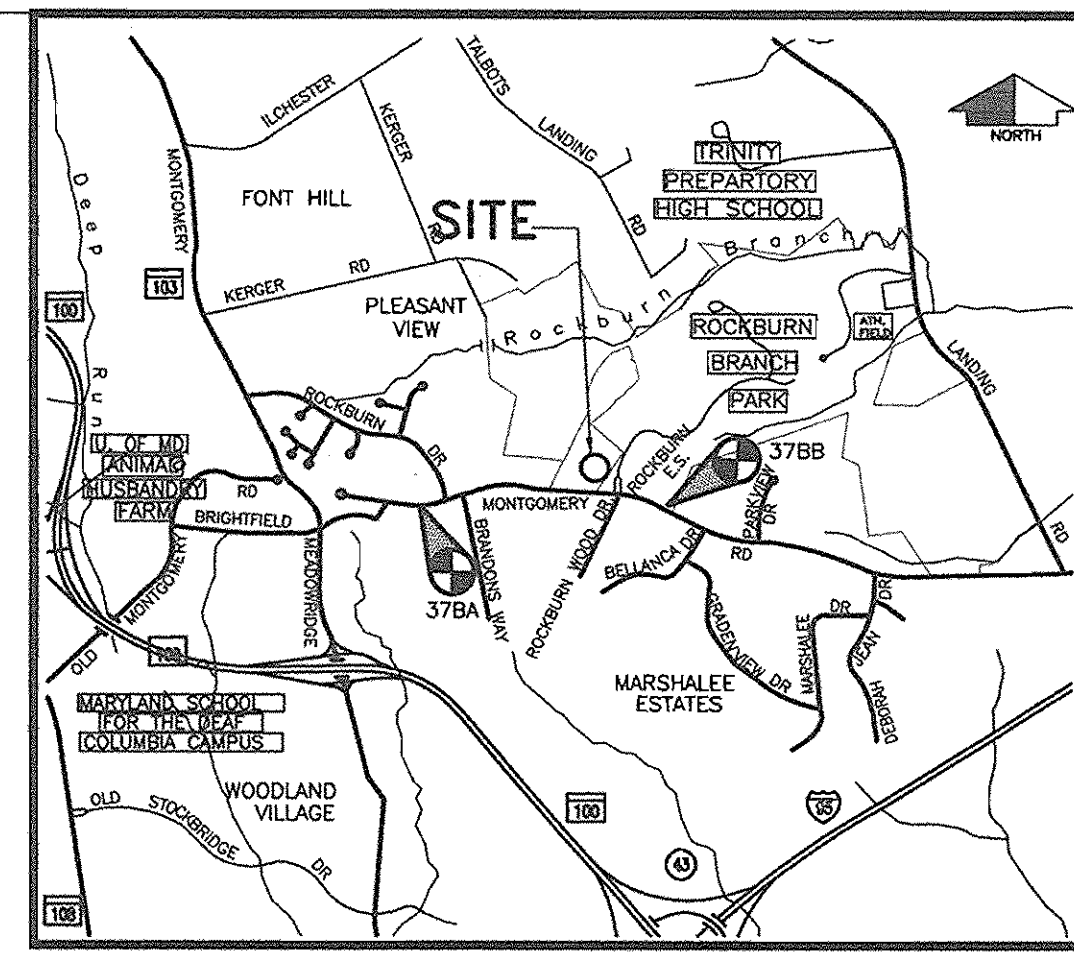
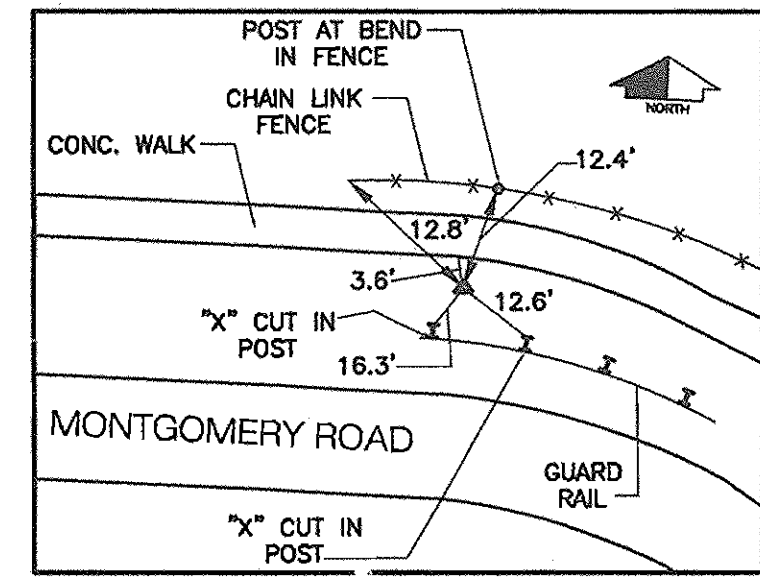
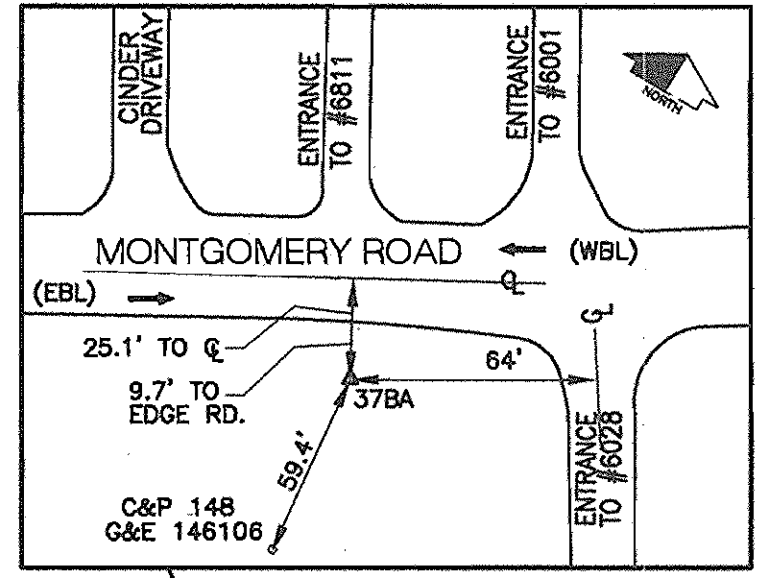


BENCHMARKS

NO	NORTHING	EASTING	ELEVATION
37BA	563785.618	1376343.172	394.786
37BB	563663.415	1378040.471	373.822



- INDEX OF SHEETS**
- C-1 OVERALL SITE PLAN
 - C-2 GEOMETRIC LAYOUT
 - C-3 SITE AND GRADING PLAN
 - C-4 HANDICAP PARKING DETAILS
 - C-5 TYPICAL ROADWAY SECTIONS & MISCELLANEOUS DETAILS
 - C-6 ROADWAY PROFILES
 - C-7 STORM DRAIN PLAN
 - C-8 WATER AND SEWER PLAN
 - C-9 UTILITY PROFILES
 - C-10 STORM WATER MANAGEMENT POND AND SECTION
 - C-11 STORM WATER MANAGEMENT POND ACCESS ROAD PROFILE AND DETAILS
 - C-12 STORM WATER MANAGEMENT POND MISCELLANEOUS DETAILS
 - C-13 GENERAL NOTES FOR STORM WATER MANAGEMENT FACILITY
 - C-14 DRAINAGE AREAS MAP FOR STORM DRAIN SYSTEM
 - C-15 EROSION AND SEDIMENT CONTROL PLAN
 - C-16 EROSION AND SEDIMENT CONTROL NOTES AND DETAILS - I
 - C-17 EROSION AND SEDIMENT CONTROL NOTES AND DETAILS - II
 - C-18 ROADWAY PAVEMENT ELEVATIONS
 - C-19 HOWARD COUNTY STANDARD DETAILS
 - C-20 LANDSCAPING PLAN I
 - C-21 LANDSCAPING PLANTING PLAN II
 - C-22 FOREST STAND DELINEATION PLAN
 - C-23 FOREST CONSERVATION PLAN
 - C-24 FOREST CONSERVATION DETAILS
 - C-25 BORING LOGS
 - C-26 BORING LOGS

HOWARD COUNTY
MARYLAND
MAP 31, PARCEL 229
LIBER 1607, FOLIO 261
ZONING R20

SITE ANALYSIS CHART

TOTAL PROJECT AREA (PARCEL 42) = 22,003 ACRES
966,885 S.F.

AREA OF PLAN SUBMISSION = 3.23 AC
LIMIT OF DISTURBED AREA = 3.76 AC
PRESENT ZONING = R-20

PROPOSED USES FOR SITE AND STRUCTURES:
ROCKBURN BRANCH PARK MAINTENANCE FACILITY

FLOOR SPACE ON EACH BUILDING:
MAINTENANCE BUILDING - 8,746 S.F.
STORAGE BUILDING - 3,503 S.F.

TOTAL NUMBER OF UNITS ALLOWED FOR PROJECT: N/A
TOTAL NUMBER OF UNITS PROPOSED ON SUBMISSION = 2
MAXIMUM NUMBER OF EMPLOYEES/TENANTS ON SITE PER USE = 18
MAXIMUM NUMBER OF PARKING SPACES PROVIDED ON SITE:
29 INCLUDING 1 HANDICAP SPACE

OPEN SPACE ON SITE: 0.44 ACRES (1.96% OF GROSS AREA)
AREA OF RECREATION OPEN SPACE REQUIRED = N/A
BUILDING COVERAGE OF SITE = 12249 SF (1.27% OF GROSS AREA)

FOREST CONSERVATION OBLIGATION

THE FOREST CONSERVATION OBLIGATION INCURRED BY THIS SITE DEVELOPMENT PLAN IS BASED ON 13.6 ACRES OF THE 21.4 ACRES OF FOREST BEING CLEARED. THE ACTUAL FOREST AREA CLEARED BY THIS PROJECT IS 3.2 ACRES SO ANY FUTURE DEVELOPMENT MAY CLEAR AN ADDITIONAL 10.4 ACRES OF FOREST. THIS OBLIGATION HAS BEEN MET BY THE RECORDATION OF 7.8 ACRES OF FOREST CONSERVATION EASEMENT. ONLY THE EXISTING FOREST OUTSIDE OF THE RETENTION FCE MAY BE CLEARED BY FUTURE DEVELOPMENT. (POFCE: P.N. 15833)

*PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12964, EXPIRATION DATE: 5/15/07

1. REVISED CAPITAL PROJECT NO.
2. REVISED BLDG. FOOTPRINT
3. REVISED SIDEWALKS, ENTRANCES, PARKING & APPLICANCES.
4. REVISED TRANSFORMER PAD LOCATION.
5. REMOVED BUILDING 'B'.



NOTE: FOR GENERAL NOTES SEE SHEET C-3

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Mark J. Caylor 2/24/03
Director (P.O. #) Date

Candy Hamlett 3/19/03
Chief, Division of Land Development Date

William J. Williams 3/12/03
Chief, Development Engineering Division Date

SUBMISSION	SECTION/AREA	PARCEL NO.
ROCKBURN BRANCH PARK	N/A	42
LIBER/FOLIO	BLOCK NO.	ZONING
3505/95	4	R-20
TAX/MAP	GRID	ELEC. DIST.
37	4	1
CENSUS TR.	6011.01	
WATER CODE	D-04	SEWER CODE
		2153800

PROJECT ADDRESS CHART

STREET ADDRESS
6105 MONTGOMERY ROAD ELK RIDGE, MARYLAND 21075

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>James J. White</i> DIRECTOR OF PUBLIC WORKS DATE: 2/24/03 CHIEF, BUREAU OF ENGINEERING DATE:	DEPARTMENT OF RECREATION AND PARKS APPROVAL <i>John B. ...</i> DIRECTOR, DEPT. OF RECREATION AND PARKS DATE:	Architects Engineers and Construction Consultants 8950 Route 108 Suite 218 Columbia Maryland 21045 (410)995-4067 Fax (410)992-1837	PROGRESSIVE ENGINEERING CONSULTANTS, INC. ENGINEERS • PLANNERS • SURVEYORS 9160 RED BRANCH ROAD • SUITE E9 COLUMBIA, MD 21045 PHONE: (410) 715-0390 FAX: (410) 715-1745	OWNER HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS 7120 OAKLAND MILLS ROAD COLUMBIA MD. 21046	REVISIONS <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7/17/07</td> <td>SEE SEAL AND CERTIFICATION ABOVE</td> </tr> </tbody> </table>	NO.	DATE	DESCRIPTION	1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE	OVERALL SITE PLAN ROCKBURN BRANCH PARK MAINTENANCE FACILITY HOWARD COUNTY, MARYLAND DATE: JANUARY 10, 2003 SCALE: 1"=100' SET SHEET -1 OF 28	CAPITAL PROJECT NO. <input type="checkbox"/> 8-9422 N-3107 C-1
NO.	DATE	DESCRIPTION											
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE											

BASELINE STATION AND OFFSET							
NO	R	STA.	OFFSET	NO	R	STA.	OFFSET
1	A	0+05.90	36.78 LT.	26	A	1+88.33	12.00 RT.
2	A	0+18.81	12.00 LT.	27	A	1+39.61	12.00 RT.
3	A	1+08	12.00 LT.	28	A	0+17.00	6.00 LT.
4	B	2+53.15	12.00 LT.	29	C	2+13	6.00 LT.
5	B	2+71	12.00 LT.	30	C	2+60.12	6.00 LT.
6	B	2+71	30.00 LT.	31	C	4+09.00	6.00 LT.
7	B	3+61	30.00 LT.	32	C	4+13	10.00 LT.
8	B	3+60.94	35.00 LT.	33	C	4+13	15.00 LT.
9	B	3+84.46	35.00 LT.	34	A	3+08.14	12.00 LT.
10	B	3+84.46	14.00 LT.	35	A	1+88.33	12.00 LT.
11	B	5+10.15	14.00 LT.	36	A	1+52	12.00 LT.
12	B	5+10.15	1.67 LT.	37	B	2+53.15	12.00 RT.
13	B	5+39	1.67 LT.	38	B	2+66.03	12.00 RT.
14	A	5+39	22.00 LT.	39	B	2+66.03	40.00 RT.
15	A	5+40	22.00 LT.	40	C	2+02.40	32.00 RT.
16	A	5+40	14.00 RT.	41	C	2+02.40	24.00 RT.
17	A	5+06.27	14.00 RT.	42	A	1+87.40	24.00 RT.
18	A	5+06.27	54.00 RT.	43	A	1+87.40	32.00 RT.
19	A	4+42.27	54.00 RT.	44	A	4+51.14	20.00 RT.
20	C	4+42.27	32.00 RT.	45	A	3+29.14	20.00 RT.
21	A	3+59.27	32.00 RT.	46	A	3+29.14	93.33 RT.
22	A	3+59.27	22.00 RT.	47	A	4+51.14	90.00 RT.
23	A	3+49.27	12.00 RT.	48	A	1+16.13	37.01 RT.
24	A	3+06.14	12.00 RT.	49	A	-0+05.50	52.17 RT.

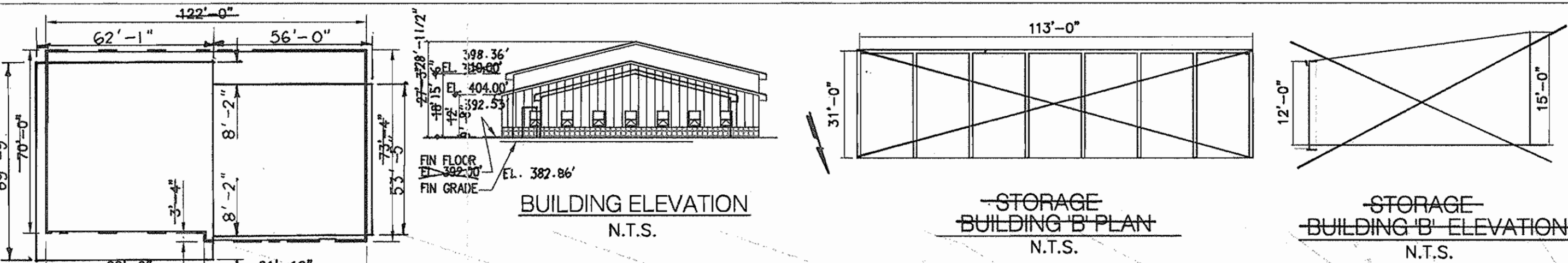
BASE LINE COORDINATES			
NO	NORTHING	EASTING	BASELINE
1	564140.0970	1377597.7763	
2	564144.2927	1377588.5167	ROAD 'A'
3	564220.2579	1377420.8641	
4	564182.8976	1377321.5957	
5	563960.7755	1377220.9497	ROAD 'B'
6	564196.1840	1377473.9944	
7	563888.9745	1377334.7943	
8	564184.0650	1377500.7406	
9	564395.1691	1377392.8767	
10	564408.2339	1377352.5119	ROAD 'C'
11	564325.0256	1377189.6622	

CURVE DATA	
CURVE-1	CURVE-2
$\Delta = 90^{\circ}-00'-00''$	$\Delta = 90^{\circ}-00'-00''$
$D_c = 76^{\circ}-23'-40''$	$D_c = 190^{\circ}-59'-09''$
$R_c = 75.0$	$R_c = 30.0$
$L_c = 117.81$	$L_c = 47.12$
$T_c = 75.00$	$T_c = 30.00$
$E = 31.07$	$E = 12.43$

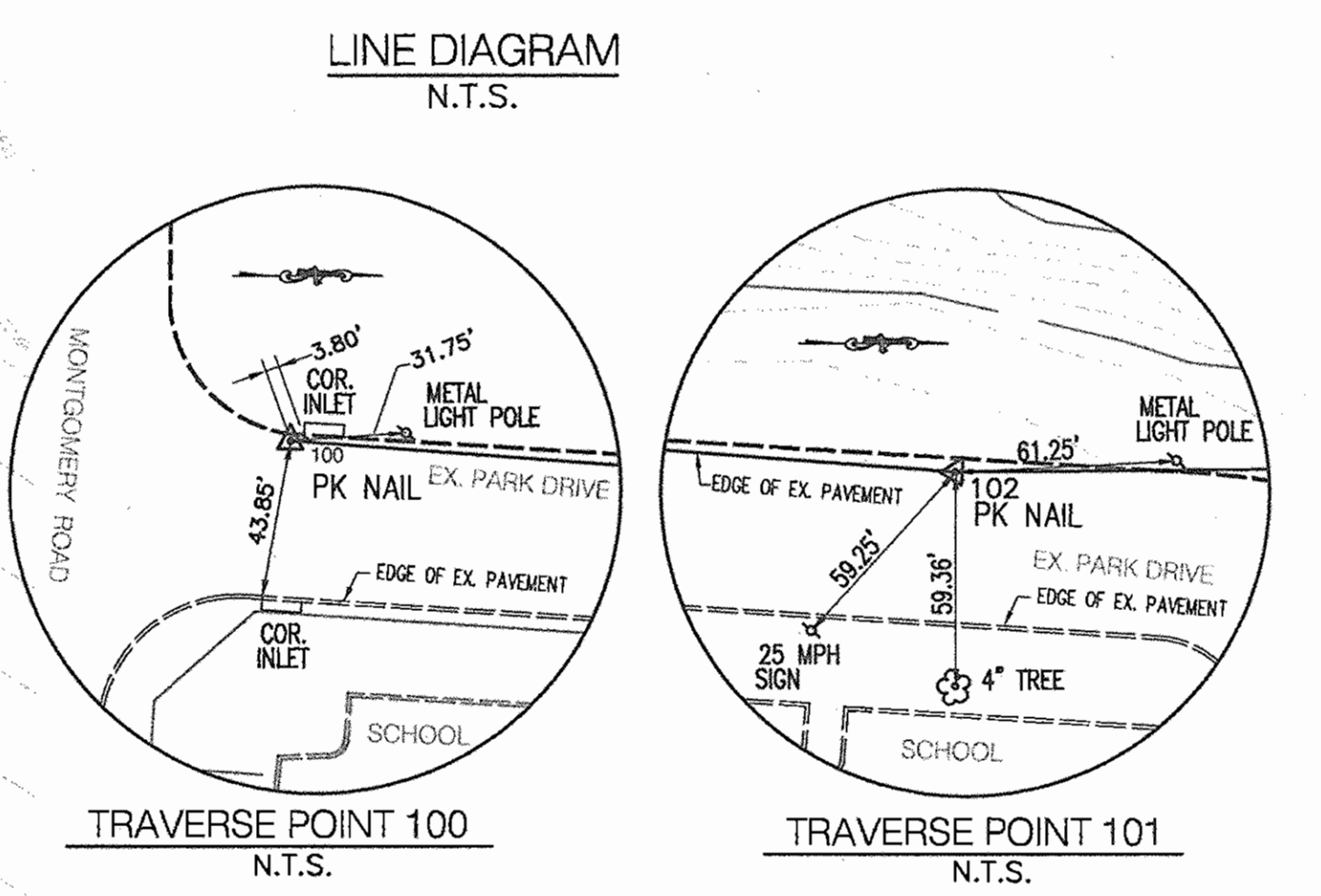
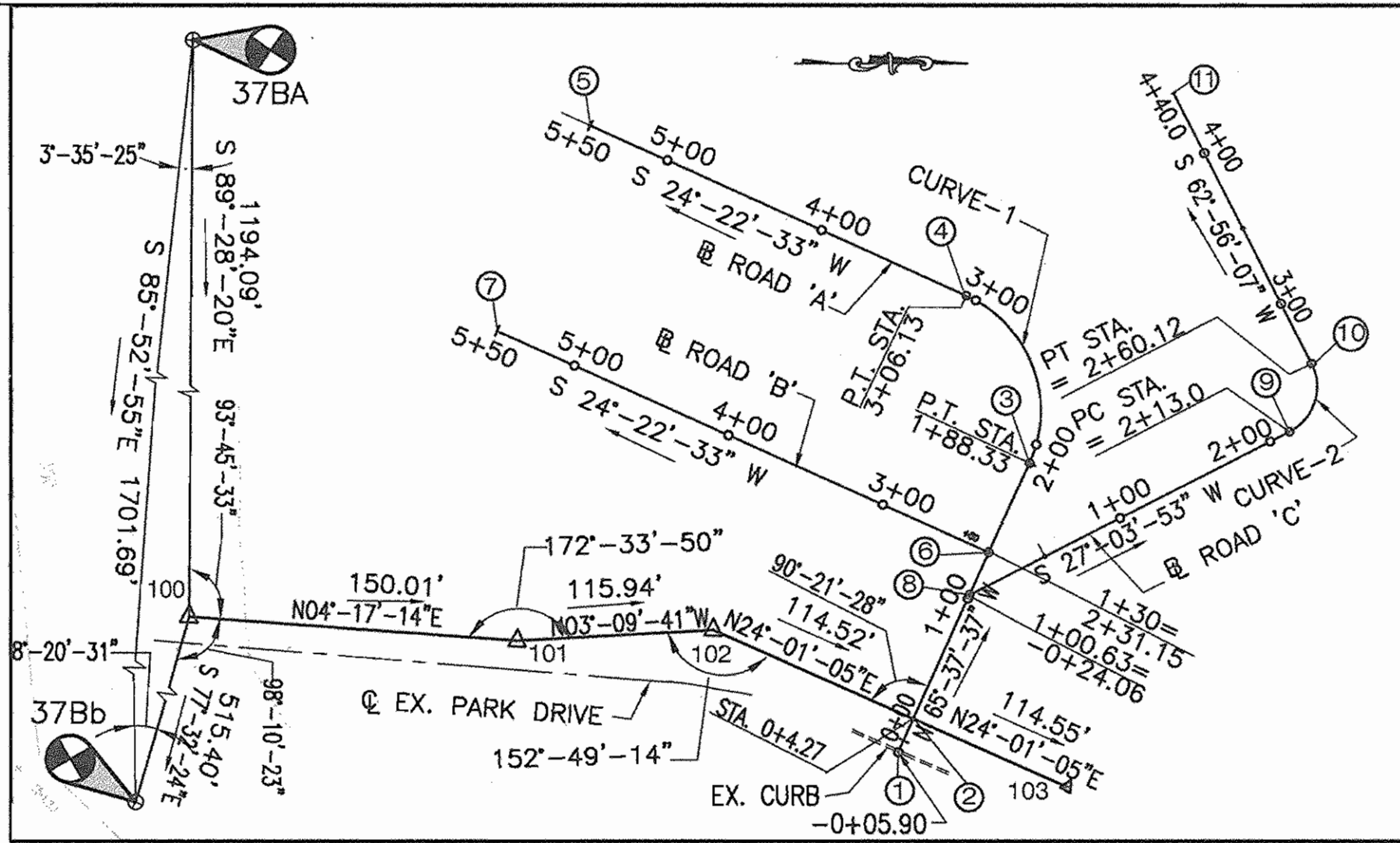
- LEGEND:**
- 378 EX. WOODS LINE
 - EX. CONTOUR LINE
 - EDGE OF PAVEMENT
 - CENTER LINE
 - TRaverse POINT
 - EX. FENCE
 - PROP. BUILDINGS
 - P-3 PAVEMENTS
 - PROP. LIGHT POLE
 - SOLID SODDING

PLAN
SCALE: 1"=30'

NOTE:
FOR GENERAL NOTES SEE DWG C-3



BENCHMARKS			
NO	NORTHING	EASTING	ELEVATION
37BA	563785.618	1376343.172	394.786
37BB	563663.415	1378040.471	373.822
102	564039.9705	1377542.0303	380.07
103	564248.9218	1377635.1398	387.50



TRAVERSE POINT			
NO	DESCRIPTION	NORTHING	EASTING
100	P.K. NAIL	563774.6173	1377537.2104
101	P.K. NAIL	563924.2077	1377548.4243
102	TOP OF S.M.	564039.9705	1377542.0303
103	TOP OF S.M.	564248.9218	1377635.1398

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director: *Mark A. Lyle* Date: 2/24/03

Chief, Division of Development: *Andy Horvath* Date: 2/19/03

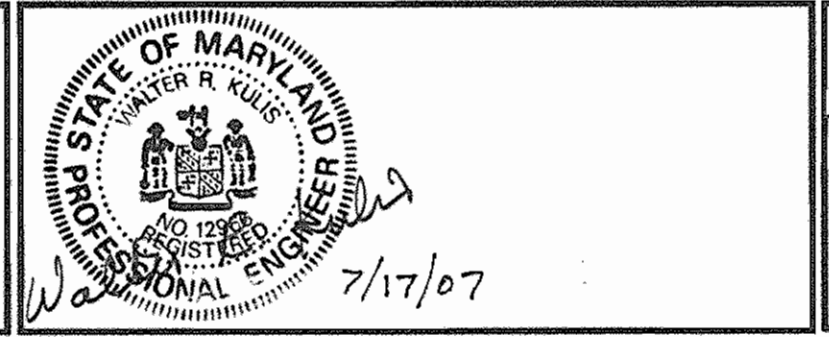
Chief, Development Engineering Division: *John D. ...* Date: 2/16/03

SUBDIVISION	SECTION/AREA	N/A	PARCEL NO.
ROCKBURN BRANCH PARK			42
LIBER/FOLIO	BLOCK NO	ZONING	TAX/MAP
3505/95	4	R-20	37
		GRID	ELEC. DIST.
		4	1
		CENSUS TR.	6011.01
WATER CODE	SEWER CODE		2153800
0-04			

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12164, EXPIRATION DATE: 5/31/08

1. REVISED CAPITAL PROJECT NO.
2. REVISED BLDG. FOOTPRINT.
3. REVISED SIDEWALKS, ENTRANCES, PARKING & APPURTENANCES.
4. REVISED TRANSFORMER PAD LOCATION.
5. REMOVED BUILDING 'B'.

7/17/07



ati Architects Engineers and Construction Consultants

8950 Route 108 Suite 218
Columbia Maryland 21045 (410)995-4067 Fax (410)992-1837

PROGRESSIVE ENGINEERING CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS

9160 RED BRANCH ROAD • SUITE E9
COLUMBIA, MD 21045
PHONE: (410) 715-0390 FAX: (410) 715-1745

OWNER
HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS

7120 OAKLAND MILLS ROAD
COLUMBIA MD. 21046

REVISIONS		
NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

GEOMETRIC LAYOUT

ROCKBURN BRANCH PARK
MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND

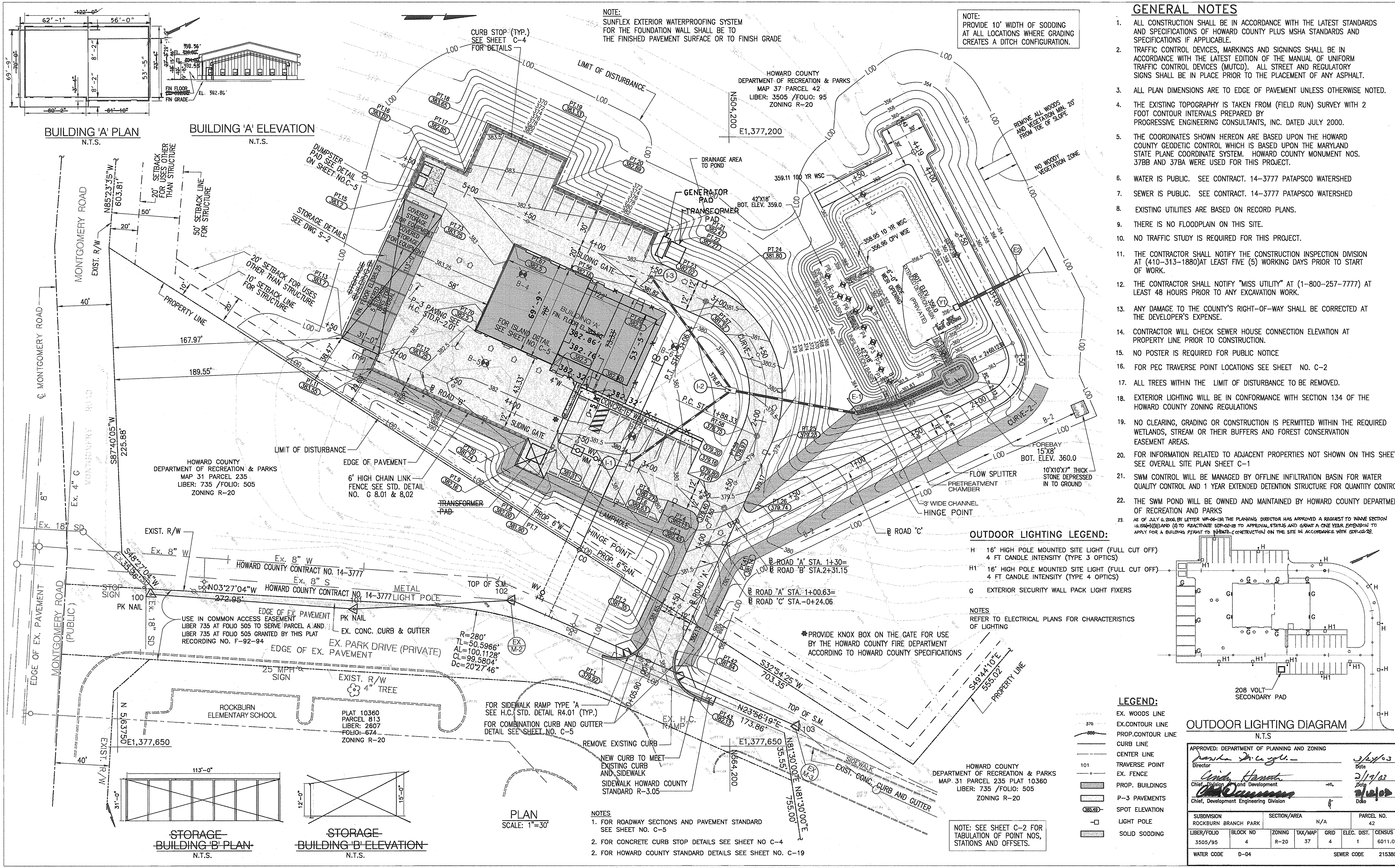
DATE: JANUARY 10, 2003 SCALE: 1"=30'

CAPITAL PROJECT NO.
18-3422-N-3107

C-2

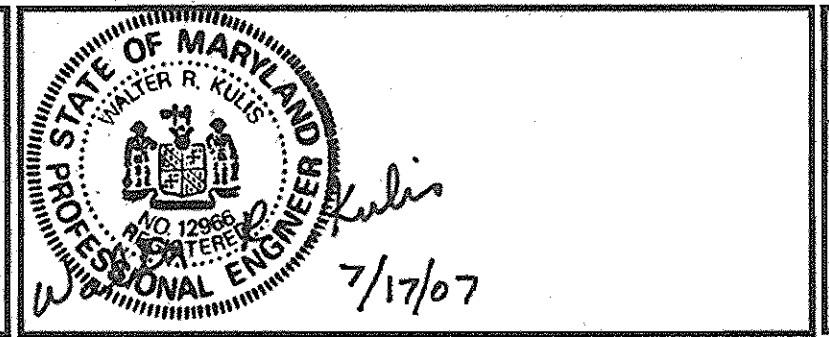
SET SHEET 2 OF 28

SDP-02-28



PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12366, EXPIRATION DATE: 8/1/08

- REVISED CAPITAL PROJECT NO.
- REVISED BLDG. FOOTPRINT
- REVISED SIDEWALKS, ENTRANCES, PARKING & APPURTENANCES
- REVISED TRANSFORMER PAD LOCATION
- REVISED BUILDING 'B'



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8950 Route 108 Suite 218
Columbia Maryland 21045 (410)995-4067 Fax (410)992-1837

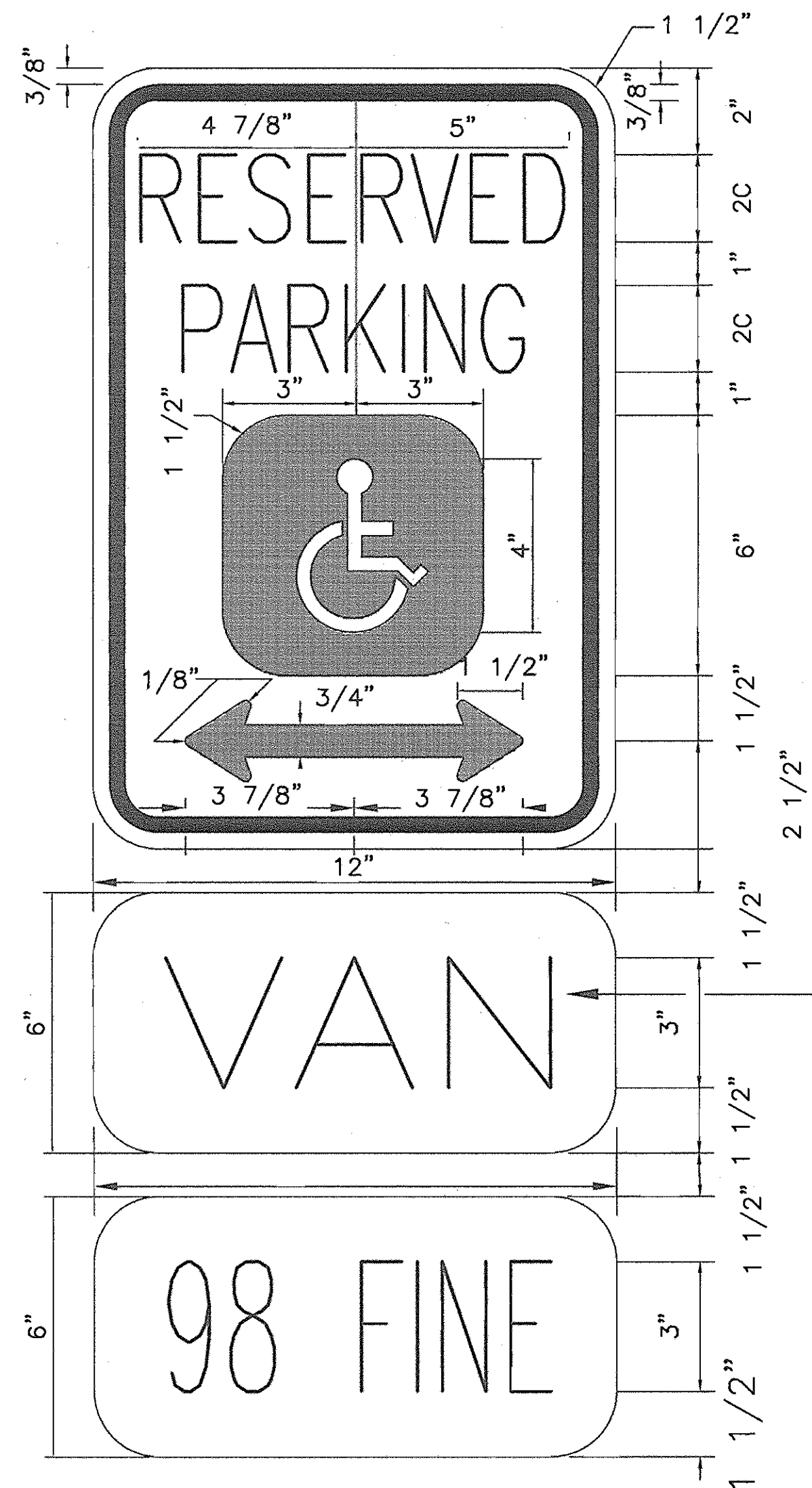
PROGRESSIVE ENGINEERING CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
9160 RED BRANCH ROAD • SUITE E9
COLUMBIA, MD 21045
PHONE: (410) 715-0390 FAX: (410) 715-1745

OWNER
HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
7120 OAKLAND MILLS ROAD
COLUMBIA MD. 21046

REVISIONS		
NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

SITE AND GRADING PLAN
ROCKBURN BRANCH PARK MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND
DATE: JANUARY 10, 2003 SCALE: 1"=30'

CAPITAL PROJECT NO. 89421 N-3107
C-3
SET SHEET 3 OF 28
SDP-02-28



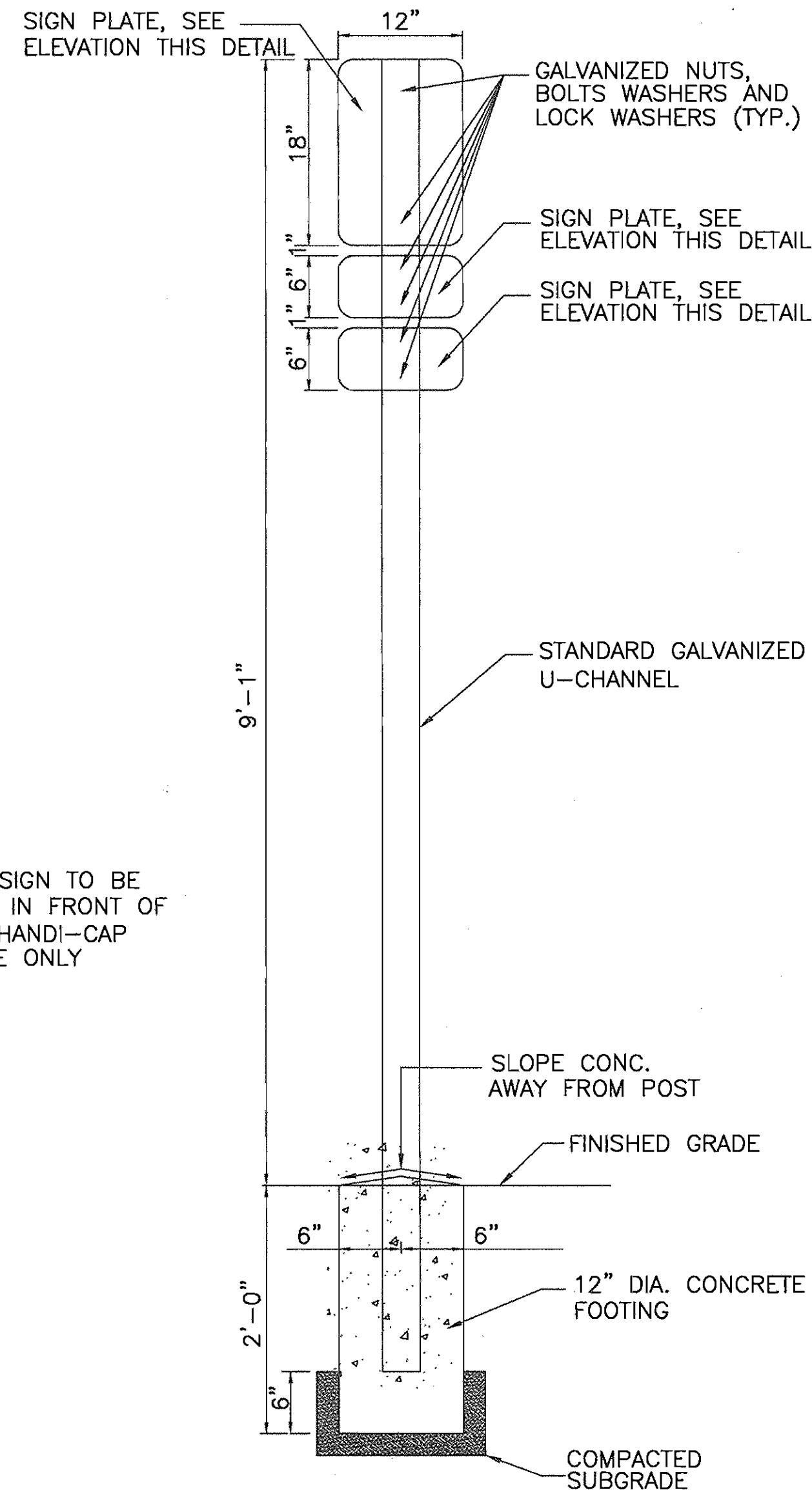
COLORS:
 LEGEND AND BORDER - GREEN
 WHITE SYMBOL ON BLUE BACKGROUND
 BACKGROUND - WHITE

NOTE: PROVIDE SIGNS AS INDICATED ON SITE PLAN

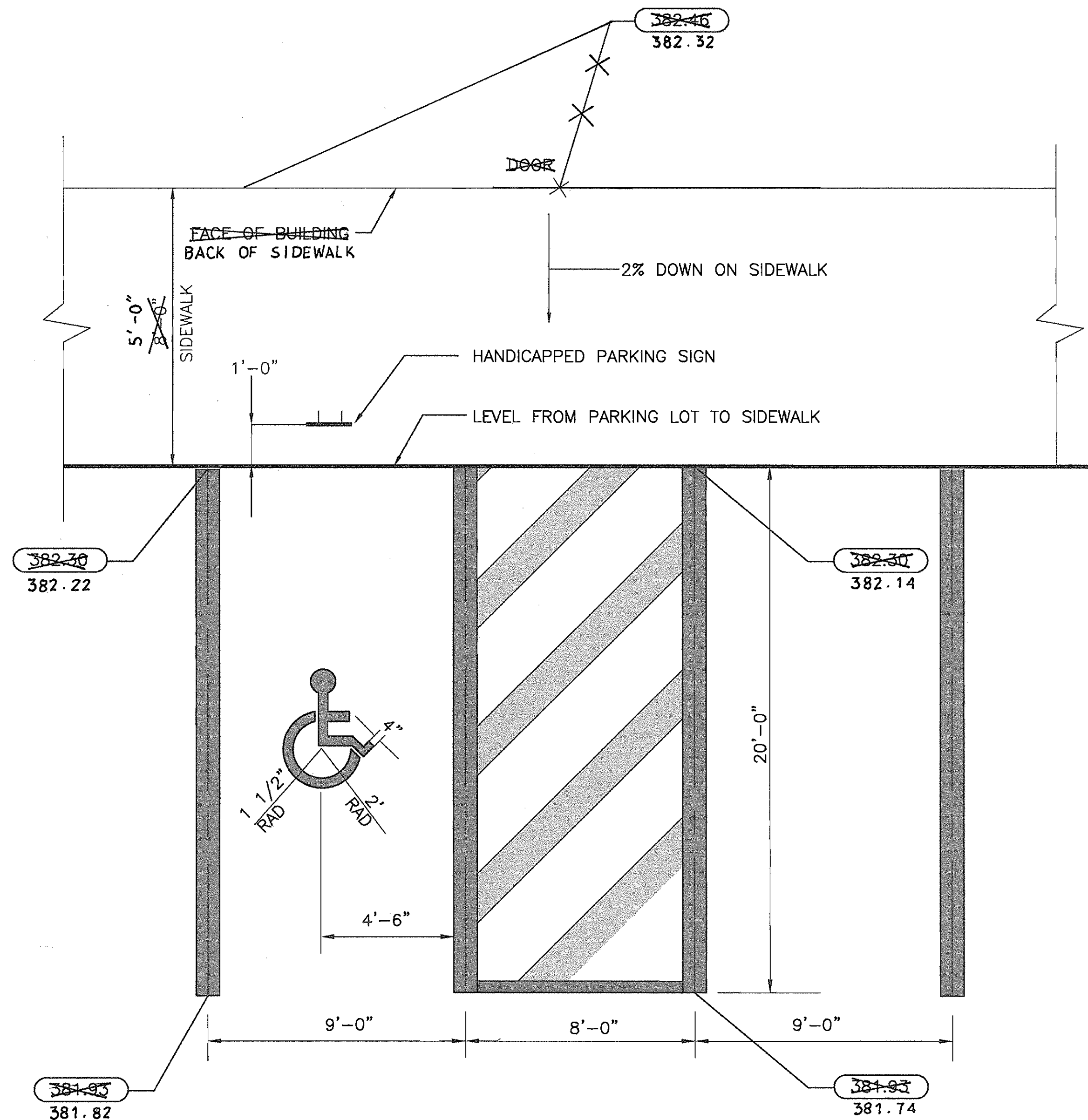
ELEVATION

HANDICAPPED PARKING SIGN DETAILS

NOT TO SCALE



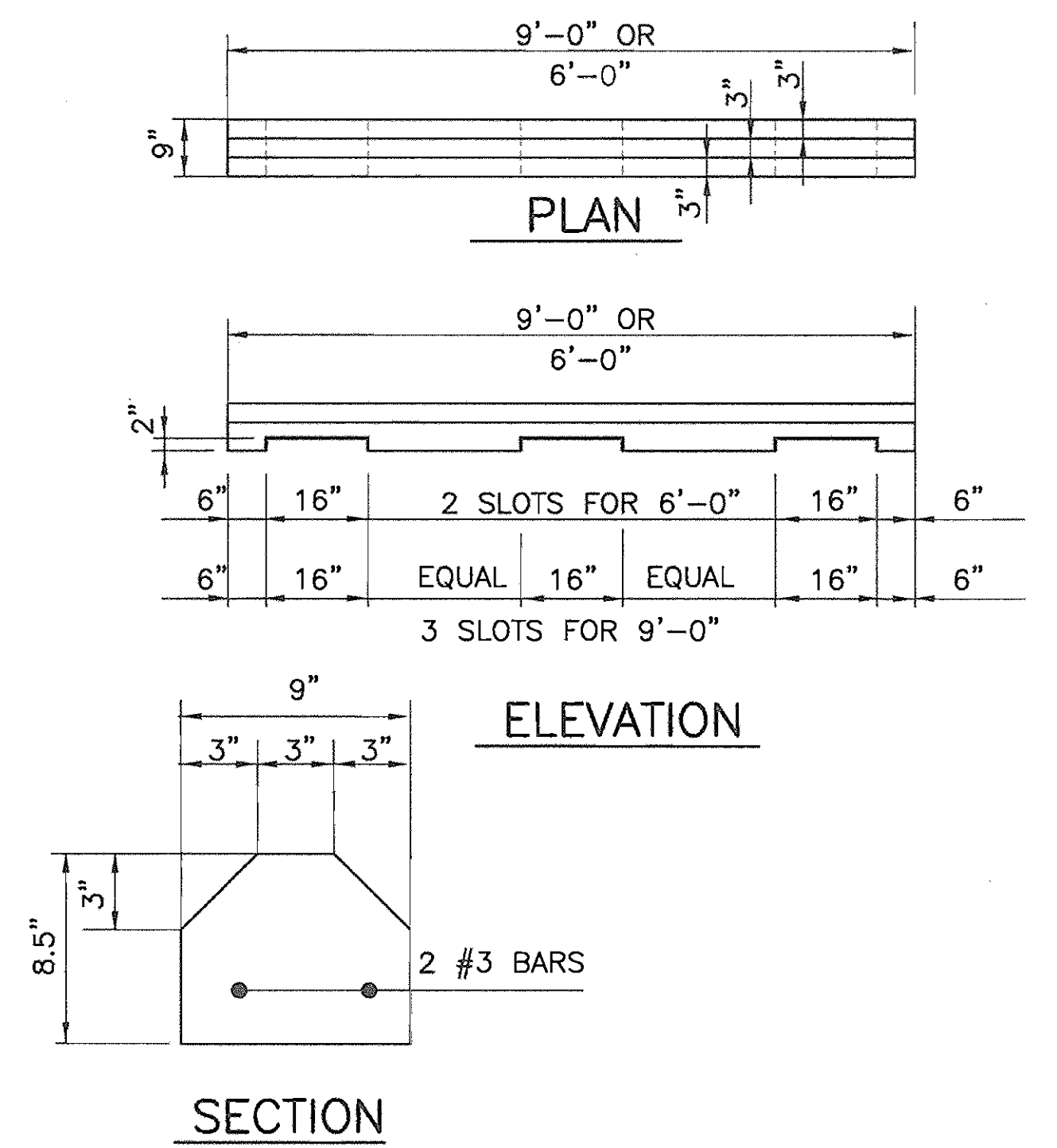
SECTION



HANDICAPPED PARKING PLAN

NOT TO SCALE

PAINT IS TO BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. (TWO (2) COATS REQUIRED) SYMBOLS AND BACKGROUND PER ADA REQUIREMENTS.



CONCRETE CURB STOP DETAILS

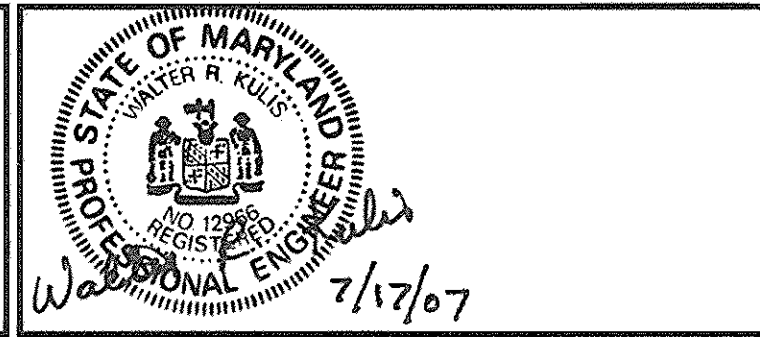
NOT TO SCALE

NOTE: FOR HANDICAPPED SIGN SEE HOWARD COUNTY STANDARD DETAIL NO. 5.09.

