

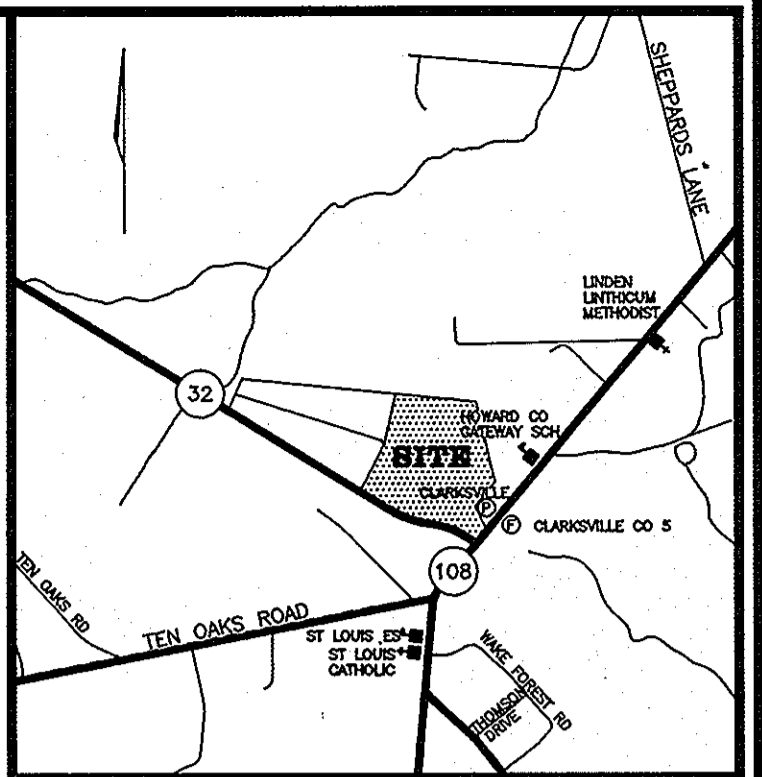
HOLWECK SUBDIVISION

5TH ELECTION DISTRICT

HOWARD COUNTY, MARYLAND FINAL CONSTRUCTION PLANS

AS-BUILT

*NOTE: AS-BUILT COORDINATES & ELEVATIONS
ARE BASED ON HOWARD COUNTY MONUMENTS
0013 AND 34C2 (NAD 83)



VICINITY MAP
SCALE: 1"=2000'

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAYS, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- EXISTING UTILITIES LOCATED FROM SHA CONSTRUCTION PLANS, FIELD SURVEYS AND AVAILABLE RECORD DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTORS INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE.
- ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3500 P.S.I.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- TEMPORARY COMPACTED 18" HIGH EARTH FILL DIVERSION DIKES SHALL BE CONSTRUCTED ABOVE THE LIPS OF FILL SLOPES ON THE R.O.W. CONCURRENTLY WITH THE INITIAL GRADING AND DIRECTED TO UNDISTURBED SOD AREAS AT THE END OF EACH DAY.
- ALL SWALES AND SLOPES SHALL BE PERMANENTLY SEEDED OR OTHERWISE STABILIZED.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING PERMIT FEES.
- THE LOCATION, TYPE AND NUMBER OF TREES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIRED AND ARE USED FOR BOND PURPOSES ONLY. THE FINAL LOCATION AND VARIETY OF TREES MAY VARY TO ACCOMMODATE FIELD CONDITIONS AND BUILDER'S LANDSCAPE PROGRAM.
- ALL FILL AREAS (ROADWAYS, UNDER STRUCTURES, PARCELS, ETC...) TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION.
- ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11-4 VOLUME I OF HOWARD COUNTY DESIGN MANUAL.
- THE STORMWATER MANAGEMENT FACILITIES PROPOSED FOR THIS SITE ARE CLASS 'A' HAZARD FACILITY. IN THE EVENT OF FAILURE OF THE EMBANKMENT, DAMAGE WILL BE LIMITED TO FLOODPLAINS. STORMWATER MANAGEMENT FACILITIES ARE EXTENDED DETENTION.
- FLOODPLAIN IN ACCORDANCE WITH STUDY APPROVED 9-20-93 IN CONJUNCTION WITH SP 93-14.
- GRADING PERMITTED WITHIN 50' OF STREAM BUFFER IN ACCORDANCE WITH WAIVER PETITION WP 93-90, APPROVED JULY 16, 1993.
- COORDINATES AND ELEVATIONS ARE BASED ON HOWARD COUNTY MONUMENTS 0013 AND 34C2 (NAD 83).
- LIGHT POLES AND FIXTURES FOR STREET LIGHTS SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III, ROADS AND BRIDGES.
- WETLAND DELINEATION BY EXPLORATION RESEARCH, NOVEMBER 1992 AND APPROVED 9-20-93 IN CONJUNCTION WITH SP 93-14.
- TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP JUNE, 1993 AND APPROVED 9-20-93 IN CONJUNCTION WITH SP 93-14.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- GEOTECHNICAL REPORT PREPARED BY HERBST AND ASSOCIATES MAY, 1993 AND APPROVED 9-20-93 IN CONJUNCTION WITH SP 93-14.
- SUBJECT TO WP-93-90 APPROVED 7-16-93 TO ALLOW GRADING IN 50' STREAM SETBACK.
- TOPOGRAPHY FROM AERIAL PHOTOGRAMMATRY PREPARED BY POTOMAC AERIAL SURVEYS DATED DECEMBER 1992 AT 2 FOOT INTERVAL CONTOURS.
- WATER AND SEWER FOR THIS PROJECT ARE PRIVATE.
- SITE ANALYSIS TAX MAP #34 A RESUBDIVISION OF PARCEL 365 (THE R. JOHNSTON PROPERTY SUBDIVISION LOTS 2 & 4, HOLWECK PROPERTY LOT 2) AND PARCELS 195 & 256. TOTAL TRACT AREA= 95.89 AC. TOTAL NUMBER OF PARCELS/LOTS: BUILDABLE LOTS=2 BUILDABLE PARCELS=10 NON-BUILDABLE PARCELS=3 REFERENCE PRELIMINARY PLAN, TITLED "COLUMBIA AUTO PARK", SP 93-14 APPROVED 9-20-93.
- THE REQUIRED PERIMETER AND INTERNAL LANDSCAPE PLANTINGS FOR EACH PARCEL WILL BE PROVIDED BY THE DEVELOPER OF EACH INDIVIDUAL PARCEL IN CONJUNCTION WITH ITS SITE PLAN. THE STREET TREES ALONG AUTO DRIVE, THE PERIMETER PLANTINGS FOR PARCEL 'J' AND THE STORMWATER MANAGEMENT POND/BUFFER PLANTINGS SHOWN ON THESE PLANS ARE THE RESPONSIBILITY OF THE DEVELOPER OF THIS PROJECT.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED REFORESTATION, AFFORESTATION AND RETENTION IN THE AMOUNT OF \$52,818.00 IS PART OF DEPARTMENT OF PUBLIC WORKS' DEVELOPERS' AGREEMENT. SINCE THE LANDSCAPE REQUIREMENTS HAVE BEEN FULFILLED VIA THE RETENTION OF EXISTING TREES, NO LANDSCAPE SURETY IS REQUIRED.

SCHEDULE 'A'
PERIMETER LANDSCAPE EDGE
BETWEEN PARCEL 'J' AND RESIDENTIAL PROPERTIES

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE		TYPE 'A' BUFFER
LINEAR FEET OF ROADWAY FRONTAGE / PERIMETER		500' PERIMETER TO RESIDENTIAL ZONE
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)		YES 100%
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)		N/A
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS		1:80 8 SHADE TREES
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)		0 SHADE TREES 100% CREDIT FOR EXISTING VEGETATION

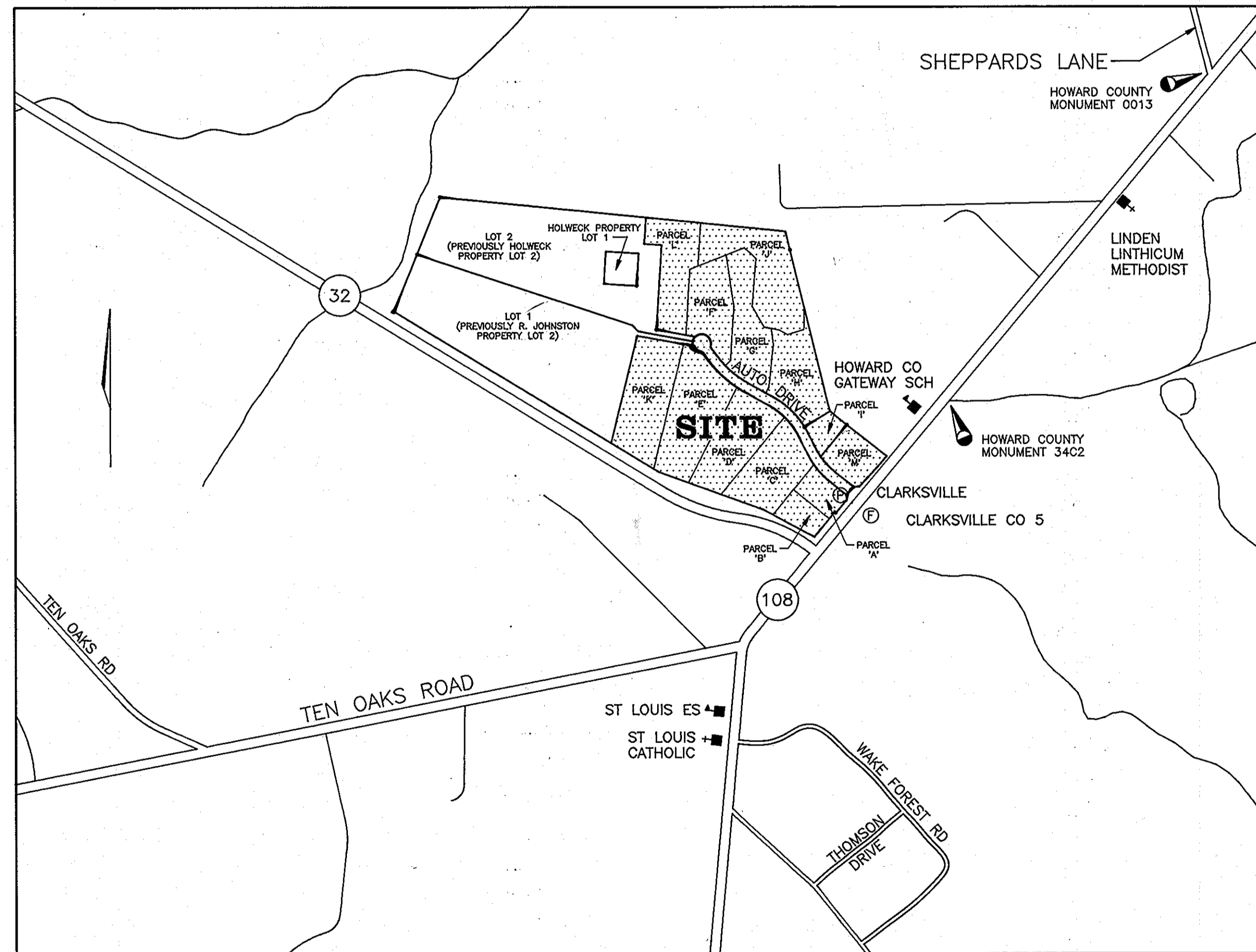
SCHEDULE 'D' STORMWATER MANAGEMENT AREA LANSAPING

LINEAR FEET OF PERIMETER	500' TO RESIDENTIAL ZONE
NUMBER OF TREES REQUIRED SHADE TREES EVERGREEN TREES	(1:50) 10 SHADE TREES (1:40) 13 EVERGREEN TREES
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	YES 100%
CREDIT FOR OTHER LANSAPING (NO, YES AND %)	N/A
NUMBER OF TREES PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION)	0 SHADE TREES 0 EVERGREEN TREES

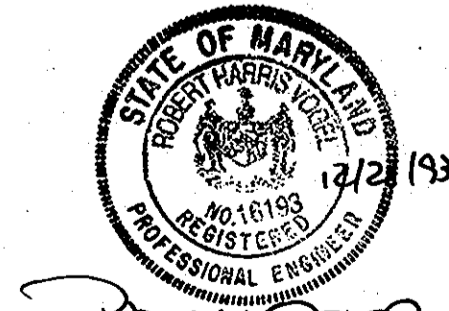
NOTE: 100% CREDIT FOR EXISTING 20'-80' HEDGEROW/ FORESTED AREA AND 10'-80' REFORESTED STRIP (SEE VEGETATION STUDY, FOREST CONSERVATION PLAN, AND ADDENDUM SP 93-14).

SHEET INDEX

- COVER
- AUTO DRIVE PLAN & PROFILE
- AUTO DRIVE PLAN & PROFILE
- STORM DRAIN PLAN
- STORMDRAIN PROFILES
- STORMDRAIN PROFILES & CHANNEL DETAILS
- STORMDRAIN PROFILES
- STORMWATER MANAGEMENT DETAILS
- STORMWATER MANAGEMENT PROFILES & DETAILS: POND #1
- STORMWATER MANAGEMENT PROFILES & DETAILS: POND #2
- STORMWATER MANAGEMENT DETAILS
- DRAINAGE AREA MAP
- SOILS MAP
- GRADING AND SEDIMENT CONTROL PLAN
- GRADING AND SEDIMENT CONTROL PLAN
- GRADING AND SEDIMENT CONTROL PLAN
- GRADING AND SEDIMENT CONTROL PLAN
- SOIL BORING PROFILES ROAD SECTIONS AND SEQUENCE OF CONSTRUCTION
- DETAILS
- NOTES AND DETAILS



VICINITY MAP
SCALE: 1"=500'



GENERAL NOTE (CONT.)

- ALL HANDICAP RAMPS AND SIDEWALK PASSING ZONES ARE TO CONFORM TO A.D.A. STANDARDS AND SPECIFICATIONS.

OWNERS

OWNER/DEVELOPER
108 LIMITED PARTNERSHIP
C/O WIN KELLY CHEVROLET
12205 HALL SHOP ROAD
CLARKSVILLE MARYLAND, 21029

SANDY SPRING BANK
17801 GEORGIA AVENUE
OLNEY, MARYLAND 20832

JAMES CHRISTOPHER HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

EDMOND & ETTA JANE HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Uma Surinomanis 1/13/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Uma Surinomanis 1/10/94
CHIEF, LAND DEVELOPMENT DIVISION DATE

Andrew M. Daniels 1-6-94
CHIEF, BUREAU OF HIGHWAYS DATE

Paul M. Segan 1/10/04
CHIEF, BUREAU OF ENGINEERING DATE

DATE	NO.	REVISION	BY

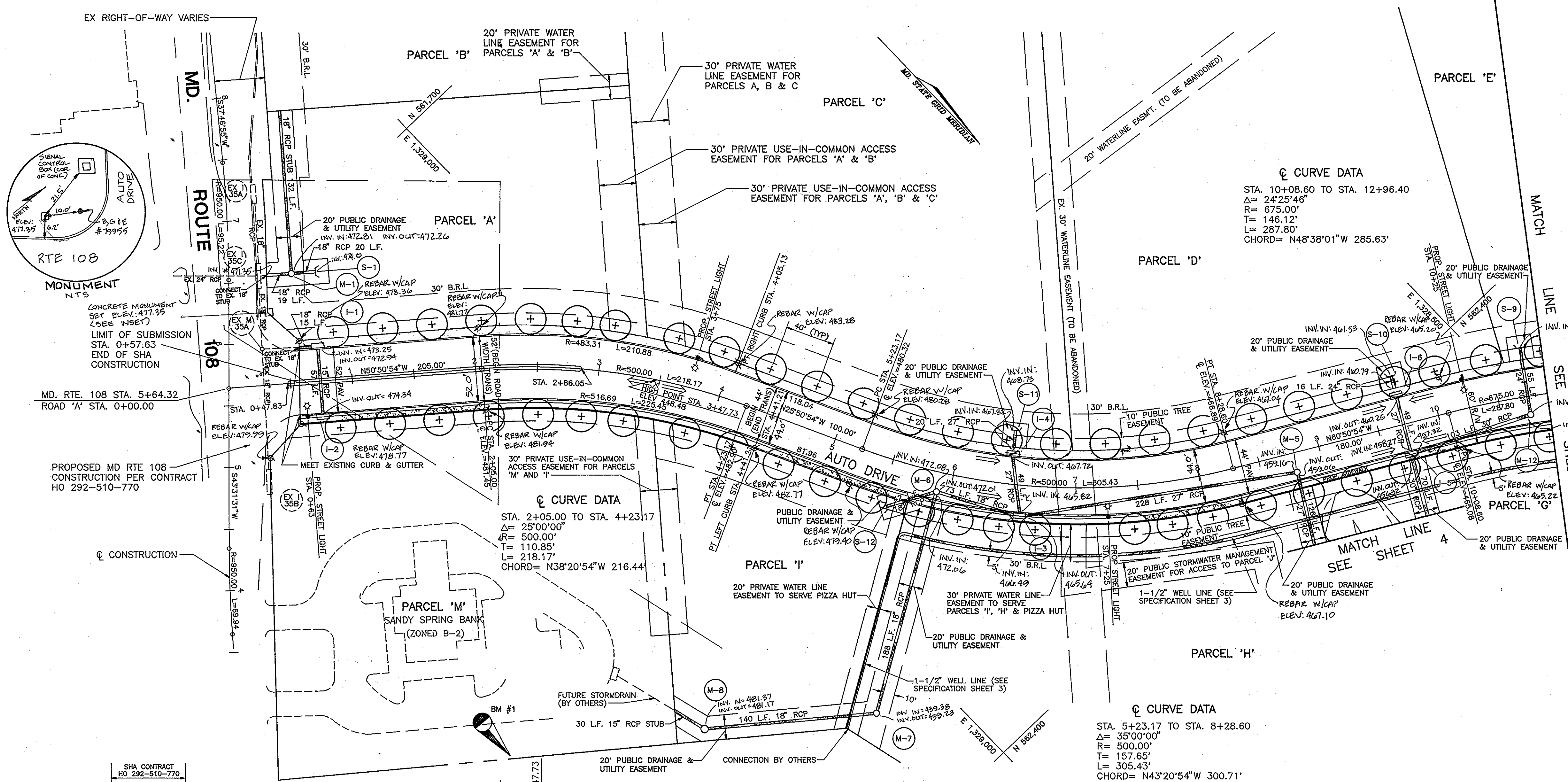
MARKS-VOGEL ASSOCIATES, INC.
ENGINEERS - SURVEYORS - PLANNERS

3691 PARK AVENUE, SUITE 101
ELLICOTT CITY, MARYLAND 21043

TELEPHONE: (410) 461-5828
FAX: (410) 465-8966

1891

F9438



- STREET TREE NOTES**
- STREET TREES SHALL BE ACER RUBRUM (OCTOBER GLORY RED MAPLE) 2-1/2" TO 3" CALIPER, AS MEASURED 1" ABOVE ROOT BALL.
 - TOTAL QUANTITY REQUIRED: 73
 - REFERENCE GENERAL NOTE 11 ON SHEET 1.
 - SEE SHEET 20 FOR TREE PLANTING DETAIL.

BENCH MARK #1
5/8" REBAR
ELEVATION=487.17

STREET LIGHT TABLE

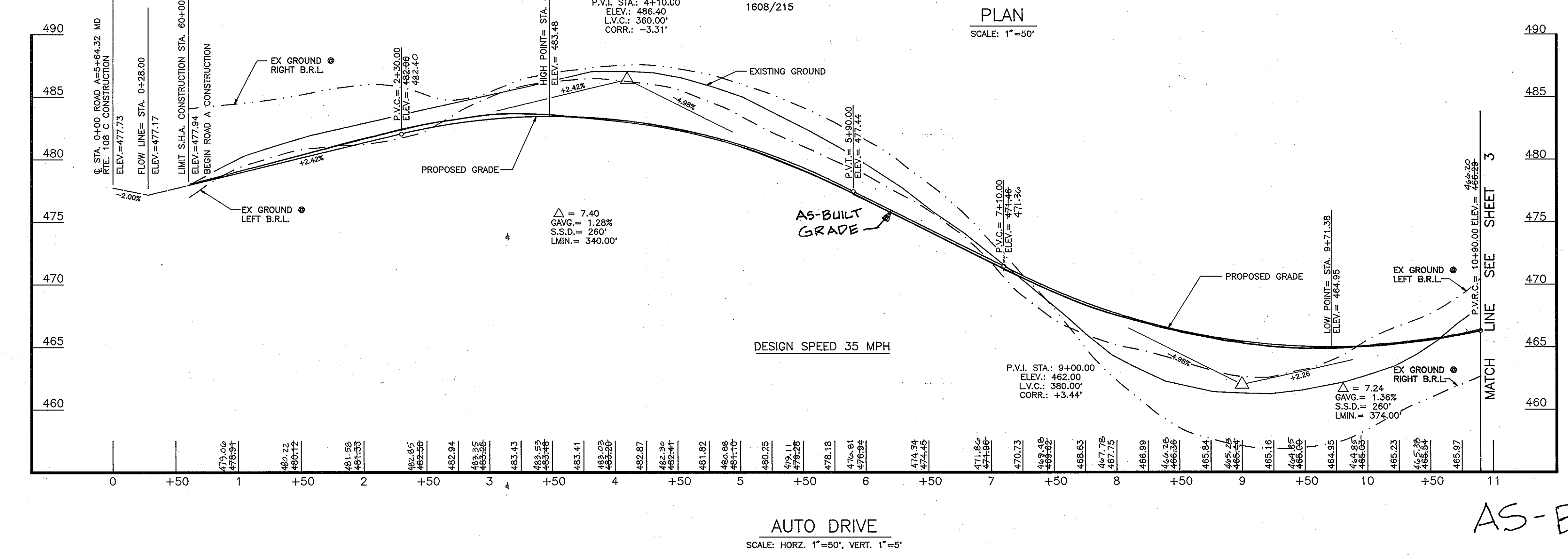
STATION	FIXTURE TYPE	POLE TYPE	OFFSET
0+62	150 WATT HIGH PRESSURE SODIUM VAPOR (PENDENT MOUNT)	30" GALVANIZED POLE	27.5' RIGHT
3+75	150 WATT HIGH PRESSURE SODIUM VAPOR (PENDENT MOUNT)	30" GALVANIZED POLE	24.9' LEFT
7+25	150 WATT HIGH PRESSURE SODIUM VAPOR (PENDENT MOUNT)	30" GALVANIZED POLE	23.5' RIGHT
10+25	150 WATT HIGH PRESSURE SODIUM VAPOR (PENDENT MOUNT)	30" GALVANIZED STEEL POLE	23.5' LEFT
13+40	150 WATT HIGH PRESSURE SODIUM VAPOR (PENDENT MOUNT)	30" GALVANIZED POLE	23.5' LEFT

- STREET LIGHT NOTES**
- 150 WATT HIGH PRESSURE SODIUM VAPOR COBRA (PENDENT MOUNT)
 - 30" GALVANIZED STEEL POLE
 - 2' TO 4' BEHIND FACE OF CURB
- NO STREET TREES TO BE PLACED WITHIN 20' OF STREET LIGHTS.

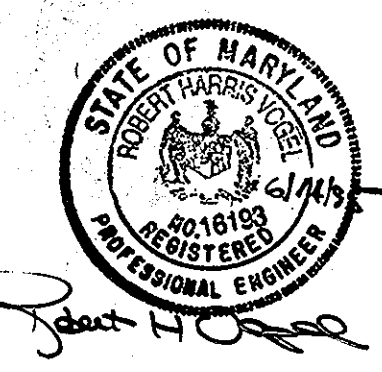
OWNER/DEVELOPER
108 LIMITED PARTNERSHIP
C/O WIN KELLY CHEVROLET
12205 HALL SHOP ROAD
CLARKSVILLE MARYLAND, 21029

OWNERS

- SANDY SPRING BANK
17801 GEORGIA AVENUE
OLNEY, MARYLAND 20832
- JAMES CHRISTOPHER HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044
- EDMOND & ETTA JANE HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044



For AS-BUILT:



DATE	NO.	REVISION	BY
9/1/94	1	Eliminate Sidewalk S.W. Side Auto Drive	RHY

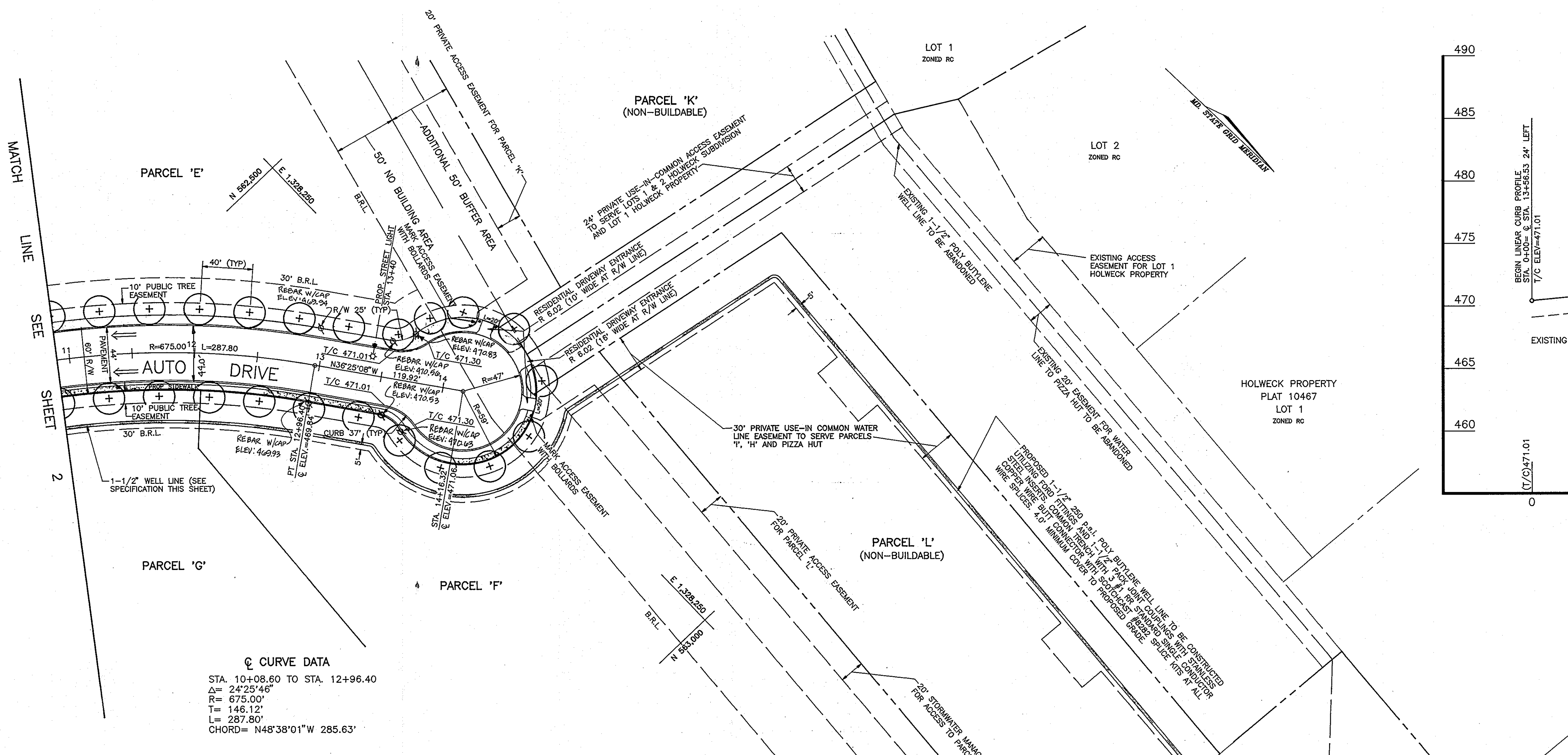
- APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
- Jim Innamore* 1/13/94
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
- APPROVED HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
- Alfred Danner* 1/10/94
CHIEF, LAND DEVELOPMENT DIVISION
- Andrew M. Daniels* 1-6-94
CHIEF, BUREAU OF HIGHWAYS
- Paul D. Seaman* 1/10/94
CHIEF, BUREAU OF ENGINEERING

HOLWECK SUBDIVISION
ROAD PLAN AND PROFILE
A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256
TAX MAP #34 PARCELS 256, 365 & 195
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REFERENCE: SP 93-14 AND WP 93-90 AND ZB947M

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

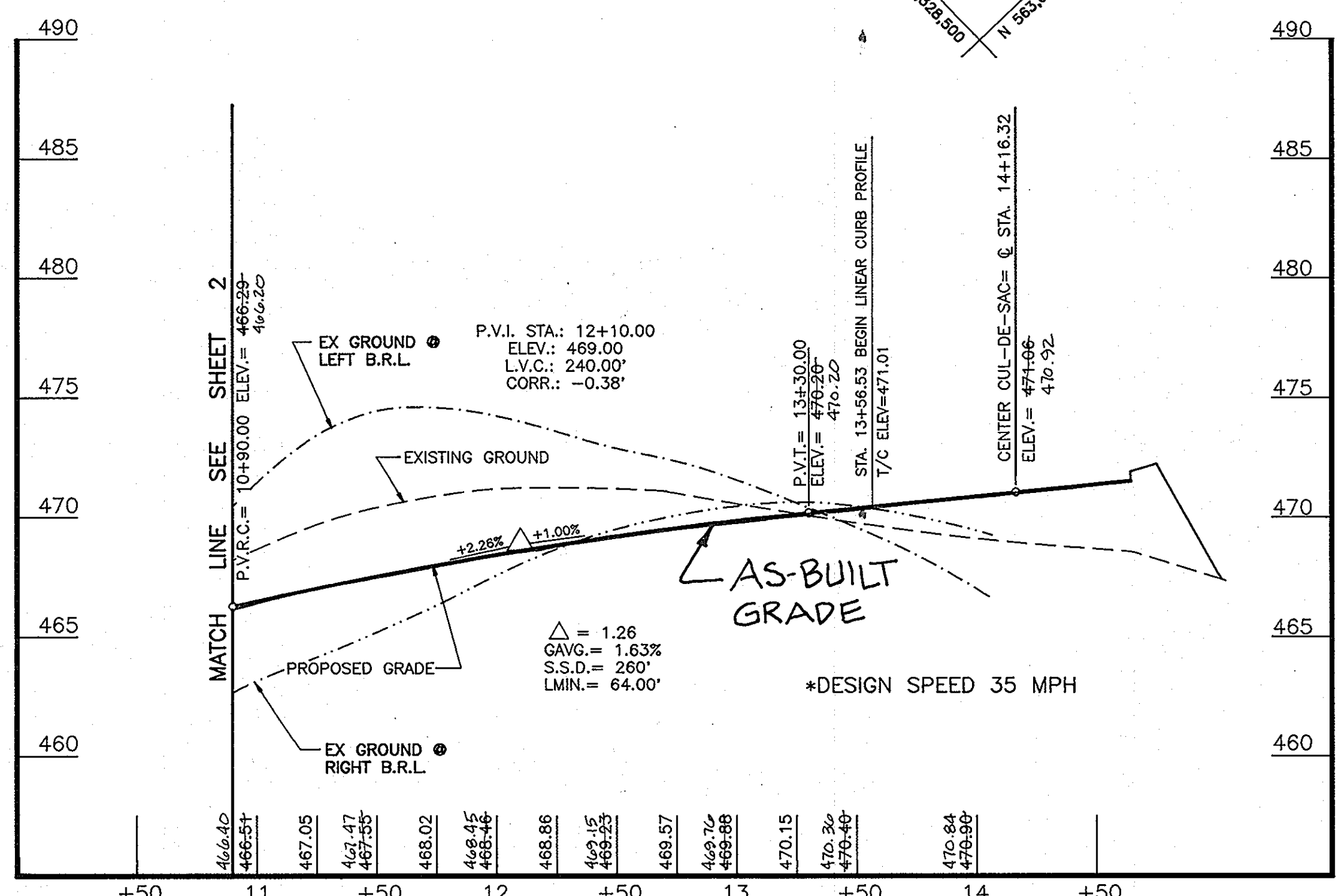
9691 PARK AVENUE, SUITE 101 ELLICOTT CITY, MARYLAND 21048 TELEPHONE: (410) 461-6888 FAX: (410) 465-3968

DESIGN BY: R.H.V.	2 SHEET OF 20
DRAWN BY: D.G.H.	
CHECKED BY: R.H.V.	
DATE: OCTOBER, 1993	
SCALE: AS SHOWN	
W.O. NO.: 92-103	



Q CURVE DATA
 STA. 10+08.60 TO STA. 12+96.40
 $\Delta = 24^{\circ}25'46''$
 $R = 675.00'$
 $T = 146.12'$
 $L = 287.80'$
 CHORD = $N48^{\circ}38'01''W$ 285.63'

PLAN
 SCALE: 1"=50'



AUTO DRIVE
 SCALE: HORZ. 1"=50', VERT. 1"=5'

STREET LIGHT NOTES
 * 150 WATT HIGH PRESSURE SODIUM VAPOR
 COBRA (PENDENT MOUNT)
 30' GALVANIZED STEEL POLE
 2' TO 4' BEHIND FACE OF CURB

STREET TREE NOTES
 1. STREET TREES SHALL BE ACER RUBRUM (OCTOBER GLORY RED MAPLE)
 2-1/2" TO 3" CALIPER, AS MEASURED 1' ABOVE ROOT BALL.
 2. TOTAL QUANTITY REQUIRED: 73
 3. REFERENCE GENERAL NOTE 11 ON SHEET 1.
 4. SEE SHEET 20 FOR TREE PLANTING DETAIL.

BENCH MARK #2
 5/8" REBAR
 ELEVATION = 448.18

OWNER/DEVELOPER
 108 LIMITED PARTNERSHIP
 C/O WIN KELLY CHEVROLET
 12205 HALL SHOP ROAD
 CLARKSVILLE MARYLAND, 21029

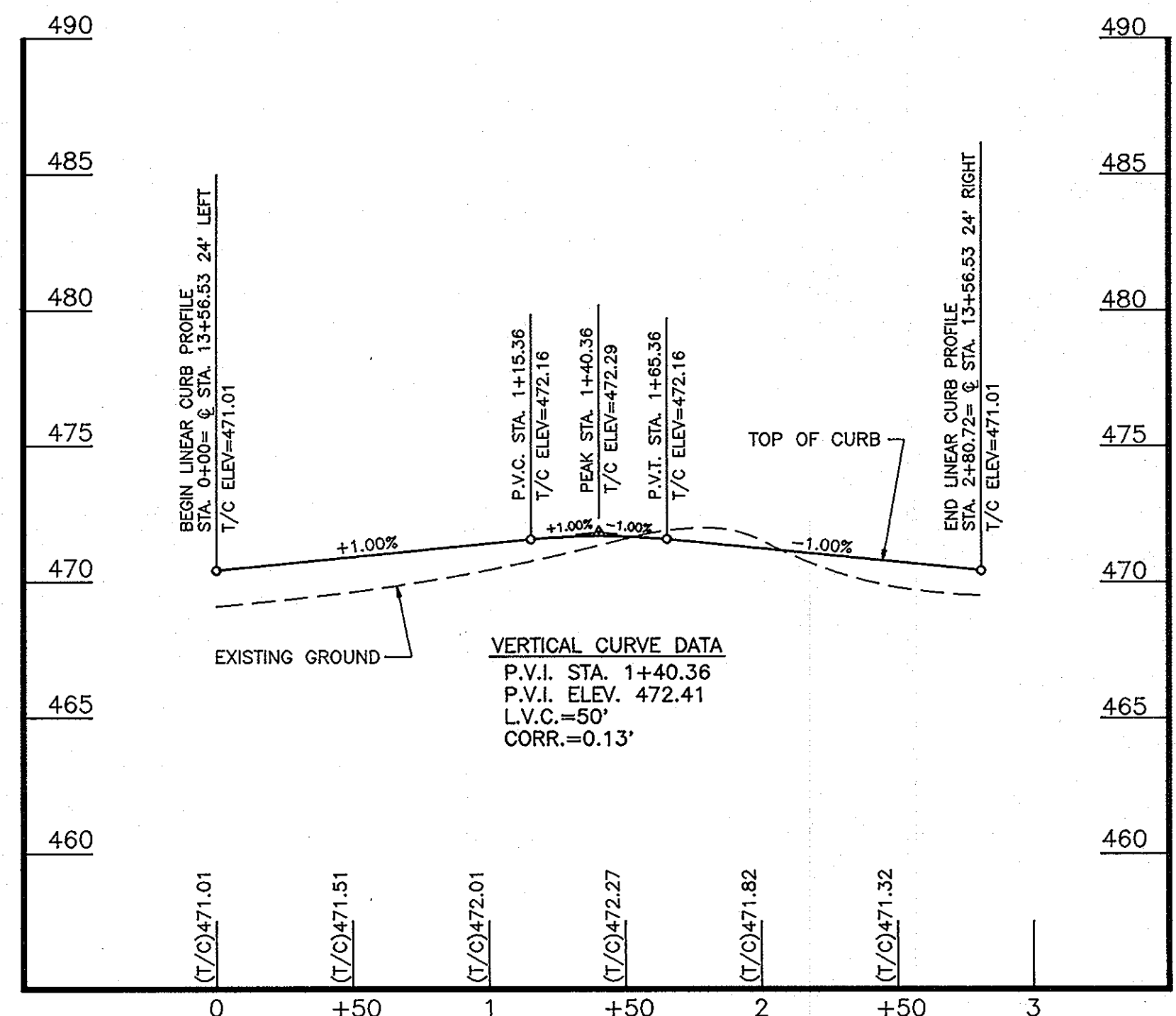
OWNERS

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 OLNEY, MARYLAND 20832

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 COLUMBIA, MARYLAND 21044

EDMOND & ETTA JANE HOLWECK
 6420 LOCHRIDGE ROAD
 COLUMBIA, MARYLAND 21044

AS-BUILT



LINEAR CURB PROFILE
AUTO DRIVE
 SCALE: HORZ. 1"=50', VERT. 1"=5'

DATE	NO.	REVISION	BY
9/7/94	1	ELIMINATE SIDEWALK S.W. SIDE AUTO DRIVE	R.H.V.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Uma Stovinsky 1/13/94
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

APPROVED HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Mark Danner 1/10/94
 CHIEF, LAND DEVELOPMENT DIVISION

Andrew M. Dwyer 1-6-94
 CHIEF, BUREAU OF HIGHWAYS

Paul H. Jones 1/10/94
 CHIEF, BUREAU OF ENGINEERING

HOLWECK SUBDIVISION
ROAD PLAN AND PROFILE

A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256
 TAX MAP #34 PARCELS 256, 365 & 195 HOWARD COUNTY, MARYLAND
 REFERENCE: SP 93-14, WP 93-90, AND ZB947M

MARKS-VOGEL ASSOCIATES, INC.

