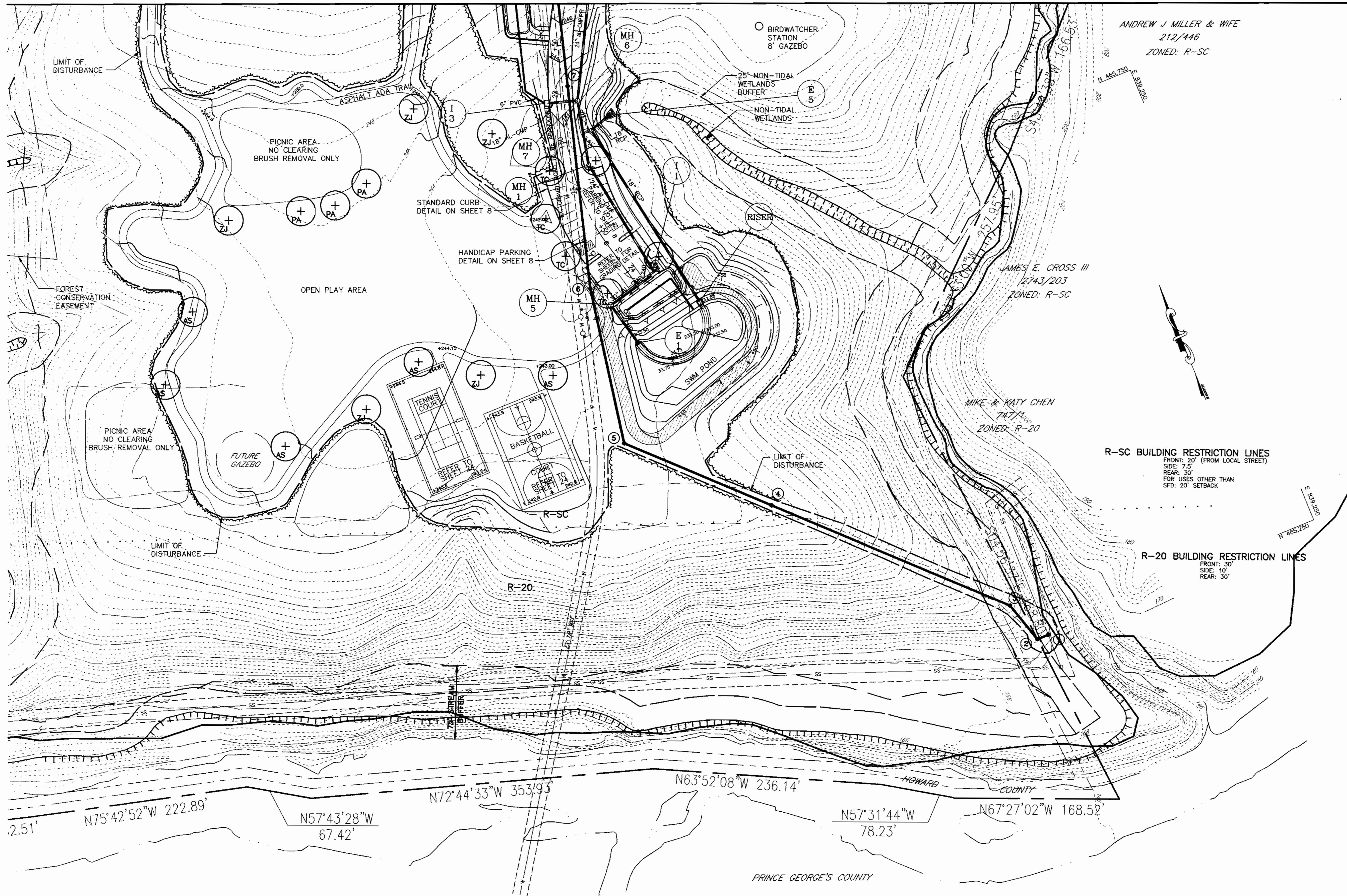
PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
GEF
GRACE E. FIELDER & ASSOCIATES, CHARTERED PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
8101 SANDY SPRING ROAD
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PHONE: 301-470-2544
FAX: 301-470-2545

FREDERICK WARD ASSOCIATES INC.
ENGINEERS ARCHITECTS SURVEYORS
5 SOUTH MAIN STREET BEL AIR, MARYLAND 21014 (410)879-2090

CENSUS TRACT NO: 6069.03 WATER CODE: C06
PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 7170900
TAX MAP 50, GRID 1 & 2
ZONED R-20 & R-SC
ELECTION DISTRICT 6 HOWARD COUNTY, MARYLAND
TITLE
HIGH RIDGE PARK
LANDSCAPE PLANTING AND
FOREST CONSERVATION PLAN
DESIGN BY: GEF SCALE: AS SHOWN PROJECT NO:
DRAWN BY: GEF DATE: 04/02/00 DRAWING NUMBER
CHECKED BY: GEF APPROVED: GEF 20 OF 24

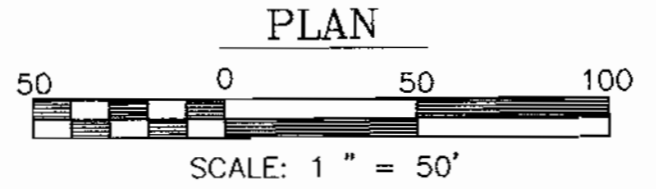


SPP 0034



DATE	NUMBER	REVISION DESCRIPTION
		APPROVED: DEPARTMENT OF PLANNING AND ZONING
		CHIEF-DEVELOPMENT ENGINEERING DIVISION
		CHIEF-DIVISION OF LAND DEVELOPMENT
		DIRECTOR
		APPROVED: DEPARTMENT OF RECREATION AND PARKS
		DIRECTOR
BY THE ENGINEER:		
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.		
SIGNATURE OF ENGINEER		
DATE		
BY THE DEVELOPER:		
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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.		
SIGNATURE OF DEVELOPER		
DATE		
OWNER		
HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS: 7120 OAKLAND MILL COLUMBIA, MD 21046 PHONE: 410-313-4700		
DEVELOPER		
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS: 3450 COURTHOUSE DRIVE ELLICOTT CITY, MD 21043 PHONE: 410-313-2014		
PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS		
GEF		
GRACE E. FIELDER & ASSOCIATES, CHARTERED PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS 8101 SANDY SPRING ROAD SUITE 104 LAUREL, MARYLAND 20707		
PHONE: 301-470-2544 FAX: 301-470-2545		
FREDERICK WARD ASSOCIATES INC. ENGINEERS ARCHITECTS SURVEYORS 5 SOUTH MAIN STREET BEL AIR, MARYLAND 21014 (410)879-2090		
CENSUS TRACT NO.: 6069.03 WATER CODE: C06 PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 7170800		
TAX MAP 50, GRID 1 & 2 ZONED R-20 & R-SC ELECTION DISTRICT 6 HOWARD COUNTY, MARYLAND		
TITLE HIGH RIDGE PARK LANDSCAPE PLANTING AND FOREST CONSERVATION PLAN		
DESIGN BY: GEF	SCALE: AS SHOWN	PROJECT NO.:
DRAWN BY: GEF	DATE: 04/02/00	DRAWING NUMBER
CHECKED BY: GEF	APPROVED: GEF	21 OF 24

- LIMIT OF DISTURBANCE (SAME AS TREE PROTECTION FENCE)
- SF SILT FENCE
- 250 PROP CONTOUR
- 250 EX CONTOUR
- PROP. EARTH DIKE
- TSOS STONE OUTLET STRUCTURE
- EXISTING TREE LINE
- LIMIT OF CLEARING
- LIMIT OF NONTIDAL WETLANDS
- 25' NON-TIDAL WETLANDS BUFFER
- 75' STREAM BUFFER
- LIMIT OF 25' NONTIDAL WETLAND BUFFER
- LIMIT OF 75' STREAM BUFFER
- STABILIZED CONSTRUCTION ENTRANCE



SDP0034

FOREST CONSERVATION WORKSHEET
VERSION 1.0

NET TRACT AREA:

A. TOTAL TRACT AREA.....	=	88.42
B. AREA WITHIN 100 YEAR FLOODPLAIN.....	=	4.36
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION.....	=	0.00
D. NET TRACT AREA.....	=	83.47

LAND USE CATEGORY: (FROM TABLE 3.2.1, PAGE 40, MANUAL)

INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY.

ARA	MDR	IDA	HDR	MPD	CA
0	0	1	0	0	0

E. AFFORESTATION THRESHOLD.....	=	15% X D =	12.5
F. REFORESTATION THRESHOLD.....	=	20% X D =	16.7

EXISTING FOREST COVER:

G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN).....	=	65.50
H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD.....	=	52.98
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD.....	=	48.80

BREAK EVEN POINT:

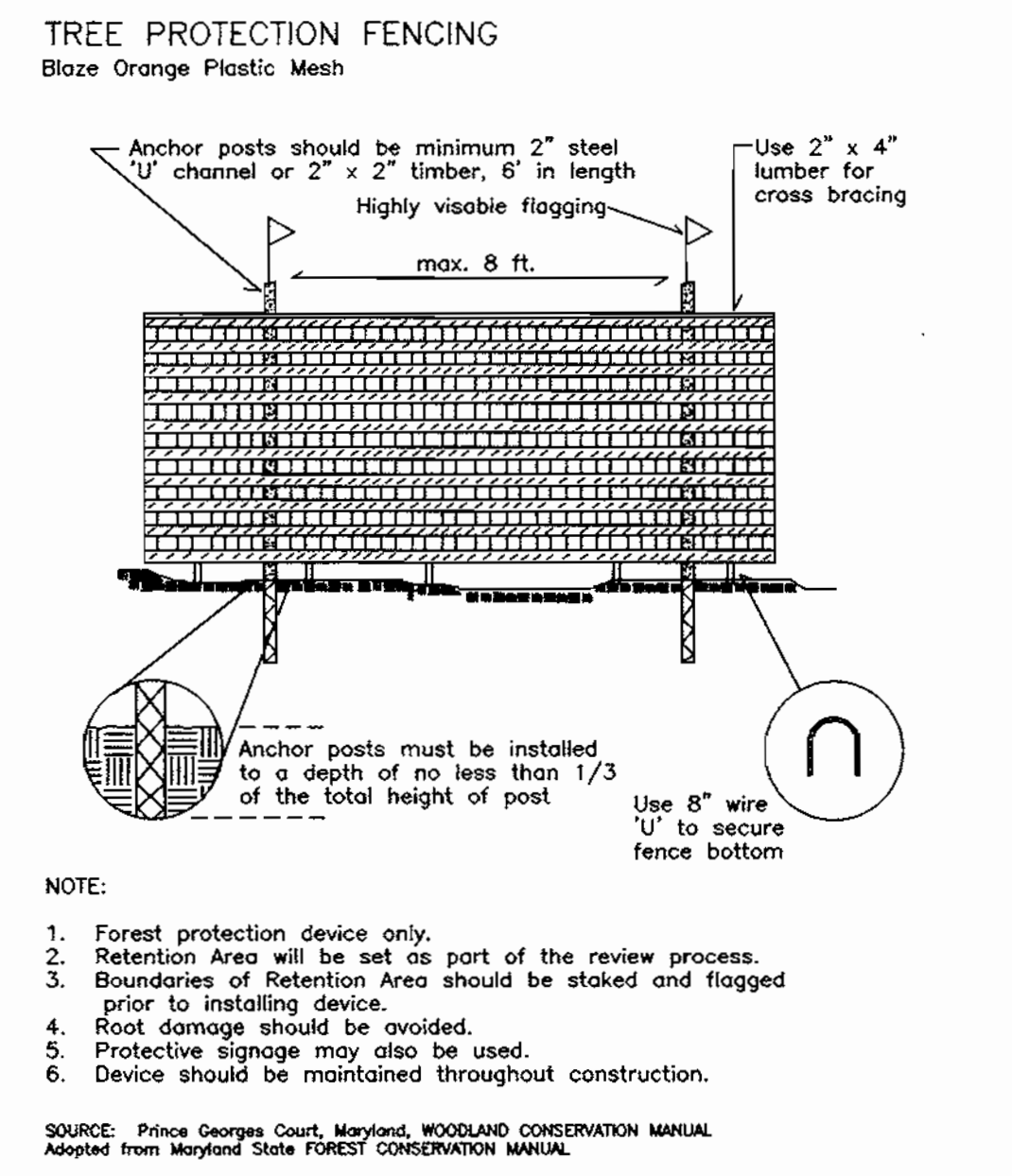
J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION.....	=	26.4
K. CLEARING WITHOUT MITIGATION.....	=	39.1