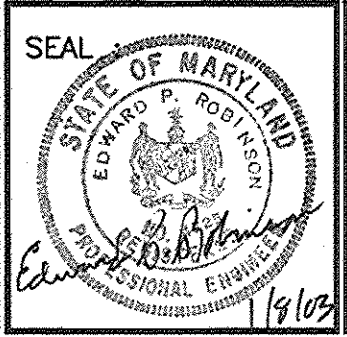
APPROVED: DEPARTMENT OF PLANNING AND ZONING					
Director: <i>Mark DeLong</i>					Date: 2/6/03
Chief, Division of Land Development: <i>Andy Hand</i>					Date: 2/19/03
Chief, Development Engineering Division: <i>John D...</i>					Date: 2/19/03
SUBDIVISION	SECTION/AREA	PARCEL NO.			
ROCKBURN BRANCH PARK	N/A	42			
LIBER/FOLIO	BLOCK NO	ZONING	TAX/MAP	GRID	ELEC. DIST.
3505/95	4	R-20	37	4	1
WATER CODE D-04				SEWER CODE 2153800	

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12966, EXPIRATION DATE: 5/19/08

1. REVISED CAPITAL PROJECT NO.
 2. REVISED BLOCK FOOTPRINT.
 3. REVISED SIDEWALKS, ENTRANCES, PARKING & APPURTENANCES.



ati Architects Engineers and Construction Consultants
 8950 Route 108 Suite 218
 Columbia Maryland 21045 (410)995-4067 Fax(410)992-1837



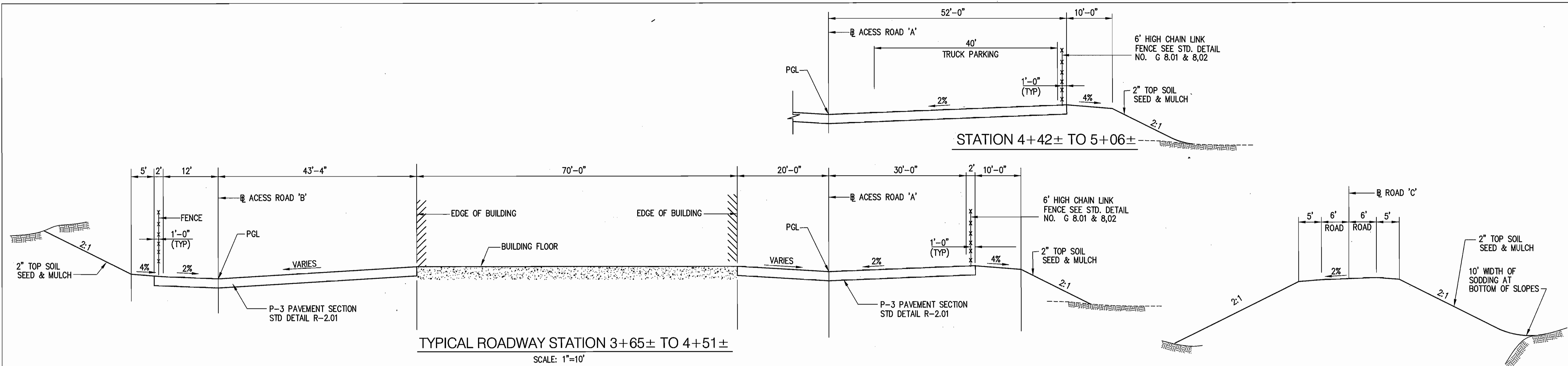
PROGRESSIVE ENGINEERING CONSULTANTS, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 9160 RED BRANCH ROAD • SUITE E9
 COLUMBIA, MD 21045
 PHONE: (410) 715-0390 FAX: (410) 715-1745

OWNER
 HOWARD COUNTY
 DEPARTMENT OF RECREATION AND PARKS
 7120 OAKLAND MILLS ROAD
 COLUMBIA MD. 21046

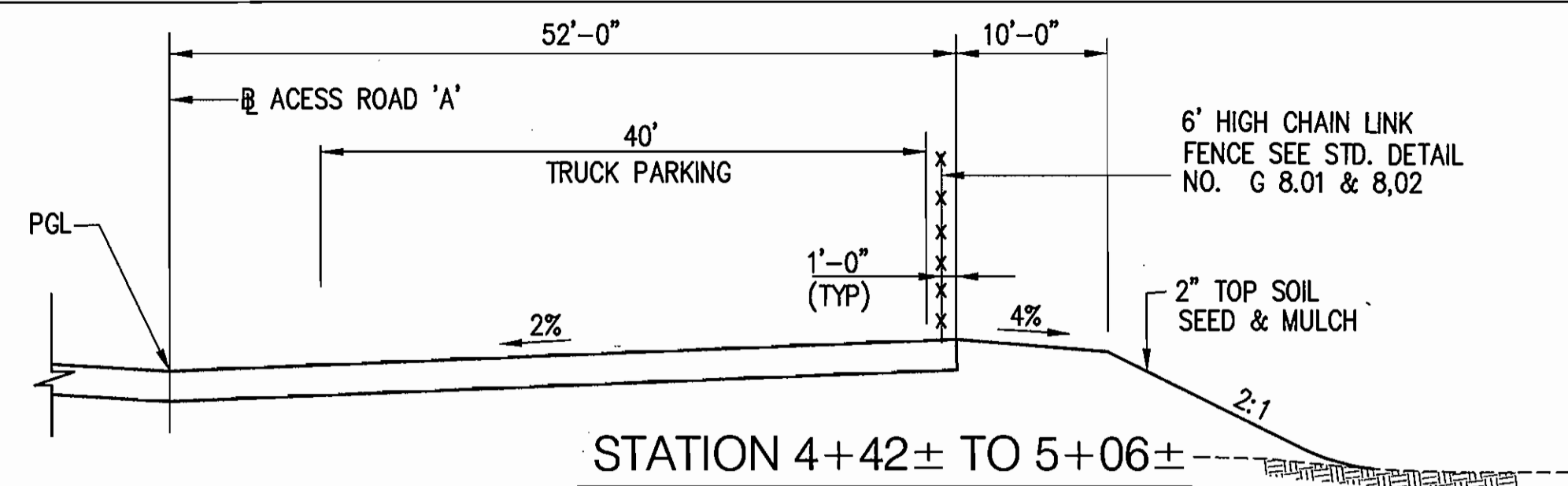
REVISIONS		
NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

HANDICAPPED PARKING PLAN
 ROCKBURN BRANCH PARK
 MAINTENANCE FACILITY
 HOWARD COUNTY, MARYLAND
 DATE: JANUARY 10, 2003 SCALE: AS SHOWN

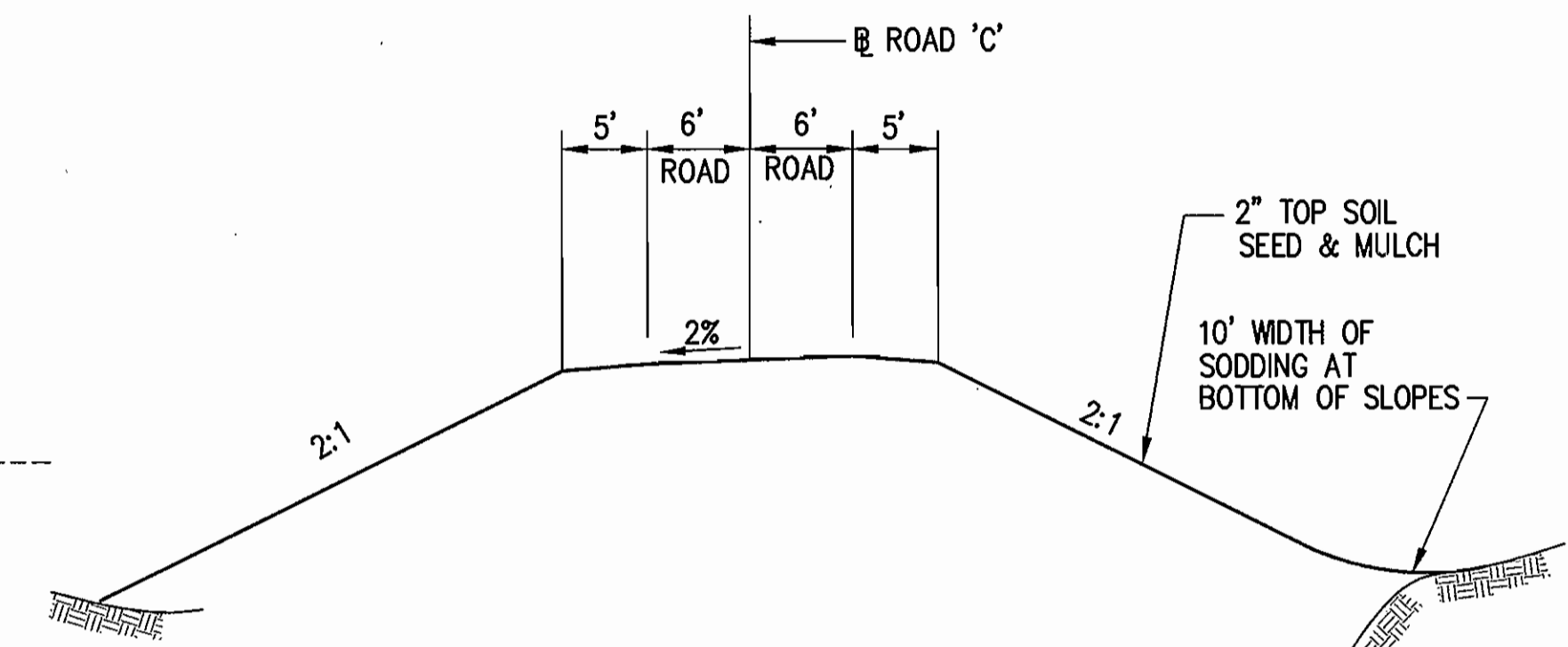
CAPITAL PROJECT NO. 382-46 N-3107
 C-4
 SET SHEET 4 OF 28



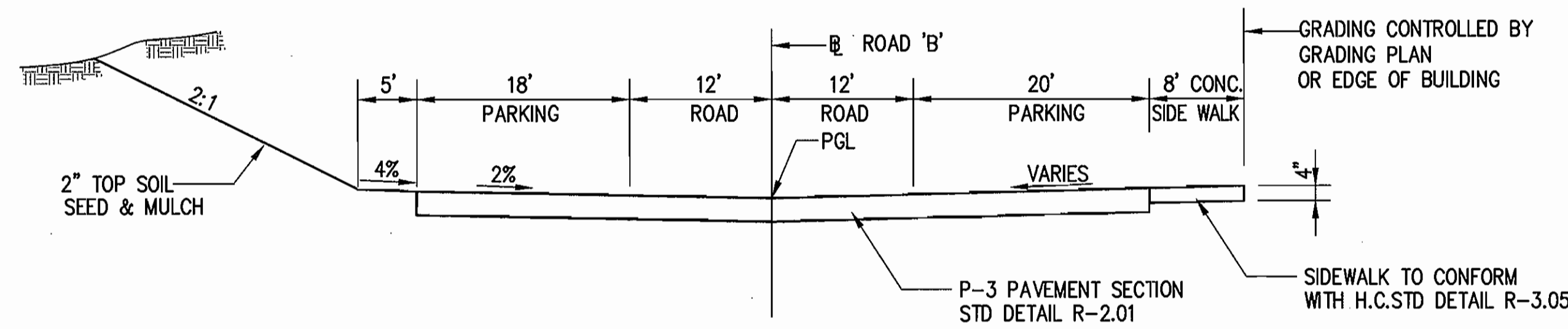
TYPICAL ROADWAY STATION 3+65± TO 4+51±
SCALE: 1"=10'



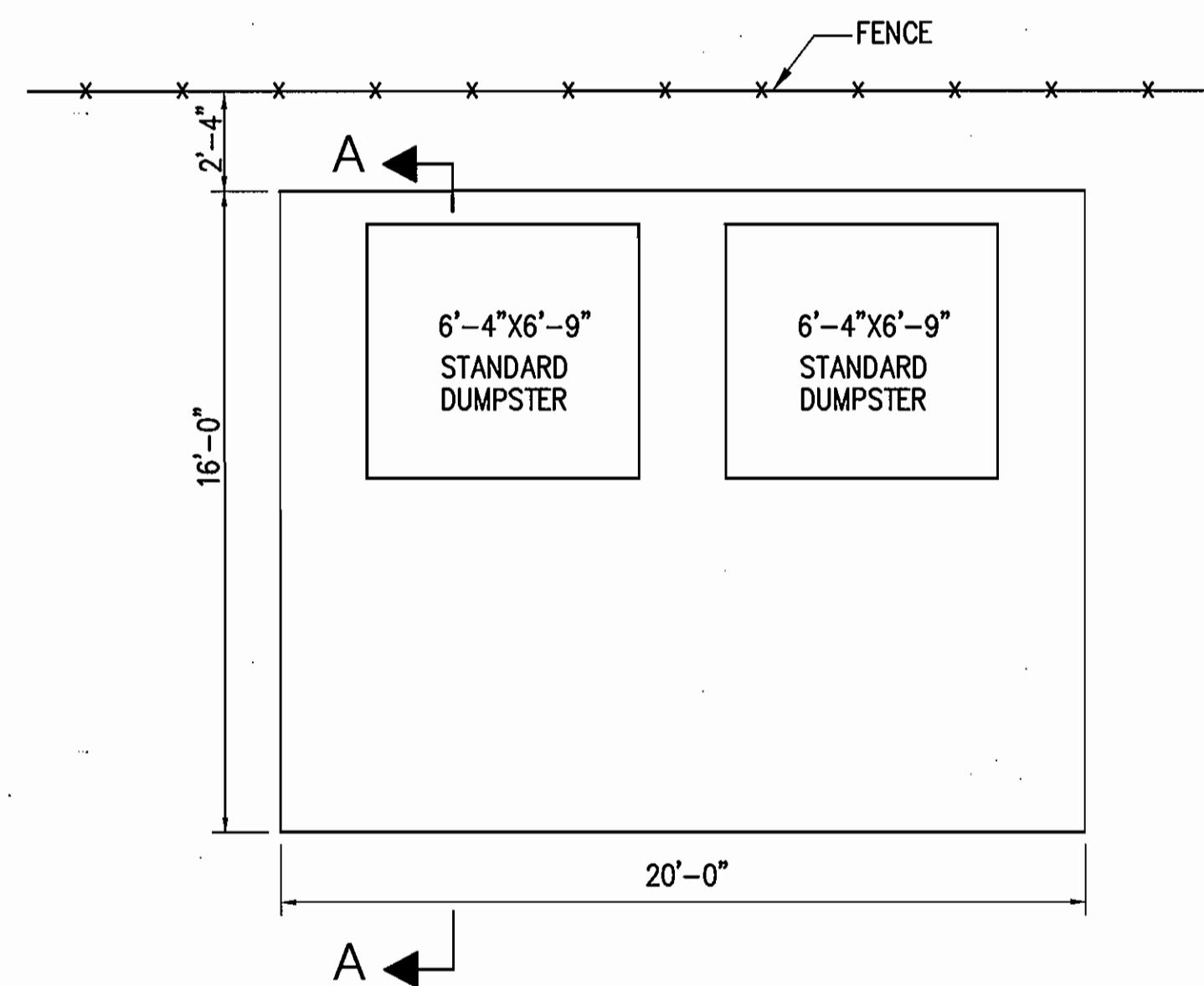
STATION 4+42± TO 5+06±



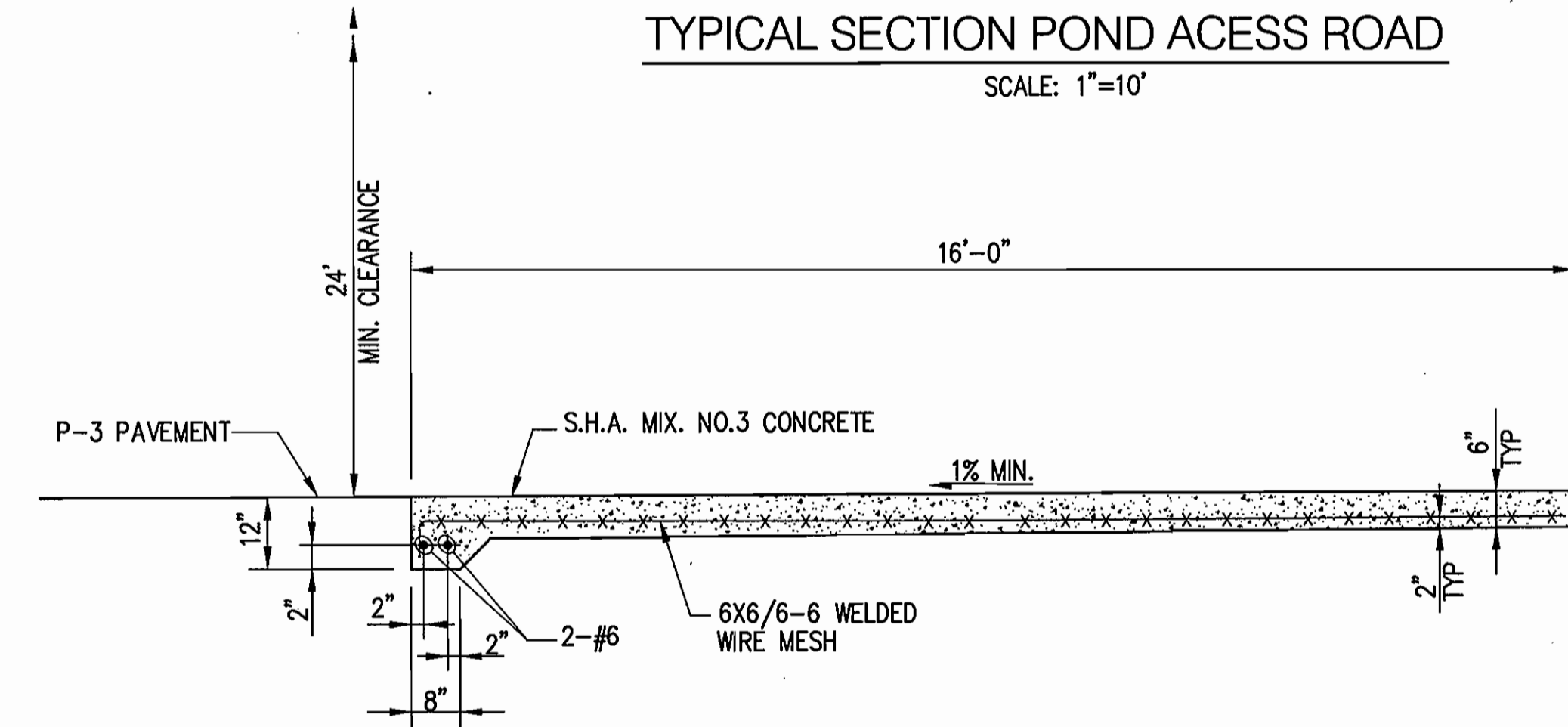
TYPICAL SECTION POND ACCESS ROAD
SCALE: 1"=10'



TYPICAL ROADWAY STA. 2+70± TO 3+65± (ROAD-B)
SCALE: 1"=10'

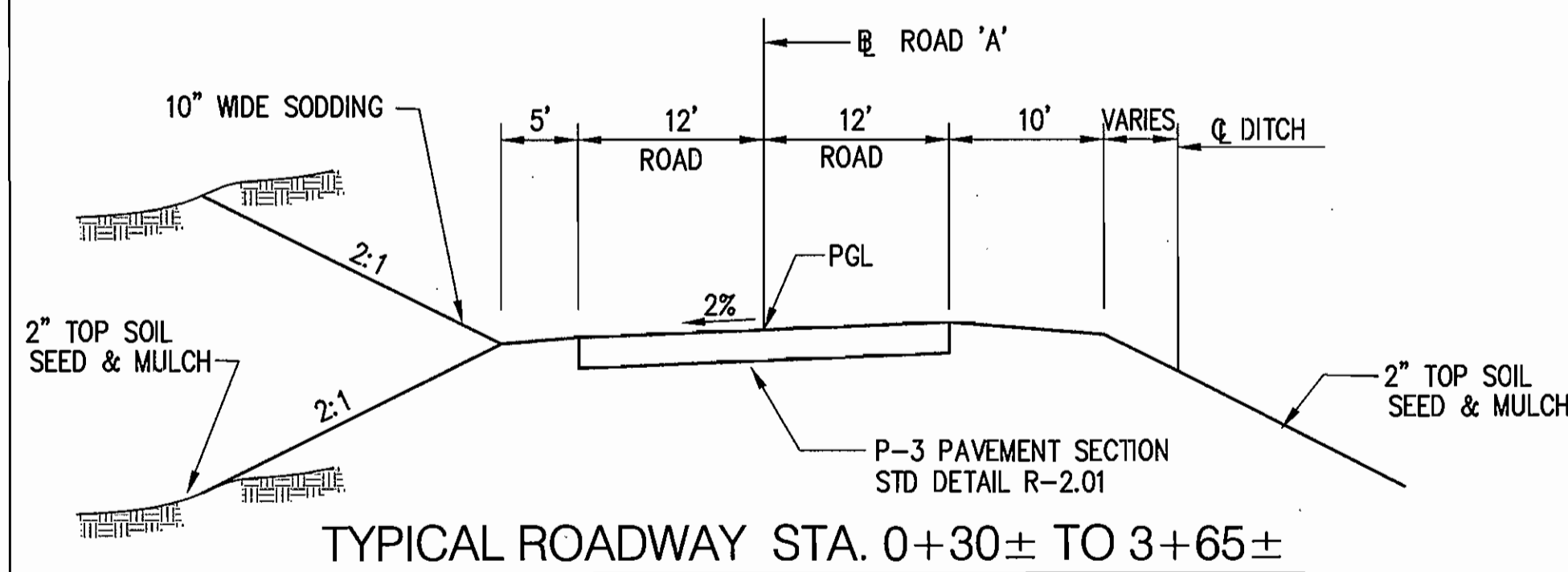


PLAN
SCALE: 1"=4'

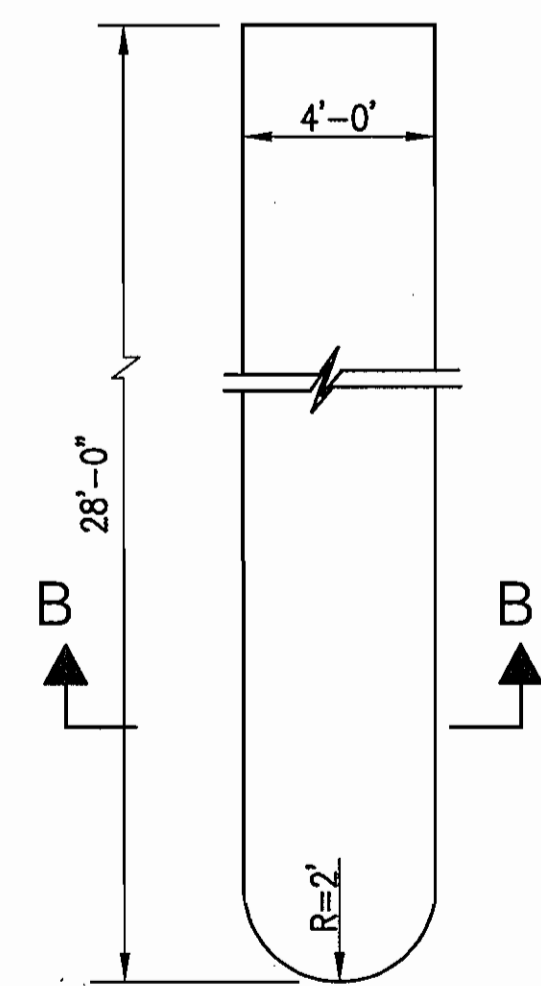


SECTION A-A
SCALE: 1"=2'

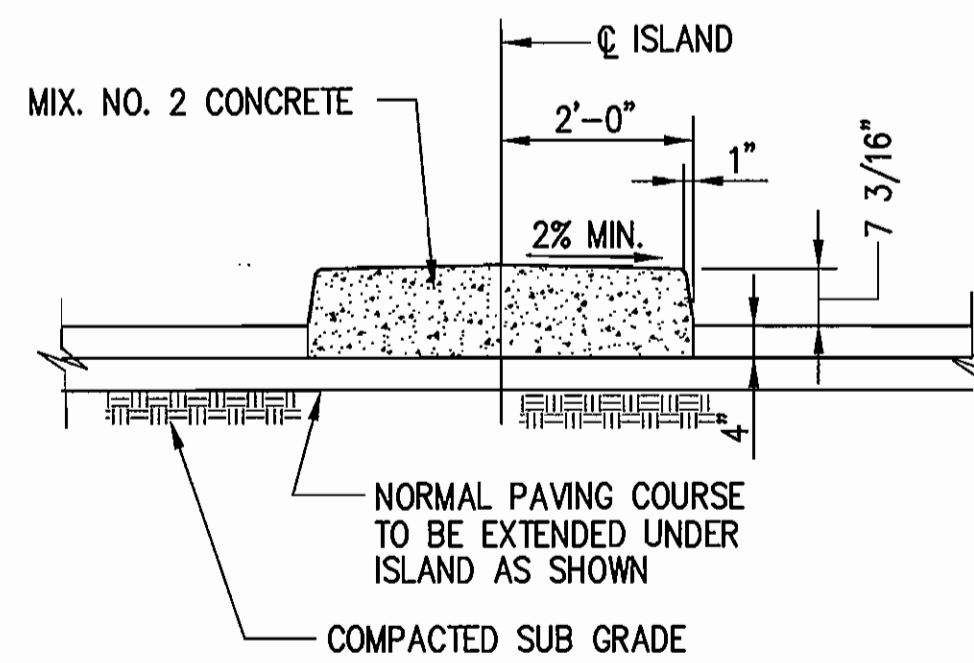
SOLID WASTE SERVICE PAD DETAILS



TYPICAL ROADWAY STA. 0+30± TO 3+65±
SCALE: 1"=10'

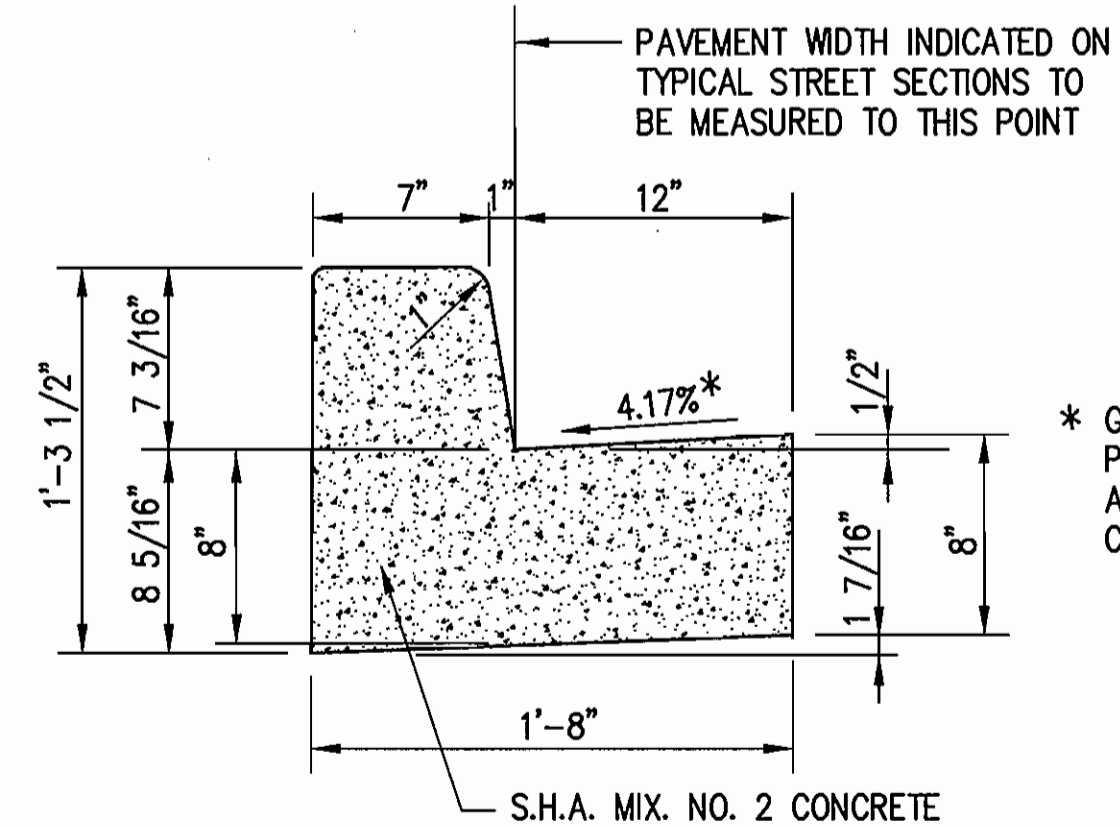


PLAN
SCALE: 1"=4'



SECTION B-B
SCALE: 1"=4'

CONCRETE ISLAND DETAILS



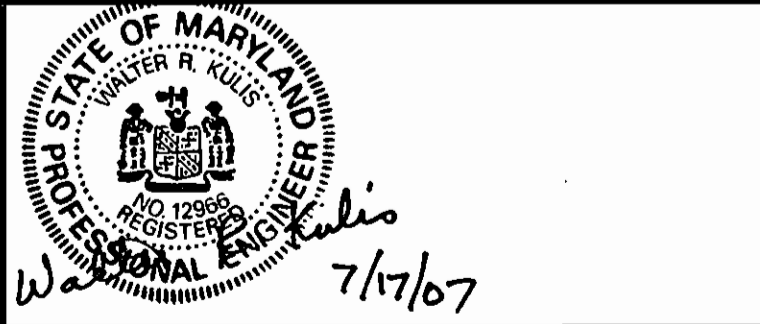
COMBINATION CURB AND GUTTER
SCALE: N.T.S.

NOTES:
FOR LOCATION OF ROAD A & B SEE SHEET NO C-3.
FOR PROFILE OF ROAD A & B SEE SHEET NO C-6.
FOR PROFILE OF ROAD C SEE SHEET NO C-11.
FOR PAVEMENT ELEVATIONS, SEE SHEET NO. C-18.

* GUTTER PAN ON HIGH SIDE OF PAVEMENT SECTION SHALL BE SLOPED AT THE SAME RATE AS THE PAVEMENT CROSS SLOPES.

APPROVED: DEPARTMENT OF PLANNING AND ZONING				DATE: 02/24/03	
Director: <i>Frank M. Lytle</i>				Date: 02/24/03	
Chief, Division of Land Development: <i>Chris Harnett</i>				Date: 03/19/03	
Chief, Development Engineering Division: <i>Chris Harnett</i>				Date: 03/12/03	
SUBDIVISION	SECTION/AREA	PARCEL NO.			
ROCKBURN BRANCH PARK	N/A	42			
LIBER/FOLIO	BLOCK NO	ZONING	TAX/MAP	GRID	ELEC. DIST.
3505/95	4	R-20	37	4	1
WATER CODE: D-04				SEWER CODE: 2153800	

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12366 EXPIRATION DATE: 5/1/88
REVISED CAPITAL PROJECT NO.



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8950 Route 108 Suite 218
Columbia Maryland 21045 (410)995-4067 Fax(410)992-1837



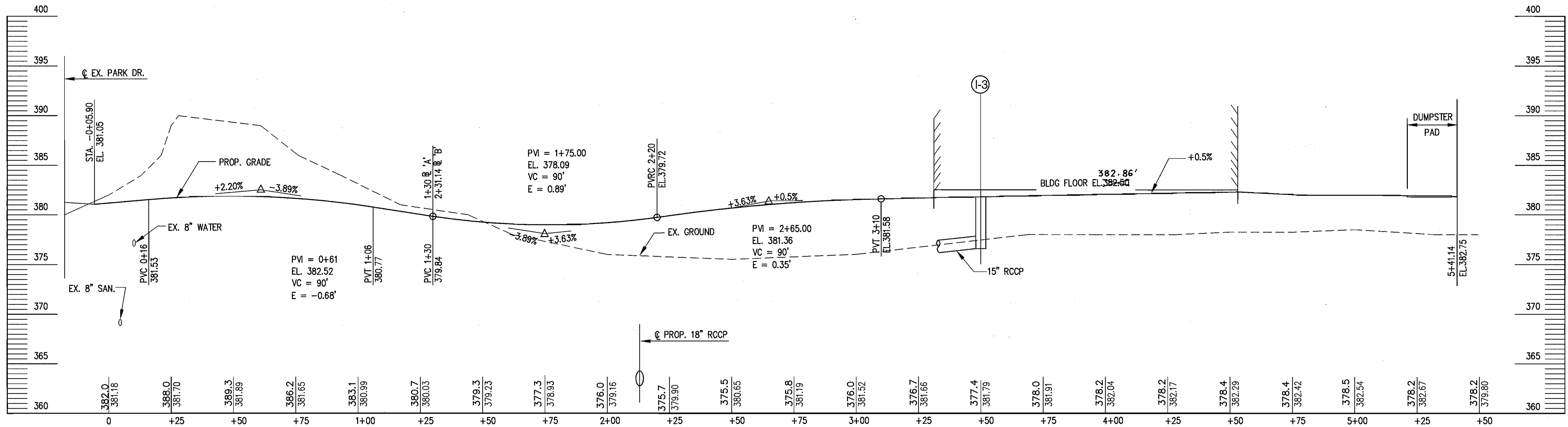
PROGRESSIVE ENGINEERING CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
9160 RED BRANCH ROAD • SUITE E9
COLUMBIA, MD 21045
PHONE: (410) 715-0390 FAX: (410) 715-1745

OWNER
HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS
7120 OAKLAND MILLS ROAD
COLUMBIA MD. 21046

NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

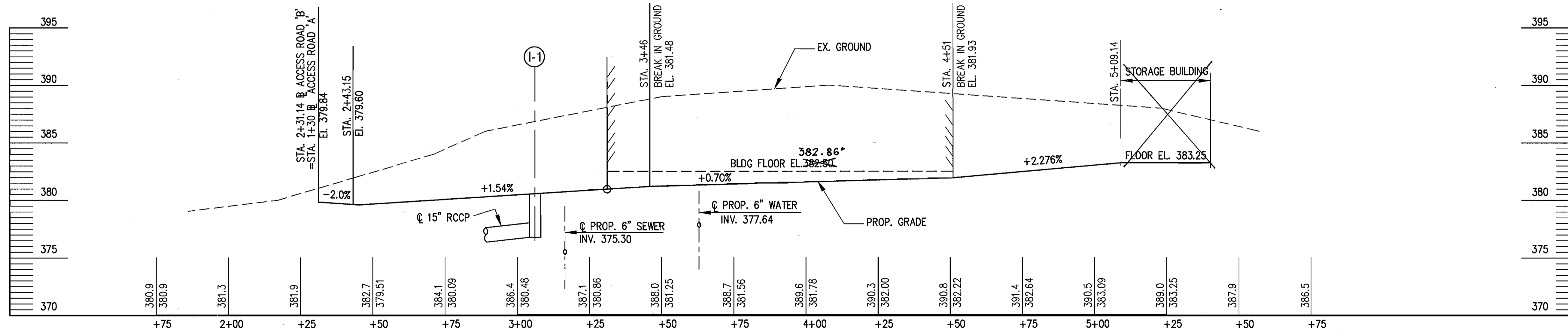
TYPICAL ROADWAY SECTIONS AND MISCELLANEOUS DETAILS
ROCKBURN BRANCH PARK
MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND
DATE: JANUARY 10, 2003 SCALE: AS SHOWN

CAPITAL PROJECT NO.
 N-3107
C-5
SET SHEET 5 OF 28



PROFILE ROAD 'A'

SCALE: 1"=20' (HORIZ.)
1"=5' (VERT.)



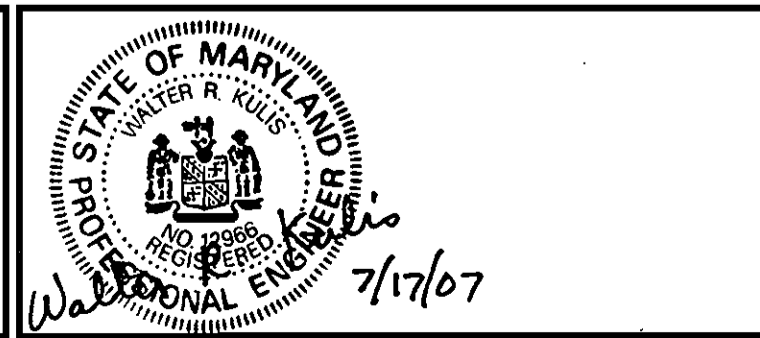
PROFILE ROAD 'B'

SCALE: 1"=20' (HORIZ.)
1"=5' (VERT.)

APPROVED: DEPARTMENT OF PLANNING AND ZONING					
Director: <i>Mark A. Cagle</i>					Date: 3/24/03
Chief, Division of Land Development: <i>Wanda K. ...</i>					Date: 3/19/03
Chief, Development Engineering Division: <i>Chad ...</i>					Date: 3/19/03
SUBDIVISION	SECTION/AREA	PARCEL NO.			
ROCKBURN BRANCH PARK	N/A	42			
LIBER/FOLIO	BLOCK NO	ZONING	TAX/MAP	GRID	ELEC. DIST.
3505/95	4	R-20	37	4	1
WATER CODE D-04				SEWER CODE 2153800	

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12744 EXPIRATION DATE: 6/1/08

1. REVISED CAPITAL PROJECT NO.
2. REVISED BLDG. FLOOR ELEVATION
3. REMOVED STORAGE BUILDINGS.



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OWNER

HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS

7120 OAKLAND MILLS ROAD
COLUMBIA MD. 21046

REVISIONS		
NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

ROADWAY PROFILES

ROCKBURN BRANCH PARK
MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND

DATE: JANUARY 10, 2003 SCALE: AS SHOWN

CAPITAL PROJECT NO.
 30-3421 N-3107

C-6

SET SHEET 6 OF 28

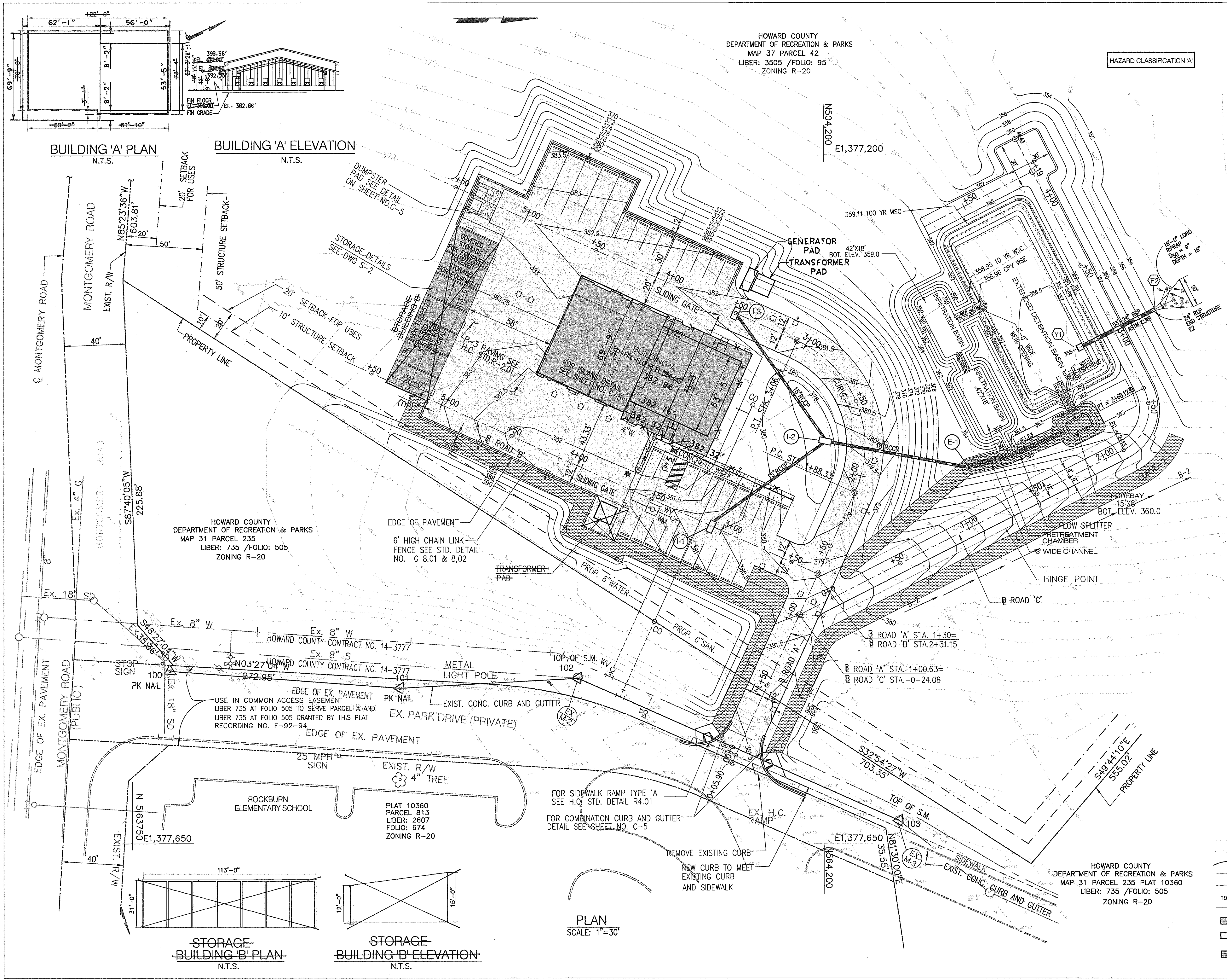
HOWARD COUNTY
DEPARTMENT OF RECREATION & PARKS
MAP 37 PARCEL 42
LIBER: 3505 /FOLIO: 95
ZONING R-20

HAZARD CLASSIFICATION 'A'

STRUCTURE SCHEDULE							
STRUCT. NO.	TYPE	STD. NO.	LOCATION	TOP ELEV.	INVERT IN	INVERT OUT	REMARK
I-1	TYPE-C INLET	SD.4.15	STA. 3+06	380.20	-	375.20	GRATE 2.75' x 10'
I-2	TYPE-E INLET	SD.4.21	STA. 2+22	376.83	371.50	362.96	25' LT. ROAD A
I-3	TYPE-C INLET	SD.4.15	STA. 3+50	381.78	-	378.28	GRATE 2.75' x 10'
E-1	END SECTION	SD.5.22	STA. 2+25			362.06	50' RT. ROAD A
Y-1	OUTLET STRUCTURE	SD.4.40	IN POND			360.00	PROVIDE RIP RAP
E-2	END SECTION	SD.5.52	OUT FALL			356.00	PROVIDE RIP RAP

NOTE:
GRANITE BLOCK LINING IN LIEU OF BRICK LINING

PIPE SCHEDULE LENGTH		
PIPE	SIZE	LENGH IN FT.
RCCP CLASS III	15"	186
RCCP CLASS IV	18"	88
RCCP	24"	53



BUILDING 'A' PLAN
N.T.S.

BUILDING 'A' ELEVATION
N.T.S.

STORAGE-BUILDING 'B' PLAN
N.T.S.

STORAGE-BUILDING 'B' ELEVATION
N.T.S.

PLAN
SCALE: 1"=30'

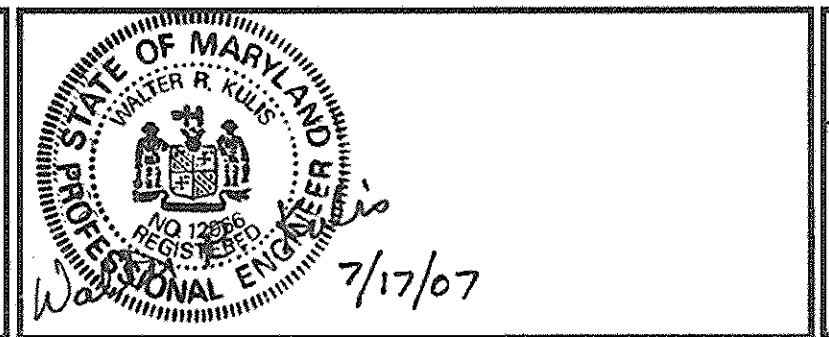
LEGEND:

- 376 EX. WOODS LINE
- 380 EX. CONTOUR LINE
- 380 PROP. CONTOUR LINE
- CURB LINE
- CENTER LINE
- 101 TRAVERSE POINT
- EX. FENCE
- PROP. BUILDINGS
- P-3 PAVEMENTS
- SOLID SODDING

APPROVED: DEPARTMENT OF PLANNING AND ZONING			
Director		Date	
Chief, Division of Land Development		Date	
Chief, Development Engineering Division		Date	
SUBDIVISION	SECTION/AREA	N/A	PARCEL NO.
ROCKBURN BRANCH PARK			42
LIBER/FOLIO	BLOCK NO.	ZONING	TAX/MAP GRID
3505/95	4	R-20	37 4
ELEC. DIST.		CENSUS TR.	
1		6011.01	
WATER CODE		SEWER CODE	
D-04		2153800	

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12826, EXPIRATION DATE: 8/1/08

1. REVISED CAPITAL PROJECT NO.
2. REVISED BLDG. FOOTPRINT
3. REVISED SIDEWALKS, ENTRANCES, PARKING, & APPURTENANCES
4. REVISED TRANSFORMER
5. REMOVED



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OWNER
HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS

7120 OAKLAND MILLS ROAD
COLUMBIA, MD. 21046

REVISIONS		
NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

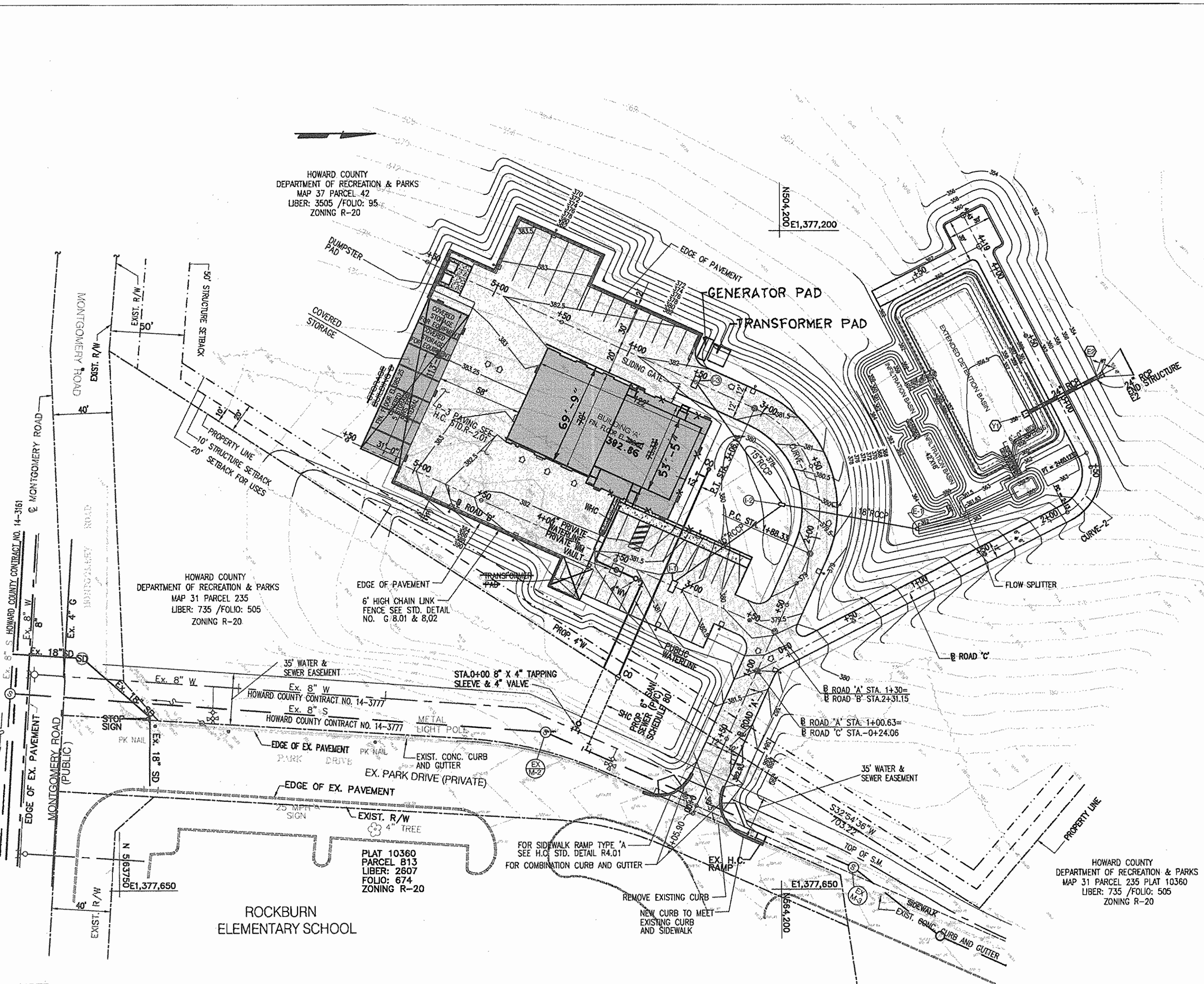
STORM DRAIN PLAN
ROCKBURN BRANCH PARK
MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND

DATE: JANUARY 10, 2003 SCALE: 1"=30'

CAPITAL PROJECT NO.
 32-8472 N-3107

C-7

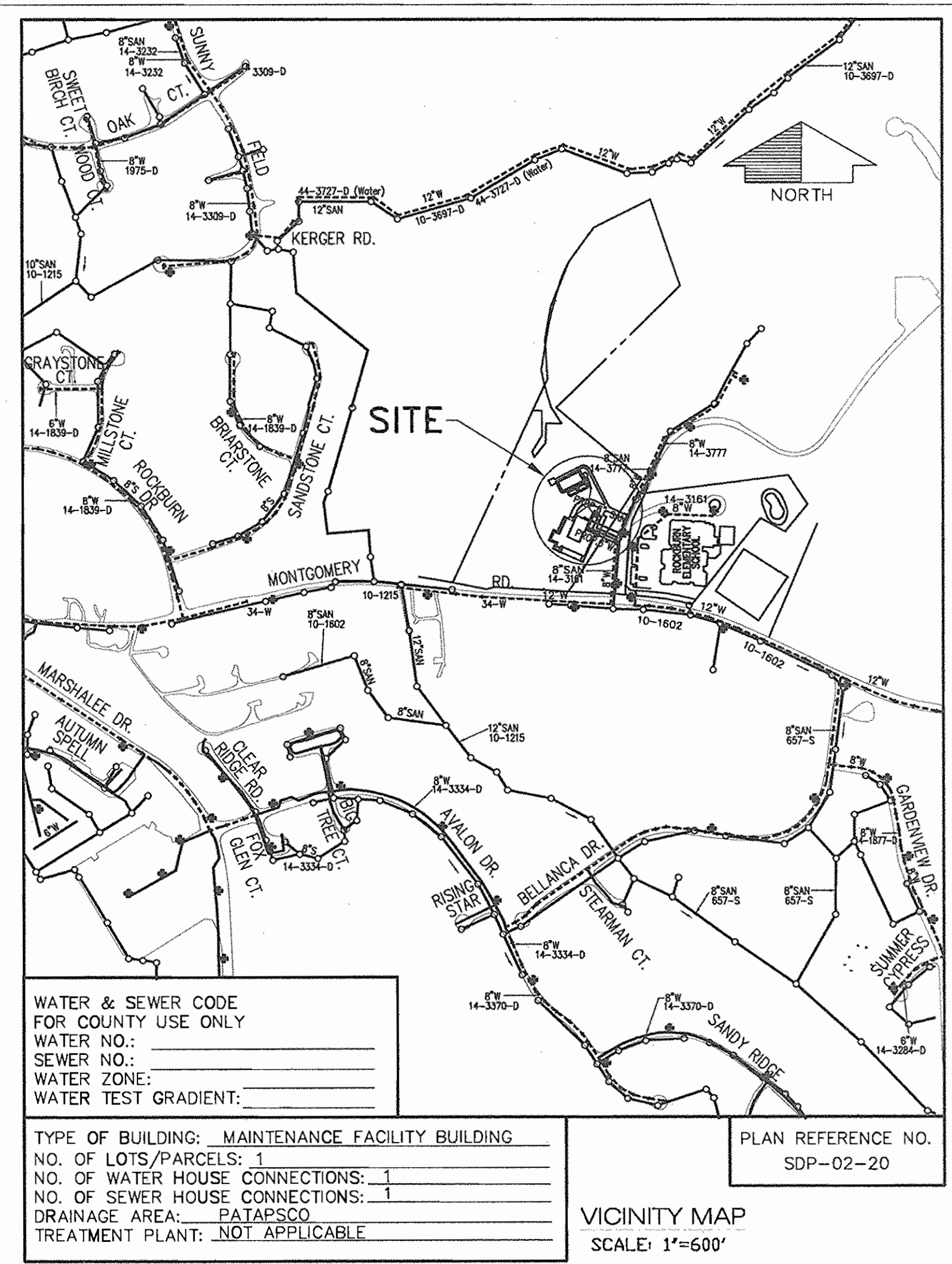
SET SHEET 7 OF 28



- LEGEND:**
- EX. WOODS LINE
 - EX. FENCE
 - PROP. BUILDINGS
 - P-3 PAVEMENTS
 - LIGHT POLE
 - EX. STORM DRAIN
 - EX. SD MAN HOLE
 - EX. SAN. MAN HOLE
 - EX. SAN. SEWER
 - EX. WATER LINE
 - PROP. WATER LINE
 - PROP. SAN. SEWER
 - PROP. STORM DRAIN
 - SOLID SODDING

GENERAL NOTES

1. APPROXIMATE LOCATIONS OF EXISTING WATER LINES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
4. ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM.
6. FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (1991 AMENDMENTS) THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB SITE.
7. EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
8. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION - 531-5533
 - BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES - 850-4620
 - BALTIMORE GAS & ELECTRIC CO. - UNDER GROUND DAMAGE CONTROL - 787-9068
 - MISS UTILITY - 1-800-257-7777
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 313-4900
9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
10. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE.
11. ALL SEWER CONNECTIONS SHALL BE D.I.P. OR P.V.C.
12. T.B. DENOTES TEST BORING.
13. WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED AS TO HAVE ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
14. ALL WATER MAINS SHALL BE D.I.P., CLASS 52
15. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2' COVER UNLESS OTHERWISE NOTED.
16. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
17. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
18. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS (W111 AND W213). SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
19. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
20. ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-153; DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
21. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, (410) 313-2450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.