ENGINEERS - SURVEYORS - PLANNERS

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 ELLICOTT CITY, MARYLAND 21043

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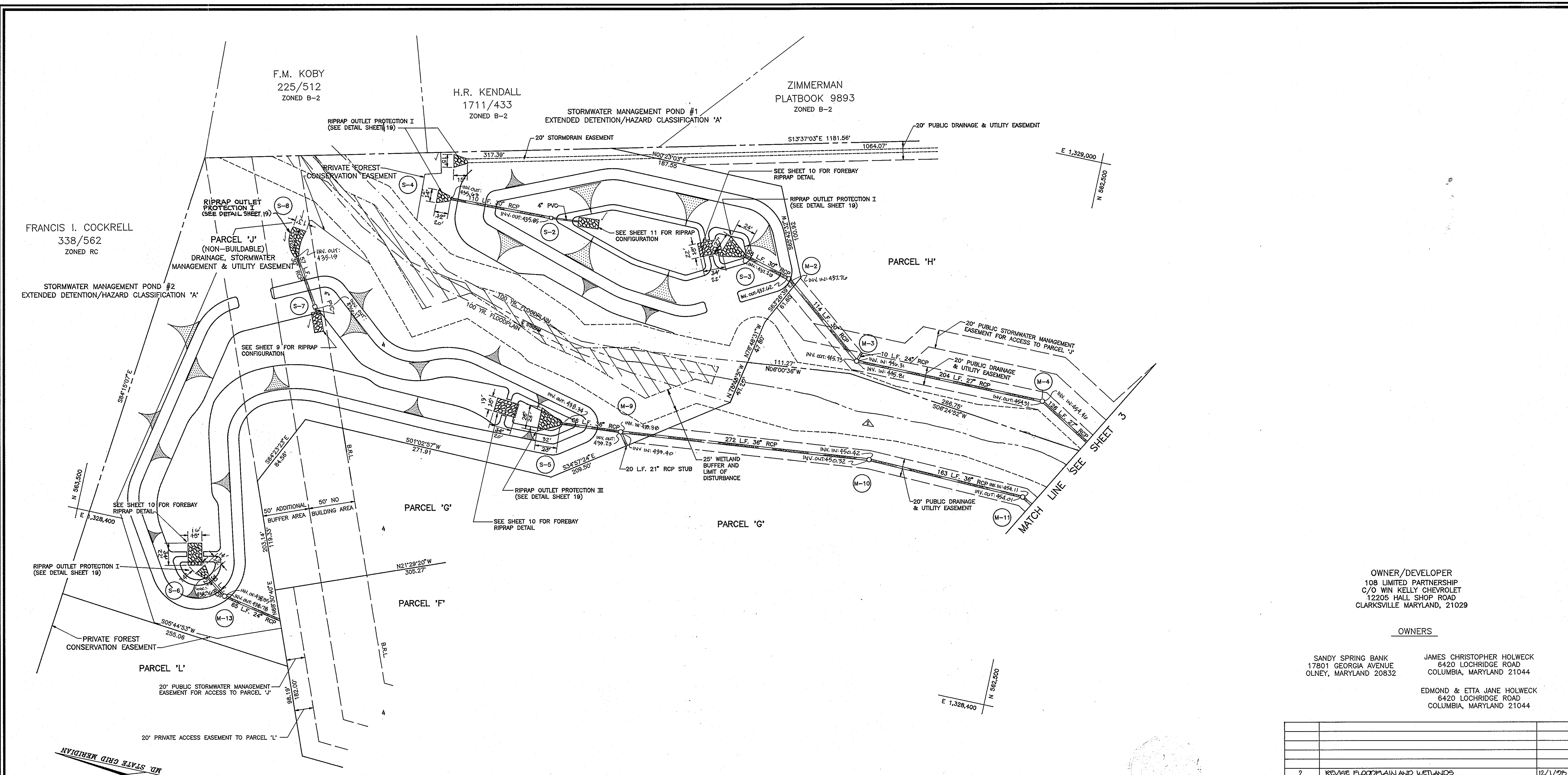


DESIGN BY: R.H.V.
 DRAWN BY: D.G.H.
 CHECKED BY: R.H.V.
 DATE: OCTOBER, 1993
 SCALE: AS SHOWN
 W.O. NO.: 92-103

3 SHEET OF 20

1681

F9438



OWNER/DEVELOPER
 108 LIMITED PARTNERSHIP
 C/O WIN KELLY CHEVROLET
 12205 HALL SHOP ROAD
 CLARKSVILLE MARYLAND, 21029

OWNERS

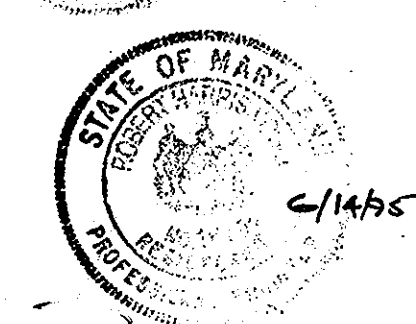
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EDMOND & ETTA JANE HOLWECK
 6420 LOCHRIDGE ROAD
 COLUMBIA, MARYLAND 21044

2	REVISION FLOODPLAIN AND WETLANDS	12/1/96
NO.	REVISION	DATE

For AS-BUILT



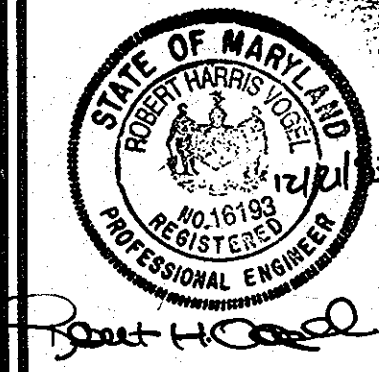
AS-BUILT

**HOLWECK SUBDIVISION
 STORMDRAIN PLAN**

A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256
 TAX MAP #34 PARCELS 256, 365 & 195
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 REFERENCE: SP 93-14, WP 93-90 AND ZB947M

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

3801 PARK AVENUE, SUITE 101 ELLICOTT CITY, MARYLAND 21043 TELEPHONE: (410) 481-5828 FAX: (410) 485-3988



DESIGN BY: R.H.V.
 DRAWN BY: D.G.H.
 CHECKED BY: R.H.V.
 DATE: OCTOBER, 1993
 SCALE: 1"=50'
 W.O. NO.: 93-101

4 SHEET OF 20

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

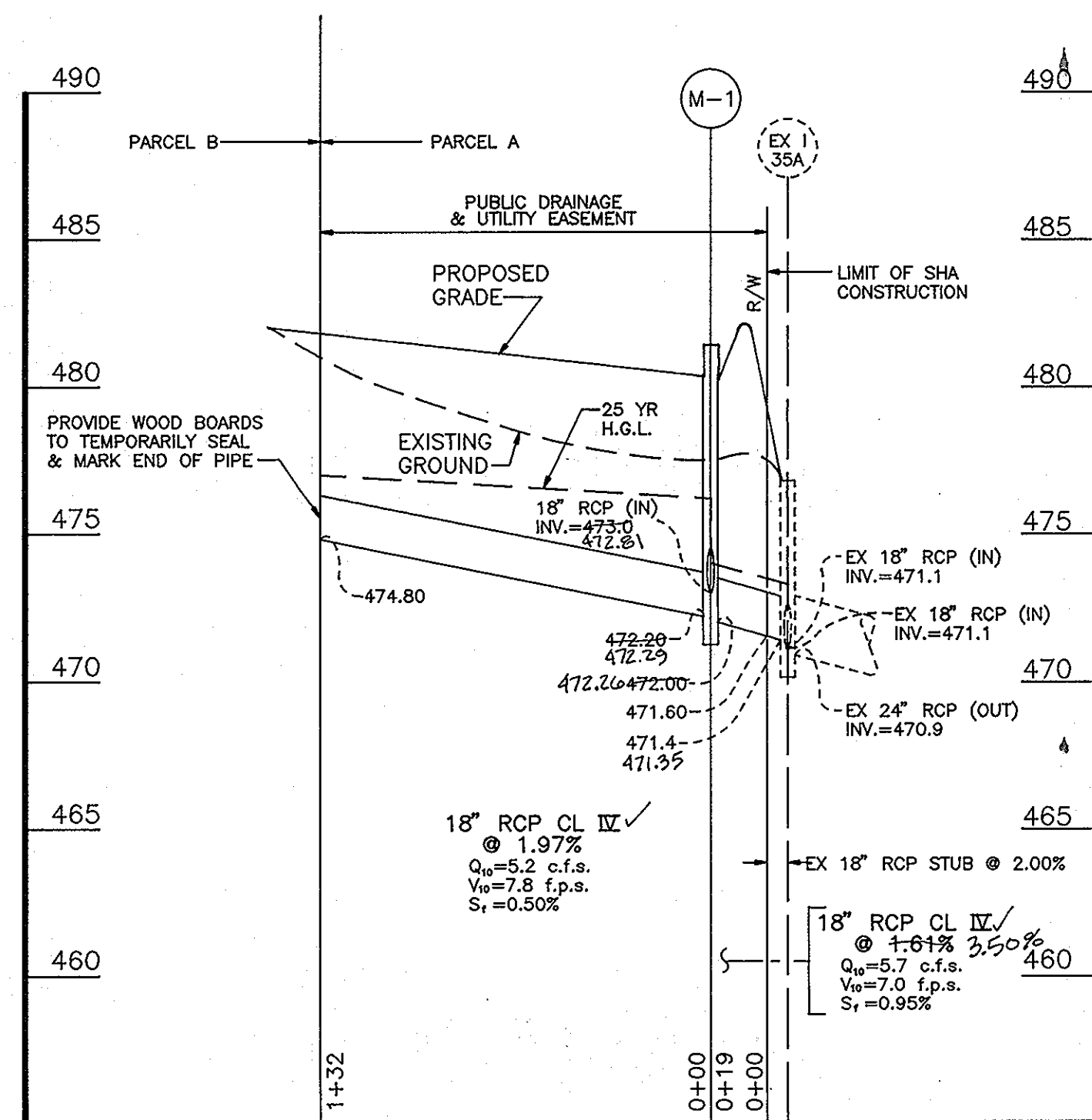
Oina Jimenez 1/13/94
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

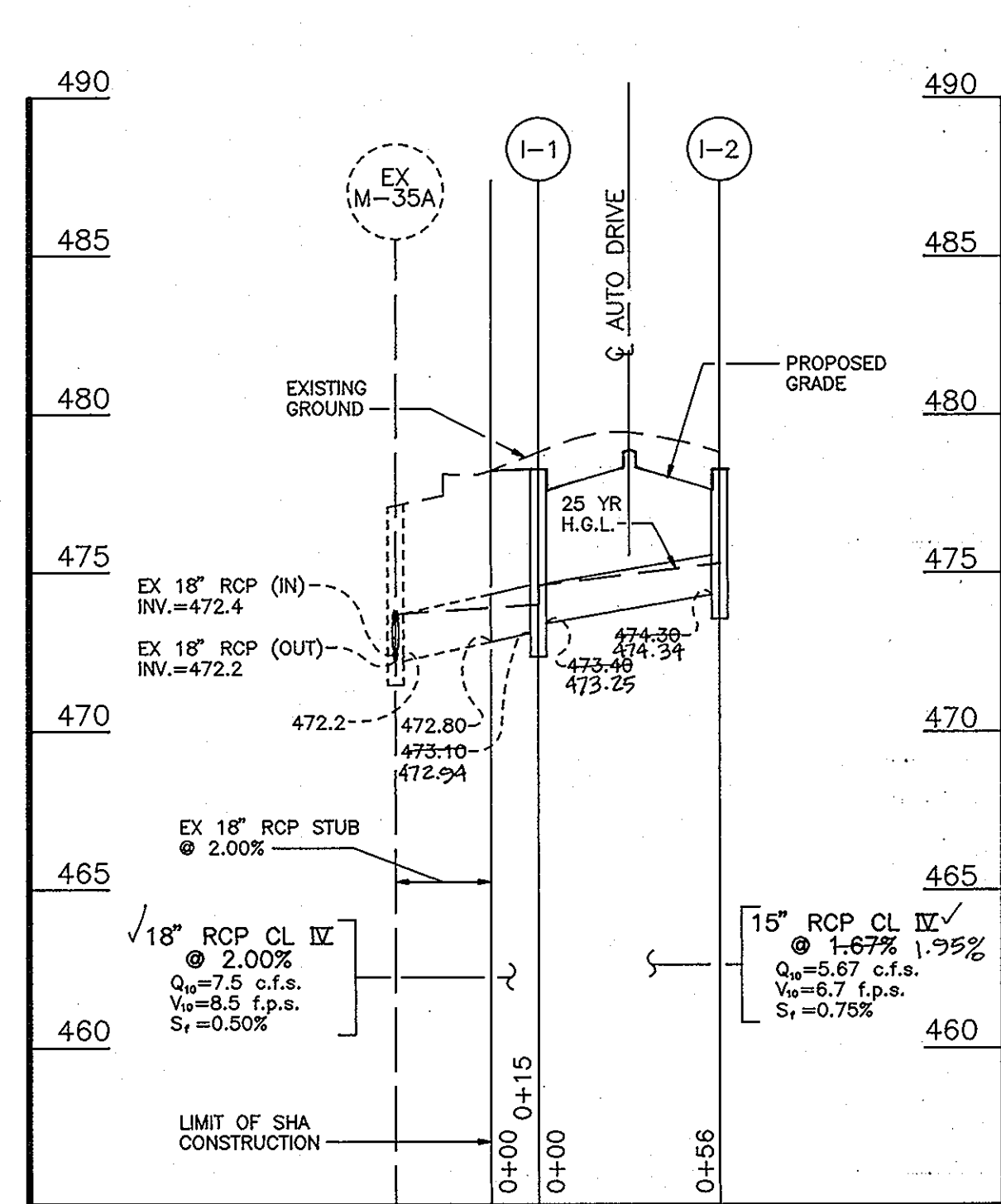
Robert H. Vogel 1/10/94
 CHIEF, BUREAU OF ENGINEERING DATE

1681

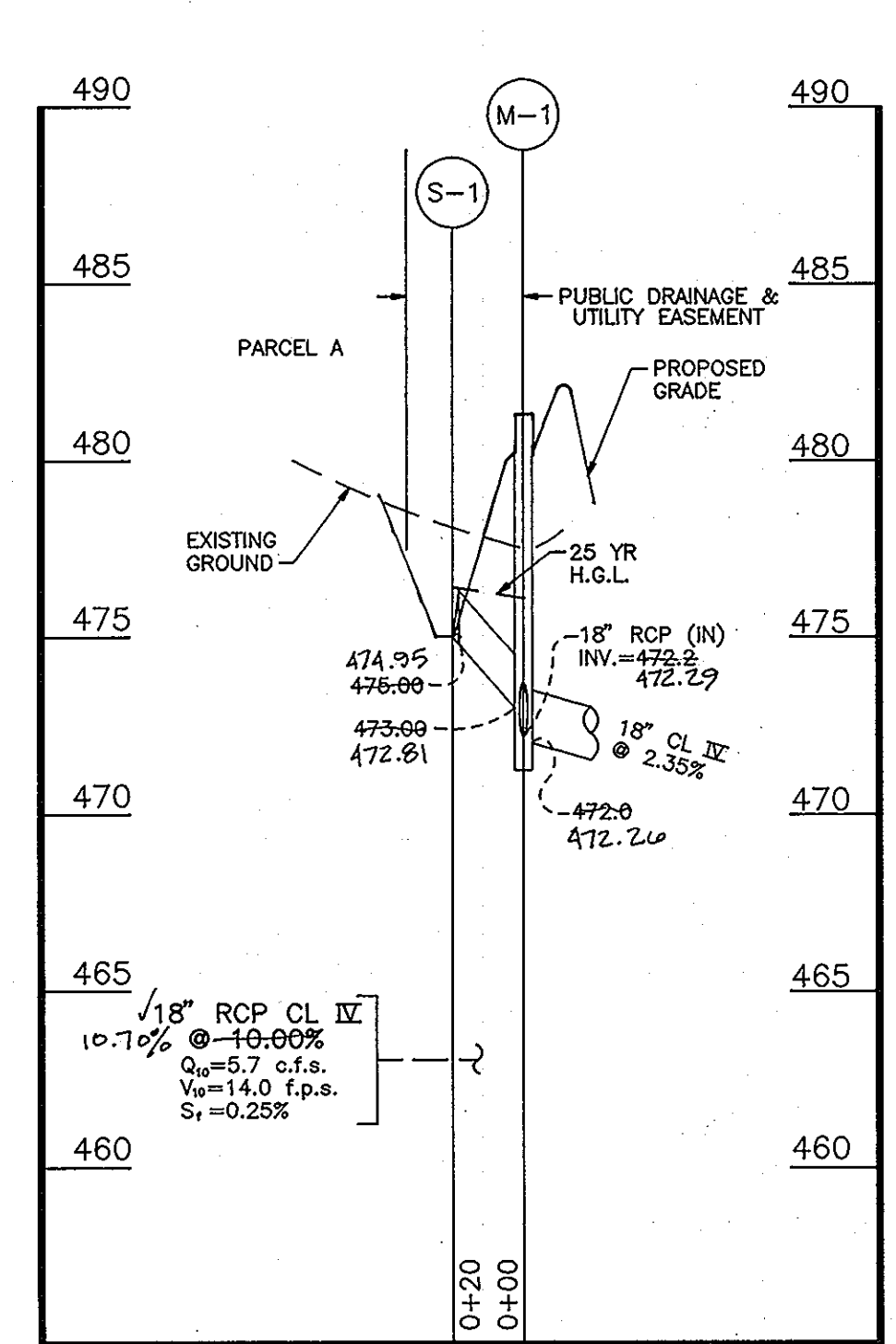
F94-38



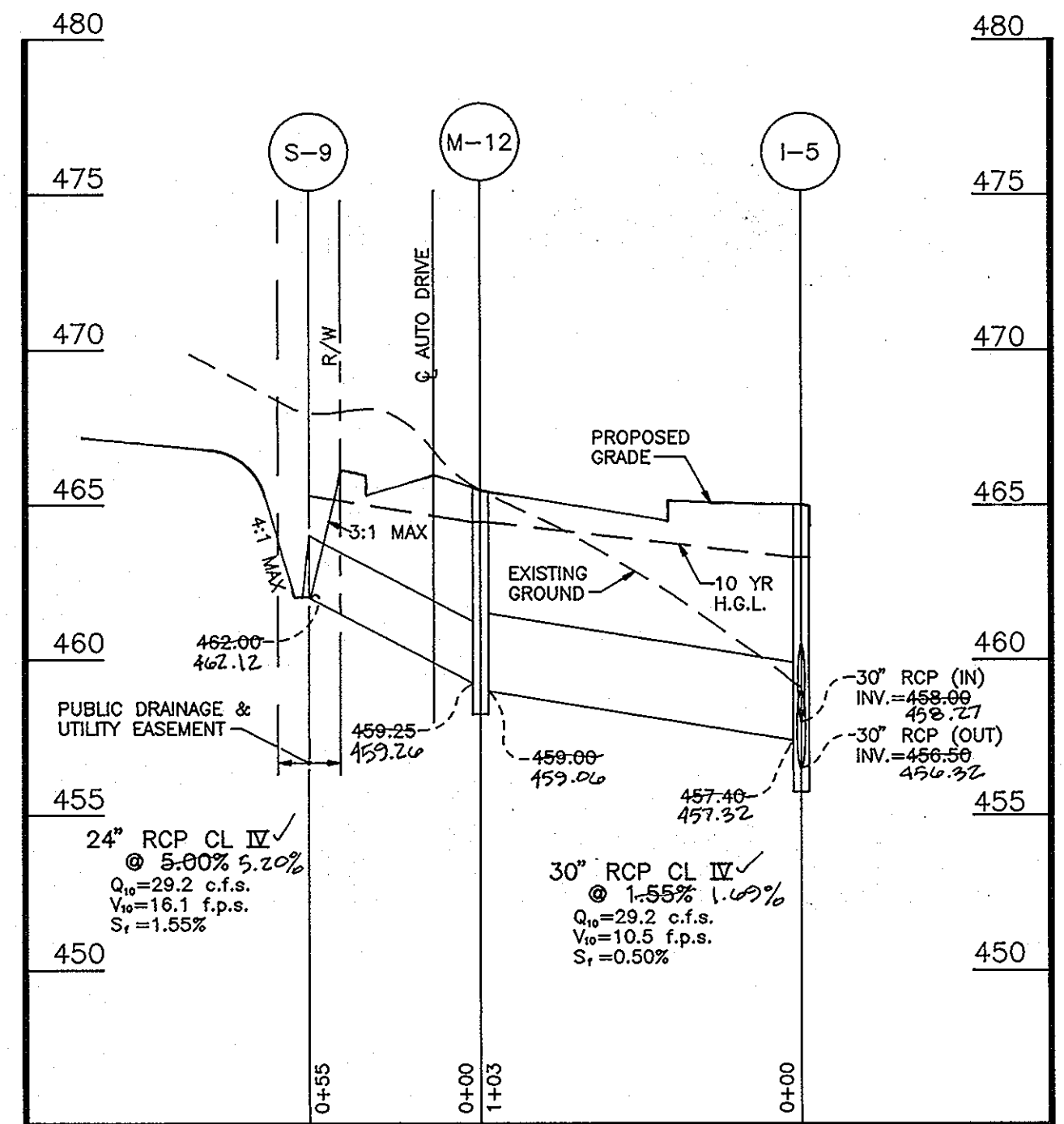
STORM DRAIN PROFILE
SCALE: HORZ. 1"=50', VERT. 1"=5'



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



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



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

INLET SCHEDULE

NO.	TYPE	TOP ELEVATION	ROADWAY SLOPE	CROSS SLOPE	LOCATION *	INV IN	INV OUT	REMARKS
I-1	A-5 INLET	478.24	2.42%	3.00%	STA. 0+74, 28' LEFT	473.25	473.40	472.24 SD 4.40
I-2	A-10 INLET	478.14	2.42%	3.00%	STA. 0+74, 28' RIGHT	473.70	474.30	474.30 SD 4.41
I-3	A-10 INLET	474.94	4.98%	3.00%	STA. 6+58, 22' RIGHT	466.49	467.09	466.00 SD 4.41
I-4	A-10 INLET	474.94	4.98%	3.00%	STA. 6+46, 22' LEFT	467.82	468.38	467.12 SD 4.41
I-5	A-5 INLET	464.92	N/A	3.00%	STA. 9+71, 22' RIGHT	458.27	458.09	456.56 SD 4.40
I-6	A-5 INLET	464.88	N/A	3.00%	STA. 9+71, 22' LEFT	460.79	460.60	460.10 SD 4.40

MANHOLE SCHEDULE

NO.	TYPE	TOP ELEVATION	ROADWAY SLOPE	CROSS SLOPE	LOCATION	INV IN	INV OUT	REMARKS
M-1	STANDARD MANHOLE	479.20	N/A	N/A	SHA STA. 6+55, 51' RIGHT	472.91	473.00	472.94 SD G 5.12
M-2	STANDARD MANHOLE	448.20	N/A	N/A	N 562,802.8 E 1,328,805.7	437.70	437.90	437.04 SD G 5.13
M-3	STANDARD MANHOLE	462.00	N/A	N/A	N 562,712.6 E 1,328,734.3	446.91	446.80	446.19 SD G 5.13
M-4	STANDARD MANHOLE	462.00	N/A	N/A	N 562,507.7 E 1,328,734.4	454.40	454.80	454.31 SD G 5.13
M-5	STANDARD MANHOLE	465.30	N/A	3.00%	STA. 8+78, 16' RIGHT	459.10	460.00	459.50 SD G 5.13
M-6	STANDARD MANHOLE	477.12	N/A	3.00%	STA. 5+90, 16' RIGHT	472.00	472.80	472.00 SD G 5.12
M-7	STANDARD MANHOLE	478.67	N/A	N/A	N 562,305.8 E 1,329,052.2	473.70	473.70	473.80 SD G 5.12
M-8	STANDARD MANHOLE	481.57	N/A	N/A	N 562,676.9 E 1,328,632.8	481.37	481.70	481.40 SD G 5.12
M-9	STANDARD MANHOLE	445.38	N/A	N/A	N 562,945.2 E 1,328,805.5	439.38	440.48	439.20 SD G 5.13
M-10	STANDARD MANHOLE	462.70	N/A	N/A	N 562,676.9 E 1,328,632.8	459.02	459.90	459.30 SD G 5.13
M-11	STANDARD MANHOLE	467.00	N/A	3.00%	STA. 10+74, 15' RIGHT	459.11	459.25	459.00 SD G 5.13
M-12	STANDARD MANHOLE	465.00	N/A	N/A	N 562,512.3 E 1,328,828.4	459.20	459.50	459.00 SD G 5.13
M-13	STANDARD MANHOLE	445.30	N/A	N/A	N 563,324.7 E 1,328,341.1	438.95	439.25	438.50 SD G 5.13

STRUCTURE SCHEDULE

NO.	TYPE	---	---	---	LOCATION	INV IN	INV OUT	REMARKS
S-1	18" CONCRETE END SECTION	---	---	---	SHA STA. 6+55, 70' RIGHT	474.95	475.00	SD 5.52
S-2	SWM RELEASE STRUCTURE	---	---	---	N 563,177.6 E 1,328,813.0	---	---	SEE DETAIL
S-3	30" CONCRETE END SECTION	---	---	---	N 562,855.8 E 1,328,820.4	---	---	437.30 SD 5.52
S-4	30" TYPE 'C' ENDWALL	---	---	---	N 563,067.9 E 1,328,815.8	---	---	435.50 SD 5.21
S-5	36" CONCRETE END SECTION	---	---	---	N 563,010.6 E 1,328,600.8	---	---	438.20 SD 5.52
S-6	24" CONCRETE END SECTION	---	---	---	N 563,346.8 E 1,328,357.2	---	---	438.20 SD 5.52
S-7	SWM RELEASE STRUCTURE	---	---	---	N 563,296.2 E 1,328,667.5	---	---	SEE DETAIL
S-8	30" TYPE 'C' ENDWALL	---	---	---	N 563,326.5 E 1,328,716.7	---	---	434.80 SD 5.21
S-9	24" CONCRETE END SECTION	---	---	---	STA. 10+74, 40' LEFT	462.12	462.00	SD 5.52
S-10	24" CONCRETE END SECTION	---	---	---	STA. 9+71, 41' LEFT	461.53	461.10	SD 5.52
S-11	27" CONCRETE END SECTION	---	---	---	STA. 6+46, 44' LEFT	468.73	469.00	SD 5.52
S-12	18" CONCRETE END SECTION	---	---	---	STA. 5+56, 38' RIGHT	---	475.00	SD 5.52

OWNER/DEVELOPER
108 LIMITED PARTNERSHIP
C/O WIN KELLY CHEVROLET
12205 HALL SHOP ROAD
CLARKSVILLE MARYLAND, 21049

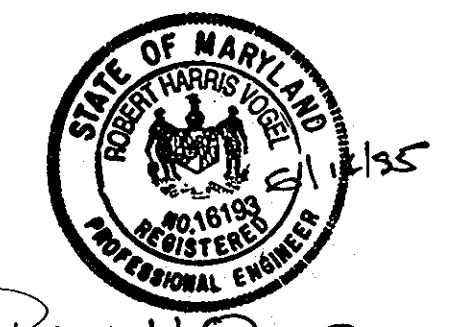
OWNERS

SANDY SPRING BANK
17801 GEORGIA AVENUE
OLNEY, MARYLAND 20832

JAMES CHRISTOPHER HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

EDMOND & ETTA JANE HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

For AS-BUILT



AS-BUILT

APPROVED:
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Uma Surranany 1/13/94
CHIEF, DIVISION OF LAND DEVELOPMENT DATE AND RESEARCH
COK

APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William M. Danek 1/10/94
CHIEF, LAND DEVELOPMENT DIVISION DATE

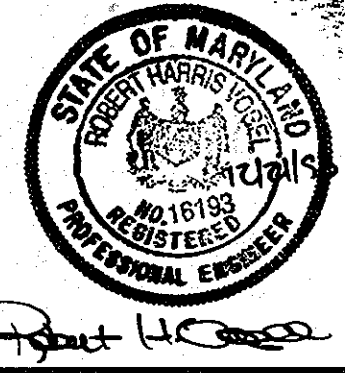
Andrew M. Danek 1-6-94
CHIEF, BUREAU OF HIGHWAYS DATE

Paul D. Sorenson 1/10/94
CHIEF, BUREAU OF ENGINEERING DATE

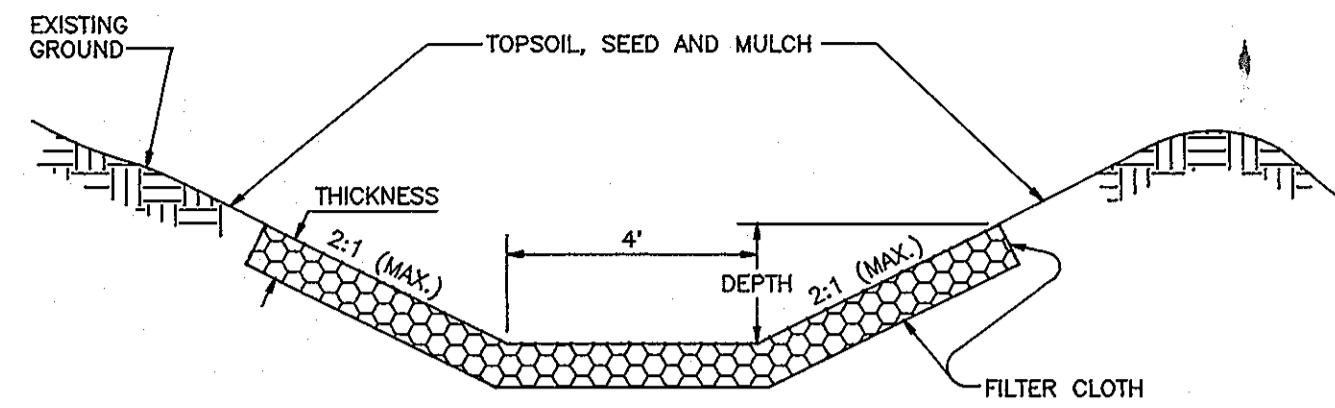
HOLWECK SUBDIVISION
STORMDRAIN PROFILES AND
STRUCTURE SCHEDULES
A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOTS 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCELS 195 AND 256
TAX MAP #34 PARCELS 256, 365 & 195 HOWARD COUNTY, MARYLAND
5TH ELECTION DISTRICT REFERENCE: SP 93-14, WP 93-90 AND ZB947M

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

3891 PARK AVENUE, SUITE 101 ELLICOTT CITY, MARYLAND 21043 TELEPHONE: (410) 461-6828 FAX: (410) 465-3986

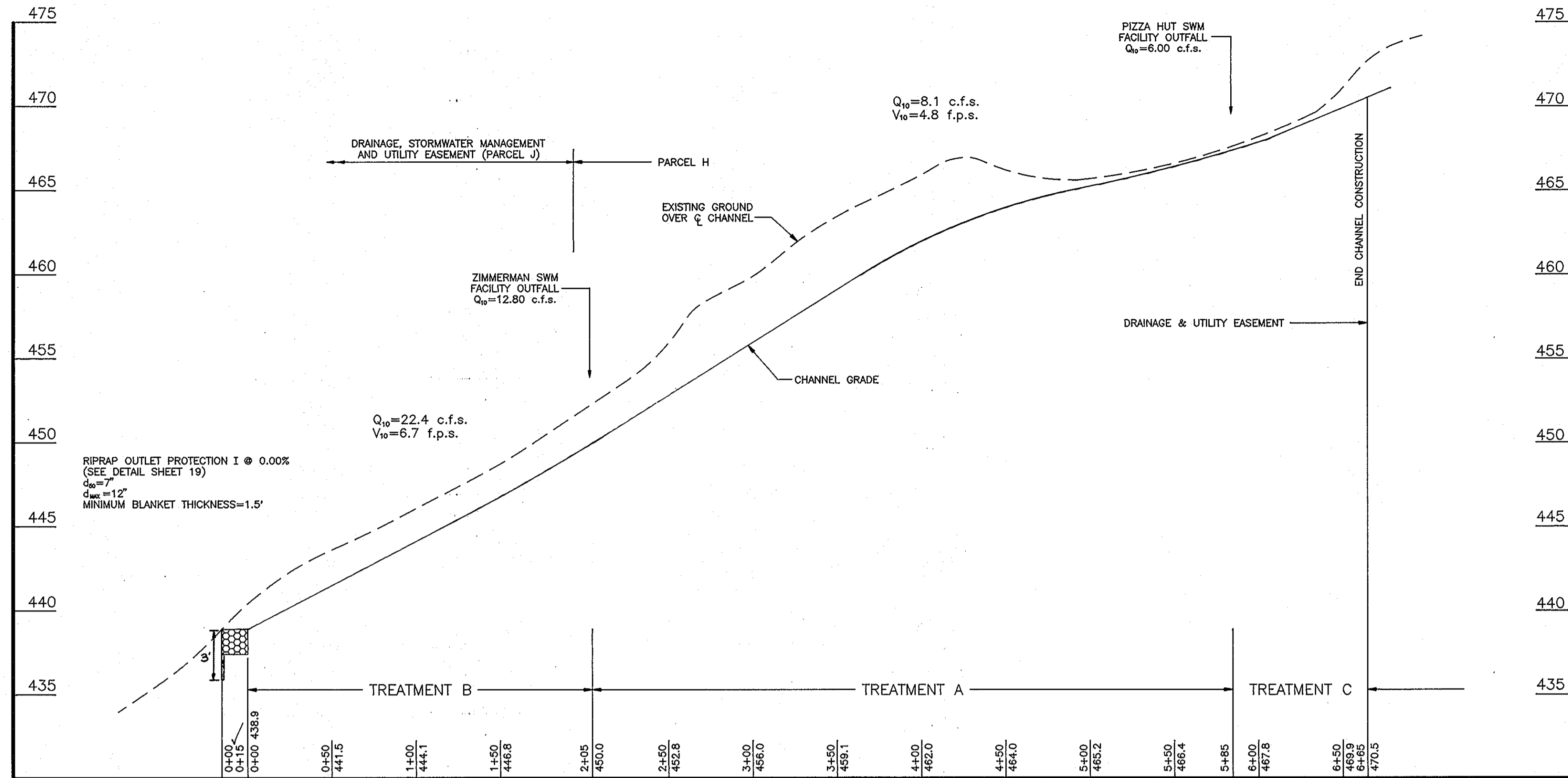


DESIGN BY: R.H.V.
DRAWN BY: D.G.H.
CHECKED BY: R.H.V.
DATE: OCTOBER, 1993
SCALE: AS SHOWN
W.O. NO.: 93-101

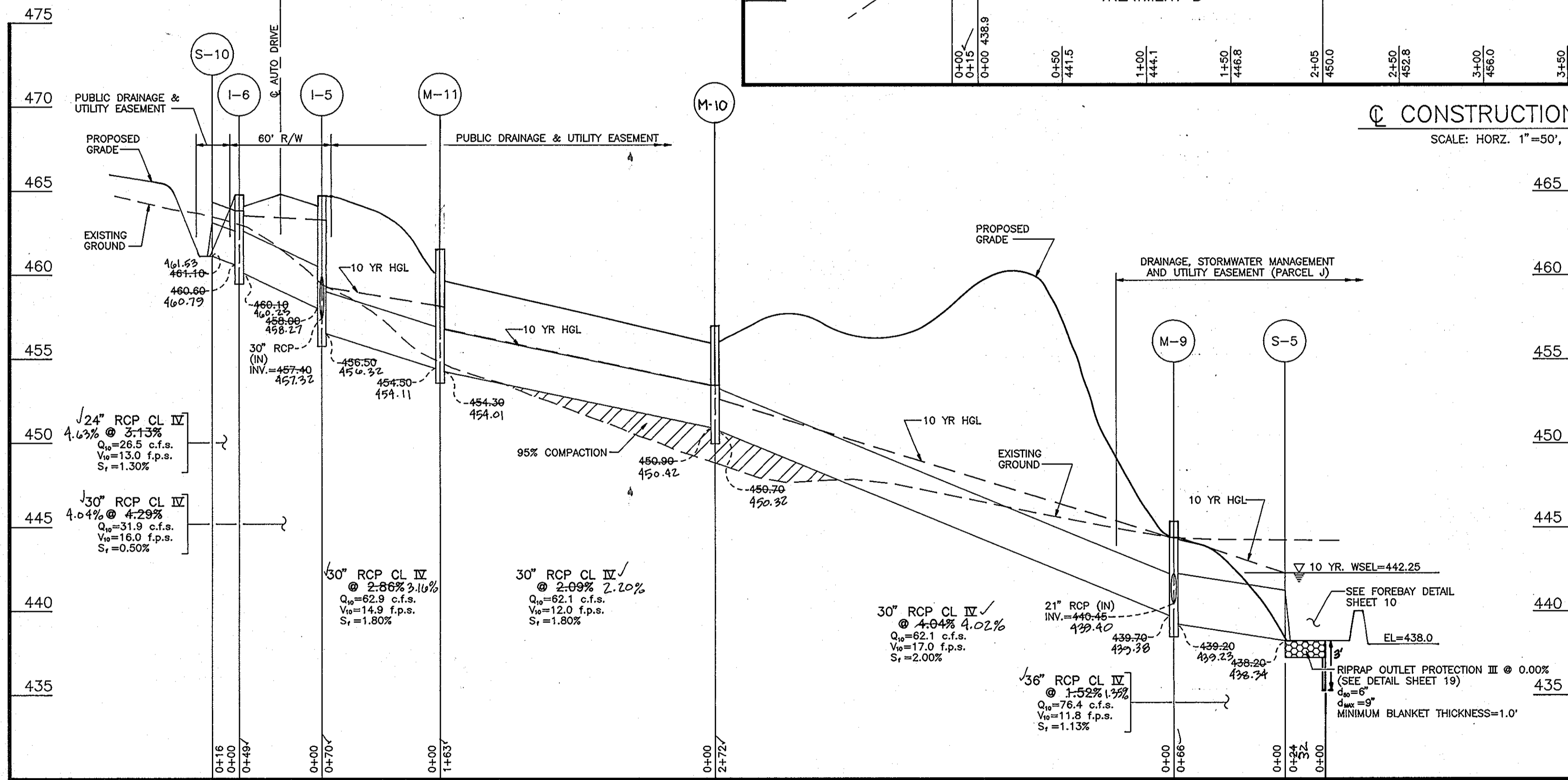


CHANNEL TREATMENT					
STATION	TREATMENT	DEPTH	THICKNESS	d ₅₀	d _{max}
0+00-2+05	B: RIPRAP	12"	18"	7"	12"
2+05-5+85	A: RIPRAP	9"	12"	4"	6"
5+85-6+65	C: SEED & MULCH W/MATTING	9"	-	-	-