PROPOSED FOREST CLEARING:

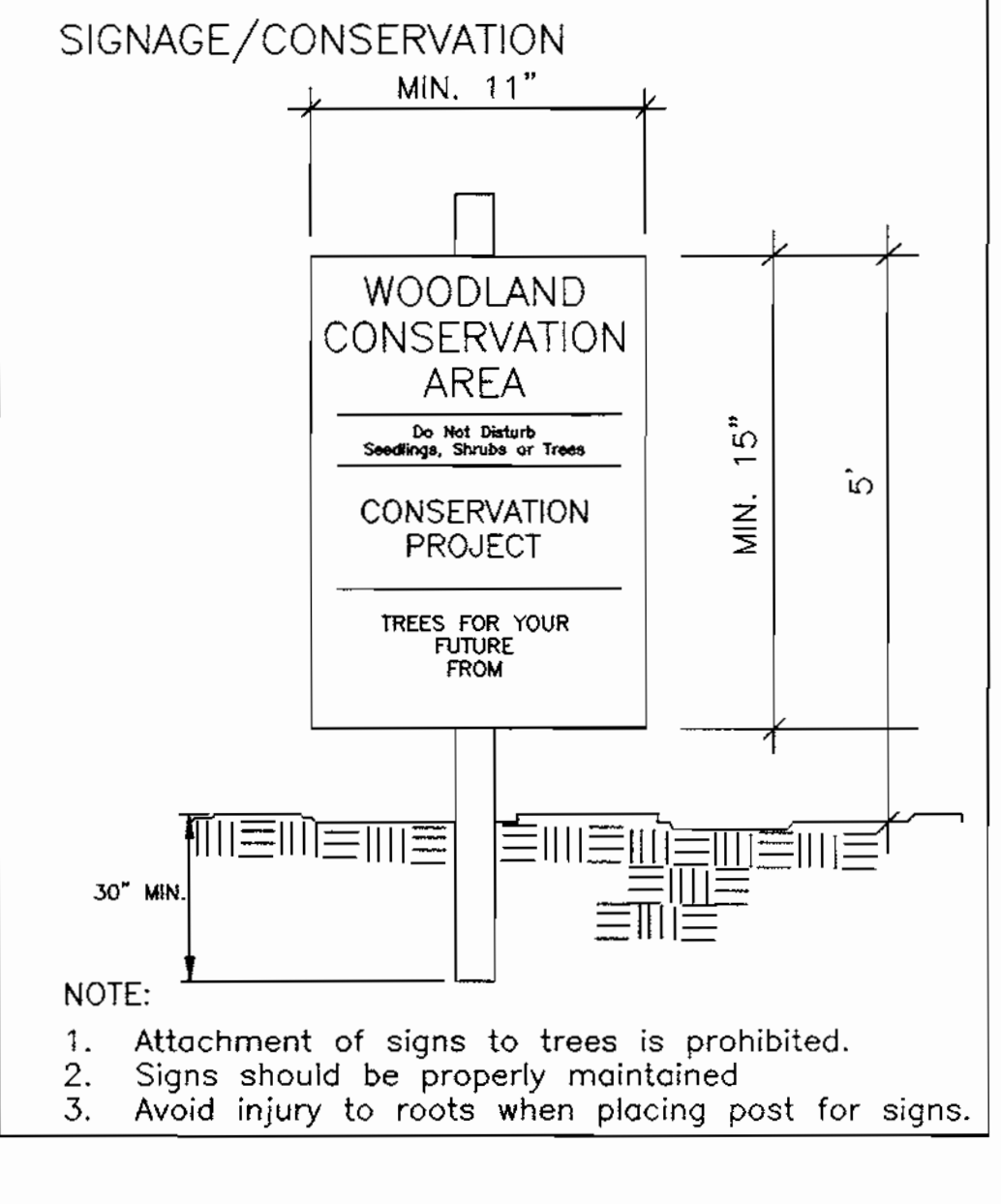
L. TOTAL AREA OF FOREST TO BE CLEARED.....	=	10.20
M. TOTAL AREA OF FOREST TO BE RETAINED.....	=	55.30

EXISTING FOREST COVER:

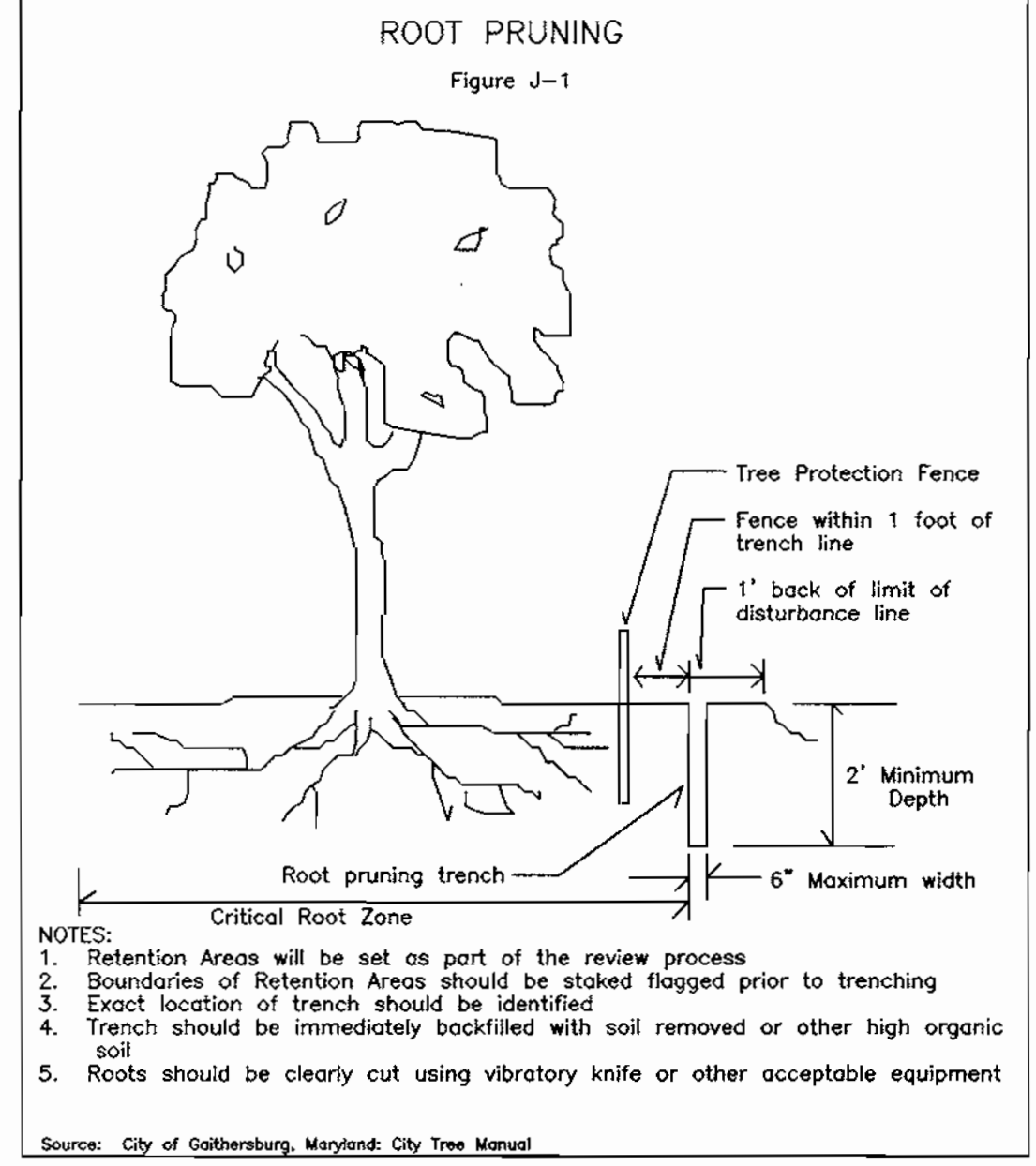
N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD.....	=	2.55
P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD.....	=	0.00
Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD.....	=	39.6
R. TOTAL REFORESTATION REQUIRED.....	=	0.00
S. TOTAL AFFORESTATION REQUIRED.....	=	0.00
T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED.....	=	0.00



- NOTE:
1. Forest protection device only.
 2. Retention Area will be set as part of the review process.
 3. Boundaries of Retention Area should be staked and flagged prior to installing device.
 4. Root damage should be avoided.
 5. Protective signage may also be used.
 6. Device should be maintained throughout construction.
- SOURCE: Prince Georges Court, Maryland, WOODLAND CONSERVATION MANUAL
Adapted from Maryland State FOREST CONSERVATION MANUAL

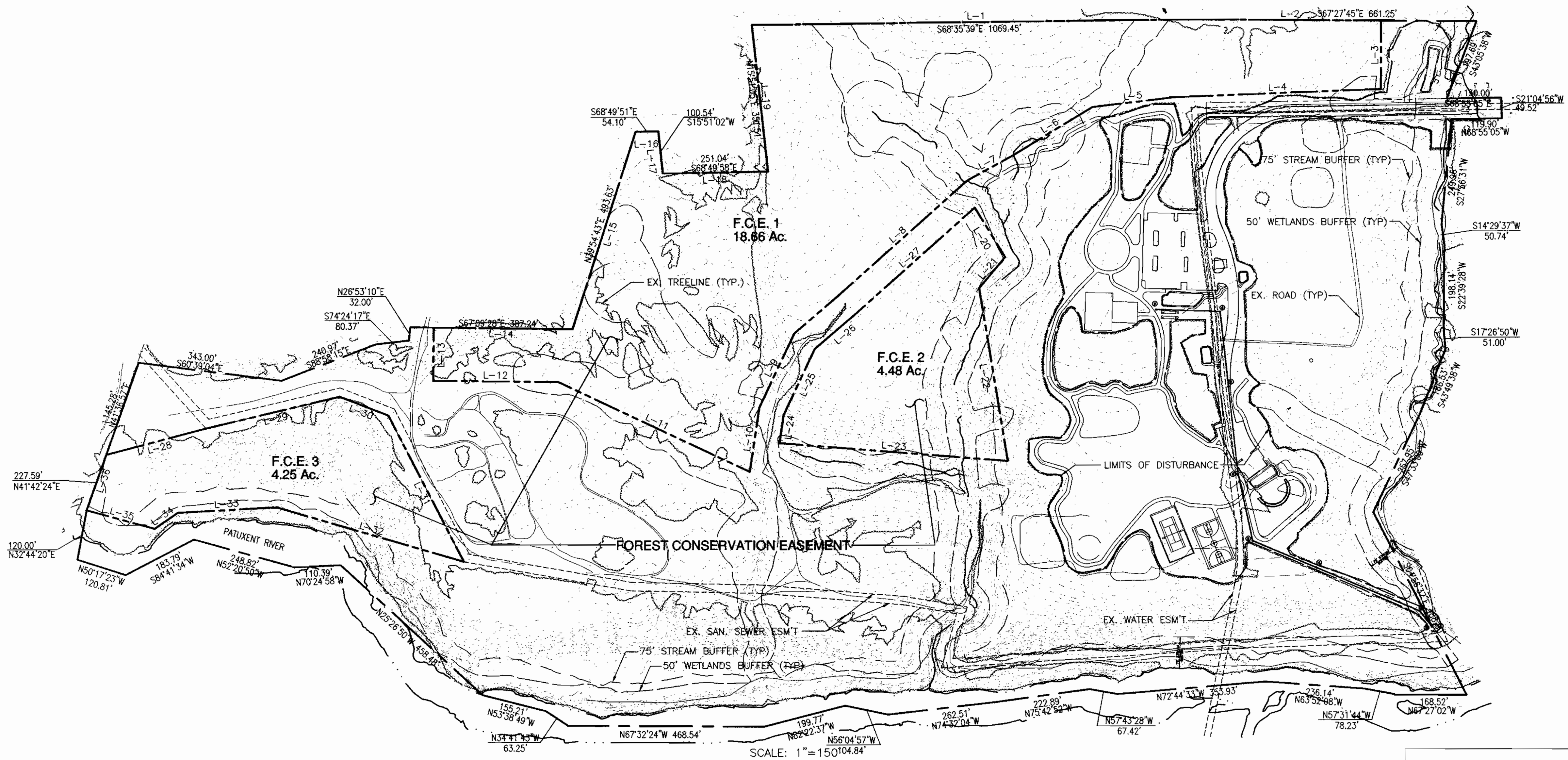


- NOTE:
1. Attachment of signs to trees is prohibited.
 2. Signs should be properly maintained
 3. Avoid injury to roots when placing post for signs.



