

**STRAW BALE DIKE**

- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 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 PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE 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.

QUANTITIES			
ITEM	EST'D	AS-BUILT	SUPPLIER
8" SEWER	953 LF.		
8" S (D.I.P.)	80 LF.		
MANHOLES	8 EACH		
6" SHC	425 LF.		
8" WATER	456 LF.		
6" WATER	79 LF.		
F.H.W/6" VALVE	2 EACH		
1" WHC	130 LF.		
3/4" WHC	393 LF.		
8"x6" REDUCER	1 EACH		

S.H.C. INVERT ELEVATIONS AT PROPERTY LINE		
STATION	LOT	ELEVATION
MH 701 TO MH 701A		
0+50 LT.	102	376.20
0+85 RT.	103	384.70
MH 702 TO MH 703		
0+702 LT.	97	389.00
0+702 LT.	96	392.64
0+58 LT.	95	393.64
1+29 RT.	104	393.86
0+703 LT.	94	394.66
MH 703 TO MH 704		
0+85 RT.	105	390.44
1+25 LT.	93	395.64
0+704 LT.	92	396.68
MH 705 TO MH 706		
0+55 RT.	101	372.21
1+50 RT.	100	375.95
0+706 RT.	98	383.28
0+706	99	383.28

MANHOLE TABULATION				
NO	STATION	DISTANCE	RIM	SLOPE
700 SET 1'-6" ABOVE EX. GROUND				
701 SET 1'-6" ABOVE EX. GROUND				
702	13+52	7' LT.	402.12	-1.00%
703	14+27	6' LT.	403.64	-1.00%
704	12+29	7' LT.	405.66	-1.00%
705		RIM ELEV:	376.0 *	
706		RIM ELEV:	388.4 *	
701A SET 1'-6" ABOVE EX. GROUND				

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN F 89-41 REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