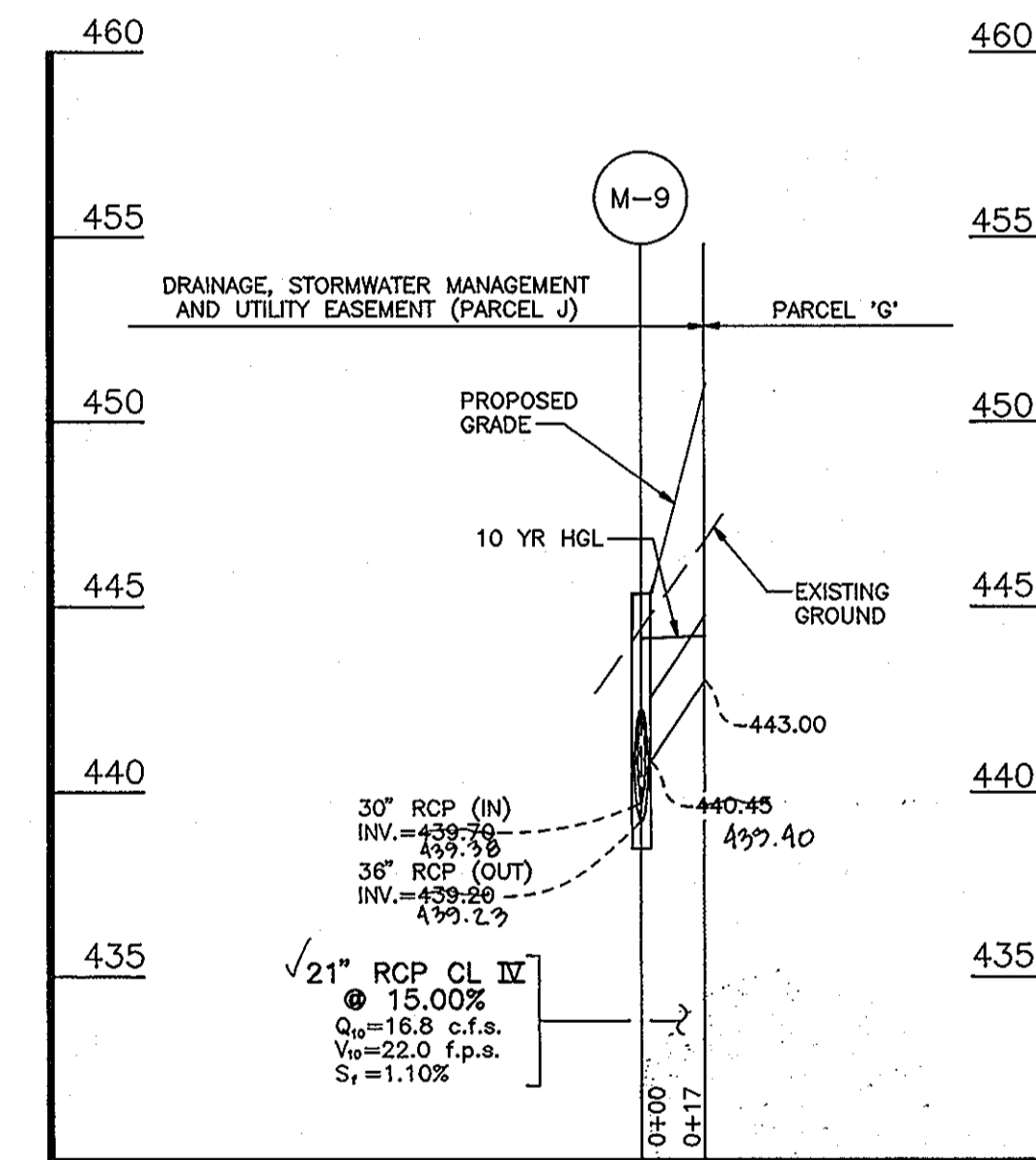
TYPICAL CHANNEL SECTION
NOT TO SCALE



CONSTRUCTION CHANNEL
SCALE: HORIZ. 1"=50', VERT. 1"=5'



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



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

OWNER/DEVELOPER
108 LIMITED PARTNERSHIP
C/O WIN KELLY CHEVROLET
12205 HALL SHOP ROAD
CLARKSVILLE MARYLAND, 21029

OWNERS

SANDY SPRING BANK
17801 GEORGIA AVENUE
OLNEY, MARYLAND 20832

JAMES CHRISTOPHER HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

EDMOND & ETTA JANE HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

NO.	REVISION	DATE

HOLWECK SUBDIVISION
STORMDRAIN AND CHANNEL PROFILES
A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2
& LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256

TAX MAP #34 PARCELS 256, 365 & 195
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REFERENCE: SP 93-14, WP 93-90 AND ZB947M

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

3891 PARK AVENUE, SUITE 101
ELLICOTT CITY, MARYLAND 21043

TELEPHONE: (410) 481-5928
FAX: (410) 485-3968



DESIGN BY: R.H.V.
DRAWN BY: D.G.H.
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SCALE: AS SHOWN
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APPROVED:
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

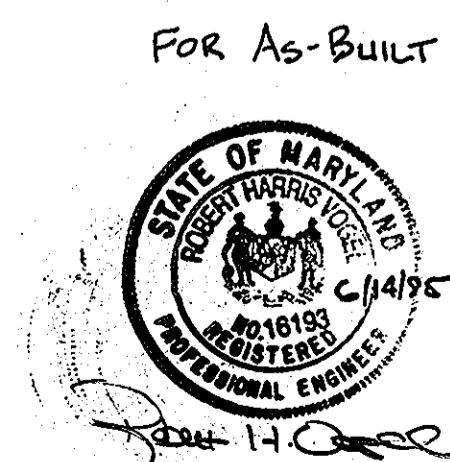
Jim Wynn 1/13/94
CHIEF, DIVISION OF LAND DEVELOPMENT
AND RESEARCH DATE

APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Michael Wynn 1/10/94
CHIEF, LAND DEVELOPMENT DIVISION DATE

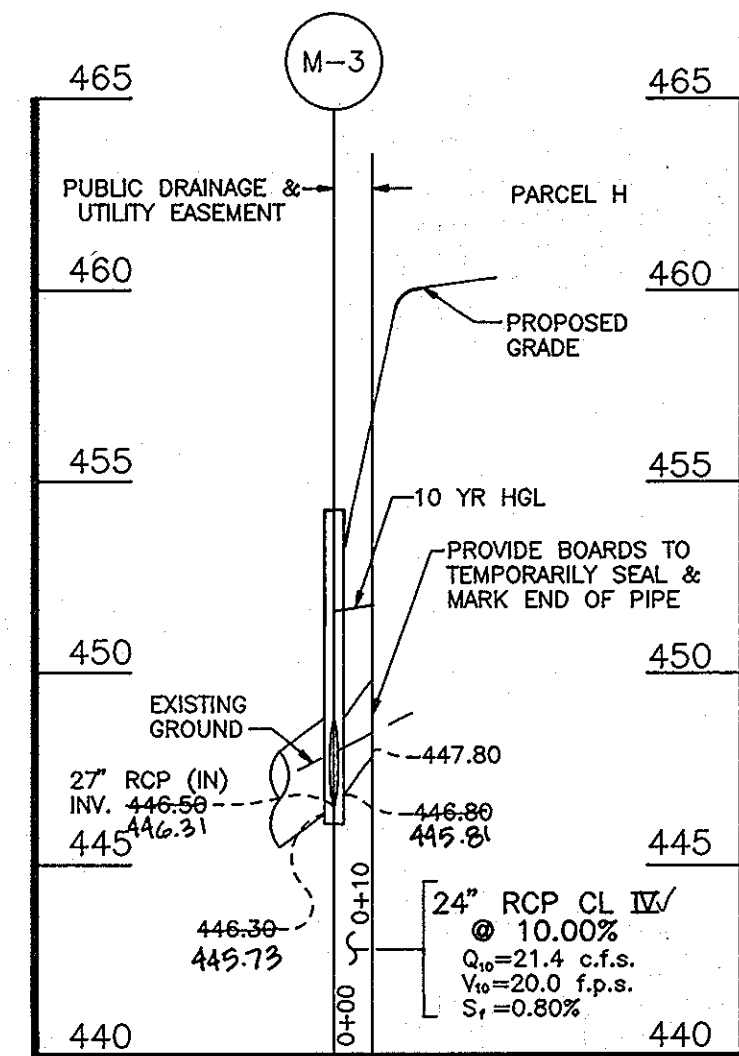
Andrew W. Dwyer 1-6-94
CHIEF, BUREAU OF HIGHWAYS DATE

Paul H. Coyle 1/10/94
CHIEF, BUREAU OF ENGINEERING DATE



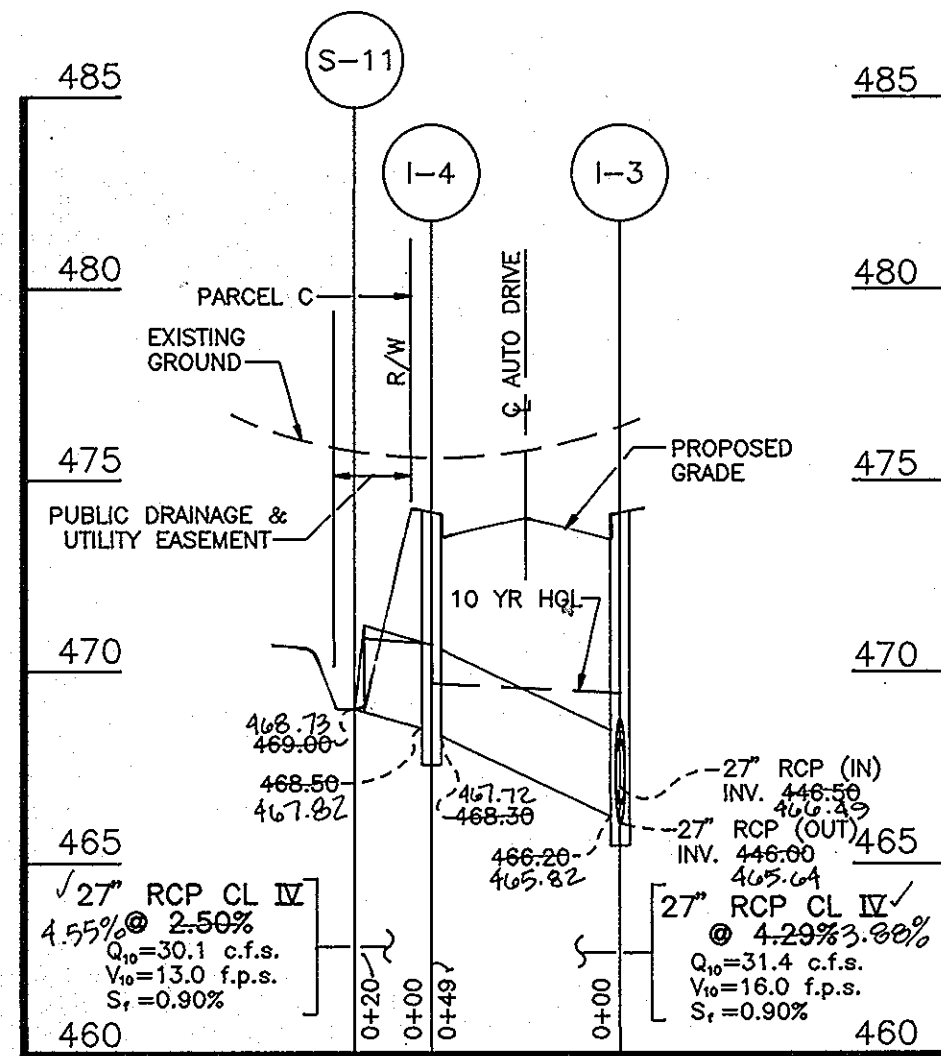
AS-BUILT

16051



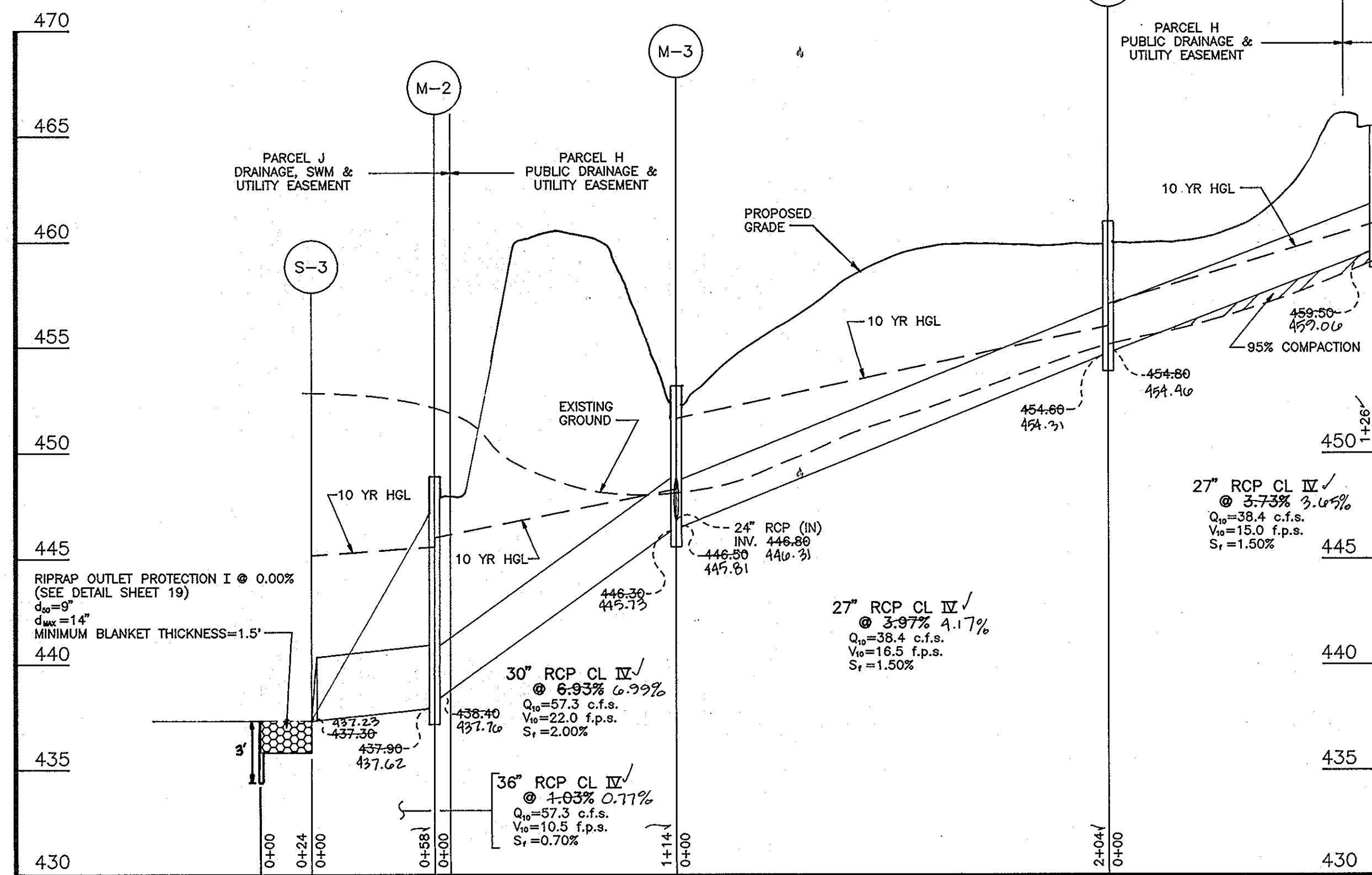
STORM DRAIN PROFILE

SCALE: HORIZ. 1"=50', VERT. 1"=5'



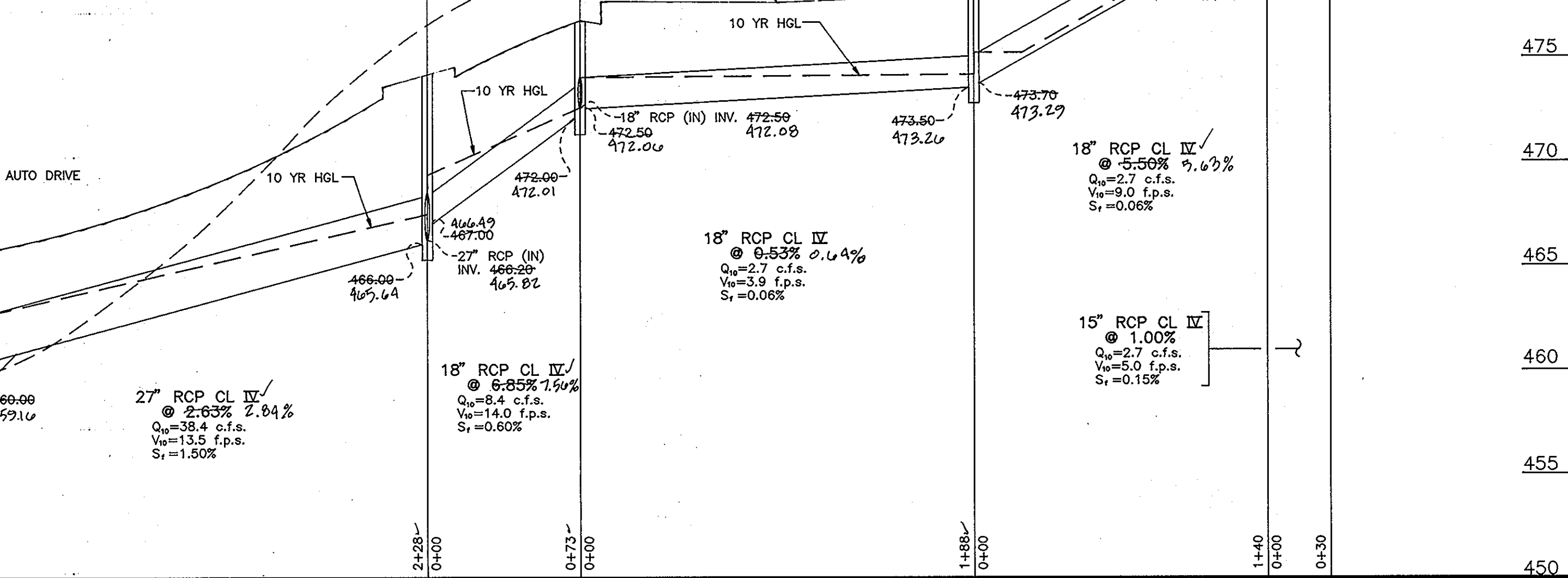
STORM DRAIN PROFILE

SCALE: HORIZ. 1"=50', VERT. 1"=5'



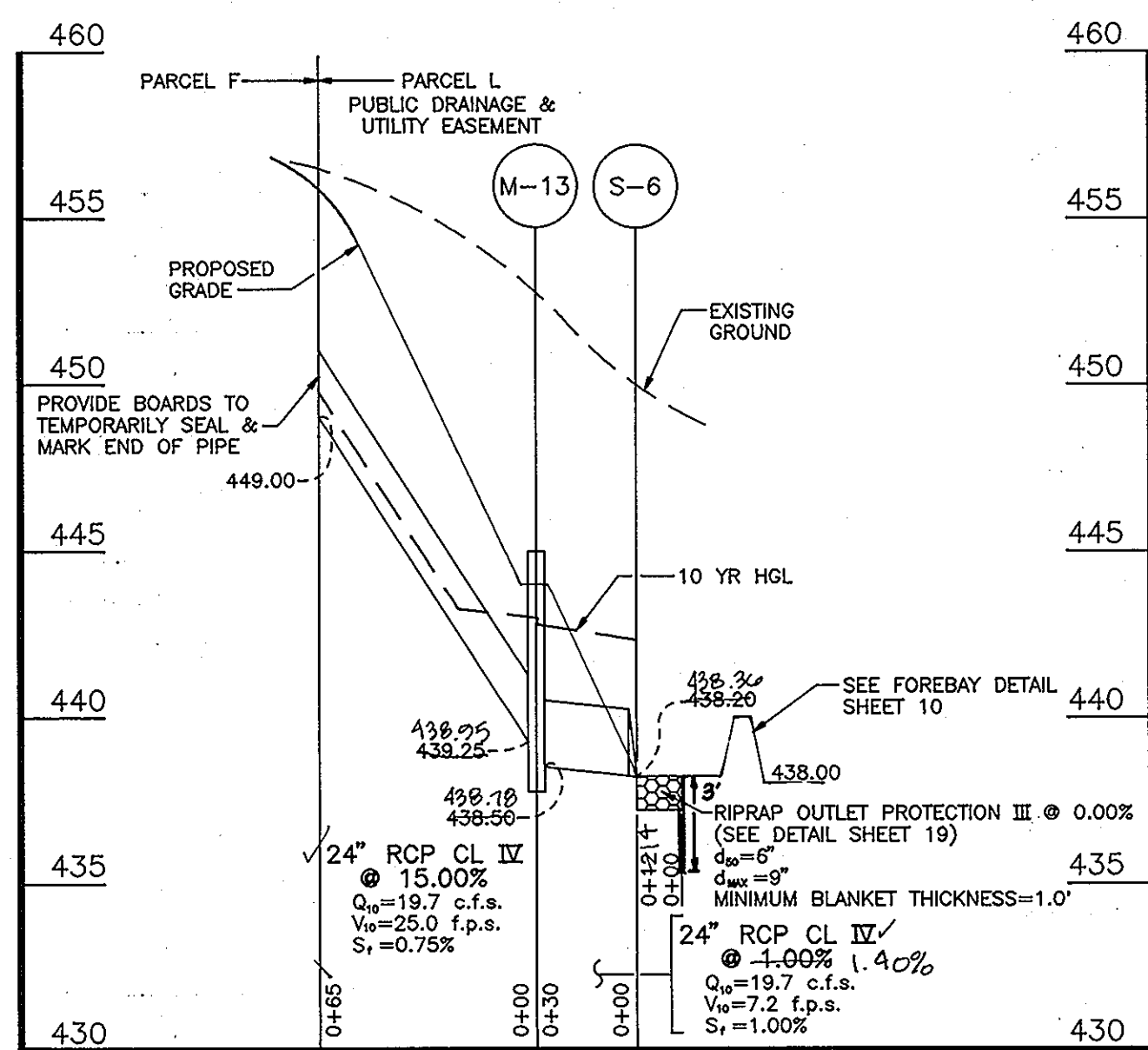
STORM DRAIN PROFILE

SCALE: HORIZ. 1"=50', VERT. 1"=5'



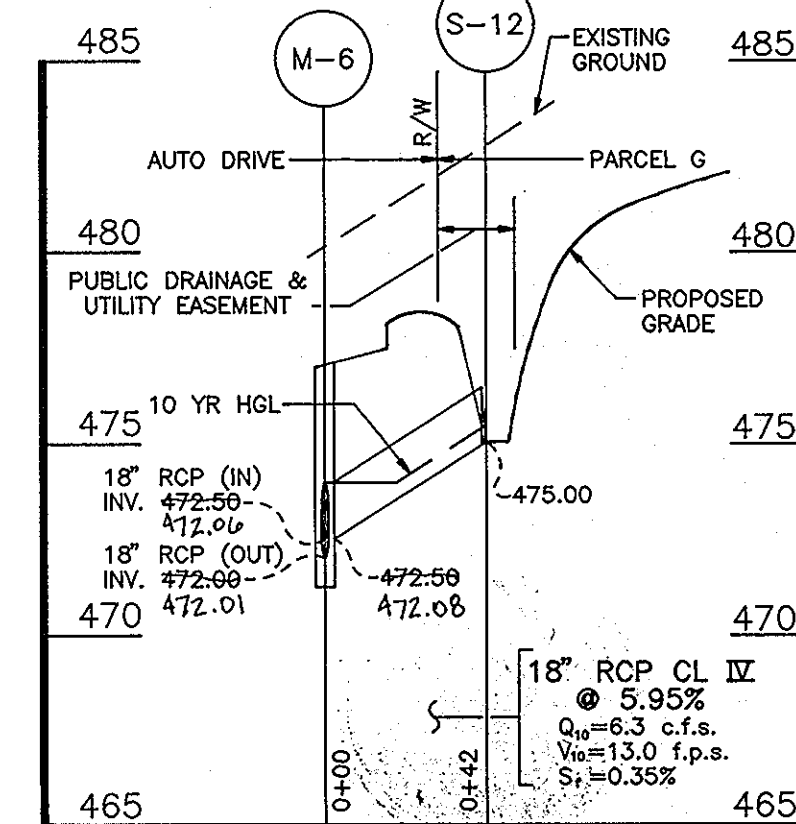
STORM DRAIN PROFILE

SCALE: HORIZ. 1"=50', VERT. 1"=5'



STORM DRAIN PROFILE

SCALE: HORIZ. 1"=50', VERT. 1"=5'



STORM DRAIN PROFILE

SCALE: HORIZ. 1"=50', VERT. 1"=5'

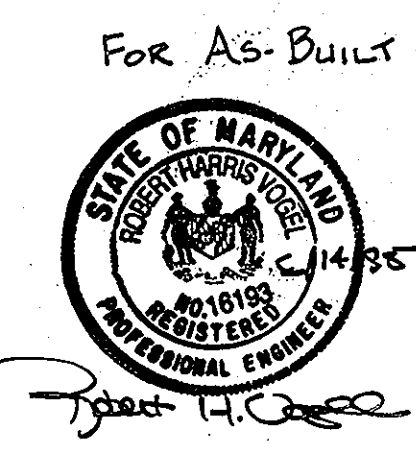
AS-BUILT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Quinn Swannick 1/13/94
CHIEF, DIVISION OF LAND DEVELOPMENT DATE AND RESEARCH

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Robert M. Danaher 1/10/94
CHIEF, LAND DEVELOPMENT DIVISION DATE
Andrew M. Danaher 1-6-94
CHIEF, BUREAU OF HIGHWAYS DATE
Paul D. Brown 1/10/94
CHIEF, BUREAU OF ENGINEERING DATE



OWNER/DEVELOPER
108 LIMITED PARTNERSHIP
C/O WIN KELLY CHEVROLET
12205 HALL SHOP ROAD
CLARKSVILLE MARYLAND, 21029

OWNERS

SANDY SPRING BANK
17801 GEORGIA AVENUE
OLNEY, MARYLAND 20832

JAMES CHRISTOPHER HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

EDMOND & ETTA JANE HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

NO.	REVISION	DATE

HOLWECK SUBDIVISION
STORMDRAIN PROFILES

A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256

TAX MAP #34 PARCELS 256, 365 & 195
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REFERENCE: SP 93-14, WP 93-90 AND ZB947M

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

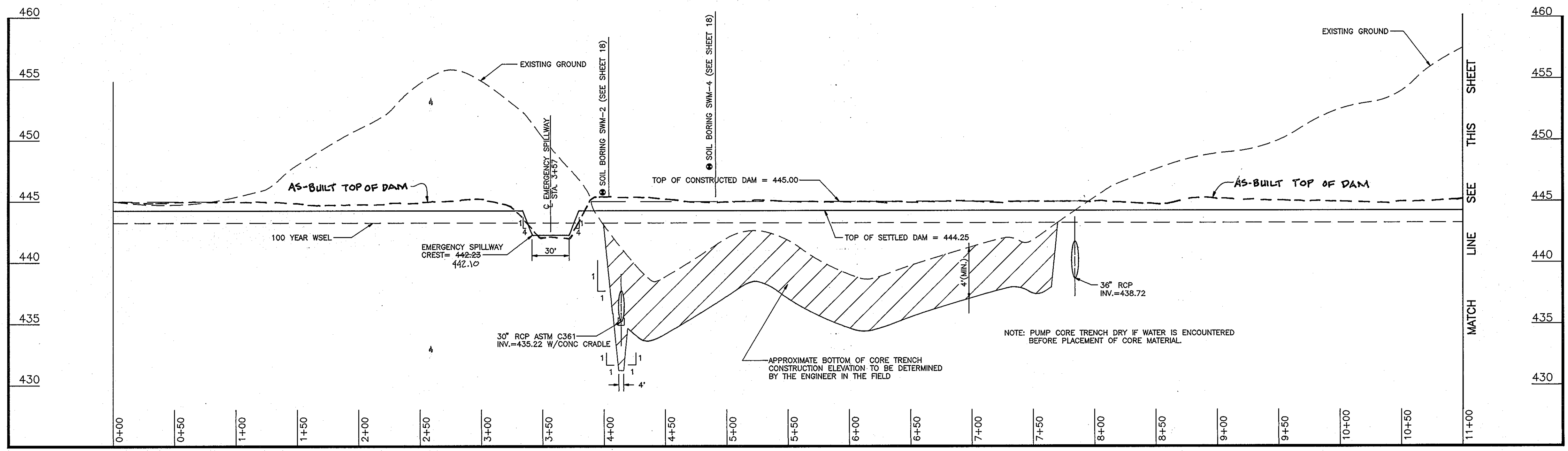
3691 PARK AVENUE, SUITE 101
ELLCOTT CITY, MARYLAND 21043

TELEPHONE: (410) 461-5828
FAX: (410) 465-3988

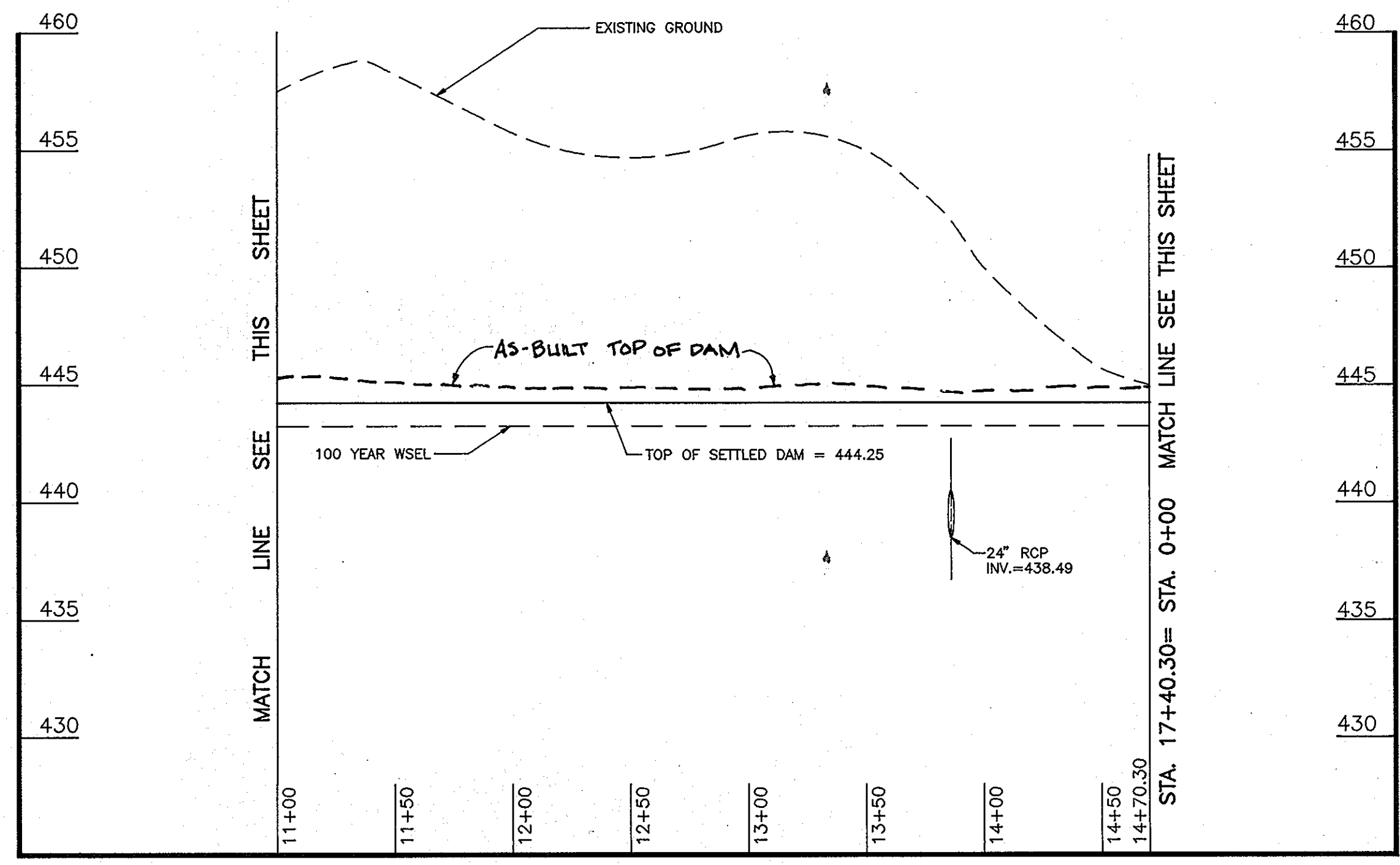


DESIGN BY: R.H.V.
DRAWN BY: D.G.H.
CHECKED BY: R.H.V.
DATE: OCTOBER, 1993
SCALE: AS SHOWN
W.O. NO.: 93-101

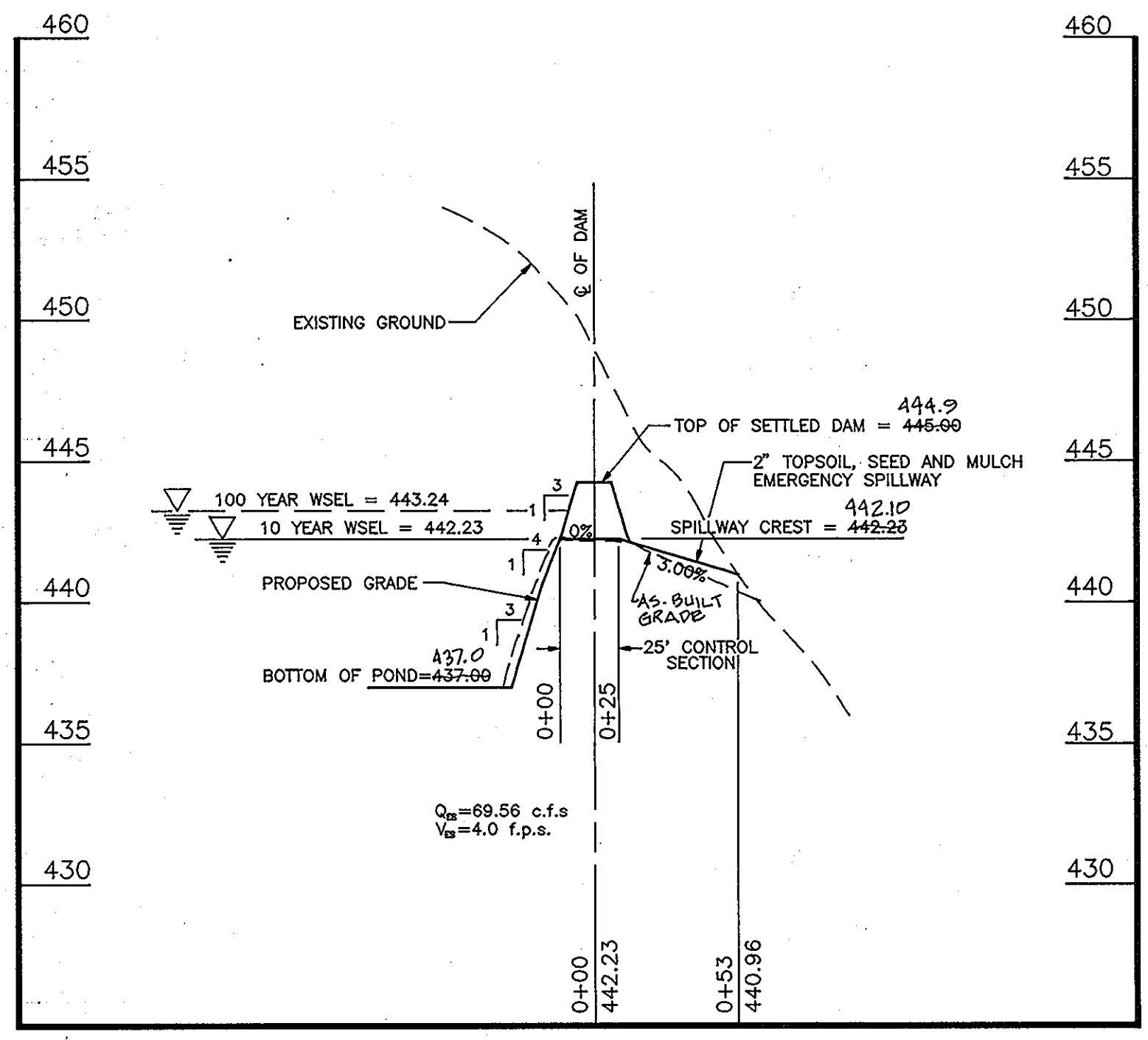
F9438



CROSS SECTION ALONG ϕ OF EMBANKMENT
STORMWATER MANAGEMENT FACILITY #2
SCALE: HORIZ. 1"=50', VERT. 1"=5'



CROSS SECTION ALONG ϕ OF EMBANKMENT
STORMWATER MANAGEMENT FACILITY #2
SCALE: HORIZ. 1"=50', VERT. 1"=5'



EMERGENCY SPILLWAY PROFILE
STORMWATER MANAGEMENT FACILITY #2
SCALE: HORIZ. 1"=50', VERT. 1"=5'

OWNER/DEVELOPER
108 LIMITED PARTNERSHIP
C/O WIN KELLY CHEVROLET
12205 HALL SHOP ROAD
CLARKSVILLE MARYLAND, 21029

OWNERS

SANDY SPRING BANK
17801 GEORGIA AVENUE
OLNEY, MARYLAND 20832

JAMES CHRISTOPHER HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

EDMOND & ETTA JANE HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

For AS-BUILT



AS-BUILT

NO.	REVISION	DATE

HOLWECK SUBDIVISION
STORMWATER MANAGEMENT PROFILES
A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2
& LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256

TAX MAP #34
5TH ELECTION DISTRICT
REFERENCE: SP 93-14, WP 93-90 AND ZB947M

PARCELS 256, 365 & 195
HOWARD COUNTY, MARYLAND

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

3691 PARK AVENUE, SUITE 101
BELLICOTT CITY, MARYLAND 21048

TELEPHONE: (410) 461-5822
FAX: (410) 466-3968

DESIGN BY: R.H.V.
DRAWN BY: D.G.H.
CHECKED BY: R.H.V.
DATE: OCTOBER, 1993
SCALE: AS SHOWN
W.O. NO.: 93-101

8 SHEET OF 20

APPROVED:
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Jim Surinani 1/13/94
CHIEF, DIVISION OF LAND DEVELOPMENT
AND RESEARCH DATE

APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chris Damann 1/10/94
CHIEF, LAND DEVELOPMENT DIVISION DATE

Andrew M. Decker 1-6-94
CHIEF, BUREAU OF HIGHWAYS DATE

Paul J. Eppson 1/10/94
CHIEF, BUREAU OF ENGINEERING DATE

DEVELOPER'S CERTIFICATE

"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 THE DEPARTMENT OF A 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."