- NOTES:
1. Retention Areas will be set as part of the review process
 2. Boundaries of Retention Areas should be staked flagged prior to trenching
 3. Exact location of trench should be identified
 4. Trench should be immediately backfilled with soil removed or other high organic soil
 5. Roots should be clearly cut using vibratory knife or other acceptable equipment
- SOURCE: City of Gaithersburg, Maryland; City Tree Manual

FOREST CONSERVATION EASEMENT LINE TABLE		
F.C.E. 1		
LINE	LENGTH	BEARING
L-1	1069.45	S68°35'39"E
L-2	434.05	S67°27'45"E
L-3	163.35	S22°32'15"W
L-4	491.34	N70°08'28"W
L-5	199.12	N74°40'22"W
L-6	219.89	S80°50'19"W
L-7	417.50	S70°29'07"W
L-8	132.85	S71°30'26"W
L-9	195.56	S47°25'29"W
L-10	154.81	S30°42'01"W
L-11	504.26	N42°46'58"W
L-12	298.87	N67°09'28"W
L-13	126.83	N22°50'32"E
L-14	351.06	S67°09'28"E
L-15	493.63	N39°54'43"E
L-16	54.10	S68°49'51"E
L-17	100.54	S15°51'02"W
L-18	251.04	S68°49'58"E
L-19	351.51	N15°51'05"E
F.C.E. 2		
L-20	138.23	S09°30'57"E
L-21	96.80	S51°57'34"W
L-22	417.52	S12°43'06"W
L-23	547.22	N63°24'42"W
L-24	67.74	N30°42'01"E
L-25	173.94	N47°25'29"E
L-26	120.58	N71°30'26"E
L-27	389.19	N70°29'07"E
F.C.E. 3		
L-28	246.18	N82°36'41"W
L-29	327.48	N81°10'53"W
L-30	124.59	N46°48'25"W
L-31	392.66	N05°09'52"W
L-32	465.98	S51°36'52"E
L-33	235.71	S71°08'21"E
L-34	66.83	N77°33'37"E
L-35	168.32	S52°41'11"E
L-36	140.50	N41°42'25"E



FOREST CONSERVATION EASEMENT	
PARCEL	ACREAGE
PARCEL A	18.65 Ac
PARCEL B	4.47 Ac
PARCEL C	4.25 Ac
TOTAL	27.37 Ac.

Lead Planner
Director

1/19/2000	1	REVISED IN ACCORDANCE IN PLZ COMMENTS
DATE:	NUMBER	REVISION DESCRIPTION
APPROVED: DEPARTMENT OF PLANNING AND ZONING		
<i>John Danvers</i>	11/15/00	DATE
CHIEF-DEVELOPMENT ENGINEERING DIVISION		
<i>Andy Hamilton</i>	1/7/01	DATE
CHIEF-DIVISION OF LAND DEVELOPMENT		
<i>Samuel C. Arthur</i>	10/26	DATE
DIRECTOR, Dept. of Recreation & Parks		
APPROVED DEPARTMENT OF RECREATION AND PARKS		

BY THE DEVELOPER:
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF STATE ENVIRONMENTAL 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."

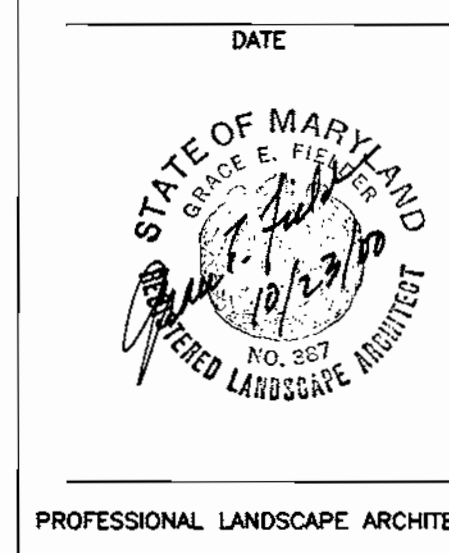
James J. Lee 10/27/00
SIGNATURE OF DEVELOPER DATE

OWNER
HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS:
7120 OAKLAND MILL
COLUMBIA, MD 21046
PHONE: 410-313-4700

DEVELOPER
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS:
3450 COURTHOUSE DRIVE
ELLCOTT CITY, MD 21043
PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
GEF
GRACE E. FIELDER & ASSOCIATES, CHARTERED
PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
8101 SANDY SPRING ROAD
SUITE 104
LAUREL, MARYLAND 20707
PHONE: 301-470-2544
FAX: 301-470-2545

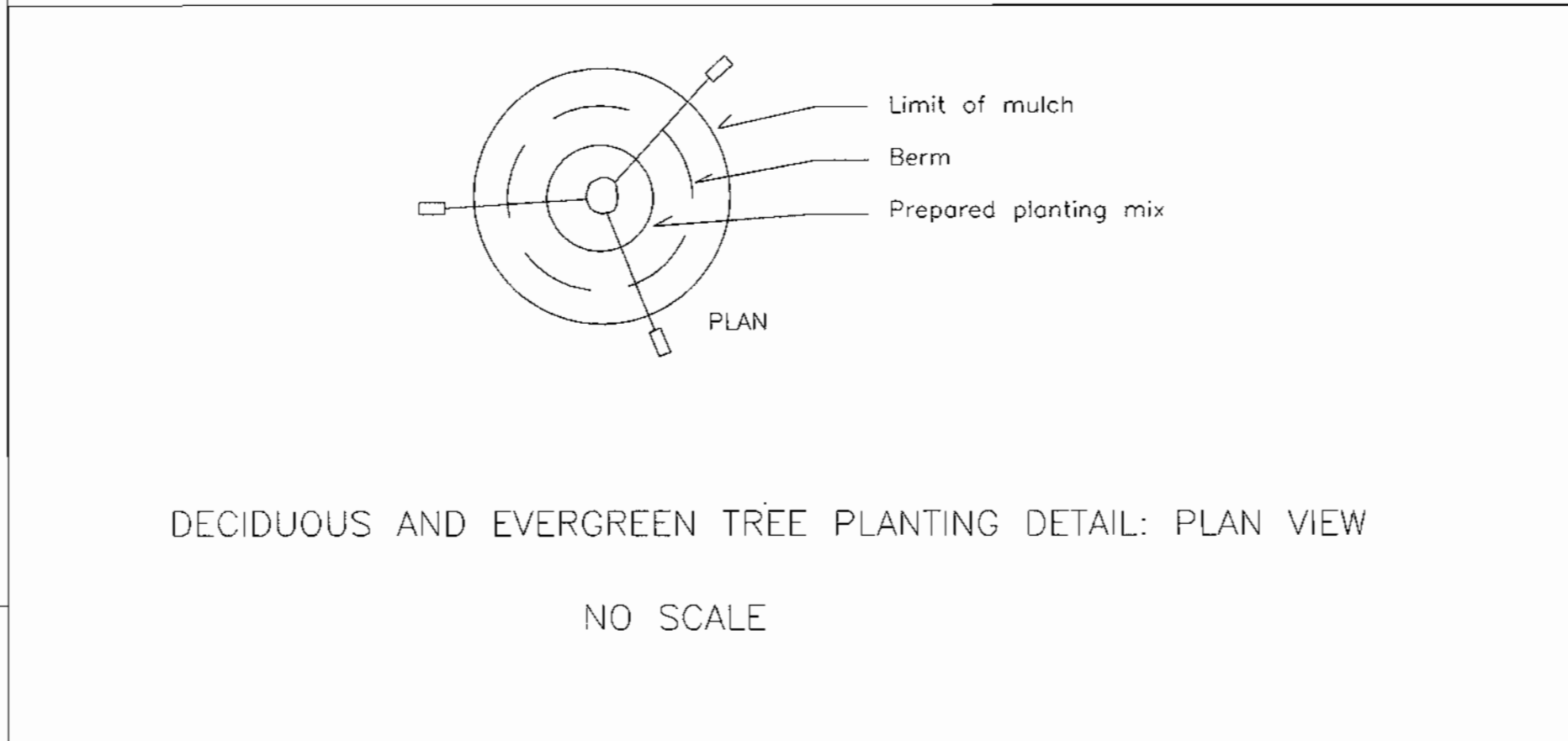
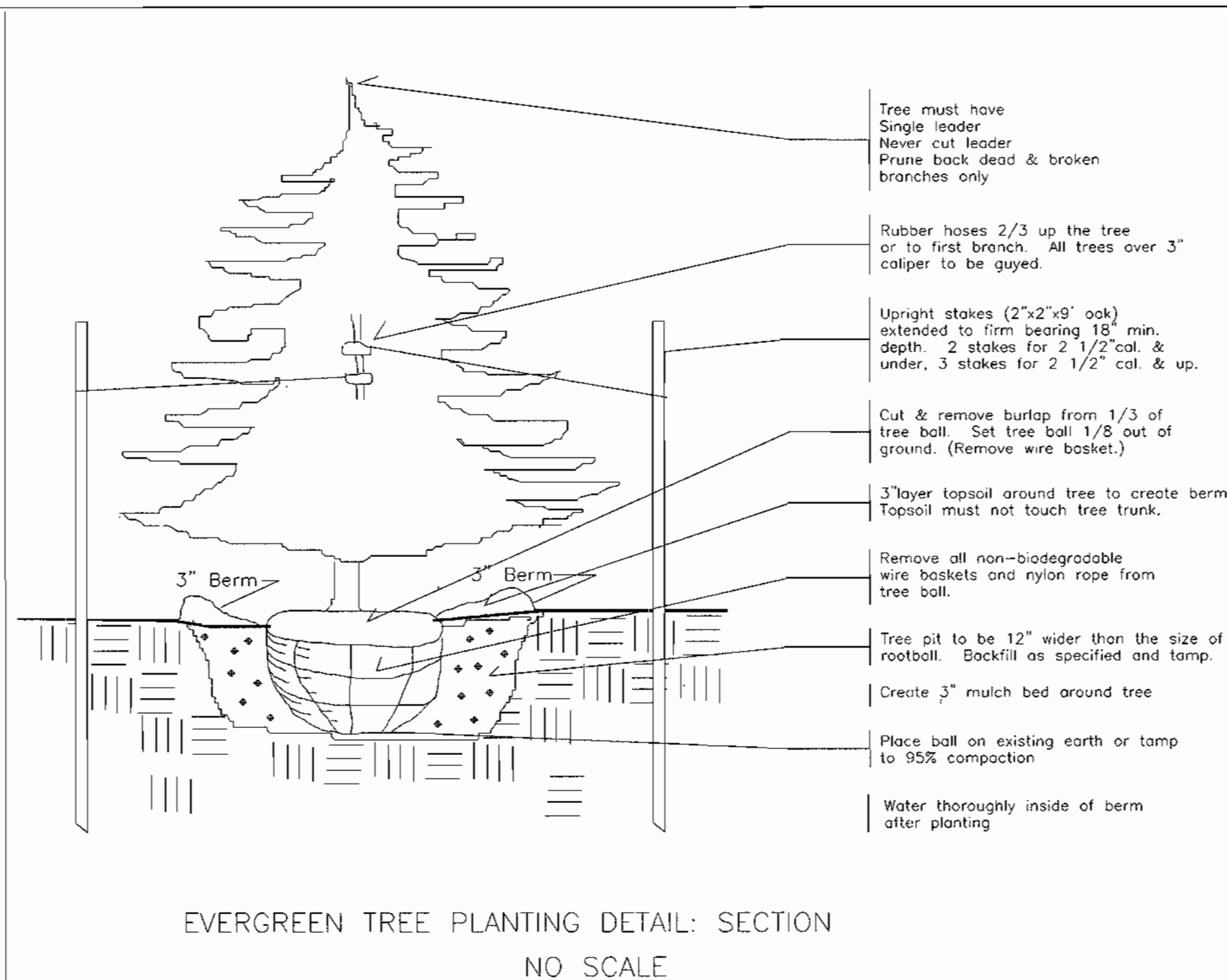
FREDERICK WARD ASSOCIATES INC. ENGINEERS ARCHITECTS SURVEYORS 5 SOUTH MAIN STREET BEL AIR, MARYLAND 21014 (410)879-2090	
CENSUS TRACT NO.: 6069.03	WATER CODE: C06
PLAT NO. SEE SHEET 1 OF 25	SEWER CODE: 7170900
TAX MAP 50, GRID 1 & 2 ZONED R-20 & R-SC ELECTION DISTRICT 6 HOWARD COUNTY, MARYLAND	
TITLE HIGH RIDGE PARK FOREST CONSERVATION EASEMENT OVERVIEW	
DESIGN BY: GEF/SC	SCALE: AS SHOWN
DRAWN BY: GEF/SC	DATE: 04/02/00
CHECKED BY: GEF	APPROVED: GEF
PROJECT NO.:	DRAWING NUMBER
	22 OF 24



