

WATER AND SEWER CODE
 WATER NO. F04, E16
 SEWER NO. 1400520

VICINITY MAP
 SCALE: 1" = 600'

CONTRACT NO. 14-1924-D

BRITTANY MANOR

WATER AND SEWER MAIN EXTENSIONS

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

- GENERAL NOTES**
- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
 - ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
 - ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
 - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
 - CLEAR ALL UTILITIES BY A MINIMUM OF 6" CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED TO THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
 - FOR DETAILS NOT SHOWN ON THE DRAWING, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
 - WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL \oplus AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
 - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - STATE HIGHWAY ADMINISTRATION - 831-8533
 - BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES 861-2585
 - BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL - 234-6621
 - BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING - 288-9013
 - MISS UTILITY - 1-859-0100
 - COLONIAL PIPELINE CO. - 785-1390
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 992-2366
 - TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
 - CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
 - ALL WATER MAINS TO BE D.I.P. UNLESS OTHERWISE NOTED.
 - TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1 1/2" COVER UNLESS OTHERWISE NOTED.
 - VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
 - ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
 - FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTIONS 1008 AND 1009 OF THE STANDARD SPECIFICATIONS.
 - THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
 - ALL SEWER MAINS SHALL BE C.S.P., H.C.S.P., V.C.P.X., A.C.P. CLASS 2400 OR P.V.C. UNLESS OTHERWISE NOTED.
 - THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
 - ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
 - MANHOLES SHOWN WITH 12" AND 16" WALLS ARE BRICK MANHOLES ONLY.
 - MANHOLES DESIGNATED "M.T." IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G 552 WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
 - HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.
 - ALL WATER CONNECTIONS SHALL BE SET FOR INSIDE METER GETTING.
 - ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-103 DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.

NOTES
 SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND WITH ROAD CONSTRUCTION PLANS F-89-69.

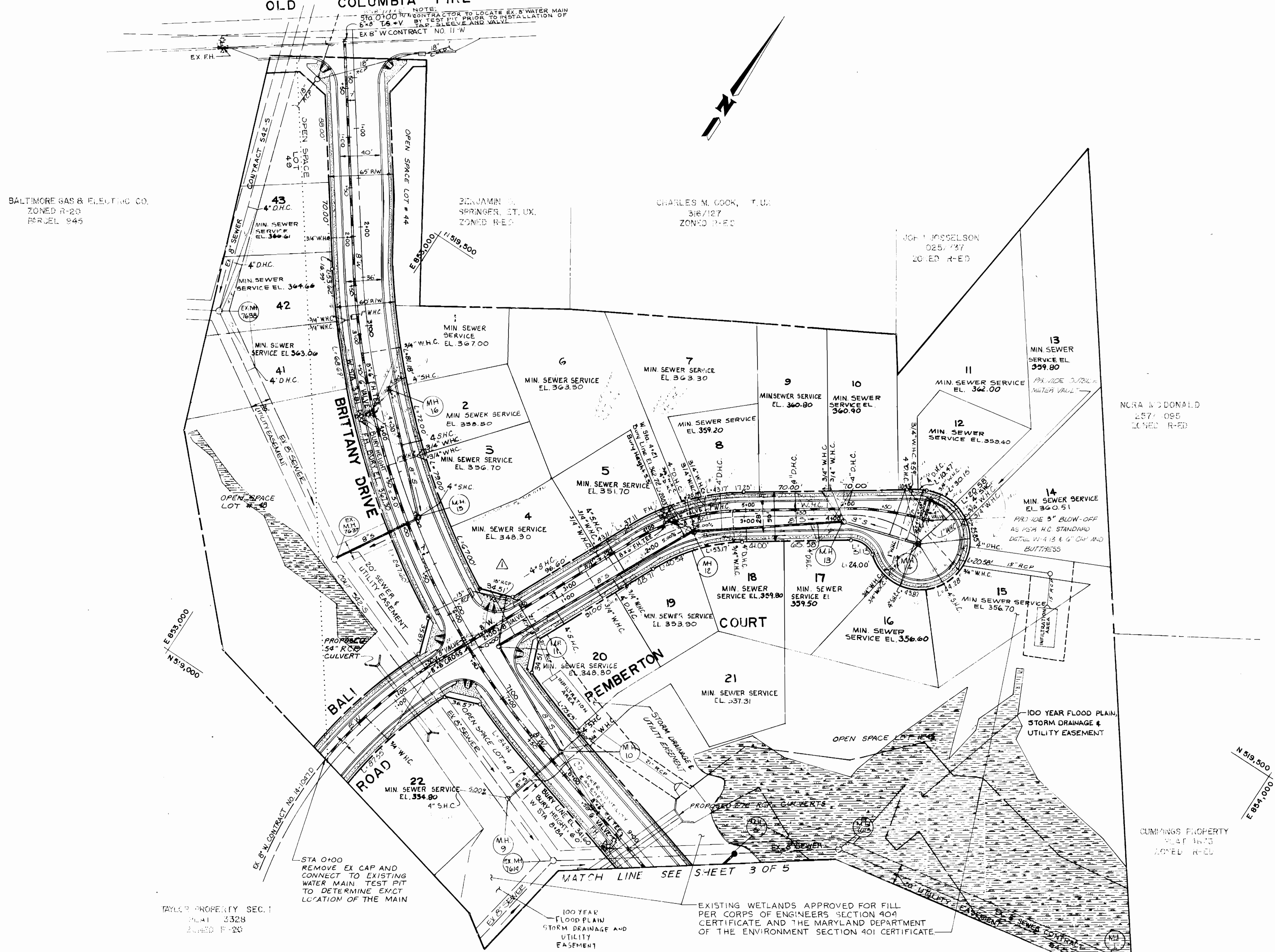
REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.
[Signature] 4/6/87
 U.S. SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature] 4/25/89
 HOWARD S.C.D. DATE