Kevin M. Zapp 12/21/93
SIGNATURE OF DEVELOPER DATE

ENGINEERS CERTIFICATE

"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."

Robert H. O'Connell 12/21/93
SIGNATURE OF ENGINEER DATE

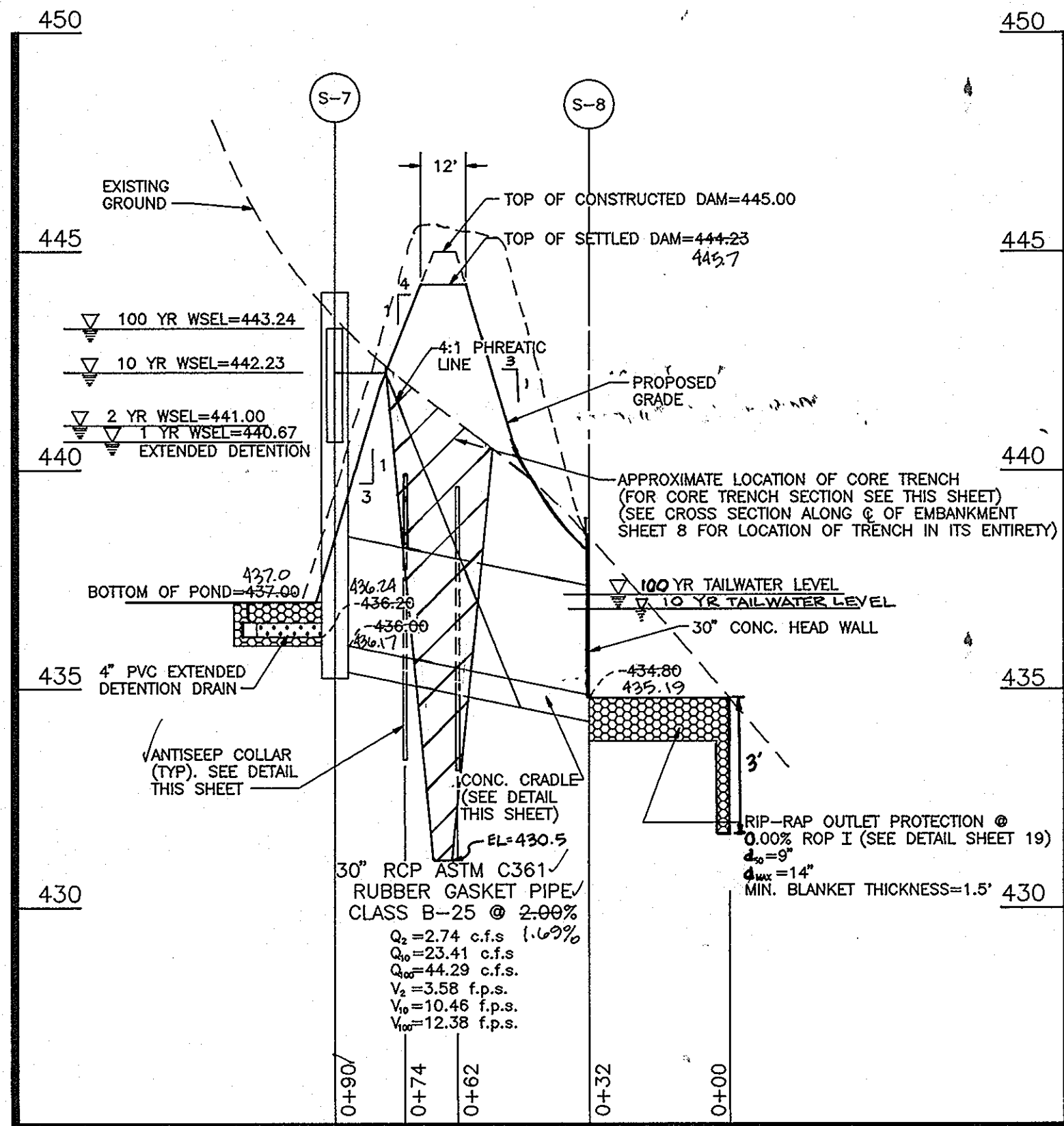
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEETS REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Robert W. Zickler 12/29/93
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL

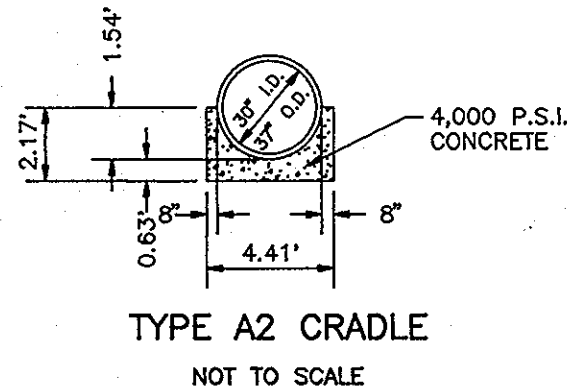
Patricia Engler 12/28/93
U.S. SOIL CONSERVATION SERVICE DATE

1881

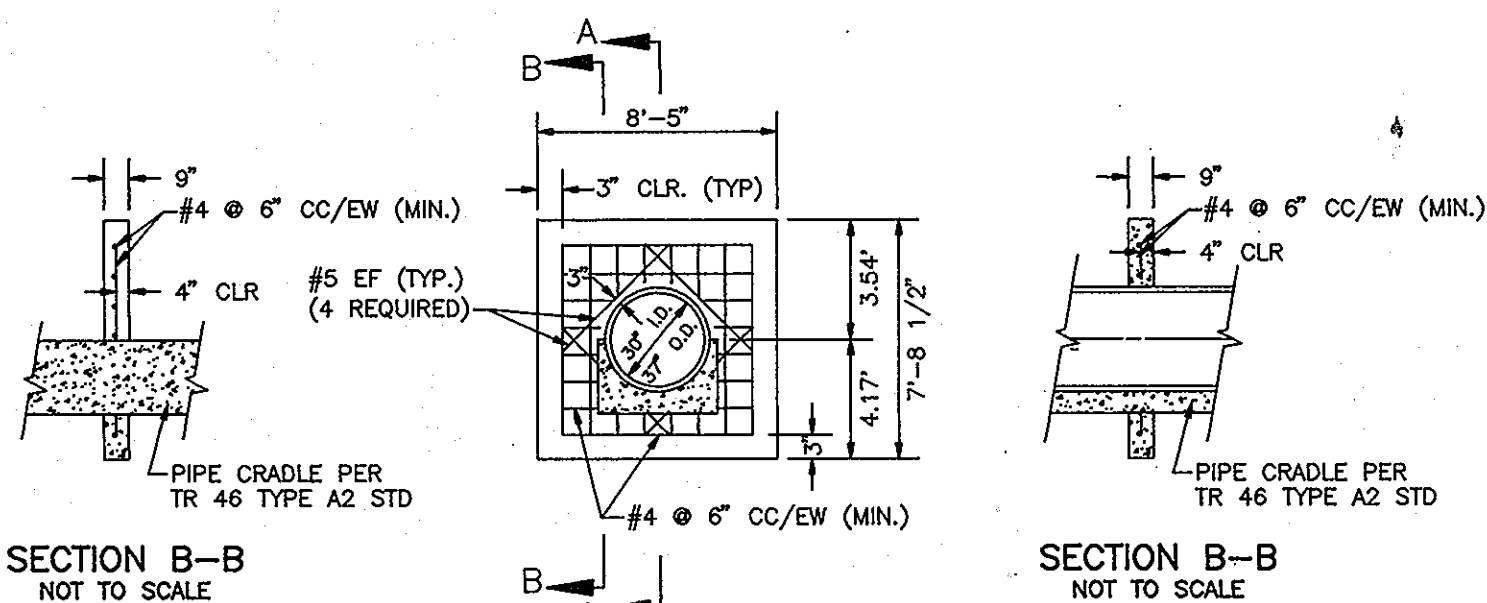


CROSS SECTION ALONG PRINCIPAL SPILLWAY
STORMWATER MANAGEMENT POND #2

SCALE: HORZ. 1"=30', VERT. 1"=3'



TYPE A2 CRADLE
NOT TO SCALE



SECTION B-B
NOT TO SCALE

SECTION B-B
NOT TO SCALE

CONCRETE ANTI-SEEP COLLAR DETAIL
STORMWATER MANAGEMENT POND #2

NOT TO SCALE

DEVELOPER'S CERTIFICATE

"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 THE DEPARTMENT OF AN 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."

Kevin M. B... 12/21/93
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

"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."

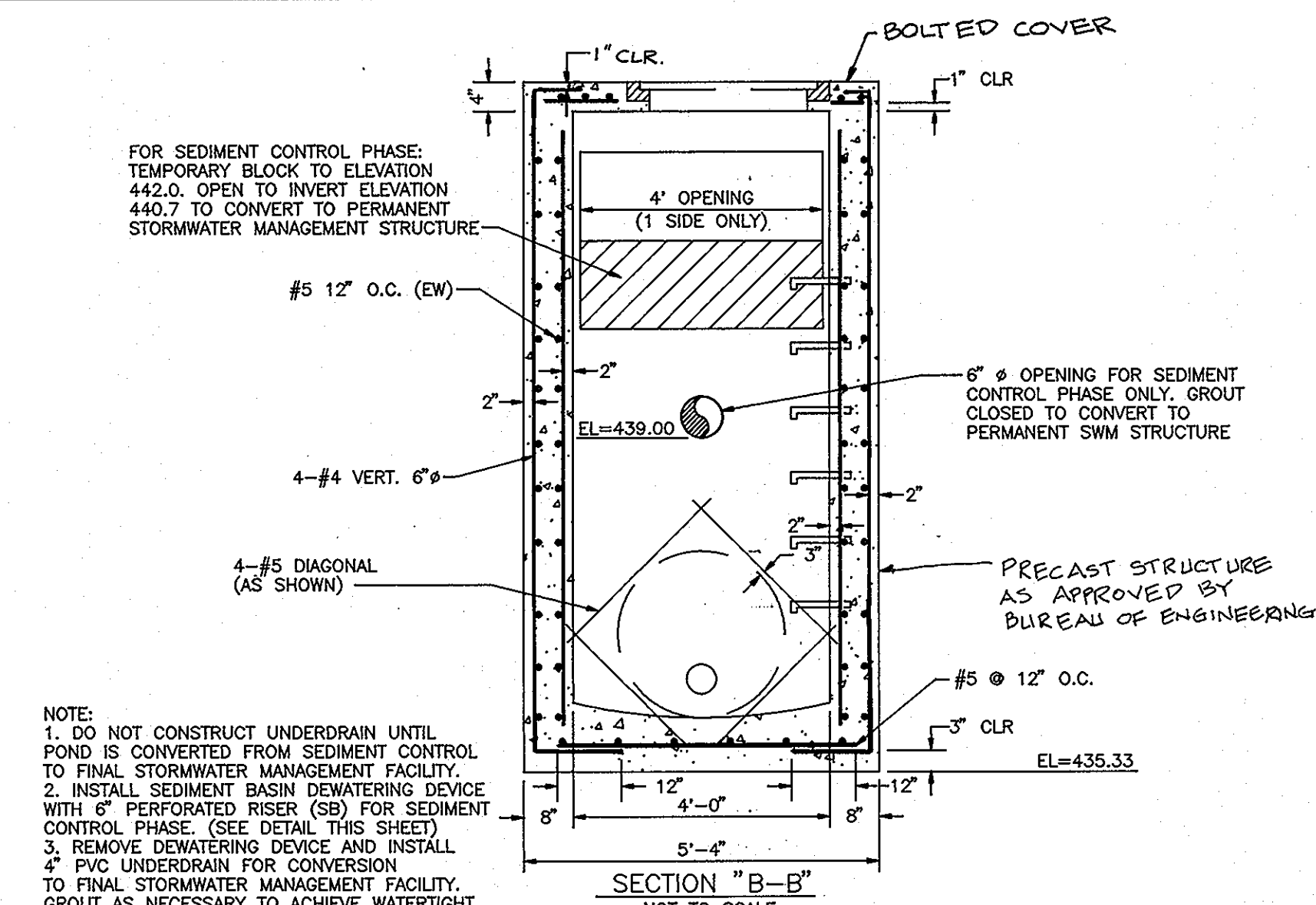
Robert W. Z... 12/28/93
SIGNATURE OF ENGINEER DATE

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

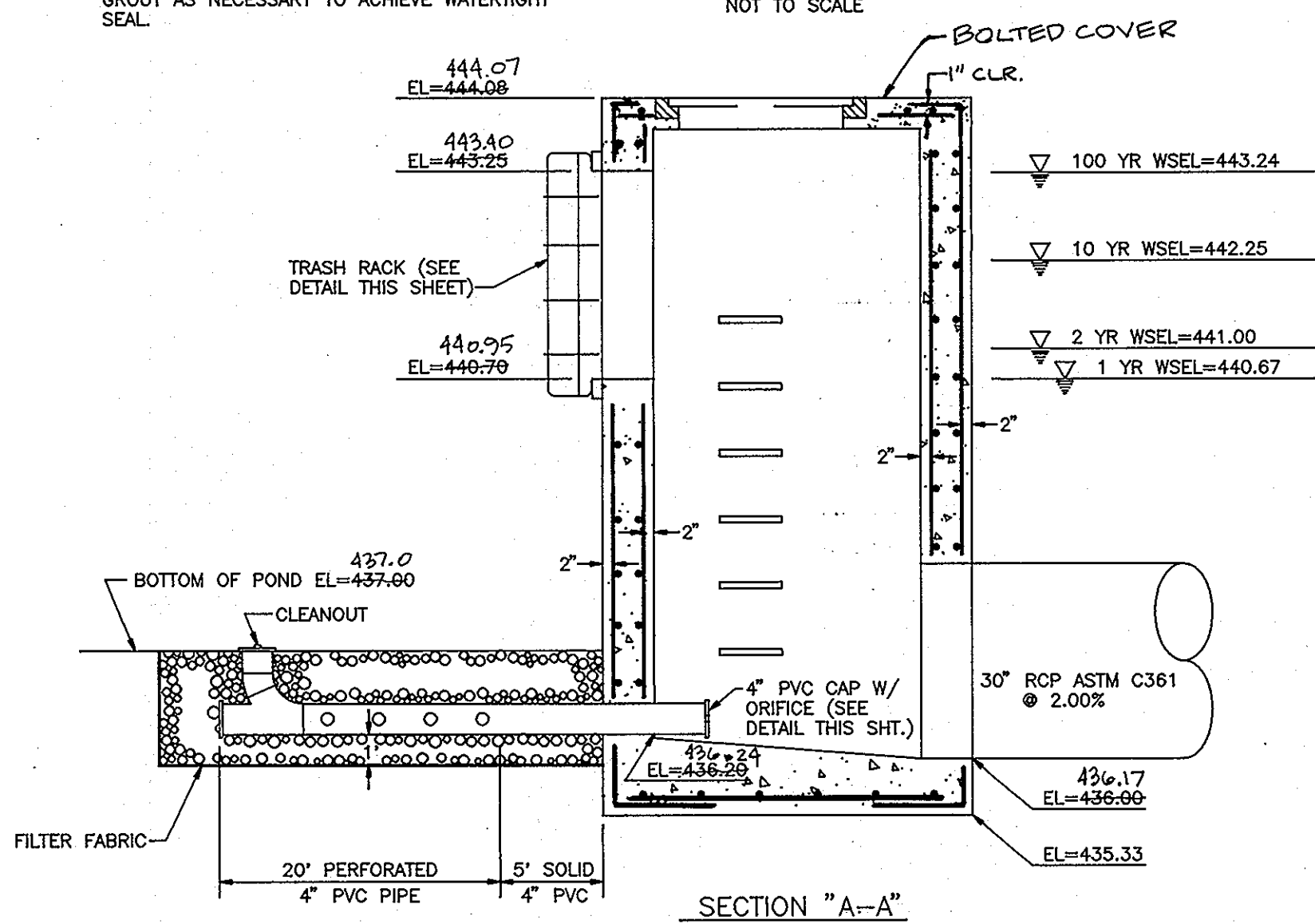
Robert W. Z... 12/28/93
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

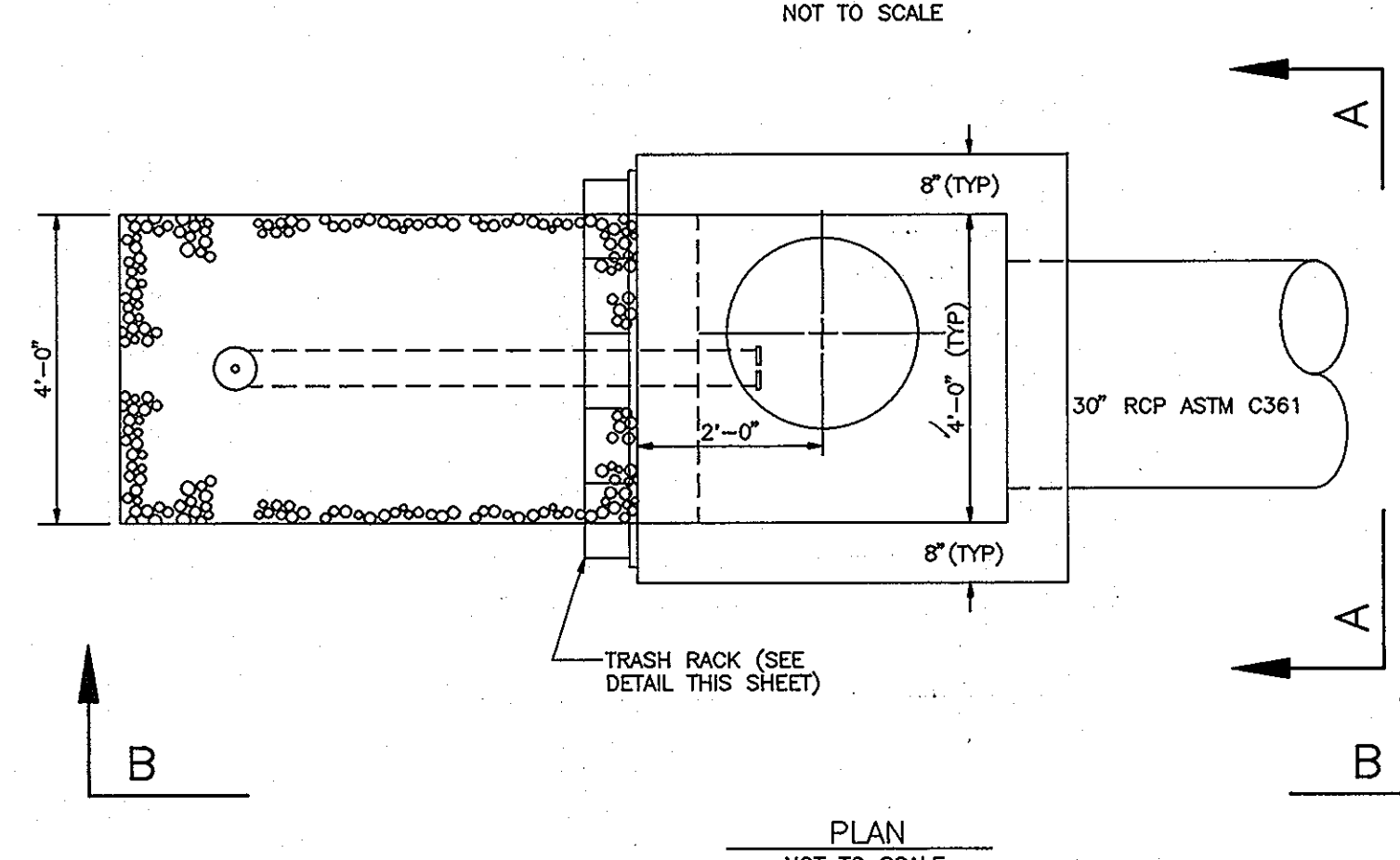
Patricia Engler 12/28/93
U.S. SOIL CONSERVATION SERVICE DATE



SECTION "B-B"
NOT TO SCALE

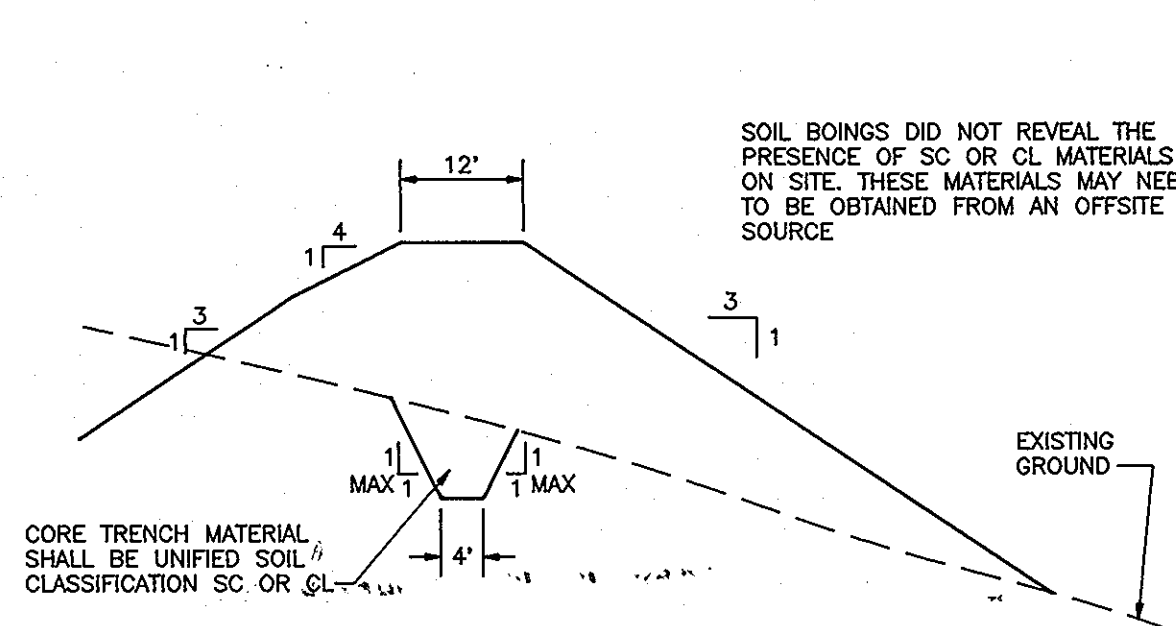


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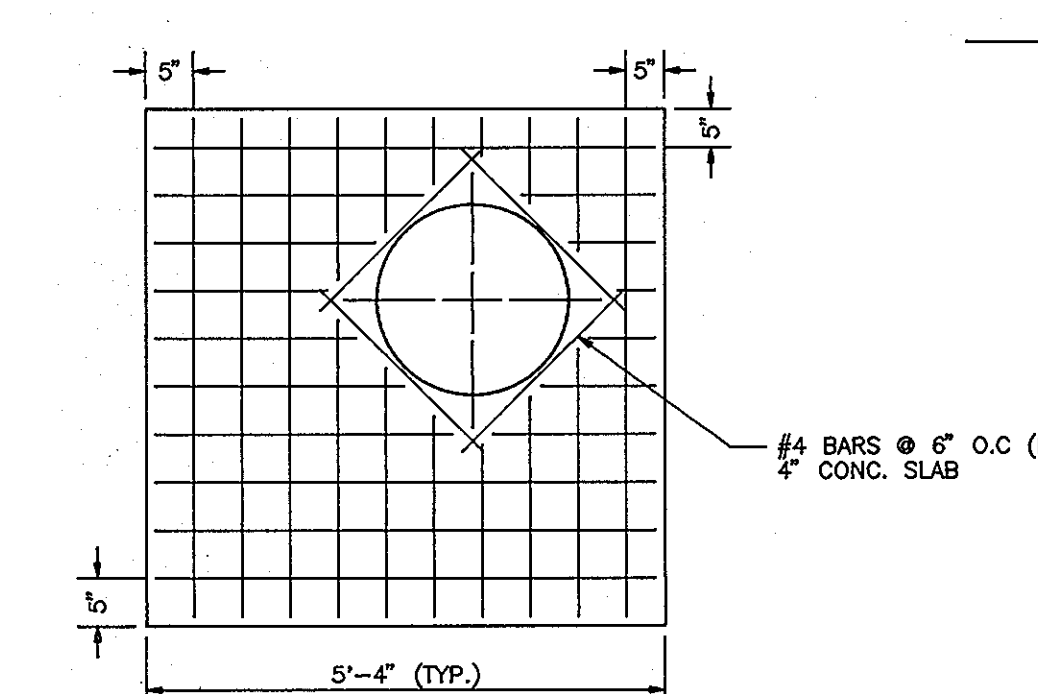


PLAN
NOT TO SCALE

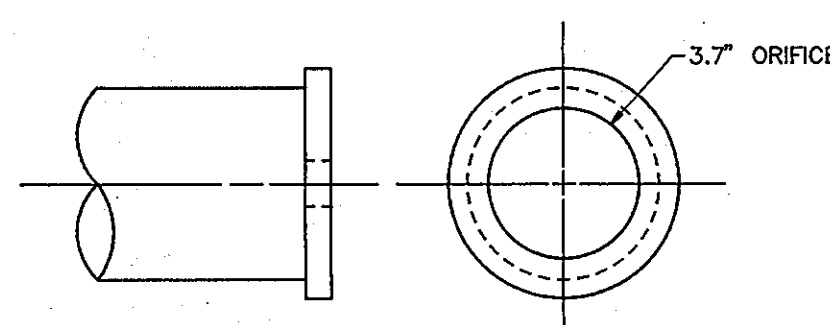
S-8, SWM RELEASE STRUCTURE
NOT TO SCALE



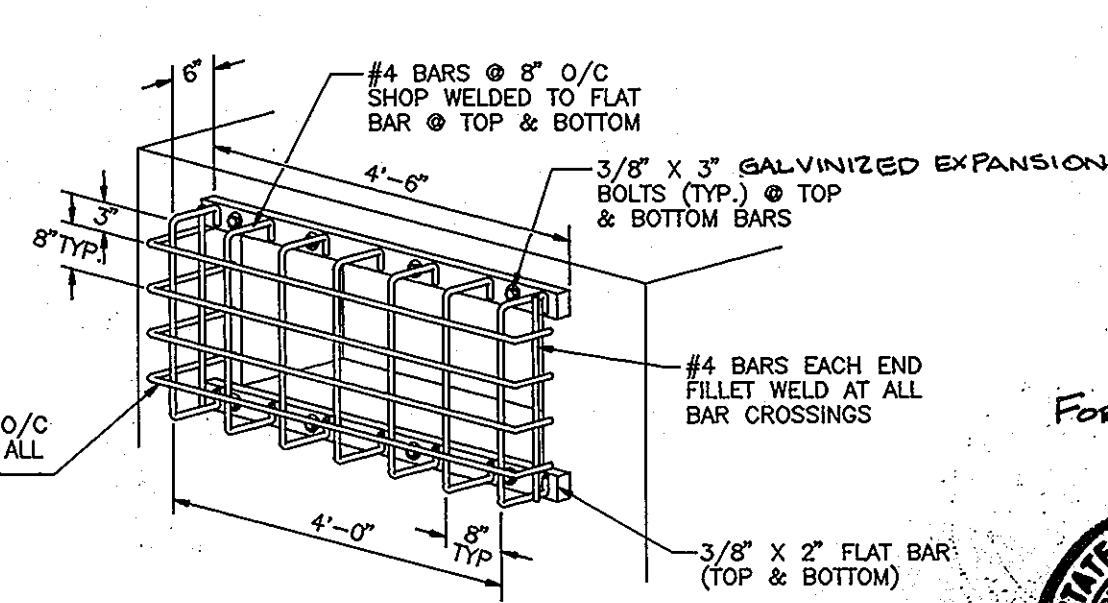
CORE TRENCH SECTION
NOT TO SCALE



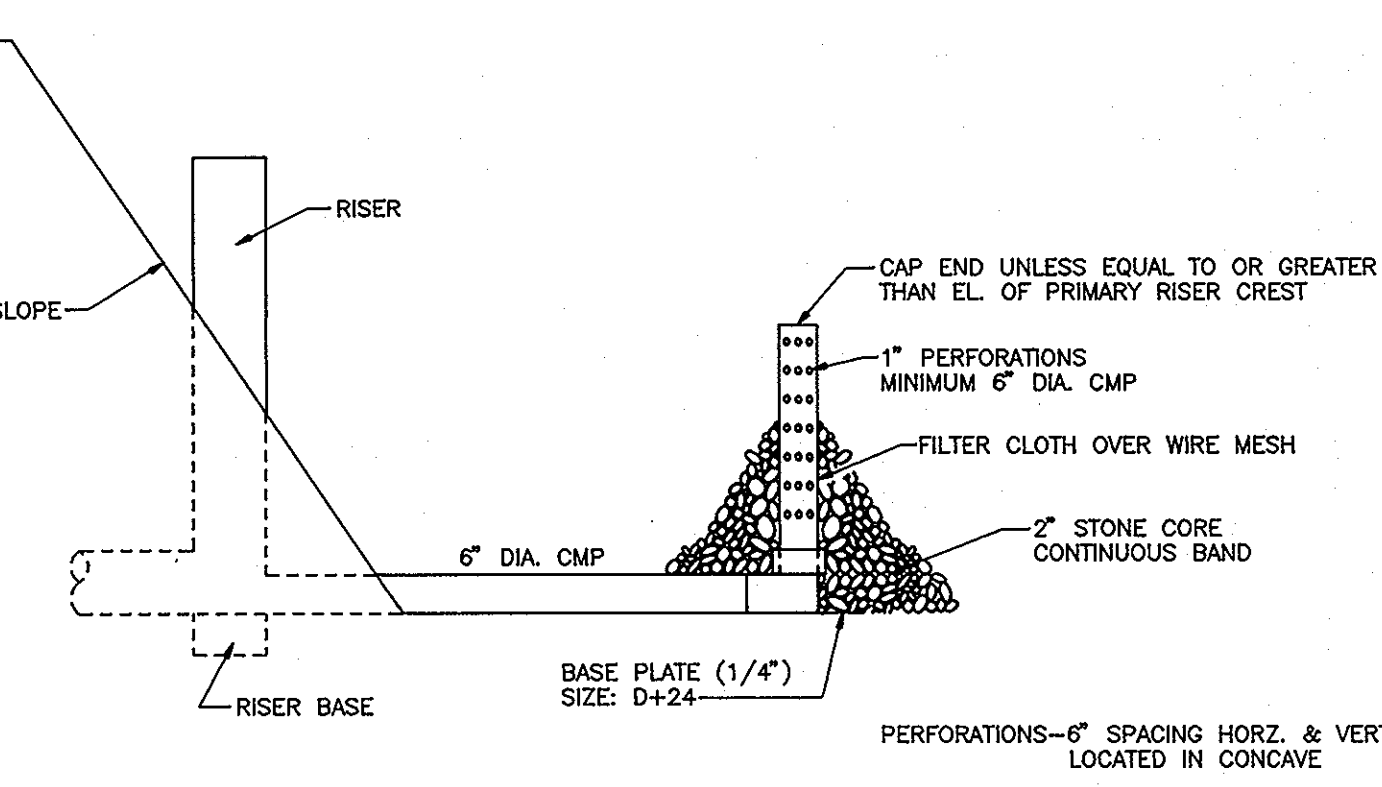
PLAN TOP SLAB,
MANHOLE FRAME AND COVER
NOT TO SCALE



4" PVC ORIFICE
STRUCTURE 7
NOT TO SCALE



WIER TRASH RACK DETAIL
STRUCTURE 7
NOT TO SCALE



SEDIMENT BASIN DEWATERING DEVICE I
WITH 6" PERFORATED RISER
NOT TO SCALE

PERFORATIONS OR SLITS, MUST NOT BE MADE ANY LOWER THAN 6" ABOVE TOP OF THE HORIZONTAL OUTFALL BARREL.

OWNER/DEVELOPER
108 LIMITED PARTNERSHIP
C/O WIN KELLY CHEVROLET
12205 HALL SHOP ROAD
CLARKSVILLE MARYLAND, 21029

OWNERS

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17801 GEORGIA AVENUE
OLNEY, MARYLAND 20832

JAMES CHRISTOPHER HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

EDMOND & ETTA JANE HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

NO.	REVISION	DATE

HOLWECK SUBDIVISION
STORMWATER MANAGEMENT PROFILES
AND DETAILS

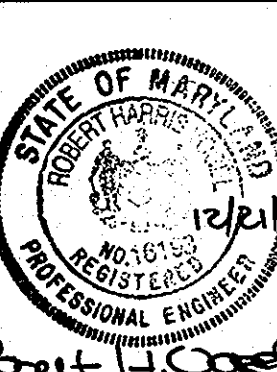
A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256
TAX MAP #34 PARCELS 256, 365 & 195
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REFERENCE: SP 93-14, WP 93-90 AND ZB947M

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

3691 PARK AVENUE, SUITE 101
ELLICOTT CITY, MARYLAND 21043

TELEPHONE: (410) 461-5828
FAX: (410) 465-9868

DESIGN BY: R.H.V.
DRAWN BY: D.G.H.
CHECKED BY: R.H.V.
DATE: OCTOBER, 1993
SCALE: AS SHOWN
W.O. NO.: 93-101



APPROVED:
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

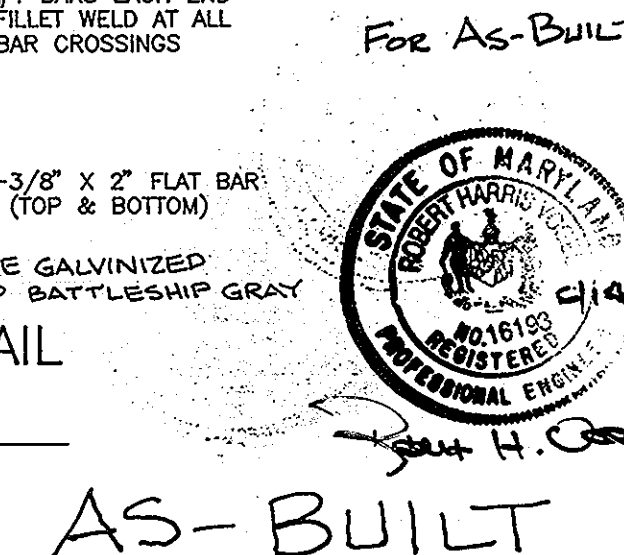
Clara Suranovich 1/13/94
CHIEF, DIVISION OF LAND DEVELOPMENT DATE AND RESEARCH CDH

APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William D... 1/10/94
CHIEF, LAND DEVELOPMENT DIVISION DATE

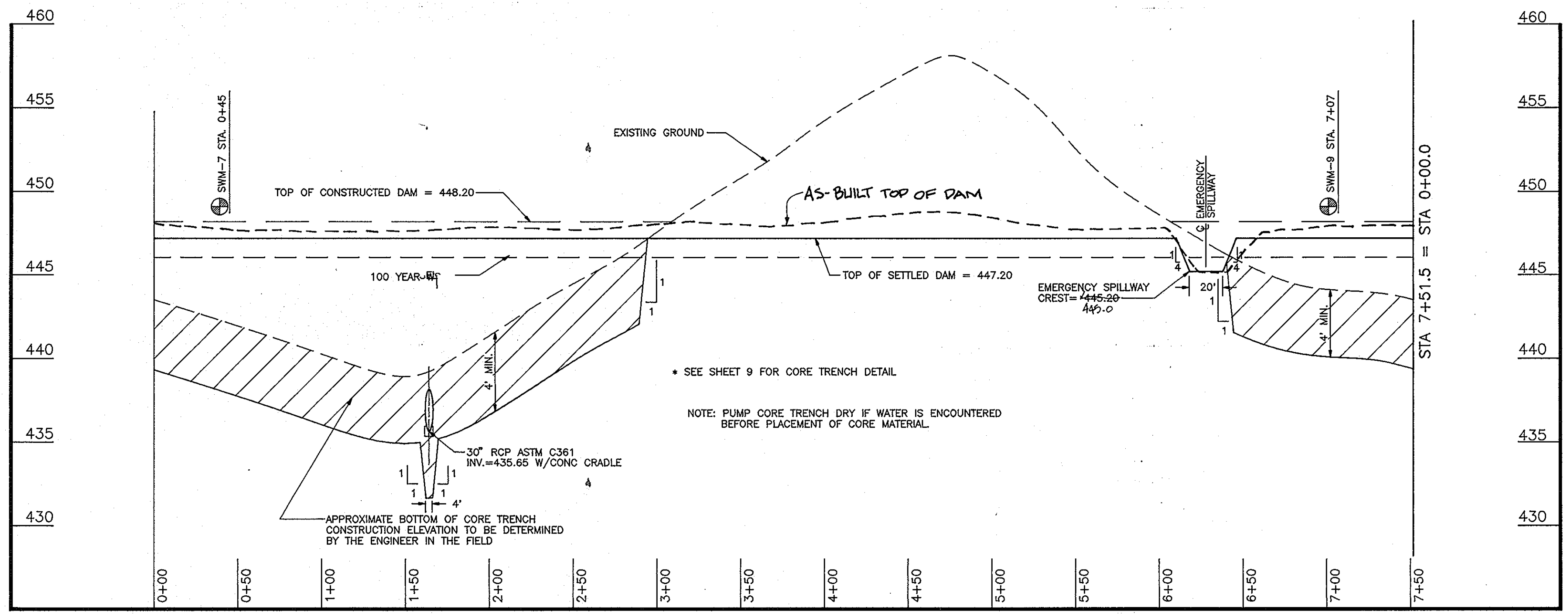
Andrew M. Danek 1-6-94
CHIEF, BUREAU OF HIGHWAYS DATE