SDP0034

GENERAL NOTES FOR PLANTING

- Plants shall conform to current "American Standards for Nursery Stock" by American Association of Nurserymen (ANN), particularly with regards to size, growth, size of ball, and density of branch structure.
- All plants (B&B or container) shall be properly identified by weather proof labels securely attached thereto before delivery to project site. Labels shall not be removed until the final inspection by the Landscape Architect.
- Any material and/or work may be rejected by the Landscape Architect if it does not meet the requirements of the specifications. All rejected materials shall be removed from the site by the contractor.
- The contractor shall furnish all plants in quantities and sizes to complete the work as specified in the plant schedule.
- Substitutions in plant species or size shall not be permitted except with the written approval by the landscape architect.
- Plants shall be installed as shown on the drawings and by scaling or as designated in the field by the landscape architect. All locations are to be approved by the landscape architect prior to excavation.
- Contractor shall contact Miss Utility prior to excavation.
- If Utility lines are encountered in excavation of tree pits, other locations for trees shall be selected by the landscape architect. Such changes shall be made by the contractor without additional compensation. No changes shall take place prior to location and digging the pits for the trees.
- Contractor shall first locate and mark the underground utilities and delineate the utility easement areas where no planting shall take place prior to location and digging the pits for the trees.
- All equipment and tools shall be placed so as not to interfere or hinder the pedestrian and vehicular traffic.
- During planting operation, excess and waste materials shall be promptly and frequently removed from the site.
- The landscape contractor shall be responsible to verify all plant quantities prior to commencement of work. Quantities in the schedule are intended to be only a guide. In the event of a discrepancy between the number of plants in the schedule and on the drawings, the greater number shall apply.
- All disturbed areas of the site not planted with shrubs, groundcover or sod shall be seeded with lawn seed.
- Diameters of plant materials as drawn are representative of plants at or near maturity rather than at initial planting.
- All shrubs or trees occurring in a continuous R.O.W. or formal arrangement shall have uniform height, spread, and habit of growth.
- A minimum of 12" depth of new topsoil shall be placed in all bed areas by ondscape contractor prior to plant installation. Backfill all shrubs and trees with backfill mix of one part peat to three parts topsoil. Backfill all holly, boxwood, perennials, and groundcover with backfill mix of one part peat to one part topsoil.
- Mulch perennial and groundcover beds with min. 2" of shredded hardwood mulch. Mulch shrubs and trees with min. 3" of shredded hardwood mulch. Mulch shall extend in a continuous layer within plantings beds from face to face of site structures - walks, building, or other plant bed limits.
- All bed edges shall be spade-cut and closely align as possible with edges as shown on drawing.



PLANT LIST

KEY	QUAN	BOTANICAL/COMMON NAME	SIZE	REMARKS
TREES		SHADE		
AS	12	Acer saccharum / Sugar Maple	2 1/2- 3" cal.	B&B
OP	5	Quercus phellos/ Willow Oak	2 1/2- 3" cal.	B&B
TC	24	Tilia cordata "Greenspire" / Linden	2-1/2- 3" cal.	B&B
ZJ	5	Zelkova japonica/ Japanese Zelkova	2 1/2- 3" cal.	B&B
TREES		EVERGREEN		
PA	5	Picea abies/ Norway Spruce	8 - 10'	B&B
SHRUBS				
CA	125	Cotoneaster horizontalis Apiculata/ Cranberry Cotoneaster	12-18	Container
FI	109	Forsythia intermedia/ Forsythia	2-3'	Container

**SCHEDULE A
PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE BUFFER TYPE	NONE	TYPE A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	NONE	10,023
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE IF NEEDED)	NO	10,023
NUMBER OF PLANTS REQUIRED		
SHADE TREES		0
EVERGREEN TREES		
OTHER TREES(2:1 SUBSTITUTION)		
SHRUBS (10:1 SUBSTITUTION)		
NUMBER OF PLANTS PROVIDED		
SHADE TREES		
EVERGREEN TREES	NONE	SUBSTITUTION REQUESTED
OTHER TREES(2:1 SUBSTITUTION)		
SHRUBS (10:1 SUBSTITUTION)		
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)		

COMMENTS: *THE EXTERIOR OF THE PARK HAS AN AVERAGE 200' HARDWOOD BUFFER THAT WILL BE MAINTAINED, IT EXCEEDS THE MINIMUM OF 20' BY 180'.

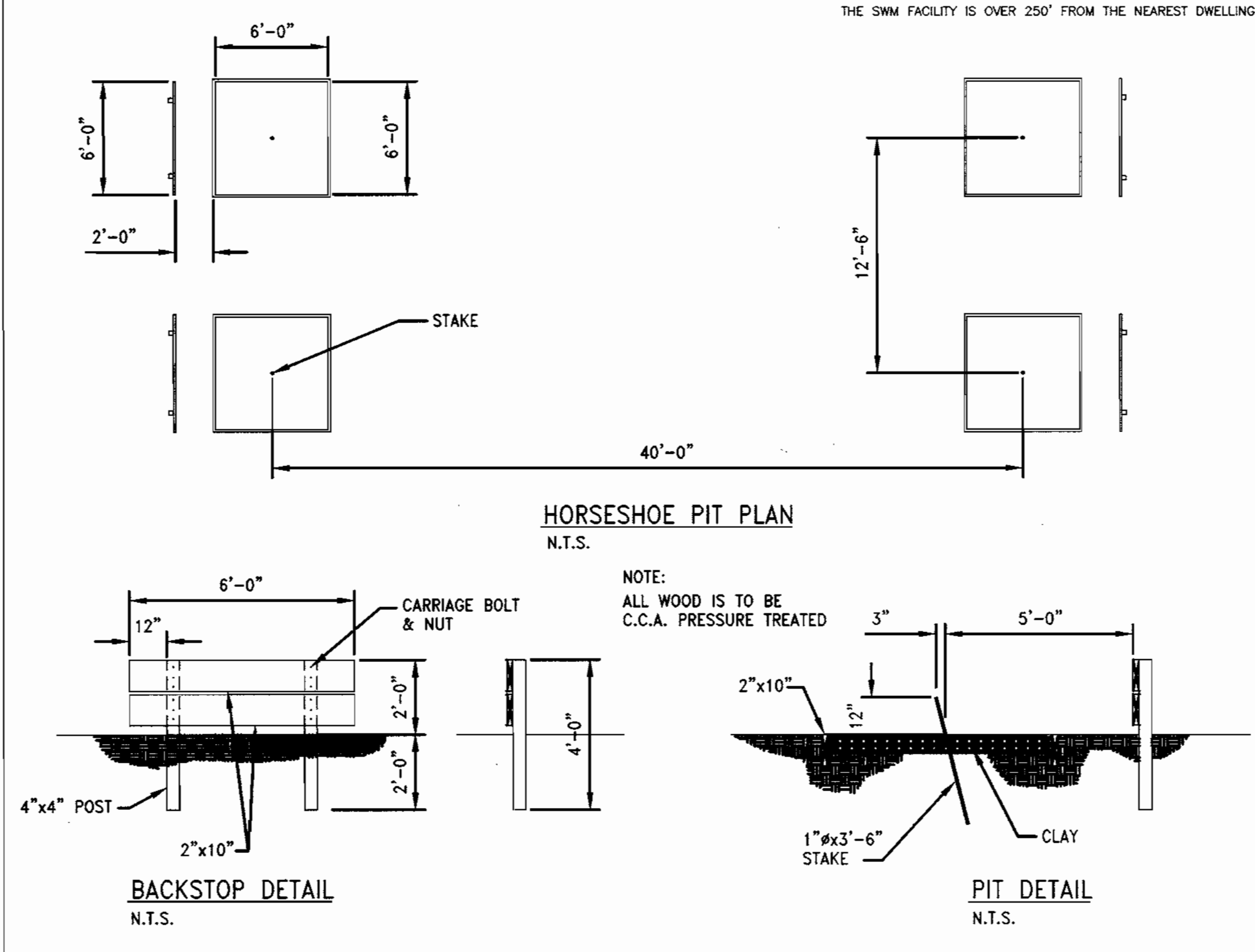
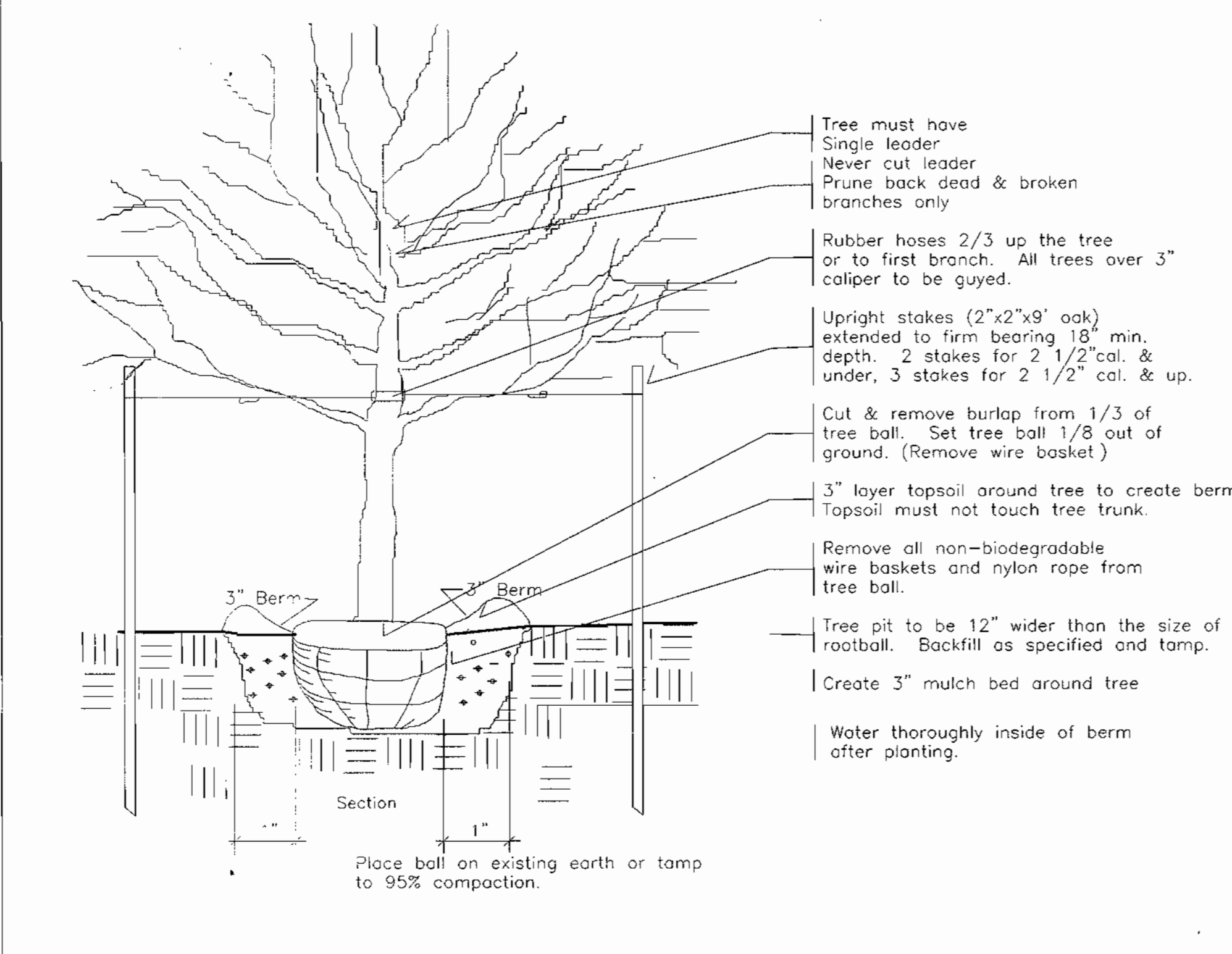
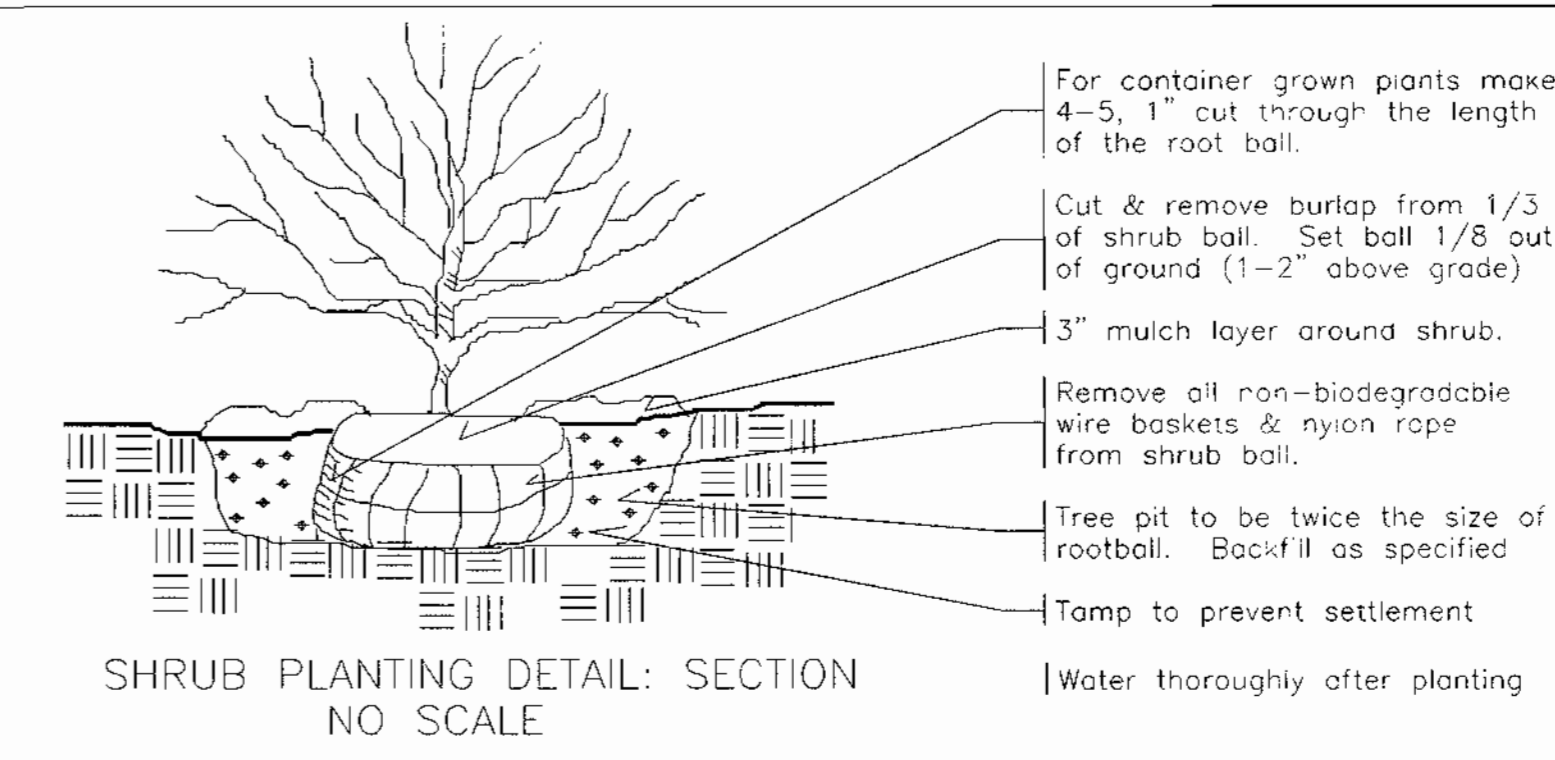
**SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING**