QUANTITIES			
ITEM	QUANTITY	AS-BUILT	SUPPLIER
8" W.T.S. & V	1	1.00	Griffin Pipe
8" WATER	2276 LF	2276 LF	"
8" WATER	242 LF	242 LF	"
8" BLOWOFFS	1	1.00	"
8" VALVES	3	3.00	Pratt & Blount
6" VALVES (EXCL. F.H.V.)	-	-	"
1" W.H.C.	326 LF	326 LF	Howell
3/4" W.H.C.	690 LF	690 LF	"
FIRE HYDRANTS	4	4.00	"
MANHOLES	16	16.00	Howell
8" SEWER	1963 LF	1963 LF	Howell
6" S.H.C.	1335 LF	1335 LF	Howell
6" 1/2" BEND	1	1.00	"
4" D.H.C.	71 LF	71 LF	"
6" REDUCER	1	1.00	Griffin Pipe

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works: <i>[Signature]</i> 4/27/89 Chief, Bureau of Engineering: <i>[Signature]</i> 4/27/89 Chief, Bureau of Utilities: <i>[Signature]</i> 4-25-89 Chief, Land Development Division: <i>[Signature]</i> 4/27/89	JOHN E. HARMS JR. AND ASSOCIATES INC. CONSULTING ENGINEERS - PLANNERS - SURVEYORS 2 CENTRE PARK 8816 CENTRE PK DR. SUITE 208 COLUMBIA, MARYLAND 21045 TELEPHONE (301) 740-5200	DES: T.A.B. DRN: J.T. CHK: K.B.C. DATE: 10/88	BY: _____ NO: _____ REVISION: _____ DATE: _____	BRITTANY MANOR VICINITY MAP AND GENERAL NOTES CONTRACT NO. 14-1924-D 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 1 OF 5
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OLD COLUMBIA PIKE



No.	Ad. Sta.	Dist. Off C.	Rim Elev.	Slope	Cross Slope	Type of Manhole
9†	N/A	N/A	337.5	0%	0%	Standard Brick Manhole Std. Detail G.5.01
16	3+65	Brittany Dr.	367.65	-3.94%	3.0%	Terminal Manhole Std. Detail G.5.01
15	5+00	Brittany Dr.	361.23	-5.88%	3.0%	Std. Precast Manhole Std. Detail G.5.11
11	6+55	Brittany Dr.	350.46	-6.30%	3.0%	Standard Precast Manhole Std. Detail G.5.11
12	2+48	Pemberton Ct.	363.78	+6.45%	3.0%	Standard Brick Manhole Std. Detail G.5.01
13	4+02	Pemberton Ct.	367.63	-1.35%	3.0%	Standard Brick Manhole Std. Detail G.5.01
14	4+85.67	Pemberton Ct.	366.56	1.50%	0.67%	Terminal Manhole Manhole Std. Detail G.5.01
10	7+80	Brittany Dr.	344.43	-3.99%	3.0%	Std. Brick Manhole Std. Detail G.5.01

† See Plan Sheet for Exact Location.
 † Watertight Manhole See Standard G.5.52.