Paul J. ... 1/10/94
CHIEF, BUREAU OF ENGINEERING DATE



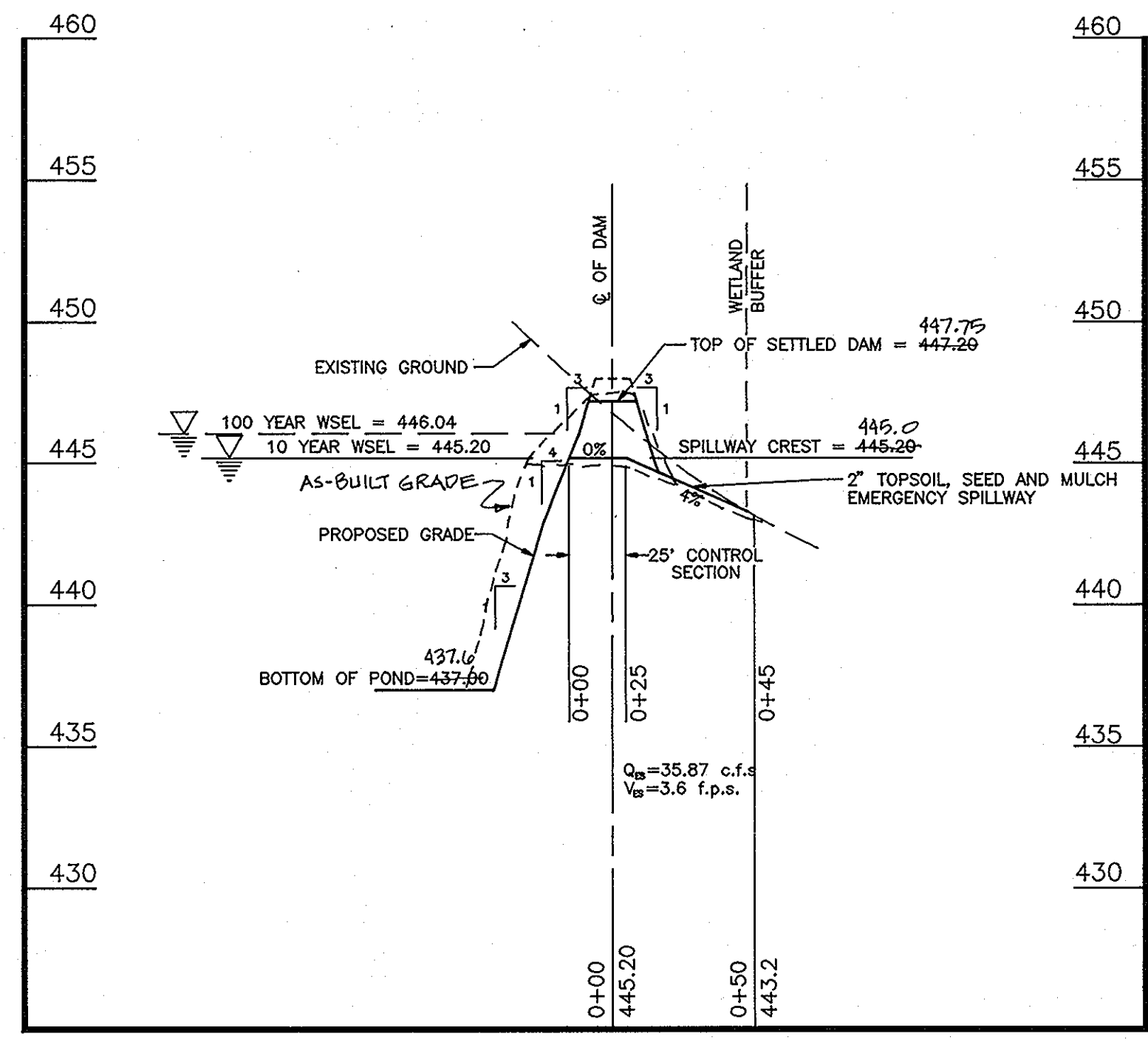
AS-BUILT

1891



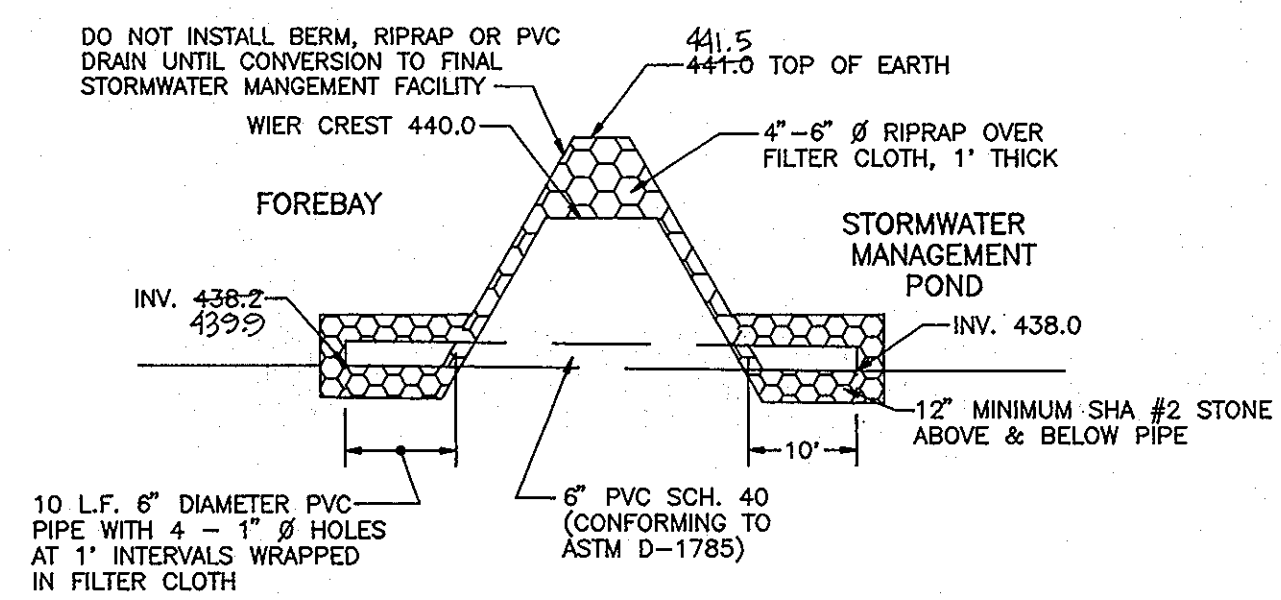
CROSS SECTION ALONG C OF EMBANKMENT
STORMWATER MANAGEMENT FACILITY #1

SCALE: HORZ. 1"=50', VERT. 1"=5'



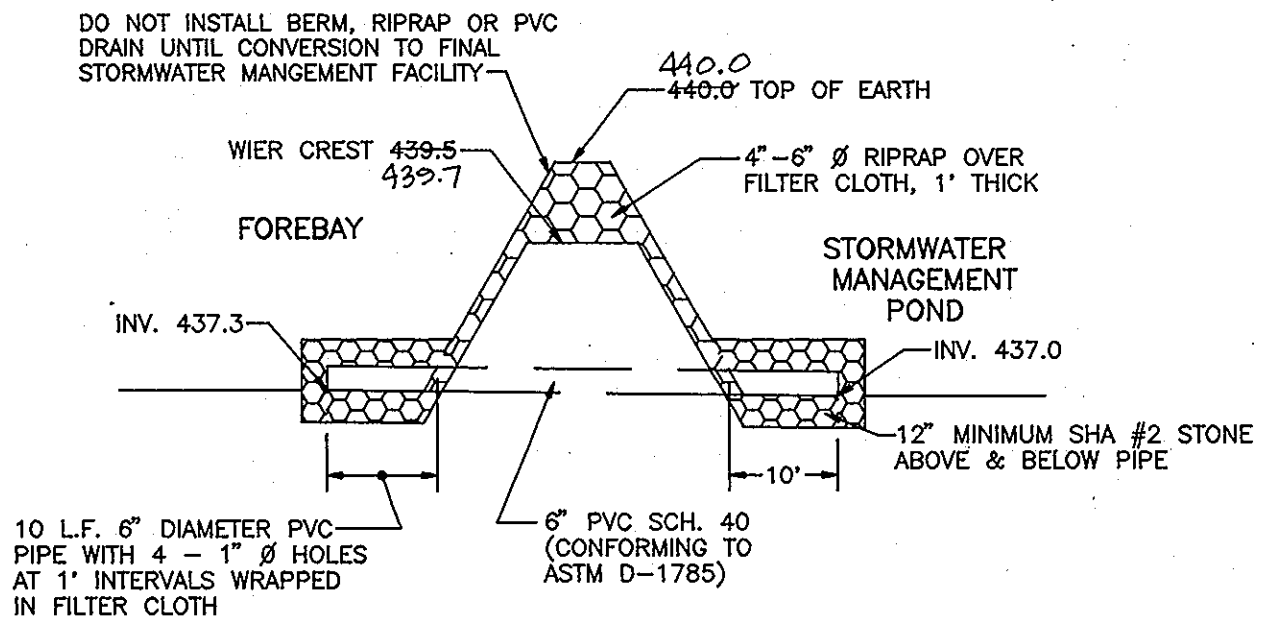
EMERGENCY SPILLWAY PROFILE
STORMWATER MANAGEMENT FACILITY #1

SCALE: HORZ. 1"=50', VERT. 1"=5'



FORBAY TYPICAL DETAIL
STORMWATER MANAGEMENT FACILITY #2

SCALE: HORZ. 1"=50', VERT. 1"=5'



FORBAY TYPICAL DETAIL
STORMWATER MANAGEMENT FACILITY #1

SCALE: HORZ. 1"=50', VERT. 1"=5'

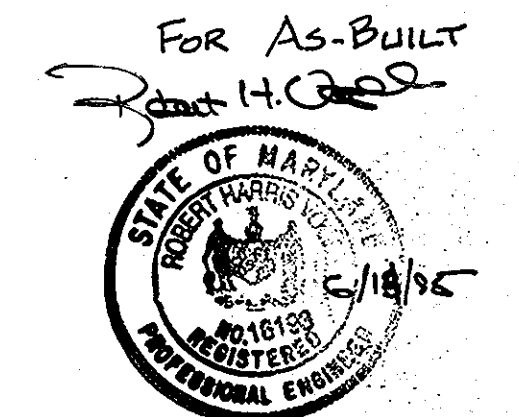
OWNER/DEVELOPER
108 LIMITED PARTNERSHIP
C/O WIN KELLY CHEVROLET
12205 HALL SHOP ROAD
CLARKSVILLE MARYLAND, 21029

OWNERS

SANDY SPRING BANK
17801 GEORGIA AVENUE
OLNEY, MARYLAND 20832

JAMES CHRISTOPHER HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

EDMOND & ETTA JANE HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044



AS-BUILT

APPROVED:
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Olga Surinova 1/13/94
CHIEF, DIVISION OF LAND DEVELOPMENT DATE AND RESEARCH

APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Robert W. Zichem 12/29/93
CHIEF, BUREAU OF ENGINEERING DATE

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

Robert W. Zichem 12/29/93
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Patricia Engler 12/28/93
U.S. SOIL CONSERVATION SERVICE DATE

NO.	REVISION	DATE

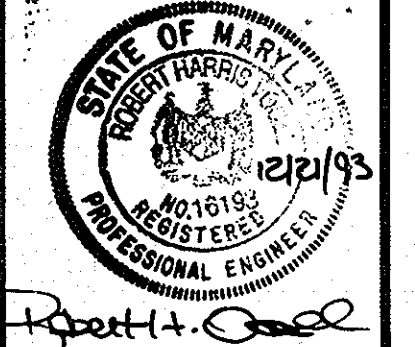
HOLWECK SUBDIVISION
STORMWATER MANAGEMENT PROFILES AND DETAILS

A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256
TAX MAP #34 PARCELS 256, 365 & 195
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REFERENCE: SP 93-14, WP 93-90 AND ZB947M

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

3691 PARK AVENUE, SUITE 101
ELLICOTT CITY, MARYLAND 21043

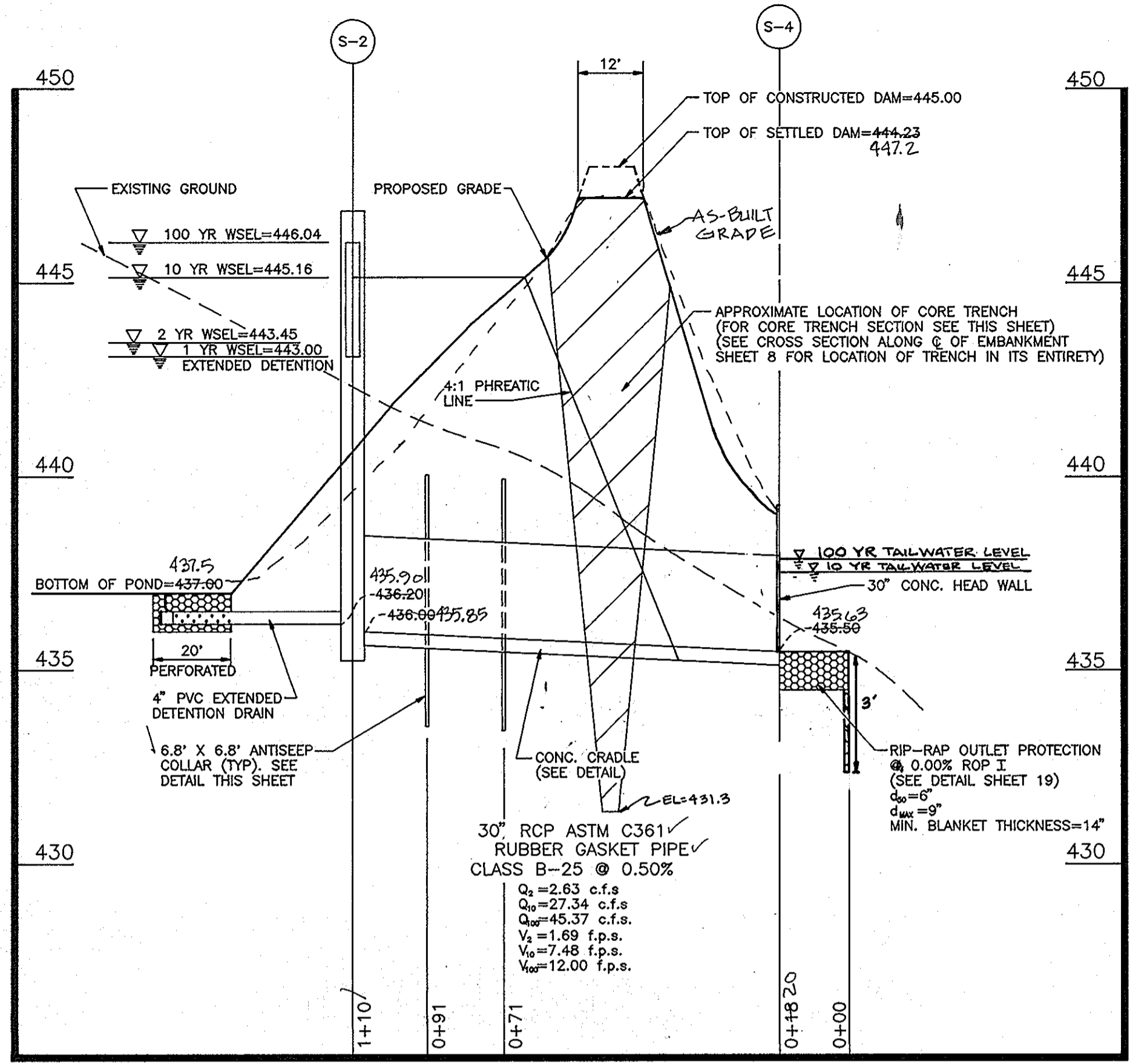
DESIGN BY: R.H.V.
DRAWN BY: D.G.H.
CHECKED BY: R.H.V.
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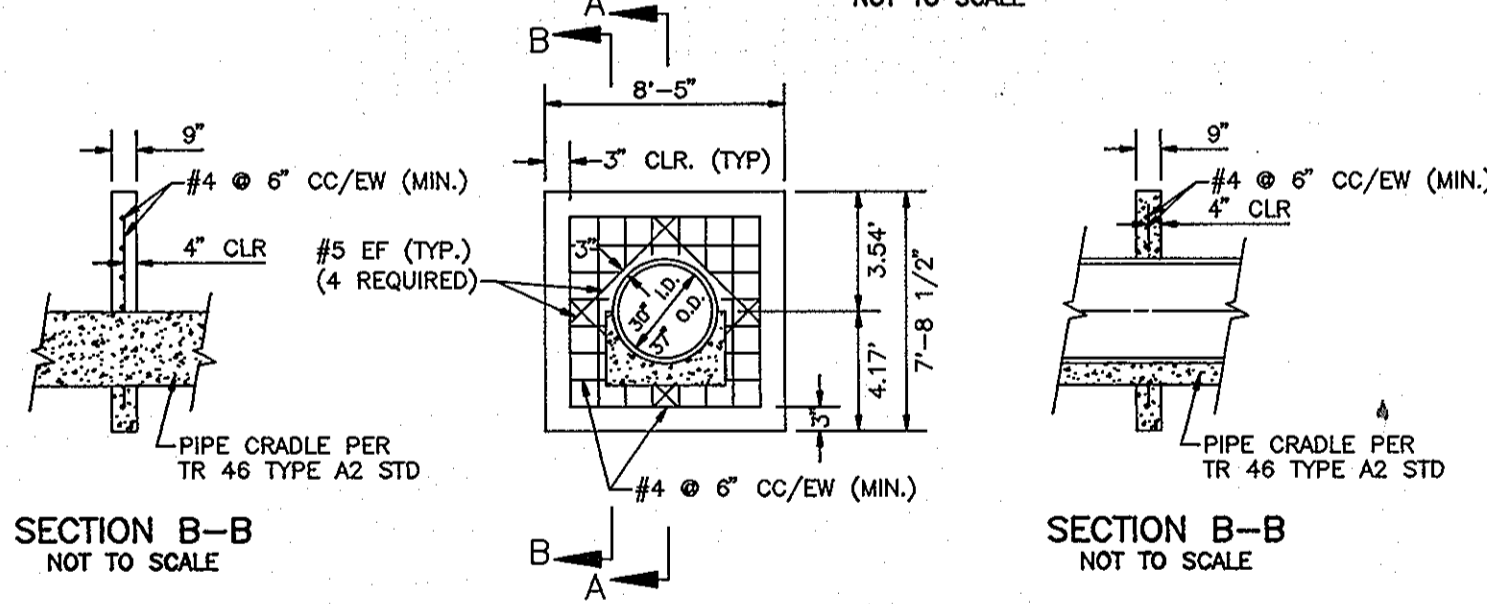
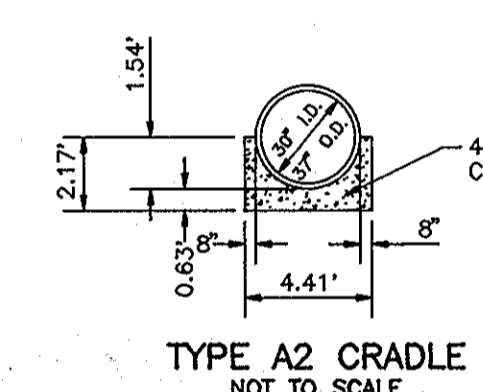
10 SHEET 20

F-94-38

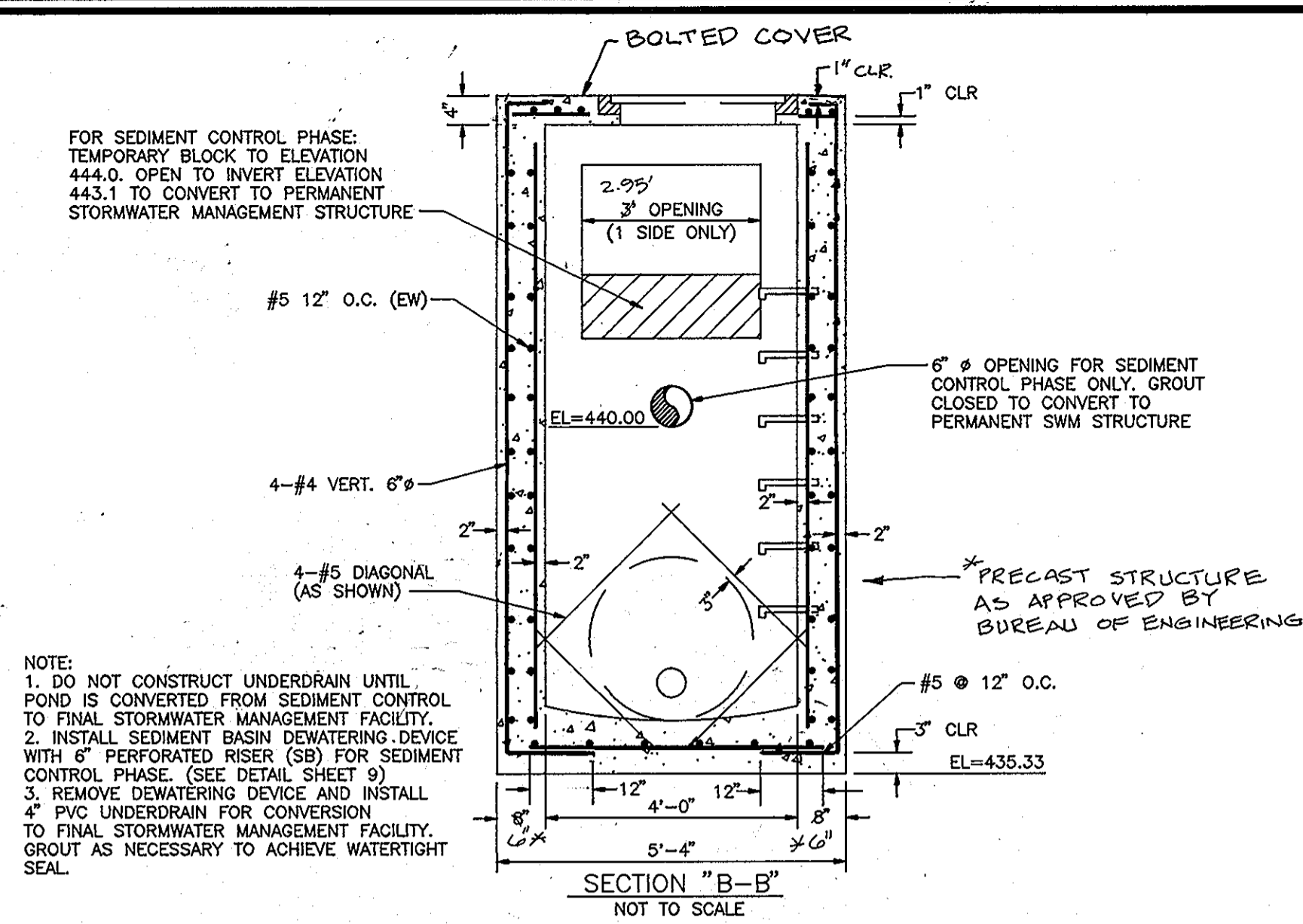
1681



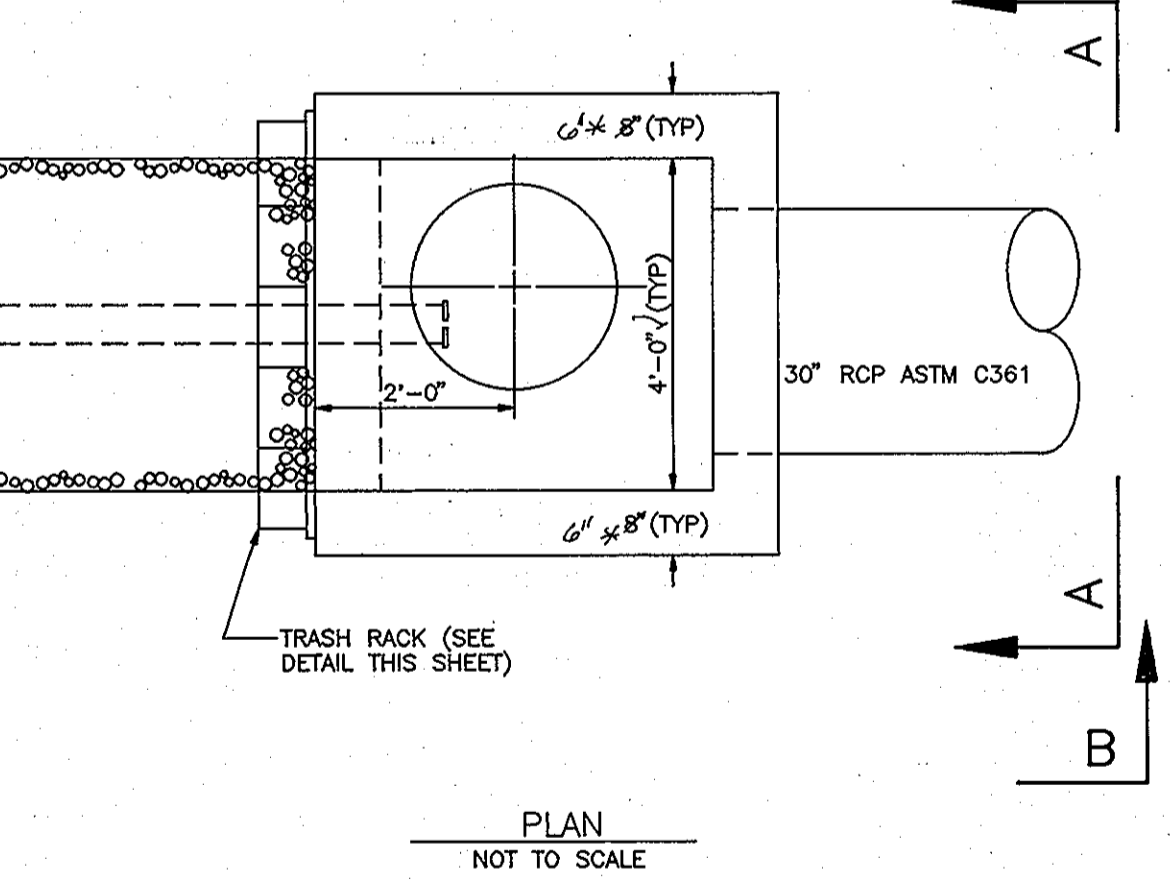
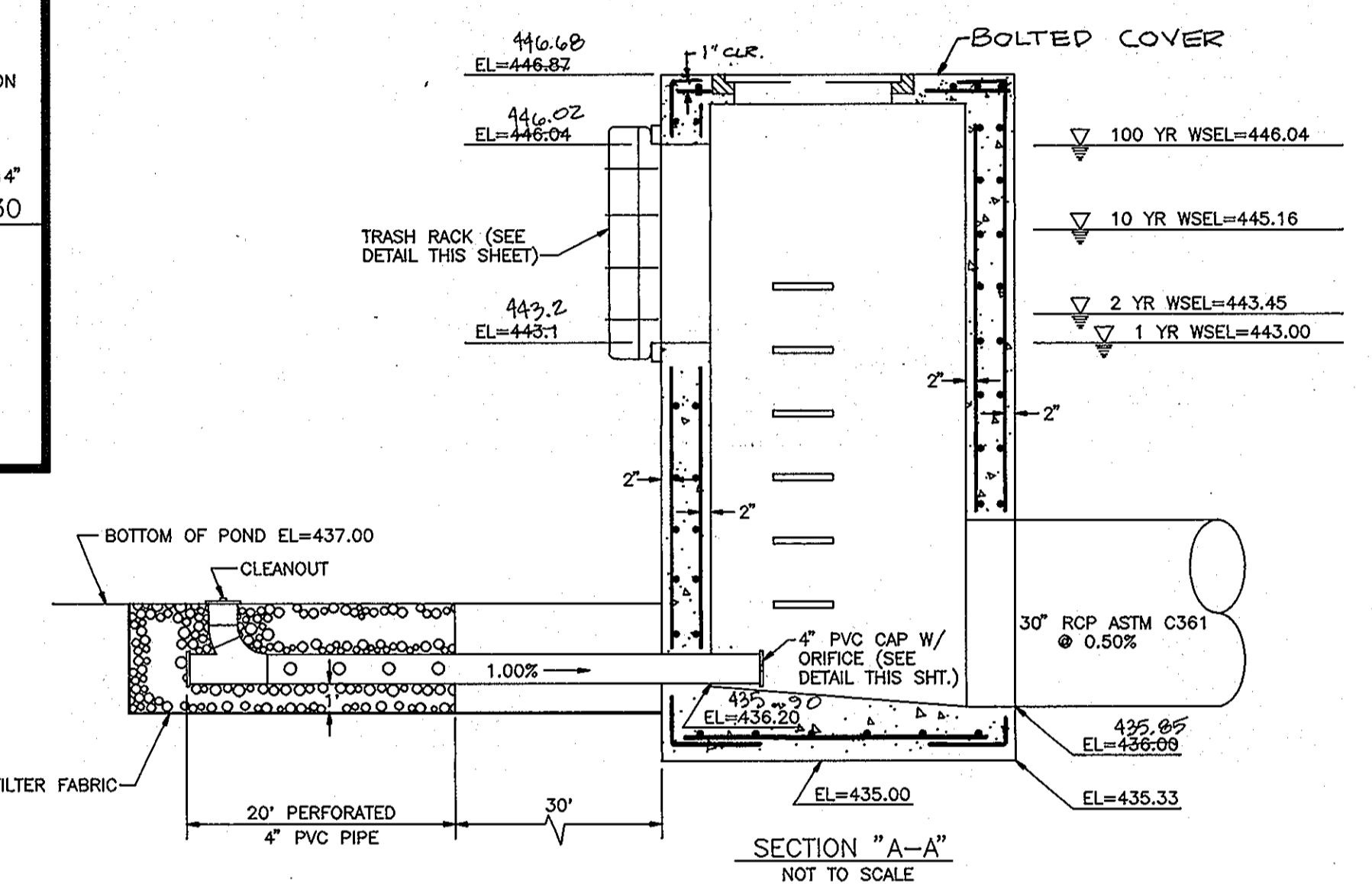
CROSS SECTION ALONG PRINCIPAL SPILLWAY STORMWATER MANAGEMENT POND #1
SCALE: HORIZ. 1"=30', VERT. 1"=3'



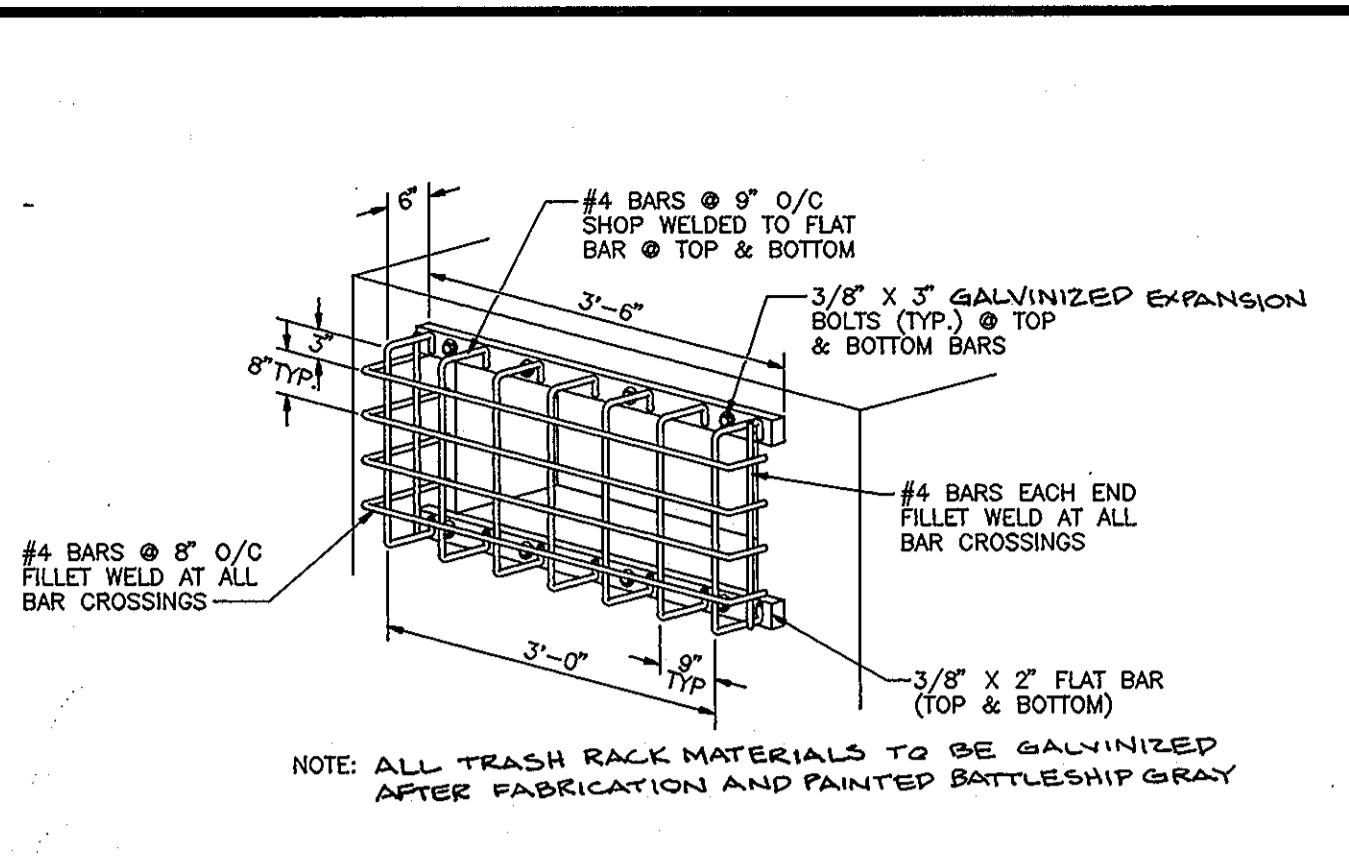
CONCRETE ANTI-SEEP COLLAR DETAIL STORMWATER MANAGEMENT FACILITY #1
NOT TO SCALE



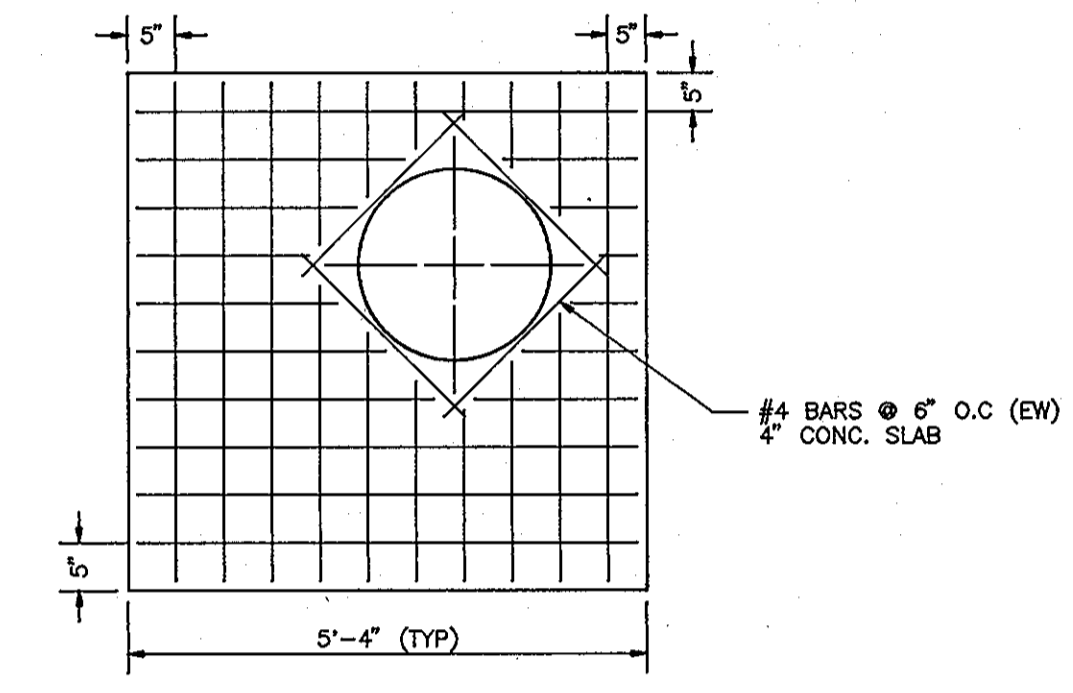
NOTE:
1. DO NOT CONSTRUCT UNDERDRAIN UNTIL POND IS CONVERTED FROM SEDIMENT CONTROL TO FINAL STORMWATER MANAGEMENT FACILITY.
2. INSTALL SEDIMENT BASIN DOWNSIDE WITH 6\"/>



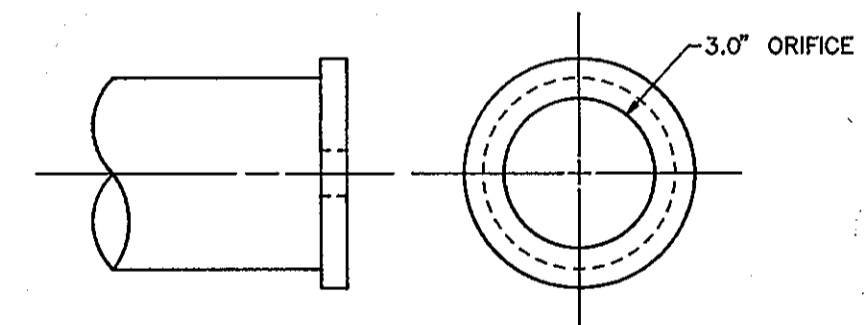
S-2, SWM RELEASE STRUCTURE
NOT TO SCALE



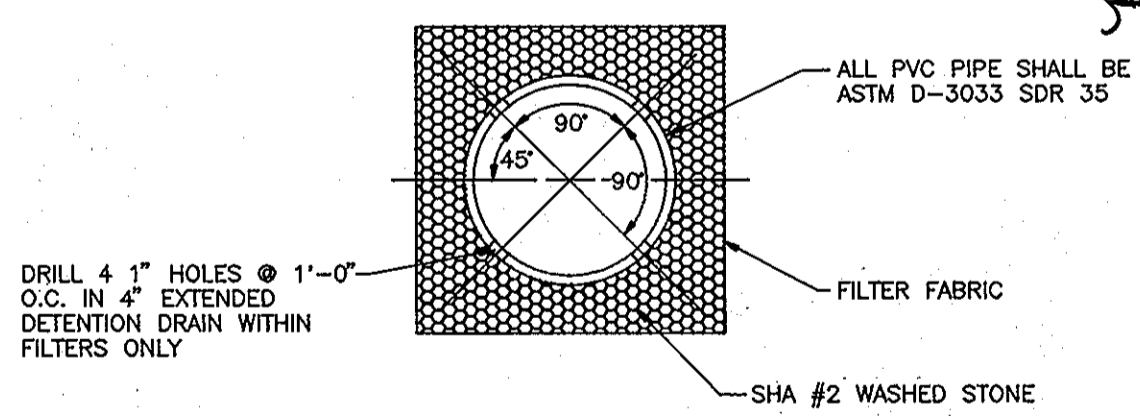
WIER TRASH RACK DETAIL STRUCTURE 2
NOT TO SCALE



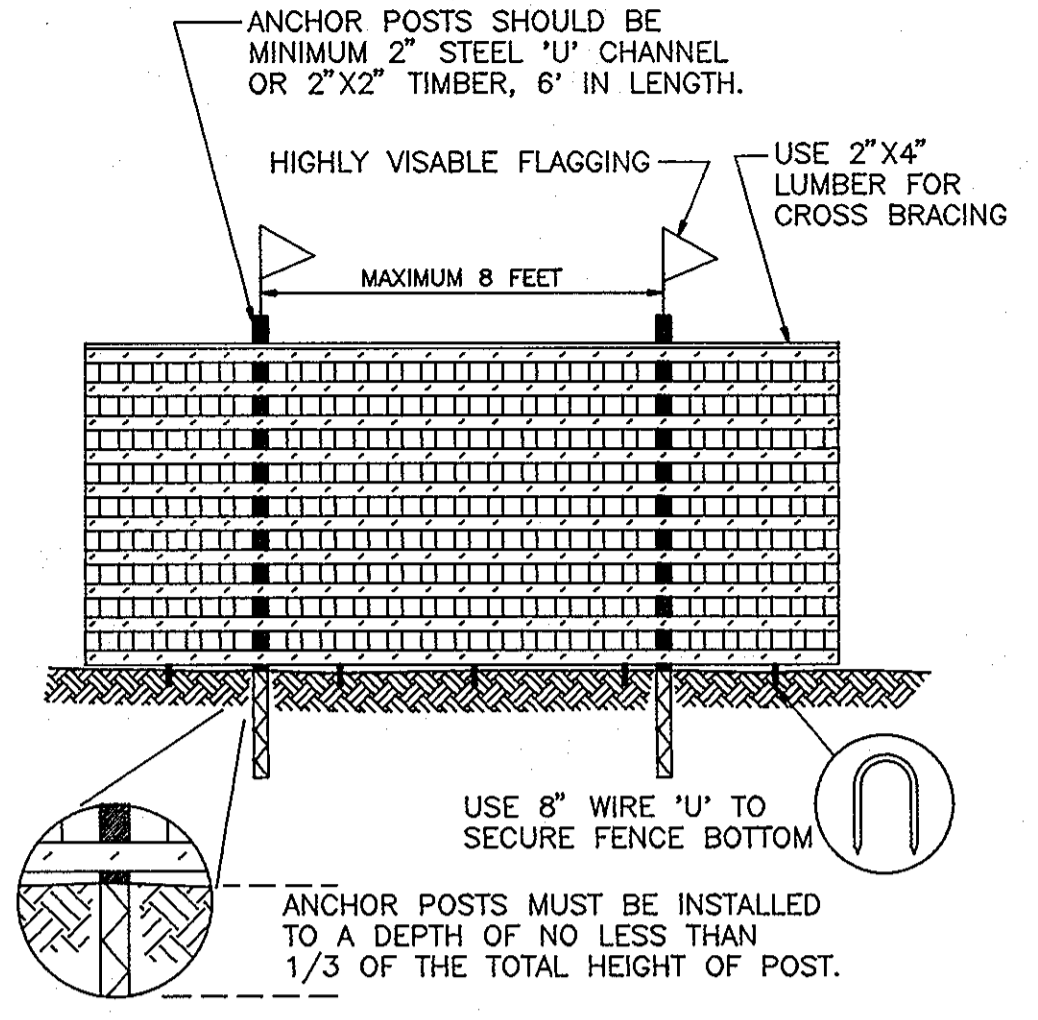
PLAN TOP SLAB, MANHOLE FRAME AND COVER
NOT TO SCALE



4\"/>



PVC PERFORATION DETAIL
NOT TO SCALE



- NOTES
1. FOREST PROTECTION DEVICE ONLY.
 2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
 4. ROOT DAMAGE SHOULD BE AVOIDED.
 5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
 6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.
 7. FOREST PROTECTION FENCING SHALL BE PLACED ADJACENT TO EXISTING TREES IN AREAS OF PROPOSED GRADING.