WATER & SEWER CODE FOR COUNTY USE ONLY
 WATER NO.: _____
 SEWER NO.: _____
 WATER ZONE: _____
 WATER TEST GRADIENT: _____

TYPE OF BUILDING: MAINTENANCE FACILITY BUILDING
 NO. OF LOTS/PARCELS: 1
 NO. OF WATER HOUSE CONNECTIONS: 1
 NO. OF SEWER HOUSE CONNECTIONS: 1
 DRAINAGE AREA: PATAPSCO
 TREATMENT PLANT: NOT APPLICABLE

PLAN REFERENCE NO. SDP-02-20
 VICINITY MAP SCALE: 1"=600'

ENGINEER'S CERTIFICATION

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

Signature of Engineer: *Edward B. Robinson* DATE: 2/12/03

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

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE: _____

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

APPROVED: _____ DATE: _____
 HOWARD SOIL CONSERVATION DISTRICT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Director: *Mark A. Leight* Date: 2/10/03
 Chief, Division of Land Development: *Carole Hanley* Date: 2/12/03
 Chief, Development Engineering Division: *Chris Dammann* Date: 2/12/03

SUBDIVISION	ROCKBURN BRANCH PARK	SECTION/AREA	N/A	PARCEL NO.	42
LIBER/FOLIO	3505/95	BLOCK NO.	4	ZONING	R-20
TAX/MAP	37	GRID	4	ELEC. DIST.	1
CENSUS TR.	6011.01	SEWER CODE	2153800	WATER CODE	D-04

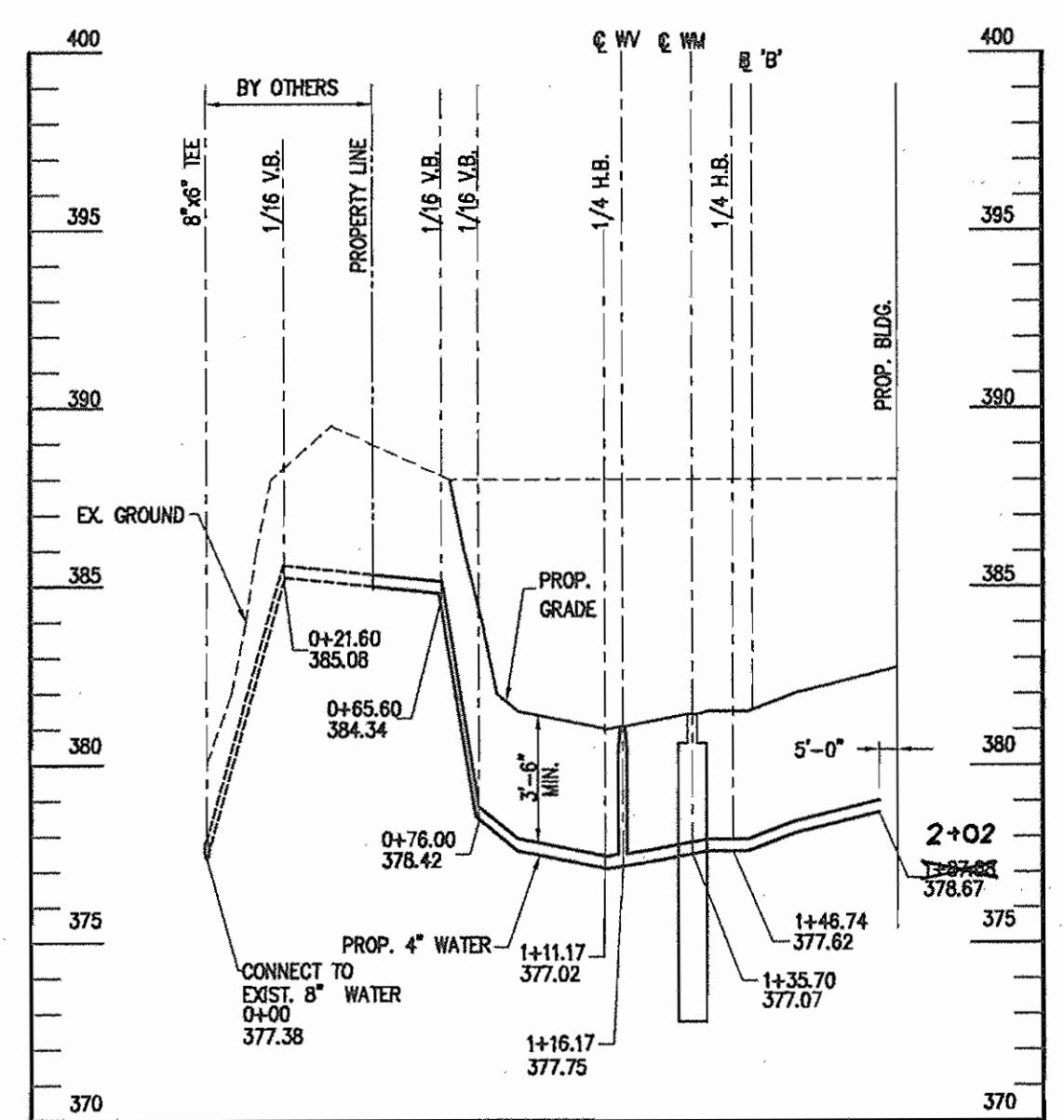
NOTE: BEFORE ORDERING T-CONNECTIONS, TAKE TEST PITS AT CONNECTIONS OF NEW WATER & SEWER LINES TO EXISTING TO CONFIRM LOCATIONS, SIZES & MATERIAL OF EXISTING PIPES.

UTILITY PLAN
SCALE: 1"=50'-0"

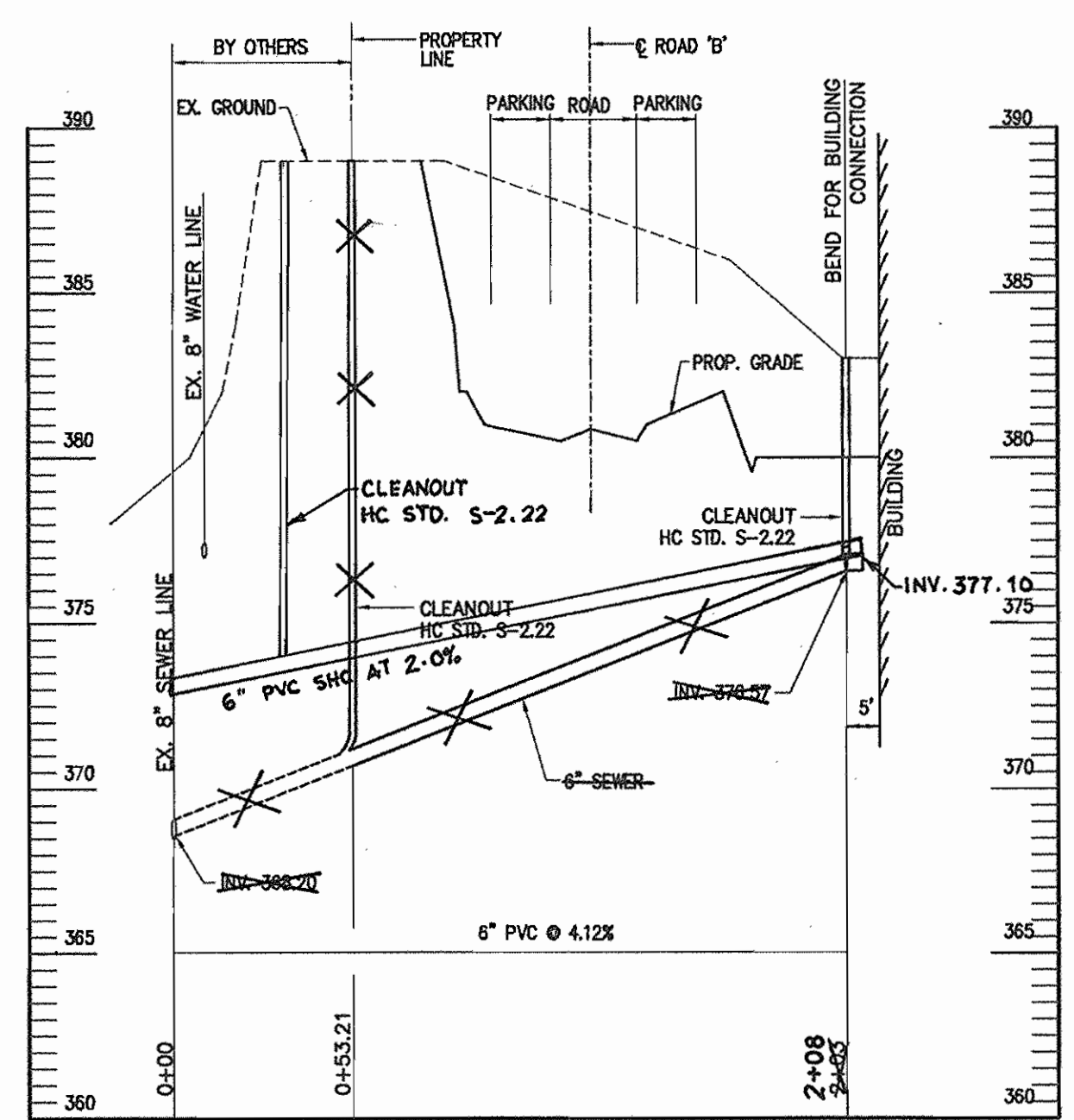
WATER LINE (FOR BUILDING CONNECTION) TABULATION CHART

WATER LINE STATION	APPURTENANCE	% ROAD STATION (BASELINE 'A')	OFFSET (BASELINE 'A')	BUTTRISS	
0+00±	8" x 4" TAPPING SLEEVE & VALVE	0+13.15±	96.02± LEFT	HC STD. W 2.23	PUBLIC WATERLINE
1+11.17	1/4 H.B.	1+24.25	96.02± LEFT	HC STD. W 2.24	PUBLIC WATERLINE
1+16.17	4" WATER VALVE	1+24.25	101.02' LEFT		PRIVATE WATERLINE
1+35.70	WATER METER	1+24.25	115.55' LEFT	HC STD. W 3.43	PRIVATE WATERLINE
1+46.74	1/4 H.B.	1+24.25	131.89' LEFT	HC STD. W 2.24	PRIVATE WATERLINE

NOTE: 1. BUTTRISSES FOR VERTICAL BENDS SHALL CONFORM TO HC STANDARD W 2.22. SEE PROFILES THIS SHEET.



WATERLINE PROFILE FOR BUILDING CONNECTION
SCALE: 1"=50'-0" (HORIZ.)
1"=5'-0" (VERT.)



PROFILE - PROP. SANITARY SEWER
SCALE: 1"=20' (HORIZ.)
1"=5' (VERT.)

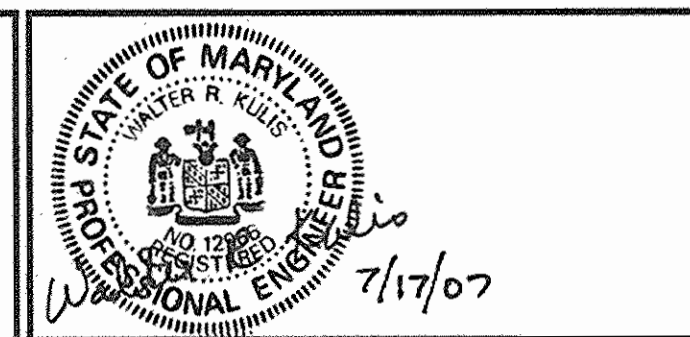
NOTE: FOR STORM DRAIN PROFILES AND SANITARY SEWER SEE SHEET NO. C-7

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND AS SHOWN ON 200- AND 201- THESE PLANS.

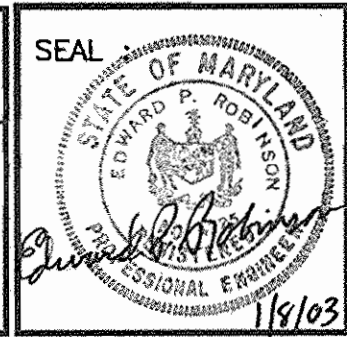
Signature of Developer: *Cap Chen* DATE: 2/12/03

*PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12166. EXPIRATION DATE: 5/1/08

1. REVISED CAPITAL PROJECT NO.
 2. REVISED BLDG. FOOTPRINT
 3. REVISED SIDEWALKS, ENTRANCES, PARKING & APPURTENANCES
 4. REVISED TRANSFORMER PAD LOCATION
 5. REMOVED BUILDING 'B'
 6. REVISED WATERLINE AND SANITARY SEWER PROFILE



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 Columbia Maryland 21045 (410)995-4067 Fax (410)992-1837



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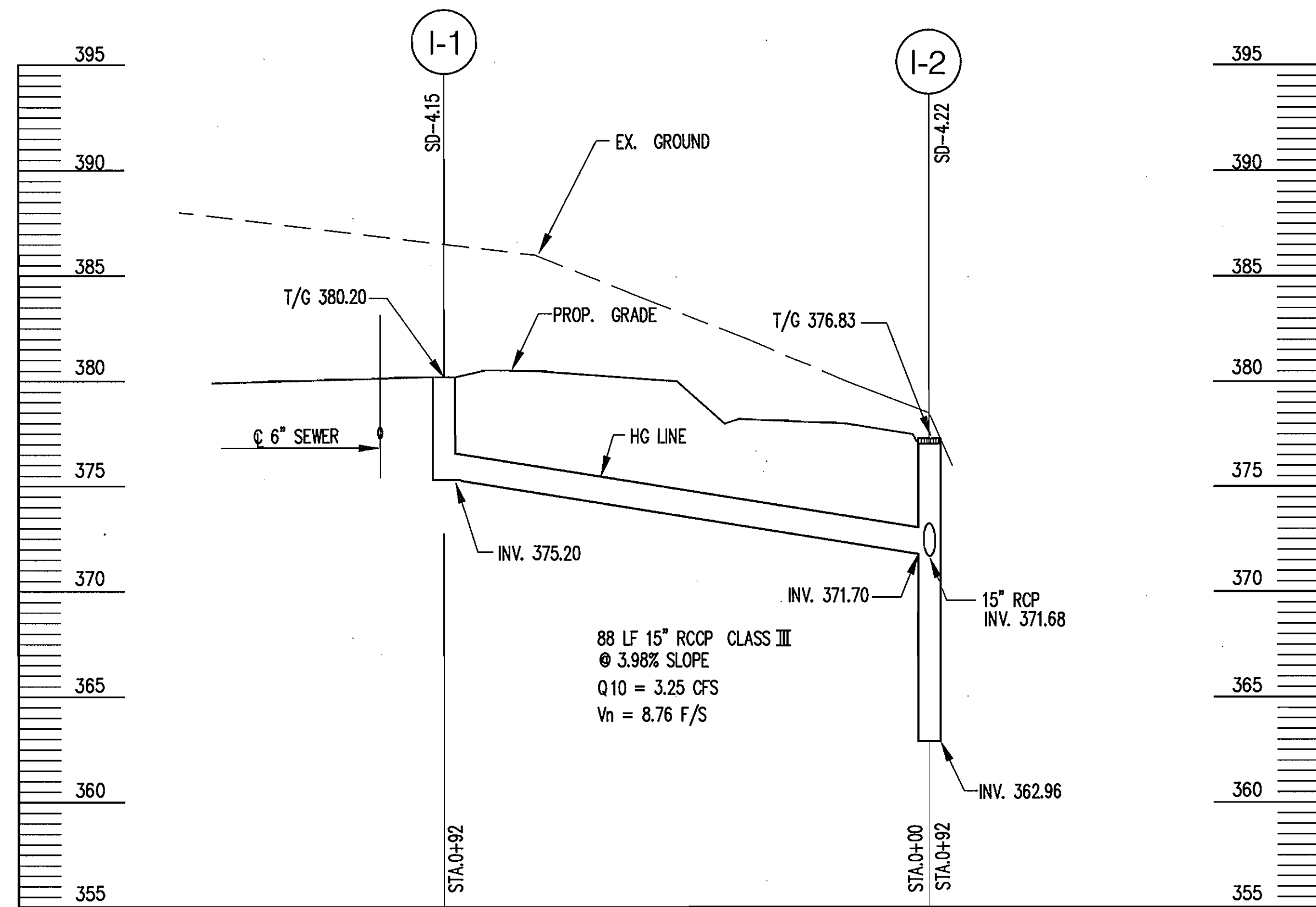
OWNER
 HOWARD COUNTY
 DEPARTMENT OF RECREATION AND PARKS
 7120 OAKLAND MILLS ROAD
 COLUMBIA MD. 21046

REVISIONS

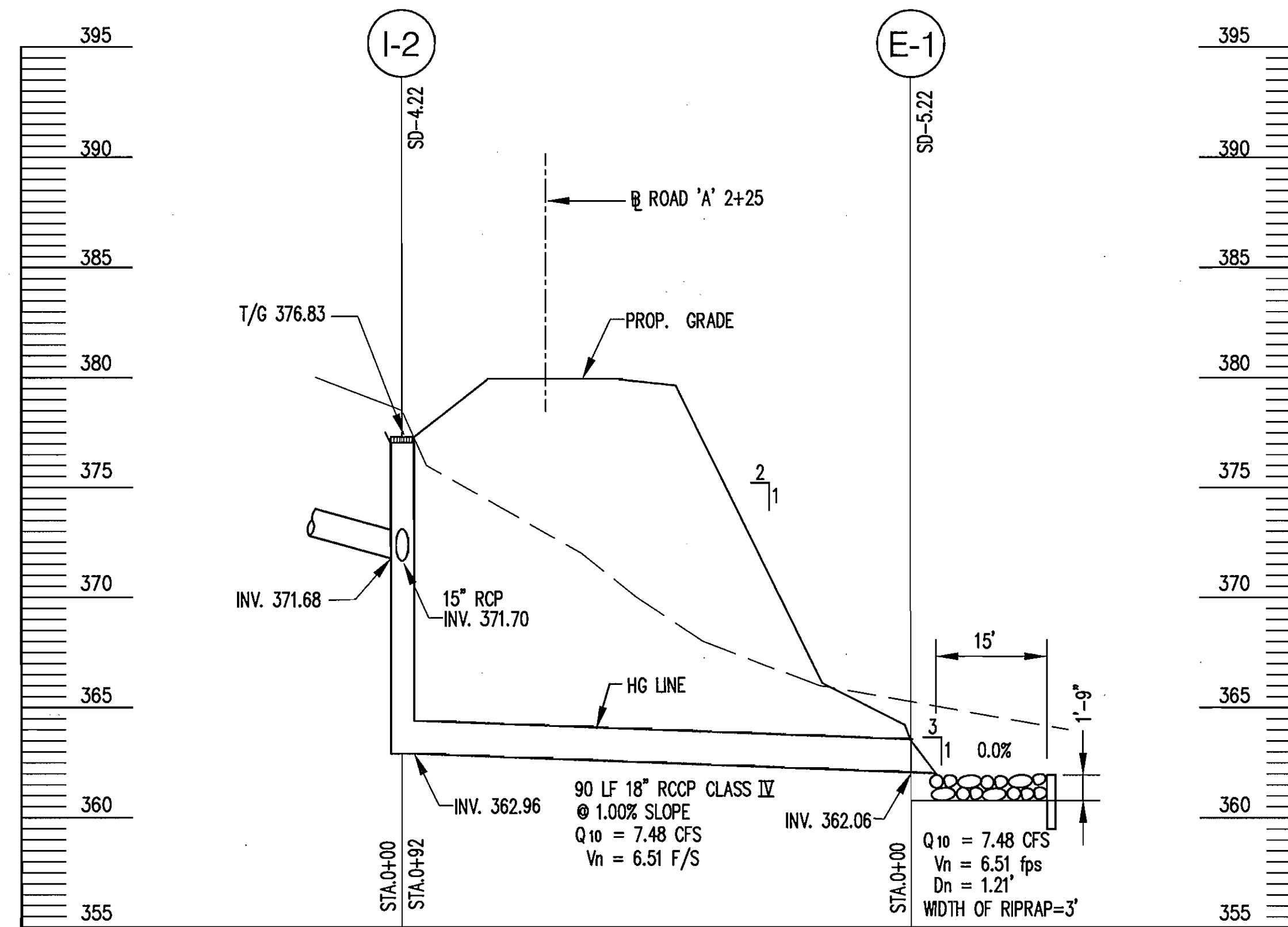
NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

WATER AND SEWER PLAN
 ROCKBURN BRANCH PARK
 MAINTENANCE FACILITY
 HOWARD COUNTY, MARYLAND
 DATE: JANUARY 10, 2003 SCALE: AS SHOWN

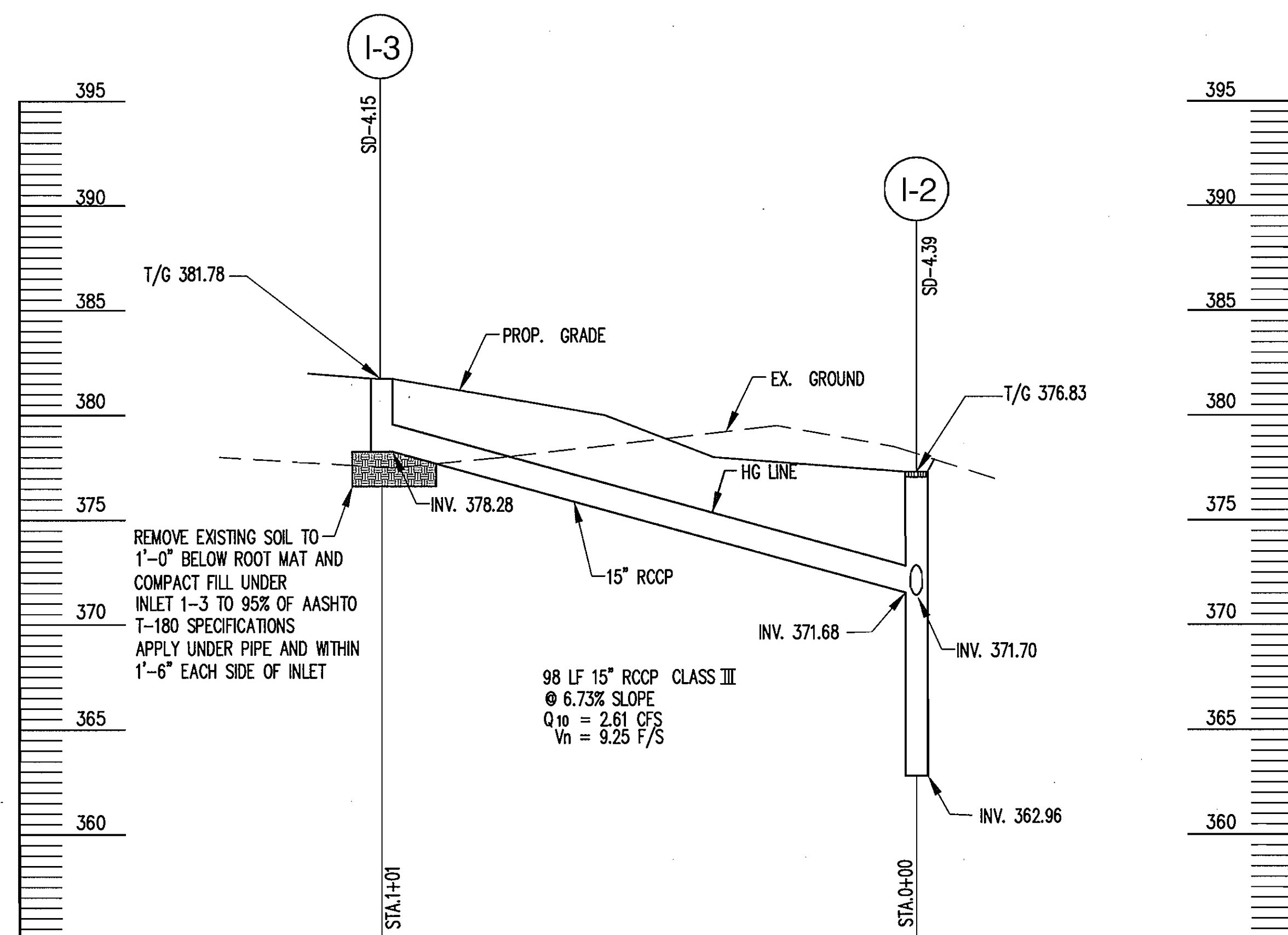
CAPITAL PROJECT NO. 4200 N-3107
C-8
 SET SHEET 8 OF 26
SDP-02-28



PROFILE - PROP. STORM DRAIN
 SCALE: 1" = 20' (HORIZ.)
 1" = 5' (VERT.)



PROFILE - PROP. STORM DRAIN
 SCALE: 1" = 20' (HORIZ.)
 1" = 5' (VERT.)



PROFILE - PROP. STORM DRAIN
 SCALE: 1" = 20' (HORIZ.)
 1" = 5' (VERT.)

STRUCTURE SCHEDULE							
STRUCT. NO.	TYPE	STD. NO.	LOCATION	TOP ELEV.	INVERT IN	INVERT OUT	REMARK
I-1	TYPE-C INLET	SD.4.15	STA. 3+06	380.20	-	375.20	GRATE 2.75' x 10'
I-2	TYPE-E INLET	SD.4.21	STA. 2+22	376.83	371.50	362.96	25' LT. ROAD A
I-3	TYPE-C INLET	SD.4.15	STA. 3+50	381.78	-	378.28	GRATE 2.75' x 10'
E-1	END SECTION	SD.5.22	STA. 2+25			362.06	50' RT. ROAD A
Y-1	OUTLET STRUCTURE	SD.4.40	IN POND			360.00	PROVIDE RIP RAP
E-2	END SECTION	SD.5.52	OUT FALL			356.00	PROVIDE RIP RAP

PIPE SCHEDULE LENGTH		
PIPE	SIZE	LENGTH IN FT.
RCCP CLASS III	15"	186
RCCP CLASS IV	18"	88
RCCP	24"	53

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director: *[Signature]* Date: *3/19/03*

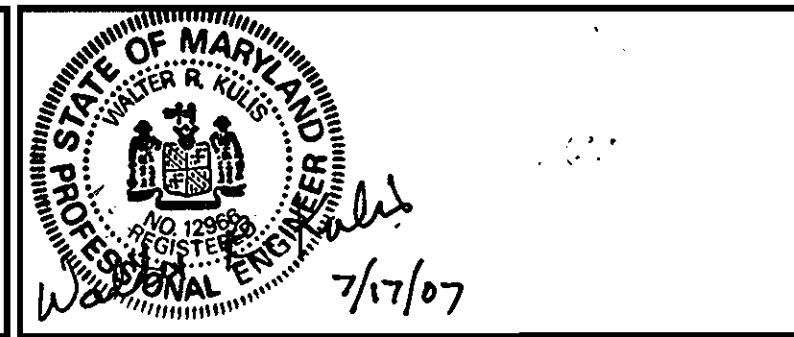
Chief, Division of Land Development: *[Signature]* Date: *3/19/03*

Chief, Development Engineering Division: *[Signature]* Date: *3/19/03*

SUBDIVISION	SECTION/AREA	PARCEL NO.
ROCKBURN BRANCH PARK	N/A	42
LIBER/FOLIO	BLOCK NO.	ZONING
3505/95	4	R-20
TAX/MAP	GRID	ELEC. DIST.
37	4	1
CENSUS TR.	6011.01	
WATER CODE	D-04	SEWER CODE
		2153800

PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12166, EXPIRATION DATE: 5/1/08

1. REVISED CAPITAL PROJECT NO.



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 Columbia Maryland 21045 (410)995-4067 Fax(410)992-1837



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OWNER

HOWARD COUNTY
 DEPARTMENT OF RECREATION AND PARKS

7120 OAKLAND MILLS ROAD
 COLUMBIA MD. 21046

REVISIONS		
NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

UTILITY PROFILES

ROCKBURN BRANCH PARK
 MAINTENANCE FACILITY
 HOWARD COUNTY, MARYLAND

DATE: JANUARY 10, 2003 SCALE: AS SHOWN

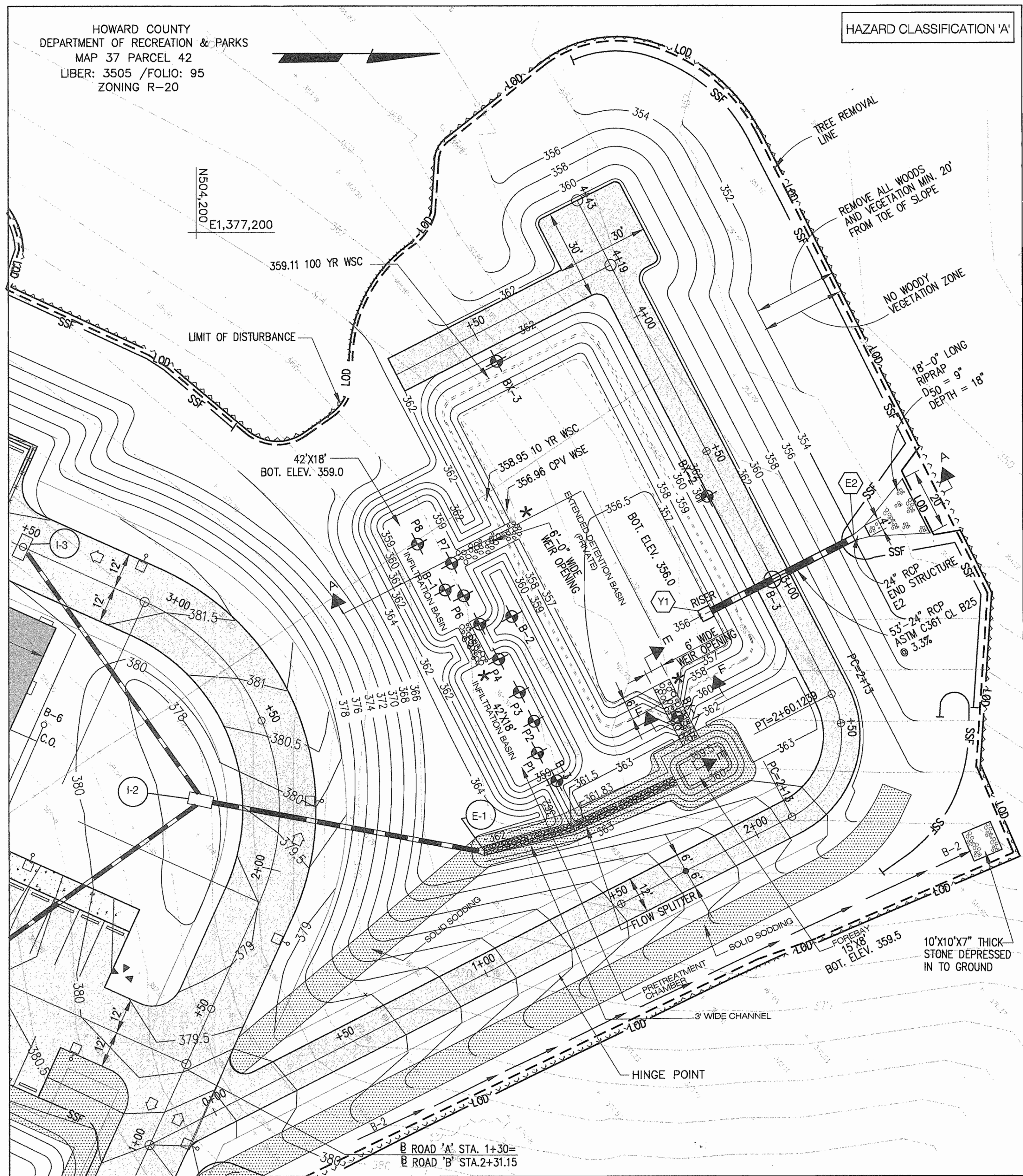
CAPITAL PROJECT NO.
 35-3492 N-3107

C-9

SET SHEET 9 OF 28

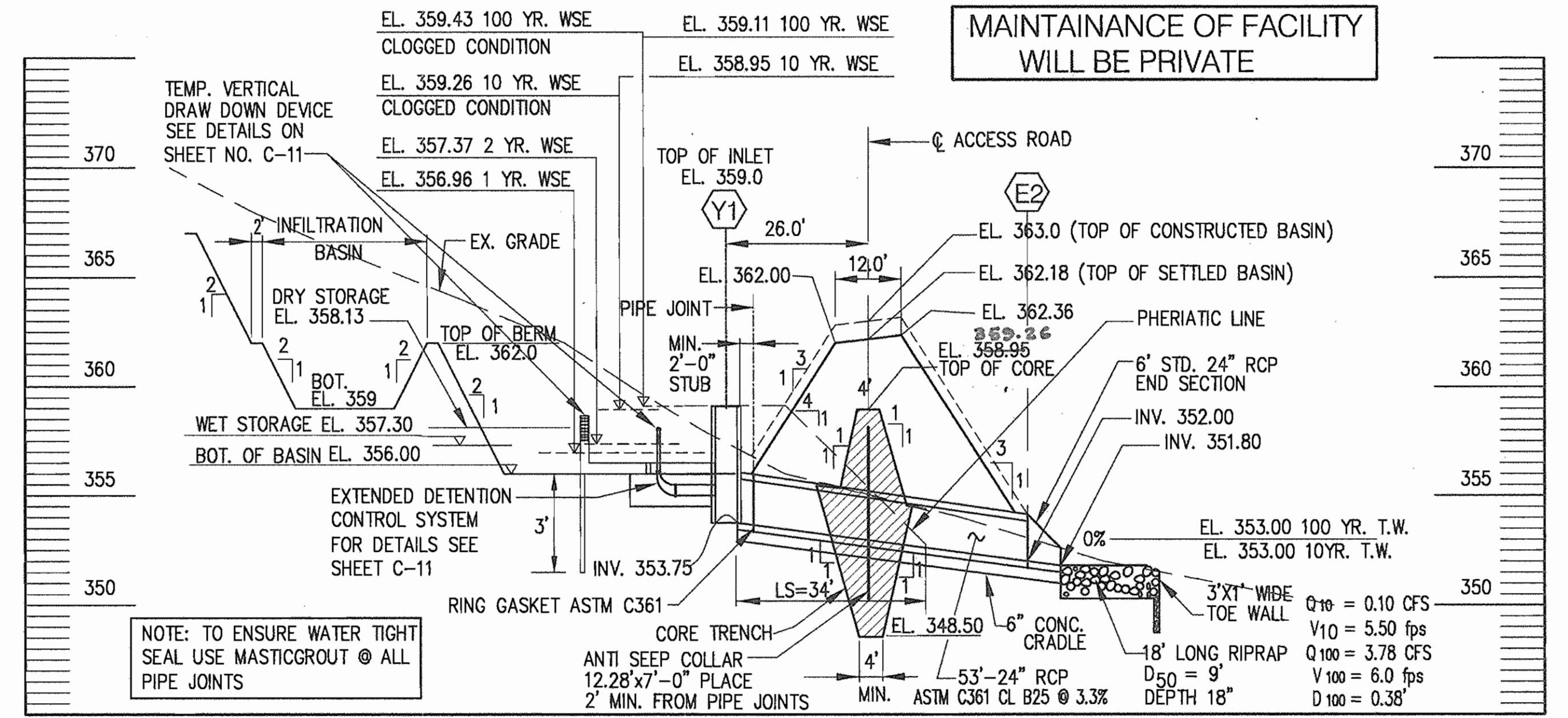
HOWARD COUNTY
DEPARTMENT OF RECREATION & PARKS
MAP 37 PARCEL 42
LIBER: 3505 / FOLIO: 95
ZONING R-20

HAZARD CLASSIFICATION 'A'



PLAN
SCALE: 1"=20'

* USE SAME STONE AS USED FOR RRP SEE DETAILS SHEET NO C-11



SECTION A-A
THRU INFILTRATION BASIN & EXTENDED DETENTION BASIN
SCALE: HOR. 1"=20'
VERT. 1"=5'

MAINTENANCE OF FACILITY
WILL BE PRIVATE

DESIGN SUMMARY

Extended Detention Basin #1
Drainage Area 2.5Ac
Bottom of Facility 356.00
Top of Embankment 362.18 @
Riser Type - Std 4' X 4' Yard Inlet Concrete
Low Orifice 1.5" diameter @ Elevation 356.00
Top of Riser 359.00
Principal Spillway 53' Long 24" RCP ASTM 361 CL B-25
Emergency Spillway N/A Top of inlet works as E.S.

	Q _{in}	Q _{out}	W.S.E.	Storage
1 Year Storm	1.74	.06	356.96	0.061 ACFT
2 Year Storm	3.02	0.07	357.37	0.1781 ACFT
10 Year Storm	10.43	0.10	358.95	0.2781 ACFT
100 Year Storm	3.78	12.50	359.11	0.3366 ACFT
Extended Detention Basin	3.0	0.06	357.88	0.124 ACFT

WQv = 4051 cft
Rev = 1154 cft
Cpv = 4410 cft
Qf N/A

SEDIMENT CONTROL & POND CONSTRUCTION

DEVELOPER
"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 day of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

Jan [Signature]
Signature of Developer
Print name below signature
Date: 2/11/03

ENGINEER
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Edward [Signature]
Signature of Engineer
Print name below signature
Date: 2/12/03

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Jan [Signature]
USDA - Natural Resources
Conservation Services
Date: 3/10/03

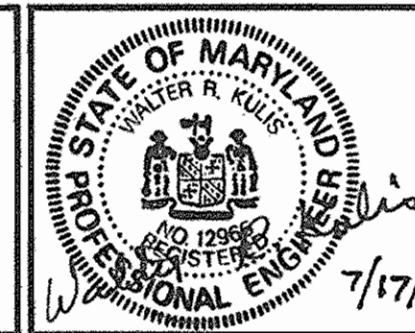
These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

[Signature]
Howard Soil Conservation District
Date: 3/10/03

NOTE:
FOR SECTION E-E & F-F SEE SHEET NO. C-11

APPROVED: DEPARTMENT OF PLANNING AND ZONING			
Director	<i>[Signature]</i>	Date	3/2/03
Chief, Division of Planning & Development	<i>[Signature]</i>	Date	3/19/03
Chief, Development Engineering Division	<i>[Signature]</i>	Date	3/10/03
SUBDIVISION	ROCKBURN BRANCH PARK	SECTION/AREA	N/A
LIBER/FOLIO	3505/95	ZONING	R-20
TAX/MAP	37	GRID	4
ELEC. DIST.	1	CENSUS TR.	6011.01
WATER CODE	D-04	SEWER CODE	2153800

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12666, EXPIRATION DATE 9/1/08"
1. REVISED CAPITAL PROJECT NO.



Architects Engineers
and Construction Consultants
8950 Route 108 Suite 218
Columbia Maryland 21045 (410)995-4067 Fax (410)992-1837

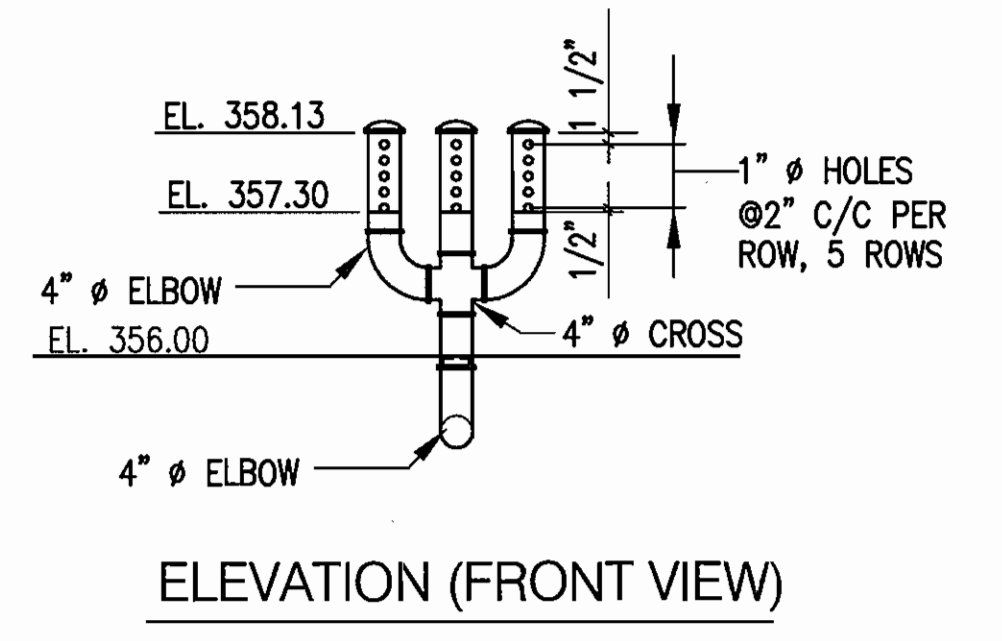
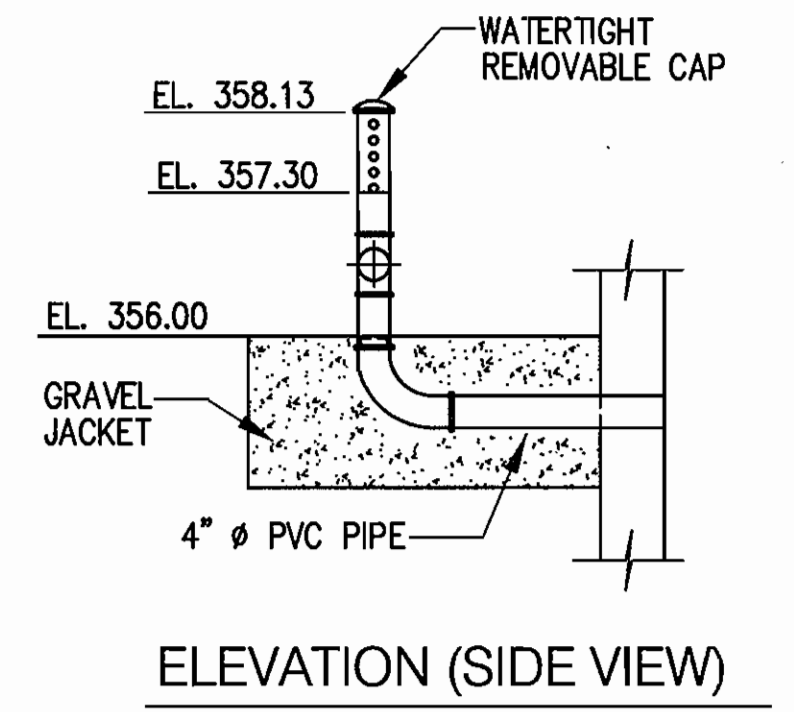
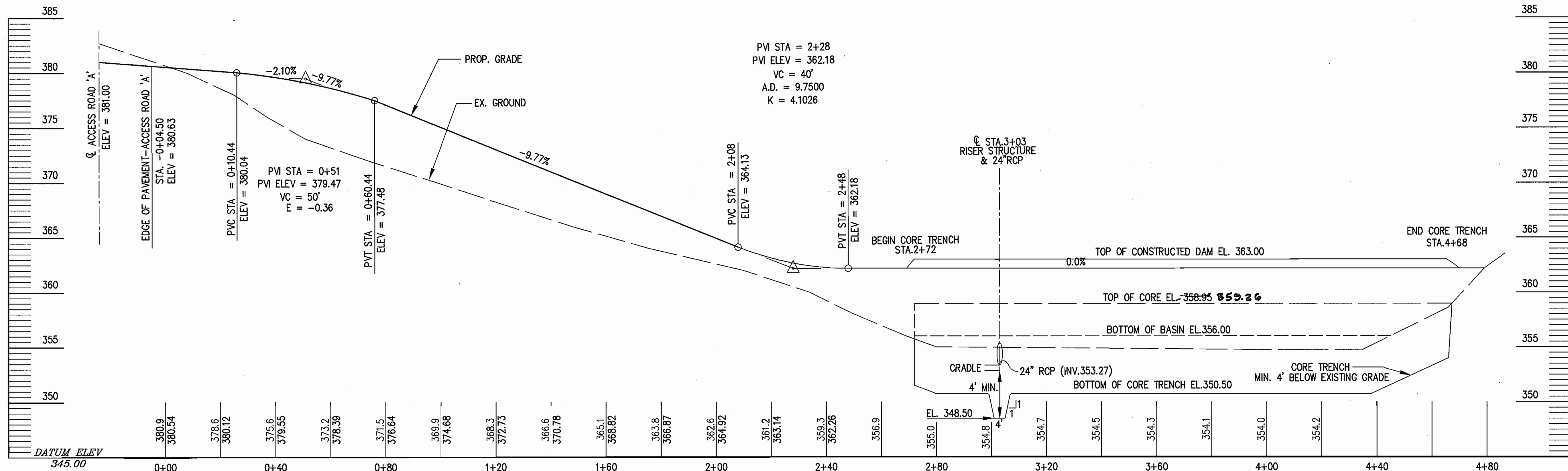
PROGRESSIVE ENGINEERING
CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
9160 RED BRANCH ROAD • SUITE E9
COLUMBIA, MD 21045
PHONE: (410) 715-0390 FAX: (410) 715-1745

OWNER
HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS
7120 OAKLAND MILLS ROAD
COLUMBIA MD. 21046