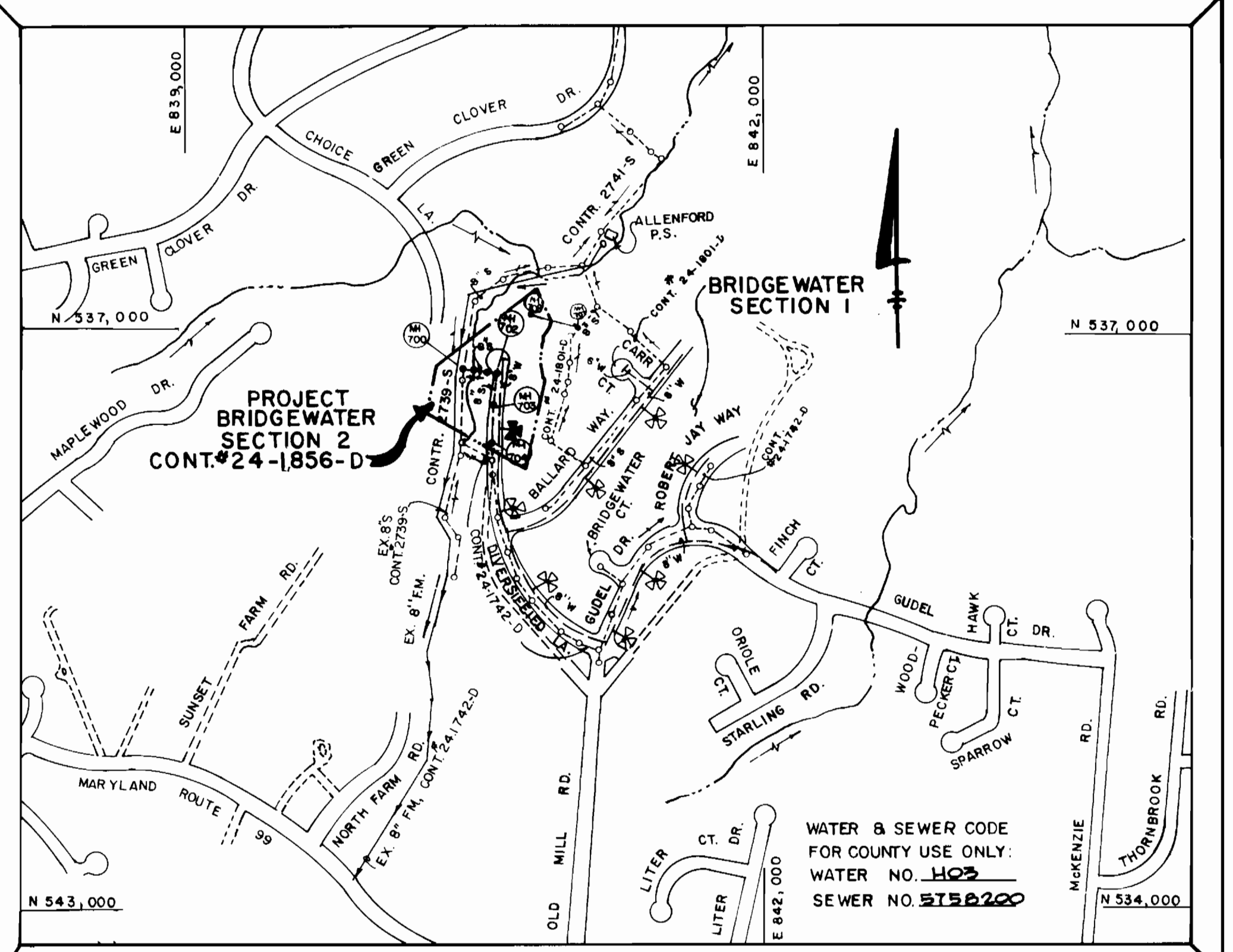
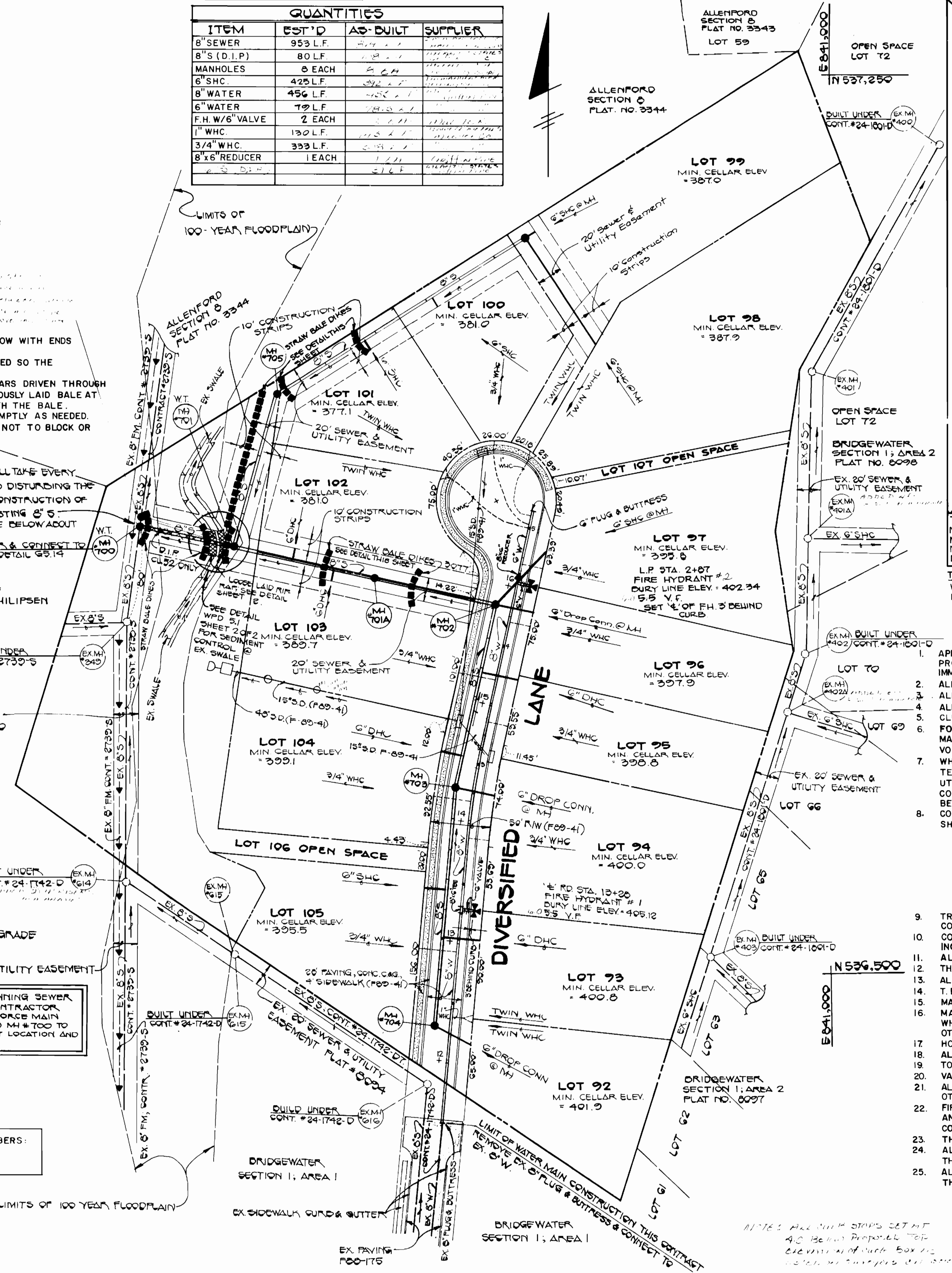
*James M. Fisher* 12-5-88  
U.S. SOIL CONSERVATION SERVICE DATE

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

*Stephen L. Fisher* 12-2-88  
HOWARD SOIL CONSERVATION DISTRICT DATE

NOTE: PRIOR TO BEGINNING SEWER MAIN CONSTRUCTION, CONTRACTOR SHALL TEST PIT EX 8" FORCE MAIN ADJACENT TO PROPOSED MH#700 TO DETERMINE THE AS-BUILT LOCATION AND AS-BUILT INVERT.