FOREST PROTECTION FENCE
NOT TO SCALE

OWNER/DEVELOPER
108 LIMITED PARTNERSHIP
C/O WIN KELLY CHEVROLET
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CLARKSVILLE MARYLAND, 21029

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17801 GEORGIA AVENUE
OLNEY, MARYLAND 20832

JAMES CHRISTOPHER HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

EDMOND & ETTA JANE HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044



NO.	REVISION	DATE

HOLWECK SUBDIVISION
STORMWATER MANAGEMENT PROFILES AND DETAILS

A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256
TAX MAP #34 PARCELS 256, 365 & 195
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
REFERENCE: SP 93-14, WP 93-90 AND ZB947M'

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

3691 PARK AVENUE, SUITE 101 ELLICOTT CITY, MARYLAND 21043
TELEPHONE: (410) 481-5228 FAX: (410) 485-3868

DESIGN BY: R.H.V.
DRAWN BY: D.G.H.
CHECKED BY: R.H.V.
DATE: OCTOBER, 1993
SCALE: AS SHOWN
W.O. NO.: 93-101



DEVELOPER'S CERTIFICATE

"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 THE DEPARTMENT OF AN 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."

Karin M. Bell 12/21/93
SIGNATURE OF DEVELOPER DATE

ENGINEERS CERTIFICATE

"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."

Robert L. O'Connell 12/21/93
SIGNATURE OF ENGINEER DATE

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

Robert L. O'Connell 12/21/93
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Fabiana Engler 12/28/93
U.S. SOIL CONSERVATION SERVICE DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Olga Surmonary 1/13/94
CHIEF, DIVISION OF LAND DEVELOPMENT DATE AND RESEARCH

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Robert L. O'Connell 1/10/94
CHIEF, LAND DEVELOPMENT DIVISION DATE

Andrew M. Daniels 1-16-94
CHIEF, BUREAU OF HIGHWAYS DATE

Robert L. O'Connell 1/10/94
CHIEF, BUREAU OF ENGINEERING DATE

AS-BUILT

DRAINAGE AREA TABLE				
STRUCTURE	SUB AREA	'C' FACTOR	% IMPERVIOUS	AREA (Ac)
I-1	(A)	0.77	87	0.26
I-2	(B)	0.72	85	0.92
M-1	(C)	0.72	85	0.85
S-1	(D)	0.72	85	0.93
I-3	(E)	0.77	87	0.22
I-4	(F)	0.77	87	0.20
M-6	(G)	0.72	85	1.03
M-8	(H)	0.72	85	0.45
S-11	(I)	0.72	85	4.91
S-10	(J)	0.77	85	4.34
M-3	(K)	0.72	85	3.50
S-9	(L)	0.72	85	4.77
I-5	(M)	0.77	87	0.63
I-6	(N)	0.77	87	0.63
M-9	(O)	0.72	85	1.98
M-13	(P)	0.72	85	3.22
CHANNEL	(S)	Q ₁₀ =	6.00 c.f.s	*
CHANNEL	(T)	Q ₁₀ =	12.60 c.f.s	*
CHANNEL	(U)	0.72	85	0.35
CHANNEL	(V)	0.72	85	0.25

* NOTE: FROM STORMWATER MANAGEMENT REPORTS ON FILE AT HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

OWNER/DEVELOPER
108 LIMITED PARTNERSHIP
C/O WIN KELLY CHEVROLET
12205 HALL SHOP ROAD
CLARKSVILLE MARYLAND, 21029

OWNERS

SANDY SPRING BANK 17801 GEORGIA AVENUE OLNEY, MARYLAND 20832
JAMES CHRISTOPHER HOLWECK 6420 LOCHRIDGE ROAD COLUMBIA, MARYLAND 21044
EDMOND & ETTA JANE HOLWECK 6420 LOCHRIDGE ROAD COLUMBIA, MARYLAND 21044

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Oliver Stumm 1/13/94
CHIEF, DIVISION OF LAND DEVELOPMENT DATE AND RESEARCH

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

John Dammus 1/10/94
CHIEF, LAND DEVELOPMENT DIVISION DATE
Andrew M. Decker 1-6-94
CHIEF, BUREAU OF HIGHWAYS DATE
Charles D. Larson 1/10/94
CHIEF, BUREAU OF ENGINEERING DATE

NO.	REVISION	DATE
2	REVISE FLOODPLAIN AND WETLANDS	12/1/96
1	REVISION	DATE

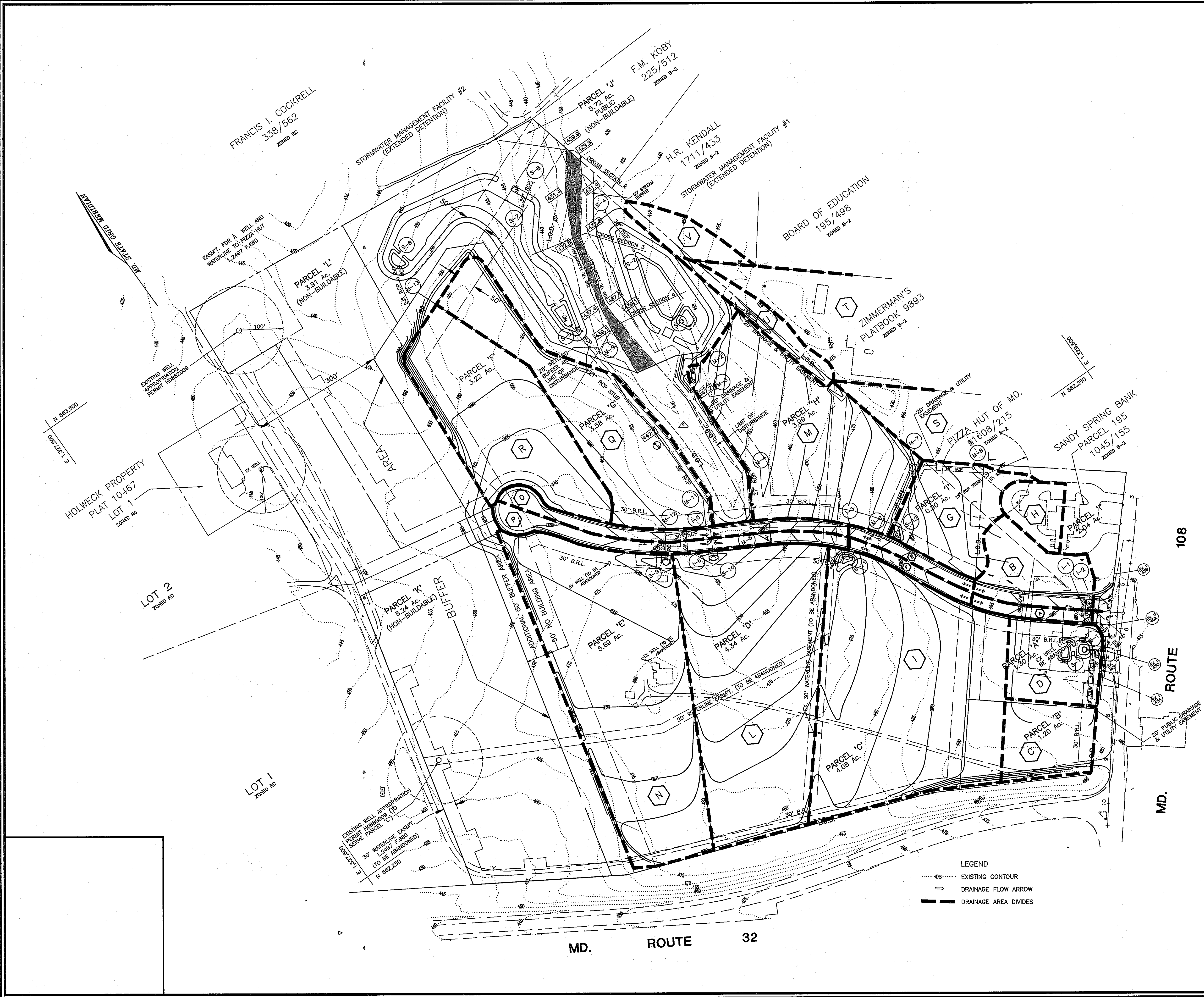
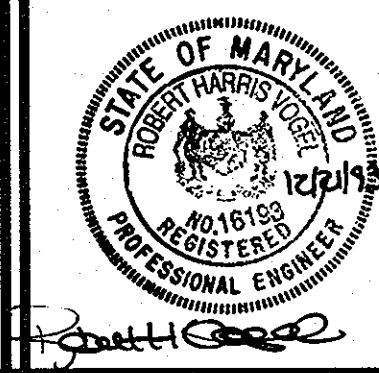
HOLWECK SUBDIVISION
DRAINAGE AREA MAP

A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256
TAX MAP #34 PARCELS 256, 365 & 195 HOWARD COUNTY, MARYLAND
5TH ELECTION DISTRICT REFERENCE: SP 93-14, WP 93-90 AND ZB947M

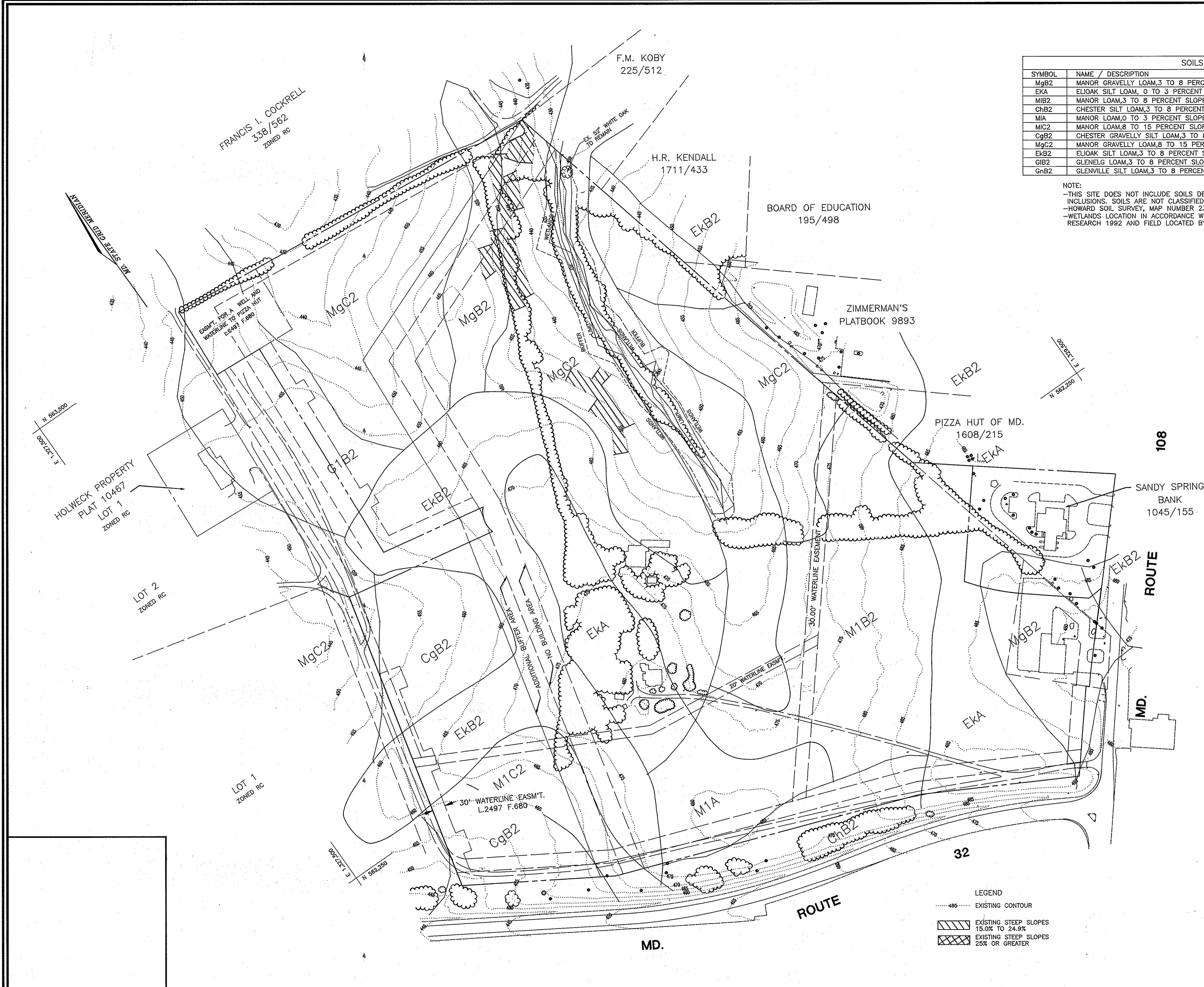
MARKS-VOGEL ASSOCIATES, INC.
ENGINEERS - SURVEYORS - PLANNERS

3691 PARK AVENUE, SUITE 101 ELLICOTT CITY, MARYLAND 21043 TELEPHONE: (410) 461-6828 FAX: (410) 465-8968

DESIGN BY: R.H.V.
DRAWN BY: D.G.H.
CHECKED BY: R.H.V.
DATE: OCTOBER, 1993
SCALE: 1"=100'
W.O. NO.: 93-101



1681



SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	TYPE
MgB2	MANOR GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
EKA	ELIOAK SILT LOAM, 0 TO 3 PERCENT SLOPES	C
MIB2	MANOR LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
ChB2	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
MIA	MANOR LOAM, 0 TO 3 PERCENT SLOPES	B
MIC2	MANOR LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CgB2	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
MgC2	MANOR GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
EkB2	ELIOAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
GIB2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
GnB2	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C

NOTE:
 -THIS SITE DOES NOT INCLUDE SOILS DESIGNATED AS HYDRIC OR SOILS WITH HYDRIC INCLUSIONS. SOILS ARE NOT CLASSIFIED AS HIGHLY ERODIBLE.
 -HOWARD SOIL SURVEY, MAP NUMBER 23
 -WETLANDS LOCATION IN ACCORDANCE WITH DELINEATION PERFORMED BY EXPLORATION RESEARCH 1992 AND FIELD LOCATED BY BOENDER ASSOCIATES.

OWNER/DEVELOPER
 108 LIMITED PARTNERSHIP
 C/O WIN KELLY CHEVROLET
 12205 HALL SHOP ROAD
 CLARKSVILLE MARYLAND, 21029

OWNERS

SANDY SPRING BANK
 17801 GEORGIA AVENUE
 OLNEY, MARYLAND 20852

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 6420 LOCHRIDGE ROAD
 COLUMBIA, MARYLAND 21044

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 6420 LOCHRIDGE ROAD
 COLUMBIA, MARYLAND 21044

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chris Strummen 1/13/94
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 AND RESEARCH CSH

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chris Strummen 1/10/94
 CHIEF, LAND DEVELOPMENT DIVISION DATE

Andrew M. Duncanson 1-6-99
 CHIEF, BUREAU OF HIGHWAYS DATE

Paul D. Sapp 1/10/04
 CHIEF, BUREAU OF ENGINEERING DATE

NO.	REVISION	DATE

HOLWECK SUBDIVISION
 SOILS MAP

A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256
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 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
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MARKS-VOGEL ASSOCIATES, INC.
 ENGINEERS - SURVEYORS - PLANNERS

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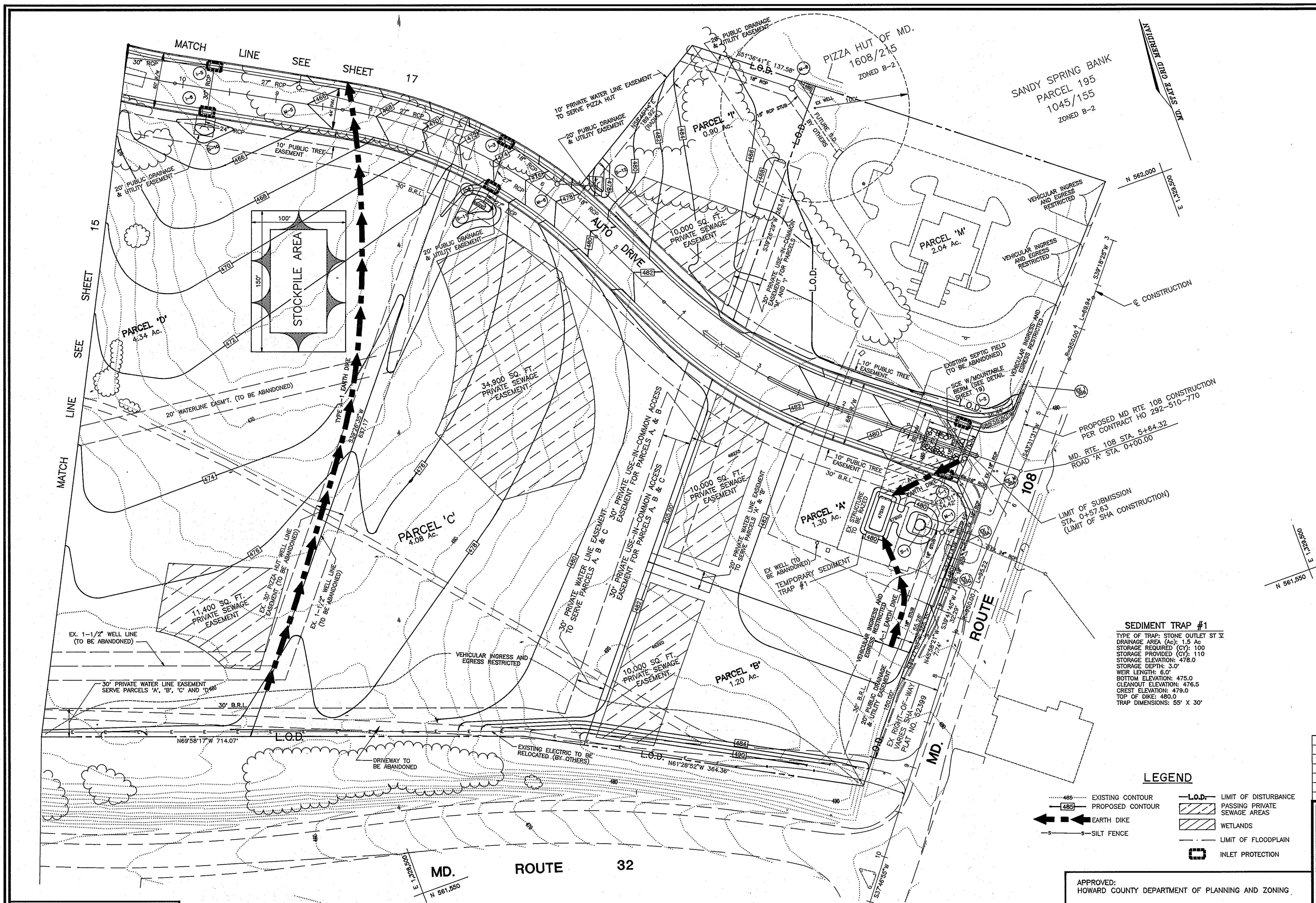
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13 SHEET OF 20

LEGEND

.....	EXISTING CONTOUR
▨	EXISTING STEEP SLOPES 19.0% TO 24.9%
▩	EXISTING STEEP SLOPES 25% OR GREATER

1681



- NOTES:
1. ABANDONMENT OF THE EXISTING WELLS AND SEPTIC AREAS TO BE PERFORMED IN ACCORDANCE WITH HEALTH DEPARTMENT REGULATIONS.
 2. CONTRACTOR TO EXERCISE EXTREME CAUTION WHEN GRADING OVER PRIVATE SEWAGE EASEMENTS SO AS NOT TO GRADE LOWER THAN THE PROPOSED GRADE AS APPROVED BY THE HEALTH DEPARTMENT AND SP 93-14.
 3. SEE FOREST CONSERVATION PLAN APPROVED WITH SP 93-14 FOR PLANTING AREAS, QUANTITIES, PLANTING DETAILS, SIGNAGE, ETC...

OWNER/DEVELOPER
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EDMOND & ETTA JANE HOLWECK
 6420 LOCHRIDGE ROAD
 COLUMBIA, MARYLAND 21044

SEDIMENT TRAP #1
 TYPE OF TRAP: STONE OUTLET ST
 DRAINAGE AREA (Ac): 1.5 Ac
 STORAGE REQUIRED (CY): 100
 STORAGE PROVIDED (CY): 110
 STORAGE ELEVATION: 478.0
 STORAGE DEPTH: 3.0'
 WEIR LENGTH: 6.0'
 BOTTOM ELEVATION: 475.0
 CLEANOUT ELEVATION: 476.5
 CREST ELEVATION: 479.0
 TOP OF DIKE: 480.0
 TRAP DIMENSIONS: 55' X 30'

- LEGEND**
- 485 --- EXISTING CONTOUR
 - - - 485 - - - PROPOSED CONTOUR
 - █ EARTH DIKE
 - S SILT FENCE
 - L.O.D.- LIMIT OF DISTURBANCE
 - ▨ PASSING PRIVATE SEWAGE AREAS
 - ▨ WETLANDS
 - - - - - LIMIT OF FLOODPLAIN
 - INLET PROTECTION

NO.	REVISION	DATE

HOLWECK SUBDIVISION
GRADING AND SEDIMENT CONTROL
 A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256
 TAX MAP #34 PARCELS 256, 365 & 195
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8691 PARK AVENUE, SUITE 101 ELLICOTT CITY, MARYLAND 21043 TELEPHONE: (410) 461-6888 FAX: (410) 465-3968

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 DRAWN BY: D.G.H.
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 DATE: OCTOBER, 1993
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14 SHEET OF 20

DEVELOPER'S CERTIFICATE

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Kevin M. Zell 12/21/93
 SIGNATURE OF DEVELOPER DATE

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Robert H. Zell 12/21/93
 SIGNATURE OF ENGINEER DATE

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Robert W. Zell 12/21/93
 HOWARD SOIL CONSERVATION DISTRICT DATE

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Patricia Engler 12/21/93
 U.S. SOIL CONSERVATION SERVICE DATE

APPROVED:
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Aimee Swannan 1/13/94
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

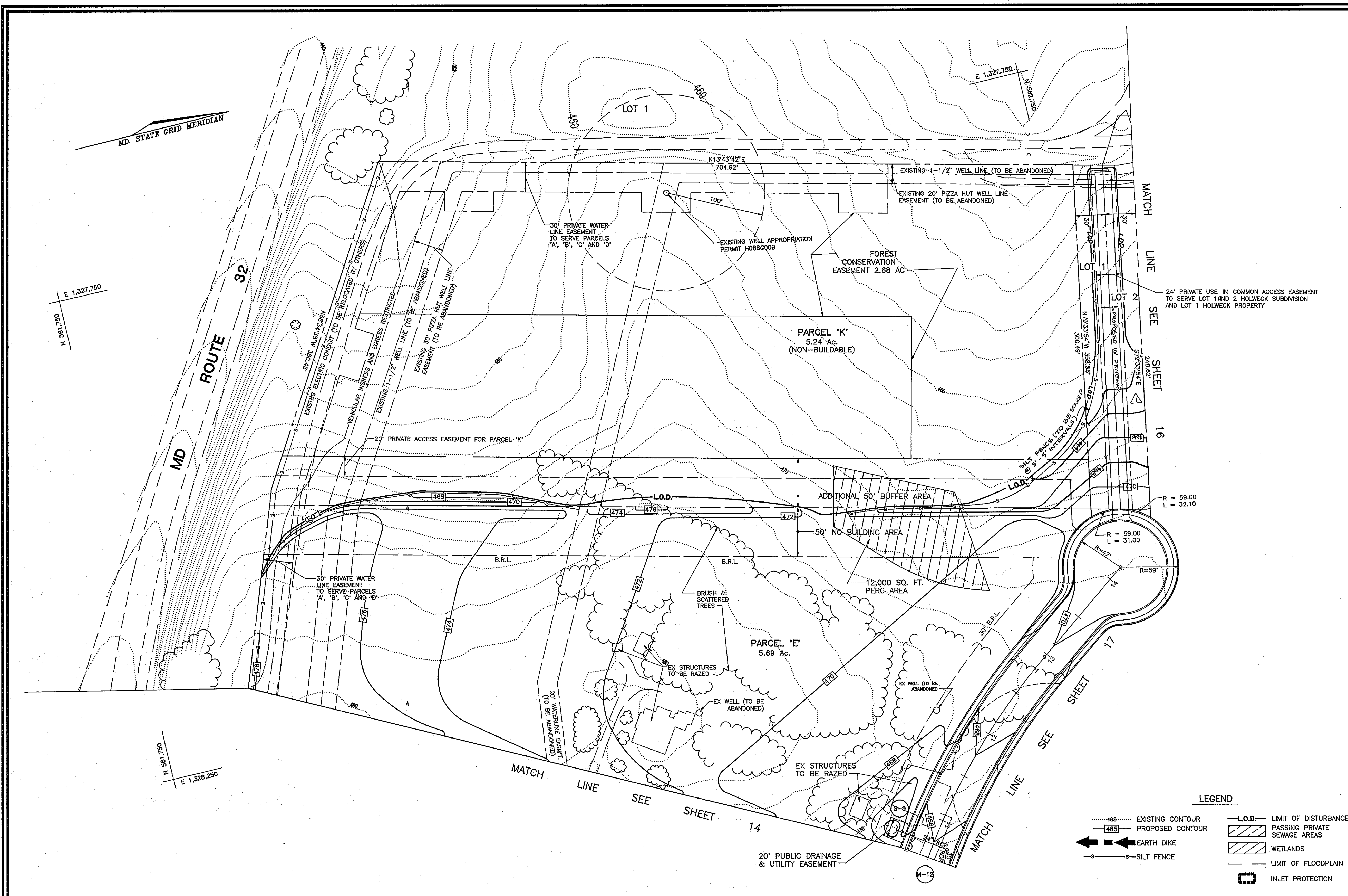
APPROVED:
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chris Danvers 1/10/94
 CHIEF, LAND DEVELOPMENT DIVISION DATE

Andrew M. Daniels 1-6-94
 CHIEF, BUREAU OF HIGHWAYS DATE

Paul M. Deason 1/10/94
 CHIEF, BUREAU OF ENGINEERING DATE

1681



OWNER/DEVELOPER
 108 LIMITED PARTNERSHIP
 C/O WIN KELLY CHEVROLET
 12205 HALL SHOP ROAD
 CLARKSVILLE MARYLAND, 21029

OWNERS

SANDY SPRING BANK
 17801 GEORGIA AVENUE
 OLNEY, MARYLAND 20832

JAMES CHRISTOPHER HOLWECK
 6420 LOCHRIDGE ROAD
 COLUMBIA, MARYLAND 21044

EDMOND & ETTA JANE HOLWECK
 6420 LOCHRIDGE ROAD
 COLUMBIA, MARYLAND 21044

NO.	REVISION	DATE
1	ADDITION OF EARTH BERM & DRIVEWAY	10/17/94

HOLWECK SUBDIVISION
GRADING AND SEDIMENT CONTROL
 A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256

TAX MAP #34 PARCELS 256, 365 & 195
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 REFERENCE: SP 93-14, WP 93-90 AND ZB947M

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

8691 PARK AVENUE, SUITE 101
 ELLICOTT CITY, MARYLAND 21043

TELEPHONE: (410) 461-5828
 FAX: (410) 465-8966

DESIGN BY: R.H.V.
 DRAWN BY: D.G.H.
 CHECKED BY: R.H.V.
 DATE: JULY, 1993
 SCALE: AS SHOWN
 W.O. NO.: 93-101

15 SHEET OF 20

- LEGEND**
- 485--- EXISTING CONTOUR
 - 487--- PROPOSED CONTOUR
 - EARTH DIKE
 - SILT FENCE
 - L.O.D.--- LIMIT OF DISTURBANCE
 - PASSING PRIVATE SEWAGE AREAS
 - WETLANDS
 - LIMIT OF FLOODPLAIN
 - INLET PROTECTION

DEVELOPER'S CERTIFICATE

"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 THE DEPARTMENT OF A 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."

Kenn W. Zook 12/21/93
 SIGNATURE OF DEVELOPER DATE

ENGINEERS CERTIFICATE

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Robert L. Coyle 12/19/93
 SIGNATURE OF ENGINEER DATE

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

Robert L. Coyle 12/29/93
 HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Patricia Engler 12/28/93
 U.S. SOIL CONSERVATION SERVICE DATE

APPROVED:
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Anna Surinoma 1/13/94
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE AND RESEARCH

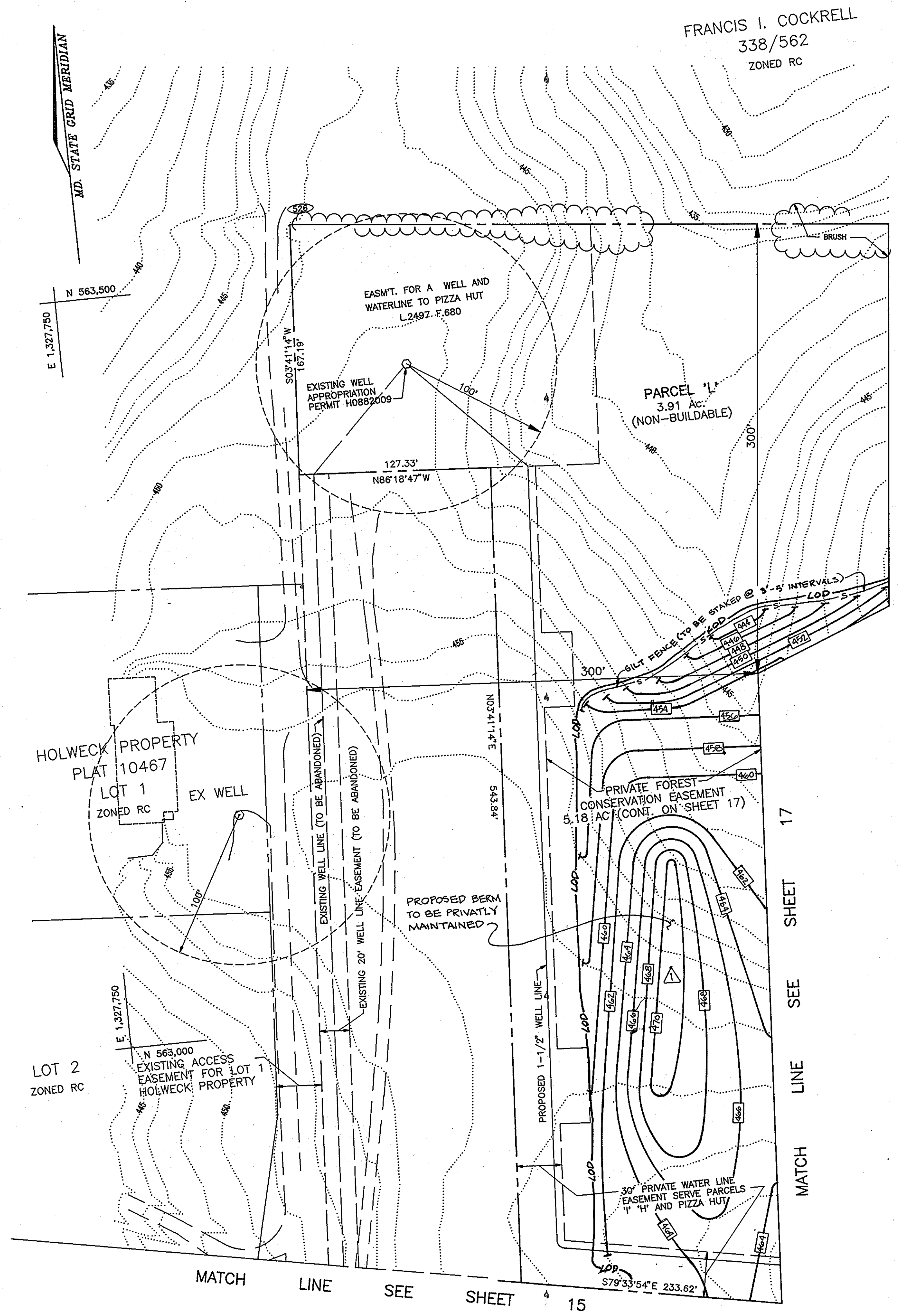
APPROVED:
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William D. ... 1/10/94
 CHIEF, LAND DEVELOPMENT DIVISION DATE

Andrew M. ... 1-6-94
 CHIEF, BUREAU OF HIGHWAYS DATE

Paul ... 1/10/94
 CHIEF, BUREAU OF ENGINEERING DATE

1681



N 563,500
E 1,328,500

N 563,500
E 1,327,750

N 563,000
E 1,327,750

HOLWECK PROPERTY
PLAT 10467
LOT 1
ZONED RC

LOT 2
ZONED RC

FRANCIS I. COCKRELL
338/562
ZONED RC

EASMT. FOR A WELL AND
WATERLINE TO PIZZA HUT
L2497. F.680

EXISTING WELL
APPROPRIATION
PERMIT HOBB2009

PARCEL 'L'
3.91 AC.
(NON-BUILDABLE)

PRIVATE FOREST
CONSERVATION EASEMENT
5.18 AC (CONT. ON SHEET 17)

EX WELL

PROPOSED BERM
TO BE PRIVATELY
MAINTAINED

EXISTING ACCESS
EASEMENT FOR LOT 1
HOLWECK PROPERTY

MATCH LINE SEE SHEET 15

SEE SHEET 17
MATCH LINE

LEGEND

..... 485	EXISTING CONTOUR	— L.O.D. —	LIMIT OF DISTURBANCE
- 485 -	PROPOSED CONTOUR	▨	PASSING PRIVATE SEWAGE AREAS
—	EARTH DIKE	▨	WETLANDS
— S —	SILT FENCE	—	LIMIT OF FLOODPLAIN
		□	INLET PROTECTION

OWNER/DEVELOPER
108 LIMITED PARTNERSHIP
C/O WIN KELLY CHEVROLET
12205 HALL SHOP ROAD
CLARKSVILLE MARYLAND, 21029

OWNERS

SANDY SPRING BANK 17801 GEORGIA AVENUE OLNEY, MARYLAND 20832	JAMES CHRISTOPHER HOLWECK 6420 LOCHRIDGE ROAD COLUMBIA, MARYLAND 21044
EDMOND & ETTA JANE HOLWECK 6420 LOCHRIDGE ROAD COLUMBIA, MARYLAND 21044	

NO.	REVISION	DATE
1	ADDITION OF EARTH BERM	10/17/94

HOLWECK SUBDIVISION
GRADING AND SEDIMENT CONTROL
A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2
& LOT 2, HOLWECK PROPERTY LOT 2 PARCEL 195 AND 256
TAX MAP #34 5TH ELECTION DISTRICT
PARCELS 256, 365 & 195
HOWARD COUNTY, MARYLAND
REFERENCE; SP 93-14, WP 93-90 AND ZB947M

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

3691 PARK AVENUE, SUITE 101
ELLICOTT CITY, MARYLAND 21043
TELEPHONE: (410) 461-6828
FAX: (410) 465-3966

	DESIGN BY: R.H.V.
	DRAWN BY: D.G.H.
	CHECKED BY: R.H.V.
	DATE: OCTOBER, 1993
	SCALE: 1"=50'
W.O. NO.: 93-101	16 SHEET OF 20

DEVELOPER'S CERTIFICATE

"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 THE DEPARTMENT OF AN 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."