SEWER HOUSE CONNECTIONS
 BRITTANY MANOR
 BRITANNY PROPERTY LINE

STATION	LOT	ELEV
Manhole #15 to Manhole #16		
MH #15	3	353.18
0+74	2	355.00
MH #16	1	362.00
Manhole #11 to Manhole #12		
MH #11	4	343.96
0+69	20	345.27
1+34	19	350.14
1+49	5	348.13
2+19	6	354.50
Manhole #12 to Manhole #13		
MH #12	7	356.40
0+31	8	357.01
0+51	18	356.96
1+04	9	358.36
1+25	17	356.81
Manhole #13 to Manhole #14		
MH #13	10	357.36
0+48	11	357.41
0+68	12	356.06
0+74	16	354.60
MH #14	14	357.96
MH #14	15	353.46
MH #14	13	355.25
Ex Manhole #7614 to Ex Manhole #7637		
MH #9	22	329.90
Ex Manhole #7637 to Ex Manhole #7638		
2+08	41	360.26
Ex Manhole #7614 to Ex Manhole #7637		
0+50	42	361.66
1+10	43	363.91
Manhole #10		
MH #10	21	331.71

† Based on 10' Length of Pipe

BALTIMORE GAS & ELECTRIC CO.
 ZONED R-2B
 PARCEL 945

CHARLES M. COOK, T.U.
 316/127
 ZONED R-2B

JOE J. JOSSIELSON
 025/737
 ZONED R-2B

NORA MCDONALD
 257/085
 ZONED R-2B

CUMMINGS PROPERTY
 ZONED R-2B

TAYLOR PROPERTY SEC. 1
 PLAT 332B
 ZONED R-2B

EXISTING WETLANDS APPROVED FOR FILL
 PER CORPS OF ENGINEERS SECTION 404
 CERTIFICATE AND THE MARYLAND DEPARTMENT
 OF THE ENVIRONMENT SECTION 401 CERTIFICATE.

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

John O'Neil 4/22/89
 DIRECTOR OF PUBLIC WORKS DATE

Ruth M. Beniger 4/25/89
 CHIEF, BUREAU OF UTILITIES DATE

JOHN E. HARMS JR.
 AND ASSOCIATES INC.
 CONSULTING ENGINEERS & SURVEYORS

2 CENTRE PARK BRIA CENTRE PK DR. SUITE 208
 COLUMBIA, MARYLAND 21045
 TELEPHONE (301) 740-5200

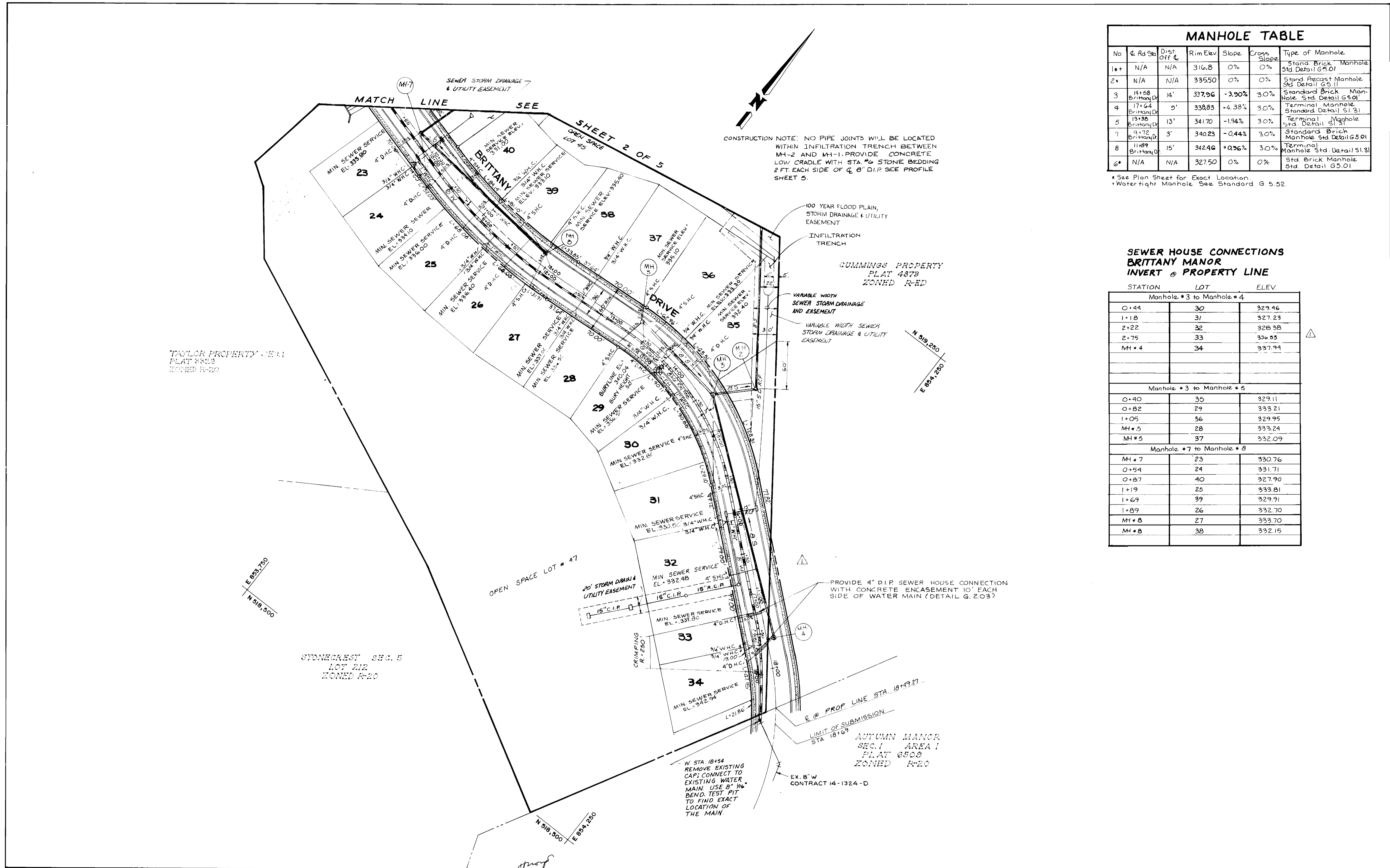
DES: TAB
 DRN: MLM
 CHK: KBC
 DATE: 10/88