PLAN REFERENCE NUMBERS:  
P 88-81  
F 89-41



TYPE OF BUILDINGS: RESIDENTIAL  
NUMBER OF LOTS: 16 (14 BUILDABLE)  
NO. OF WATER HOUSE CONNECTIONS: 14  
NO. OF SEWER HOUSE CONNECTIONS: 14  
DRAINAGE AREA: LITTLE PATUXENT

**VICINITY MAP**  
SCALE: 1"=600'

TREATMENT PLANT: PATAPSCO  
WASTEWATER TREATMENT PLANT VIA THE ROUTE 108 PUMPING STATION

**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. DATUM.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6'.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. 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 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 VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
  - C & B TELEPHONE COMPANY - 1-800-257-7777
  - STATE HIGHWAY ADMINISTRATION - 531-5533
  - BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES 850-4620
  - BALTIMORE GAS & ELECTRIC CO. - UNDER GROUND DAMAGE CONTROL-859-9004
  - BALTIMORE GAS & ELECTRIC CO. - TROUBLE SHOOTING-298-9001
  - MISS UTILITY-1-559-0100
  - COLONIAL PIPELINE CO.-795-1390
  - 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 TREE, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- ALL SEWER MAINS SHALL BE C.S.P.X., R.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.
- T.B. DENOTES TEST BORING.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G.5.52 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 THE CELLAR CAN NOT BE SERVED.
- ALL WATER MAINS TO BE D.I.P., CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2" 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 SECTION 1003 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATION C-153: DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER & OTHER LIQUIDS.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James M. Fisher* 12-14-88  
DIRECTOR OF PUBLIC WORKS DATE

*Robert M. Bennett* 12-13-88  
CHIEF, BUREAU OF UTILITIES DATE

*William D. Kelly* 12-14-88  
CHIEF, BUREAU OF ENGINEERING DATE

*Paul J. ...* 12/14/88  
CHIEF, LAND DEVELOPMENT DIVISION DATE

FISHER, COLLINS, AND CARTER, INC. # 9757

CONSULTING ENGINEERS AND LAND SURVEYORS  
8388 COURT AVENUE  
ELLCOTT CITY, MARYLAND 21043

*Terrell A. Fisher*  
TERRELL A. FISHER

DES: G.W.			
DRN: G.W.			
CHK: P.W.K.			
DATE:	BY NO.	REVISION	DATE
		Revise Sewer Main Alignment	4/6/89

PLAN  
WATER & SEWER MAINS

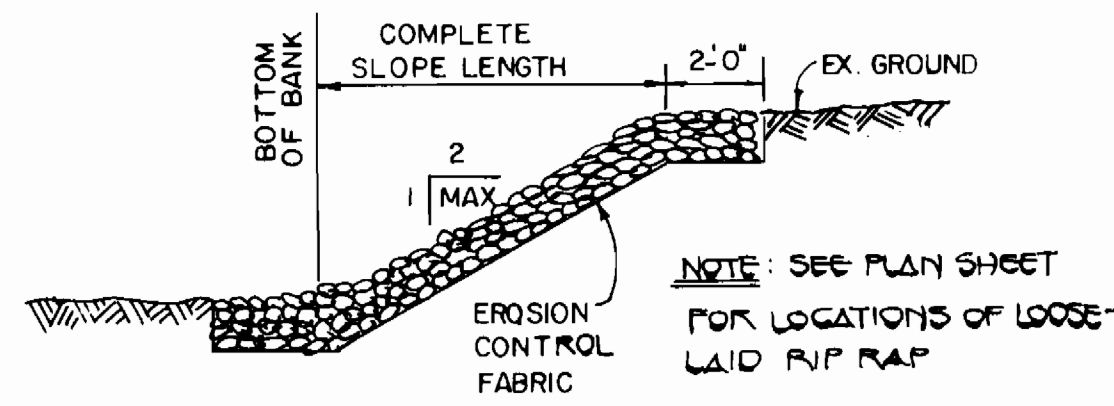
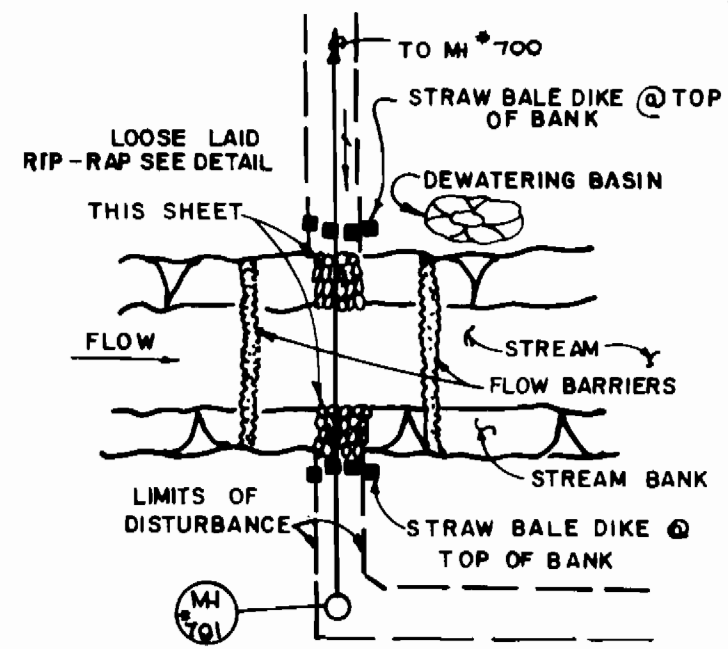
600 SCALE MAP NO. 17 BLOCK NO.