Kevin M. Booz 12/21/93
SIGNATURE OF DEVELOPER DATE

ENGINEERS CERTIFICATE

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Robert H. Vogel 12/21/93
SIGNATURE OF ENGINEER DATE

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

Robert W. Johnson 12/29/93
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Patricia Egler 12/28/93
U.S. SOIL CONSERVATION SERVICE 65 DATE

APPROVED:
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Jim Summank 1/13/94
CHIEF, DIVISION OF LAND DEVELOPMENT DATE AND RESEARCH

APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

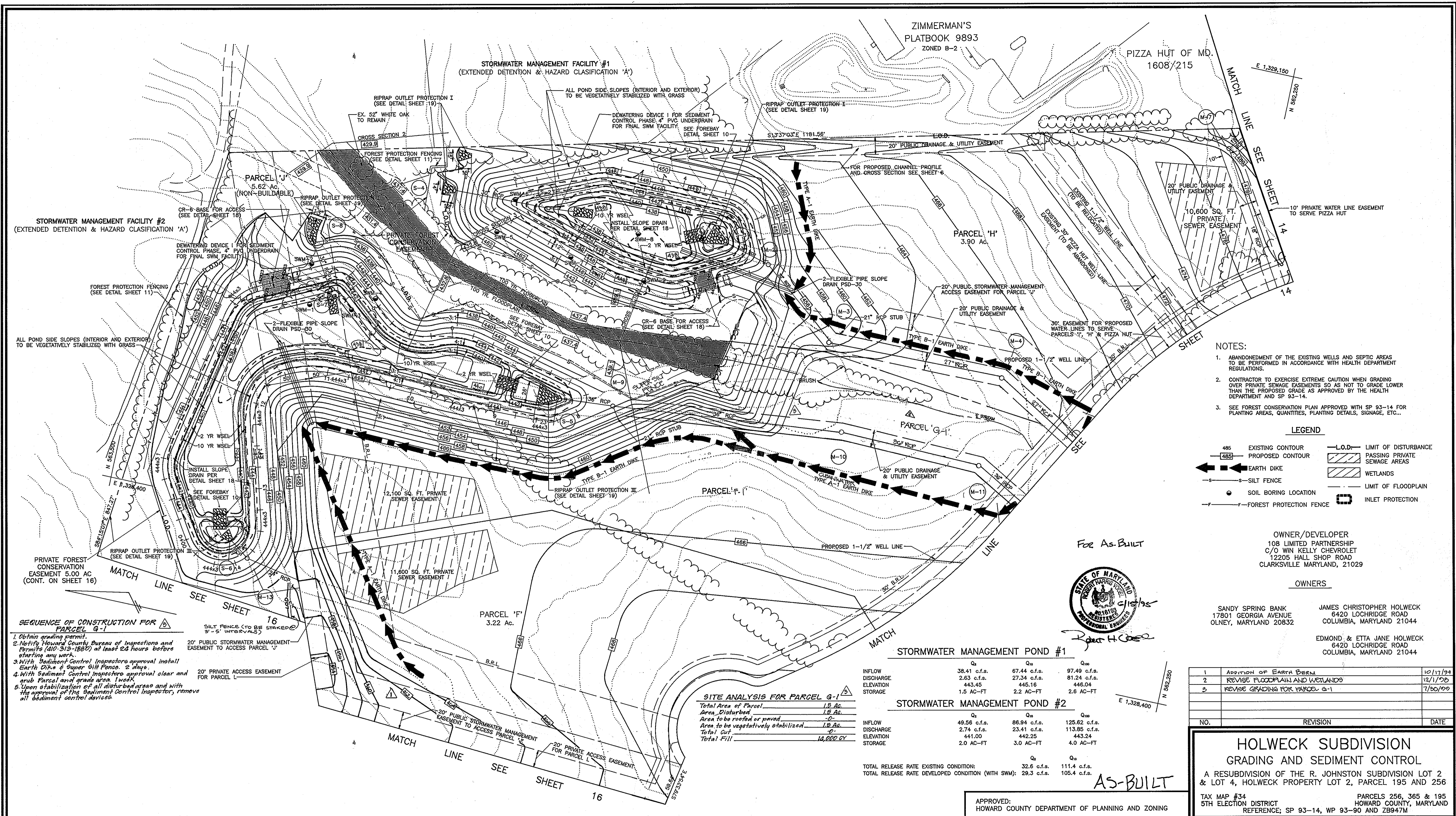
Chris Damann 1/10/94
CHIEF, LAND DEVELOPMENT DIVISION DATE

Andrew M. Daniels 1-6-94
CHIEF, BUREAU OF HIGHWAYS DATE

Paul D. Johnson 1/10/94
CHIEF, BUREAU OF ENGINEERING DATE

1681

1681



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Ken M. Ball 12/21/93
SIGNATURE OF DEVELOPER DATE

ENGINEERS CERTIFICATE

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Robert H. Cole 12/21/93
SIGNATURE OF ENGINEER DATE

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

John C. Robertson 8/2/99
Robert W. Zimmerman 12/29/93
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL

Patricia Edwards 12/28/93
U.S. SOIL CONSERVATION SERVICE 65. DATE

APPROVED:
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Quina Zimmerman 1/13/94
CHIEF, DIVISION OF LAND DEVELOPMENT DATE AND RESEARCH

APPROVED:
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Robert H. Cole 1/10/94
CHIEF, LAND DEVELOPMENT DIVISION DATE

Andrew M. Daniels 1-6-94
CHIEF, BUREAU OF HIGHWAYS DATE

Paul D. Sisson 1/10/94
CHIEF, BUREAU OF ENGINEERING DATE

NO.	REVISION	DATE
1	ADDITION OF EARTH BERM	10/17/94
2	REVISE FLOODPLAIN AND WETLANDS	12/1/95
3	REVISE GRADING FOR PARCEL G-1	7/20/00

HOLWECK SUBDIVISION
GRADING AND SEDIMENT CONTROL

A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCELS 195 AND 256

TAX MAP #34 5TH ELECTION DISTRICT
REFERENCE: SP 93-14, WP 93-90 AND ZB947M

PARCELS 256, 365 & 195
HOWARD COUNTY, MARYLAND

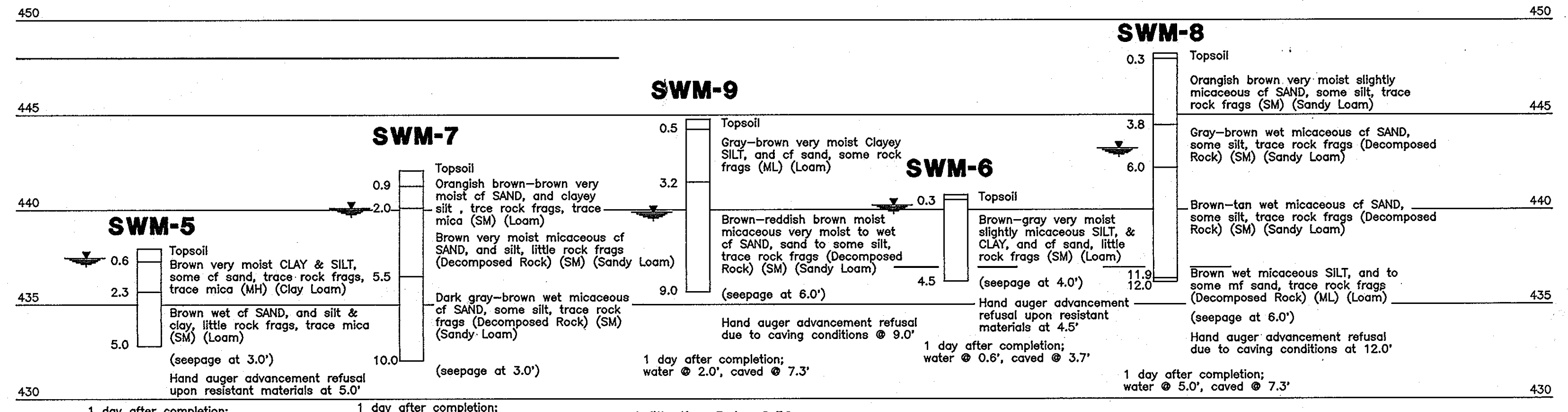
MARKS-VOGEL ASSOCIATES, INC.
ENGINEERS - SURVEYORS - PLANNERS

3691 PARK AVENUE, SUITE 101
ELLCOTT CITY, MARYLAND 21043

TELEPHONE: (410) 461-5828
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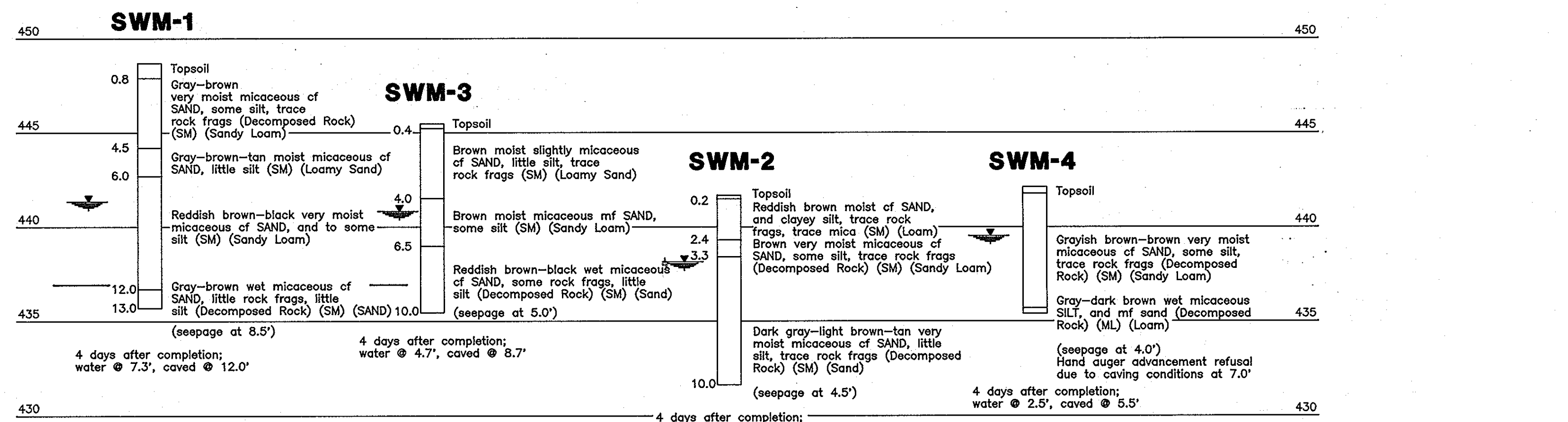
DESIGN BY: R.H.V.
DRAWN BY: D.G.H.
CHECKED BY: R.H.V.
DATE: OCTOBER, 1993
SCALE: 1"=50'
W.O. NO.: 93-101

17 SHEET OF 20



1 day after completion; water @ 0.5', caved @ 3.9' Infiltration Rate: 0.52 Estimated Bearing Pressure= 2-3 KSF
 1 day after completion; water @ 2.0', caved @ 5.9' Infiltration Rate: 0.52 Estimated Bearing Pressure= 1-3 KSF
 1 day after completion; water @ 0.6', caved @ 3.7' Infiltration Rate: 0.52 Estimated Bearing Pressure= 2-3 KSF
 1 day after completion; water @ 5.0', caved @ 7.3' Infiltration Rate: 1.02 Estimated Bearing Pressure= 2-3 KSF

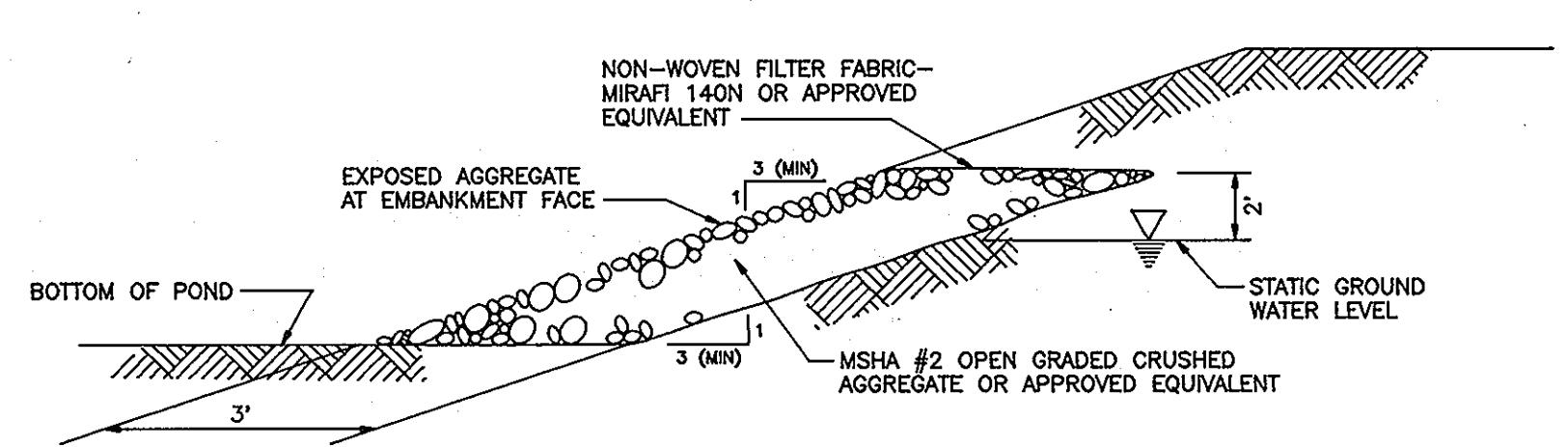
SECTION C-C
 SECTION D-D
 BORING PROFILES
 VERTICAL SCALE: 1"=5'



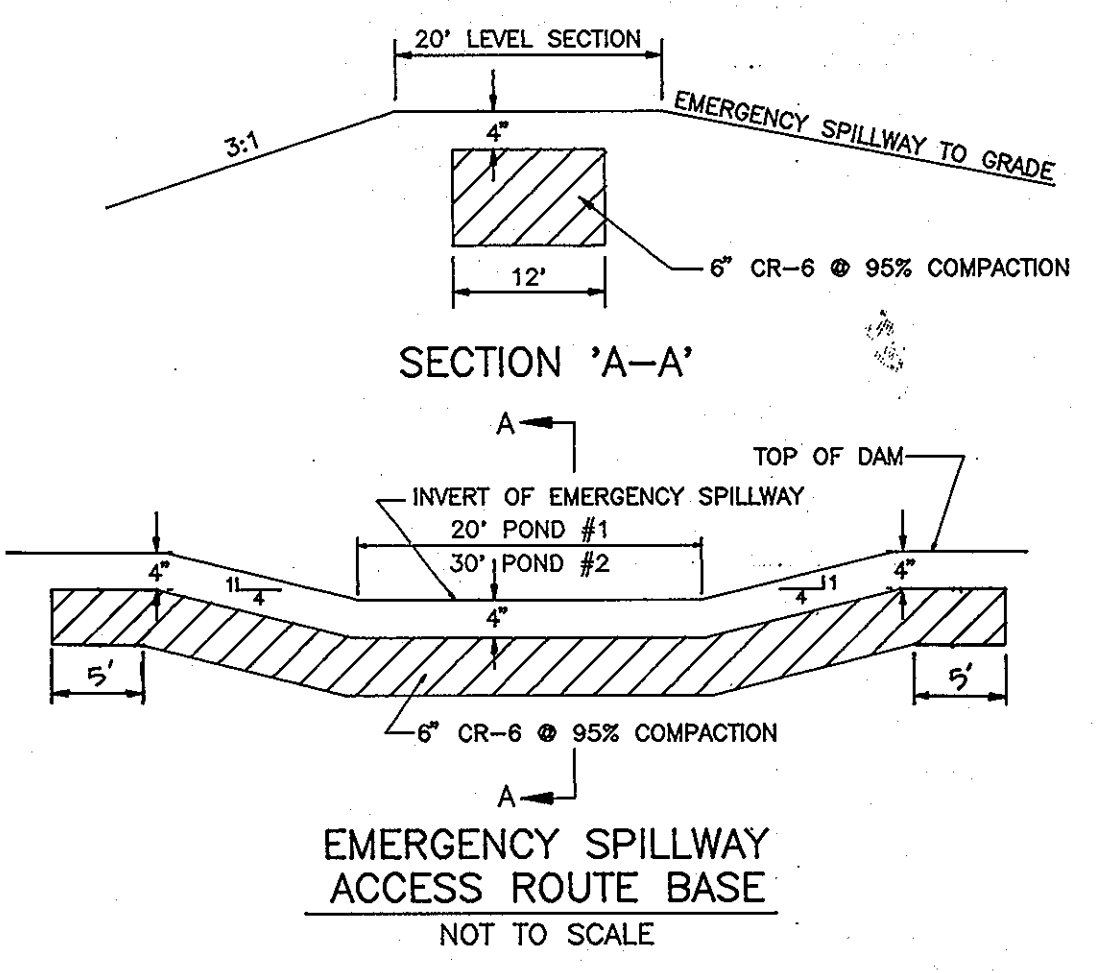
4 days after completion; water @ 7.3', caved @ 12.0' Infiltration Rate: 1.02
 4 days after completion; water @ 4.7', caved @ 6.7' Infiltration Rate: 1.02
 4 days after completion; water @ 3.5', caved @ 8.5' Infiltration Rate: 0.52 Estimated Bearing Pressure= 1-3 KSF
 4 days after completion; water @ 2.5', caved @ 5.5' Infiltration Rate: 1.02 Estimated Bearing Pressure= 2-3 KSF

SECTION A-A
 SECTION B-B
 BORING PROFILES
 VERTICAL SCALE: 1"=5'

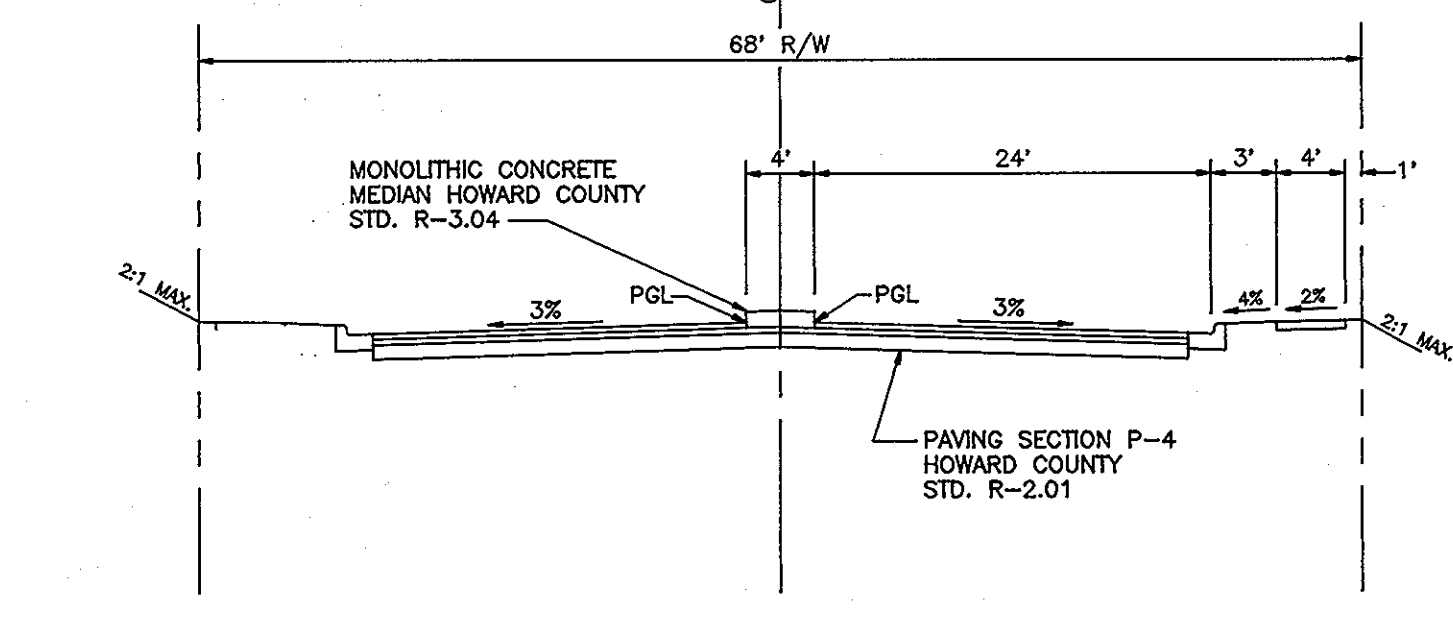
NOTES:
 1. VERTICAL TRENCH DRAIN CONSTRUCTED WITH MINIMUM WIDTH OF 2 FEET.
 2. REQUIREMENT AND EXTENT OF VERTICAL TRENCH CONSTRUCTION TO BE DETERMINED AT THE TIME OF CONSTRUCTION.



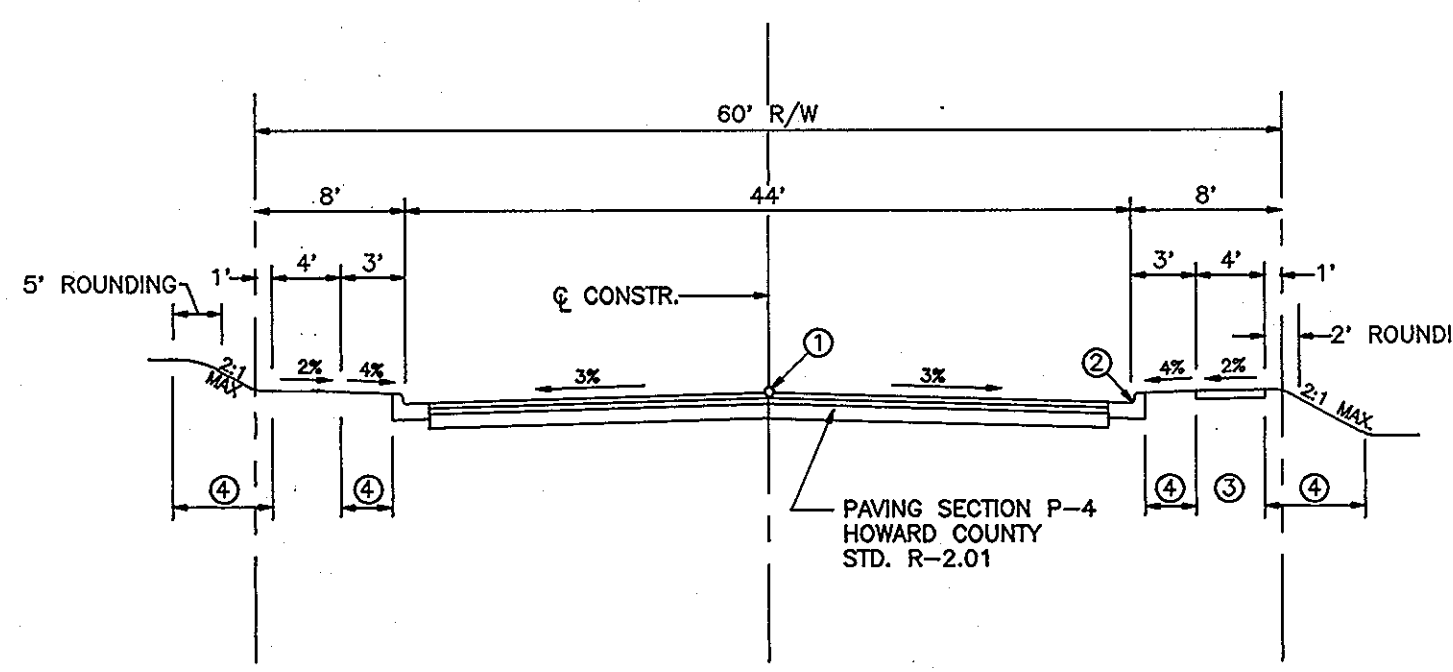
VERTICAL DRAIN DETAIL
 NOT TO SCALE



EMERGENCY SPILLWAY ACCESS ROUTE BASE
 NOT TO SCALE

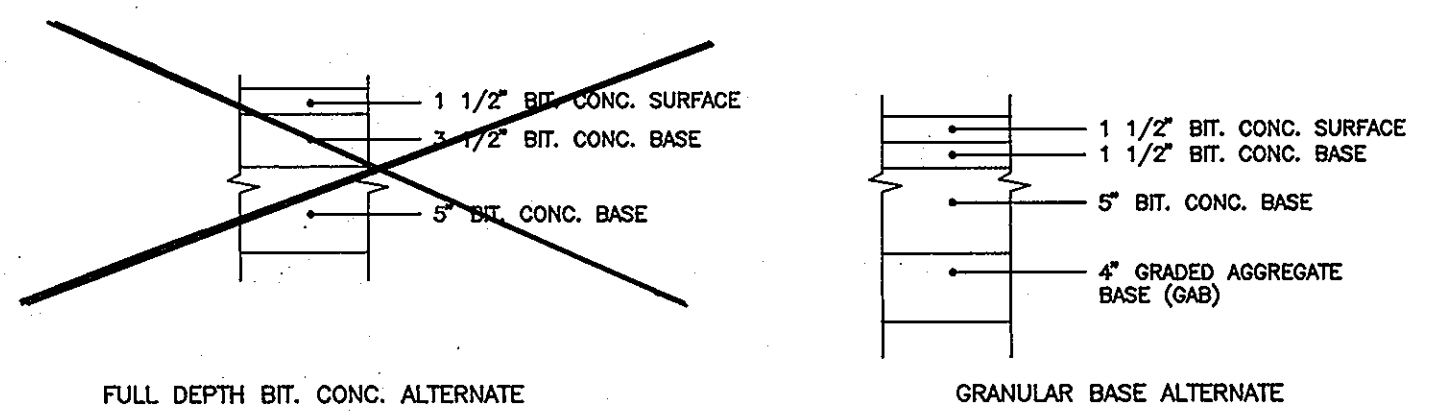


AUTO DRIVE STA. 0+48 TO STA. 2+87
 DESIGN SPEED 35 MPH
 NOT TO SCALE



AUTO DRIVE STA. 2+87 TO ST. 14+16.32
 HOWARD COUNTY STANDARD R-1.03
 DESIGN SPEED 35 MPH
 NOT TO SCALE

- 1 PROFILE GRADE LINE (PGL)= ϵ OF ROADWAY.
- 2 HOWARD COUNTY STANDARD "T" COMBINATION CURB & GUTTER R-3.01.
- 3 "T" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
- 4 INDICATES 2" TOPSOIL, SEED & MULCH.



P-4 PAVING SECTION
 HOWARD COUNTY STANDARD R-2.01
 NOT TO SCALE

- ### SEQUENCE OF CONSTRUCTION
- OBTAIN GRADING PERMIT. (3 DAYS)
 - NOTIFY HOWARD COUNTY BUREAU OF INSPECTIONS AND PERMITS (313-1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK. (1 WEEK)
 - CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.
 - INSTALL PERIMETER CONTROLS AND PROTECTIVE FENCING AT EDGE OF WETLAND BUFFERS AND LIMITS OF DISTURBANCE ALONG WOOD LINES. (1 WEEK)
 - PERFORM CLEARING AND GRUBBING. (2 WEEKS)
 - CONSTRUCT STORMWATER MANAGEMENT FACILITIES #1 AND #2 AND INSTALL TEMPORARY DEWATERING DEVICE 1 (DO NOT INSTALL EXTENDED DETENTION PIPES). THE FOREBAYS ARE NOT TO BE CONSTRUCTED AT THIS TIME. INSTALL TEMPORARY 6" ϕ OPENINGS AND TEMPORARY CLOSE PORTION OF WEIR. (2 WEEKS)
 - INSTALL ALL EARTH DIKES, SLOPE DRAINS, AND SEDIMENT TRAP #1. (2 DAYS)
 - FIELD DELINEATE ALL PRIVATE SEWAGE EASEMENTS (CONTRACTOR TO EXERCISE EXTREME CARE WHEN GRADING OVER THESE AREAS).
 - INSTALL NEW WELL LINE CONNECTION TO PIZZA HUT AND ABANDON OLD LINE. (2 DAYS)
 - ABANDON EXISTING WELLS AND SEPTIC SYSTEMS AS NOTED IN ACCORDANCE WITH HEALTH DEPARTMENT CRITERIA.
 - MASS GRADE SITE (ALL FILLS TO BE COMPACTED AS REQUIRED TO ACCOMMODATE BUILDINGS AND/OR PARKING AREAS). (4 WEEKS)
 - INSTALL STORM DRAIN SYSTEM AND STONE FILTER INLET PROTECTION AS NECESSARY. (2 WEEKS)
 - BRING ROAD TO SUBGRADE. (1 WEEK)
 - CONSTRUCT CURB AND BASE COURSE. (2 WEEKS)
 - INSTALL TRAFFIC SIGNAL, SIDEWALK, STREET TREES, AFFORESTATION PLANTINGS AND STABILIZE AREAS IN ACCORDANCE WITH PERMANENT SEDING NOTES. (4 WEEKS)
 - UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREAS REMOVE TEMPORARY DEWATERING DEVICE IN BOTH PONDS. CONVERT TO EXTENDED DETENTION PIPE AND CONSTRUCT FOREBAYS. MODIFY STRUCTURE TO FINAL CONFIGURATION. (1 WEEK)
 - FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - A. 7 CALENDER DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, SWALES, DITCH PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
 - B. 14 DAYS FOR ALL OTHER DISTURBED AREAS.
 - WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR REMOVE ALL SEDIMENT CONTROL STRUCTURES.

OWNER/DEVELOPER
 108 LIMITED PARTNERSHIP
 C/O WIN KELLY CHEVROLET
 12205 HALL SHOP ROAD
 CLARKSVILLE MARYLAND, 21029

OWNERS

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6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044
- EDMOND & ETTA JANE HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

NO.	REVISION	DATE
1	ELIMINATE SIDEWALK SW Side AUTO DRIVE	7/7/94

HOLWECK SUBDIVISION
 SOIL BORING PROFILES & ROAD SECTIONS
 A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256
 TAX MAP #34 PARCELS 256, 365 & 195
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 REFERENCE: SP 93-14, WP 93-90 AND ZB947M

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

3691 PARK AVENUE, SUITE 101 ELLICOTT CITY, MARYLAND 21048 TELEPHONE: (410) 481-5828 FAX: (410) 485-3968

DESIGN BY: R.H.V.
 DRAWN BY: D.G.H.
 CHECKED BY: R.H.V.
 DATE: OCTOBER, 1993
 SCALE: AS SHOWN
 W.O. NO.: 93-101

18 SHEET OF 20

DEVELOPER'S CERTIFICATE
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Ken M. ZOO 12/21/93
 SIGNATURE OF DEVELOPER DATE

ENGINEERS CERTIFICATE
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Robert H. Vogel 12/21/93
 SIGNATURE OF ENGINEER DATE

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

Robert W. Zimmerman 12/29/93
 HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Patricia L. G... 12/28/93
 U.S. SOIL CONSERVATION SERVICE DATE

APPROVED:
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Anna J... 1/13/94
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE AND RESEARCH

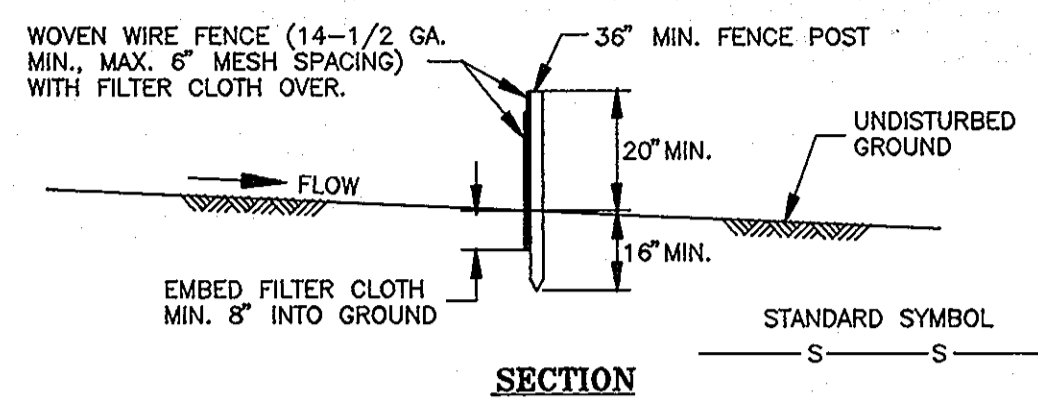
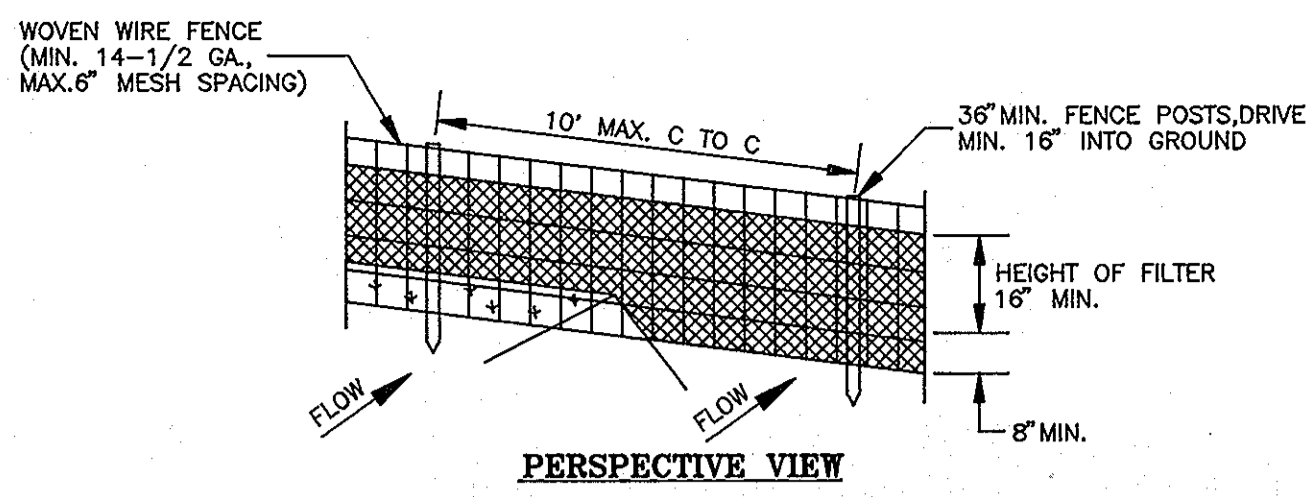
APPROVED:
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

John... 1/6/94
 CHIEF, LAND DEVELOPMENT DIVISION DATE

Andrew M. Daniels 1-6-94
 CHIEF, BUREAU OF HIGHWAYS DATE

Paul... 1/10/94
 CHIEF, BUREAU OF ENGINEERING DATE

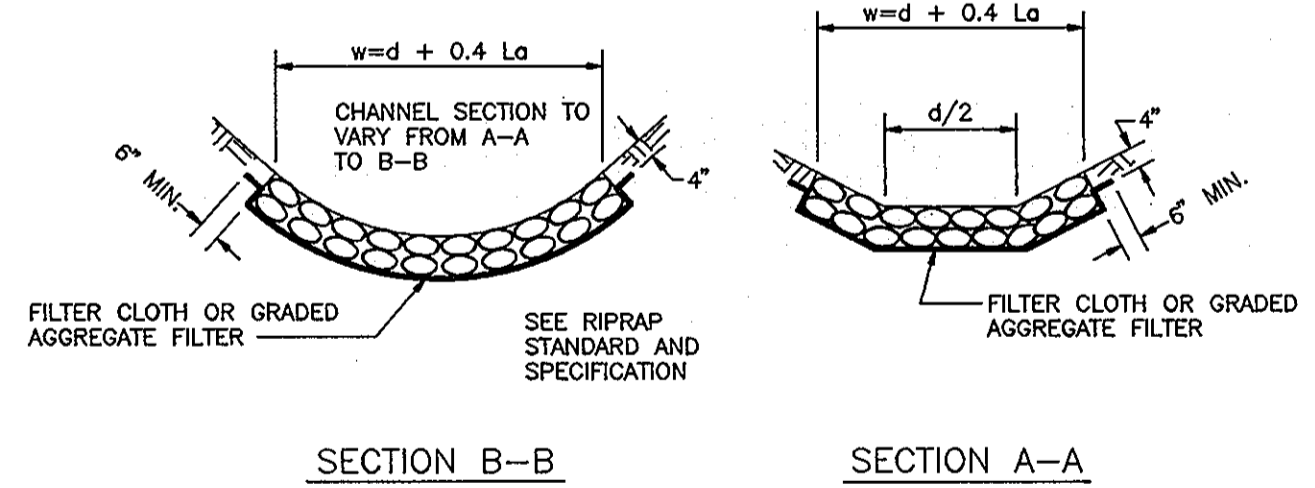
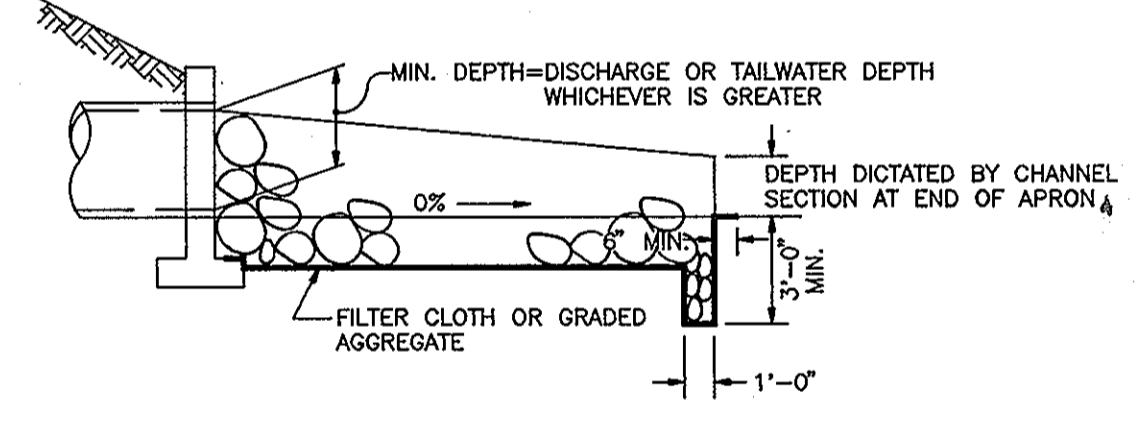
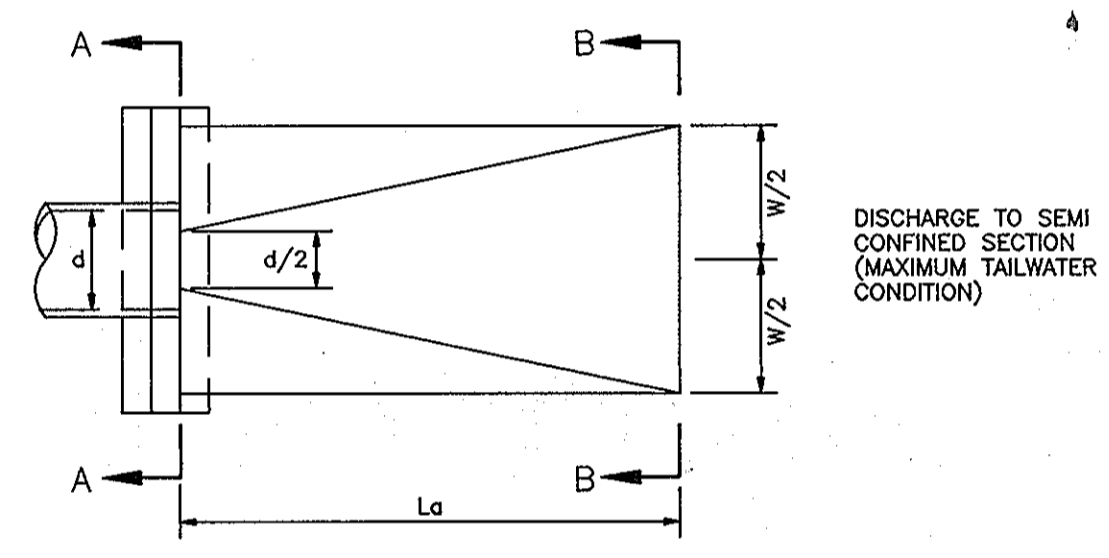
1681