BY	NO	REVISION	DATE
		REV. FRONT FOOT DIMENSIONS AS PER HOWARD COUNTY COMMENTS	8/30/89
		SEE REVISED #	7/4/89

600' SCALE MAP NO. _____ BLOCK NO. _____

BRITANNY MANOR
 PLAN - WATER & SEWER
 CONTRACT NO 14-1924-D
 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: 1"=50'
 SHEET 2 OF 5



MANHOLE TABLE						
No	℄ Rd Sta	Dist. Off ℄	Rim Elev	Slope	Cross Slope	Type of Manhole
1*	N/A	N/A	316.8	0%	0%	Stand. Brick Manhole Std. Detail G.5.01
2*	N/A	N/A	335.50	0%	0%	Stand. Precast Manhole Std. Detail G.5.11
3	14+58	14'	337.96	-3.90%	3.0%	Standard Brick Manhole Std. Detail G.5.01
4	17+64	9'	338.83	+4.38%	3.0%	Terminal Manhole Standard Detail S1.31
5	13+38	13'	341.70	-1.94%	3.0%	Terminal Manhole Std. Detail S1.31
7	9+72	3'	340.23	-0.44%	3.0%	Standard Brick Manhole Std. Detail G.5.01
8	11+89	15'	342.46	+0.96%	3.0%	Terminal Manhole Std. Detail S1.31
6*	N/A	N/A	327.50	0%	0%	Std. Brick Manhole Std. Detail G.5.01

* See Plan Sheet for Exact Location.
 * Watertight Manhole See Standard G.5.52.

**SEWER HOUSE CONNECTIONS
 BRITTANY MANOR
 INVERT @ PROPERTY LINE**

STATION	LOT	ELEV.
Manhole #3 to Manhole #4		
0+44	30	329.46
1+18	31	327.23
2+22	32	328.38
2+75	33	336.55
MH #4	34	337.94
Manhole #3 to Manhole #5		
0+40	35	329.11
0+82	29	333.21
1+05	36	329.95
MH #5	28	333.24
MH #5	37	332.09
Manhole #7 to Manhole #8		
MH #7	23	330.76
0+54	24	331.71
0+87	40	327.90
1+19	25	333.81
1+69	39	329.91
1+89	26	332.70
MH #8	27	333.70
MH #8	38	332.15