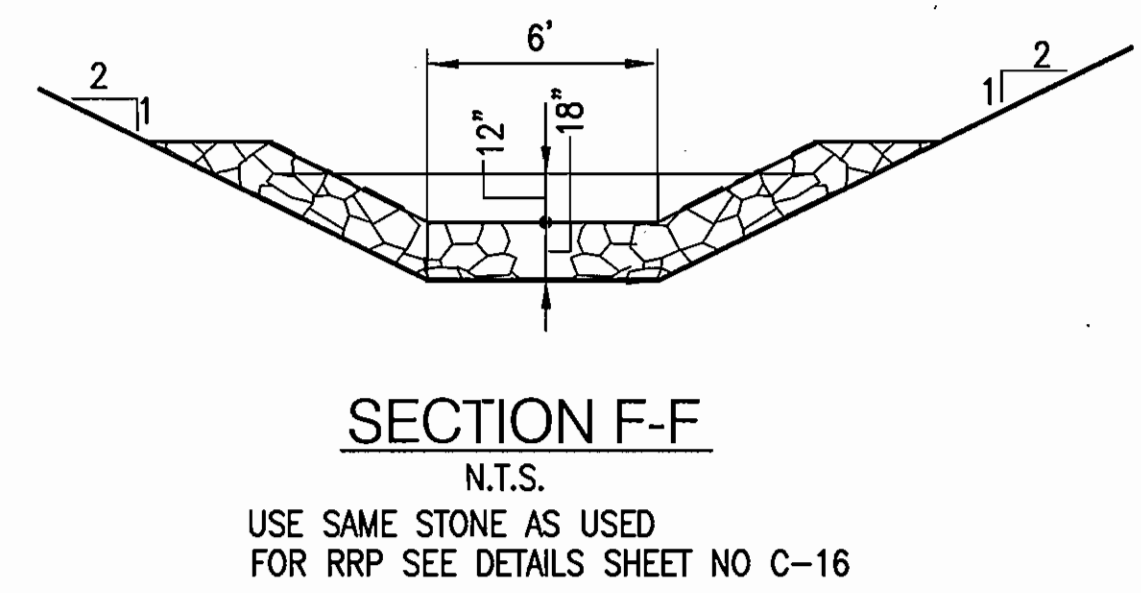
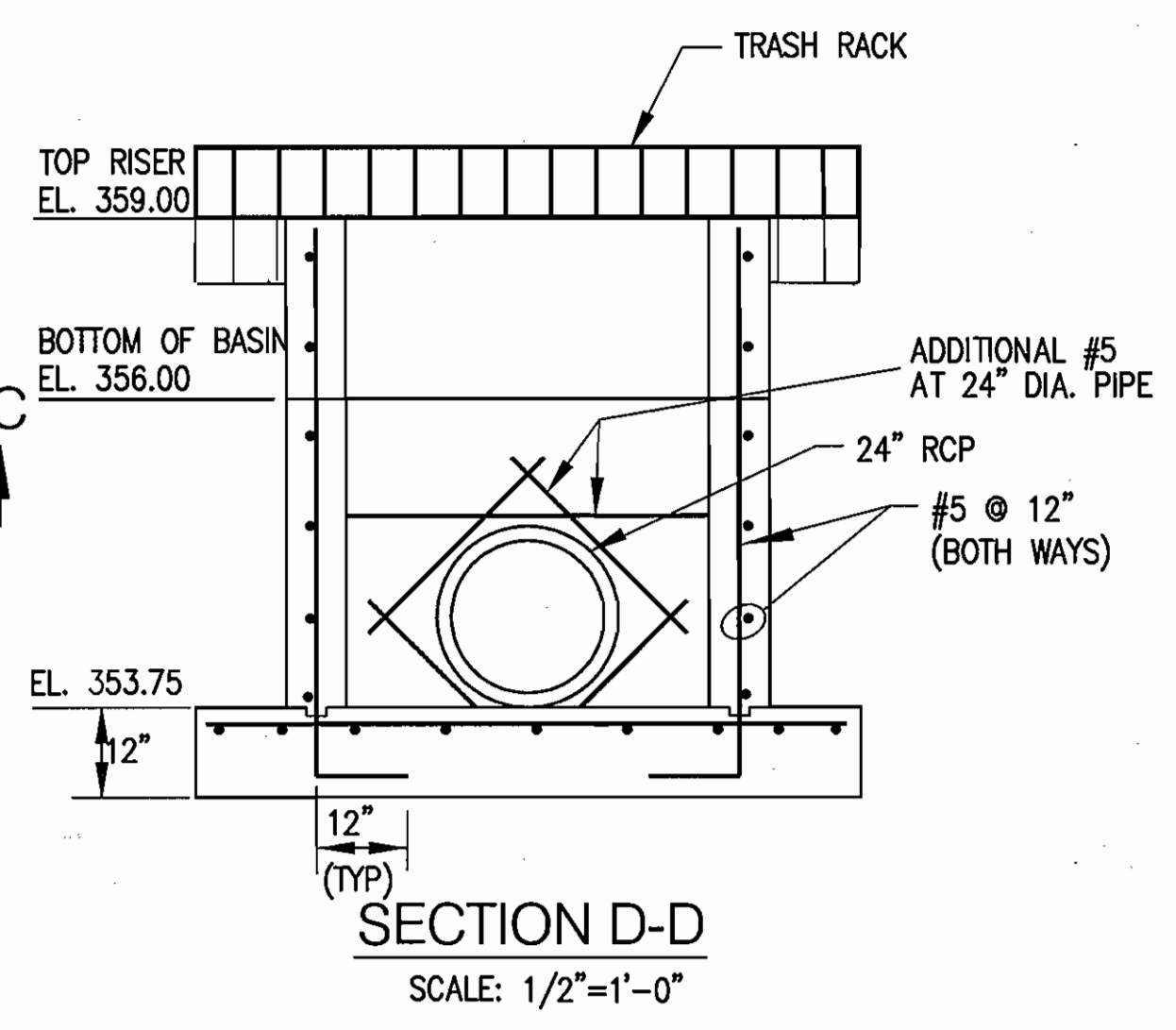
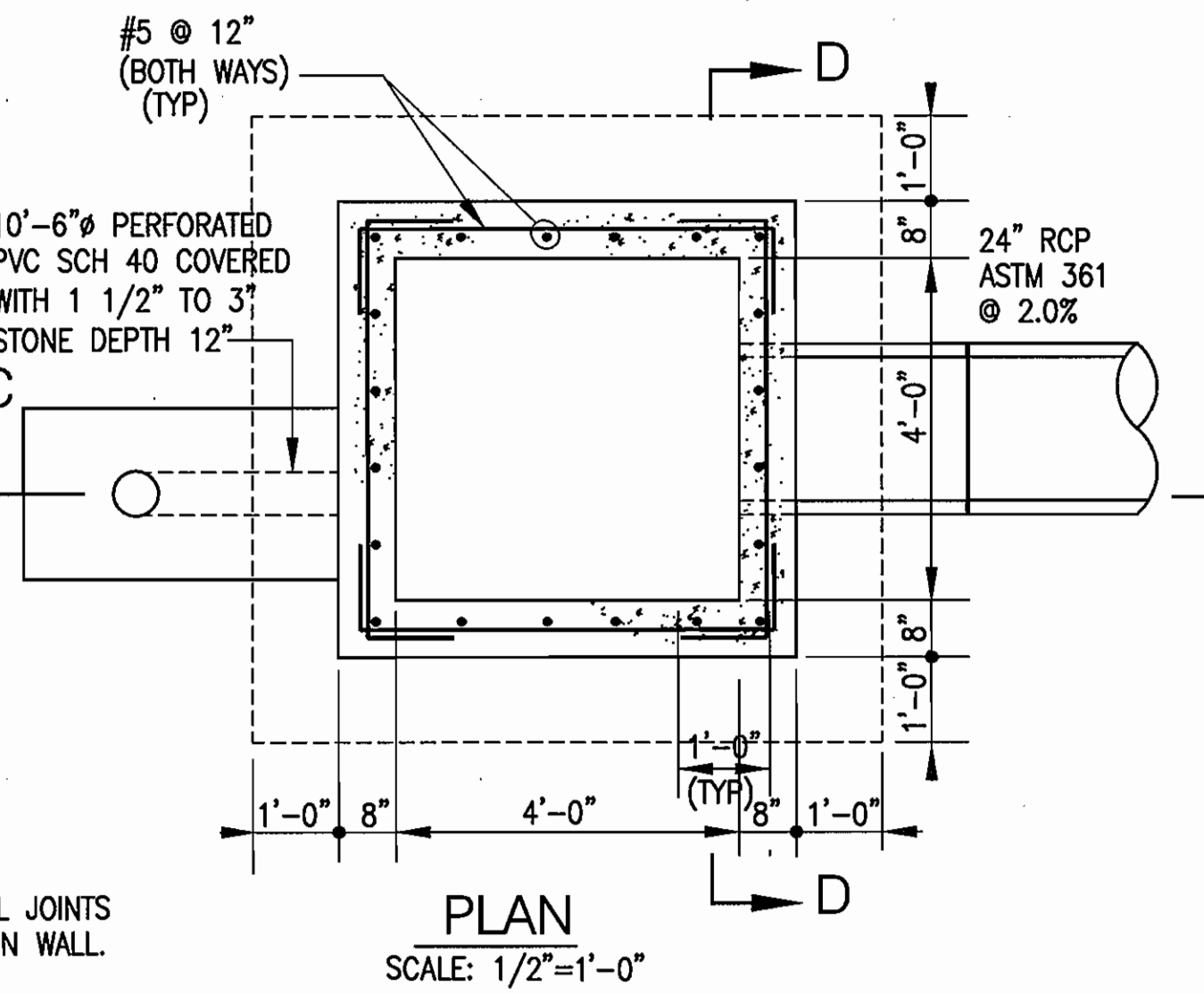
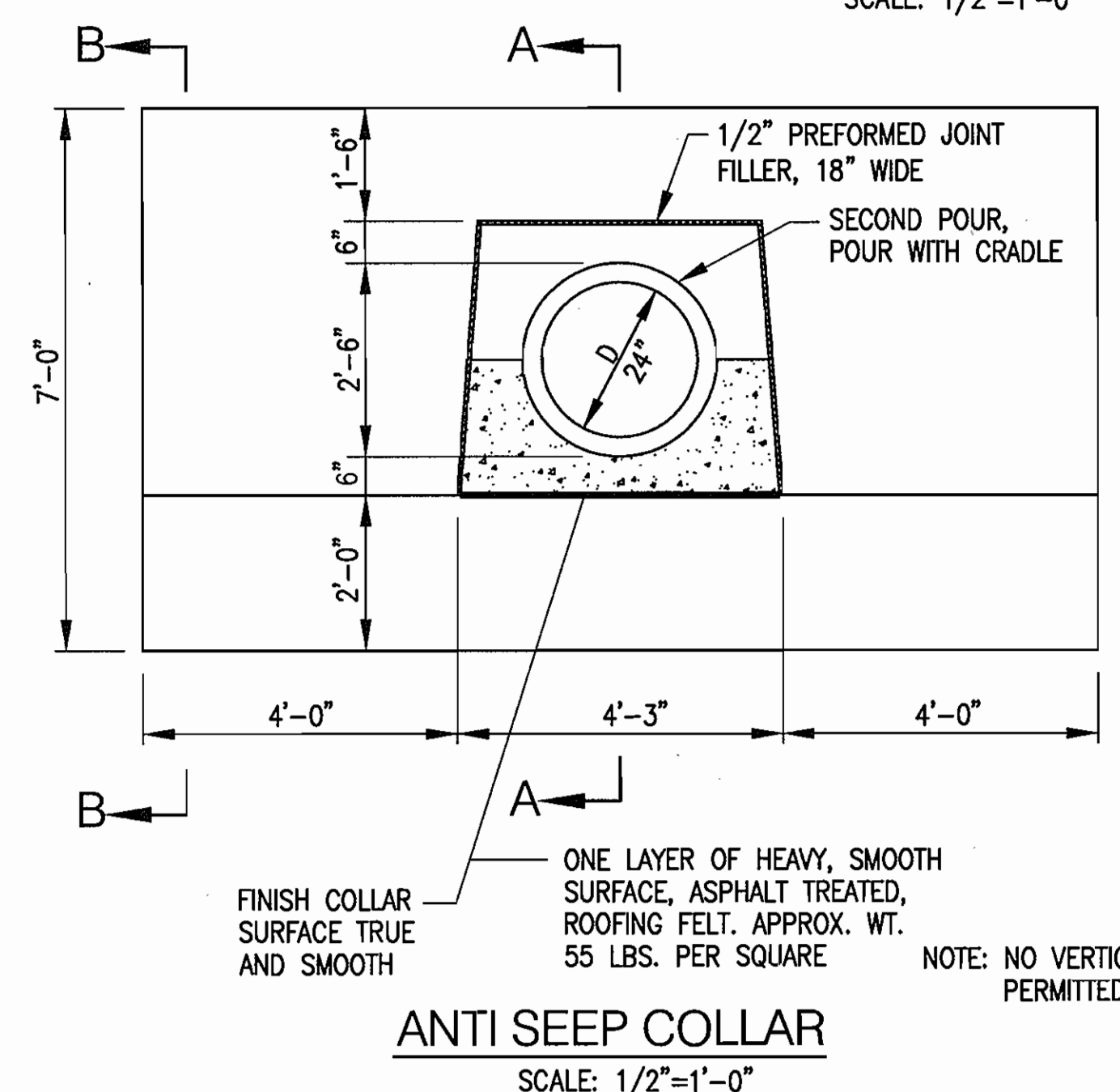
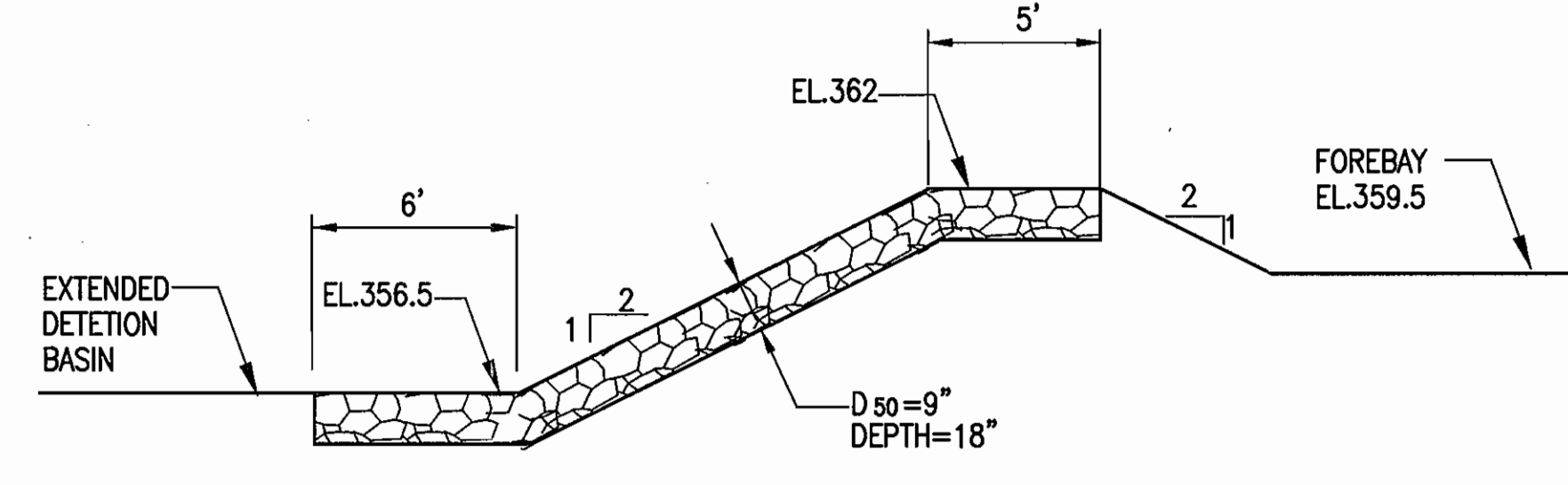
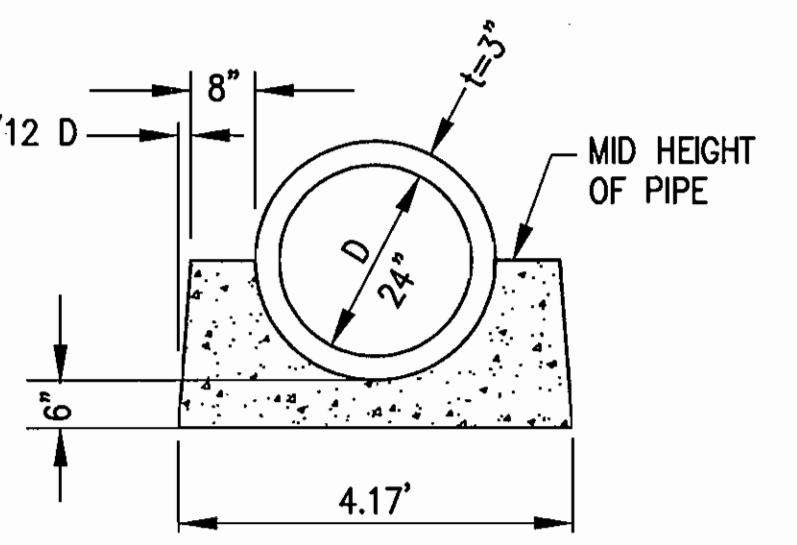
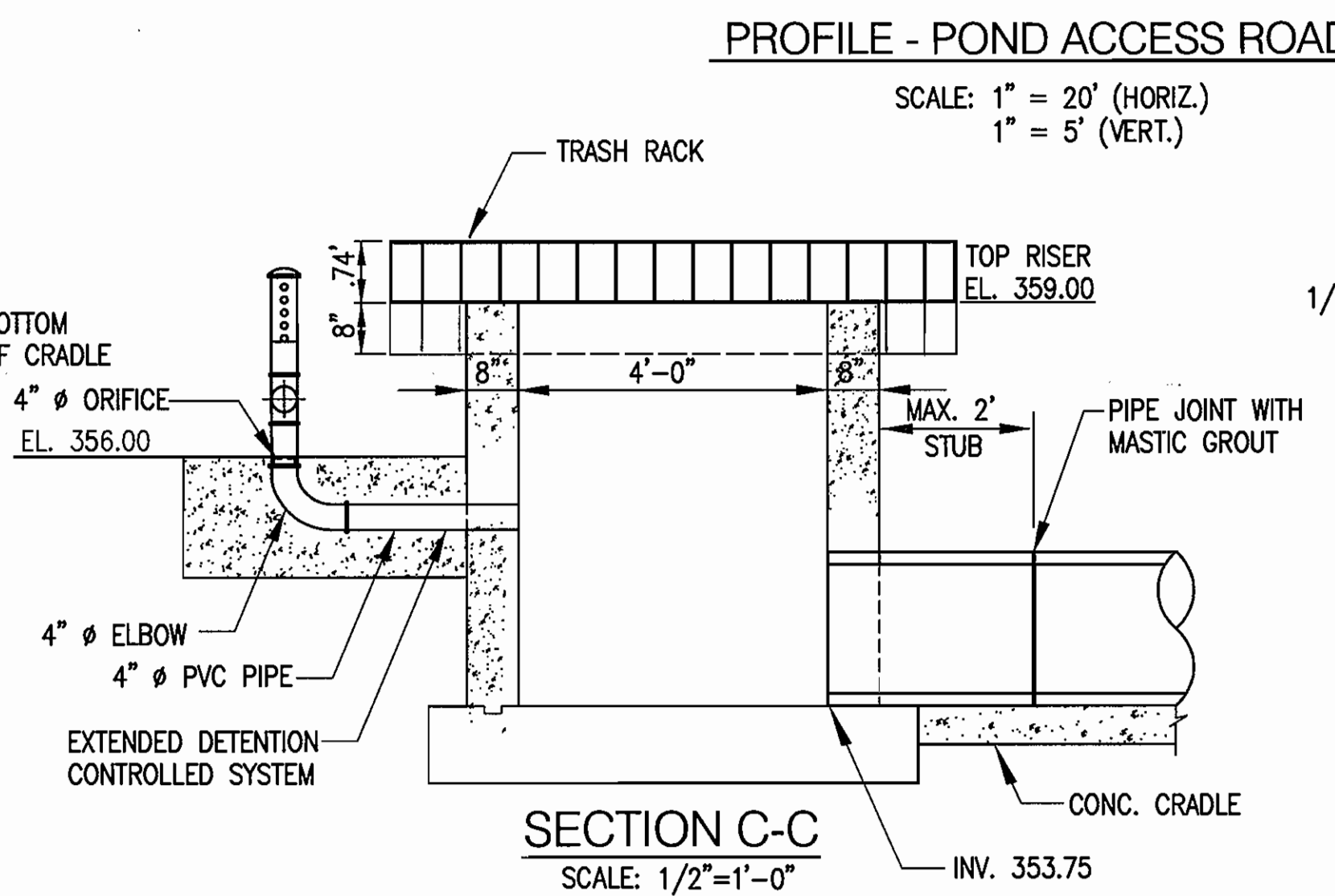
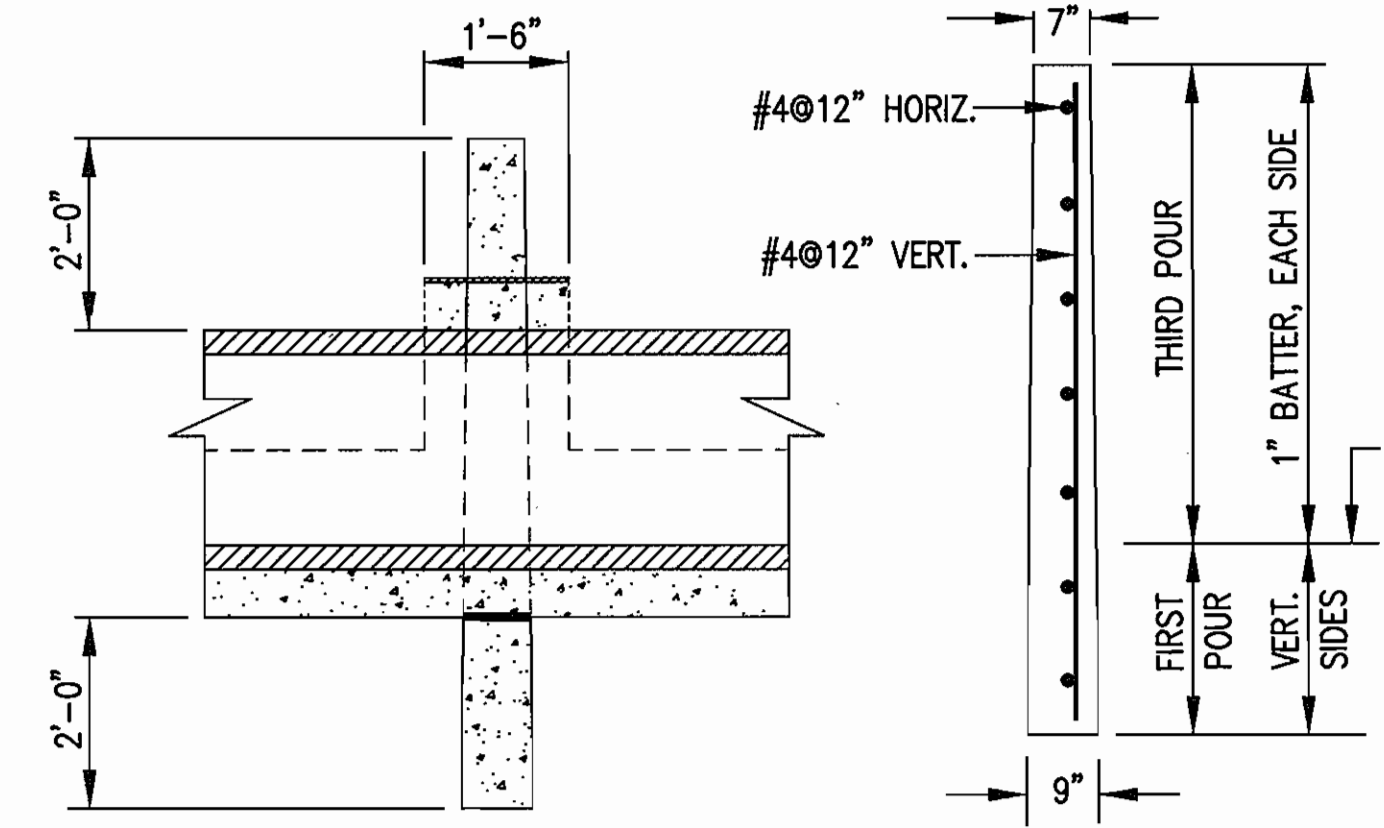
NO.	DATE	DESCRIPTION
1	7/17/02	SEE SEAL AND CERTIFICATION ABOVE

STORM WATER MANAGEMENT POND AND SECTION
ROCKBURN BRANCH PARK
MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND
DATE: JANUARY 10, 2003 SCALE: AS SHOWN

CAPITAL PROJECT NO.
 N-3478: N-3107
C-10
SET SHEET 10 OF 26
SDP-02-26



TEMP. VERTICAL
DRAW DOWN DEVICE
N.T.S.

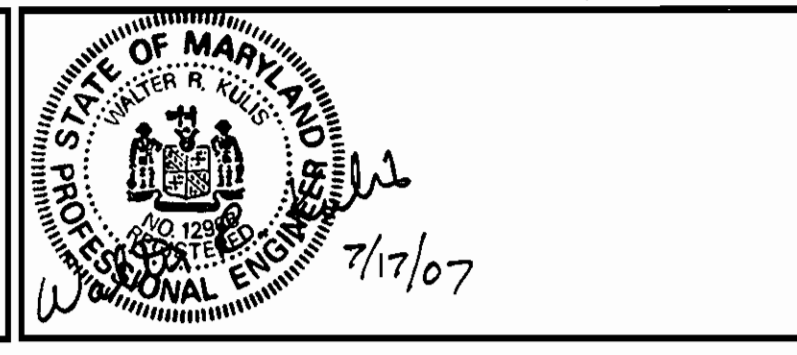


NOTE:
FOR LOCATION OF SECTION E-E & F-F SEE SHEET NO. C-10

APPROVED: DEPARTMENT OF PLANNING AND ZONING					
Director: <i>Mark A. Long</i>				Date: 2/17/03	
Chief, Planning & Development: <i>Andy Kline</i>				Date: 2/19/03	
Chief, Development Engineering Division: <i>Chris...</i>				Date: 2/19/03	
SUBDIVISION	SECTION/AREA	N/A	PARCEL NO.	42	
ROCKBURN BRANCH PARK					
LIBER/FOLIO	BLOCK NO	ZONING	TAX/MAP	GRID	ELEC. DIST.
3505/95	4	R-20	37	4	6011.01
WATER CODE D-04			SEWER CODE 2153800		

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12946, EXPIRATION DATE: 9/14/05"

1. REVISED CAPITAL PROJECT NO.



lati Architects Engineers and Construction Consultants
8950 Route 108 Suite 218
Columbia Maryland 21045 (410)995-4067/Fax(410)992-1837



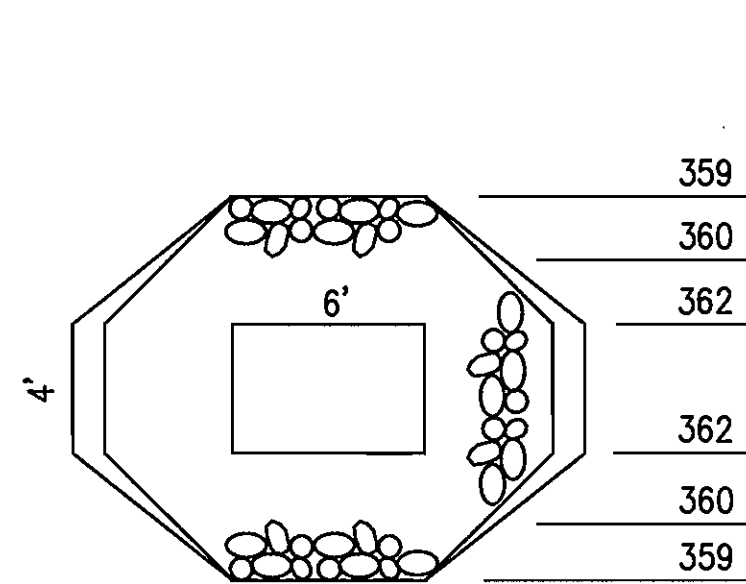
PROGRESSIVE ENGINEERING CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
9160 RED BRANCH ROAD • SUITE E9
COLUMBIA, MD 21045
PHONE: (410) 715-0390 FAX: (410) 715-1745

OWNER
HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS
7120 OAKLAND MILLS ROAD
COLUMBIA MD. 21046

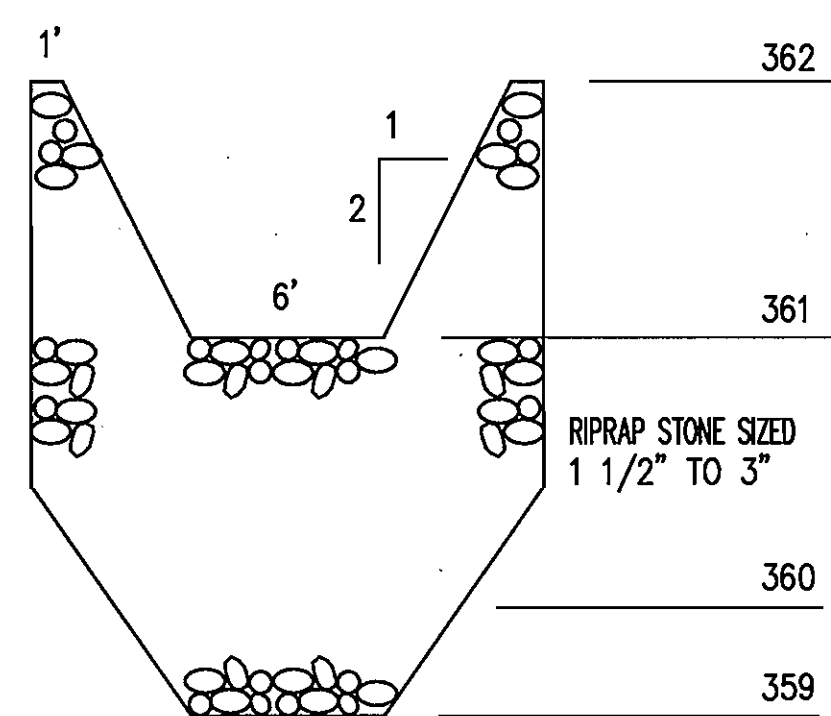
REVISIONS		
NO.	DATE	DESCRIPTION
1	7/17/01	SEE SEAL AND CERTIFICATION ABOVE

STORM WATER MANAGEMENT POND ACCESS ROAD PROFILE AND DETAILS
ROCKBURN BRANCH PARK MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND
DATE: JANUARY 10, 2003 SCALE: AS SHOWN

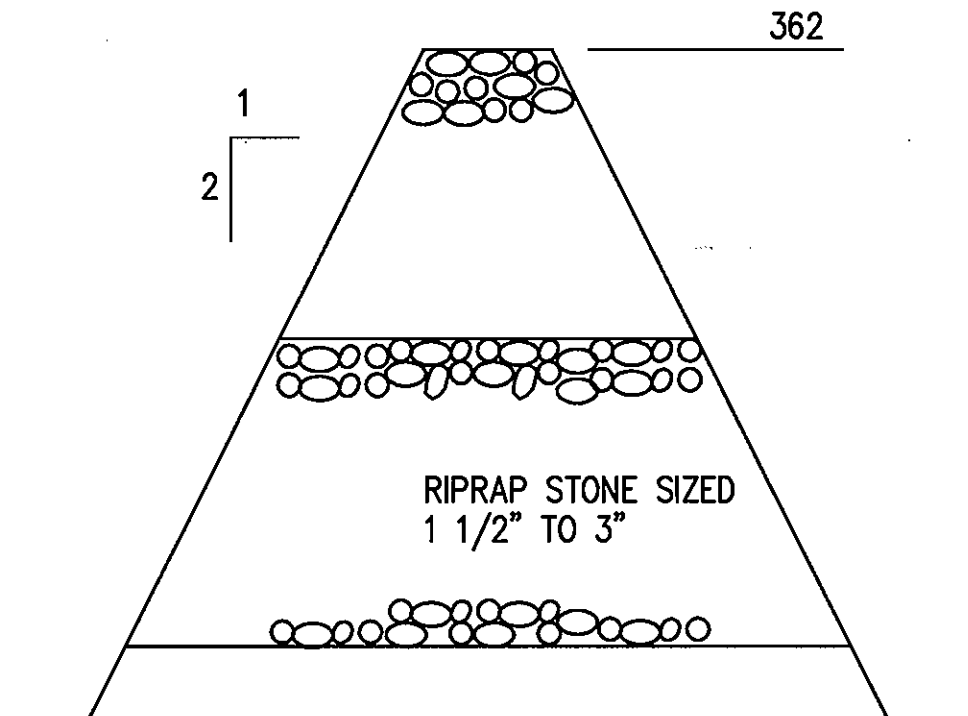
CAPITAL PROJECT NO.
 30-3170- N-3107
C-11
SET SHEET .11 OF 28



PLAN
N.T.S.

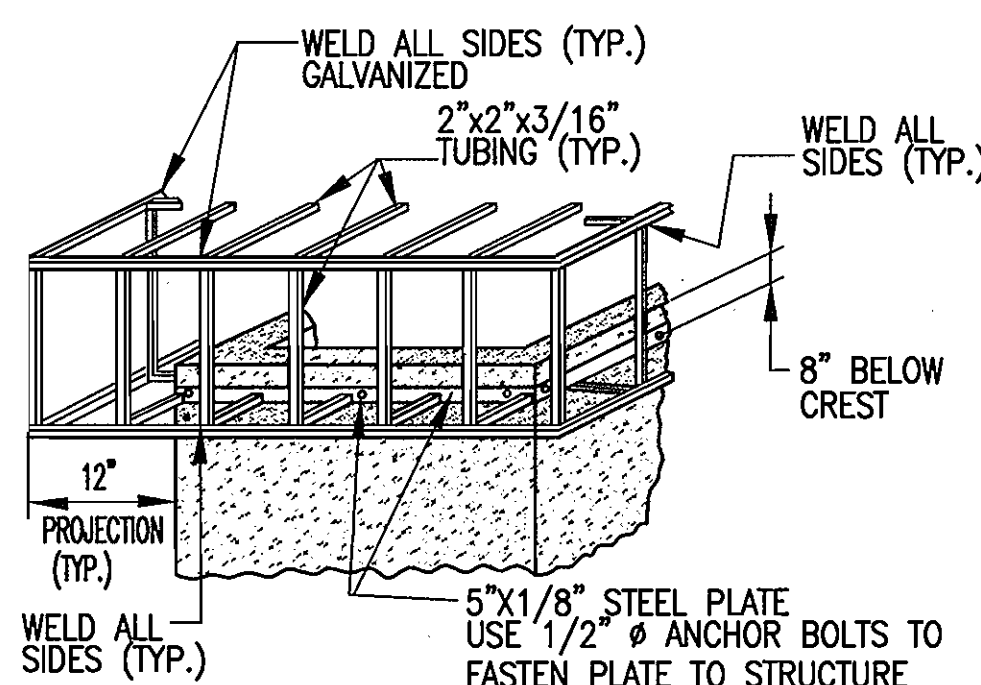


ELEVATION
N.T.S.

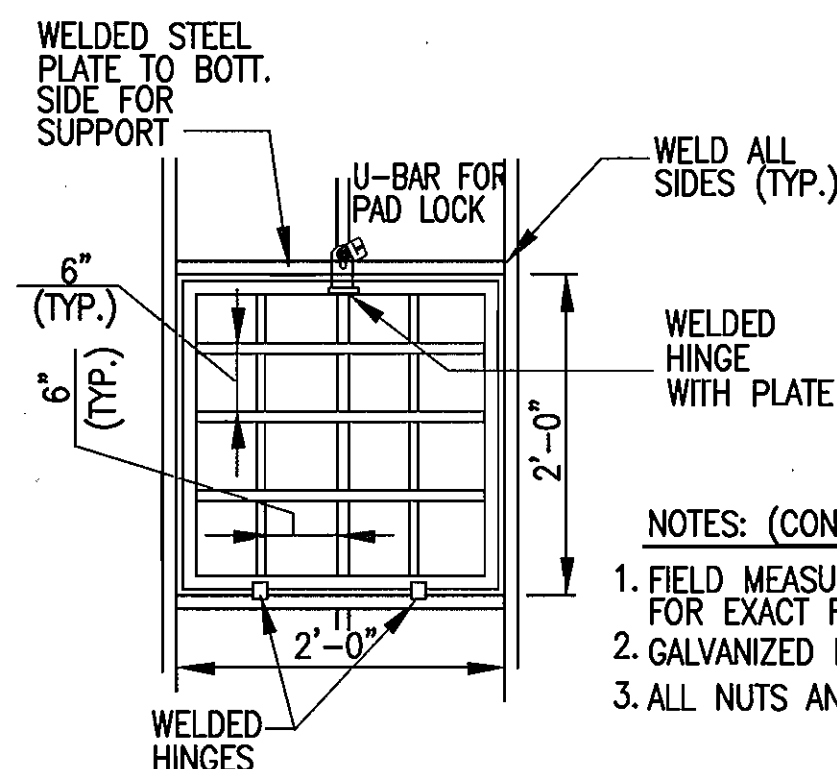


SECTION

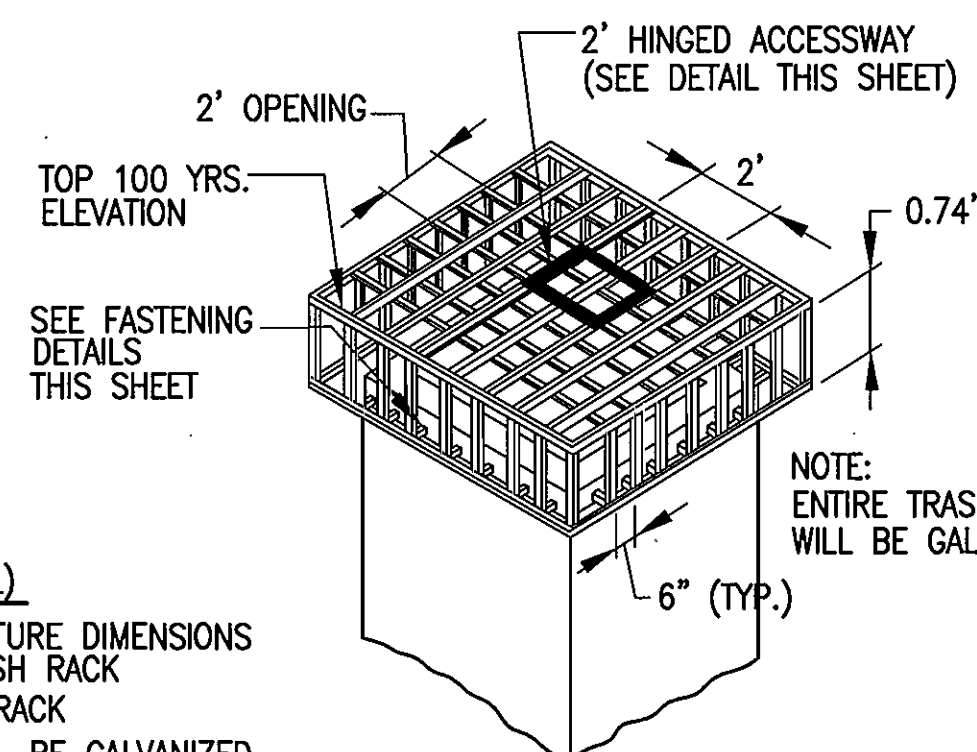
WEIR PROTECTION INFILTRATION BASIN
AND FORE BAY



FASTENING DETAIL
(N.T.S.)

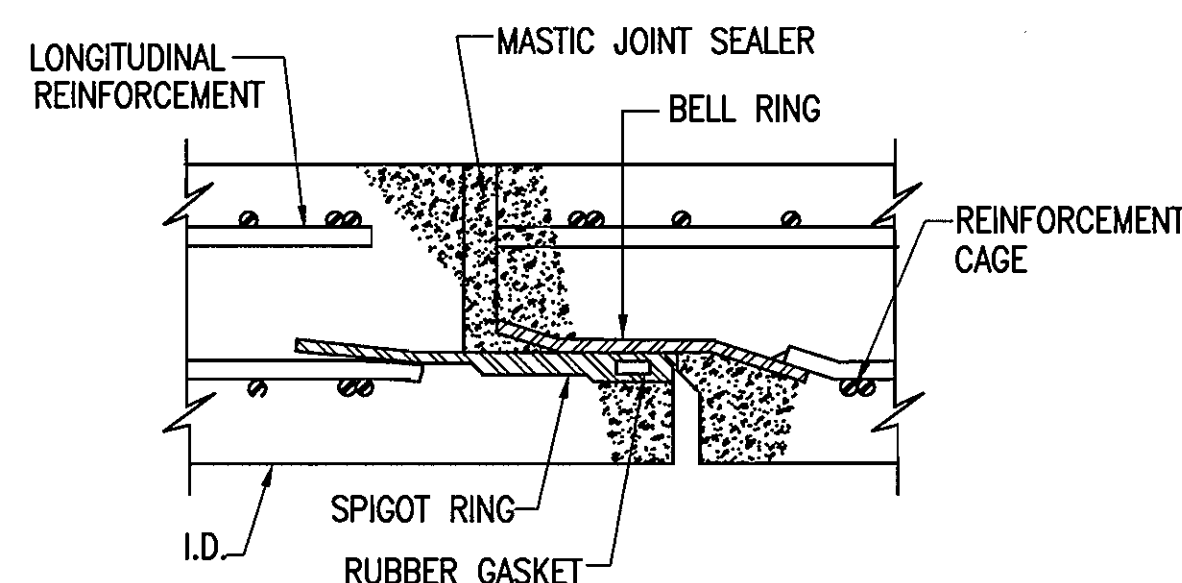


OPENING DETAIL
(N.T.S.)

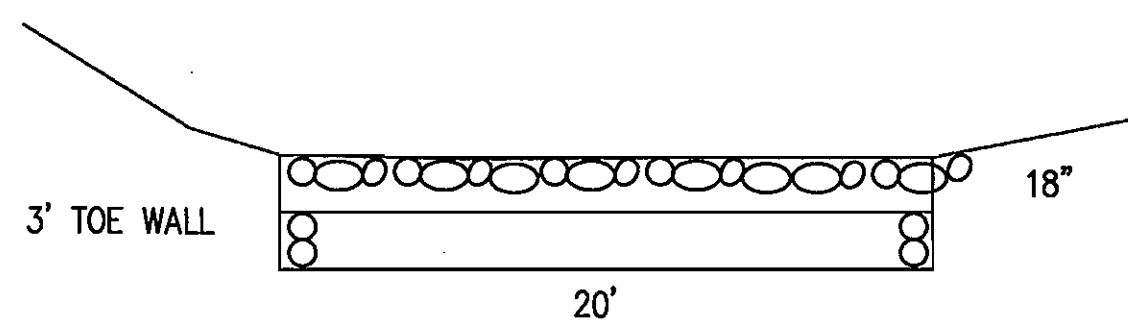


TRASH RACK 'B'
(N.T.S.)

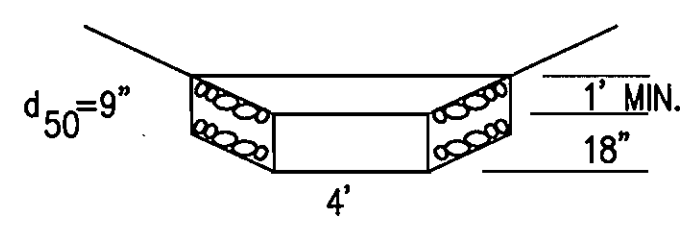
TRASH RACK DETAILS



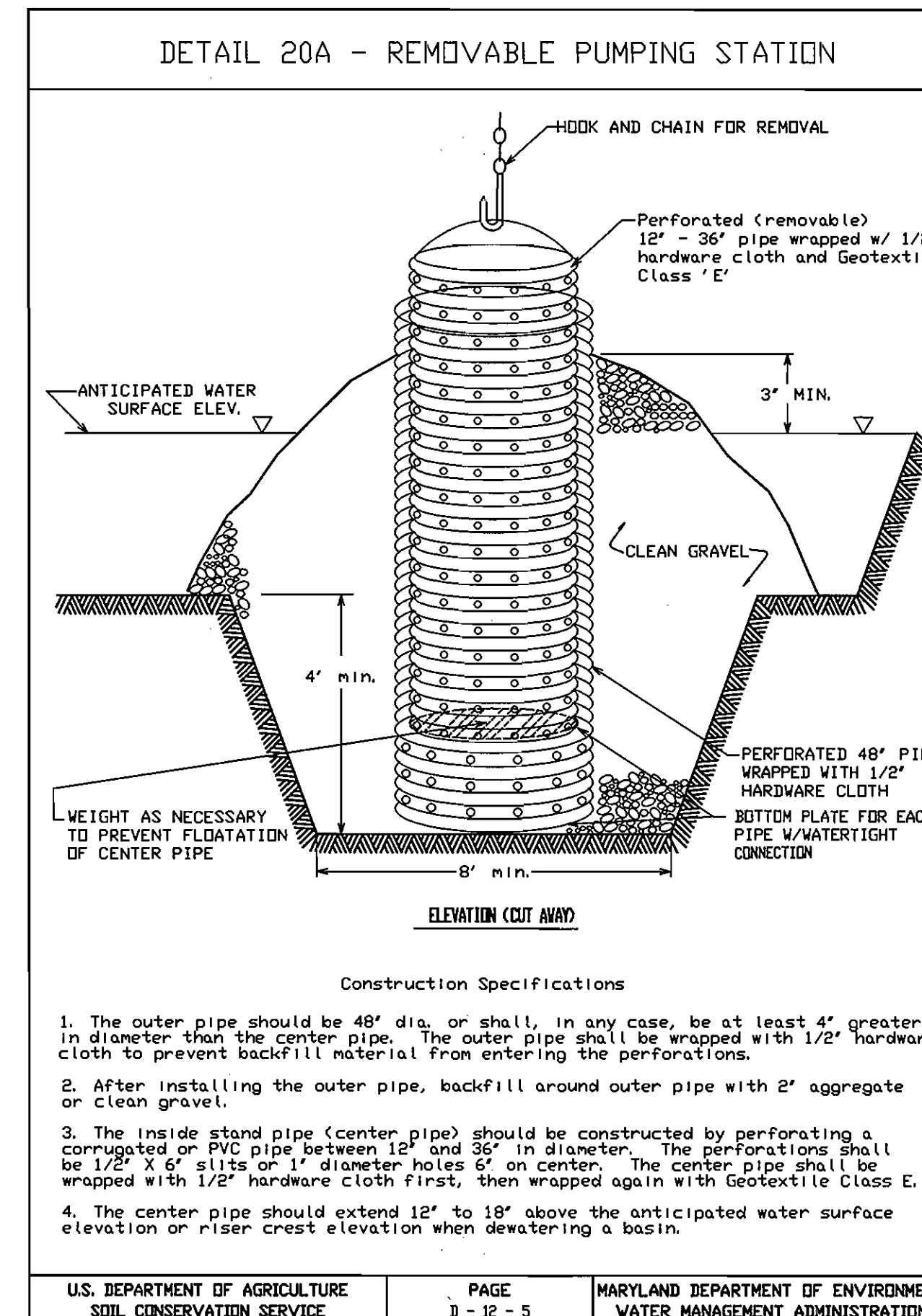
BARREL JOINT SEAL DETAILS
N.T.S.



SECTION AT END OF OUTFALL PROTECTION
N.T.S.



OUTFALL CHANNEL SECTION @ END SECTION
N.T.S.



DETAIL 20A - REMOVABLE PUMPING STATION

- Construction Specifications
- The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.
 - After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.
 - The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" x 6" slits or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class E.
 - The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE B-12-5 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

OPERATION AND MAINTENANCE SCHEDULE FOR
PRIVATELY OWNED AND MAINTAINED
STORMWATER PONDS

Routine Maintenance:

- Facility shall be inspected annually and after major storm. Inspections shall be performed during wet weather to determine if the pond is functioning properly.
- Top and sides slope of the embankment shall be mowed a minimum of (2) times per year, once in June and once in September. Other side slopes and maintenance access shall be mowed as needed.
- Debris and litter shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the pond as well as the riprap or gabion outlet area shall be repaired as soon as it is noticed.

Non-Routine Maintenance:

- 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.
- 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, upon approval from the Department of Public Works.

OPERATION AND MAINTENANCE SCHEDULE FOR
PRIVATELY OWNED AND MAINTAINED
INFILTRATION BASIN

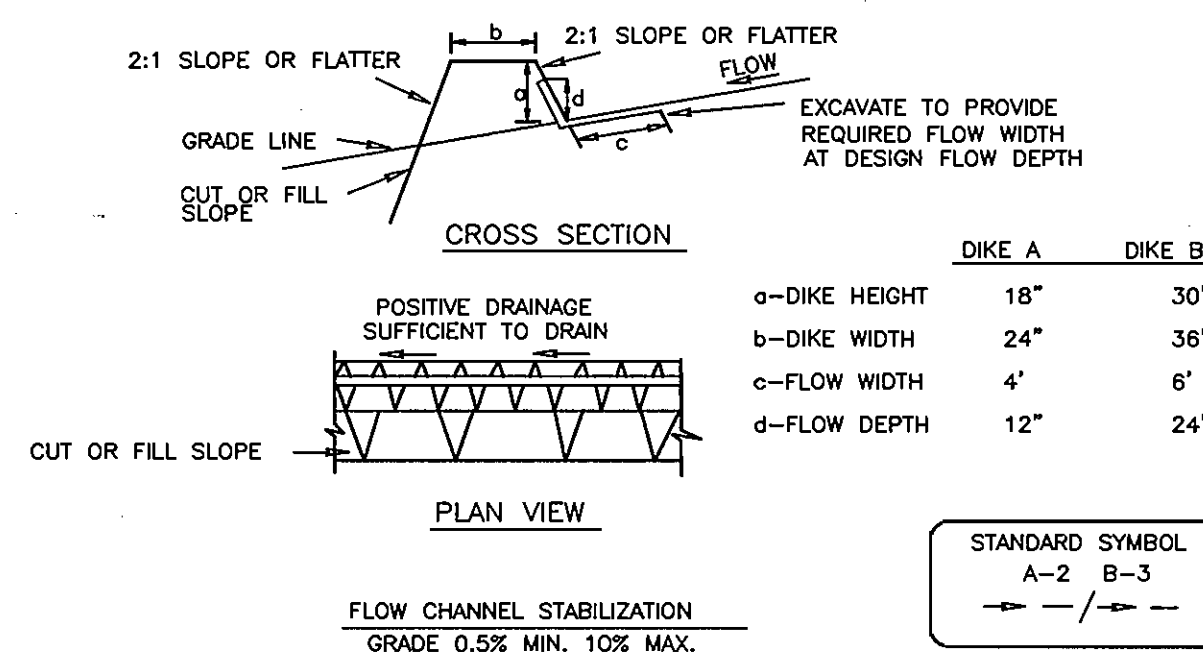
Routine Maintenance:

- Facility shall be inspected annually and after every major storm. Inspection should be performed during wet weather to insure that the trench is functioning properly.
- Top and side slopes of embankment shall be mowed a minimum of two (2) times a year, once in June and once in September. Other side slopes, the bottom of trench and maintenance access should be mowed as needed. In any event, vegetation within the trench area shall not exceed 18" in height.
- Accumulated debris, litter, trash will be removed as necessary.

Non-Routine Maintenance:

- Silt shall be removed from bottom of trench when the accumulative exceeds 1".
- When the trench does not drain down within 96 hours, the corrective maintenance is required.
- Any structural damage detected to trench bottom, side slopes, and emergency spillway shall be repaired.

DETAIL 1 - EARTH DIKE



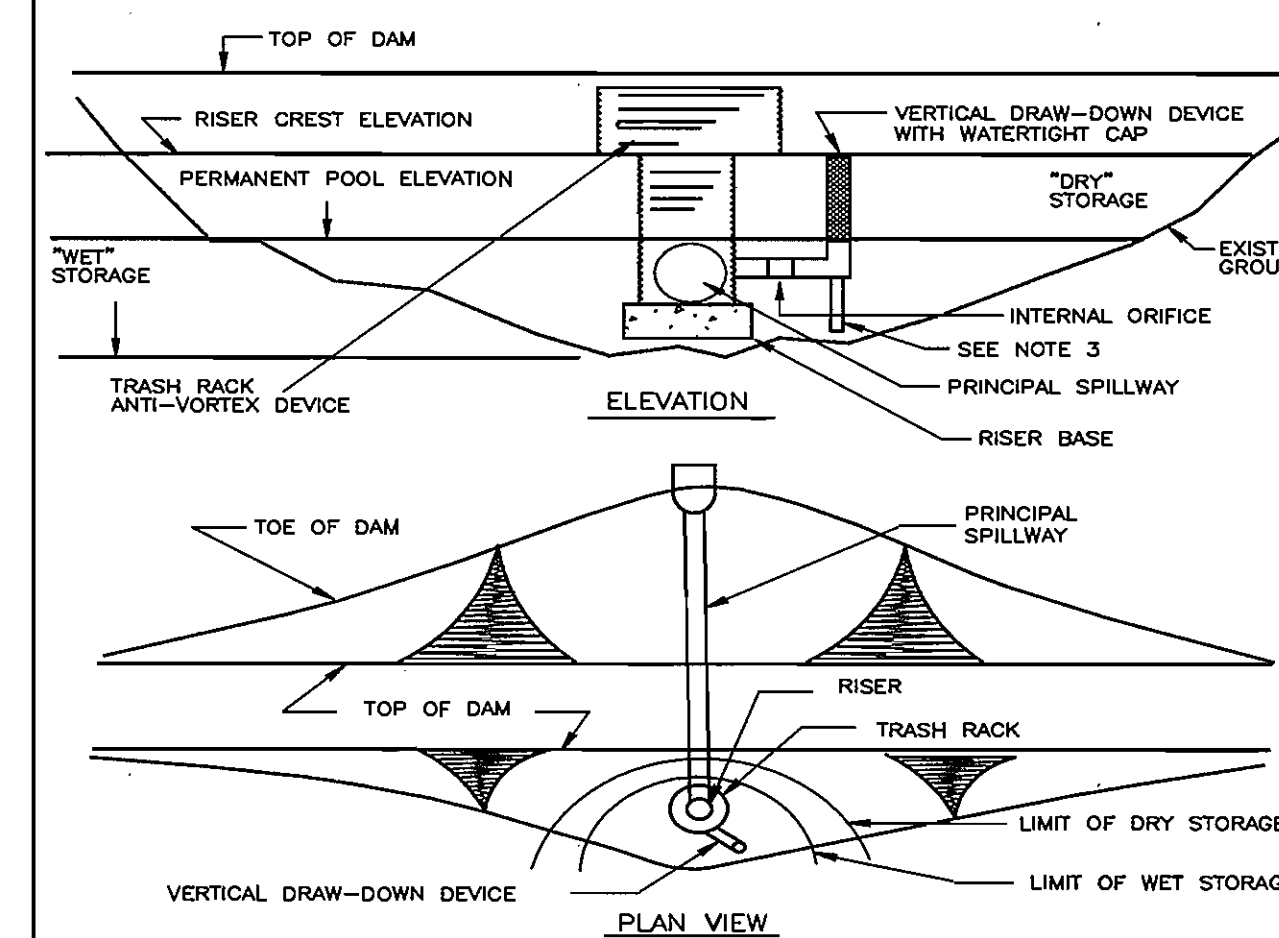
- Seed and cover with straw mulch.
- Seed and cover with Erosion Control Matting or line with sod.
- 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum.

Construction Specifications

- All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
- Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
- Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area of a non-erosive velocity.
- All trees, brush, stumps, obstructions, and other objectionable material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
- The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
- Fill shall be compacted by earth moving equipment.
- All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
- Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE A-1-6 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

BASIN DRAWDOWN SCHEMATIC
VERTICAL DRAW-DOWN DEVICE



- Perforations in the draw-down device may not extend into the wet storage.
- The total area of the perforations must be greater than 2 times the area of the internal orifice.
- The perforated portion of the draw-down device shall be wrapped with 1/2" hardware cloth and geotextile fabric. The geotextile fabric shall meet the specifications for Geotextile Class E.
- Provide support of draw-down device to prevent sagging and flotation. An acceptable preventative measure is to stake both sides of draw-down device with 1" steel angle, or 1" by 4" square or 2" round wooden posts set 3' minimum into the ground then joining them to the device by wrapping with 12 gauge minimum wire.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-10-30 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

APPROVED: DEPARTMENT OF PLANNING AND ZONING			
Director <i>David J. Long</i>		Date 3/2/03	
Chief, Division of Land Development <i>Andy Hanan</i>		Date 3/19/03	
Chief, Development Engineering Division <i>Chris Dorman</i>		Date 3/11/03	
SUBDIVISION ROCKBURN BRANCH PARK	SECTION/AREA N/A	PARCEL NO. 42	
LIBER/FOLIO 3505/95	BLOCK NO. 4	ZONING R-20	TAX/MAP 37
GRID 4	ELEC. DIST. 1	CENSUS TR. 6011.01	
WATER CODE D-04		SEWER CODE 2153800	

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12966, EXPIRATION DATE: 01/12/07.