CONSTRUCTION NOTES FOR SILT FENCE

- WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 - FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP & MID SECTION.
 - WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
 - MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
- POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD.
 FENCE: WOVEN WIRE, MIN. 14-1/2 GA., 6" MAX. MESH OPENING
 FILTER CLOTH:
 FILTER X, MIRAFI 100X, STABILIKUM T140N OR APPROVED EQUAL.
 PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

SILT FENCE
 NOT TO SCALE



RIPRAP OUTLET PROTECTION III
 NOT TO SCALE

OWNER/DEVELOPER
 108 LIMITED PARTNERSHIP
 C/O WIN KELLY CHEVROLET
 12205 HALL SHOP ROAD
 CLARKSVILLE MARYLAND, 21029

SANDY SPRING BANK
 17801 GEORGIA AVENUE
 OLNEY, MARYLAND 20832

JAMES CHRISTOPHER HOLWECK
 6420 LOCHRIDGE ROAD
 COLUMBIA, MARYLAND 21044

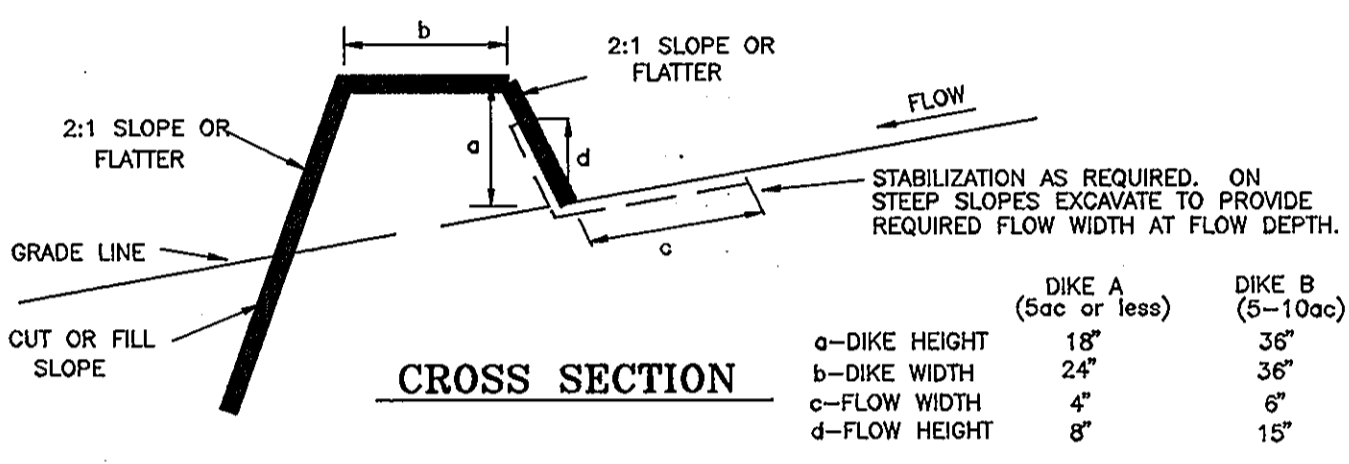
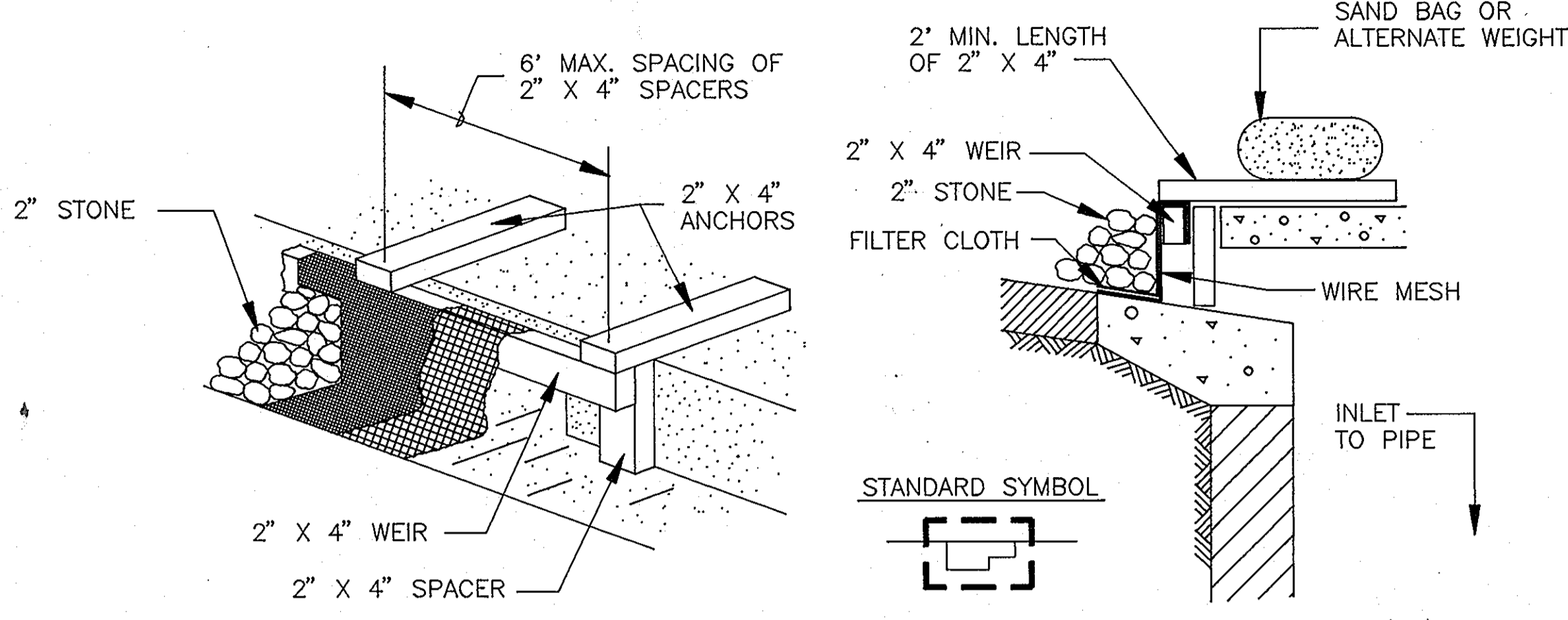
EDMOND & ETTA JANE HOLWECK
 6420 LOCHRIDGE ROAD
 COLUMBIA, MARYLAND 21044

OWNERS

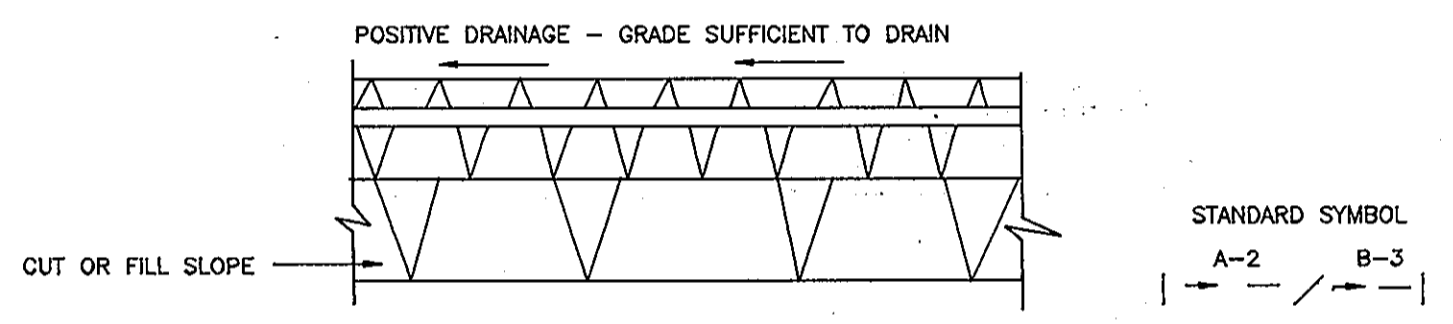
DEVELOPER'S CERTIFICATE
 "I, WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF AN ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL 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."

Kevin M. Ball
 SIGNATURE OF DEVELOPER
 12/21/93
 DATE

CURB INLET PROTECTION DETAIL
 NOT TO SCALE



CROSS SECTION



CONSTRUCTION SPECIFICATIONS

- ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
- ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
- TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
- FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
- EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. RUNOFF SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SEDIMENT BASIN WHERE EITHER THE DIKE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIKE ARE NOT ADEQUATELY STABILIZED.
- DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING SOIL
3	5.1-8.0%	SEED WITH SOIL	STABILIZATION MATTING, OR SOD
4	8.1-20%	LINED RIP-RAP 4-8"	LINED RIP-RAP 4-8"

- RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
- SUBSTITUTION FOR ANY OF THE ABOVE MATERIALS MAY BE CONSIDERED BUT MUST BE APPROVED BY THE ENGINEER.

- STABILIZATION SHALL BE: (A) IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SEED AND STRAW MULCH OR STRAW MULCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART ABOVE.
- PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

EARTH DIKE
 NOT TO SCALE

ENGINEERS CERTIFICATE

"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."

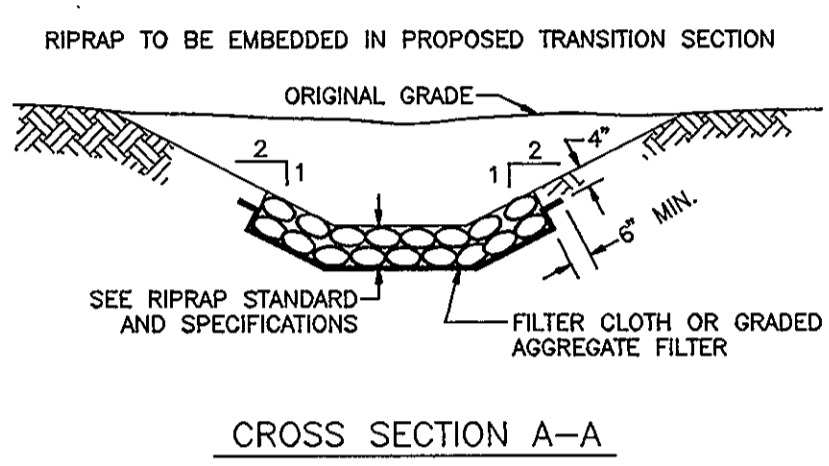
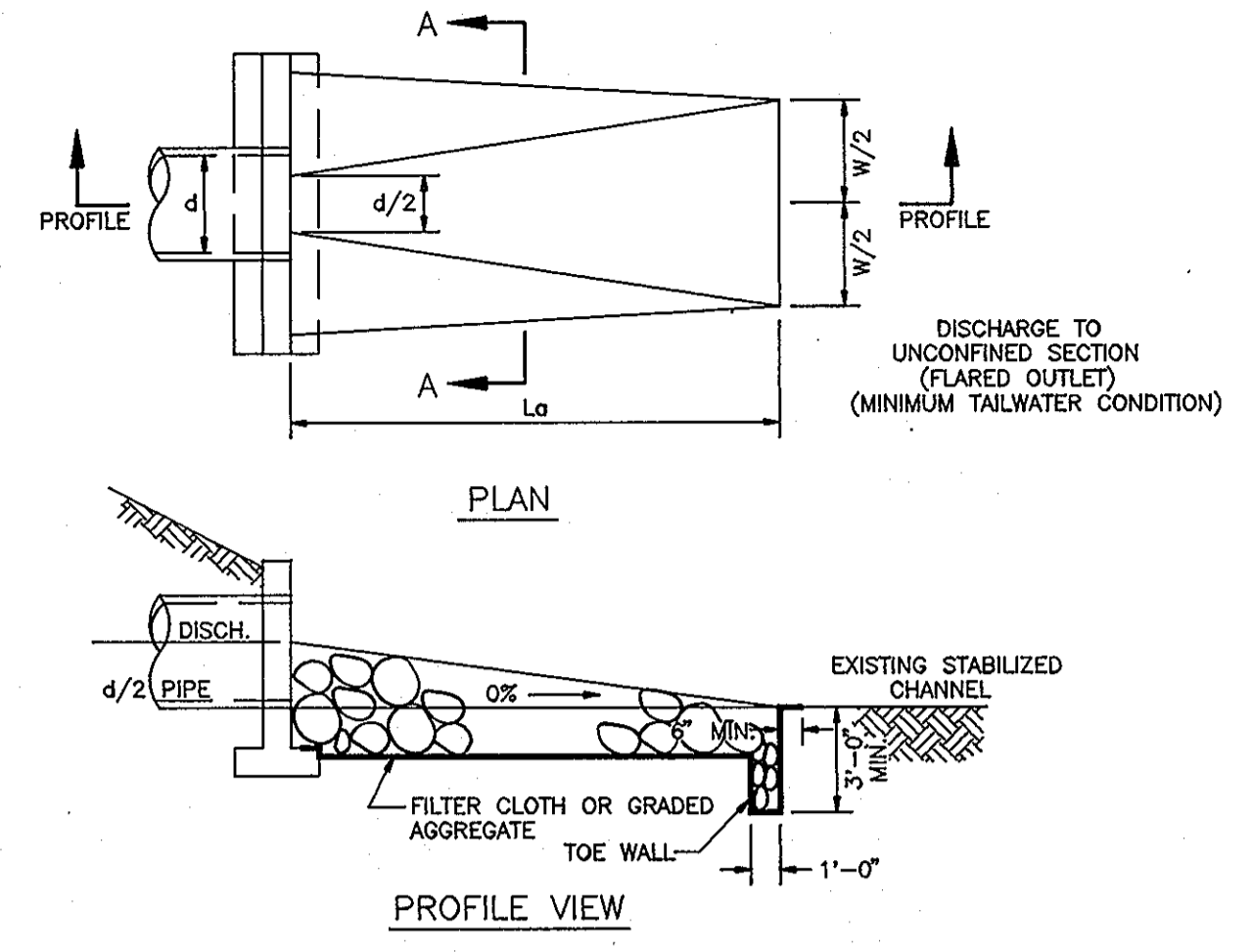
Robert H. ...
 SIGNATURE OF ENGINEER
 12/21/93
 DATE

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

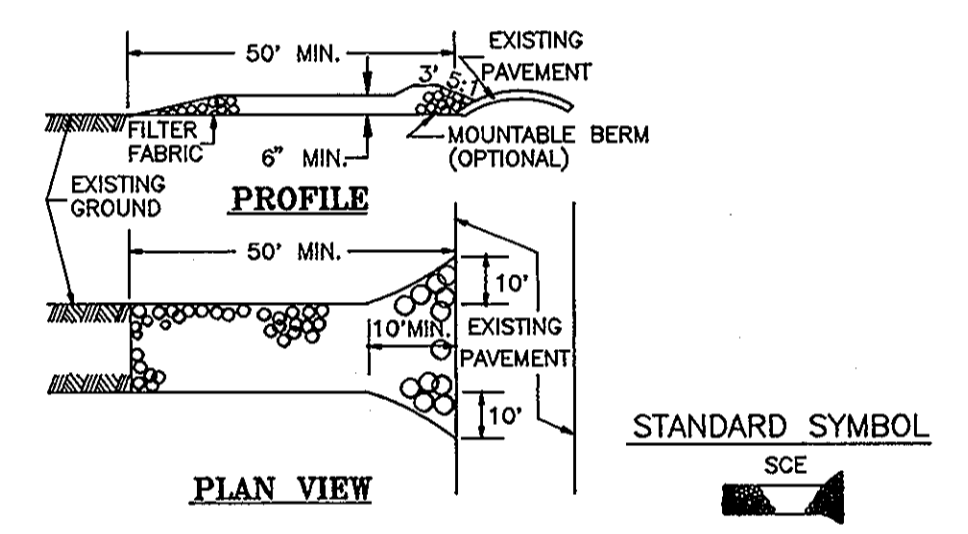
Robert W. Z...
 HOWARD SOIL CONSERVATION DISTRICT
 12/21/93
 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Patricia ...
 U.S. SOIL CONSERVATION SERVICE
 12/28/93
 DATE



RIPRAP OUTLET PROTECTION I
 NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

- STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENT LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINT WHERE INGRESS AND EGRESS OCCURS.
- FILTER CLOTH - WILL BE PLACED OVER ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY LOT.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC STABILIZATION MATTING, OR ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE INTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE
 NOT TO SCALE

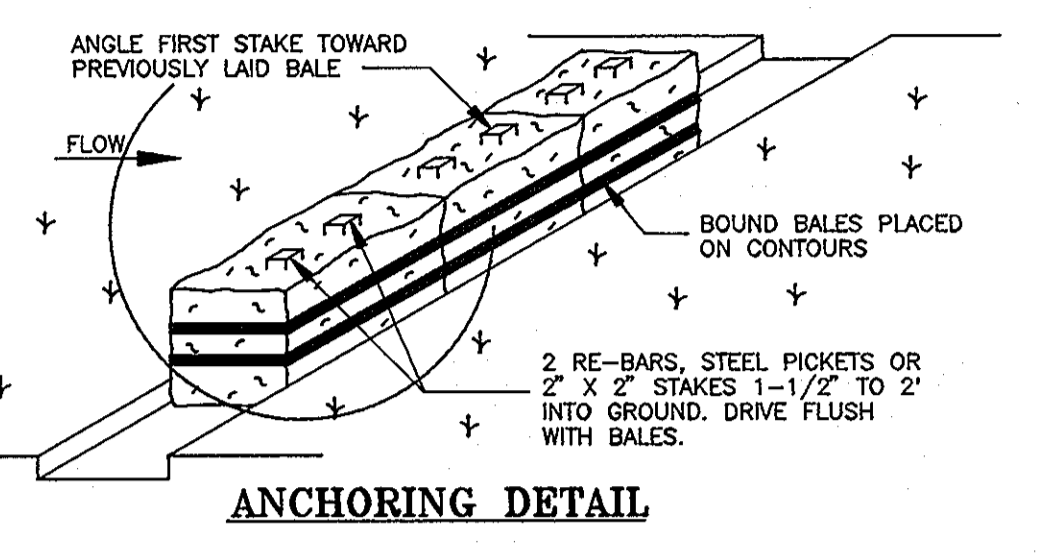
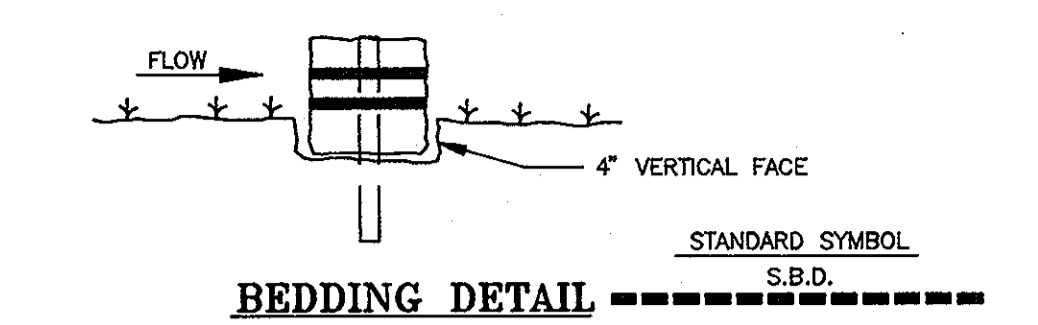
APPROVED:
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Gina Surinman
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
 1/13/94
 DATE

APPROVED:
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, LAND DEVELOPMENT DIVISION
 1/20/94
 DATE

Andrew M. ...
 CHIEF, BUREAU OF HIGHWAYS
 1-6-94
 DATE

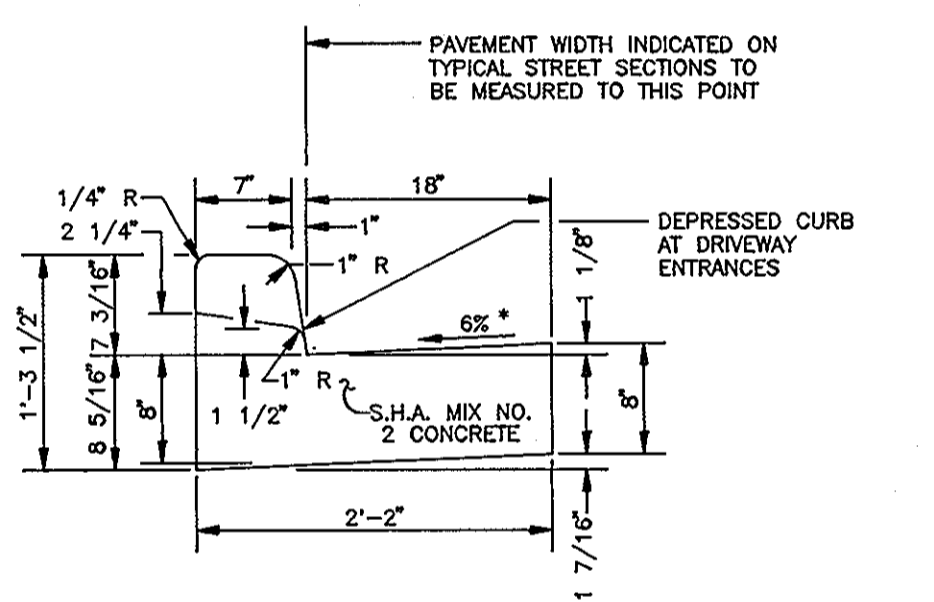
Paul ...
 CHIEF, BUREAU OF ENGINEERING
 1/10/94
 DATE



STRAW BALE DIKE SPECIFICATIONS

- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH THE ENDS TIGHTLY ADJUTING ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED INTO SOIL A MINIMUM OF FOUR (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUS LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH BALE.
- INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

STRAW BALE DIKE DETAILS
 NOT TO SCALE



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

NO.	REVISION	DATE

HOLWECK SUBDIVISION
 DETAILS

A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256
 TAX MAP #34
 5TH ELECTION DISTRICT
 REFERENCE: SP 93-14, WP 93-90 AND ZB947M
 PARCELS 256, 365 & 195
 HOWARD COUNTY, MARYLAND

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

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

DESIGN BY: R.H.V.
 DRAWN BY: D.G.H.
 CHECKED BY: R.H.V.
 DATE: OCTOBER, 1993
 SCALE: AS SHOWN
 W.O. NO.: 93-101
 19 SHEET OF 20

1681

STORMWATER MANAGEMENT POND CONSTRUCTION SPECIFICATIONS

I. SITE PREPARATION

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL, ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED...

AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS...

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE...

II. EARTH FILL

MATERIAL

THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBJECTIONABLE MATERIALS...

PLACEMENT

AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN 8-INCH MAXIMUM THICKNESS (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL...

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 THE EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT...

WHERE A MINIMUM REQUIRED DENSITY IS SPECIFIED, IT 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...

CUTOFF 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...

III. STRUCTURAL BACKFILL

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL. THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPERS OR MANUALLY DIRECTED COMPACTION EQUIPMENT...

IV. PIPE CONDUITS

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION.

A. CORRUGATED METAL PIPE-ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE:

1. MATERIALS - (STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL BE GALVANIZED AND FULLY BITUMINOUS COATED AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A WITH WATER TIGHT COUPLING BANDS...

MATERIALS - (ALUMINUM COATED STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-274 WITH WATER TIGHT COUPLING BANDS OR FLANGES...

MATERIALS - (ALUMINUM PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-196 OR M-211 WITH WATER TIGHT COUPLING BANDS OR FLANGES...

2. COUPLING BANDS, ANTI-SEEP COLLARS, END SECTIONS, ETC., MUST BE COMPOSED OF THE SAME MATERIAL AS THE PIPE. METALS MUST BE INSULATED FROM DISSIMILAR MATERIALS WITH USE OF RUBBER OR PLASTIC INSULATING MATERIALS AT LEAST 24 MILS IN THICKNESS.

3. CONNECTIONS - ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATER TIGHT. THE DRAIN PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WHEN THE PIPE AND RISER ARE METAL. ANTI-SEEP COLLARS SHALL BE CONNECTED TO THE PIPE IN SUCH A MANNER AS TO BE COMPLETELY WATER TIGHT...

ALL CONNECTIONS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THE END OF EACH PIPE SHALL BE RE-ROLLED AN ADEQUATE NUMBER OF CORRUGATIONS TO ACCOMMODATE THE BAND WIDTH. THE FOLLOWING TYPE CONNECTIONS ARE ACCEPTABLE FOR PIPES LESS THAN 48" IN DIAMETER...

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 STRUCTURAL BACKFILL AS SHOWN ABOVE.

6. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

V. 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 DESIGNATION C-361.

2. BEDDING - ALL REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN CONCRETE BEDDING FOR THEIR ENTIRE LENGTH. THIS BEDDING SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 10% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 3 INCHES...

3. BEDDING - 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...

4. BACKFILLING SHALL CONFORM TO STRUCTURAL BACKFILL AS SHOWN ABOVE.

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

VI. POLYVINYL CHLORIDE (PVC) PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR POLYVINYL CHLORIDE (PVC) PIPE:

1. MATERIALS - PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D-1785 OR ASTM D-2241.

2. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATER TIGHT.

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 STRUCTURAL BACKFILL AS SHOWN ABOVE.

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

VI. CONCRETE CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION, STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 608, MIX NO. 3.

IX. CARE OF WATER DURING CONSTRUCTION

ALL WORK ON THE 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...

X. STABILIZATION

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SLIGHTLY UNIFORM CONDITION. ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPOIL AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING...

VII. EROSION AND SEDIMENT CONTROL

CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES TO BE EMPLOYED DURING THE CONSTRUCTION PROCESS.

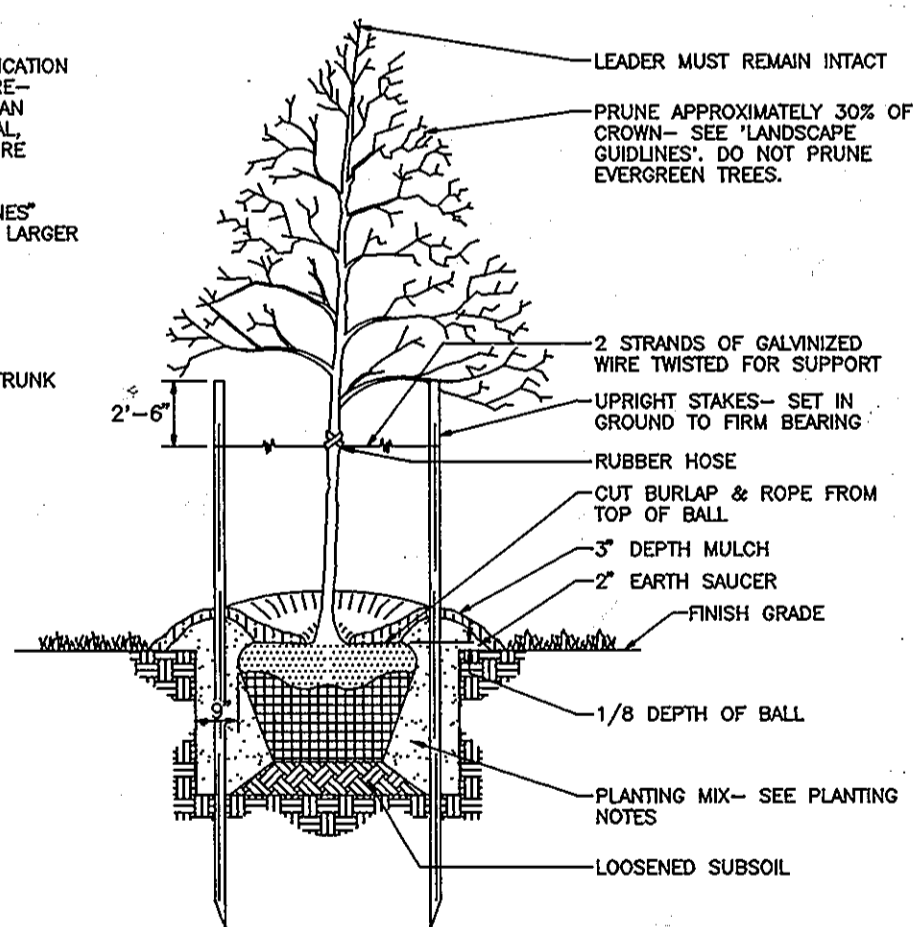
VIII. ROCK RIPRAP

ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION, STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, AND MATERIALS, SECTION 608, MIX NO. 3

BULK SPECIFIC GRAVITY AND ABSORPTION SHALL BE DETERMINED ACCORDING TO ASTM C 127. THE TEST FOR SOUNDNESS SHALL BE PERFORMED ACCORDING TO ASTM C 88. THE RIPRAP SHALL BE PLACED TO THE REQUIRED THICKNESS IN ONE OPERATION...

NOTES

- 1. SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
2. SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
3. PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
4. KEEP MULCH 1" FROM TRUNK

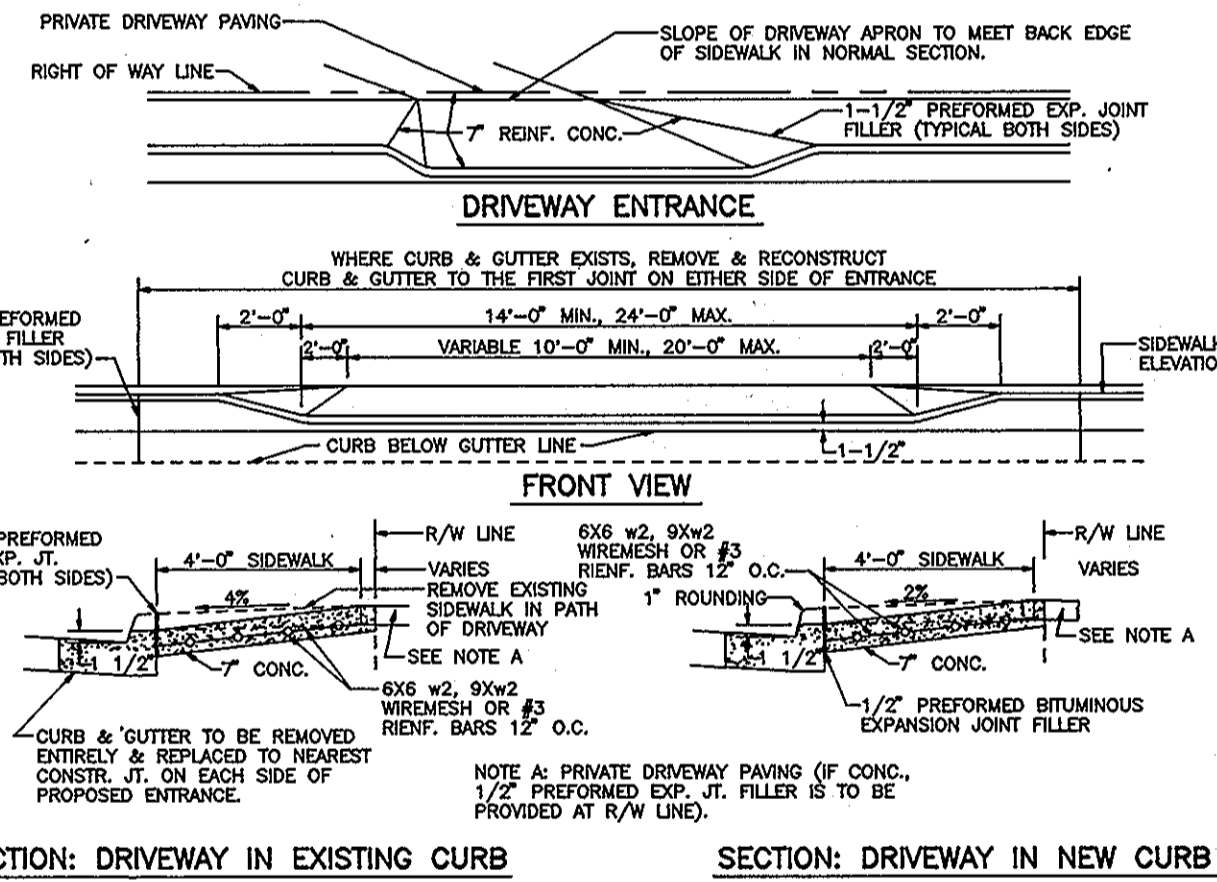


TREE PLANTING AND STAKING

DICIDUOUS AN EVERGREEN TREES UP TO 2-1/2" CALIPER NOT TO SCALE

SEDIMENT CONTROL NOTES

- 1. All Grading Permits shall be obtained prior to the starting of any Grading work.
2. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction (892-2437).
3. All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
4. Following initial site disturbance or redistribution, permanent or temporary stabilization shall be completed within: (a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes, and all slopes greater than 3:1; (b) 14 days as to all other disturbed or graded areas on the project site.
5. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, Storm Drainage, of the Howard County Design Manual.
6. All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50), and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow proper germination and establishment of grasses.
7. 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.
8. Site Analysis
Total area of site R/W and easements: 97.0 acres
Area disturbed: 35.2 acres
Area to be roofed or paved: 1.5 acres
Area to be vegetatively stabilized: 30.3 acres
Total out: 128,000 cu. yds.
Total fill: 128,000 cu. yds.
Offsite waste/borrow area location: To be determined by contractor, with pre-approval of the Sediment Control Inspector.
9. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
10. Additional sediment controls must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
11. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
12. See Sheet No. 5 for additional Sediment and Erosion Control Notes and Details.
* EARTHWORK QUANTITIES ARE NOT FOR BIDDING OR PAYMENT PURPOSES.



RESIDENTIAL DRIVEWAY ENTRANCE

CLOSED SECTION WITH STANDARD 7" COMBINATION CURB AND GUTTER AND SIDEWALK ABUTTING THE CURB HOWARD COUNTY STANDARD R-6.02 NOT TO SCALE

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent, long-lived vegetative cover is needed.
Seeded Preparation: Loosen upper 3 inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened.
Soil Amendments: Use one of the following schedules:
1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq. ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.) before seeding. Harrow or disc into upper 3 inches of soil. At time of seeding apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs./1000 sq. ft.).
2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil.
Seeding: For the periods March 1 thru April 30 and August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs./1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. of Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq. ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option 1 - 2 tons per acre of well-anchored straw mulch, and seed as soon as possible in the spring. Option 2 - Use sod. Option 3 - Seed with 60 lbs. per acre Kentucky 31 Tall Fescue, and mulch with 2 tons per acre well anchored straw.
Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of un-rotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal./1000 sq. ft.) for anchoring.
Maintenance: Inspect all seeded areas, and make needed repairs, replacements, and reseedings.

TEMPORARY SEEDING

Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.
Seeded preparation: Loosen upper three inches of soil by raking, discing, or other acceptable means before seeding, if not previously loosened.
Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.).
Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual ryegrass (3.2 lbs./1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq. ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well-anchored straw mulch, and seed as soon as possible in the spring, or use sod.
Mulching: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of un-rotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gal. per acre (8 gal./1000 sq. ft.) for anchoring.
Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

OWNER/DEVELOPER
108 LINDEN PARTNERSHIP
C/O WIN KELLY CHEVROLET
12205 HALL SHOP ROAD
CLARKSVILLE, MARYLAND, 21029

OWNERS

- SANDY SPRING BANK
17801 GEORGIA AVENUE
OLNEY, MARYLAND 20832
JAMES CHRISTOPHER HOLWECK
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044
EDMOND & ETTA JANE HU
6420 LOCHRIDGE ROAD
COLUMBIA, MARYLAND 21044

Table with columns: NO., REVISION, DATE

HOLWECK SUBDIVISION STORMWATER MANAGEMENT AND SEEDING NOTES

A RESUBDIVISION OF THE R. JOHNSTON SUBDIVISION LOT 2 & LOT 4, HOLWECK PROPERTY LOT 2, PARCEL 195 AND 256
FAX MAP #34
5TH ELECTION DISTRICT
REFERENCE: SP 93-14, WP 93-90 AND ZB947M

MARKS-VOGEL ASSOCIATES, INC.

ENGINEERS - SURVEYORS - PLANNERS

3691 PARK AVENUE, SUITE 101
ELLIOTT CITY, MARYLAND 21048

TELEPHONE: (410) 481-8888
FAX: (410) 465-9868



DESIGN BY: R.H.V.
DRAWN BY: D.G.H.
CHECKED BY: R.H.V.
DATE: OCTOBER, 1993
SCALE: AS SHOWN
W.O. NO.: 93-101

20 SHEET OF 20

DEVELOPER'S CERTIFICATE

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 THE DEPARTMENT OF AN 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.

Signature of Developer, Date: 12/21/93

ENGINEERS CERTIFICATE

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.

Signature of Engineer, Date: 12/21/93

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

Signature of Engineer, Date: 12/21/93

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

Signature of Engineer, Date: 12/28/93

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature of Planning and Zoning Official, Date: 11/13/94

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Signature of Public Works Official, Date: 11/6/94

Signature of Public Works Official, Date: 11/10/94

1891

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