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

John O'Hara 4/28/89
Robert Deinger 4-25-89

John E. Harms Jr. 4/17/89
Paul J. ... 4/27/89

JOHN E. HARMS JR.
 AND ASSOCIATES INC.
 PLANNERS

2 CENTRE PARK 8818 CENTRE PK. DR. SUITE 208
 COLUMBIA, MARYLAND 21045
 TELEPHONE (301) 740-5200

DES. J.A.B.			
DRN. J.J.T.			
CHK. K.B.C.	CAG 2	REL. FRONT HOOT DIMENSIONS AS PER HOWARD COUNTY COMMENTS	4/30/89
DATE 10/88	HT	SEE REVISED # 2	7/2/89

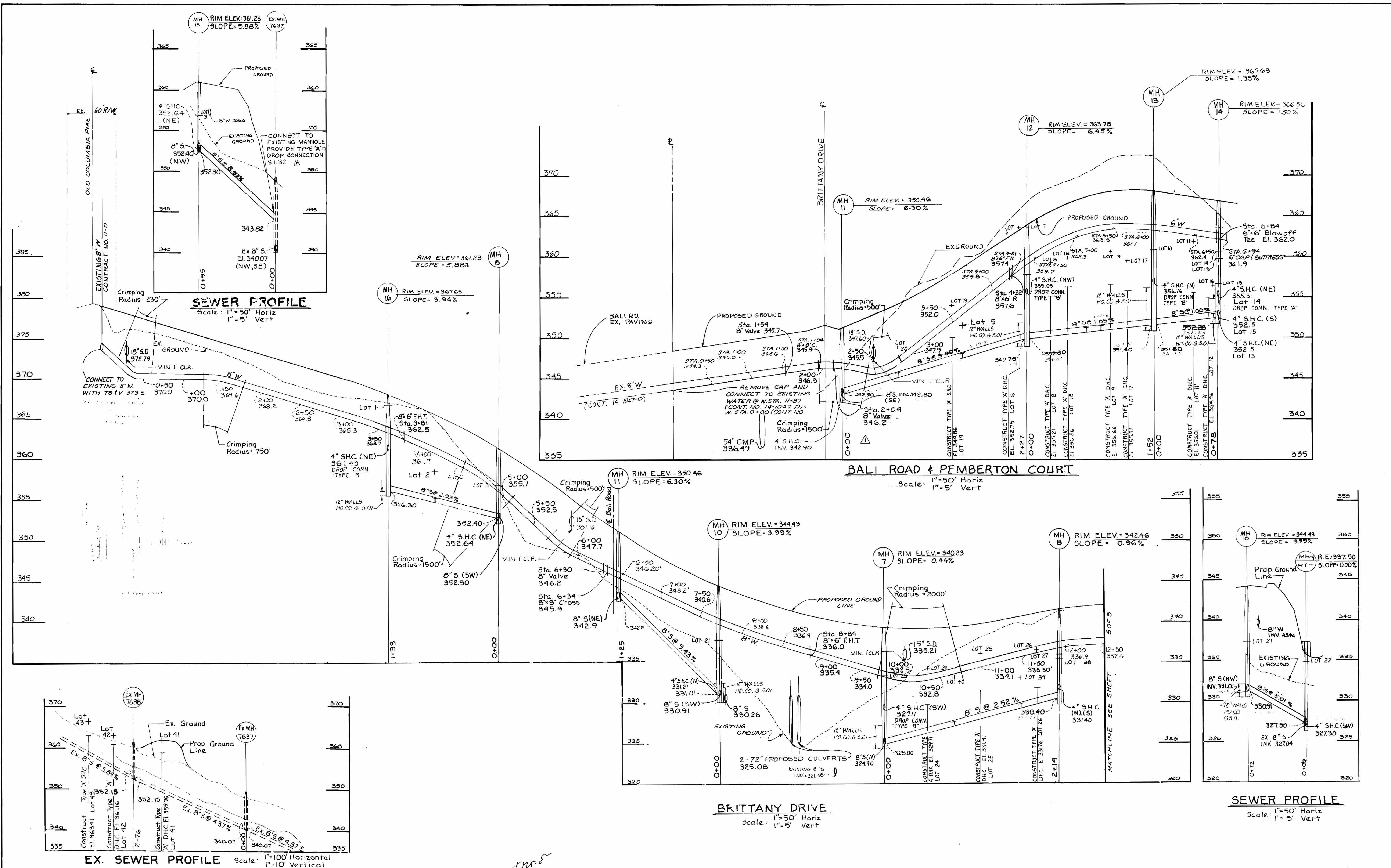
BRITTANY MANOR

PLAN- WATER & SEWER
 CONTRACT NO. 14-1924-D

2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE 1" = 50'

SHEET 3 OF 5



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John O'Hara 4/28/89
DIRECTOR OF PUBLIC WORKS DATE