	LOT 1	LOT 2
NUMBER OF PARKING SPACES	80	23
NUMBER OF TREES REQUIRED	4	2
NUMBER OF TREES PROVIDED	17	6
SHADE TREES		
EVERGREEN TREES		
OTHER TREES(2:1 SUBSTITUTION)		
NUMBER OF PARKING ISLANDS REQUIRED	4	2
NUMBER OF PARKING ISLANDS PROVIDED	4	2

**SCHEDULE D
STORMWATER MANAGEMENT AREA LANDSCAPING**

LINEAR FEET OF PERIMETER	480'
NUMBER OF TREES REQUIRED	
SHADE TREES	10
EVERGREEN TREES	12
CREDIT FOR EXISTING VEGETATION (YES, NO & %)	YES 100 %
CREDIT FOR OTHER LANDSCAPING (YES, NO & %)	NO
NUMBER OF TREES PROVIDED	
SHADE TREES	NONE, SEE NOTE BELOW
EVERGREEN TREES	FOR SUBSTITUTION
OTHER TREES(2:1 SUBSTITUTION)	

THE SWM FACILITY IS OVER 250' FROM THE NEAREST DWELLING AND THAT ENTIRE DISTANCE IS A FOREST.



NOTE:
NO SURETY IS REQUIRED FOR THIS PROJECT BECAUSE IT IS A HOWARD COUNTY CAPITAL IMPROVEMENT PROJECT

FOREST CONSERVATION SURETY NOTE:
NO FOREST CONSERVATION SURETY IS REQUIRED FOR THIS PROJECT BECAUSE IT IS A HOWARD COUNTY CAPITAL IMPROVEMENT PROJECT

THE OBLIGATIONS OF FOREST CONSERVATION HAVE BEEN MET BY THE RETENTION OF 27.37 ACRES OF FOREST IN A CONSERVATION EASEMENT

DATE	NUMBER	REVISION DESCRIPTION
1/19/2000	1	PLZ COMMENTS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief-Development Engineering Division: *[Signature]* 1/15/00
 Chief-Division of Land Development: *[Signature]* 1/17/00
 Director: *[Signature]* 1/18/00

APPROVED: DEPARTMENT OF RECREATION AND PARKS
 Director: *[Signature]* 10-26

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

BY THE DEVELOPER:
 I WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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 SOIL CONSERVATION DISTRICT.

Signature of Developer: *[Signature]* 10/26/00

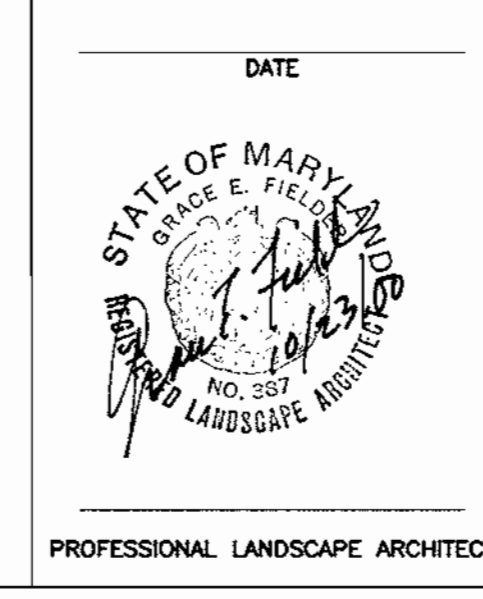
OWNER: HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
 7120 OAKLAND MILL COLUMBIA, MD 21046
 PHONE: 410-313-4700

DEVELOPER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 3450 COURTHOUSE DRIVE ELLICOTT CITY, MD 21043
 PHONE: 410-313-2014

PLANNERS, ENGINEERS, LANDSCAPE ARCHITECTS
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FREDERICK WARD ASSOCIATES INC.
 ENGINEERS ARCHITECTS SURVEYORS
 5 SOUTH MAIN STREET BEL AIR, MARYLAND 21014 (410)879-2090

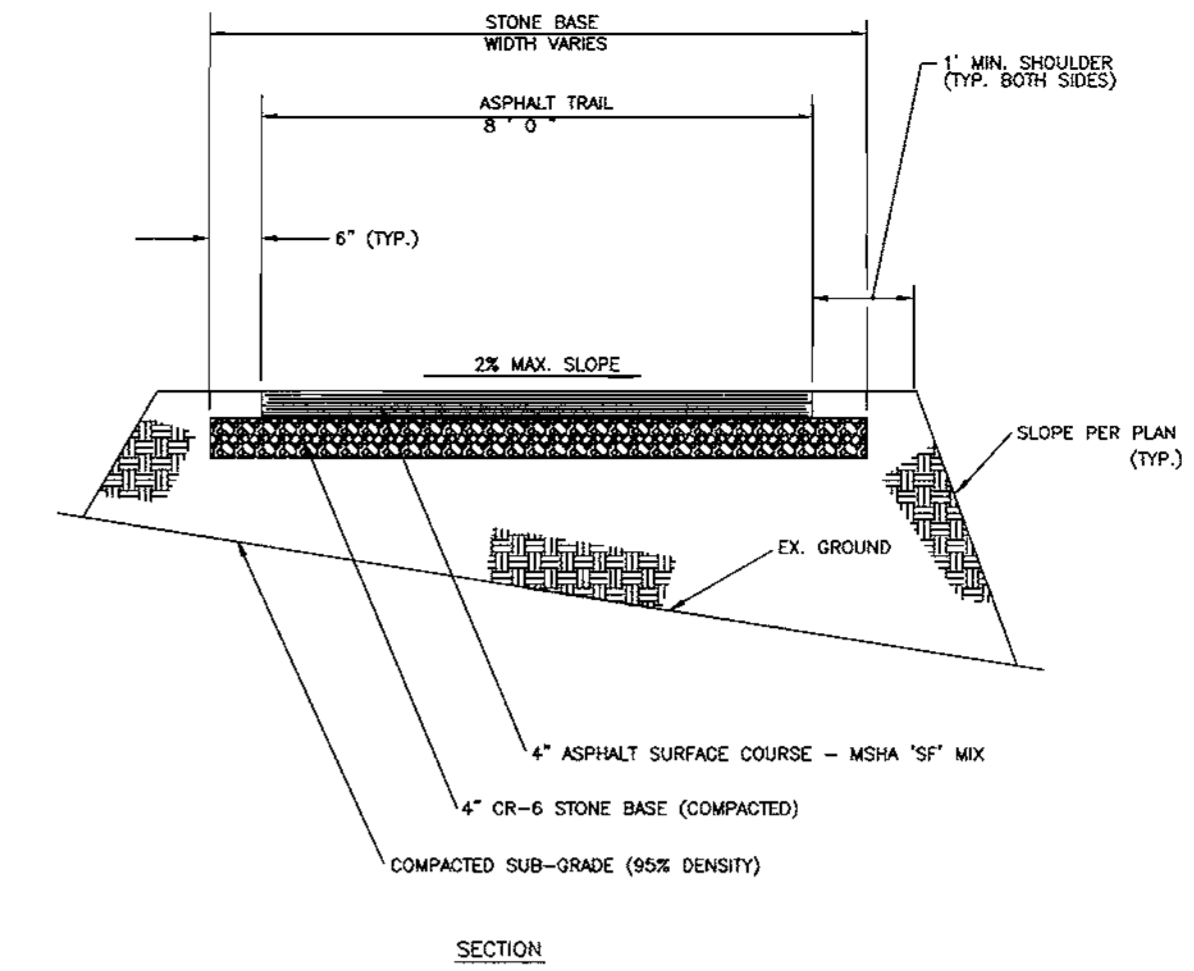
GENIUS TRACT NO.: 6069.03 WATER CODE: C06
 PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 7170900
 TAX MAP 50, GRID 1 & 2 ZONED R-20 & R-SC
 ELECTION DISTRICT 6 HOWARD COUNTY, MARYLAND
TITLE
 HIGH RIDGE PARK LANDSCAPING PLANTING & HORSESHOE DETAILS
 DESIGN BY: GEF SCALE: AS SHOWN PROJECT NO.:
 DRAWN BY: GEF DATE: 04/02/00 DRAWING NUMBER:
 CHECKED BY: GEF APPROVED: GEF 23 OF 24