**BRIDGEWATER SECTION 2**

CONTRACT NO. 24-1856-D  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

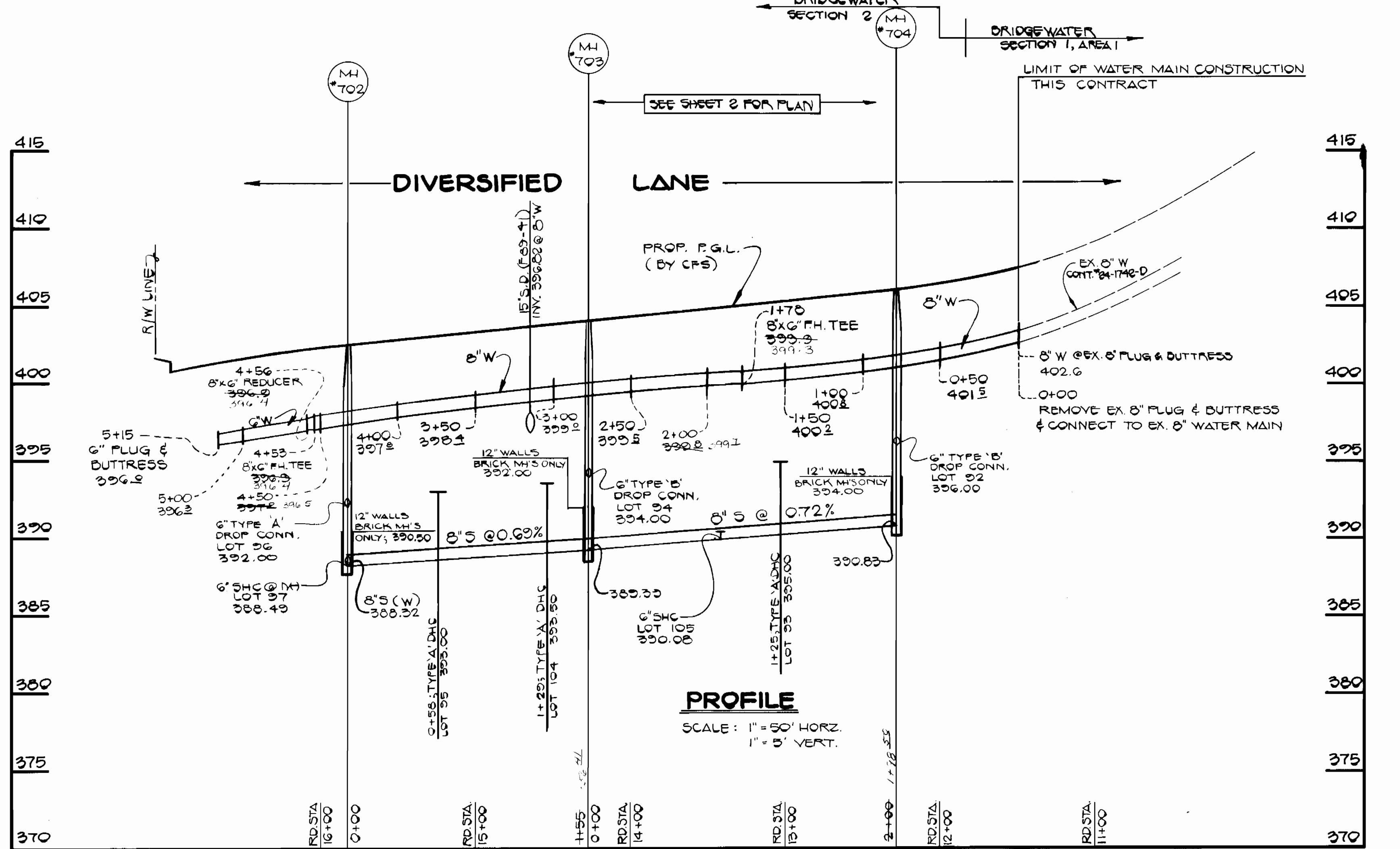
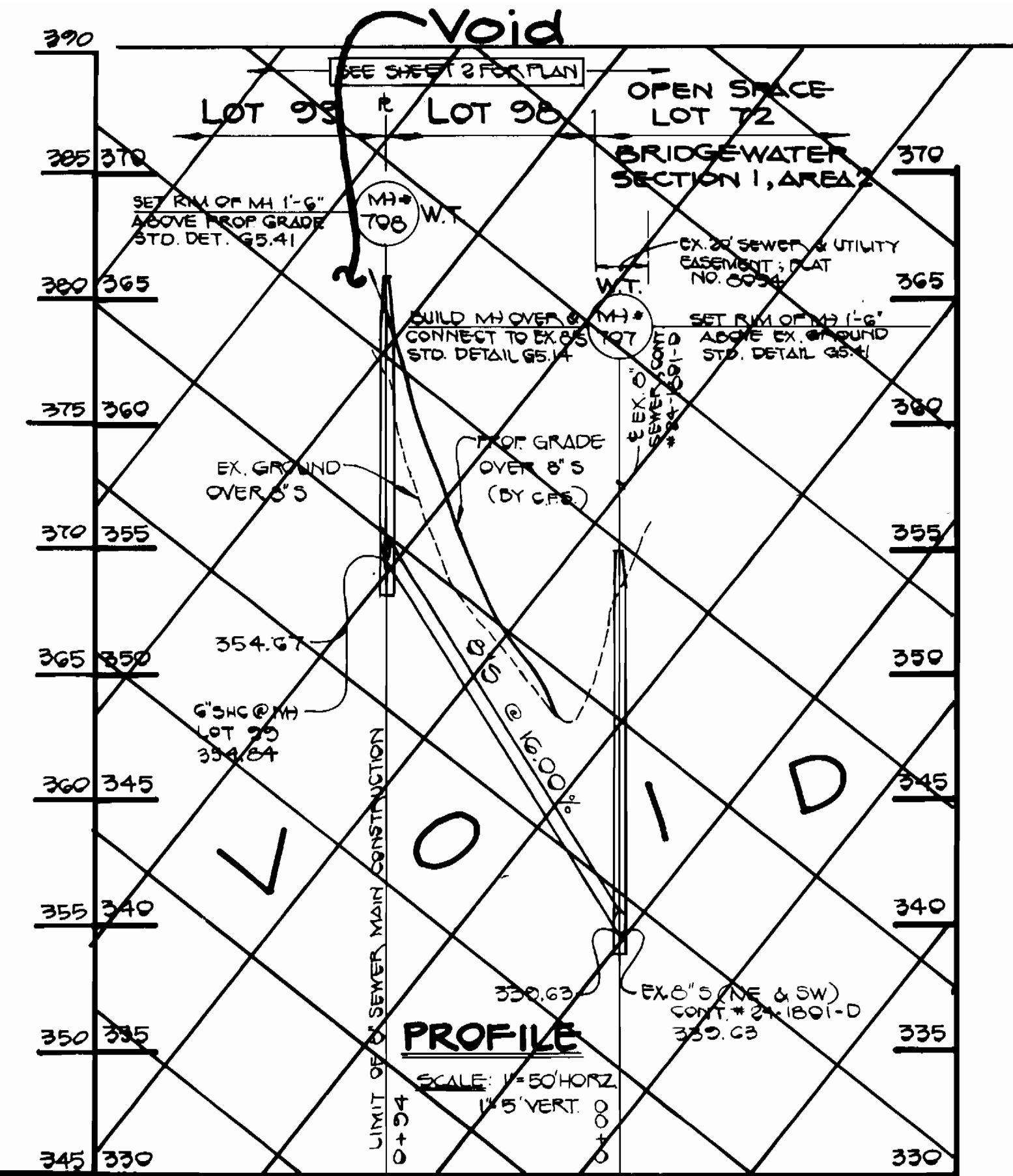