Robert B. ... 4-25-89
CHIEF, BUREAU OF UTILITIES DATE

... 4/1/89
CHIEF, LAND DEVELOPMENT DIVISION DATE

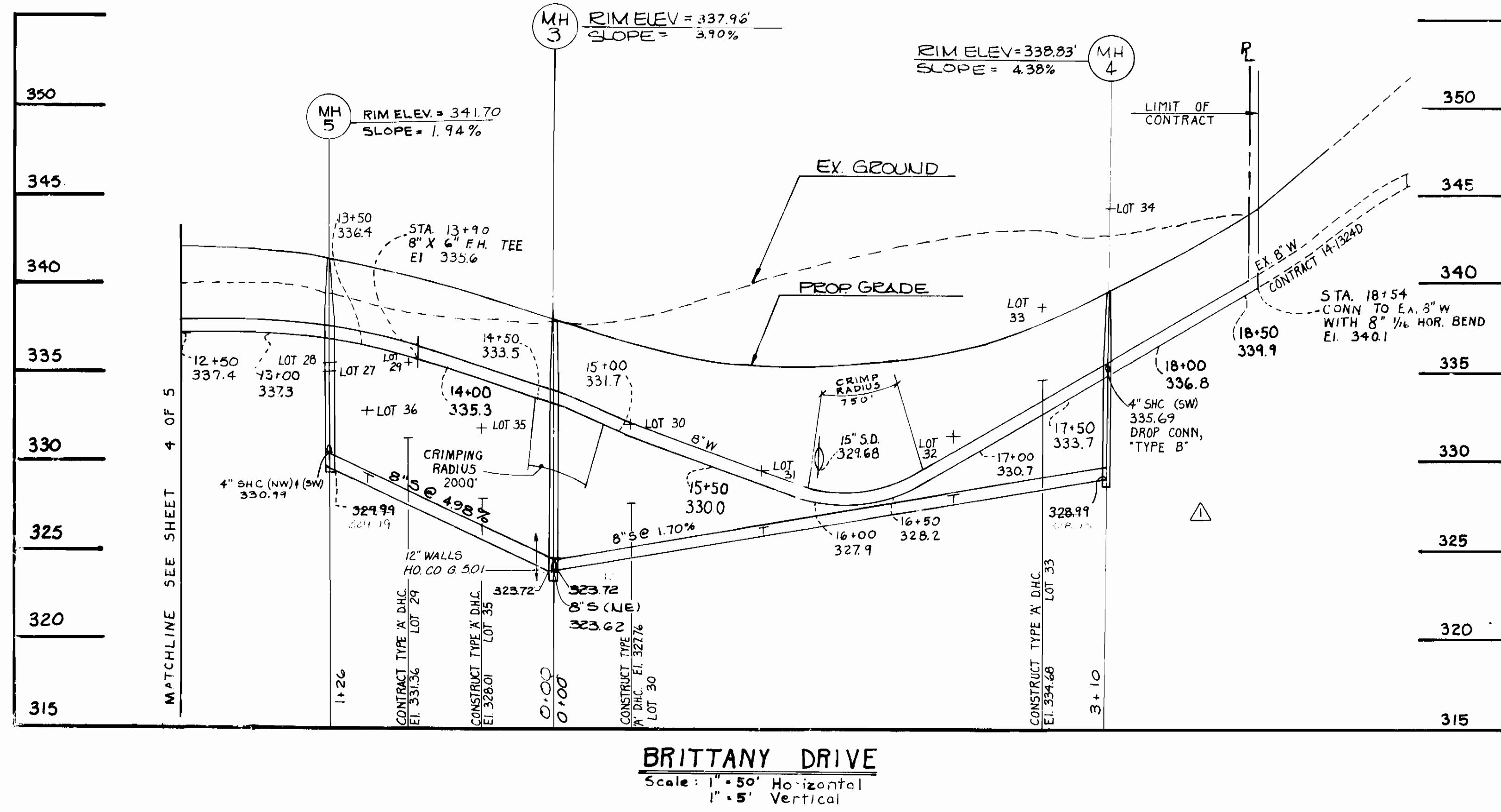
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