SDP 0034

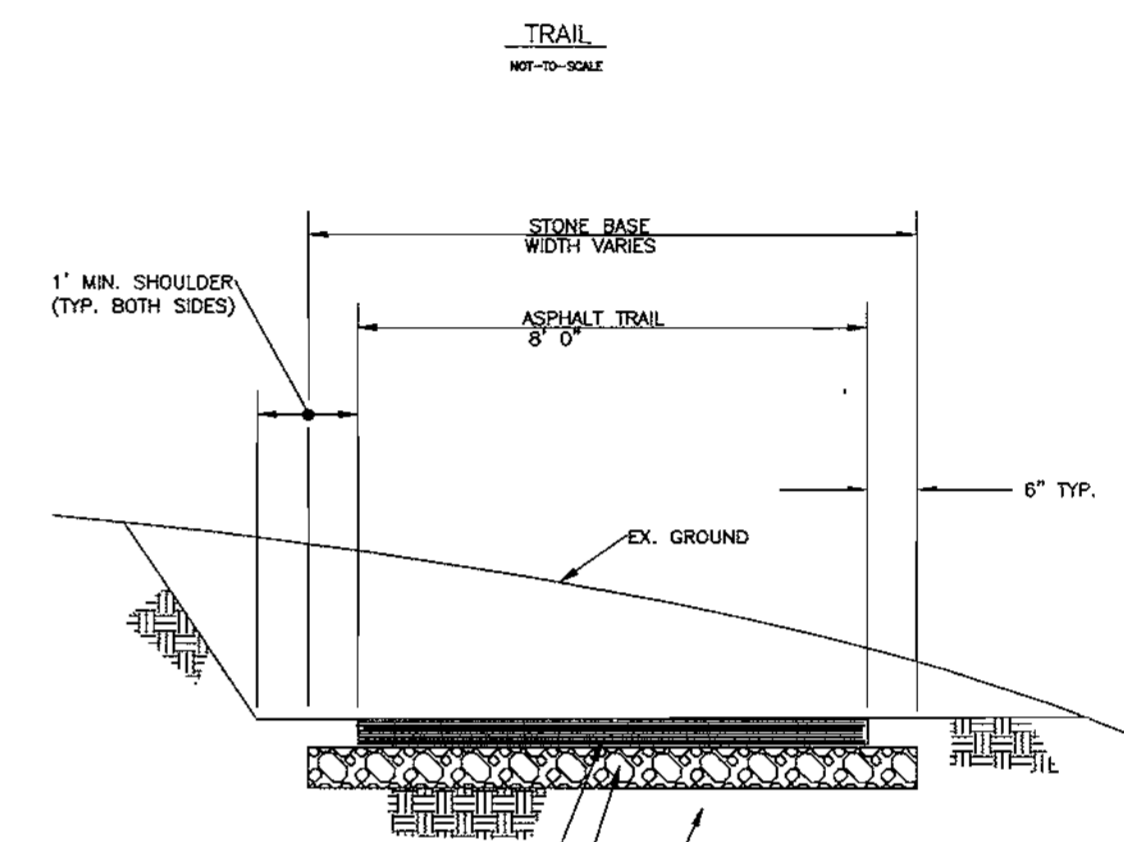
NOTES:

1. ALL CRUSHED STONE BASE MATERIALS ARE TO CONFORM TO CR-6.
2. COMPACT SUBGRADE TO 95% OPTIMUM DENSITY.
3. FENCE POSTS ARE TO BE 2-1/2" DIA. TYP.
4. COLORCOAT SURFACE AFTER FENCE AND GATES HAVE BEEN INSTALLED. PROVIDE CHAIN AND LOCK FOR GATES TO PROTECT THE COLORCOATED SURFACE. ONE COAT OF RESURFACER ON NEW SURFACE, 3 COATS OF COLORCOAT FINISH, LIGHT GREEN AND DARK GREEN COLOR.
5. ALL EXPOSED CONCRETE SURFACE ON TENNIS COURT IS TO BE TROWELED SMOOTH & FLUSH W/ ASPHALT SURFACE. PROVIDE COLOR COAT PER DRAWING.
6. ALL FOOTINGS ARE TO BE 6-BAG MIX CONCRETE.
7. ALL POSTS & RAILS SHALL BE HOT-DIPPED GALVANIZED ZINC & CHROMATE CONVERSION COATING BY ALLIED TUBE AND CONDUIT CORPORATION OR AN APPROVED EQUAL.
8. ALL ASSORTED HARDWARE SHALL BE OF A NON-RUSTING TYPE.
9. FENCE SECTION IS TYPICAL, ACTUAL LOCATION OF GATES SHALL BE AT THE EXACT PLACE AS SHOWN ON THE SITE PLAN.
10. NO CONCRETE SHALL BE PLACED IN FOOTINGS WITHOUT ON-SITE INSPECTION & APPROVAL OF A HOWARD COUNTY INSPECTOR.
11. ALL PAVEMENT SURFACES TO BE COLORCOATED INCLUDING EDGES OUTSIDE FENCE.
12. ANY WORK DONE IN DEVIATION OF THE DIMENSIONS AS SHOWN ON THIS PLAN WILL BE REDONE BY THE CONTRACTOR AT HIS OWN EXPENSE.
13. CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS PRIOR TO PAVING.
14. APPROVED SOIL STERILANT SHALL BE APPLIED TO SUBGRADE PRIOR TO PAVING, CERTIFIED STATEMENT 1 TO BE PROVIDED.



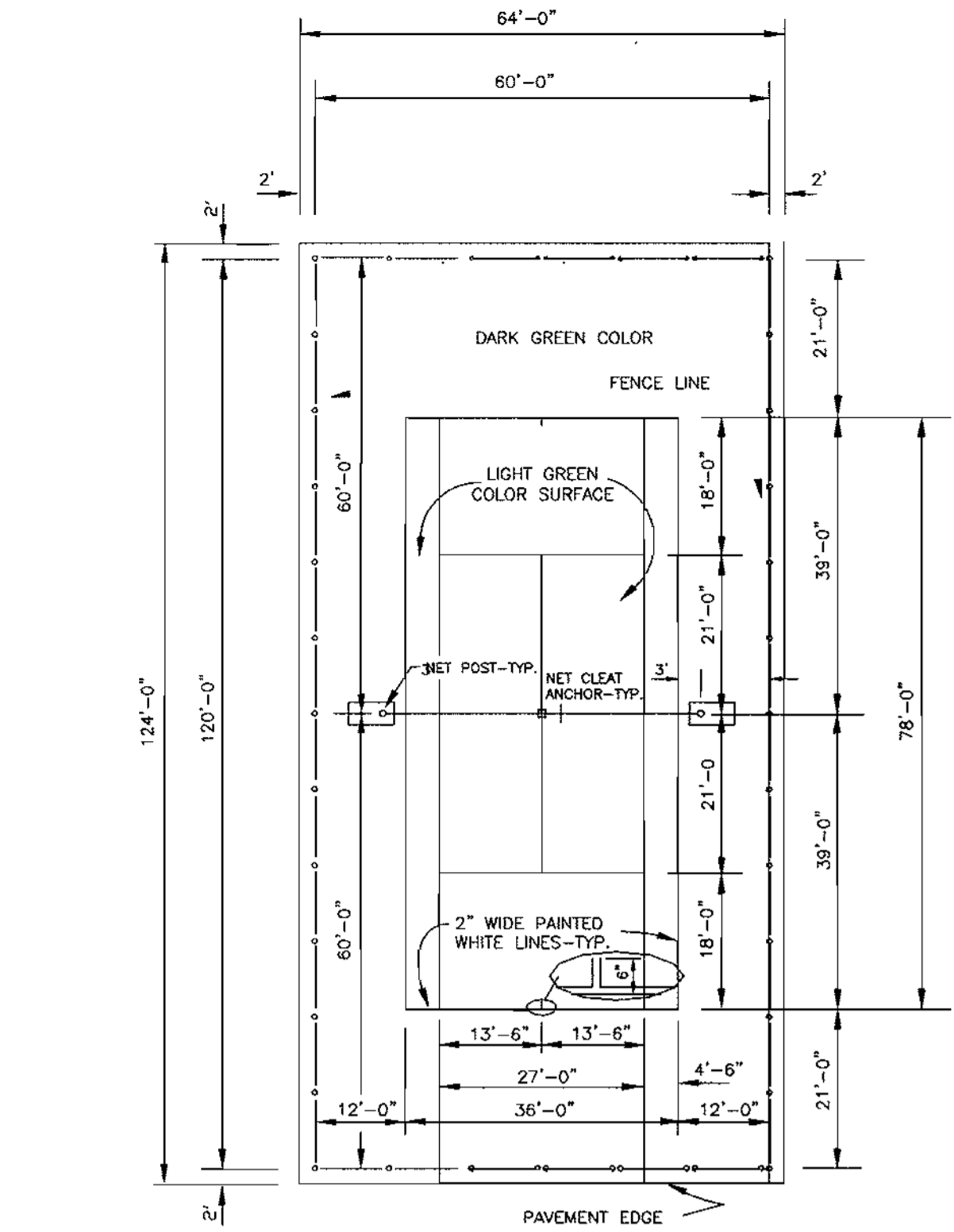
NOTES:

1. STRIP TOPSOIL AND REMOVE UNSUITABLE MATERIAL BELOW EX. GRADE.
2. BACKFILL BOTH SIDES OF TRAIL WITH CLEAN TOPSOIL, SEED AND MULCH.



NOTE:

1. UNDERCUT, IF NECESSARY TO PROVIDE FIRM SUB-BASE
2. BACKFILL BOTH SIDES OF TRAIL WITH CLEAN TOPSOIL, SEED AND MULCH

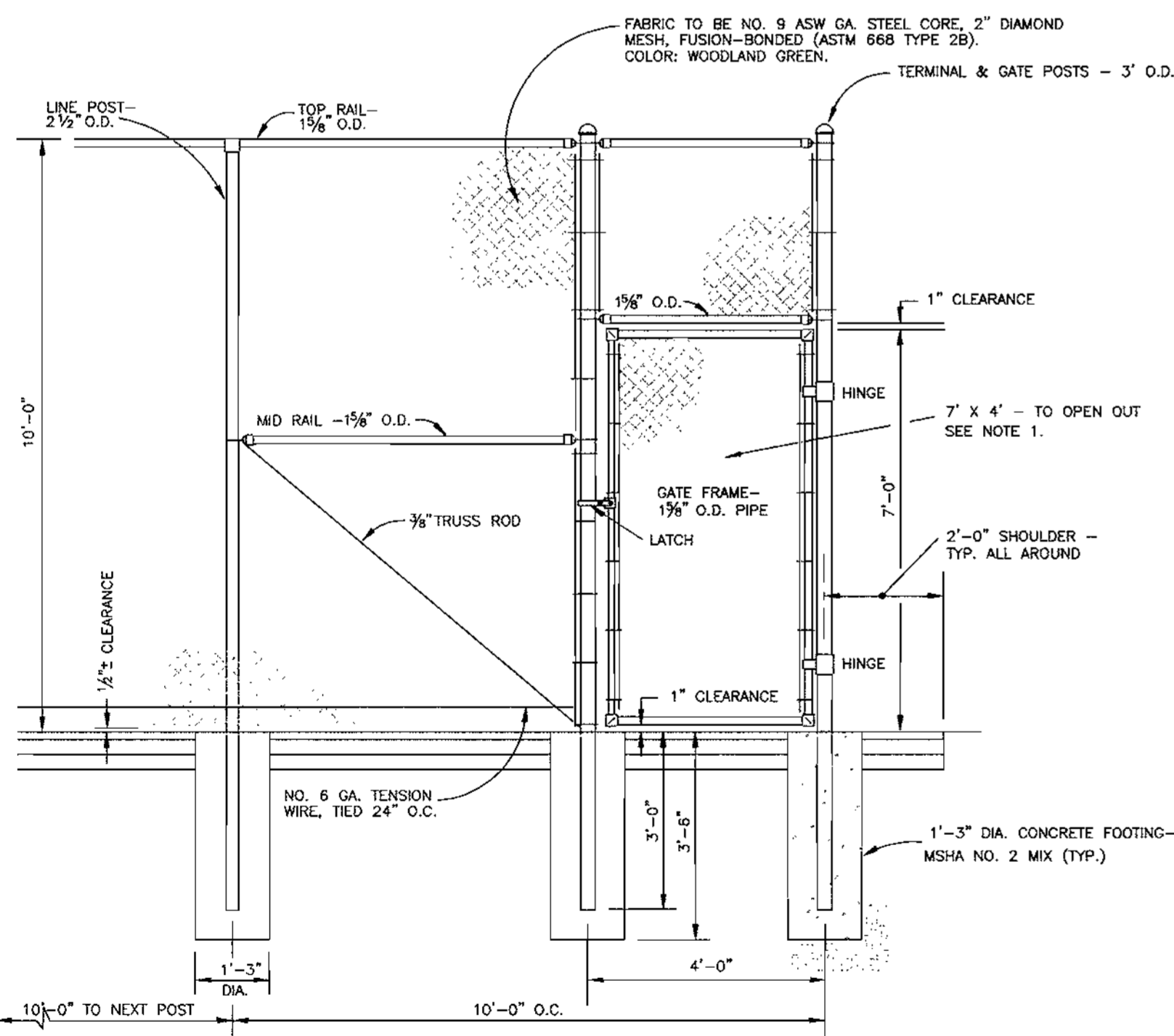


NOTES:

- PROVIDE 1% SLOPE ACROSS COURT.
- GATES ARE TO BE LOCATED AS SHOWN ON SITE PLAN AND ARE TO SWING OUT.
- APPLY PROTECTIVE COLORCOATING ON SMOOTH ASPHALT SURFACE AT MANUFACTURER'S RECOMMENDED RATE.
- COLORCOAT SURFACE AFTER FENCE AND GATES HAVE BEEN INSTALLED. PROVIDE CHAIN AND LOCK FOR GATES TO PROTECT THE COLORCOATED SURFACE FROM POSSIBLE VANDALISM.
- ALL MEASUREMENTS FOR LINE STRIPING OF COURTS ARE TO THE OUTSIDE OF LINES, EXCEPT THOSE INVOLVING THE CENTER SERVICE LINE WHICH IS EQUALLY DIVIDED BETWEEN LEFT AND RIGHT SERVICE COURTS.
- FOR PAVEMENT SECTION AND NET POST ANCHOR DETAILS, SEE STANDARD NO. 203.
- FOR FENCE AND GATE DETAILS, SEE STANDARD NO. 204 AND 205.

TENNIS COURT - SINGLE

SCALE 1" = 20'

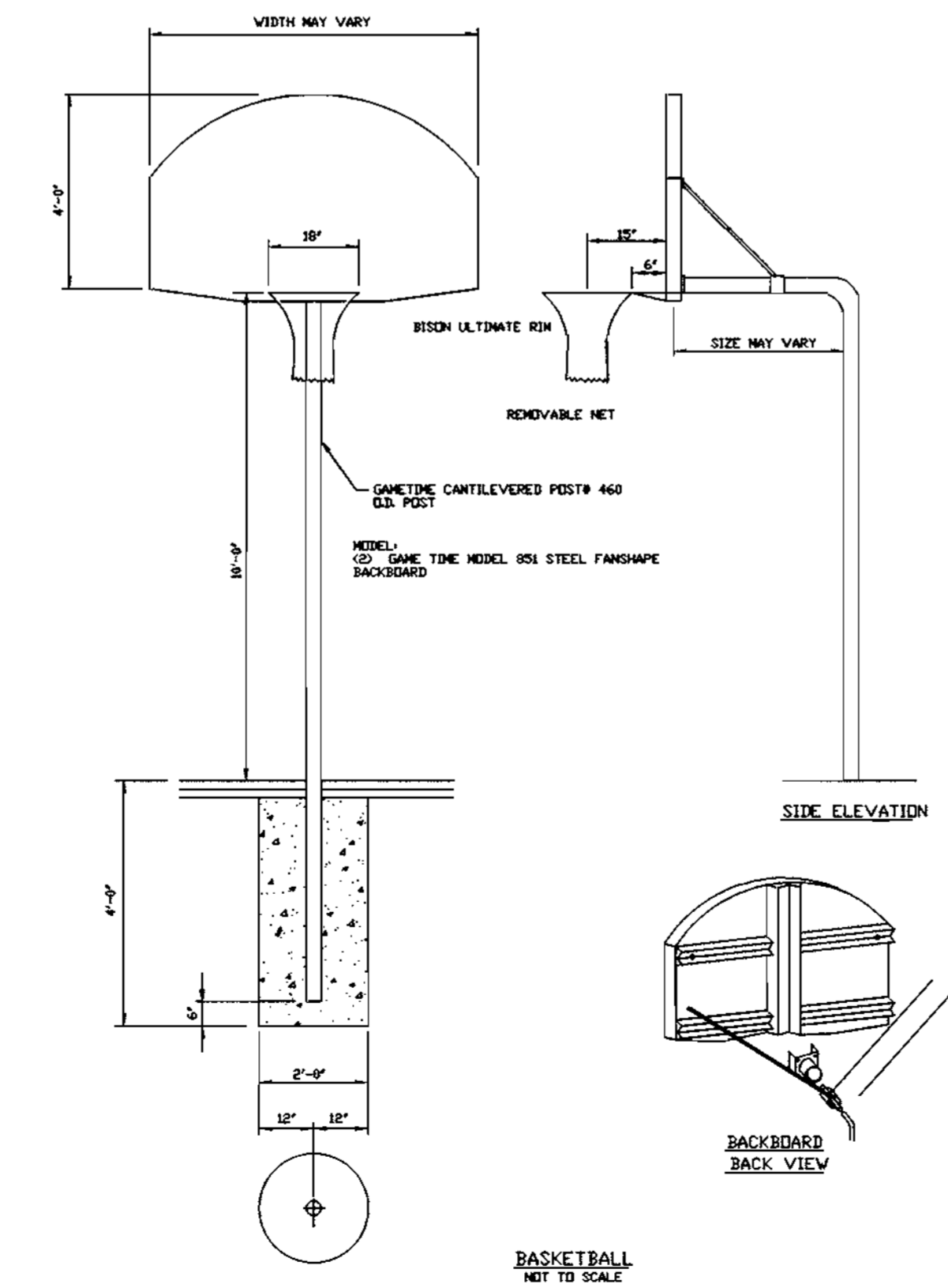
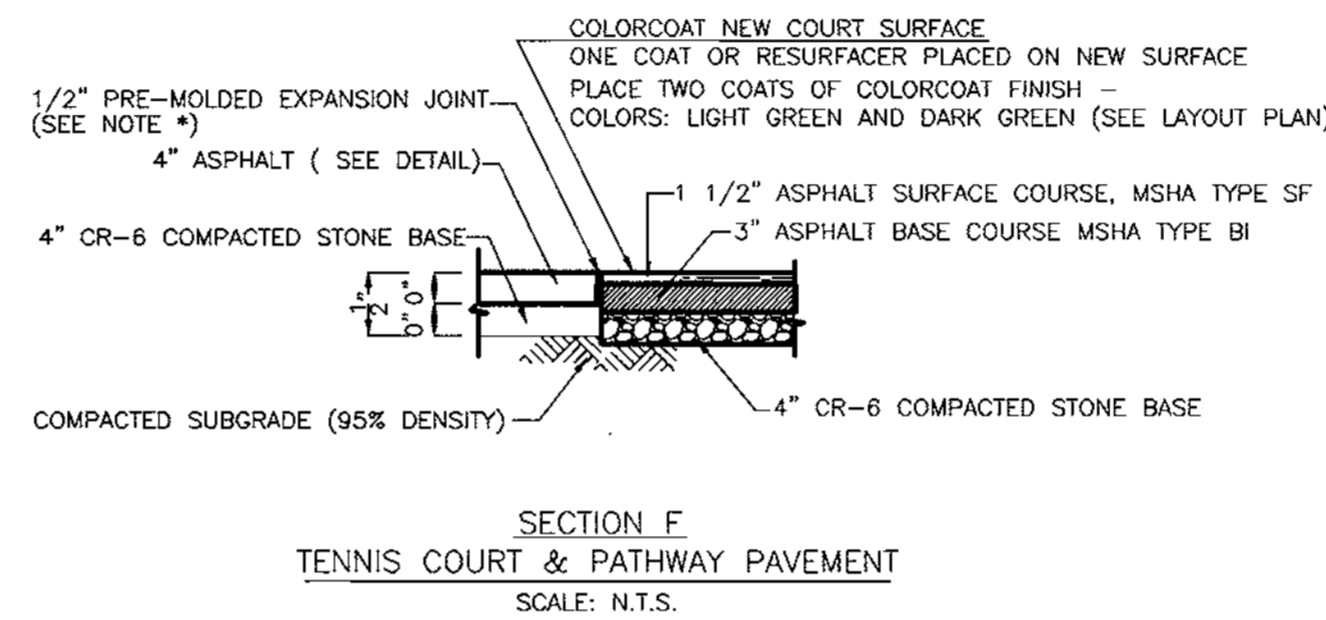
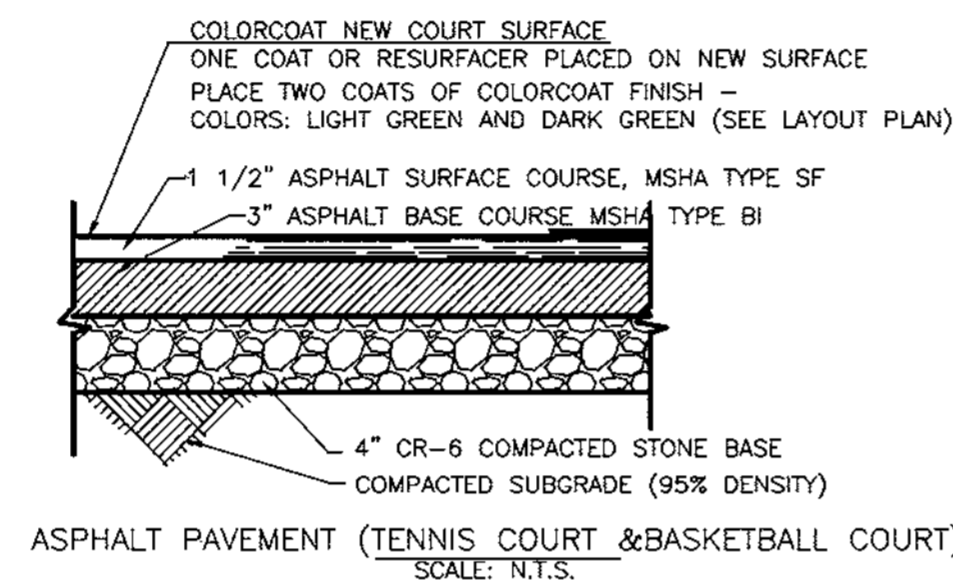
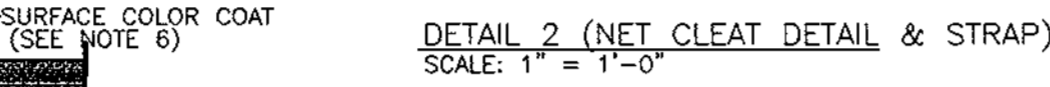
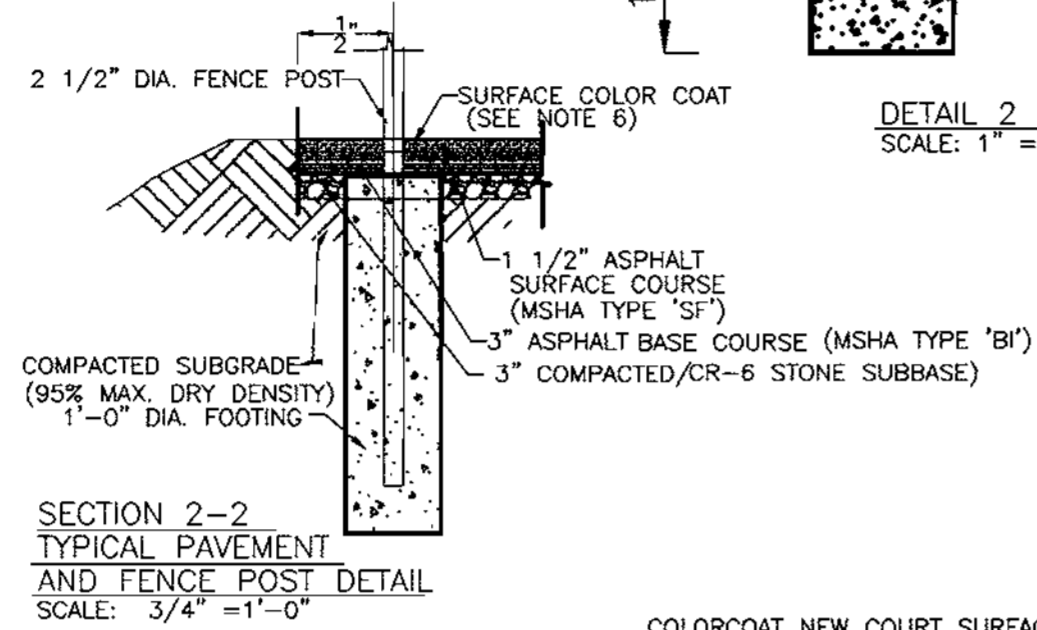
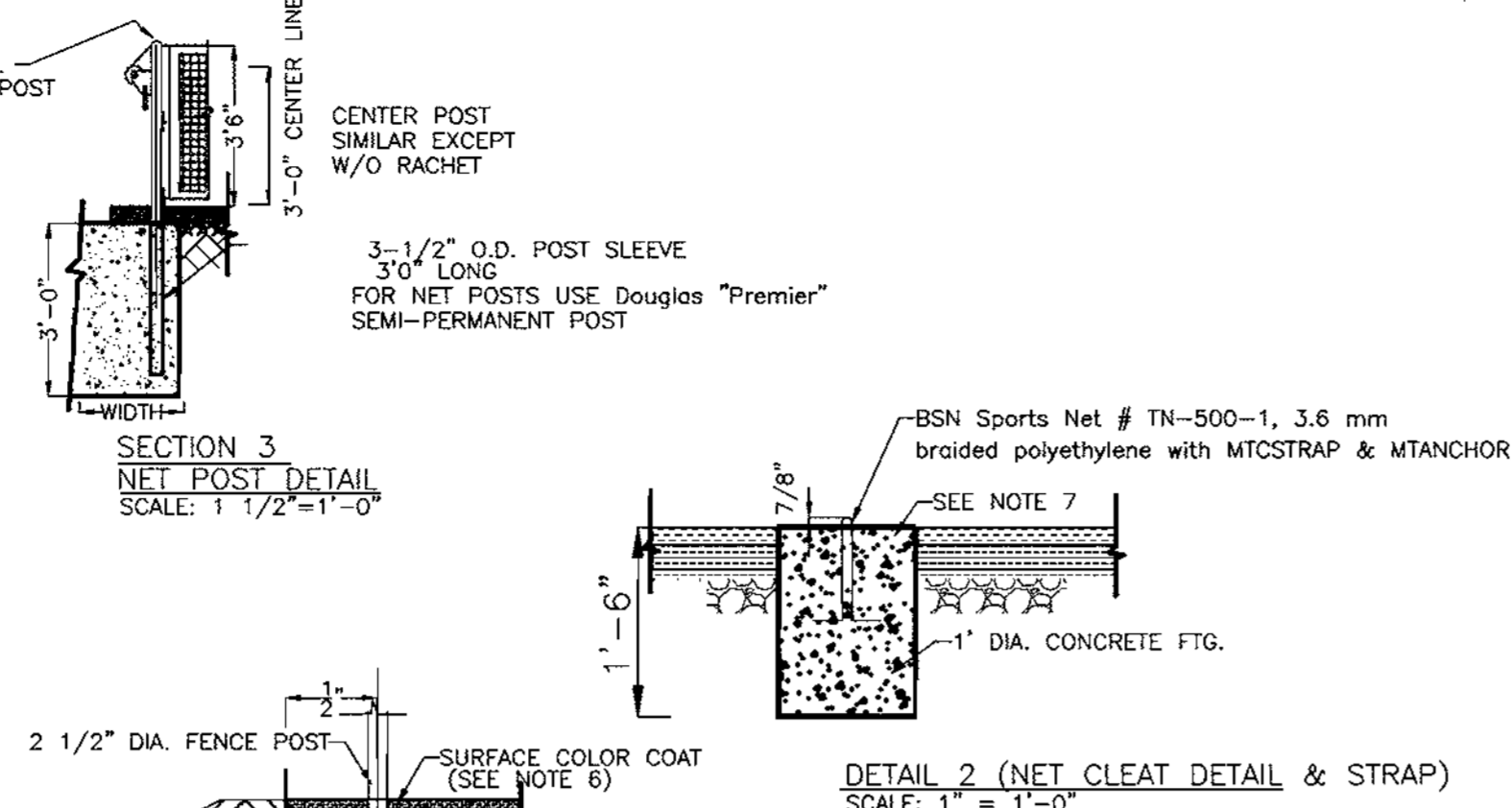