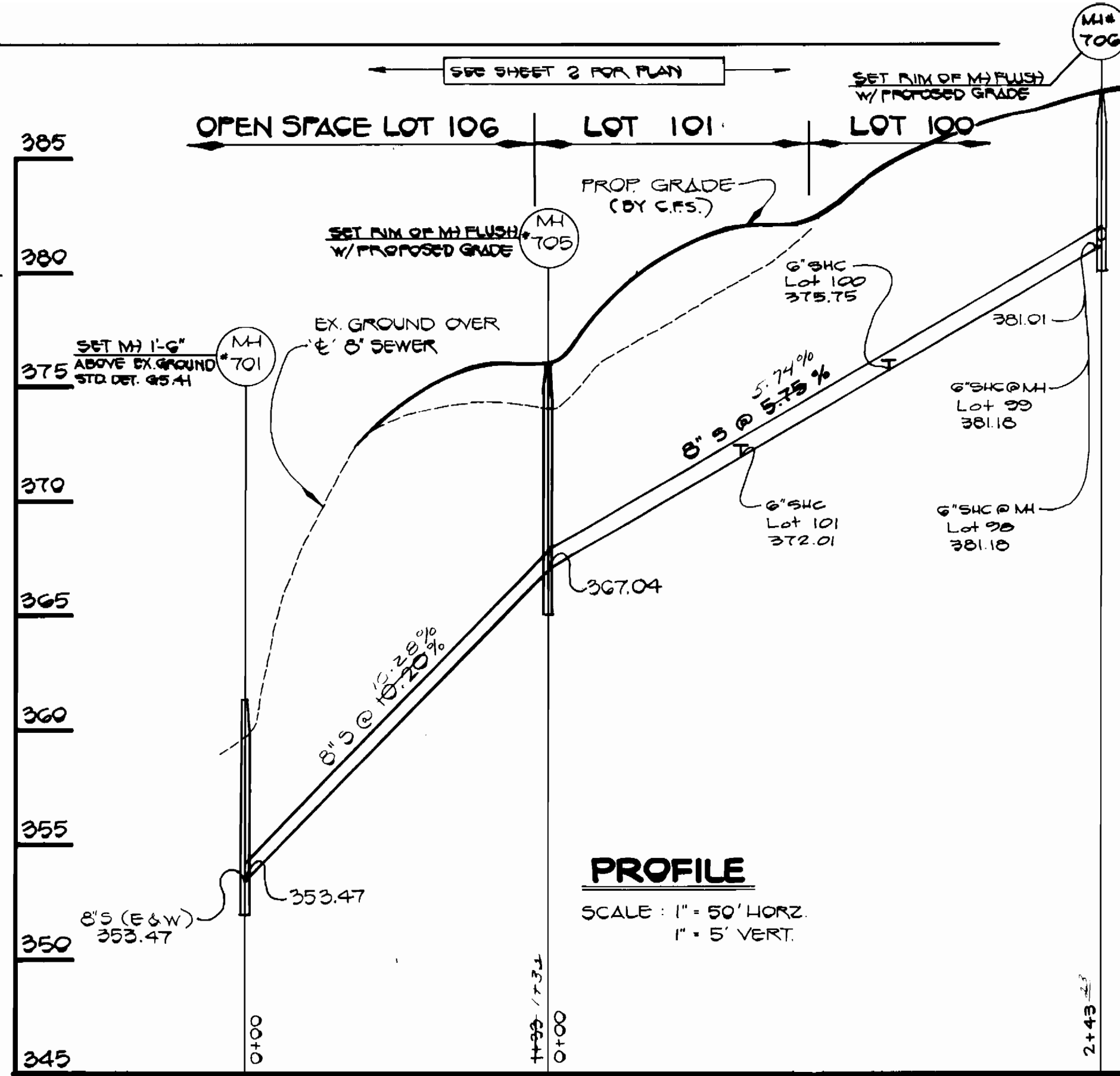
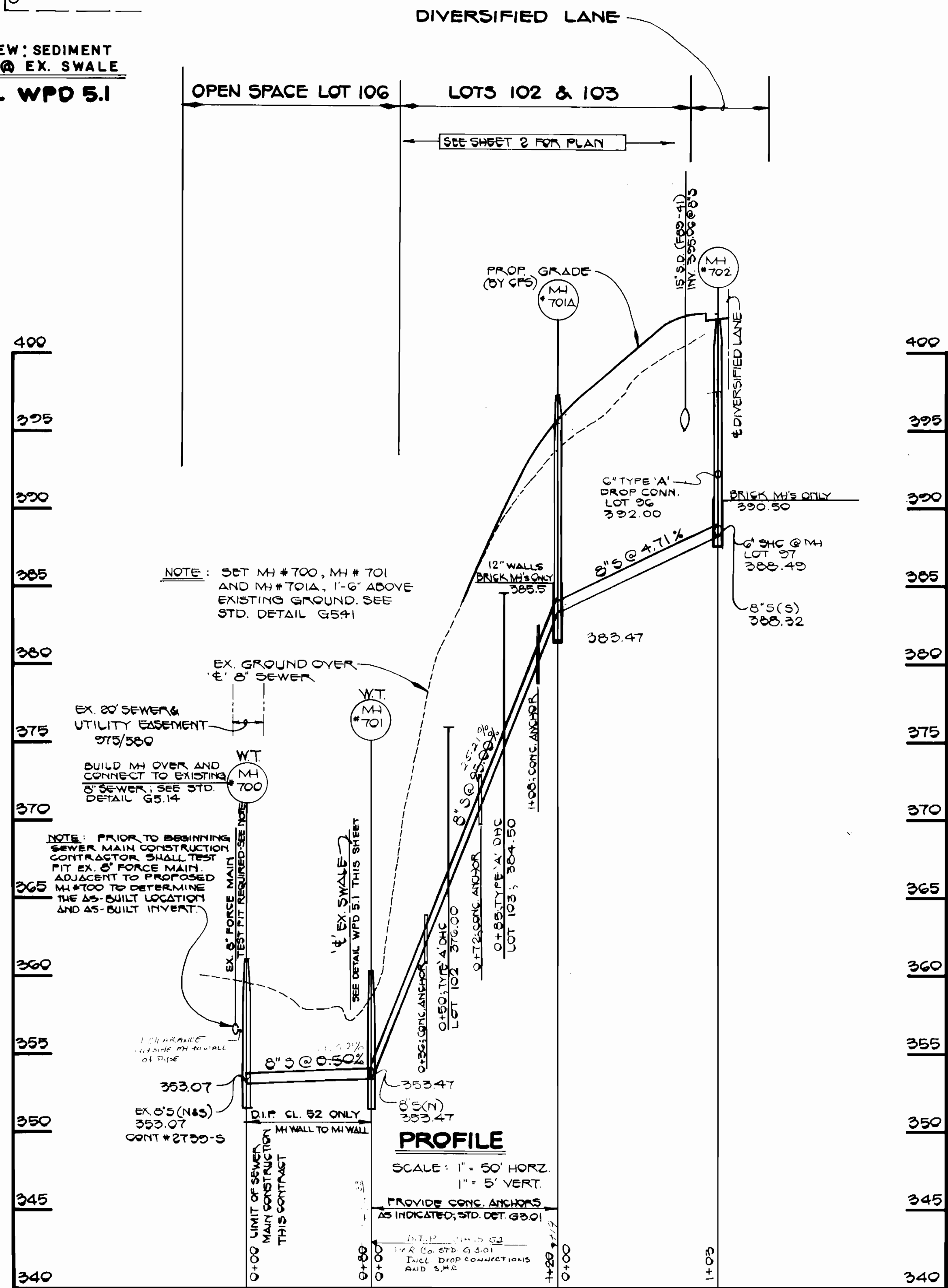
SCALE AS SHOWN