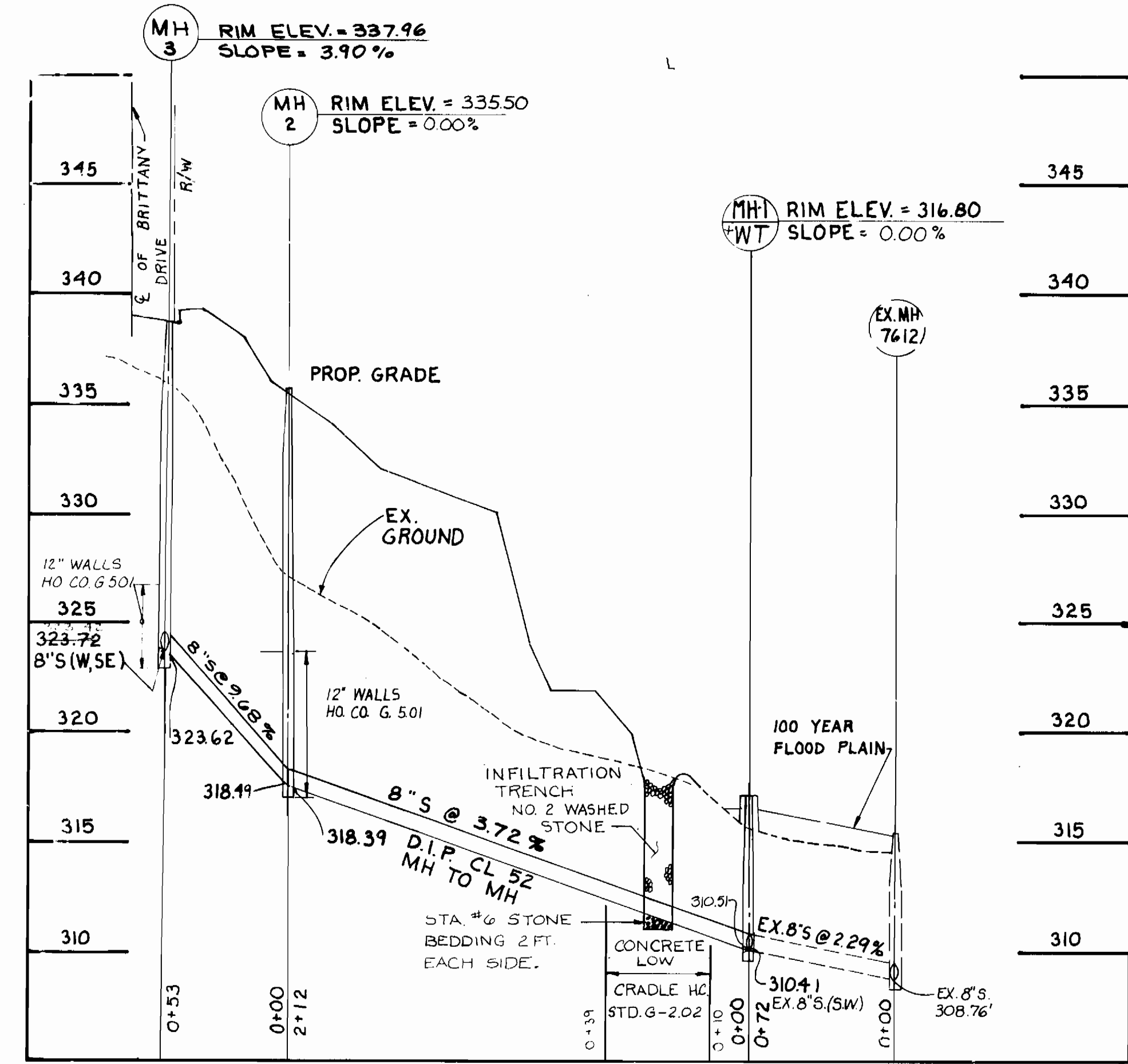
DES: J.A.B.			
DRN: D.E.W.			
CHK: K.B.C.	SEE REVISED *A	7/18/89	
DATE: 10/88	SEE REVISED *A	7/16/89	
BY: NO	REVISION	DATE	600 SCALE MAP NO. 24 BLOCK NO.