Architects Engineers and Construction Consultants
8950 Route 108 Suite 218
Columbia Maryland 21045 (410)995-4067 Fax (410)992-1837

PROGRESSIVE ENGINEERING CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
9160 RED BRANCH ROAD • SUITE E9
COLUMBIA, MD 21045
PHONE: (410) 715-0390 FAX: (410) 715-1745

OWNER
HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS
7120 OAKLAND MILLS ROAD
COLUMBIA MD. 21046

NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

STORM WATER MANAGEMENT POND
MISCELLANEOUS DETAILS
ROCKBURN BRANCH PARK
MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND
DATE: JANUARY 10, 2003 SCALE: AS SHOWN

CAPITAL PROJECT NO.
N-3107
C-12
SET SHEET 12 OF 28

ROCK-C12SD-DET2

SDP-02-28

CONSTRUCTION SPECIFICATIONS FOR POND:

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, fenced, 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 storm water 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 of 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 materials for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, 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 track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out.

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 to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-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-year water 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; the core shall be placed concurrently with the outer shell of the embankment.

STRUCTURE BACKFILL

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely at 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 flow able 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 day unconfined compressive strength. The flow able 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 flow able fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flow ability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe shall be bituminous coated. Any adjoining soil 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 shall completely fill all voids adjacent to the flow able 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 (flow able fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

CONSTRUCTION SPECIFICATIONS:

PIPE CONDUITS

All pipes shall be circular in cross section.

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

1. Materials - (Polymer Coated steel pipe) - Steel pipes with polymeric coatings 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 flow able fill or when soil and/or water conditions warrant the need 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 flow able 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. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material 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 drainpipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collar shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the bandwidth. The following type connections are acceptable for pipes less than 24 inches in diameter: flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, prepunched to the flange bolt circle, sandwiched between adjacent flanges; a 12-inch wide standard lap 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 inch greater than the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch long annular corrugated band using a minimum of 4 (four) 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 bead.

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

5. Backfilling shall conform to "Structure Backfill".

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

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

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

2. Bedding - 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 cradle is not needed for structural reasons, flow able fill may be used as described in the "Structure 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.

4. Backfilling shall conform to "Structure Backfill".

5. 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" - 10" inch pipe shall meet the requirements of AASHTO M252 Type S, and 12" 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 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 areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom 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 sumps from which the water shall be pumped.

STABILIZATION

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

Constructions 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

An operation and maintenance plan in accordance with Local or State Regulations will be prepared for all ponds. As a minimum, the dam inspection checklist located in Appendix A shall be included as part of the operation and maintenance plan and performed at least annually. Written records of maintenance and major repairs needs to be retained in a file. The issuance of a Maintenance and Repair Permit for any repairs or maintenance that involves the modification of the dam or spillway from its original design and specifications is required. A permit is also required for any repairs or reconstruction that involve a substantial portion of the structure. All indicated repairs are to be made as soon as practical.

CONSTRUCTION SPECIFICATION FOR INFILTRATION BASIN

CONSTRUCTION SPECIFICATIONS

The construction of all infiltration basins should comply with the criteria set forth in the Maryland SCS Standards and Specifications 378 - Ponds dated July, 1981 or subsequent revisions and the additional criteria provided below.

SCHEDULE

The sequence of various phases of basin construction shall be coordinated with the overall project construction schedule. A program should schedule rough excavation of the basin with the rough grading phase of the project to permit use of the material as fill in earthwork areas. The partially excavated basin could serve as a sedimentation basin in order to assist in erosion and sediment control during construction. However, basins near final stages of excavation should never be used prematurely for runoff disposal. Drainage from untreated, freshly constructed slopes within the watershed area would load the newly formed basin with a heavy concentration of fine sediment. This could seriously impair the natural infiltration characteristics of the basin floor. Final grade of an infiltration basin shall not be attained until after its use as a sediment control basin is completed.

Specifications for basin construction should state: (1) the earliest point in progress when storm drainage may be directed to the basin, and (2) the means by which this delay in use is to be accomplished. Due to the wide variety of conditions encountered among projects, each should be separately evaluated in order to postpone use as long as is reasonably possible.

EXCAVATION

Initial basin excavation should be carried to within 1 foot of the final elevation of the basin floor. Final excavation to the finished grade should be deferred until all disturbed areas on the watershed have been stabilized or protected. The final phase excavation should remove all accumulated sediment. Relatively light tracked equipment is recommended for this operation to avoid compaction of the basin floor. After the final grading is completed, the basin floor should be deeply tilled by means of rotary tillers or disc harrows to provide a well-aerated, highly porous surface texture.

LINING MATERIAL

Infiltration basins may be lined with a 6- to 12-inch layer of filter material such as course sand to help prevent the buildup of impervious deposits on the soil surface. The filter layer can be replaced or cleaned when it becomes clogged. When a 6-inch layer of course organic material is specified for discing (such as hulls, leaves, stems, etc.) or spading into the basin floor to increase the permeability of the soils, the basin floor should be soaked or inundated for a brief period, then allowed to dry subsequent to this operation. This induces the organic material to decay rapidly, loosening the upper soil layer.

Establishing dense vegetation on the basin side slopes and floor is recommended. A dense vegetative stand will not only prevent erosion and sloughing, but will also provide a natural means of maintaining relatively high infiltration rates. Removal of accumulated sediment is a problem only at the basin floor. Little maintenance is normally required to maintain the infiltration capacity of slope areas.

Selection of suitable vegetative materials for the side slope and all other areas to be stabilized with vegetation and application of required fertilizer and mulches shall be done in accordance with the Maryland Standards and Specifications for Soil Erosion and Sediment Control. Local Extension Agencies should also be consulted.

MAINTENANCE

INSPECTION SCHEDULE

Drainage systems must be inspected on a routine basis to ensure that they are functioning properly. Inspections can be on a semiannual basis but should always be conducted following major storms.

SEDIMENT CONTROL EFFECT ON VEGETATED BASINS

Cleanout frequency of infiltration basins will depend on whether they are vegetated or nonvegetated and will be a function of their storage capacity, recharge characteristics, volume of inflow, and sediment load. Infiltration basins should be inspected at least once a year. Sedimentation basins and traps may require more frequent inspection and cleanout.

Grass bottoms on infiltration basins seldom need replacement since grass serves as a good filter material. This is particularly true of Kentucky 31 Tall Fescue, which is extremely hardy and can withstand several days of submergence. If silty water is allowed to trickle through the turf, most of the suspended material is strained out within a few yards of surface travel. Well-established turf on a basin floor will grow up through sediment deposits, forming a porous turf and preventing the formation of an impermeable layer. Grass filtration would work well with long, narrow, shoulder-type (swales, ditches, etc.) depressions where highway runoff flows down a grassy slope between the roadway and the basin. Kentucky 31 Tall Fescue demands very little attention and looks attractive when trimmed. Grass planted on basin side slopes will also prevent erosion.

SEDIMENT REMOVAL FROM NONVEGETATED BASINS

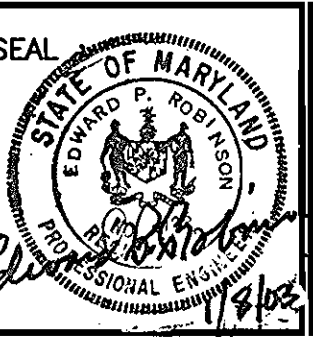
(a) Technique - Remove sediment only when the basin floor is completely dry, after the silt layer has mud-cracked and separated from the basin floor. Equipment maneuverability and precise blade control are essential in small areas and can greatly reduce the quantity of material to be removed. (b) Frequency - All sediment must be removed prior to tilling operations. As tilling is required periodically and at least once annually, the frequency of sediment removal will be reduced to small operations on a regular basis.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Director: Mark A. Wagle
Chief, Division of Land Development: Cindy Spindler
Chief, Development Engineering Division: [Signature]
SUBDIVISION: ROCKBURN BRANCH PARK
SECTION/AREA: N/A
PARCEL NO.: 42
LIBER/FOLIO: 3505/95
BLOCK NO: 4
ZONING: R-20
TAX/MAP: 37
GRID: 4
ELEC. DIST.: 1
CENSUS TR.: 6011.01
WATER CODE: D-04
SEWER CODE: 2153800

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12144, EXPIRATION DATE: 5/19/08
REVISED CAPITAL PROJECT NO.



Architects Engineers and Construction Consultants
8950 Route 108 Suite 218
Columbia Maryland 21045 (410)995-4067 Fax (410)992-1837



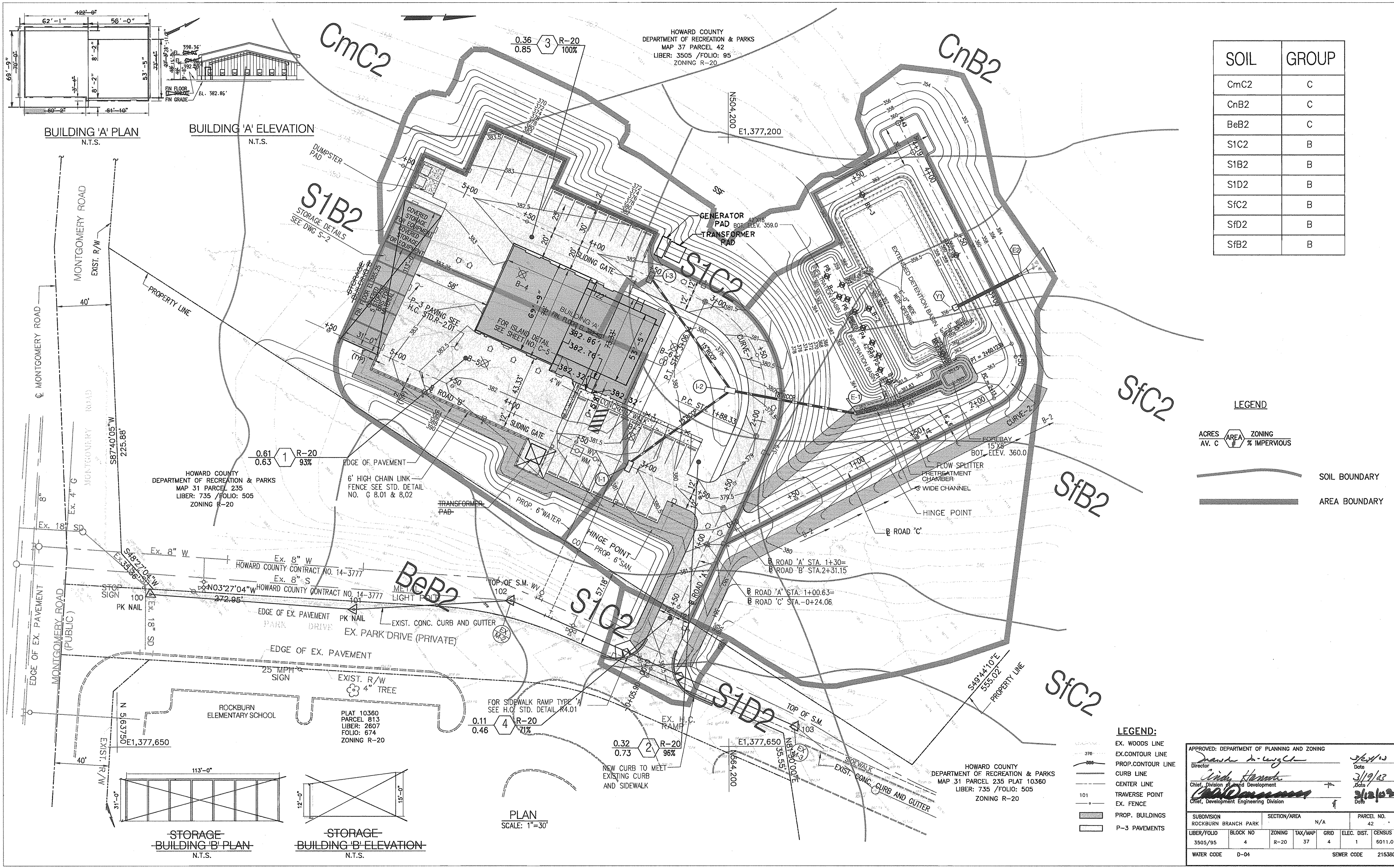
PROGRESSIVE ENGINEERING CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
9160 RED BRANCH ROAD • SUITE E9
COLUMBIA, MD 21045
PHONE: (410) 715-0390 FAX: (410) 715-1745

OWNER
HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS
7120 OAKLAND MILLS ROAD
COLUMBIA MD. 21046

Table with 3 columns: NO., DATE, DESCRIPTION. Row 1: 1, 7/17/07, SEE SEAL AND CERTIFICATION ABOVE.

GENERAL NOTES FOR STORM WATER MANAGEMENT FACILITY
ROCKBURN BRANCH PARK MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND
DATE: JANUARY 10, 2003 SCALE: NONE

CAPITAL PROJECT NO.
[] 20-3107 N-3107
C-13
SET SHEET 13 OF 28



SOIL	GROUP
CmC2	C
CnB2	C
BeB2	C
S1C2	B
S1B2	B
S1D2	B
S1F2	B
S1E2	B
S1G2	B
S1H2	B
S1I2	B
S1J2	B
S1K2	B
S1L2	B
S1M2	B
S1N2	B
S1O2	B
S1P2	B
S1Q2	B
S1R2	B
S1S2	B
S1T2	B
S1U2	B
S1V2	B
S1W2	B
S1X2	B
S1Y2	B
S1Z2	B

LEGEND

ACRES	AV. C	ZONING	% IMPERVIOUS
0.36	0.85	R-20	100%
0.61	0.63	R-20	93%
0.11	0.46	R-20	71%
0.32	0.73	R-20	96%

	SOIL BOUNDARY
	AREA BOUNDARY

LEGEND:

	EX. WOODS LINE
	EX. CONTOUR LINE
	PROP. CONTOUR LINE
	CURB LINE
	CENTER LINE
	TRAVERSE POINT
	EX. FENCE
	PROP. BUILDINGS
	P-3 PAVEMENTS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director: *[Signature]* Date: 3/19/03

Chief, Division of Land Development: *[Signature]* Date: 3/19/03

Chief, Development Engineering Division: *[Signature]* Date: 3/19/03

SUBDIVISION	SECTION/AREA	N/A	PARCEL NO.	42
ROCKBURN BRANCH PARK				
LIBER/FOLIO	BLOCK NO	ZONING	TAX/MAP	GRID
3505/95	4	R-20	37	4
				ELEC. DIST.
				1
				CENSUS TR.
				6011.01
WATER CODE	D-04			SEWER CODE
				2153800

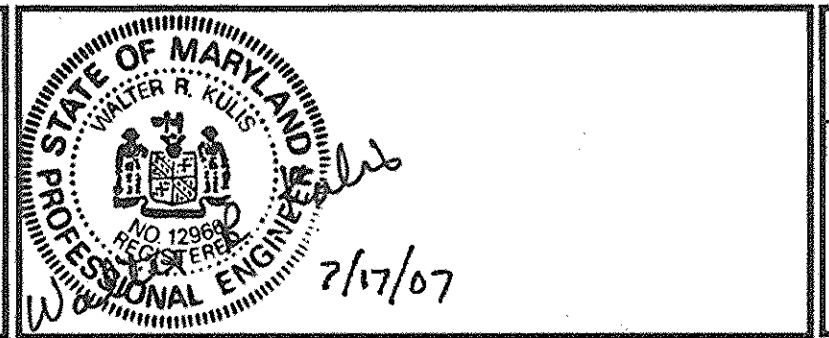


PLAN SCALE: 1"=30'

*PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12466, EXPIRATION DATE: 5/19/08

1. REVISED CAPITAL PROJECT NO.
2. REVISED BLDG. FOOTPRINT
3. REVISED SIDEWALKS, ENTRANCES, PARKING & APPURTENANCES.
4. REVISED TRANSFORMER PAD LOCATION.
5. REMOVED BUILDING 'B'.

7/17/07



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PHONE: (410) 715-0390 FAX: (410) 715-1745

OWNER
HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS

7120 OAKLAND MILLS ROAD
COLUMBIA MD. 21046

REVISIONS

NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

DRAINAGE AREA MAP

ROCKBURN BRANCH PARK
MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND

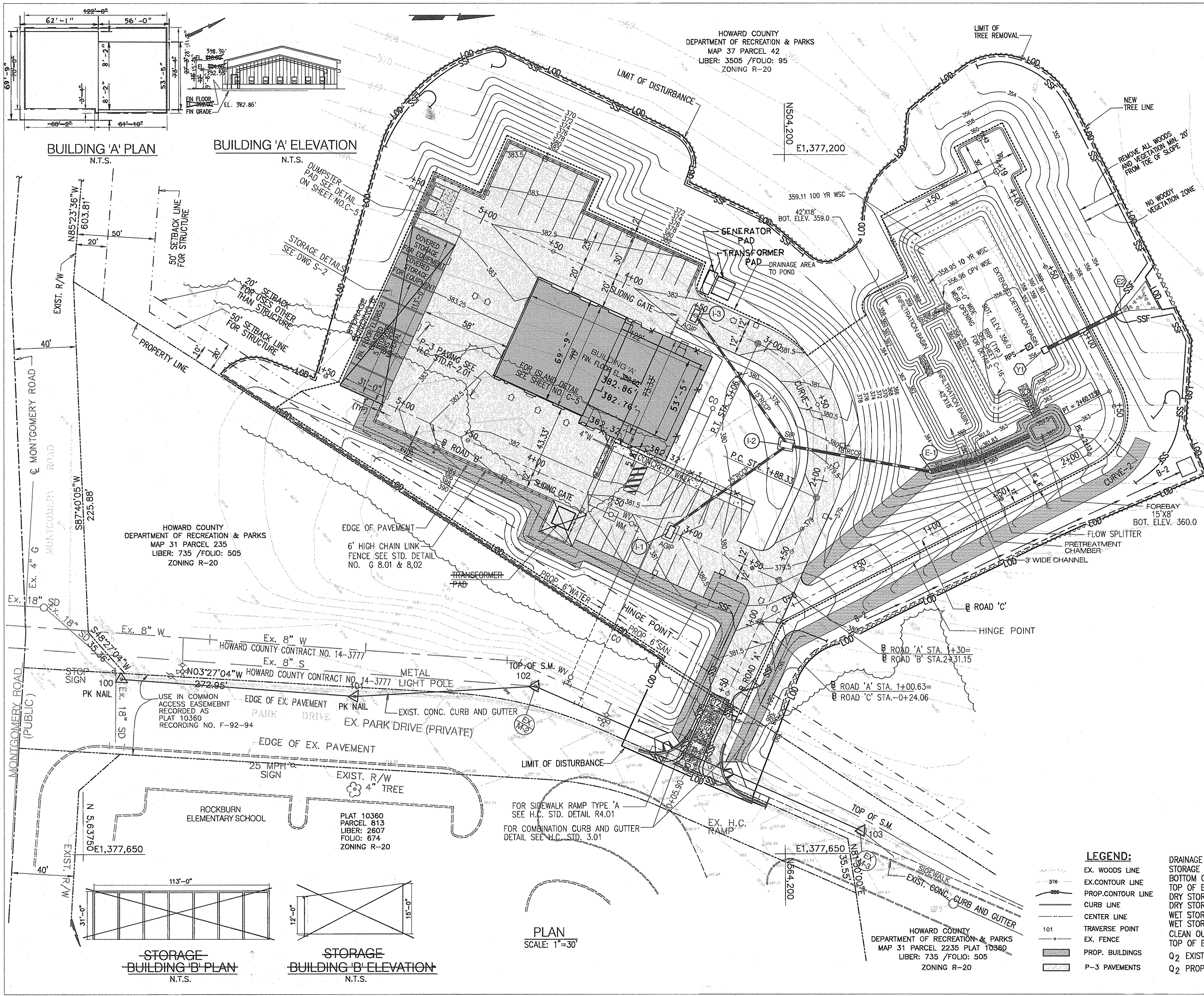
DATE: JANUARY 10, 2003 SCALE: 1"=30'

CAPITAL PROJECT NO. 30442 N-3107

C-14

SET SHEET 14 OF 28

SDP-02-28



SEDIMENT CONTROL & POND CONSTRUCTION

DEVELOPER

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 day of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

Jan M. Jan
 Signature of Developer
 Print name below signature

2/2/03
 Date

ENGINEER

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Edward P. Robinson
 Signature of Engineer
 Print name below signature

1/8/03
 Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Jim May Jr
 Signature of Engineer
 Print name below signature

3/6/03
 Date

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Howard Soil Conservation District
 Signature of Engineer
 Print name below signature

3/6/03
 Date

LEGEND:

---	EX. WOODS LINE	---	DRAINAGE AREA TO POND	= 2.5 Acres
---	EX. CONTOUR LINE	---	STORAGE REQUIRED 2.5 x 3600	= 0.2 Ac Ft.
---	PROP. CONTOUR LINE	---	BOTTOM OF BASIN	= 356.00
---	CURB LINE	---	TOP OF BASIN ELEVATION	= 362.18
---	CENTER LINE	---	DRY STORAGE ELEVATION	= 358.13
---	TRaverse POINT	---	DRY STORAGE VOLUME	= 4500 CUF.
---	EX. FENCE	---	WET STORAGE ELEVATION	= 357.30
---	PROP. BUILDINGS	---	WET STORAGE VOLUME	= 2250 CFT
---	P-3 PAVEMENTS	---	CLEAN OUT ELEVATION	= 356.89
		---	TOP OF BERM WIDTH DIMENSION	= 12.00
		---	Q2 EXISTING	= 2.0 CFS
		---	Q2 PROPOSED	= 8.0 CFS

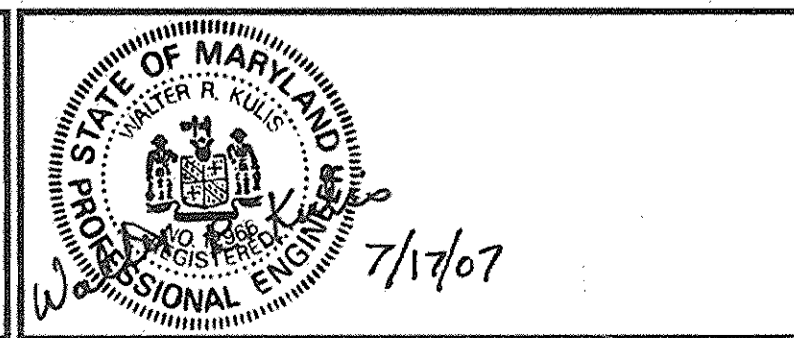
APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director	<i>Mark A. Long</i>	Date	<i>2/24/03</i>
Chief, Division of Land Development	<i>Linda Hanah</i>	Date	<i>3/19/03</i>
Chief, Development Engineering Division	<i>John Damann</i>	Date	<i>3/12/03</i>

SUBDIVISION	SECTION/AREA	N/A	PARCEL NO.
ROCKBURN BRANCH PARK			42
LIBER/FOLIO	BLOCK NO	ZONING	TAX/MAP
3505/95	4	R-20	37
		GRID	ELEC. DIST.
		4	1
		CENSUS TR.	6011.01
WATER CODE	D-04	SEWER CODE	2153800

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12166, EXPIRATION DATE: 9/1/08

- REVISED CAPITAL PROJECT NO.
- REVISED BLDG. FOOTPRINT.
- REVISED SIDEWALKS, ENTRANCES, PARKING & APPURTENANCES.
- REVISED TRANSFORMER PAD LOCATION.
- REMOVED BUILDING 'B'



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OWNER

HOWARD COUNTY
 DEPARTMENT OF RECREATION AND PARKS

7120 OAKLAND MILLS ROAD
 COLUMBIA MD. 21046

REVISIONS

NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

EROSION AND SEDIMENT CONTROL PLAN

ROCKBURN BRANCH PARK
 MAINTENANCE FACILITY
 HOWARD COUNTY, MARYLAND

DATE: JANUARY 10, 2003 SCALE: AS SHOWN

CAPITAL PROJECT NO.

3P-942 N-3107

C-15

SET SHEET 15 of 28

**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 (313-1855).
- All vegetative and structural practices are to be installed according to the provisions to 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 re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes steeper than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol 1, Chapter 7 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, sod, temporary seeding, and mulching (Sec.G). 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	= 22 Acres
Area Disturbed	= 3.76 Acres
Area to be roofed or paved	= 1.35 Acres
Area to be vegetatively stabilized	= 2.41 Acres
Total Cut	= 9270 C.Y.
Total Fill	= 11,226 C.Y. (Includes 15% for shrinkage)
Offsite waste/borrow area location	= 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 in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspecting approvals may not be authorized until this initial approval by the inspecting agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.

TOPSOIL

Topsoil: - Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

Topsoil Specifications - Soil to be used as topsoil must meet the following:

Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash or other materials larger than a 1 1/2" in diameter.

Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle.

PERMANENT SEEDING NOTES

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

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

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- Enriched** - Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.)
- Acceptable** - Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

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

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

Maintenance - Inspect all seeding areas and make needed repairs, replacements and reseeding.

TEMPORARY SEEDING NOTES

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

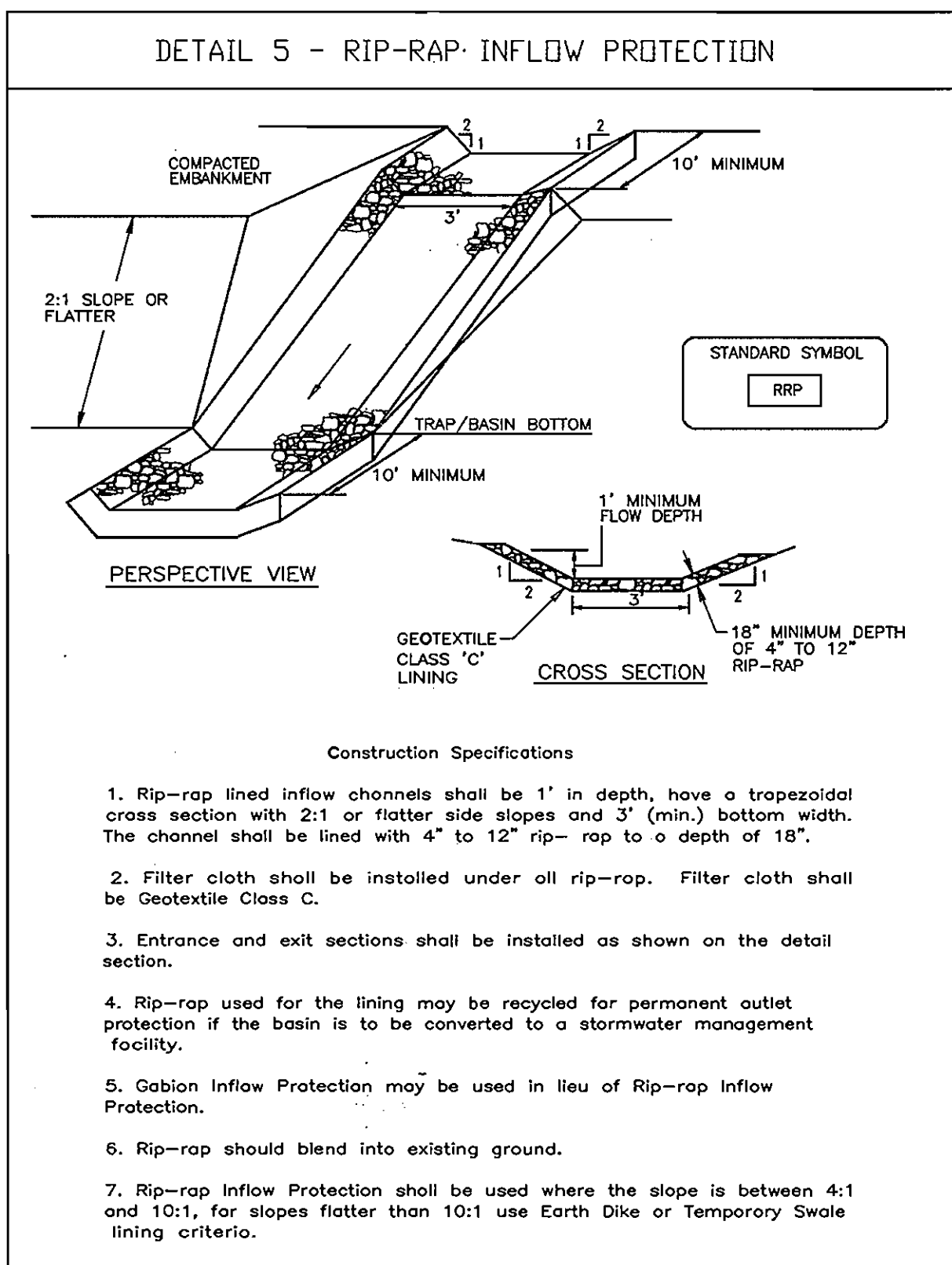
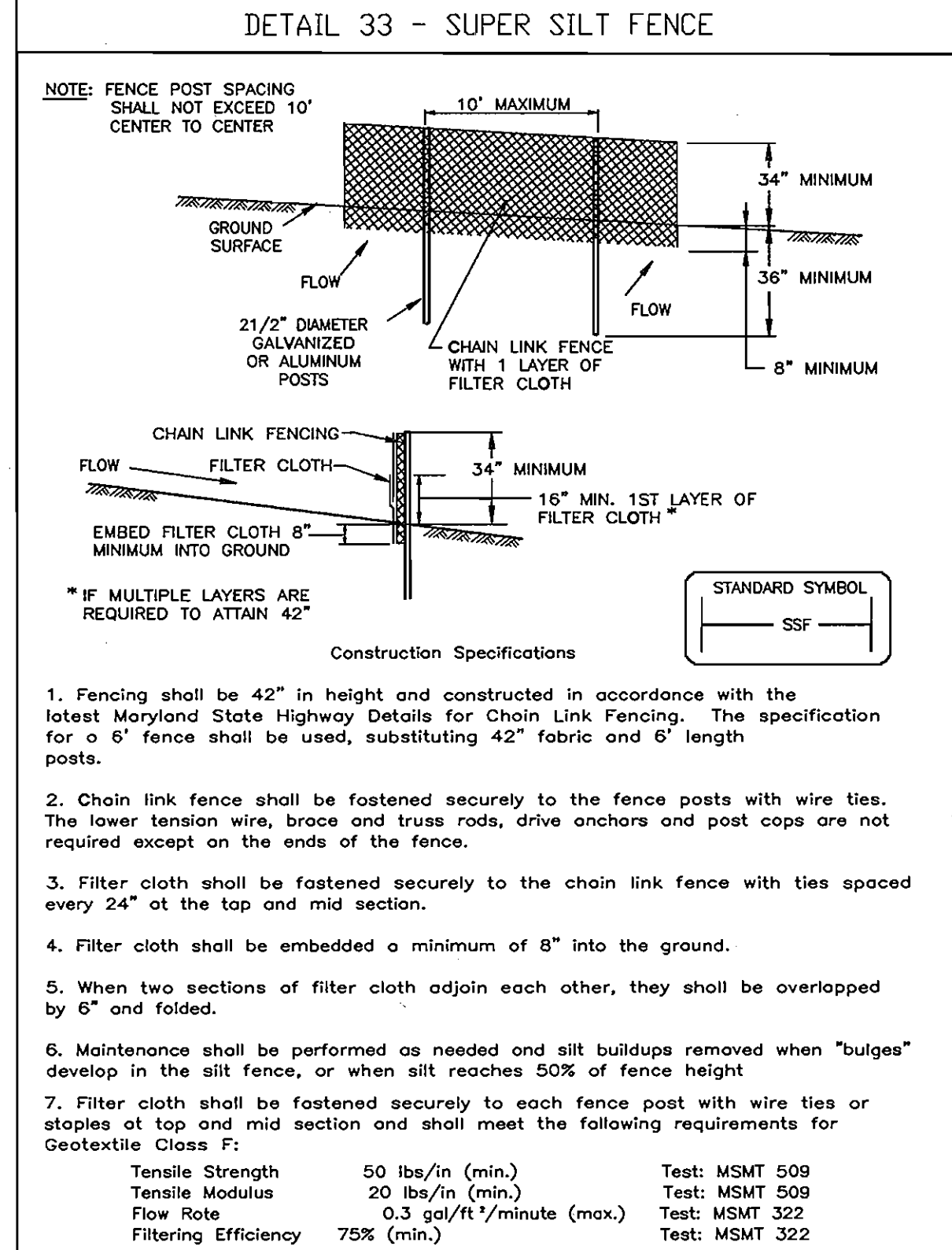
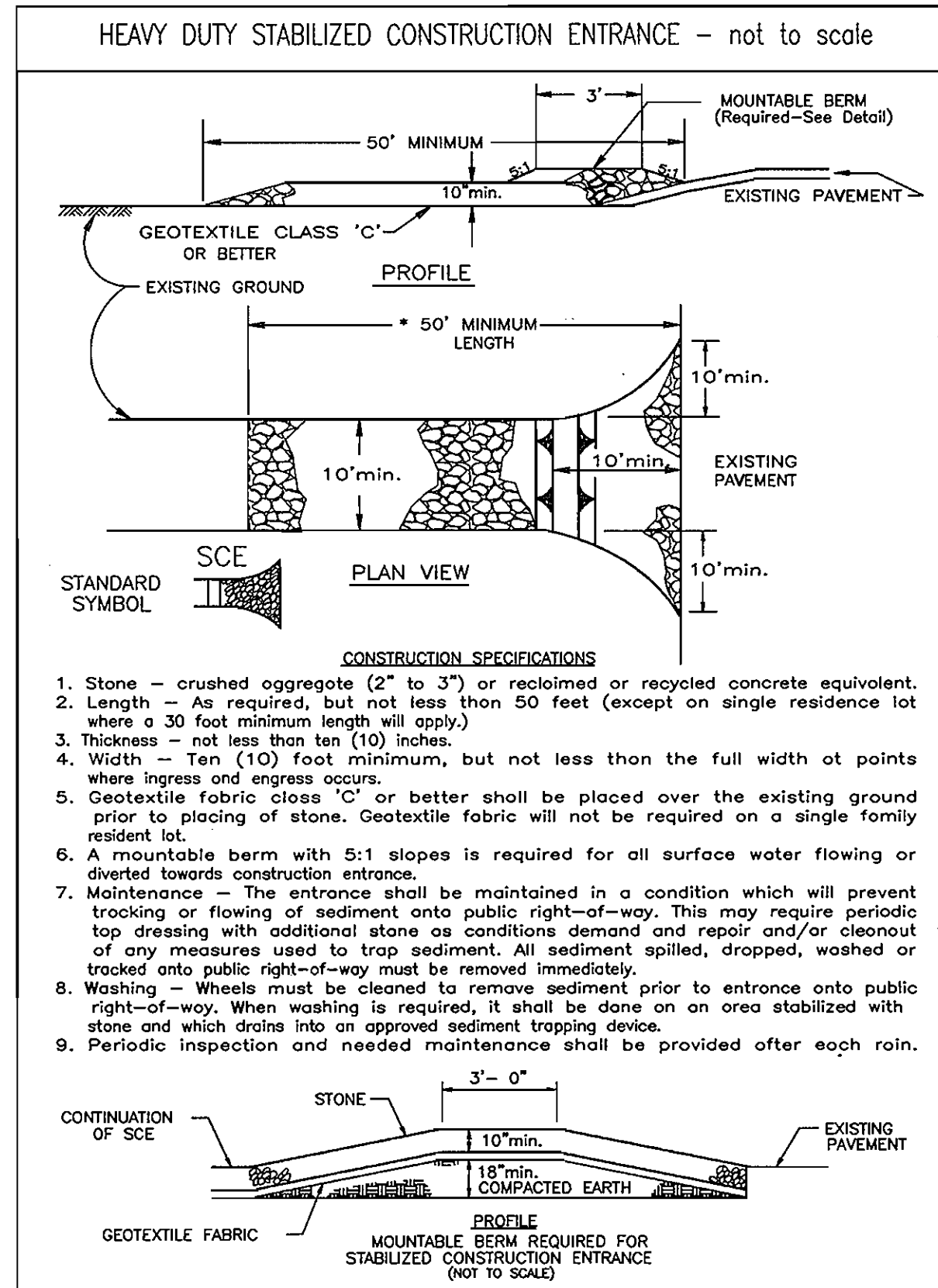
Seedbed preparation: - Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

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

Seeding: - For periods March 1 - April 30 and from August 15 - October 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs/1000 sq. ft.). For the period May 1 - August 14, seed with 3 lbs/acre of weeping lovegrass (.07 lbs/1000 sq. ft.). For the period November 16 - February 18, protect site by applying 2 tons/acre of well-anchored straw mulch and seed as soon as possible in the spring, or use sod.

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

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL additional rates and methods not covered.



SEDIMENT CONTROL & POND CONSTRUCTION

DEVELOPER

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

James P. ...
Signature of Developer
Print name below signature

2/21/03
Date

ENGINEER

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Edward P. Robinson
Signature of Engineer
Print name below signature

2/12/03
Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Jin Nguyen
USDA Natural Resources
Conservation Services

3/10/03
Date

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Howard Soil Conservation District
Howard Soil Conservation District

3/10/03
Date

Reviewed for HOWARD SCD and meet Technical Requirements.

U.S.D.A. - Natural Resources Conservation Service Date

The development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT

Howard SCD Date

ENGINEER'S CERTIFICATE

"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 requirements of the Howard Soil Conservation District."

Edward P. Robinson
Signature of Engineer (Print name below signature)

1/8/03
Date

DEVELOPER'S CERTIFICATE

"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 the 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 Howard Soil Conservation District"

James P. ...
Signature of Developer (Print name below signature)

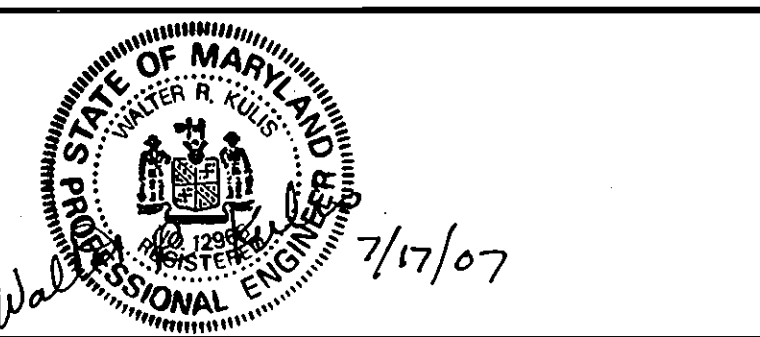
2/21/03
Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING					
Director	<i>...</i>	3/24/03	Date		
Chief, Division of Land Development	<i>...</i>	3/19/03	Date		
Chief, Development Engineering Division	<i>...</i>	3/14/03	Date		
SUBDIVISION	ROCKBURN BRANCH PARK	SECTION/AREA	N/A	PARCEL NO.	42
LIBER/FOLIO	3505/95	BLOCK NO.	4	ZONING	R-20
		TAX/MAP	37	GRID	4
		ELEC. DIST.	1	CENSUS TR.	6011.01
WATER CODE	D-04	SEWER CODE	2153800		

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12466, EXPIRATION DATE: 5/19/08"

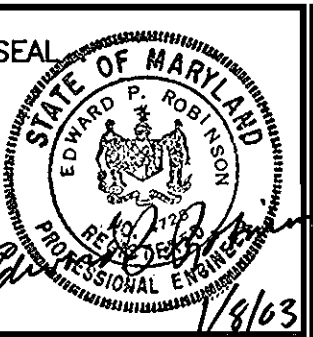
1. REVISED CAPITAL PROJECT NO.

Walton ...
Professional Engineer
7/17/07



ati Architects Engineers and Construction Consultants

8950 Route 108 Suite 218
Columbia Maryland 21045 (410)995-4067 Fax (410)992-1837



PROGRESSIVE ENGINEERING CONSULTANTS, INC.

ENGINEERS • PLANNERS • SURVEYORS

9160 RED BRANCH ROAD • SUITE E9
COLUMBIA, MD 21045
PHONE: (410) 715-0390 FAX: (410) 715-1745

OWNER

HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS

7120 OAKLAND MILLS ROAD
COLUMBIA MD. 21046

REVISIONS		
NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS - 1

ROCKBURN BRANCH PARK MAINTENANCE FACILITY

HOWARD COUNTY, MARYLAND

DATE: JANUARY 10, 2003 SCALE:

CAPITAL PROJECT NO.

36-349C N-3107

C-16

SET SHEET 16 of 28

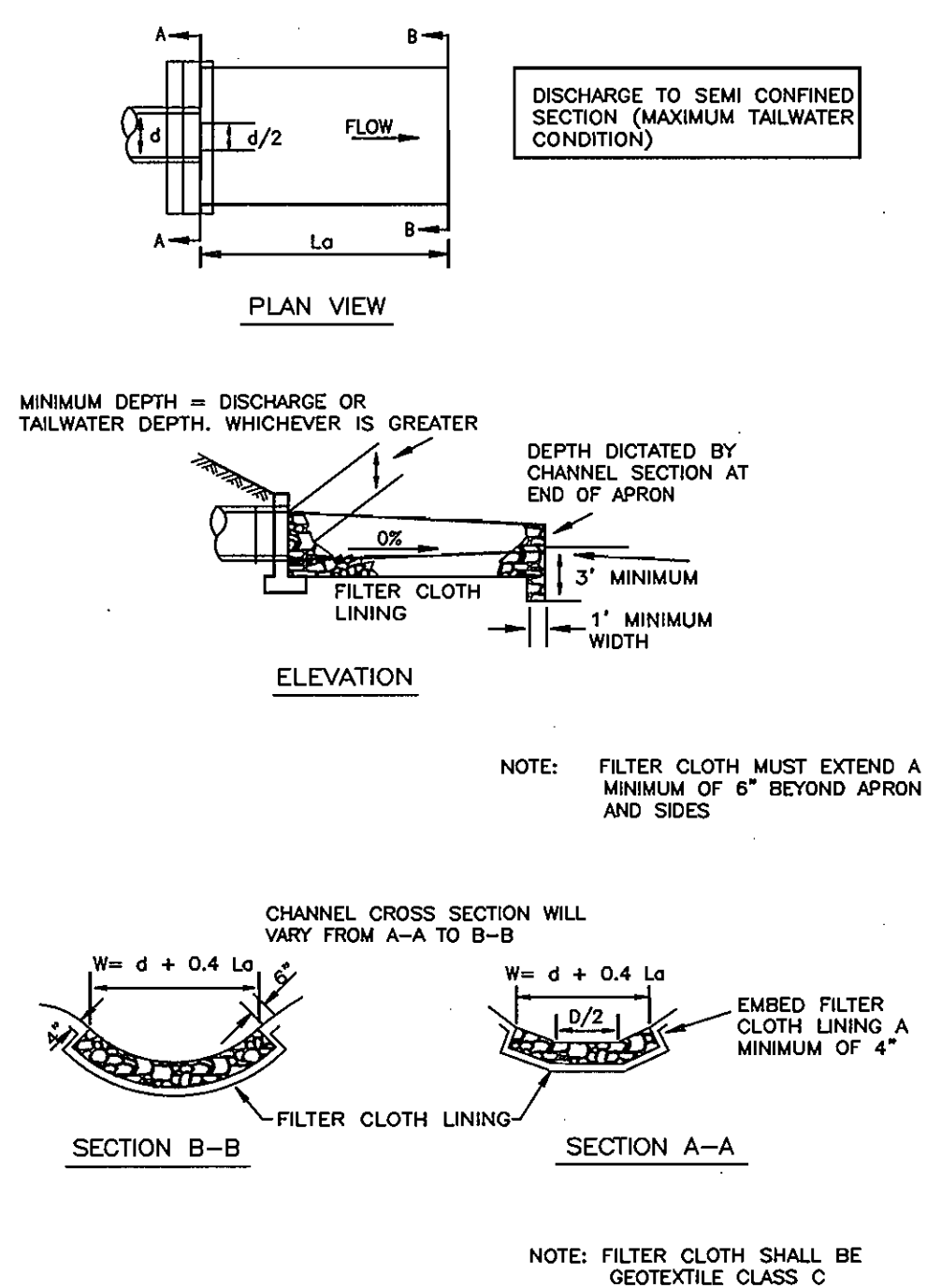
ROCK-C16-SDNOTES

ROCK OUTLET PROTECTION

Construction Specifications

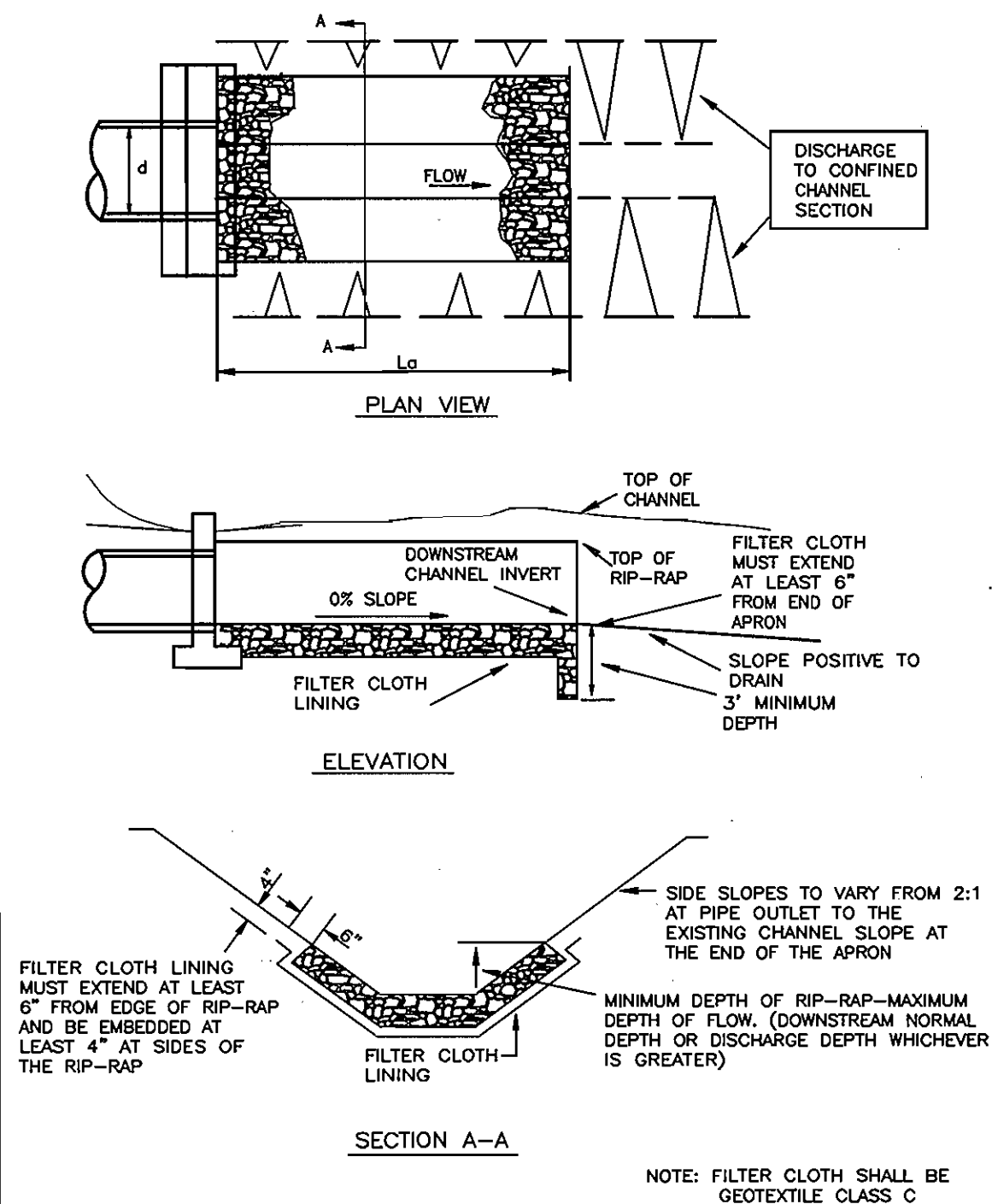
1. The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
2. The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
3. Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.
4. Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
5. The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

DETAIL 25 - ROCK OUTLET PROTECTION I

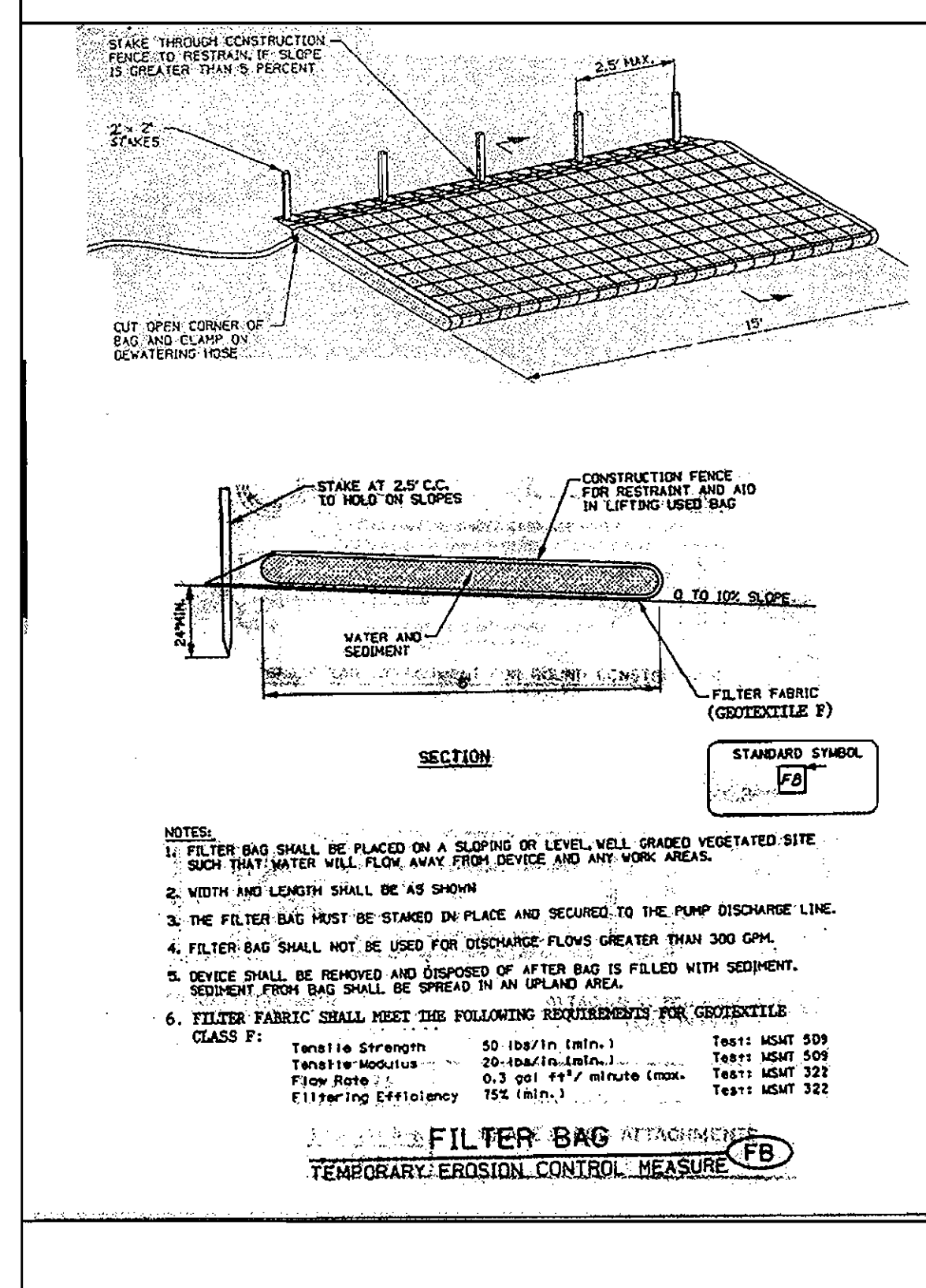


U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-18-8 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 26 - ROCK OUTLET PROTECTION II



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-18-9 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



SEDIMENT CONTROL & POND CONSTRUCTION

DEVELOPER

"I/We certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 day of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

Jan J. ...
Signature of Developer
Print name below signature

2/21/03
Date

ENGINEER

"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Edward P. Robinson
Signature of Engineer
Print name below signature

2/10/03
Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

Jim ...
USDA - Natural Resources Conservation Services

2/10/03
Date

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Howard Soil Conservation District
Howard Soil Conservation District

2/10/03
Date

SEQUENCE OF CONSTRUCTION

1. OBTAIN PROPER PERMITS. NOTIFY HOWARD COUNTY DEPARTMENT OF PERMITS, SEDIMENT CONTROL DIVISION REPRESENTATIVE AS PER NOTE 1 OF SEDIMENT CONTROL NOTES.
2. CLEAR AND GRUB FOR INSTALLATION OF PERIMETER SEDIMENT CONTROLS. INSTALL STABILIZED CONSTRUCTION ENTRANCE, FILTER BAG AND SILT FENCE AS SHOWN ON THE PLAN.
3. INSTALL SUPER SILT FENCE AROUND PERIMETER OF PROPOSED ENTRANCE ROAD, PARKING LOT, WATER AND SEWER LINES TO CONNECTIONS WITH EXISTING LINES, INFILTRATION BASINS, AND SEDIMENT BASIN. (15 DAYS)
4. AFTER RECEIVING PERMISSION FROM INSPECTOR TO PROCEED, CONSTRUCT NEW UTILITIES AND VEHICULAR ACCESS DRIVE FROM PARK ROAD TO BUILDING SITE.
5. GRADE AND CONSTRUCT SEDIMENT CONTROL ENTRANCE AT CONNECTION WITH THE EXISTING PARK DRIVE. (3 DAYS)
6. GRADE ROAD 'A' AND PARKING LOT TO SUBGRADE. STABILIZE EXPOSED AREAS. (30 DAYS)
7. INSTALL STORM DRAINAGE SYSTEM (15 DAYS)
8. INSTALL WATER LINES, WATER METER, AND FIRE HYDRANT. PROVIDE A TEMPORARILY CAP FOR THE SERVICE LINE FIVE FEET (5') OUTSIDE THE BUILDING.
9. INSTALL UNDERGROUND ELECTRIC, TELEPHONE, AND CABLE LINES TO CONNECTION POINT WITH BUILDING. (21 DAYS)
10. INSTALL THE SANITARY SEWER. PROVIDE A TEMPORARILY CAP FIVE (5') FEET OUTSIDE THE BUILDING. (10 DAYS)
11. GRADE BUILDING TO SUBGRADE LEVEL. 3 DAYS
12. CONSTRUCT FOUNDATION FOR BUILDING (30 DAYS)
13. CONSTRUCT MAINTENANCE BUILDING AND STORAGE BUILDINGS AS WORK PROGRESSES ON OTHER FEATURES OF PROJECTS. (120 DAYS)
14. PLACE GRANULAR SUBBASE MATERIAL AND ASPHALTIC BASE COURSE ON ROAD 'A' AND PARKING LOT. (5 DAYS)
15. GRADE ROAD 'C' TO SUBGRADE AND PLACE GRANULAR SUBBASE AND ASPHALTIC BASE COURSE. (10 DAYS)
16. INSTALL OUTLET PIPES FOR SWM (2 DAYS)
17. GRADE INFILTRATION BASINS AND EXTENDED DETENTION POND TO FINAL CONTOURS, AND STABILIZE EXPOSED SURFACES. (10 DAYS)
18. CONSTRUCT RISER STRUCTURE (2 DAYS)
19. LAY PAVEMENT SURFACE COURSE FOR ROADS AND PARKING LOT. (5 DAYS)
20. CONSTRUCT FENCE (3 DAYS)
21. INSTALL STORAGE BUILDING. (3 DAYS)
22. PROVIDE PERMANENT SEEDING AND MULCHING. (3 DAYS)
23. REMOVE EROSION AND SEDIMENT CONTROL FACILITIES WITH CONCURRENCE OF COUNTY.