SHEET 1 OF 3



LOOSE LAID RAP DETAIL

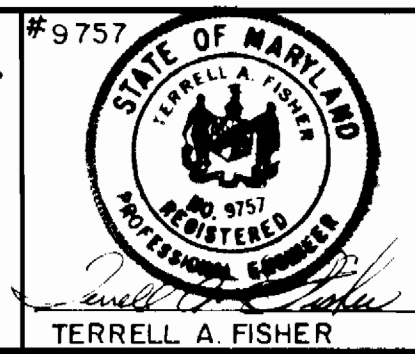
PLAN VIEW: SEDIMENT CONTROL @ EX. SWALE DETAIL WPD 5.1



CONTRACT NO. 24-1856-D  
BRIDGEWATER  
SECTION 2  
WATER AND SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
12/13/88  
12/14/88

FISHER, COLLINS, AND CARTER, INC.  
CONSULTING ENGINEERS AND LAND SURVEYORS  
8388 COURT AVENUE  
ELLCOTT CITY, MARYLAND 21043



DES: G.W.			
DRN: G.W.			
CHK: P.W.K.			
DATE:			
BY:			
NO.			
REVISION			
DATE			

PROFILES  
WATER & SEWER MAINS  
600' SCALE MAP NO. 17 BLOCK NO.