NOTES:

1. FENCE SECTION IS TYPICAL. ACTUAL LOCATION OF GATE SHALL BE AT THE EXACT PLACE AS SHOWN ON THE SITE PLAN.
2. NO CONCRETE SHALL BE PLACED IN FOOTINGS WITHOUT ON-SITE INSPECTION AND APPROVAL OF A COMMISSION REPRESENTATIVE.
3. ALL POSTS AND RAILS SHALL BE SCHEDULE 40, HOT-DIPPED GALVANIZED ZINC & CHROMATE CONVERSION COATING AND THERMAL PLASTIC ACRYLIC COATING ON OUTSIDE SURFACE.
4. ALL ASSORTED HARDWARE SHALL BE OF A NON-RUSTING TYPE.
5. PIPE WEIGHTS: 1/2" O.D. = 2.27 LBS./LIN. FT. 3/4" O.D. = 3.65 " " " 1" O.D. = 5.79 " " "
6. ALL PAVEMENT SURFACES ARE TO BE COLORCOATED INCLUDING EDGES OUTSIDE THE FENCE.
7. ANY WORK DONE IN DEVIATION OF THE DIMENSIONS SHOWN HEREON WILL BE REDONE BY THE CONTRACTOR AT HIS OWN EXPENSE.

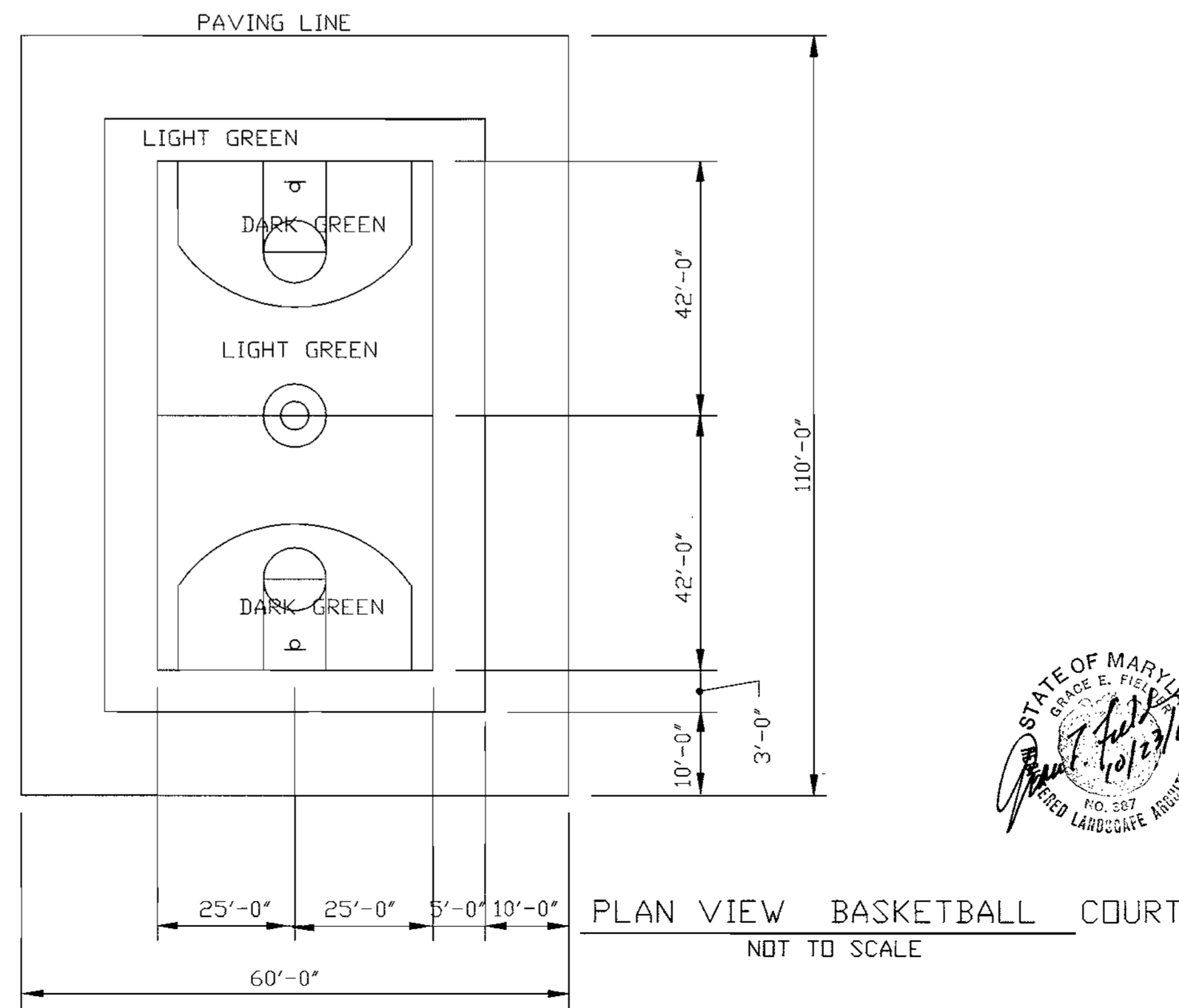
TENNIS COURT FENCE

NOT TO SCALE



PLAN VIEWS BACK BACKBOARD

NOT TO SCALE



DATE:	NUMBER:	REVISION DESCRIPTION:
11/15/00		APPROVED: DEPARTMENT OF PLANNING AND ZONING
1/10/01		CHIEF-DEVELOPMENT ENGINEERING DIVISION
1/18/01		CHIEF-DIVISION OF LAND DEVELOPMENT
10-26-01		APPROVED: DEPARTMENT OF RECREATION AND PARKS
		DIRECTOR

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

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SIGNATURE OF DEVELOPER: _____ DATE: _____

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GEF

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CENSUS TRACT NO.: 6069.03 WATER CODE: 008
 PLAT NO. SEE SHEET 1 OF 25 SEWER CODE: 7170900

TAX MAP: 50, GRID 1 & 2
 ZONED: R-20 & R-3C
 ELECTION DISTRICT 6 HOWARD COUNTY, MARYLAND

TITLE: HIGH RIDGE PARK TENNIS COURT & BASKETBALL COURT DETAILS

DESIGN BY: EAV SCALE: AS SHOWN PROJECT NO.:
 DRAWN BY: RJS DATE: 04/02/00 DRAWING NUMBER:
 CHECKED BY: EAV APPROVED: TMP 24 OF 24