Reviewed for HOWARD SCD and meet Technical Requirements.

U.S.D.A. - Natural Resources Conservation Service Date _____

The development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT

Howard SCD Date _____

ENGINEER'S CERTIFICATE

"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 requirements of the Howard Soil Conservation District."

Edward P. Robinson
Signature of Engineer (Print name below signature) Date *1/8/03*

DEVELOPER'S CERTIFICATE

"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 the 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 Howard Soil Conservation District"

Jan J. ...
Signature of Developer (Print name below signature) Date *2/21/03*

APPROVED: DEPARTMENT OF PLANNING AND ZONING

David L. ...
Director Date *2/21/03*

Clayton ...
Chief, Division of Land Development Date *3/19/03*

...
Chief, Development Engineering Division Date *2/14/03*

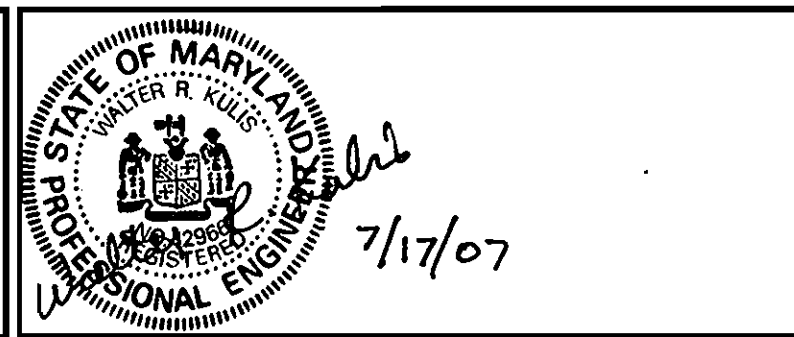
SUBDIVISION	SECTION/AREA	PARCEL NO.
ROCKBURN BRANCH PARK	N/A	42
LIBER/FOLIO	BLOCK NO	ZONING
3505/95	4	R-20
TAX/MAP	GRID	ELEC. DIST.
37	4	1
CENSUS TR.		
		6011.01
WATER CODE	D-04	SEWER CODE
		2153800

ROCK-C17 SONOTES2

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12366, EXPIRATION DATE: 5/19/08"

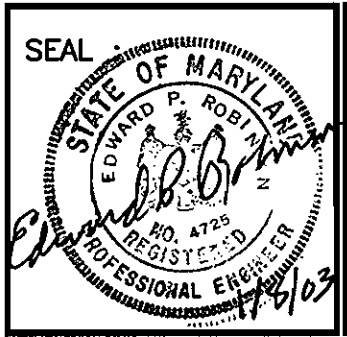
I. REVISED CAPITAL PROJECT NO.

7/17/07



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8950 Route 108 Suite 218
Columbia Maryland 21045 (410)995-4067 Fax (410)992-1837



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OWNER

HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS

7120 OAKLAND MILLS ROAD
COLUMBIA, MD. 21046

REVISIONS

NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS-II

ROCKBURN BRANCH PARK MAINTENANCE FACILITY

HOWARD COUNTY, MARYLAND

DATE : JANUARY 10, 2003 SCALE :

CAPITAL PROJECT NO.

35-34-02 N-3107

C-17

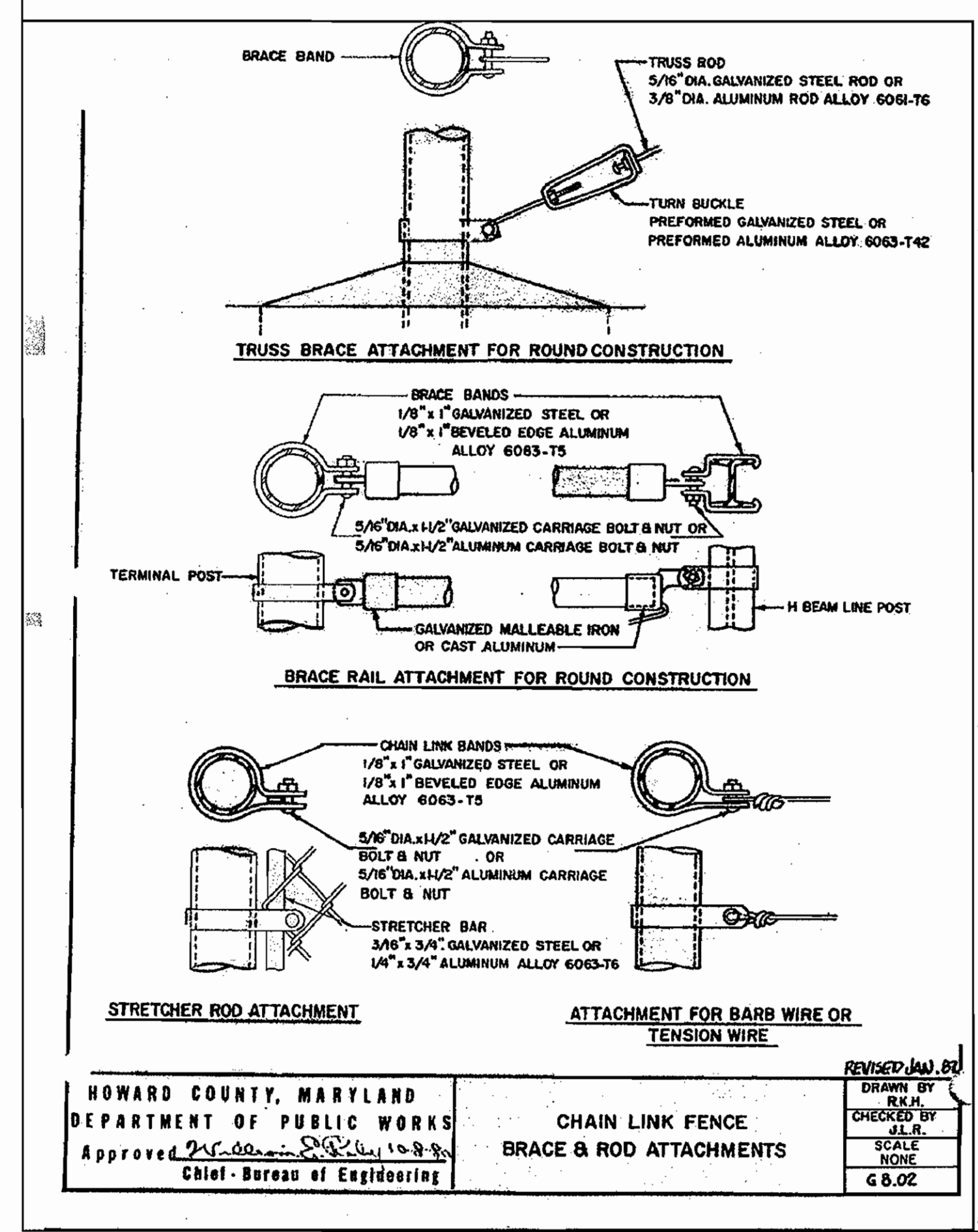
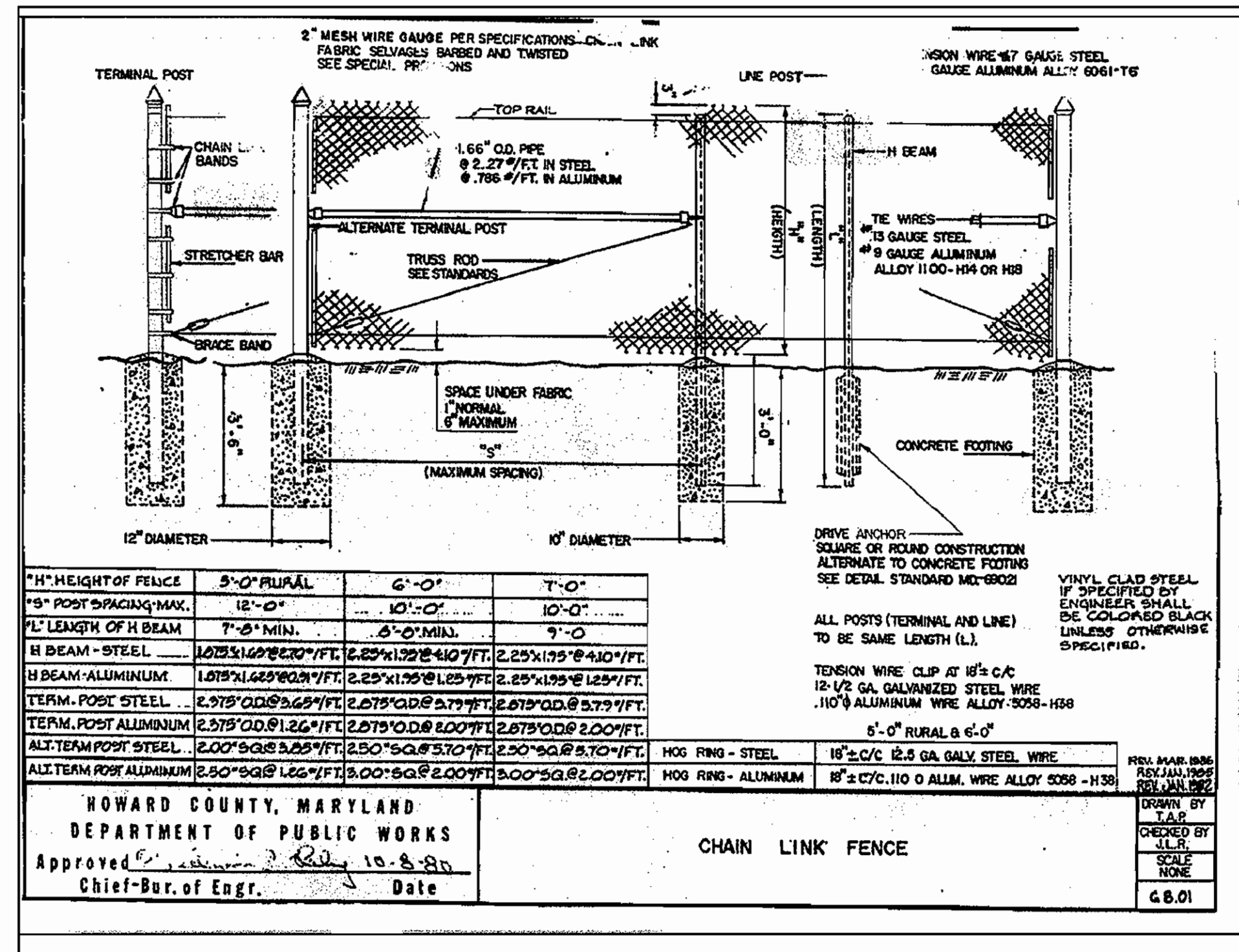
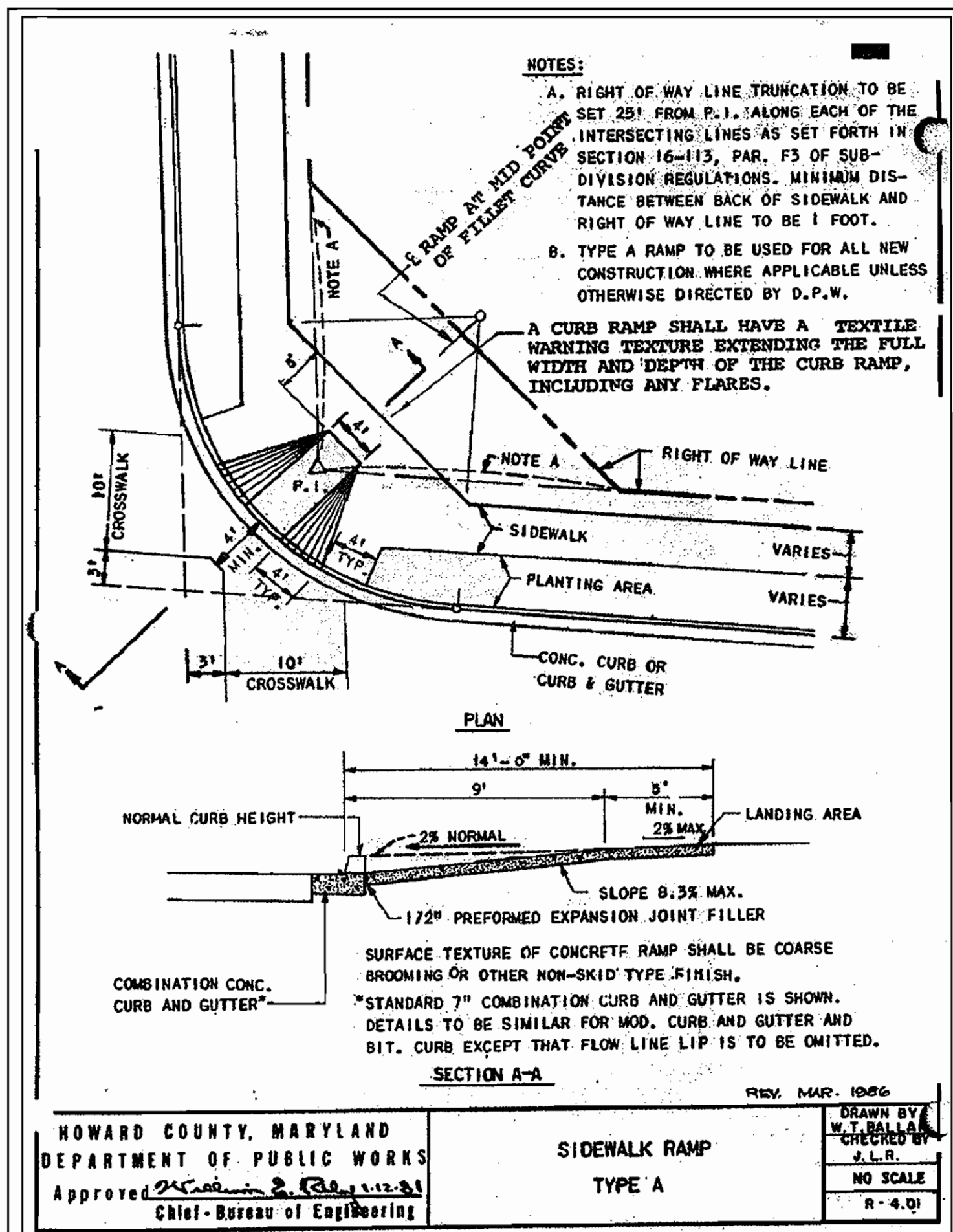
SET SHEET 17 of 28

PAVEMENT AND HINGE POINT ELEVATIONS BASELINE "A"

Right Pavt. Elev. Point #	Left 20 Ft	Left 17 Ft	Left 12 Ft	STATION	PGL ELEV	Right 12 Ft	Right 22 Ft	Right 32 Ft	Right 37 Ft	Right 54 Ft	Right 59 Ft	Right Pavt. Elev. Point #
			Lt 36.78'		PAVT	Rt 37.17'						
1			379.92	-5.9	381.04	382.18						43
			0		381.17							
		HINGE	PAVT	10	381.40							
2	381.55	381.35		18.81	381.59	PAVT	HINGE					
	381.56	381.36		19.43	381.60	381.84	381.44					42
	381.57	381.37		20	381.61	381.85	381.45					
	381.66	381.46		25	381.70	381.94	381.54					
	381.73	381.53		30	381.77	382.01	381.61					
	381.82	381.62		40	381.86	382.10	381.70					
	381.85	381.65		50	381.89	382.13	381.73					
	381.80	381.60		60	381.84	382.08	381.68					
	381.69	381.49		70	381.73	381.97	381.57					
	381.61	381.41		75	381.65	381.89	381.49					
	381.51	381.31		80	381.55	381.79	381.39					
	381.27	381.07		90	381.31	381.55	381.15					
	380.95	380.75		100	380.99	381.23	380.83					
	380.86	380.66		102.57	380.90	381.14	380.74					41
3		380.45		108	380.69	380.93	380.53					
		380.38		110	380.62	380.86	380.46					
		379.99		120	380.23	380.47	380.07					
		379.79		125	380.03	380.27	379.87					
		379.60		130	379.84	380.08	379.68					
		379.26		139.61	379.50	379.74	379.34					26
		379.25		140	379.49	379.73	379.33					
		378.99		150	379.23	379.47	379.07					
59	378.75	378.95		152	379.19	379.43	379.03					
	378.61	378.81		160	379.05	379.29	378.89					
	378.51	378.71		170	378.95	379.19	378.79					
	378.49	378.69		175	378.93	379.17	378.77					
	378.40	378.60		180	378.84	379.08	378.68					
58		378.75		188.33	378.99	379.23	378.83					25
		378.57		190	379.01	379.25	378.85					
		378.72		200	379.16	379.40	379.00					
		378.96		210	379.40	379.64	379.24					
		379.28		220	379.72	379.96	379.56					
		379.46		225	379.90	380.14	379.74					
		379.63		230	380.07	380.31	379.91					
		379.94		240	380.38	380.62	380.22					
		380.22		250	380.66	380.90	380.50					
		380.46		260	380.90	381.14	380.74					
		380.66		270	381.10	381.34	380.94					
		380.75		275	381.19	381.43	381.03					
		380.83		280	381.27	381.51	381.11					
		380.97		290	381.41	381.65	381.25					
		381.07		300	381.51	381.75	381.35					
57		381.32		306.14	381.56	381.80	381.40					24
		381.14		310	381.58	381.82	381.42					
		381.65		320	381.63	381.87	381.47					
		381.68		325	381.66	381.90	381.50					
68	382.50			329.14	381.68	381.92	381.52					
		381.73		330	381.68	381.92	381.52					
		381.78		340	381.73	381.97	381.57					
		381.83		349.27	381.78	382.02	381.62					23
		381.88		350	381.78							
56	PAVT	381.93	382.13	353	381.80			PAVT	HINGE			22 & 21
	382.50		382.16	359.27	381.83			382.47	382.07			
	382.50			360	381.83			382.47	382.07			
	382.50			363	381.85			382.49	382.09			
	382.50			370	381.88			382.52	382.12			
	382.50			375	381.91			382.55	382.15			
	382.50			380	381.93			382.57	382.17			
	382.50			390	381.98			382.62	382.22			
	382.50			400	382.03			382.67	382.27			
	382.50			410	382.08			382.72	382.32			
	382.50			420	382.13			382.77	382.37			
	382.50			425	382.16			382.80	382.40			
	382.50			430	382.18			382.82	382.42			
	382.50			440	382.23			382.87	382.47	PAVT	HINGE	

PAVEMENT AND HINGE POINT ELEVATIONS BASELINE "B"

Left Pavt. Elev. Point #	Left 35 Ft.	Left 30 Ft.	Left 19 Ft.	Left 17 Ft.	Left 14 Ft.	Left 12 Ft.	STATION	PGL ELEV	Right 12 Ft	Right 32 Ft	Right 40 Ft	Right 43.33 Ft	Right Pavt. Elev. Point #
				HINGE					PAVT				
				380.27				380.07	243.14	379.60	379.18		
				380.32				380.12	250	379.71	379.34		
4				380.33				380.13	253.15	379.75	379.40		60
				380.38				380.18	260	379.86	379.56	PAVT	PAVT
				380.44				380.24	269	380.00	379.76	379.36	379.20
				380.46				380.26	270	380.02	379.79	379.41	379.25
6 & 5		HINGE	PAVT					380.27	271	380.03	379.83	379.46	379.31
	380.83	380.63						380.33	275	380.09	379.96	379.65	379.53
	380.89	380.69						380.41	280	380.17	380.13	379.90	379.80
	380.97	380.77						380.56	290	380.32	380.47	380.39	380.34
	381.12	380.92						380.72	300	380.48	380.81	380.88	380.88
	381.28	381.08						380.81	306.14	380.57	381.02	381.18	381.21
	381.37	381.17						380.87	310	380.63	381.15	381.36	381.42
	381.43	381.23						381.03	320	380.79	381.49	381.85	381.96
	381.59	381.39						381.11	325	380.87	381.66	382.10	382.24
	381.67	381.47						381.17	329.15	380.93	381.80	382.30	382.46
	381.73	381.53						381.18	330	380.94	381.83	382.30	382.46
	381.74	381.54						381.21	332	380.97	381.90	382.30	382.46
	381.77	381.57						381.34	340	381.10	381.90	382.30	382.46
	381.90	381.70						381.43	346	381.19	381.90	382.30	382.46
	381.99	381.79						381.46	350	381.22	381.93	382.30	382.46
	382.02	381.82						381.53	360	381.29	382.02	382.30	382.46
8 & 7	382.00	381.90		HINGE	LT. 40'			381.54	361	381.30	382.02	382.30	382.46
								381.56	364	381.32	382.05	382.30	382.46
								381.60	370	381.36	382.05	382.30	382.46
								381.63	375	381.39	382.05	382.30	382.46
								381.67	380	381.43	382.05	382.30	382.46
9 & 10	382.16			HINGE	382.36	381.74		384.46	381.46	382.05	382.30	382.46	
								390	381.50	382.05	382.30	382.50	PAVT
								391.5	381.51	382.05	382.23		382.50
								400	381.57	382.05	382.23		382.50
								410	381.64	382.05	382.23		382.50
								420	381.71	382.05	382.23		382.50
								425	381.75	382.05	382.23		382.50
								430	381.78	382.05	382.23		382.50
								440					



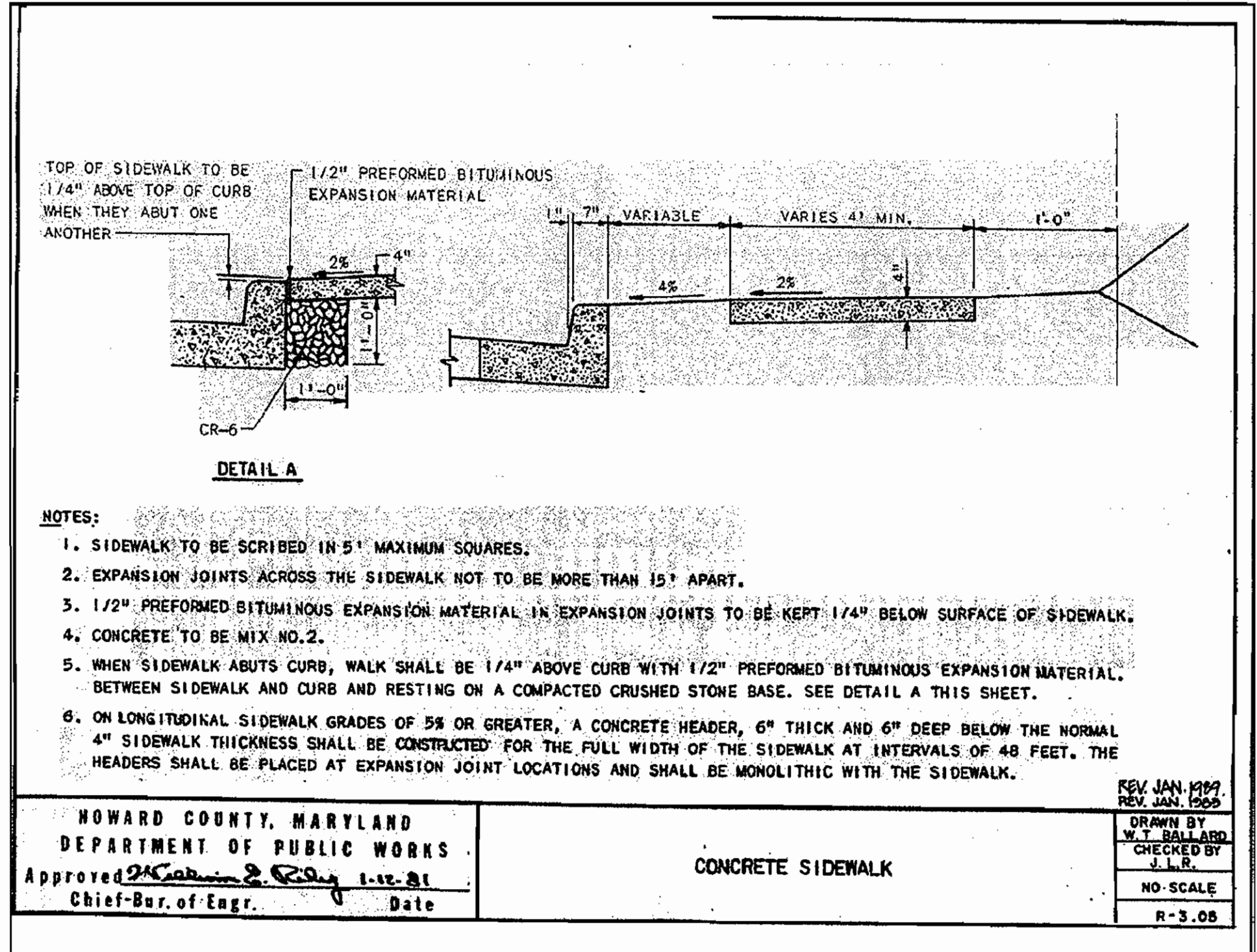
SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVEMENT MATERIALS	
		FULL DEPTH BIT. CONC. ALTERNATE	GRANULAR BASE ALTERNATES
P-1	PARKING BAYS APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO HEAVY TRUCKS TRAVELWAYS FOR APARTMENTS AND COMMERCIAL INDUSTRIAL ZONES WITH NO HEAVY TRUCK	1" BIT. CONC. SURFACE 4" BIT. CONC. BASE	1" BIT. CONC. SURFACE 2" BIT. CONC. BASE 4" GRADED AGGREGATE BASE (GAB)
P-2	RESIDENTIAL ZONES LOCAL, CUL-DE-SAC STS. ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL LOTS TRAVELWAYS FOR APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY*	1 1/2" BIT. CONC. SURFACE 5" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 2 1/2" BIT. CONC. BASE 6" GRADED AGGREGATE BASE (GAB)
P-3	RESIDENTIAL ZONES MINOR AND MAJOR COLLECTORS COMMERCIAL-INDUSTRIAL ZONES LOCAL AND CUL-DE-SAC STREETS ALLEYS TRAVELWAYS FOR APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH MORE THAN 10 HEAVY TRUCKS PER DAY*	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE 5" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 4 1/2" BIT. CONC. BASE 5" GRADED AGGREGATE BASE (GAB)
P-4	COMMERCIAL-INDUSTRIAL ZONES MINOR COLLECTOR	1 1/2" BIT. CONC. SURFACE 3 1/2" BIT. CONC. BASE 5" BIT. CONC. BASE	1 1/2" BIT. CONC. SURFACE 1 1/2" BIT. CONC. BASE 5" BIT. CONC. BASE 4" GRADED AGGREGATE BASE (GAB)

* TRAVELWAYS ARE DEFINED AS THE ROADWAYS LEADING TO THE PARKING BAYS.
* HEAVY TRUCKS ARE DEFINED AS THOSE WITH 6 WHEEL OR MORE INCLUDING GARBAGE TRUCKS.

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: *[Signature]* Chief-Bureau of Engineering

PAVING SECTIONS

REV. JAN. 1989
REV. OCT. 1992
REV. JAN. 1999
REV. JAN. 1996
DRAWN BY: W.T. BALLARD
CHECKED BY: J.L.R.
NO SCALE
R-3.08



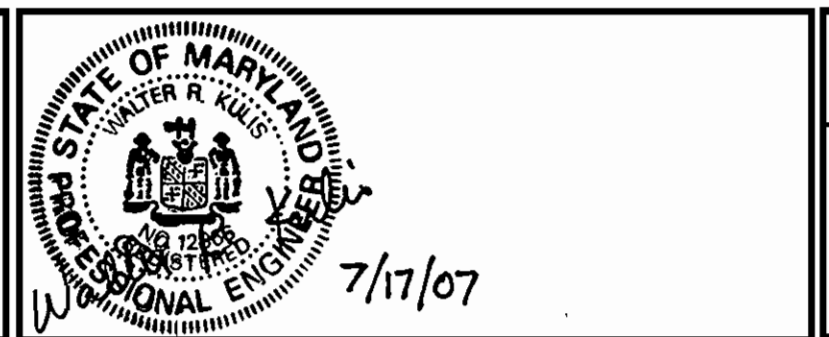
APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director: *[Signature]* Date: 3/24/03
Chief, Division of Development: *[Signature]* Date: 3/19/03
Chief, Development Engineering Division: *[Signature]* Date: 3/18/03

SUBDIVISION	SECTION/AREA	N/A	PARCEL NO.	42		
ROCKBURN BRANCH PARK						
LIBER/FOLIO	BLOCK NO	ZONING	TAX/MAP	GRID	ELEC. DIST.	CENSUS TR.
3505/95	4	R-20	37	4	1	6011.01
WATER CODE	D-04				SEWER CODE	2153800

"PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12164, EXPIRATION DATE: 5/19/08"

1. REVISED CAPITAL PROJECT NO.



ati Architects Engineers and Construction Consultants

8950 Route 108 Suite 218
Columbia Maryland 21045 (410)995-4067 Fax (410)992-1837

PROGRESSIVE ENGINEERING CONSULTANTS, INC.

ENGINEERS • PLANNERS • SURVEYORS

9160 RED BRANCH ROAD • SUITE E9
COLUMBIA, MD 21045
PHONE: (410) 715-0390 FAX: (410) 715-1745

OWNER

HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS

7120 OAKLAND MILLS ROAD
COLUMBIA MD. 21046

REVISIONS

NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

HOWARD COUNTY STANDARD DETAILS

ROCKBURN BRANCH PARK
MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND

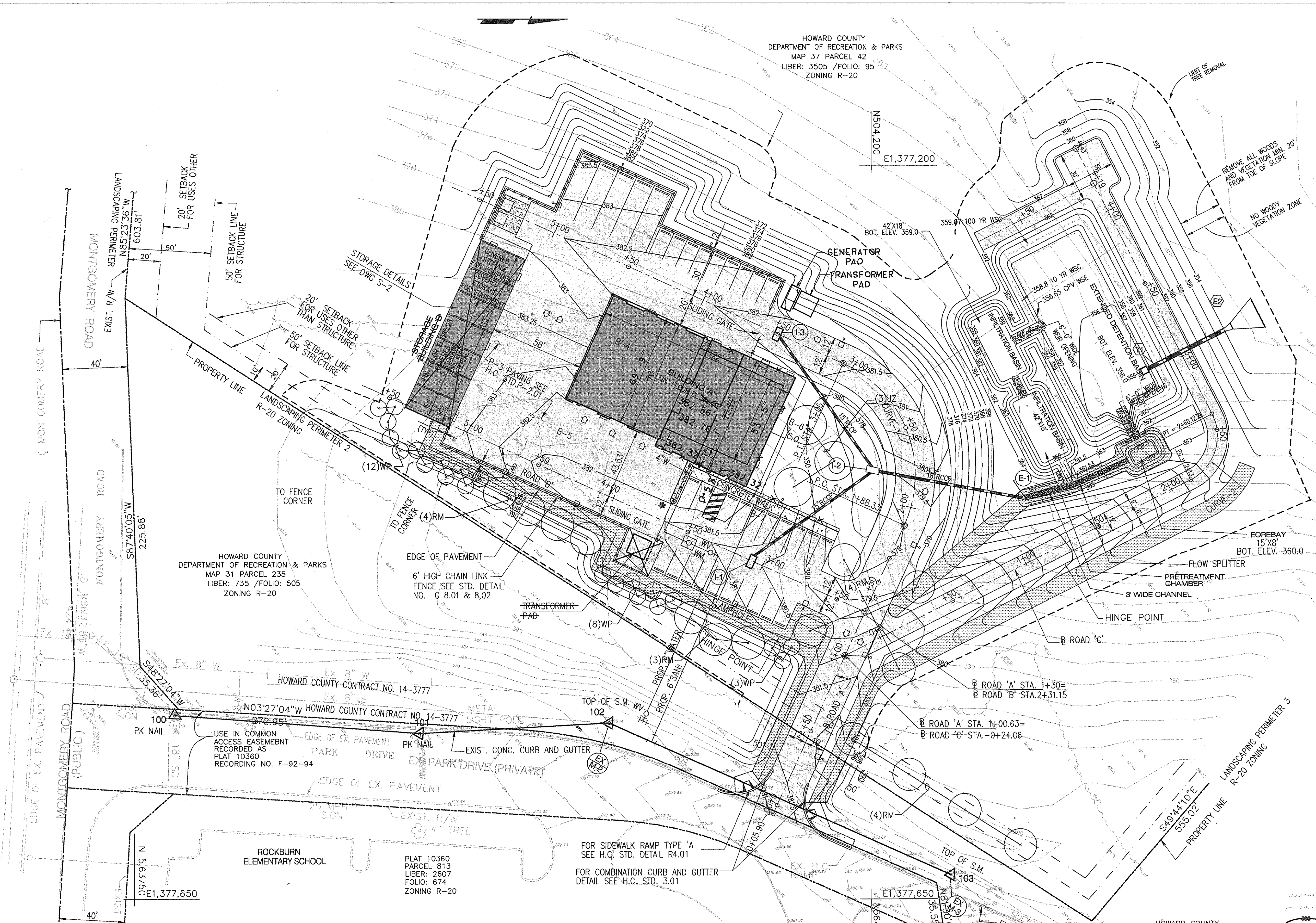
DATE: JANUARY 10, 2003 SCALE: NONE

CAPITAL PROJECT NO. 3P-349C N-3107

C-19

SET SHEET 19 OF 28

HOWARD COUNTY
DEPARTMENT OF RECREATION & PARKS
MAP 37 PARCEL 42
LIBER: 3505 / FOLIO: 95
ZONING R-20



- LANDSCAPE NOTES**
- ALL PLANTS MATERIALS SHALL BE NURSERY GROWN AND SHALL CONFORM TO AMERICAN ASSOCIATION OF NURSERYMAN, INC. STANDARD, LATEST EDITION.
 - ALL PLANTING PROCEDURES AND SPECIFICATIONS SHALL CONFORM TO "LANDSCAPE SPECIFICATIONS GUIDELINES FOR BALTIMORE WASHINGTON METROPOLITAN AREA" LATEST EDITION.
 - THE CONTRACTOR SHALL CONTACT "MISS UTILITY" FOR UNDERGROUND UTILITY LOCATIONS AT LEAST 72 HOURS PRIOR TO THE COMPLETION DATE.
 - ALL PLANTS SHALL BE GUARANTEED BY THE CONTRACTOR FOR ONE YEAR FOLLOWING THE INSTALLATION COMPLETION DATE.
 - AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTING HERewith LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPE PLANTING SHOWN ON THIS PLAN WILL BE DONE IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATE OF LANDSCAPE INSTALLATION ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Jan P. Clark 2/21/03
NAME DATE

LANDSCAPING PLANTING LIST

KEY	QUANTITY	COMMON NAME/BOTANICAL NAME	MIN. SIZE	ROOT	REMARKS
RM	15 EA.	RED SUNSET MAPLE / ACER RUBRUM "RED SUNSET"	2.5"-3" CAL.	B&B	20' O.C.
JZ	3 EA.	JAPANESE ZELKOVA / ZELKOVA SERRATA "VILLAGE GREEN"	2.5"-3" CAL.	B&B	-
WP	23 EA.	WHITE PINE / PINUS STROBUS	6"-8" HT.	B&B	10' O.C.

PLAN
SCALE=1"=30'

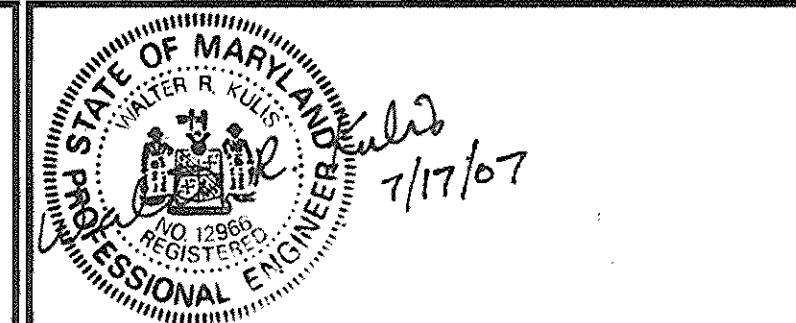
- LEGEND:**
- EX. WOODS LINE
 - EX. CONTOUR LINE
 - PROP. CONTOUR LINE
 - CURB LINE
 - CENTER LINE
 - 101 TRAVERSE POINT
 - EX. FENCE
 - PROP. BUILDINGS
 - P-3 PAVEMENTS
 - SOLID SODDING

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Jan P. Clark Director Date 2/19/03
Linda K. ... Chief, Division of Land Development Date 2/19/03
... Chief, Development Engineering Division Date 2/19/03

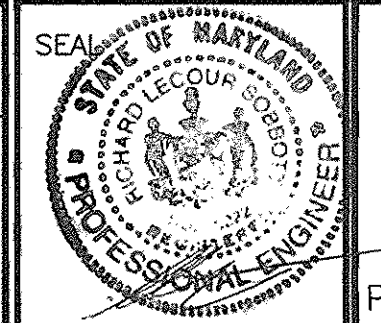
SUBDIVISION	ROCKBURN BRANCH PARK	SECTION/AREA	N/A	PARCEL NO.	42
LIBER/FOLIO	3505/95	BLOCK NO.	4	ZONING	R-20
TAX/MAP	37	GRID	4	ELEC. DIST.	1
CENSUS TR.	6011.01	WATER CODE	D-04	SEWER CODE	2153800

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12646 EXPIRATION DATE: 6/1/08

1. REVISED CAPITAL PROJECT NO.
2. REVISED BLDG. FOOTPRINT
3. REVISED SIDEWALKS, ENTRANCES, PARKING & APPURTENANCES
4. REVISED TRANSFORMER PAD LOCATION
5. REMOVED BUILDINGS



lati Architects Engineers and Construction Consultants
8950 Route 108 Suite 218
Columbia Maryland 21045 (410)995-4067 Fax(410)992-1837



PROGRESSIVE ENGINEERING CONSULTANTS, INC.
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PHONE: (410) 715-0390 FAX: (410) 715-1745

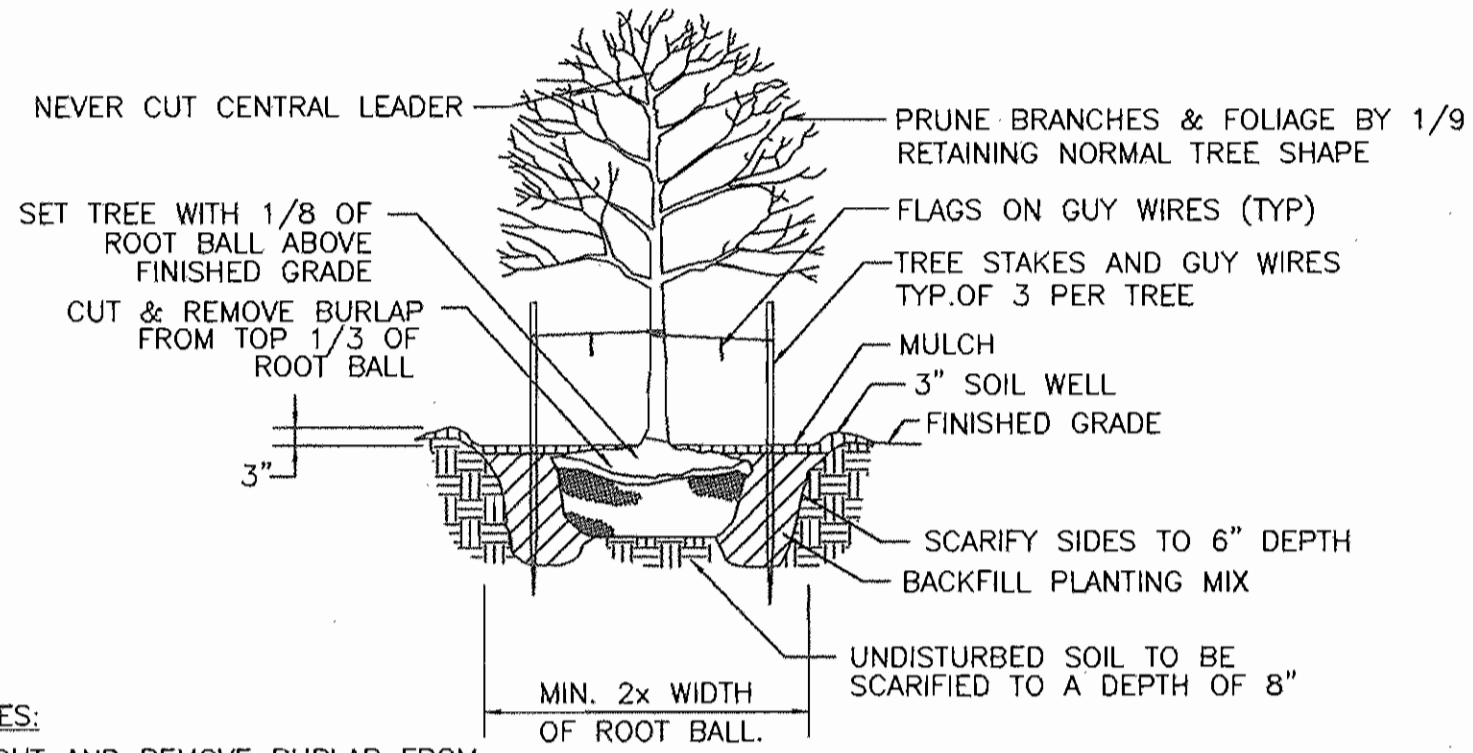
OWNER
HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS
7120 OAKLAND MILLS ROAD
COLUMBIA MD. 21046

REVISIONS

NO.	DATE	DESCRIPTION
1	1/17/07	SEE SEAL AND CERTIFICATION ABOVE

LANDSCAPING PLAN I
ROCKBURN BRANCH PARK
MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND
DATE: JANUARY 10, 2003 SCALE: 1"=30'

CAPITAL PROJECT NO. 3107
C-20
SET SHEET 20 OF 28
SDP-02-28



- NOTES:
- CUT AND REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL.
 - REMOVE ALL NON-BIODEGRADABLE CONTAINERS & SCARIFY ROOT BALL.

TREE PLANTING DETAIL
NOT TO SCALE

PRIVATE 50' USE IN COMMON ACCESS EASEMENT FOR LOTS 1, 2, AND 3
LIBER: 2050
FOLIO: 203

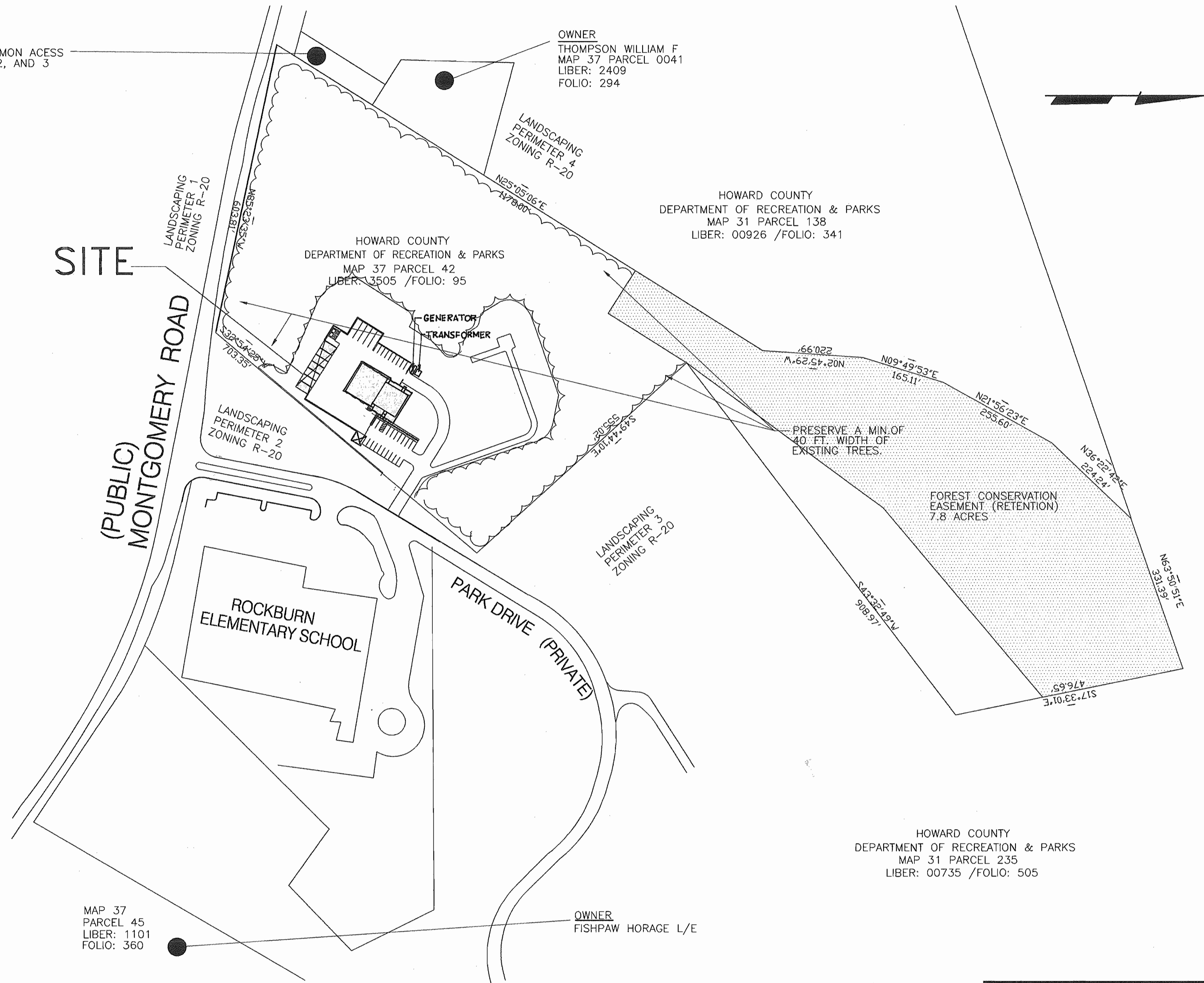
OWNER
THOMPSON WILLIAM F
MAP 37 PARCEL 0041
LIBER: 2409
FOLIO: 294

HOWARD COUNTY
DEPARTMENT OF RECREATION & PARKS
MAP 31 PARCEL 138
LIBER: 00926 /FOLIO: 341

HOWARD COUNTY
DEPARTMENT OF RECREATION & PARKS
MAP 37 PARCEL 42
LIBER: 3505 /FOLIO: 95

FOREST CONSERVATION EASEMENT (RETENTION)
7.8 ACRES

HOWARD COUNTY
DEPARTMENT OF RECREATION & PARKS
MAP 31 PARCEL 235
LIBER: 00735 /FOLIO: 505



SCHEDULE "B" - PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	29
NUMBER OF TREES REQUIRED(LANDSCAPE ISLANDS)	2
NUMBER OF TREES PROVIDED(LANDSCAPE ISLANDS) SHADE TREES	2

SCHEDULE "A" - PERIMETER LANDSCAPE EDGE

CATEGORY LANDSCAPE TYPE	ADJACENT TO ROADWAYS		ADJACENT TO PROPERTY	
	PERIMETER 1 LOADING AREA TYPE "D"	PERIMETER 2 TYPE "B"	PERIMETER 3 TYPE "C" (PROPERTY LINE)	PERIMETER 4 TYPE "C" (PROPERTY LINE)
LINEAR FEET OF ROADWAY FRONTAGE / PERIMETER	609	703	582	260
CREDIT FOR EXIST. VEGETATION (YES, NO, LINEAR FOOT) (DESCRIBED BELOW IF NEEDED)	YES 100%	YES (140 LF) (NET 563 LF)	YES 100%	YES 100%
CREDIT FOR WALL, FENCE OR BERM	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED				
SHADE TREES	0	12	0	0
EVERGREEN TREES	0	14	0	0
SHRUBS	0	0	0	0
NUMBER OF PLANTS PROVIDED				
SHADE TREES	0	13	0	0
EVERGREEN TREES	0	23	0	0
OTHER TREES(2:1 SUBSTITUTION)	0	0	0	0
SHRUBS(10:1 SUBSTITUTION)	0	0	0	0

EXISTING VEGETATION PRESERVATION PLAN

SCALE: 1"=120'

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Joseph M. Taylor Director Date: 2/12/03

Cindy Hamada Chief, Division of Planning & Development Date: 2/19/03

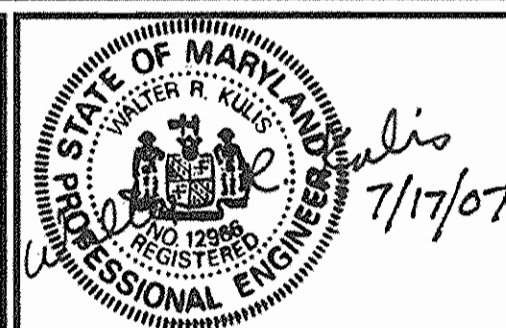
Chris ... Chief, Development Engineering Division Date: 3/14/03

SUBDIVISION ROCKBURN BRANCH PARK	SECTION/AREA N/A	PARCEL NO. 42
LIBER/FOLIO 3505/95	BLOCK NO 4	ZONING R-20
TAX/MAP 37	GRID 4	ELEC. DIST. 1
CENSUS TR. 6011.01	WATER CODE D-04	SEWER CODE 2153800

H:\PROJECTS\CIVIL\0122101\LANDSCAPE2.DWG

*PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12166. EXPIRATION DATE: 5/1/08

- REVISED CAPITAL PROJECT NO.
- REVISED BLDG. FOOTPRINT.
- REVISED SIDEWALKS, ENTRANCES, PARKING & APPURTENANCES.
- REVISED TRANSFORMER PAD LOCATION.
- REMOVED BUILDING "B".