BRIDGEWATER  
SECTION 2  
CONTRACT NO. 24-1856-D  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
SCALE AS SHOWN  
SHEET 2 OF 3

SEWER AS-BUILT

WATER AS-BUILT

LOT	LOCATION	DISTANCE
92	EXISTING MANHOLE # 616	48.3'
"	MANHOLE # 704	37.6'
"	FIRE HYDRANT # 1 (SEE PLAN VIEW)	113.7'
93	VALVE BOX FIRE HYDRANT # 1	31.9'
"	MANHOLE # 704	84.8'
"	FIRE HYDRANT # 1	27.5'
94	" " "	91.9'
"	VALVE BOX FIRE HYDRANT # 1	93.3'
"	MANHOLE # 703	34'
95	" " "	105.8'
"	MANHOLE # 702	65.5'
"	FIRE HYDRANT # 2 (SEE PLAN VIEW)	80.8'
96	" " "	23.9'
"	MANHOLE # 702	33.6'
"	VALVE BOX FIRE HYDRANT # 2	23.9'
97	" " " "	35'
"	MANHOLE # 702	62'
"	FIRE HYDRANT # 2	30.6'
98	MANHOLE # 706	110.6'
"	STORM DRAIN INLET - lot 100-101	128.6'
"	SEWER HOUSE CONNECTION BOARD lot # 99	106.5'
99	MANHOLE # 706	15'
"	STORM DRAIN INLET lot 100-101	191'
"	SEWER HOUSE CONNECTION BOARD lot # 98	106.5'
100	MANHOLE # 706	95.2'
"	STORM DRAIN INLET lot 100-101	131'
"	MANHOLE # 705	148.8'
101	" " "	84.4'
"	MANHOLE # 706	160.6'
"	STORM DRAIN INLET lot 100-101	128.8'
102	MANHOLE # 701A	53.3'
"	MANHOLE # 701	72.4'
"	STORM DRAIN MANHOLE # 1 (SEE PLAN VIEW)	121.9'
103	" " " " " "	90'
"	MANHOLE # 701	40.2'
"	MANHOLE # 701A	86'
104	MANHOLE # 703	36.6'
"	STORM DRAIN INLET lot 94-95	41.4'
"	STORM DRAIN INLET lot 103-104	28.2'
105	MANHOLE # 704	117'
"	MANHOLE # 703	86.9'
"	FIRE HYDRANT # 1	47.7'

LOT	LOCATION	DISTANCE
92	EXISTING MANHOLE # 616	64.7'
"	MANHOLE # 704	38.3'
"	FIRE HYDRANT # 1	94'
93	" " "	89.1'
"	MANHOLE # 704	38.6'
"	EXISTING MANHOLE # 616	68.6'
94	FIRE HYDRANT # 1	60.3'
"	VALVE BOX FIRE HYDRANT # 1	62.5'
"	MANHOLE # 703	50.8'
95	" " "	69.6'
"	MANHOLE # 702	104.1'
"	STORM DRAIN INLET lot 94-95	27.7'
96	MANHOLE # 702	38.5'
"	FIRE HYDRANT # 2	41.4'
"	VALVE BOX FIRE HYDRANT # 2	43.8'
97	" " " "	22.5'
"	FIRE HYDRANT # 2	15'
"	MANHOLE # 702	48.3'
98	FIRE HYDRANT # 2	111.9'
"	VALVE BOX FIRE HYDRANT # 2	111.6'
"	STORM DRAIN INLET lot 100-101	47.4'
99	" " " " " "	43.6'
"	FIRE HYDRANT # 2	112.7'
"	VALVE BOX FIRE HYDRANT # 2	112'
100	" " " " " "	123.9'
"	FIRE HYDRANT # 2	126.6'
"	STORM DRAIN INLET lot 100-101	19.4'
101	" " " " " "	31.4'
"	FIRE HYDRANT # 2	122.2'
"	VALVE BOX FIRE HYDRANT # 2	116.5'
102	" " " " " "	115.6'
"	FIRE HYDRANT # 2	121.2'
"	STORM DRAIN INLET lot 100-101	34.5'
103	MANHOLE # 702	64.7'
"	MANHOLE # 703	99.9'
"	STORM DRAIN INLET lot 103-104	41.5'
104	FIRE HYDRANT # 1	99.9'
"	MANHOLE # 703	19.5'
"	STORM DRAIN INLET lot 94-95	59.9'
105	MANHOLE # 704	70.5'
"	FIRE HYDRANT # 1	57.3'
"	VALVE BOX FIRE HYDRANT # 1	50.2'

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND		DES: _____ DRN: _____ CHK: _____ DATE: _____		KATHY WILSON SEWER & WATER AS-BUILTS 04-19-89		BRIDGEWATER CONT. NO. 24-1856- D		SCALE AS SHOWN SHEET 3 OF 3
DIRECTOR OF PUBLIC WORKS _____ DATE _____	CHIEF, BUREAU OF ENGINEERING _____ DATE _____	BY _____ NO. _____	REVISION _____	DATE _____	600' SCALE MAP NO. _____	BLOCK NO. _____	AS-BUILT 4-19-89	