BRITANNY MANOR
PROFILE - WATER & SEWER
CONTRACT NO 14-1924-D
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

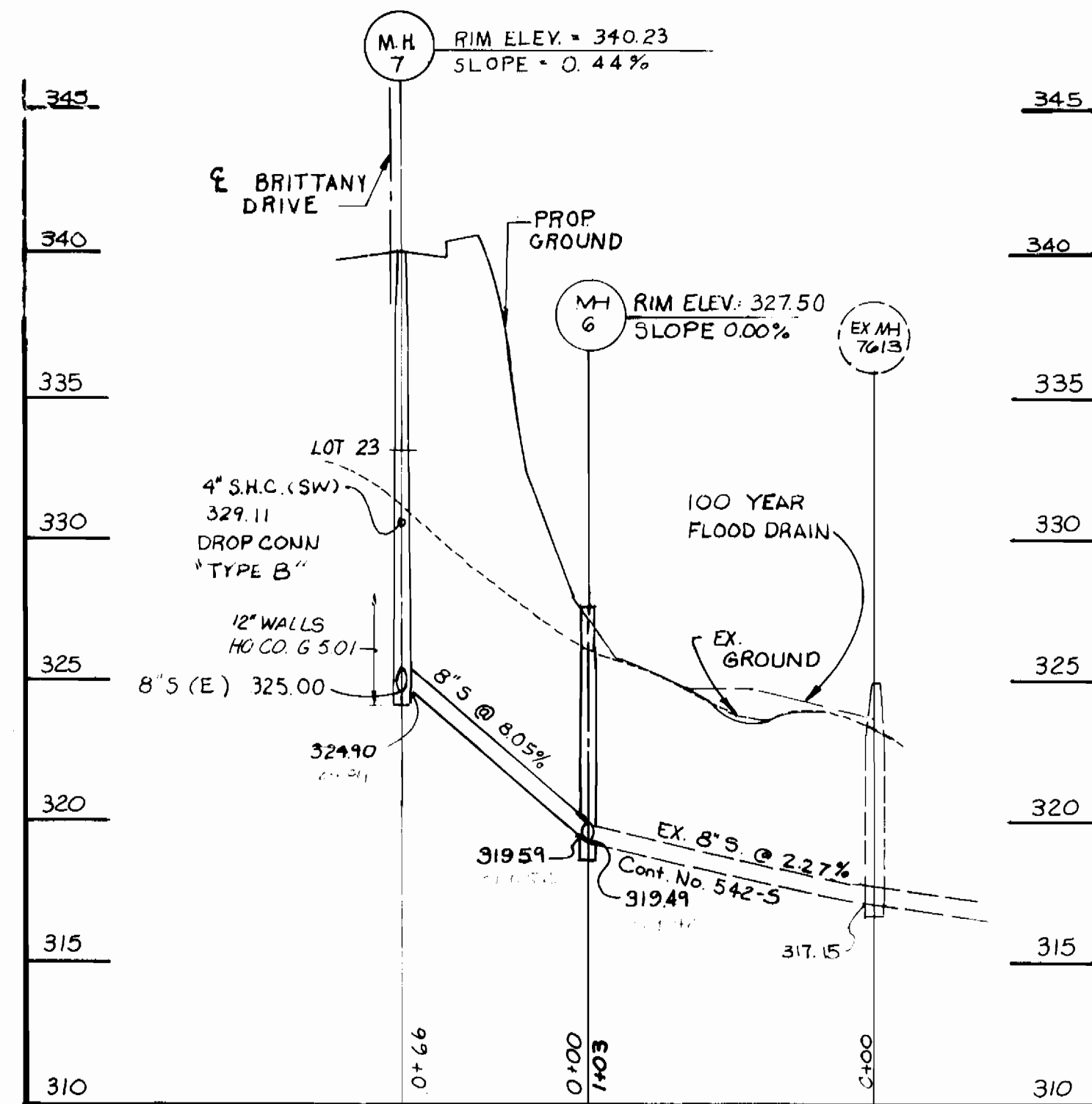
SCALE: H: 1" = 50'
V: 1" = 5'
SHEET 4 OF 5



BRITTANY DRIVE
 Scale: 1" = 50' Horizontal
 1" = 5' Vertical



SEWER PROFILE
 Scale: 1" = 50' Horizontal
 1" = 5' Vertical



SEWER PROFILE
 Scale: 1" = 50' Horizontal
 1" = 5' Vertical

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 4/28/89 DATE		JOHN E. HARMS JR. AND ASSOCIATES INC. CONSULTING ENGINEERS, PLANNERS - SURVEYORS 2 CENTRE PARK 8818 CENTRE PK DR SUITE 208 COLUMBIA, MARYLAND 21045 TELEPHONE (301) 740-5200 4/27/89 DATE		DES: J.B. DRN: R.E. CHK: K.B.C. DATE: 10/88	BY: [] NO: [] REVISION: [] DATE: 7/1/89	600 SCALE MAP NO. 24 BLOCK NO. []	BRITTANY MANOR PROFILE, WATER & SEWER CONTRACT NO 14-IS24-D 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE: H: 1" = 50' V: 1" = 5' SHEET: 5 OF 5
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