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Columbia Maryland 21045 (410)995-4067/Fax(410)992-1837



DCL CONSULTING ENGINEERS
COLUMBIA, MARYLAND 21045
Tel:(410) 995-0090 Fax, (410) 992-7038

OWNER
HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS
7120 OAKLAND MILLS ROAD

REVISIONS		
NO.	DATE	DESCRIPTION
1	7/1/07	SEE SEAL AND CERTIFICATION ABOVE

LANDSCAPING PLANTING PLAN II

ROCKBURN BRANCH PARK
MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND

DATE: OCTOBER 24, 2002 SCALE: 1"=120'

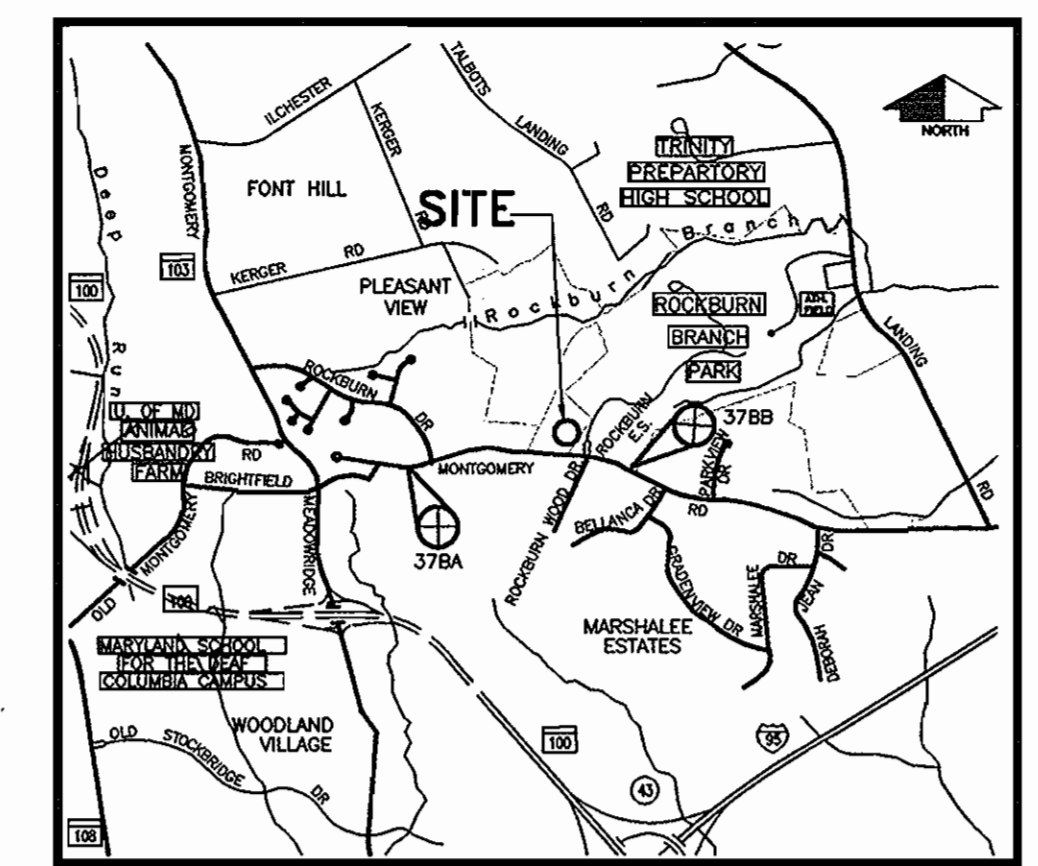
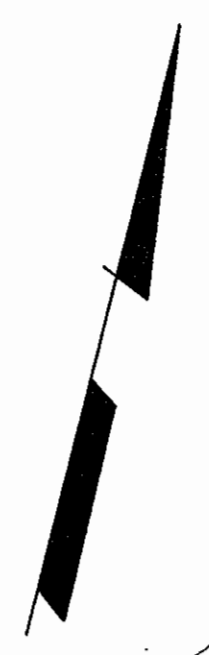
CAPITAL PROJECT NO.
 N-3107

C-21

SET SHEET 21 OF 28

PLAN LEGEND

- BeB2 SOIL TYPE AND LIMIT
- STEEP SLOPE 25 % AND GREATER
- STEEP SLOPE 15 % TO 25 %
- EXISTING TREE LINE
- FOREST STAND LIMIT AND DESCRIPTION
- WETLAND LIMIT INCLUDING 25' BUFFER
- LIMIT OF DISTURBANCE
- FOREST RETENTION EASEMENT
- FOREST RETENTION SIGNAGE
- TREE PROTECTIVE FENCE
- INTERMITTENT STREAM



VICINITY MAP
SCALE: 1"=3000'
3000 0 3000 FEET

STAND NARRATIVE

THE SITE CONSISTS OF ABOUT 21.4 ACRES OF WOODLANDS ON A 22.00-ACRE SITE. THE SITE CONTAINS THE FOLLOWING THREE FOREST STANDS

STAND F1 (10.4 AC)
STAND F1 IS A MATURE FIXED HARDWOOD FOREST. THE DOMINANT SPECIES IS TULIP POPLAR BUT THERE ARE ALSO A SIGNIFICANT NUMBER OF AMERICAN BEECH. THE SIZE CLASS IS MEDIUM TO LARGE SAW TIMBER AVERAGING 18" DBH. THE STAND CONTAINS NINETEEN SPECIMEN TREES (ALL OF WHICH ARE TULIP POPLAR.) THE STOCKING IS IN THE OPTIMUM RANGE FOR TREE GROWTH. THIS STAND IS CONTIGUOUS WITH MATURE HARDWOOD STANDS OF THE SAME DESCRIPTION NORTH, EAST, AND WEST OF THE SITE. THE UNDERSTORY IS TYPICAL OF MATURE MIXED STREAM VALLEY FORESTS WITH A LARGE PERCENTAGE OF SPICE BUSH IN LOWLAND ENVIRONMENTS. THE GROUND COVER IS FAIRLY SPARSE BECAUSE OF THE DENSE CANOPY. THE ONLY INVASIVE SPECIES NOTED WERE WIDELY SCATTERED AREAS OF JAPANESE HONEYSUCKLE. FEW SIGNS OF DISTRESS WERE FOUND. THE EXTREME NORTHERN END OF THE SITE IS USED AS FRISBEE GOLF COURSE SO MUCH OF THE UNDERSTORY HAS BEEN CLEARED. APPROXIMATELY 6% OF THE STAND COVERS ENVIRONMENTALLY SENSITIVE AREAS (WETLANDS AND WETLAND BUFFERS.) THIS TOGETHER WITH ITS INHERENT HIGH QUALITY MAKES THIS STAND A HIGH PRESERVATION PRIORITY.

STAND F2 (2.0 AC)
STAND F2 IS MIXED HARDWOOD FOREST CONTAINING A VERY LARGE PERCENTAGE OF TULIP POPLAR. THIS FOREST STAND APPEARS TO BE MUCH YOUNGER THAN THE TREES IN THE FOREST STAND F1. A 1968 AERIAL PHOTOGRAPH SHOWS THIS AREA WAS ONCE OPEN FIELD. THE ONLY OTHER SPECIES WITHIN THE STAND IN GREAT NUMBERS IS SOME WIDELY SCATTERED BLACK CHERRY. THIS SIZE CLASS IS SMALL TO MEDIUM SAW TIMBER AVERAGING 7" DBH. THE STAND CONTAINS NO SPECIMEN TREES OR UNUSUAL SPECIES. BECAUSE OF THE DENSE CANOPY THE UNDERSTORY AND GROUND COVER IS RELATIVELY SPARSE AND COMPOSED MAINLY OF TREE REGENERATION AND SOME SMILAX SPECIES. THE UNDERSTORY BECOMES MORE DENSE CLOSER TO THE EASTERN EDGE OF THE STAND WHERE JAPANESE HONEYSUCKLE AND MULTIFLORA ROSE ARE BEGINNING TO INVADE. FEW SIGNS OF DISTRESS WERE FOUND. APPROXIMATELY 2 PERCENT OF THE STAND COVERS ENVIRONMENTALLY SENSITIVE AREAS (WETLAND BUFFER, STEEP SLOPES.) BECAUSE THE STAND IS ON WELL-DRAINED UPLAND SOILS, THE STAND COULD IN TIME BECOME A HIGH QUALITY MIXED FOREST HABITAT CONTIGUOUS WITH STAND F1. AT THIS TIME, HOWEVER, ITS PRESERVATION PRIORITY WOULD BE CONSIDERED MODERATE.

STAND F3 (9.0 AC)
STAND F3 IS A MIX TYPICAL OF MIDDLE SUCCESSION GROWTH ON ABANDONED FARM FIELDS. THE STAND CONTAINS ONE SPECIMEN TREE - A WHITE OAK. A 1968 AERIAL PHOTOGRAPH SHOWS THIS AREA WAS ONCE OPEN FIELD. FLOWERING DOGWOOD IS THE DOMINANT SPECIES. THESE TREES ARE BEING DISPLACED BY TALLER TULIP POPLARS AND RED MAPLE WHICH ARE NOW WIDELY SCATTERED OVER APPROXIMATELY 60% OF THE STAND CANOPY IS NOT COMPLETELY CLOSED SO THE UNDERSTORY IS MUCH DENSER THAN IN FOREST STANDS F1 AND F2. THE UNDERSTORY AND GROUND COVER SPECIES INCLUDE MULTIFLORA ROSE, SOME SMILAX SPECIES, FOX GRAPE, JAPANESE HONEYSUCKLE, AND HERBACEOUS PLANTS SUCH AS GOLDENROD. APPROXIMATELY 4 PERCENT OF THE STAND COVERS ENVIRONMENTALLY SENSITIVE AREAS (WETLAND BUFFER, STEEP SLOPES.) BECAUSE THE STAND IS ON WELL-DRAINED UPLAND SOILS, THE STAND COULD IN TIME BECOME A HIGH QUALITY MIXED FOREST HABITAT CONTIGUOUS WITH STAND F1. AT THIS TIME HOWEVER ITS PRESERVATION PRIORITY WOULD BE CONSIDERED MODERATE TO LOW.

THE REMAINDER OF THE SITE IS GRASSED OPEN SPACE. THE ORIGINAL HOME SITE OCCUPIED THE SOUTHWEST CORNER OF THE SITE. THE ORIGINAL HOMESTEAD HAS BEEN TORN DOWN BUT SOME 12" DBH AMERICAN HOLLY, 20" DBH BLACKGUM, AND A SINGLE 48" DBH WHITE OAK STILL REMAIN.

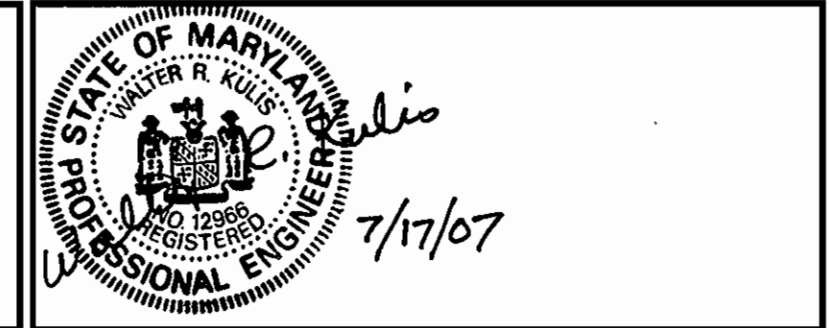
SOIL LEGEND

SYMBOL	NAME
BeB2	BELTSVILLE SILT LOAMS, 1 TO 5% SLOPES MODERATELY ERODED
C1C3	CHILLUM GRAVELLY LOAM, 5 TO 10% SLOPES
C1D2	CHILLUM GRAVELLY LOAM, 10 TO 15% SLOPES, MODERATELY ERODED
CnB2	CHILLUM-FAIRFAX LOAMS, 1 TO 5% SLOPES, MODERATELY ERODED
CmC2	CHILLUM SILT LOAM, 5 TO 10% SLOPES, MODERATELY ERODED
DeB2	DELANCO SILT LOAMS, 3 TO 8% SLOPES, MODERATELY ERODED
EnB2	ELSINBORO LOAMS, 0 TO 3% SLOPES
IuB	IUKA LOAMS, LOCAL ALLUVIUM, 1 TO 5% SLOPES
S1B2	SASSAFRAS LOAMS, 1 TO 5% SLOPES, MODERATELY ERODED
S1C2	SASSAFRAS LOAMS, 5 TO 10% SLOPES, MODERATELY ERODED
S1D2	SASSAFRAS LOAMS, 10 TO 15% SLOPES, MODERATELY ERODED
Co	CODORUS SILT LOAM
SsE	SASSAFRAS SOILS, 15 TO 40% SLOPES
SfD2	SASSAFRAS GRAVELLY SANDY LOAM, 10 TO 15% SLOPES, MODERATELY ERODED
ScB	SANDY AND CLAYEY LAND, GENTLY SLOPING
CmB2	CHILLUM SILT LOAM, 1 TO 5% SLOPES, MODERATELY ERODED

QUALIFIED PROFESSIONAL PER THE MARYLAND FOREST CONSERVATION ACT
Richard S. Surr 1-16-03
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING			
Director	<i>Mark A. Gayle</i>	3/24/03	Date
Chief, Planning & Development	<i>Linda Hamer</i>	3/19/03	Date
Chief, Development Engineering Division	<i>Paul R. ...</i>	3/12/03	Date
SUBDIVISION	ROCKBURN BRANCH PARK	SECTION/AREA	N/A
LIBER/FOLIO	3505/95	BLOCK NO.	4
ZONING	R-20	TAX/MAP	37
GRID	4	ELEC. DIST.	1
CENSUS TR.	6011.01	SEWER CODE	2153800

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12964, EXPIRATION DATE: 9/19/08
1. REVISION CAPITAL PROJECT NO.



lati Architects Engineers and Construction Consultants
8950 Route 108 Suite 218
Columbia Maryland 21045 (410)995-4067 Fax(410)992-1837



DGL CONSULTING ENGINEERS
COLUMBIA, MARYLAND 21045
Tel:(410) 995-0090 Fax: (410) 992-7038

OWNER
HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS
7120 OAKLAND MILLS ROAD

REVISIONS		
NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

FOREST STAND DELINATION PLAN
ROCKBURN BRANCH PARK
MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND
DATE: OCTOBER 24, 2002 SCALE: 1"=100'

CAPITAL PROJECT NO.
 2002-02 N-3107
C-22
SET SHEET 22 of 28
SDP-02-28

C:\M\0122101\F0RESTS.DWG

PLAN LEGEND

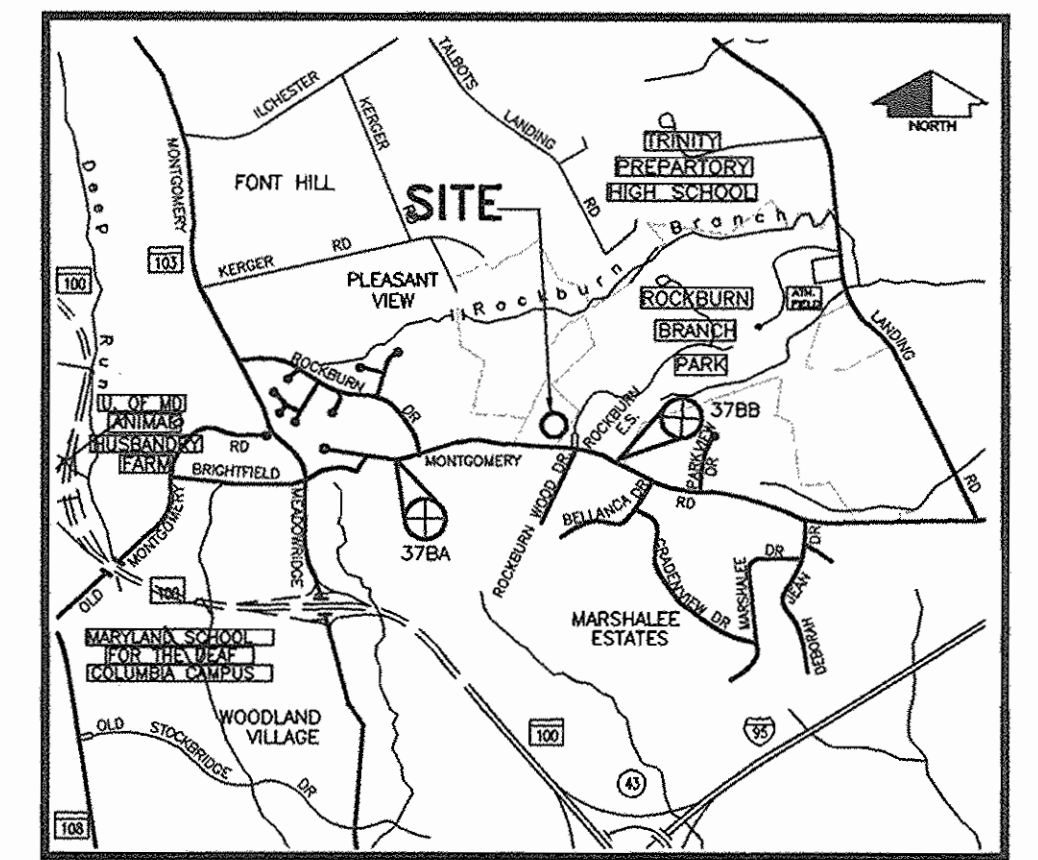
- BeB2 SOIL TYPE AND LIMIT
- [Hatched Box] STEEP SLOPE 25 % AND GREATER
- [Cross-hatched Box] STEEP SLOPE 15 % TO 25 %
- [Wavy Line] EXISTING TREE LINE
- [Dashed Line] FOREST STAND LIMIT AND DESCRIPTION
- [Dashed Line] WETLAND LIMIT INCLUDING 25' BUFFER
- [Dotted Line] LIMIT OF DISTURBANCE
- [Shaded Box] FOREST RETENTION EASEMENT
- [Triangle] FOREST RETENTION SIGNAGE
- [Square with X] TREE PROTECTIVE FENCE
- [Dashed Line] INTERMITTENT STREAM

LINE TABLE

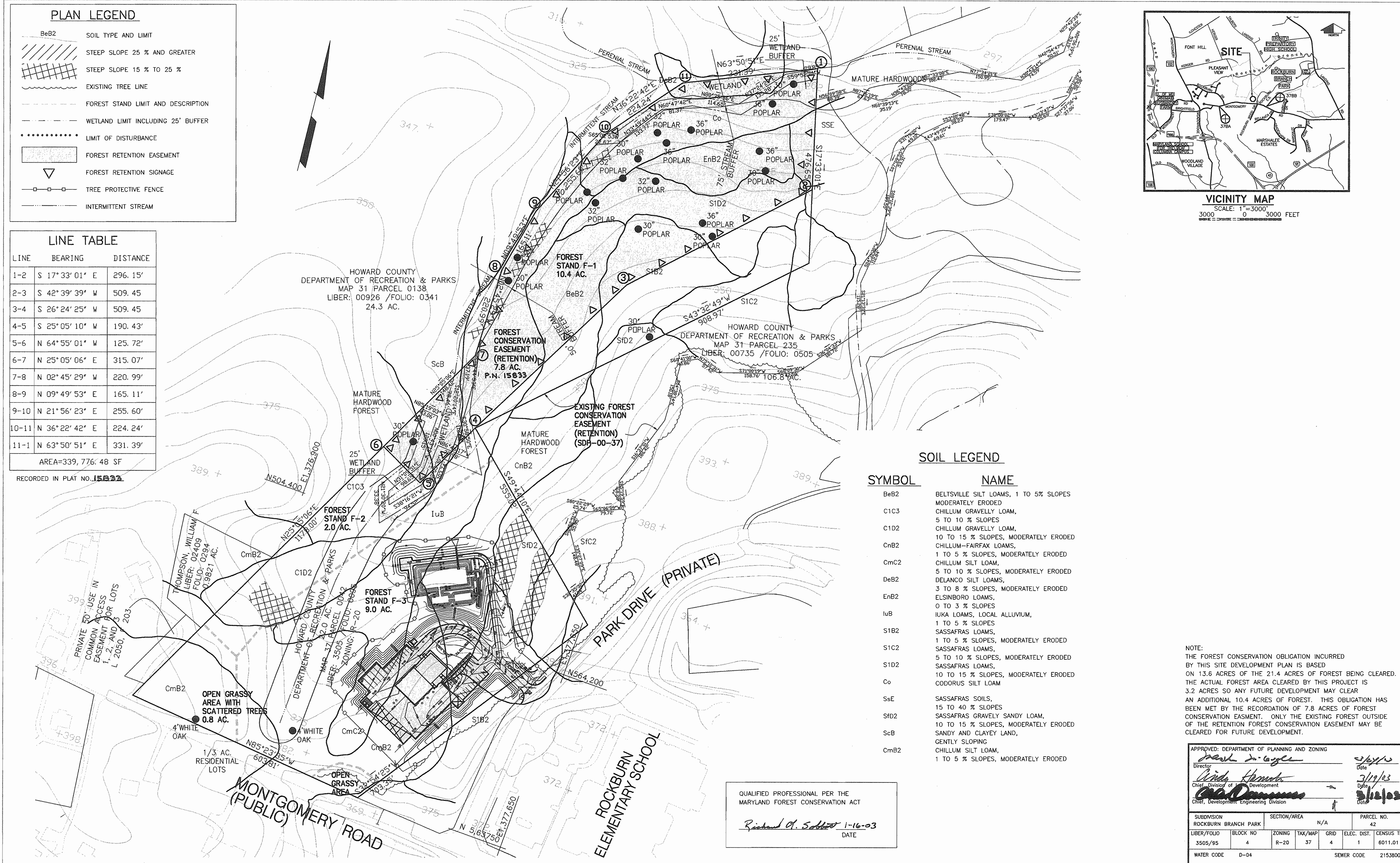
LINE	BEARING	DISTANCE
1-2	S 17° 33' 01" E	296.15'
2-3	S 42° 39' 39" W	509.45
3-4	S 26° 24' 25" W	509.45
4-5	S 25° 05' 10" W	190.43'
5-6	N 64° 55' 01" W	125.72'
6-7	N 25° 05' 06" E	315.07'
7-8	N 02° 45' 29" W	220.99'
8-9	N 09° 49' 53" E	165.11'
9-10	N 21° 56' 23" E	255.60'
10-11	N 36° 22' 42" E	224.24'
11-1	N 63° 50' 51" E	331.39'

AREA=339, 776.48 SF

RECORDED IN PLAT NO. 15833



VICINITY MAP
SCALE: 1"=3000'
3000 0 3000 FEET



SOIL LEGEND

SYMBOL	NAME
BeB2	BELTSVILLE SILT LOAMS, 1 TO 5% SLOPES MODERATELY ERODED
C1C3	CHILLUM GRAVELLY LOAM, 5 TO 10 % SLOPES
C1D2	CHILLUM GRAVELLY LOAM, 10 TO 15 % SLOPES, MODERATELY ERODED
CnB2	CHILLUM-FAIRFAX LOAMS, 1 TO 5 % SLOPES, MODERATELY ERODED
CmC2	CHILLUM SILT LOAM, 5 TO 10 % SLOPES, MODERATELY ERODED
DeB2	DELANCO SILT LOAMS, 3 TO 8 % SLOPES, MODERATELY ERODED
EnB2	ELLSBORO LOAMS, 0 TO 3 % SLOPES
IuB	IUKA LOAMS, LOCAL ALLUVIUM, 1 TO 5 % SLOPES
S1B2	SASSAFRAS LOAMS, 1 TO 5 % SLOPES, MODERATELY ERODED
S1C2	SASSAFRAS LOAMS, 5 TO 10 % SLOPES, MODERATELY ERODED
S1D2	SASSAFRAS LOAMS, 10 TO 15 % SLOPES, MODERATELY ERODED
Co	CODORUS SILT LOAM
SsE	SASSAFRAS SOILS, 15 TO 40 % SLOPES
SfD2	SASSAFRAS GRAVELLY SANDY LOAM, 10 TO 15 % SLOPES, MODERATELY ERODED
ScB	SANDY AND CLAYEY LAND, GENTLY SLOPING
CmB2	CHILLUM SILT LOAM, 1 TO 5 % SLOPES, MODERATELY ERODED

NOTE:
THE FOREST CONSERVATION OBLIGATION INCURRED BY THIS SITE DEVELOPMENT PLAN IS BASED ON 13.6 ACRES OF THE 21.4 ACRES OF FOREST BEING CLEARED. THE ACTUAL FOREST AREA CLEARED BY THIS PROJECT IS 3.2 ACRES SO ANY FUTURE DEVELOPMENT MAY CLEAR AN ADDITIONAL 10.4 ACRES OF FOREST. THIS OBLIGATION HAS BEEN MET BY THE RECORDATION OF 7.8 ACRES OF FOREST CONSERVATION EASEMENT. ONLY THE EXISTING FOREST OUTSIDE OF THE RETENTION FOREST CONSERVATION EASEMENT MAY BE CLEARED FOR FUTURE DEVELOPMENT.

QUALIFIED PROFESSIONAL PER THE MARYLAND FOREST CONSERVATION ACT
Richard A. Soltner 1-16-03
DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING			
<i>Mark D. Gaylor</i>	Director	3/11/03	Date
<i>Rinda Hamstra</i>	Chief, Division of Development	3/11/03	Date
<i>Cal Domineo</i>	Chief, Development Engineering Division	3/11/03	Date
SUBDIVISION	SECTION/AREA	N/A	PARCEL NO.
ROCKBURN BRANCH PARK			42
LIBER/FOLIO	BLOCK NO.	ZONING	TAX/MAP
3505/95	4	R-20	37
		GRID	ELEC. DIST.
		4	1
		CENSUS TR.	6011.01
WATER CODE	D-04	SEWER CODE	2153800

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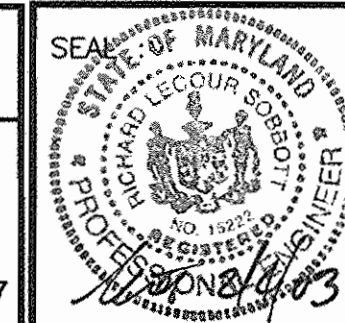
"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12366. EXPIRATION DATE: 9/1/07"

1. REVISED CAPITAL PROJECT NO.
2. REVISED BLDG. FOOTPRINT.
3. REVISED SIDEWALKS, ENTRANCES, PARKING & APPURTENANCES.
4. REVISED TRANSFORMER PAD LOCATION.
5. REMOVED BUILDING 'P'

Richard A. Soltner 7/17/07



ati Architects Engineers and Construction Consultants
8950 Route 108 Suite 218
Columbia Maryland 21045 (410)995-4067 Fax (410)992-1837



DCI CONSULTING ENGINEERS
COLUMBIA, MARYLAND 21045
Tel: (410) 995-0090 Fax: (410) 992-7038

OWNER
HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS
7120 OAKLAND MILLS ROAD

REVISIONS		
NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

FOREST CONSERVATION PLAN
ROCKBURN BRANCH PARK
MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND
DATE: OCTOBER 24, 2002 SCALE: 1"=100'

CAPITAL PROJECT NO.
 N-3107
C-23
SET SHEET 23 OF 28
SDP-02-28

FOREST CONSERVATION WORK SHEET

I. BASIC SITE DATA

	ACRES (1/10 ACRE)
GROSS SITE AREA	22.0
AREA WITHIN 100 YEAR FLOOD PLAIN	0.00
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE)	0.00
NET TRACK AREA	22.0
LAND USE CATEGORY (R-RLD, R-RMD, R-S, C/10, I, R-20)	IDA

II. INFORMATION FOR CALCULATIONS

A. NET TRACT	22.0
B. REFORESTATION THRESHOLD (20% X A)	4.4
C. AFFORESTATION MINIMUM (15% X A)	3.3
D. EXISTING FOREST ON NET TRACK AREA	21.4
E. FOREST AREAS TO BE CLEARED	13.6
F. FOREST AREAS TO BE RETAINED	7.8

* ONLY 3.2 AC REMOVED AS PART OF THIS PROJECT, REST LEFT OUT OF EASEMENT

III. DETERMINING REQUIREMENTS: AFFORESTATION OR REFORESTATION

1. REFORESTATION

IF EXISTING FOREST AREAS EQUAL OR EXCEED THE AFFORESTATION MINIMUM (IF D EQUALS OR IS MORE THAN C), AND CLEARING OF FOREST AREAS IS PROPOSED REFORESTATION REQUIREMENTS MAY APPLY.

GO TO SECTION IV

IF EXISTING FORESTS EXCEED THE AFFORESTATION MINIMUM (IF D EQUALS OR IS MORE THAN C) AND NO CLEARING OF EXISTING FOREST RESOURCES IS PROPOSED, NO REFORESTATION IS REQUIRED. NO FURTHER CALCULATIONS ARE NEEDED.

2. AFFORESTATION

IF EXISTING FOREST AREA ARE LESS THAN THE AFFORESTATION MINIMUM (IF D IS LESS THAN C). AFFORESTATION REQUIREMENTS APPLY.

GO TO SECTION V

IV. REFORESTATION CALCULATIONS

A. NET TRACT AREA	22.0
B. REFORESTATION THRESHOLD (25% X A)	4.4
D. EXISTING FOREST ON NET TRACK AREA	21.4
E. FOREST AREAS TO BE CLEARED	13.6
F. FOREST AREAS TO BE RETAINED	7.8
G. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD (D - F, IF F EQUALS OR IS GREATER THAN B, ALTERNATIVE 1) (D - B, IF F IS LESS THAN B ALTERNATIVE 2)	13.6
H. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD (B - F, IF APPLICABLE)	<00.0
I. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD (F - B, RETENTION CREDIT, IF APPLICABLE)	3.4

SELECT THE ALTERNATIVE THAT APPLIES:

1. CLEARING ABOVE THE THRESHOLD ONLY:
IF FOREST AREAS TO BE RETAINED EQUAL OR ARE GREATER THAN THE REFORESTATION THRESHOLD (IF F EQUALS OR IS GREATER THAN B), THE FOLLOWING CALCULATIONS APPLY:

REFORESTATION FOR CLEARING ABOVE THRESHOLD $G \times 1/4$	3.4
CREDIT FOR FOREST AREAS RETAINED ABOVE THRESHOLD I = RETENTION CREDIT	3.4
TOTAL REFORESTATION REQUIRED $(G \times 1/4) - I$	<0

IF THE TOTAL REFORESTATION REQUIREMENT IS EQUAL TO OR LESS THAN 0, NO REFORESTATION IS REQUIRED.

2. CLEARING BELOW THE THRESHOLD:
IF FOREST AREAS TO BE RETAINED ARE LESS THAN THE REFORESTATION THRESHOLD (IF F IS LESS THAN B), THE FOLLOWING CALCULATIONS APPLY:

REFORESTATION FOR CLEARING ABOVE THRESHOLD $G \times 1/4$	0.00
REFORESTATION FOR CLEARING BELOW THRESHOLD $H \times 2$	0.00
TOTAL REFORESTATION REQUIRED $(G \times 1/4) + (H \times 2)$	0.00

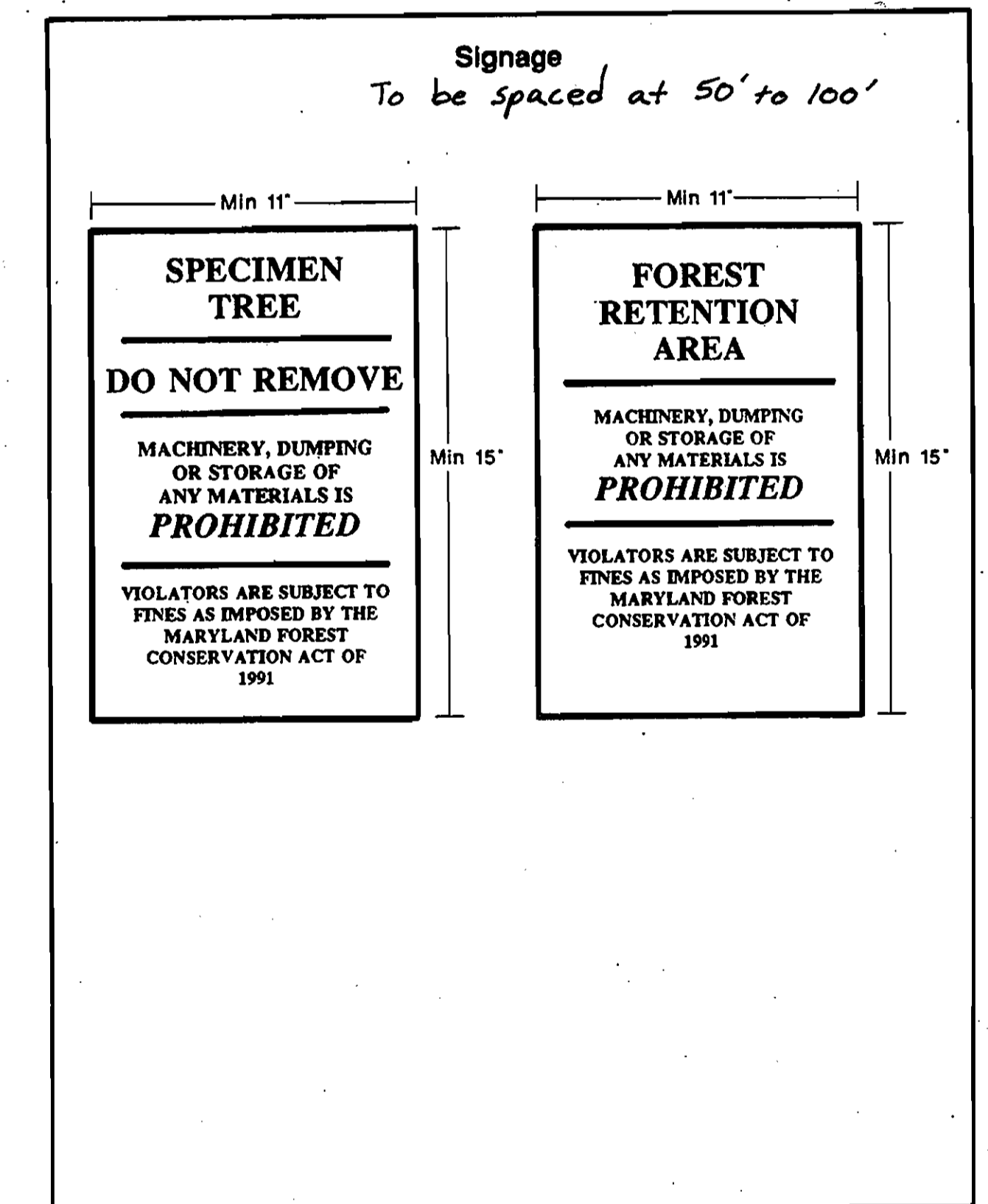
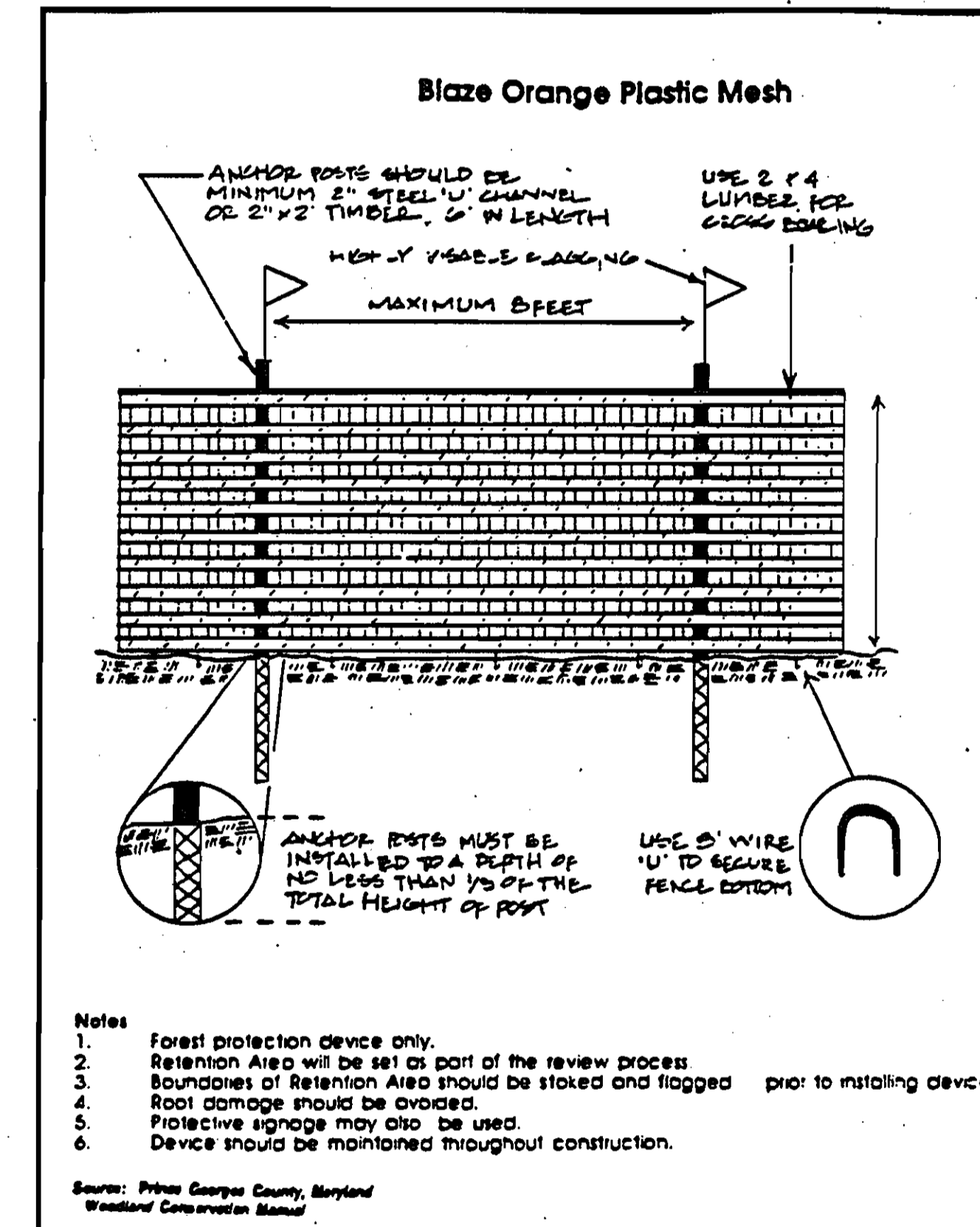
SINCE CLEARING OCCURS BELOW THE THRESHOLD, NO FOREST RETENTION CREDIT IS POSSIBLE.

CONSTRUCTION PERIOD PRACTICES

TRAFFIC IS TO BE EXCLUDED FROM THE RETENTION AREAS WHICH WILL BE FENCED AND POSTED PRIOR TO CONSTRUCTION. EVERY EFFORT WILL BE MADE TO AVOID DISTURBANCE OF THE PRIMARY ROOT ZONE OF TREES IN THE RETENTION AREA. THIS MEANS, GENERALLY, THAT THE ROOT ZONE WILL NOT BE DISTURBED WITHIN THE DRIP LINE OF THE TREES IN THE RETENTION AREA. FOR TREES WHICH ARE TO BE RETAINED OUTSIDE THE RETENTION AREA THE SAME CARE APPLIES. ADDITIONALLY, THESE TREES WILL BE PROTECTED FROM COMPACTING BY CONSTRUCTION EQUIPMENT, STORAGE OF CONSTRUCTION MATERIALS, AND FROM FILLING OVER THEIR ROOT ZONES WITHIN THE DRIP LINE. PARKING OF EQUIPMENT AND STORAGE OF MATERIALS WILL BE DIRECTED AWAY FROM RETENTION AREAS, STREAMS, AND OTHER TREES WHICH ARE TO BE RETAINED.

POST CONSTRUCTION PRACTICES

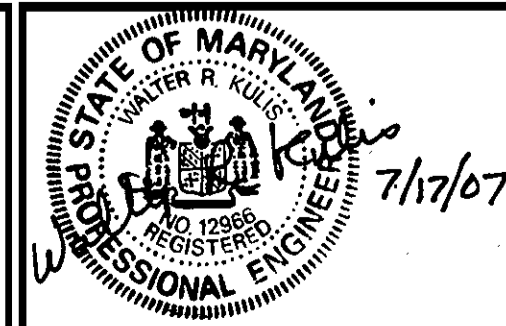
RETENTION AREA FENCING IS TO BE RETAINED FOR THE REQUIRED PERIOD. TREES ON THE MARGINS OF THE RETENTION AREAS WILL BE CHECKED FOR SIGNS OF DECLINE CAUSED BY CONSTRUCTION DISTURBANCE, AND TREATED APPROPRIATELY. ANY EROSION PROBLEMS WILL BE CORRECTED, PARTICULARLY THOSE THAT IMPACT THE RETENTION AREAS. THE NEW HOMEOWNERS WILL RECEIVE BRIEF INSTRUCTION ABOUT THE IMPORTANCE OF THE RETENTION AREAS AND THEIR OWN RIGHTS AND RESPONSIBILITIES WITH RESPECT TO THOSE AREAS ON THEIR PROPERTY. IN GENERAL THE CONSTRUCTION PERIOD PROHIBITIONS WILL APPLY, THE NEW OWNERS WILL BE INSTRUCTED TO MINIMIZE USE OF HERBICIDES AND INSECTICIDES ADJACENT TO RETENTION AREAS AND THEY WILL BE ENCOURAGED TO FEATURE NATIVE SPECIES IN ANY PLANTING DONE ON THE NEW LOTS.



H:\PROJECTS\CIVIL\0122101\NOTES\J.DWG

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12966, EXPIRATION DATE: 5/19/08

1. REVISED CAPITAL PROJECT NO.



lati Architects Engineers and Construction Consultants

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DCI CONSULTING ENGINEERS
COLUMBIA, MARYLAND 21045
Tel: (410) 995-0090 Fax: (410) 992-7038

OWNER

HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS
7120 OAKLAND MILLS ROAD
COLUMBIA MD. 21046

REVISIONS		
NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

FOREST CONSERVATION DETAILS

ROCKBURN BRANCH PARK
MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND

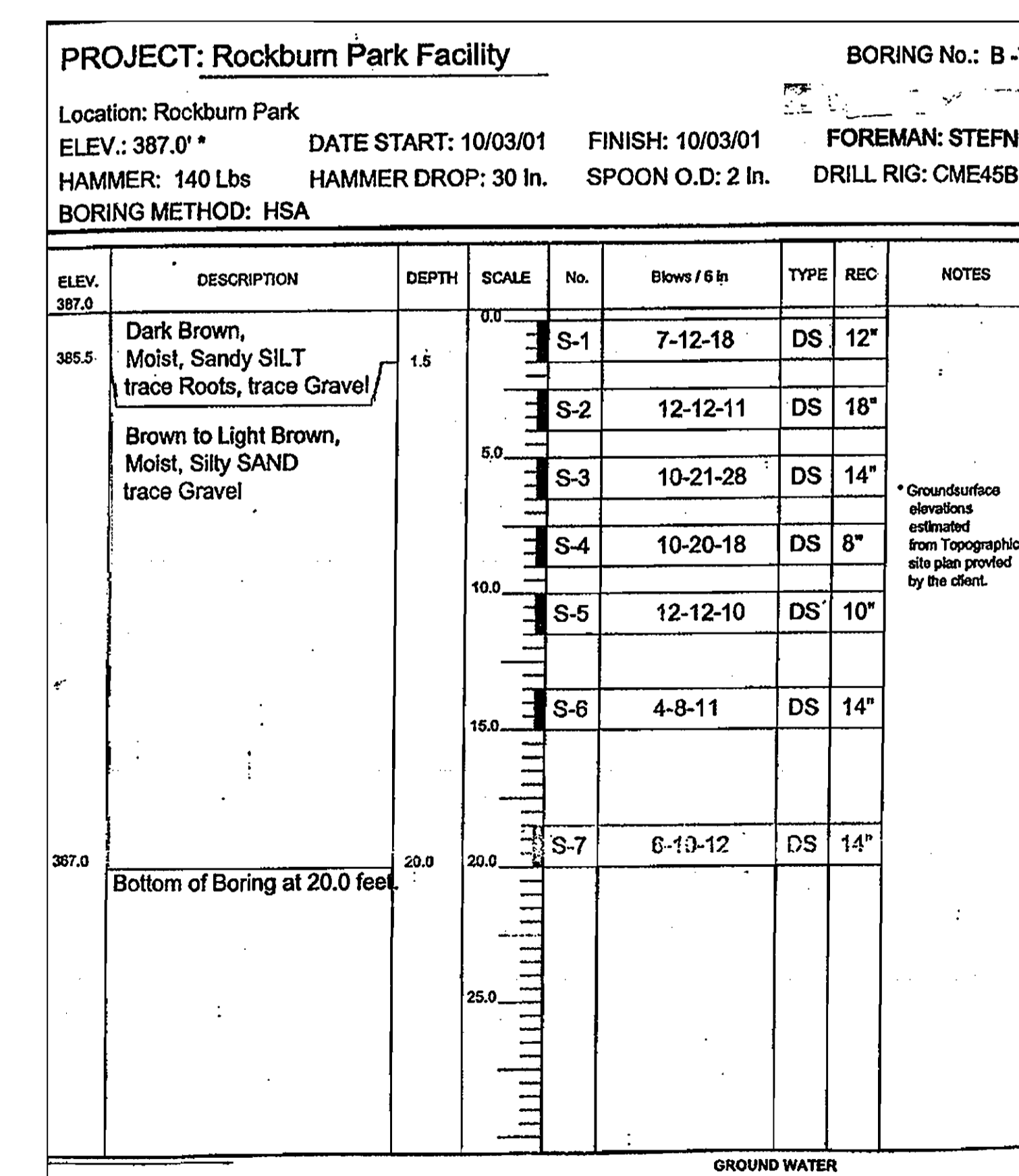
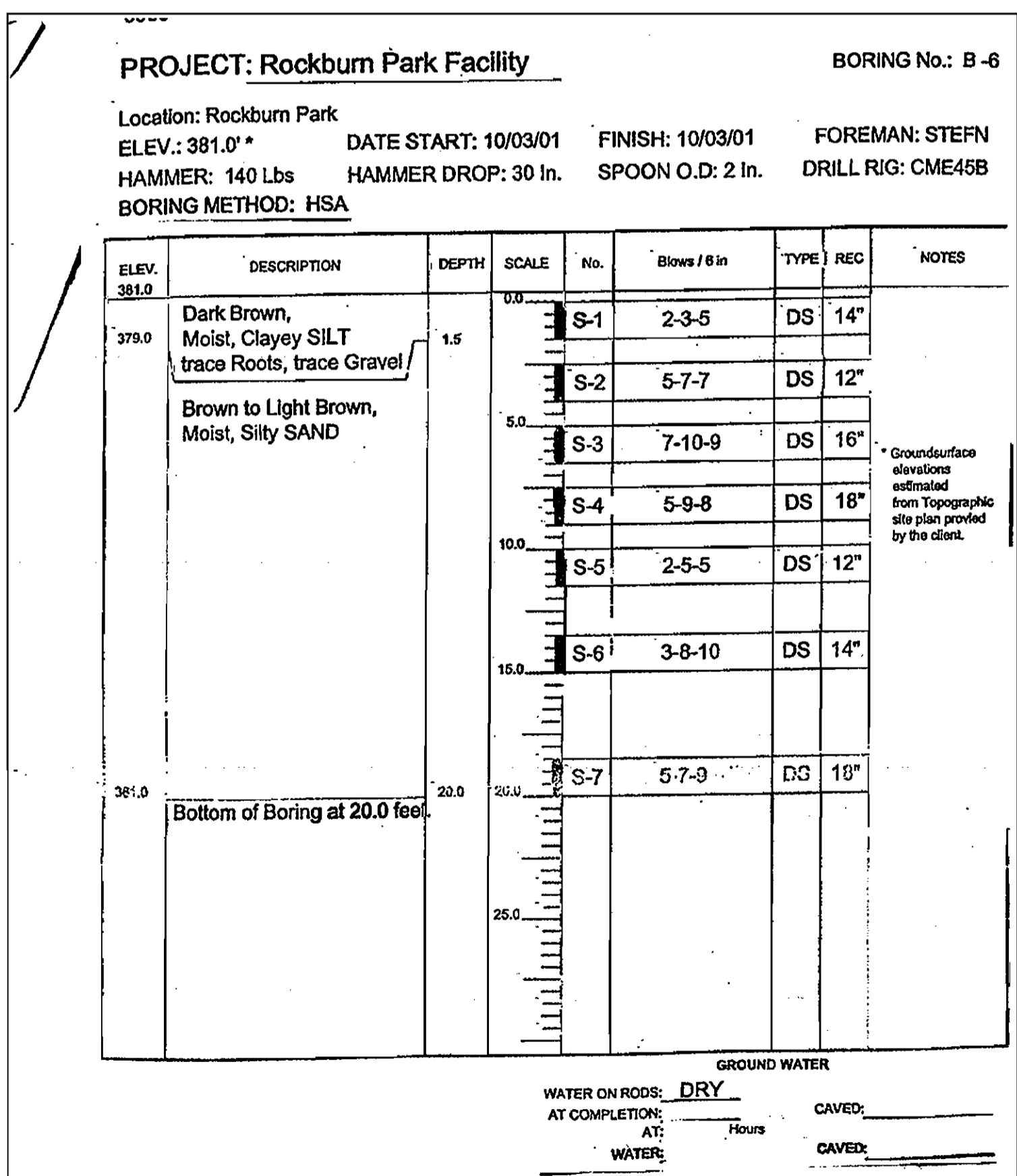
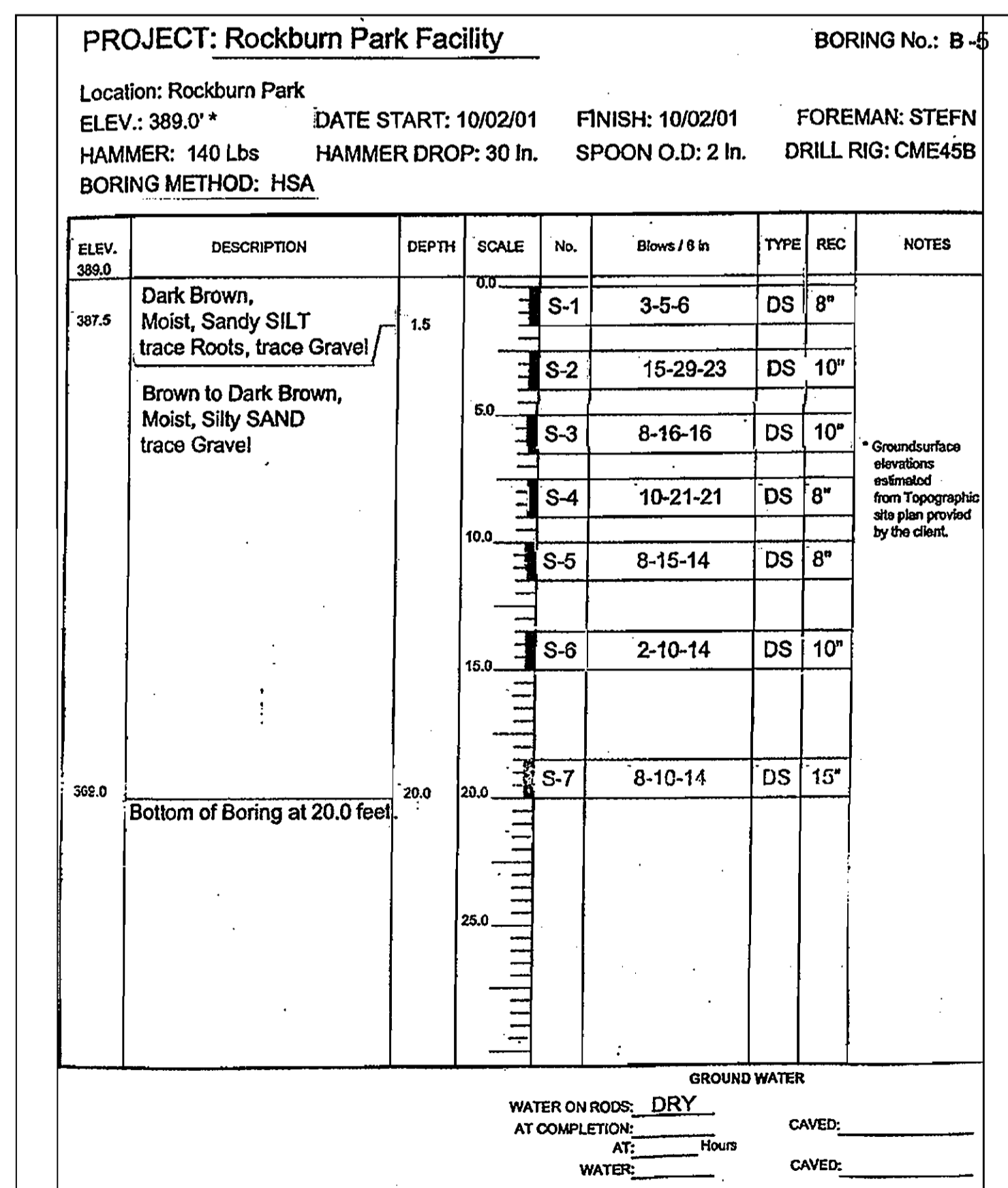
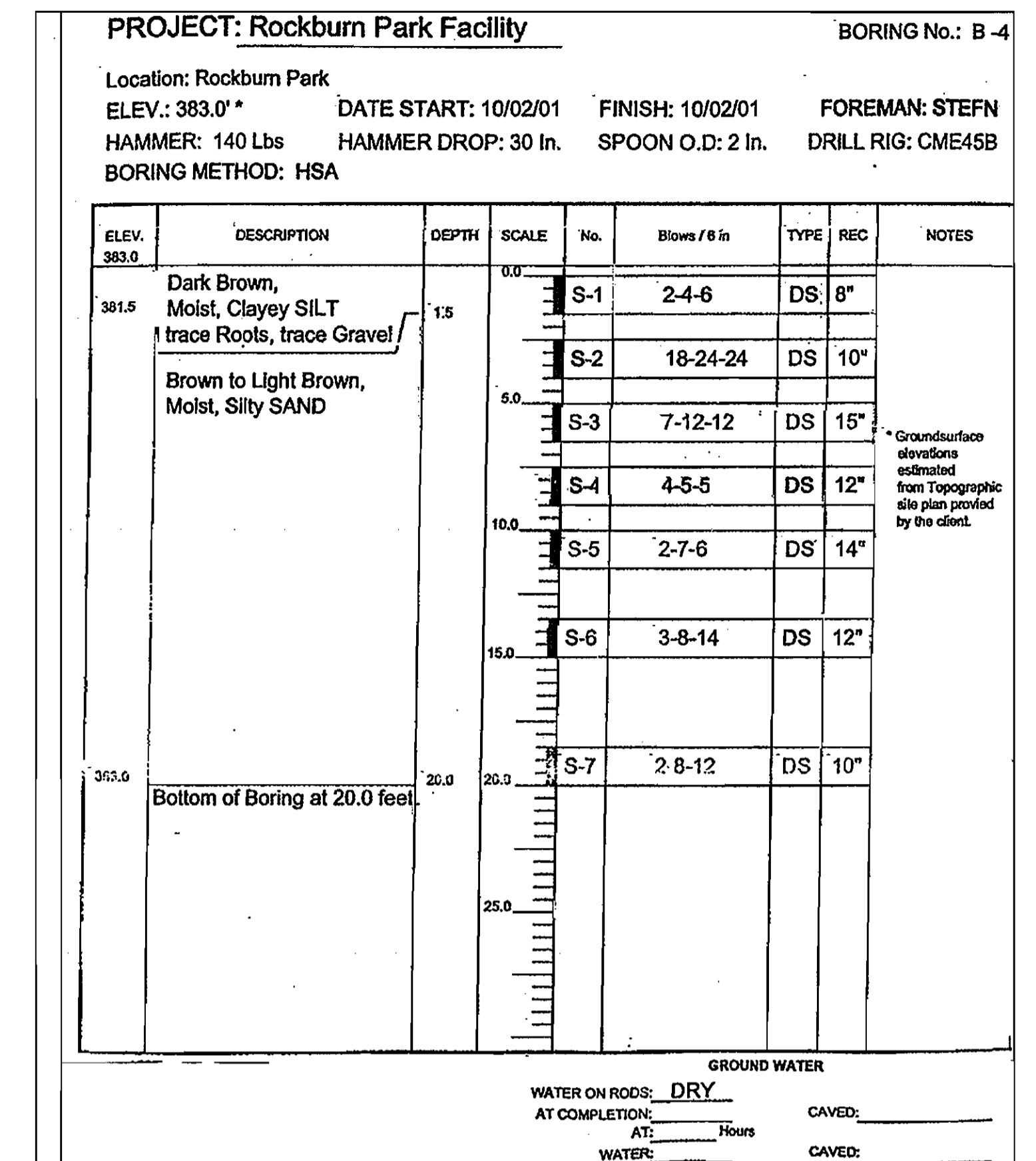
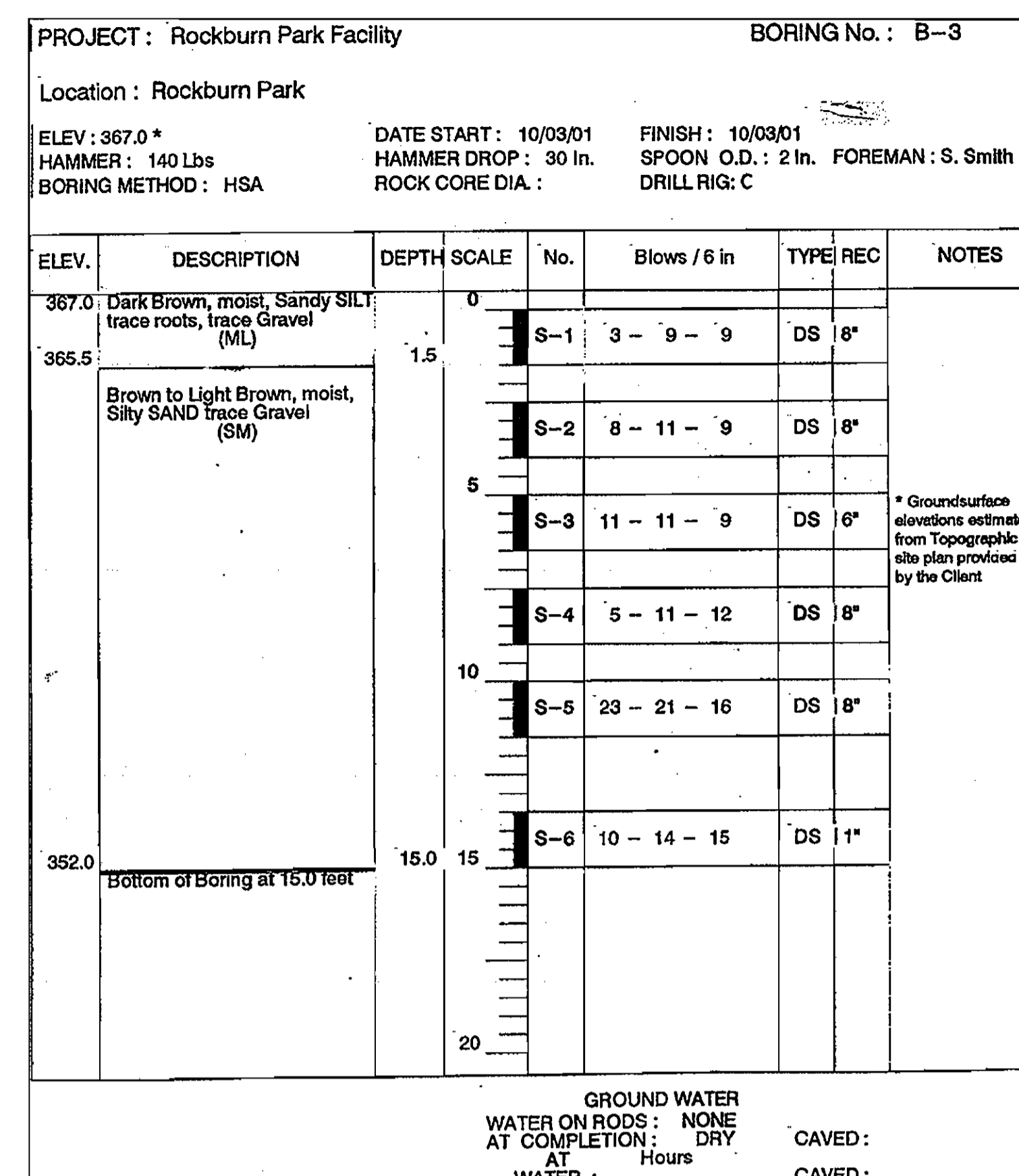
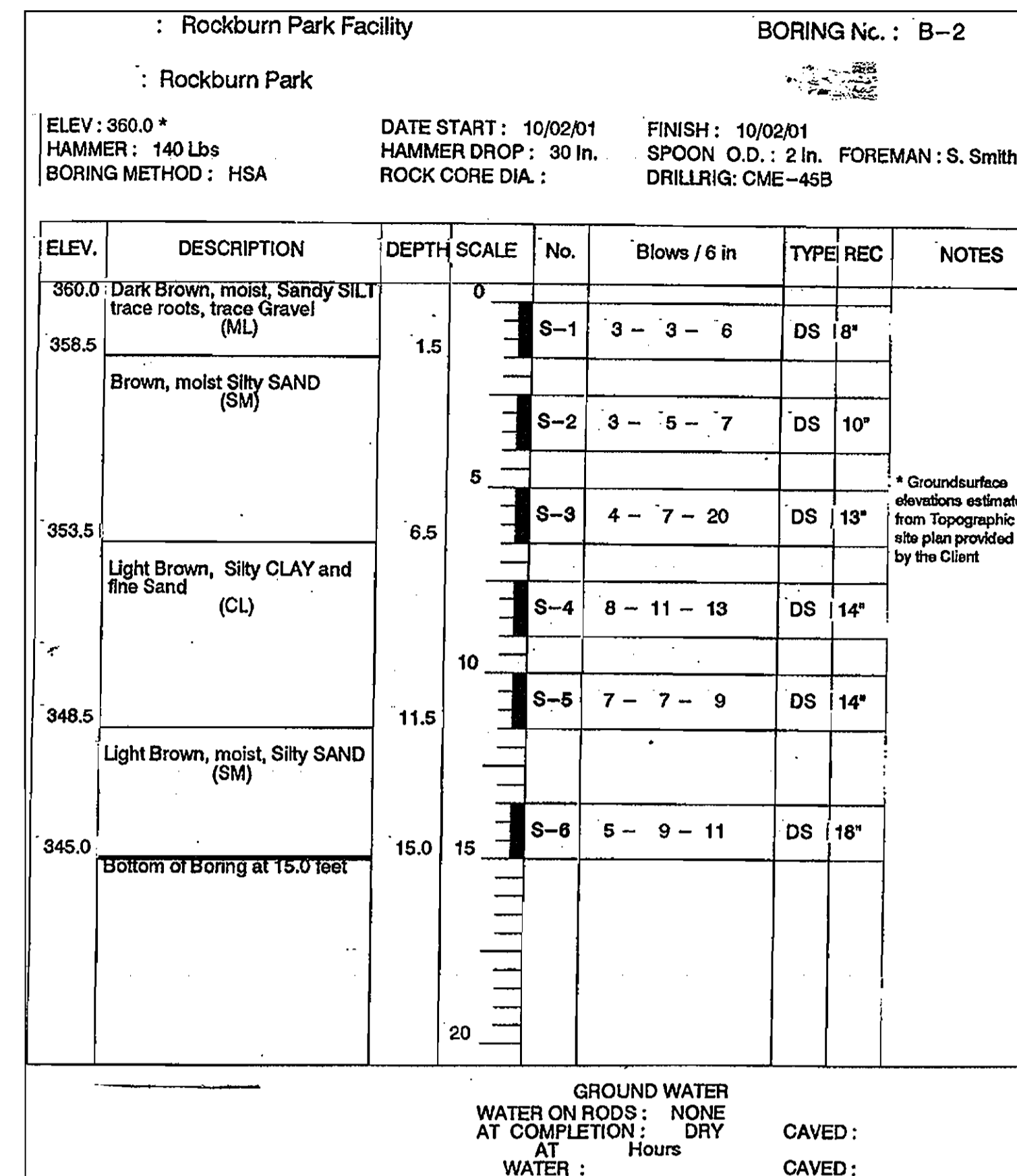
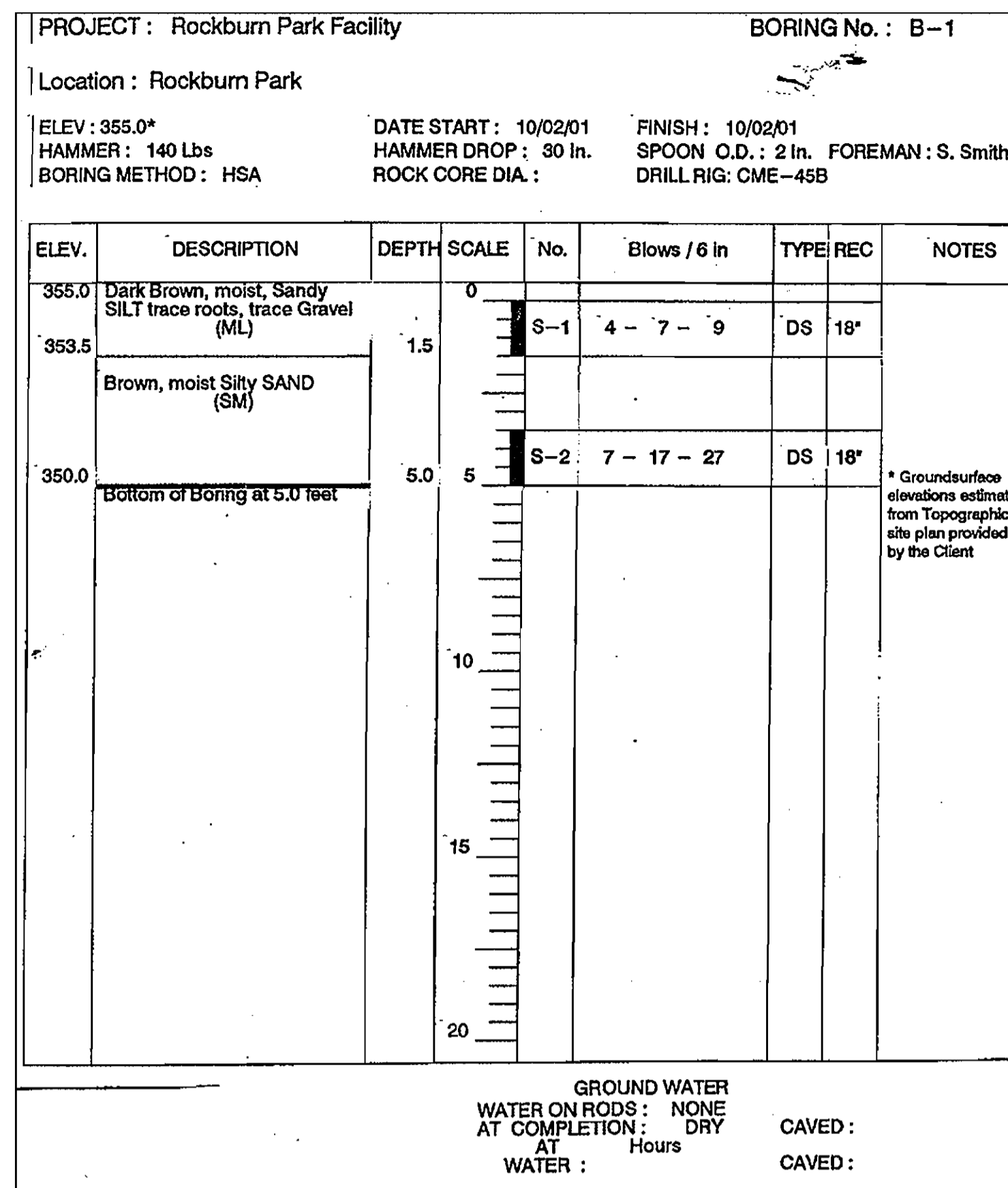
DATE: OCTOBER 24, 2002 SCALE: NONE

CAPITAL PROJECT NO.
 N-3420: N-3107

C-24

SET SHEET 24 of 28

APPROVED: DEPARTMENT OF PLANNING AND ZONING							
Mark A. Taylor						3/17/08	
Director						Date	
Linda Hamada						3/17/13	
Chief, Division of Land Development						Date	
Caleb D. Williams						5/12/09	
Chief, Development Engineering Division						Date	
SUBDIVISION	ROCKBURN BRANCH PARK	SECTION/AREA	N/A	PARCEL NO.	42		
LIBER/FOLIO	3505/95	BLOCK NO	4	ZONING	R-20	TAX/MAP	37
				GRID	4	ELEC. DIST.	1
						CENSUS TR.	6011.01
WATER CODE	D-04			SEWER CODE	2153800		



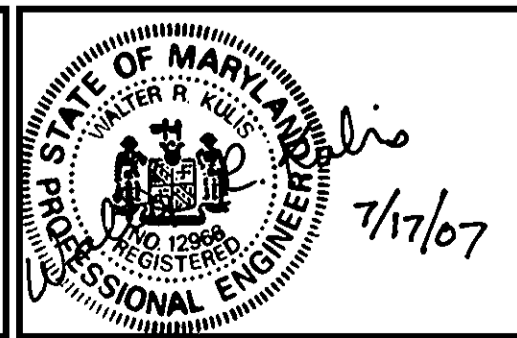
LEGEND
 DS DRIVEN SPOON
 ST SHELBY TUBE
 PS PISTON SAMPLE
 RC ROCKCORE
 HSA HOLLOW STEM AUGER
 DC DRIVEN CASING
 MD MUD DRILLING

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Director: *[Signature]* Date: 5/28/03
 Chief, Division of Development: *[Signature]* Date: 3/19/03
 Chief, Development Engineering Division: *[Signature]* Date: 3/19/03

SUBDIVISION	SECTION/AREA	PARCEL NO.
ROCKBURN BRANCH PARK	N/A	42
LIBER/FOLIO	BLOCK NO	ZONING
3505/95	4	R-20
TAX/MAP	GRID	ELEC. DIST.
37	4	1
CENSUS TR.	6011.01	
WATER CODE	D-04	SEWER CODE
		2153800

ROCK-C26-BORING2

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12166, EXPIRATION DATE: 5/19/05
 I, REVISED CAPITAL PROJECT NO.



ati Architects Engineers and Construction Consultants
 8950 Route 108 Suite 218
 Columbia Maryland 21045 (410)995-4067 Fax (410)992-1837



PROGRESSIVE ENGINEERING CONSULTANTS, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 9160 RED BRANCH ROAD • SUITE E9
 COLUMBIA, MD 21045
 PHONE: (410) 715-0390 FAX: (410) 715-1745

OWNER
 HOWARD COUNTY
 DEPARTMENT OF RECREATION AND PARKS
 7120 OAKLAND MILLS ROAD
 COLUMBIA MD. 21046

REVISIONS		
NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

BORING LOGS
 ROCKBURN BRANCH PARK
 MAINTENANCE FACILITY
 HOWARD COUNTY, MARYLAND
 DATE: JANUARY 10, 2003 SCALE: AS SHOWN

CAPITAL PROJECT NO.
 N-3107
C-25
 SET SHEET 25 OF 28
SDP-02-28

PROJECT: Rockburn Park Facility		BORING No.: BX-1				
Stormwater Management Facility						
Location: See Plan						
ELEV: 355.4	DATE START: 4/26/02	FINISH: 4/26/02				
HAMMER: 140 Lbs	HAMMER DROP: 30 in.	SPoon O.D.: 2 in.	FOREMAN: S. Smith			
BORING METHOD: HSA	ROCK CORE DIA:	DRILL RIG: CME-750				
ELEV.	DESCRIPTION	DEPTH SCALE	No.	Blows / 6 in	TYPE REC	NOTES
355.4	Brown, moist Clayey SILT, some fine Sand, trace rocks (ML)	0	S-1	1 - 1 - 1	DS 9"	
		5	S-2	5 - 8 - 8	DS 11"	
349.4	Brown dry-moist fine to medium SAND (SP-SM)	6.0	S-3	8 - 10 - 8	DS 15"	No groundwater encountered
		10	S-4	6 - 4 - 6	DS 18"	
349.9	Bottom of Boring at 11.5 feet	11.5	S-5	3 - 4 - 4	DS 18"	
GROUND WATER WATER ON RODS: NONE AT COMPLETION: DRY AT Hours WATER: CAVED: 5.1 feet CAVED:						

PROJECT: Rockburn Park Facility		BORING No.: BX-2				
Stormwater Management Facility						
Location: See Plan						
ELEV: 349.8	DATE START: 4/26/02	FINISH: 4/26/02				
HAMMER: 140 Lbs	HAMMER DROP: 30 in.	SPoon O.D.: 2 in.	FOREMAN: S. Smith			
BORING METHOD: HSA	ROCK CORE DIA:	DRILL RIG: CME-750				
ELEV.	DESCRIPTION	DEPTH SCALE	No.	Blows / 6 in	TYPE REC	NOTES
349.8	Brown Clayey SILT and fine Sand, trace Gravel (ML)	0	S-1	1 - 1 - 1	DS 12"	
		5	S-2	1 - 2 - 2	DS 14"	
344.8	Tan-Brown moist fine to medium SAND, trace Silt (SM)	5.0	S-3	17 - 27 - 22	DS 18"	No groundwater encountered
		10	S-4	15 - 19 - 29	DS 18"	
338.3	Bottom of Boring at 11.5 feet	11.5	S-5	19 - 16 - 15	DS 14"	
GROUND WATER WATER ON RODS: NONE AT COMPLETION: DRY AT Hours WATER: CAVED: 5.8 feet CAVED:						

PROJECT: Rockburn Park Facility		BORING No.: BX-3				
Stormwater Management Facility						
Location: See Plan						
ELEV: 351.0	DATE START: 4/26/02	FINISH: 4/26/02				
HAMMER: 140 Lbs	HAMMER DROP: 30 in.	SPoon O.D.: 2 in.	FOREMAN: S. Smith			
BORING METHOD: HSA	ROCK CORE DIA:	DRILL RIG: CME-750				
ELEV.	DESCRIPTION	DEPTH SCALE	No.	Blows / 6 in	TYPE REC	NOTES
348.0	Brown moist Silty fine to medium SAND, trace Clay and Gravel (SM)	0	S-1	1 - 1 - 2	DS 12"	
		3.0	S-2	1 - 4 - 4	DS 11"	
		5	S-3	4 - 4 - 5	DS 18"	No groundwater encountered
		10	S-4	2 - 5 - 6	DS 5"	
341.0	Red-Brown very moist Silty fine to medium SAND (SM)	10.0	S-5	7 - 5 - 4	DS 18"	
339.5	Bottom of Boring at 11.5 feet	11.5				
GROUND WATER WATER ON RODS: NONE AT COMPLETION: DRY AT Hours WATER: CAVED: 5.1 feet CAVED:						

PROJECT: Rockburn Park Facility		BORING No.: BX-4				
Stormwater Management Facility						
Location: See Plan						
ELEV: 360.0	DATE START: 4/26/02	FINISH: 4/26/02				
HAMMER: 140 Lbs	HAMMER DROP: 30 in.	SPoon O.D.: 2 in.	FOREMAN: S. Smith			
BORING METHOD: HSA	ROCK CORE DIA:	DRILL RIG: CME-750				
ELEV.	DESCRIPTION	DEPTH SCALE	No.	Blows / 6 in	TYPE REC	NOTES
360.0	Dark Brown moist Silty fine to medium SAND, trace organics (SM)	0	S-1	WOH-1 - 1	DS 8"	
357.0	Tan moist fine to medium SAND (SM)	3.0	S-2	3 - 2 - 5	DS 12"	
355.0	Tan moist Clayey SILT, some Sand and Gravel (ML)	5.0	S-3	9 - 11 - 9	DS 4"	No groundwater encountered
352.5	Tan dry fine to medium SAND, trace Gravel (SP-SM)	7.5	S-4	7 - 7 - 9	DS 16"	
348.5	Bottom of Boring at 11.5 feet	11.5	S-5	5 - 9 - 18	DS 18"	
GROUND WATER WATER ON RODS: NONE AT COMPLETION: DRY AT Hours WATER: CAVED: 5.1 feet CAVED:						

LEGEND
 DS DRIVEN SPOON
 ST SHELBY TUBE
 PS PISTON SAMPLE
 RC ROCKCORE
 HSA HOLLOW STEM AUGER
 DC DRIVEN CASING

LEGEND
 DS DRIVEN SPOON
 ST SHELBY TUBE
 PS PISTON SAMPLE
 RC ROCKCORE
 HSA HOLLOW STEM AUGER
 DC DRIVEN CASING
 MD MUD DRILLING

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director: *Mark D. Taylor* Date: *3/19/03*

Chief, Division of Planning and Development: *Chris Hammett* Date: *3/19/03*

Chief, Development Engineering Division: *Chris Hammett* Date: *3/19/03*

SUBDIVISION	SECTION/AREA	PARCEL NO.
ROCKBURN BRANCH PARK	N/A	42
LIBER/FOLIO	ZONING	TAX/MAP
3505/95	R-20	37
GRID	ELEC. DIST.	CENSUS TR.
4	1	6011.01
WATER CODE	SEWER CODE	
D-04	2153800	

ROCKBURN-C7

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12166, EXPIRATION DATE: 5/1/06

1. REVISED CAPITAL PROJECT NO.

7/17/07



Architects Engineers and Construction Consultants

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 Columbia Maryland 21045 (410)995-4067 Fax(410)992-1837

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OWNER

HOWARD COUNTY
 DEPARTMENT OF RECREATION AND PARKS

7120 OAKLAND MILLS ROAD
 COLUMBIA MD. 21046

NO.	DATE	DESCRIPTION
1	7/17/07	SEE SEAL AND CERTIFICATION ABOVE

BORING LOGS

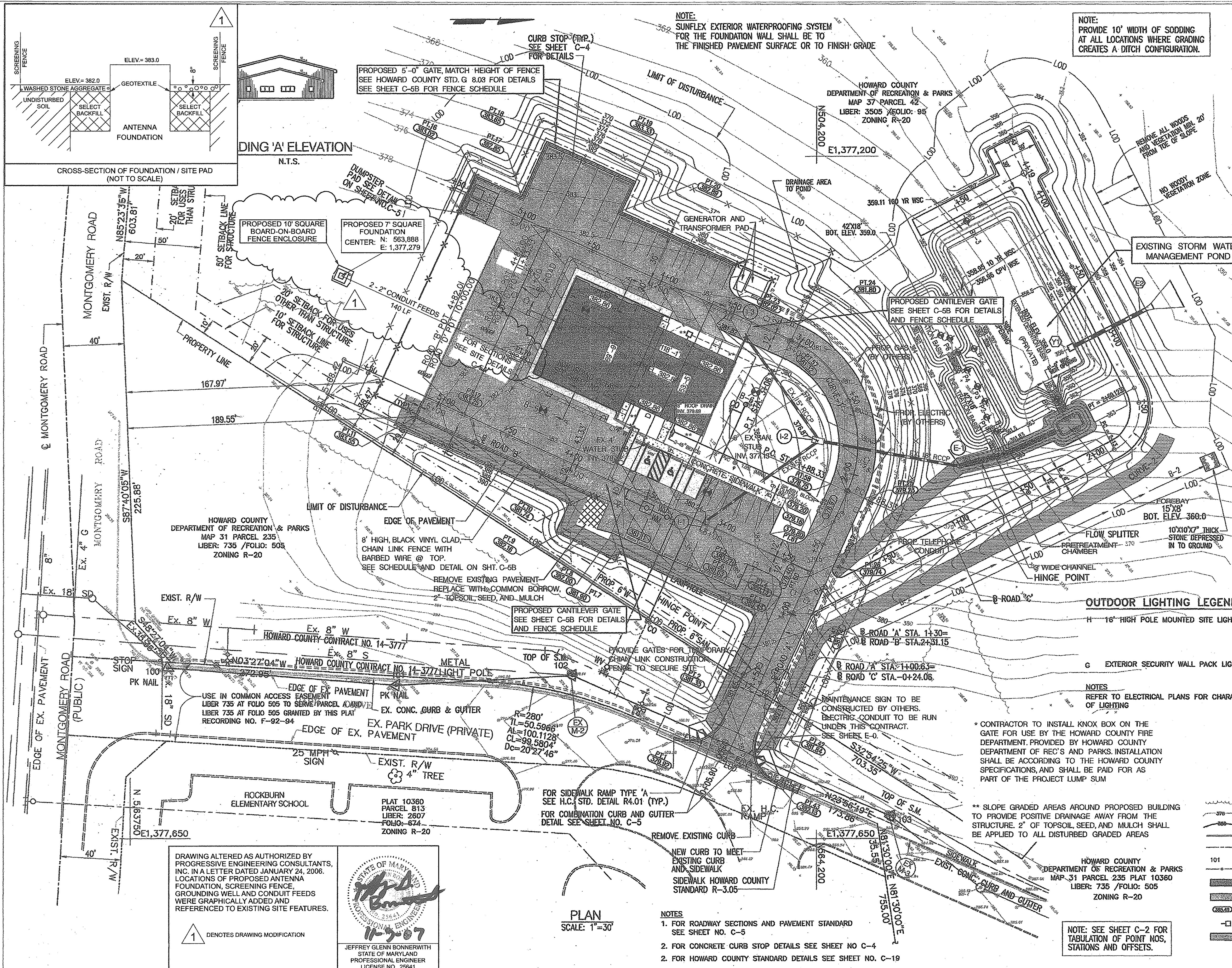
ROCKBURN BRANCH PARK
 MAINTENANCE FACILITY
 HOWARD COUNTY, MARYLAND

DATE: JANUARY 10, 2003 SCALE: AS SHOWN

CAPITAL PROJECT NO. 28-3492 N-3107

C-26

SET SHEET 28 OF 28



NOTE:
SUNFLEX EXTERIOR WATERPROOFING SYSTEM FOR THE FOUNDATION WALL SHALL BE TO THE FINISHED PAVEMENT SURFACE OR TO FINISH GRADE

NOTE:
PROVIDE 10' WIDTH OF SODDING AT ALL LOCATIONS WHERE GRADING CREATES A DITCH CONFIGURATION.

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM (FIELD RUN) SURVEY WITH 2 FOOT CONTOUR INTERVALS PREPARED BY PROGRESSIVE ENGINEERING CONSULTANTS, INC. DATED JULY 2000.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 378B AND 378A WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC. SEE CONTRACT. 14-3777 PATAPSCO WATERSHED
- SEWER IS PUBLIC. SEE CONTRACT. 14-3777 PATAPSCO WATERSHED
- EXISTING UTILITIES ARE BASED ON RECORD PLANS.
- THERE IS NO FLOODPLAIN ON THIS SITE.
- NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION AT (410-313-1880) AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT (1-800-257-7777) AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- AS OF JULY 6, 2006, BY LETTER WP-06-130, THE PLANNING DIRECTOR HAS APPROVED A REQUEST TO WAIVE SECTION 16J560000 AND (2) TO REACTIVATE SDP-02-28 TO APPROVAL STATUS AND GRANT A ONE YEAR EXTENSION TO APPLY FOR A BUILDING PERMIT TO INITIATE CONSTRUCTION ON THE SITE IN ACCORDANCE WITH SDP-02-28.
- NO POSTER IS REQUIRED FOR PUBLIC NOTICE
- FOR PEC TRAVERSE POINT LOCATIONS SEE SHEET NO. C-2
- ALL TREES WITHIN THE LIMIT OF DISTURBANCE TO BE REMOVED.
- EXTERIOR LIGHTING WILL BE IN CONFORMANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM OR THEIR BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
- FOR INFORMATION RELATED TO ADJACENT PROPERTIES NOT SHOWN ON THIS SHEET SEE OVERALL SITE PLAN SHEET C-1
- SWM CONTROL WILL BE MANAGED BY OFFLINE INFILTRATION BASIN FOR WATER QUALITY CONTROL AND 1 YEAR EXTENDED DETENTION STRUCTURE FOR QUANTITY CONTROL
- THE SWM POND WILL BE OWNED AND MAINTAINED BY HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS

OUTDOOR LIGHTING LEGEND:

- H 16" HIGH POLE MOUNTED SITE LIGHT
- G EXTERIOR SECURITY WALL PACK LIGHT FIXERS

NOTES
REFER TO ELECTRICAL PLANS FOR CHARACTERISTICS OF LIGHTING

* CONTRACTOR TO INSTALL KNOX BOX ON THE GATE FOR USE BY THE HOWARD COUNTY FIRE DEPARTMENT. PROVIDED BY HOWARD COUNTY DEPARTMENT OF REC'S AND PARKS. INSTALLATION SHALL BE ACCORDING TO THE HOWARD COUNTY SPECIFICATIONS, AND SHALL BE PAID FOR AS PART OF THE PROJECT LUMP SUM

** SLOPE GRADED AREAS AROUND PROPOSED BUILDING TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE STRUCTURE. 2" OF TOPSOIL, SEED, AND MULCH SHALL BE APPLIED TO ALL DISTURBED GRADED AREAS

LEGEND:

- EX. WOODS LINE
- EX. CONTOUR LINE
- PROP. CONTOUR LINE
- CURB LINE
- CENTER LINE
- TRAVERSE POINT
- EX. FENCE
- PROP. BUILDINGS
- P-3 PAVEMENTS
- SPOT ELEVATION
- LIGHT POLE
- SOLID SODDING

OUTDOOR LIGHTING DIAGRAM

APPROVED: DEPARTMENT OF PLANNING AND ZONING

<i>Harold M. Leizer</i>	11/9/07
DIRECTOR	DATE
<i>John Hamilton</i>	11/9/07
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>Chris Deussen</i>	11/9/07
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE

SUBDIVISION	SECTION/AREA	N/A	PARCEL NO.
ROCKBURN BRANCH PARK			42
LIBER/FOLIO	BLOCK NO	ZONING	TAX/MAP
3505/95	4	R-20	37
GRID	ELEC. DIST.	CENSUS TR.	
4	1	6011.01	
WATER CODE	D-04	SEWER CODE	2153800

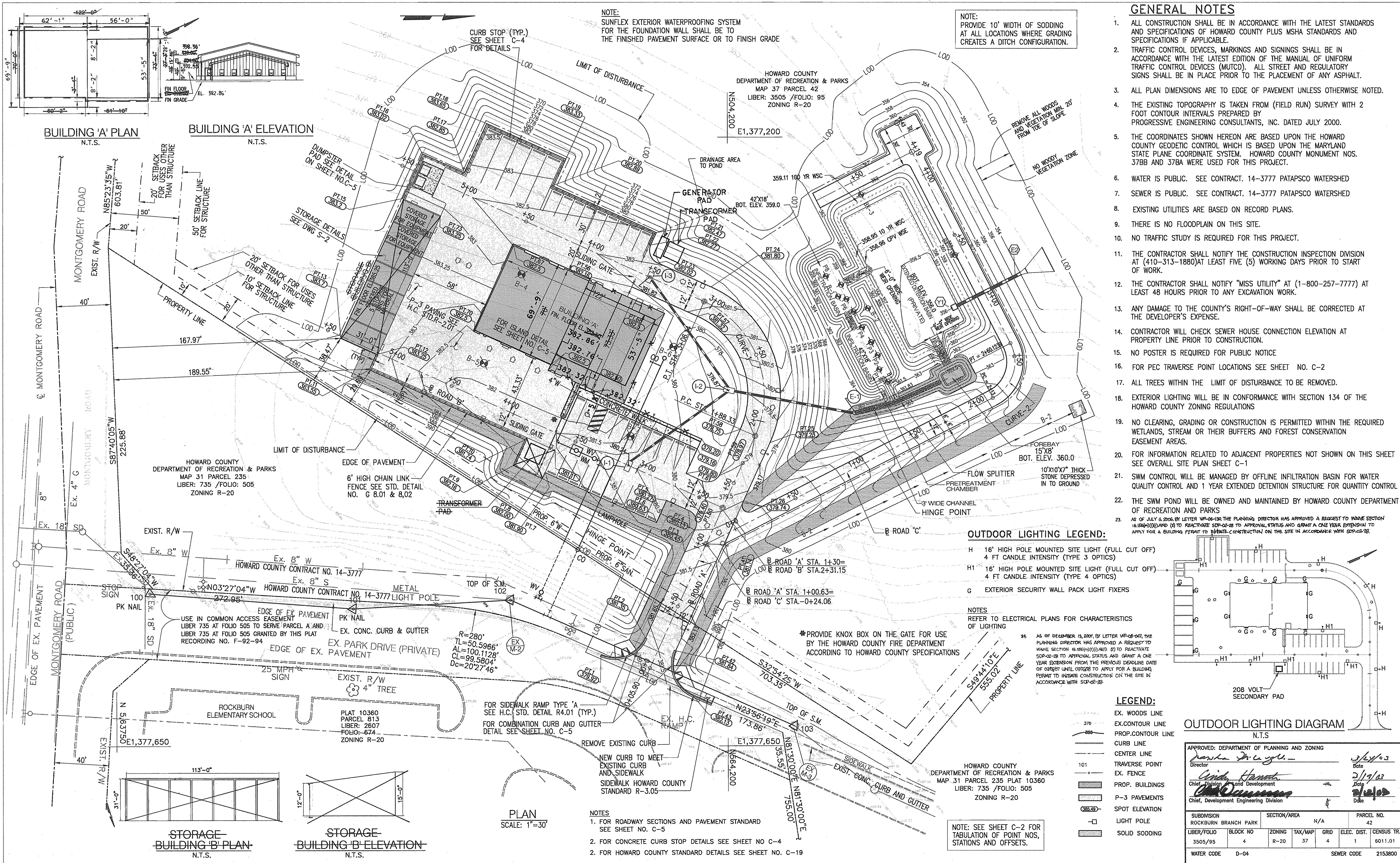
DRAWING ALTERED AS AUTHORIZED BY PROGRESSIVE ENGINEERING CONSULTANTS, INC. IN A LETTER DATED JANUARY 24, 2006. LOCATIONS OF PROPOSED ANTENNA FOUNDATION, SCREENING FENCE, GROUNDING WELL AND CONDUIT FEEDS WERE GRAPHICALLY ADDED AND REFERENCED TO EXISTING SITE FEATURES.

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 11-3-07
 JEFFREY GLENN BONNER WITH
 STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 LICENSE NO. 25641

PLAN
 SCALE: 1"=30'

- NOTES**
- FOR ROADWAY SECTIONS AND PAVEMENT STANDARD SEE SHEET NO. C-5
 - FOR CONCRETE CURB STOP DETAILS SEE SHEET NO C-4
 - FOR HOWARD COUNTY STANDARD DETAILS SEE SHEET NO. C-19

	<p>Architects Engineers and Construction Consultants</p> <p>8950 Route 108 Suite 218 Columbia Maryland 21045 (410)995-4067 Fax(410)992-1837</p>				<p>PROGRESSIVE ENGINEERING CONSULTANTS, INC.</p> <p>ENGINEERS • PLANNERS • SURVEYORS</p> <p>9160 RED BRANCH ROAD • SUITE E9 COLUMBIA, MD 21045 PHONE: (410) 715-0390 FAX: (410) 715-1745</p>	<p>OWNER</p> <p>HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS</p> <p>7120 OAKLAND MILLS ROAD COLUMBIA MD. 21046</p>	<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td>1</td> <td>11/07/07</td> <td>ADDED PROP. ANTENNA LOCATION</td> </tr> </table>	NO.	DATE	DESCRIPTION	1	11/07/07	ADDED PROP. ANTENNA LOCATION	<p>SITE AND GRADING PLAN</p> <p>ROCKBURN BRANCH PARK MAINTENANCE FACILITY</p> <p>HOWARD COUNTY, MARYLAND</p> <p>DATE: JANUARY 10, 2003 SCALE: 1"=30'</p>	<p>CAPITAL PROJECT NO.</p> <p>11-3107</p> <p>C-3</p> <p>SET SHEET 4 OF 38</p>
								NO.	DATE	DESCRIPTION					
1	11/07/07	ADDED PROP. ANTENNA LOCATION													
<p>SDP-02-28</p>															



NOTE:
SUNFLEX EXTERIOR WATERPROOFING SYSTEM
FOR THE FOUNDATION WALL SHALL BE TO
THE FINISHED PAVEMENT SURFACE OR TO FINISH GRADE

NOTE:
PROVIDE 10' WIDTH OF SODDING
AT ALL LOCATIONS WHERE GRADING
CREATES A DITCH CONFIGURATION.

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM (FIELD RUN) SURVEY WITH 2 FOOT CONTOUR INTERVALS PREPARED BY PROGRESSIVE ENGINEERING CONSULTANTS, INC. DATED JULY 2000.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 37BB AND 37BA WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC. SEE CONTRACT. 14-3777 PATAPSCO WATERSHED
- SEWER IS PUBLIC. SEE CONTRACT. 14-3777 PATAPSCO WATERSHED
- EXISTING UTILITIES ARE BASED ON RECORD PLANS.
- THERE IS NO FLOODPLAIN ON THIS SITE.
- NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
- THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION AT (410-313-1880) AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT (1-800-257-7777) AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- CONTRACTOR WILL CHECK SEWER HOUSE CONNECTION ELEVATION AT PROPERTY LINE PRIOR TO CONSTRUCTION.
- NO POSTER IS REQUIRED FOR PUBLIC NOTICE
- FOR PEC TRAVERSE POINT LOCATIONS SEE SHEET NO. C-2
- ALL TREES WITHIN THE LIMIT OF DISTURBANCE TO BE REMOVED.
- EXTERIOR LIGHTING WILL BE IN CONFORMANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS
- NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM OR THEIR BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
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- SWM CONTROL WILL BE MANAGED BY OFFLINE INFILTRATION BASIN FOR WATER QUALITY CONTROL AND 1 YEAR EXTENDED DETENTION STRUCTURE FOR QUANTITY CONTROL
- THE SWM POND WILL BE OWNED AND MAINTAINED BY HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS
- AS OF JULY 4, 2006 BY LETTER WP-06-180 THE PLANNING DIRECTOR HAS APPROVED A REQUEST TO WAIVE SECTION 16.155(a)(1) AND (2) TO REACTIVATE SDP-02-28 TO APPROVAL STATUS AND GRANT A ONE YEAR EXTENSION TO APPLY FOR A BUILDING PERMIT TO INITIATE CONSTRUCTION ON THE SITE IN ACCORDANCE WITH SDP-02-28.

OUTDOOR LIGHTING LEGEND:

- H 16' HIGH POLE MOUNTED SITE LIGHT (FULL CUT OFF)
4 FT CANDLE INTENSITY (TYPE 3 OPTICS)
- H1 16' HIGH POLE MOUNTED SITE LIGHT (FULL CUT OFF)
4 FT CANDLE INTENSITY (TYPE 4 OPTICS)
- G EXTERIOR SECURITY WALL PACK LIGHT FIXERS

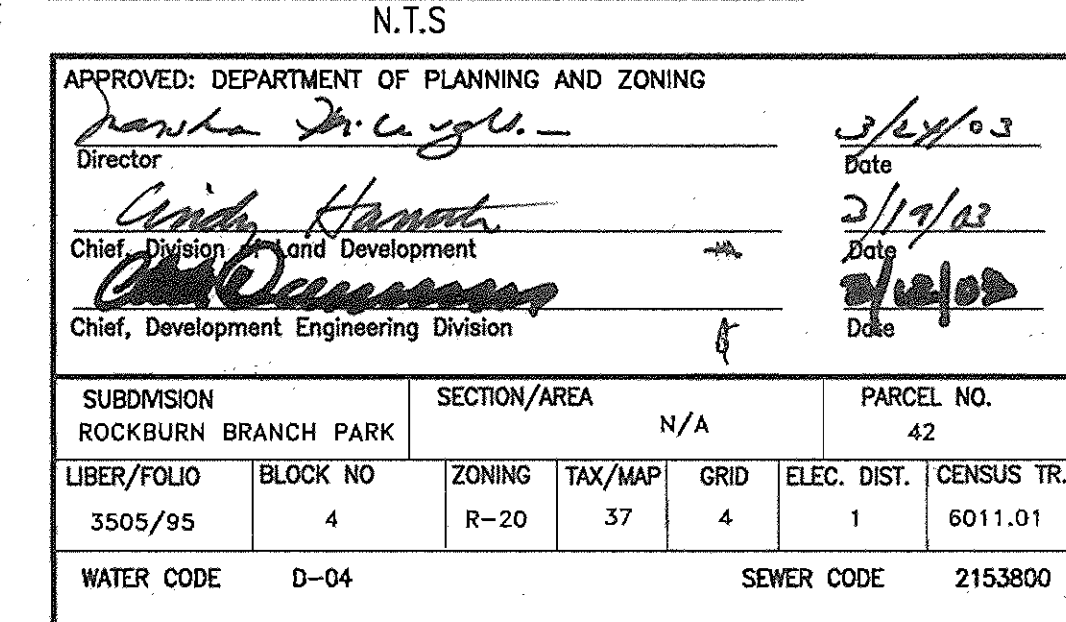
NOTES
REFER TO ELECTRICAL PLANS FOR CHARACTERISTICS
OF LIGHTING

24 AS OF DECEMBER 13, 2007, BY LETTER WP-06-042, THE PLANNING DIRECTOR HAS APPROVED A REQUEST TO WAIVE SECTION 16.155(a)(1) AND (2) TO REACTIVATE SDP-02-28 TO APPROVAL STATUS AND GRANT A ONE YEAR EXTENSION FROM THE PREVIOUS DEADLINE DATE OF 02/07/07 UNTIL 02/07/08 TO APPLY FOR A BUILDING PERMIT TO INITIATE CONSTRUCTION ON THE SITE IN ACCORDANCE WITH SDP-02-28.

LEGEND:

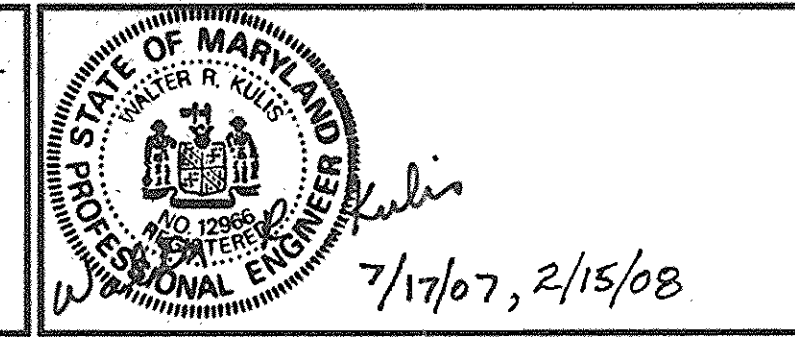
- EX. WOODS LINE
- EX. CONTOUR LINE
- PROP. CONTOUR LINE
- CURB LINE
- CENTER LINE
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OUTDOOR LIGHTING DIAGRAM



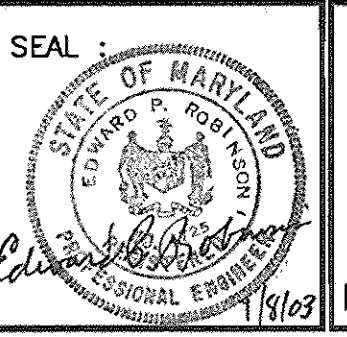
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THE REVISIONS LISTED BELOW WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12966, EXPIRATION DATE: 5/1/08

1. REVISED CAPITAL PROJECT NO. 7/1/07
2. REVISED BLDG. FOOTPRINT. 7/1/07
3. REVISED SIDEWALKS, ENTRANCES, PARKING & APPURTENANCES. 7/1/07
4. REVISED TRANSFORMER PAD LOCATION. 7/1/07
5. REVISED BUILDING 'B' PLAN. 7/1/07
6. ADDED PERMIT NOTE. 2/15/08



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Columbia Maryland 21045 (410)995-4067 Fax (410)992-1837



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9160 RED BRANCH ROAD • SUITE E9
COLUMBIA, MD 21045
PHONE: (410) 715-0390 FAX: (410) 715-1745

OWNER

HOWARD COUNTY
DEPARTMENT OF RECREATION AND PARKS

7120 OAKLAND MILLS ROAD
COLUMBIA MD. 21046

REVISIONS		DESCRIPTION
NO.	DATE	DESCRIPTION
1	7/1/07	SEE SEAL AND CERTIFICATION ABOVE
2	2/15/08	SEE SEAL AND CERTIFICATION ABOVE

SITE AND GRADING PLAN

ROCKBURN BRANCH PARK
MAINTENANCE FACILITY
HOWARD COUNTY, MARYLAND

DATE: JANUARY 10, 2003 SCALE: 1"=30'

CAPITAL PROJECT NO.
N-3107

C-3

SET SHEET 3 OF 28