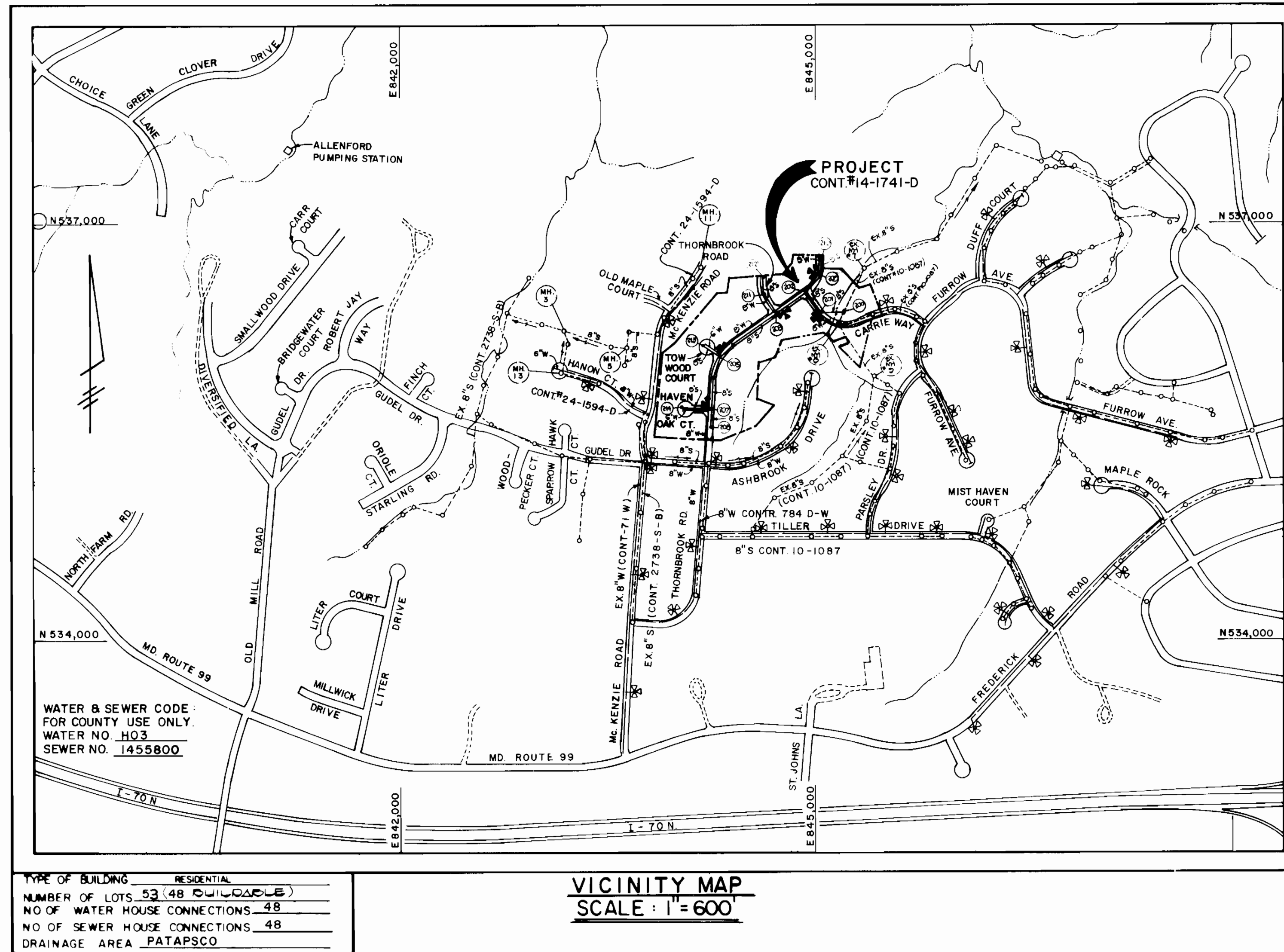


QUANTITIES			
ITEM	EST'D	AS-BUILT	SUPPLIER
8" SEWER	2,451 I.F.		
6" SEWER	1,260 I.F.		
MANHOLES	16 EACH		
8" WATER	2,346 I.F.		
6" WATER	411 I.F.		
3" WATER			
FIRE HYDRANTS	5 EACH		
1" WHC.	312 I.F.		
3/4" WHC.	776 I.F.		
8" VALVES	4 EACH		
6" VALVES	2 EACH		
BLOW-OFFS			
8" x 6" REDUCERS			
8" SEWER, D.I.P.	164 I.F.		
OUTSIDE METER VAULTS			



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.
 - STATE HIGHWAY ADMINISTRATION : 531-5533
 - BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES : 850-4620
 - BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL : 859-9004
 - BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING : 298-9001
 - MISS UTILITY : 1-559-0100
 - COLONIAL PIPELINE COMPANY : 795-1390
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 992-2366
 - C & P TELEPHONE COMPANY : 1-800-257-7777
- 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. 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 AND 1008 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. (STD. DETAIL W.3.21).
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED SO AS TO HAVE AT LEAST ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVERS STANDARD DETAIL G5.52 WHERE WATER-TIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 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.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES LOCATED WITHIN PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAME AND COVER, STANDARD DETAIL G5.51.
- 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.

CONTRACT NO. 14-1741-D
MT. HEBRON
SECTION 19
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

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 88-227.

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

James M. ... 9/2/88
 U.S. SOIL CONSERVATION SERVICE DATE

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

APPROVED:

Robert W. ... 9/2/88
 HOWARD SOIL CONSERVATION DISTRICT DATE

PLAN REFERENCE NUMBERS:
 P - 88-03
 F - 88-227

AS BUILT DRAWINGS FOR SEWER

CONTRACT NO. 14-1741-D
 MOUNT HEBRON
 SECTION 19
 WATER & SEWER MAIN EXTENSIONS
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

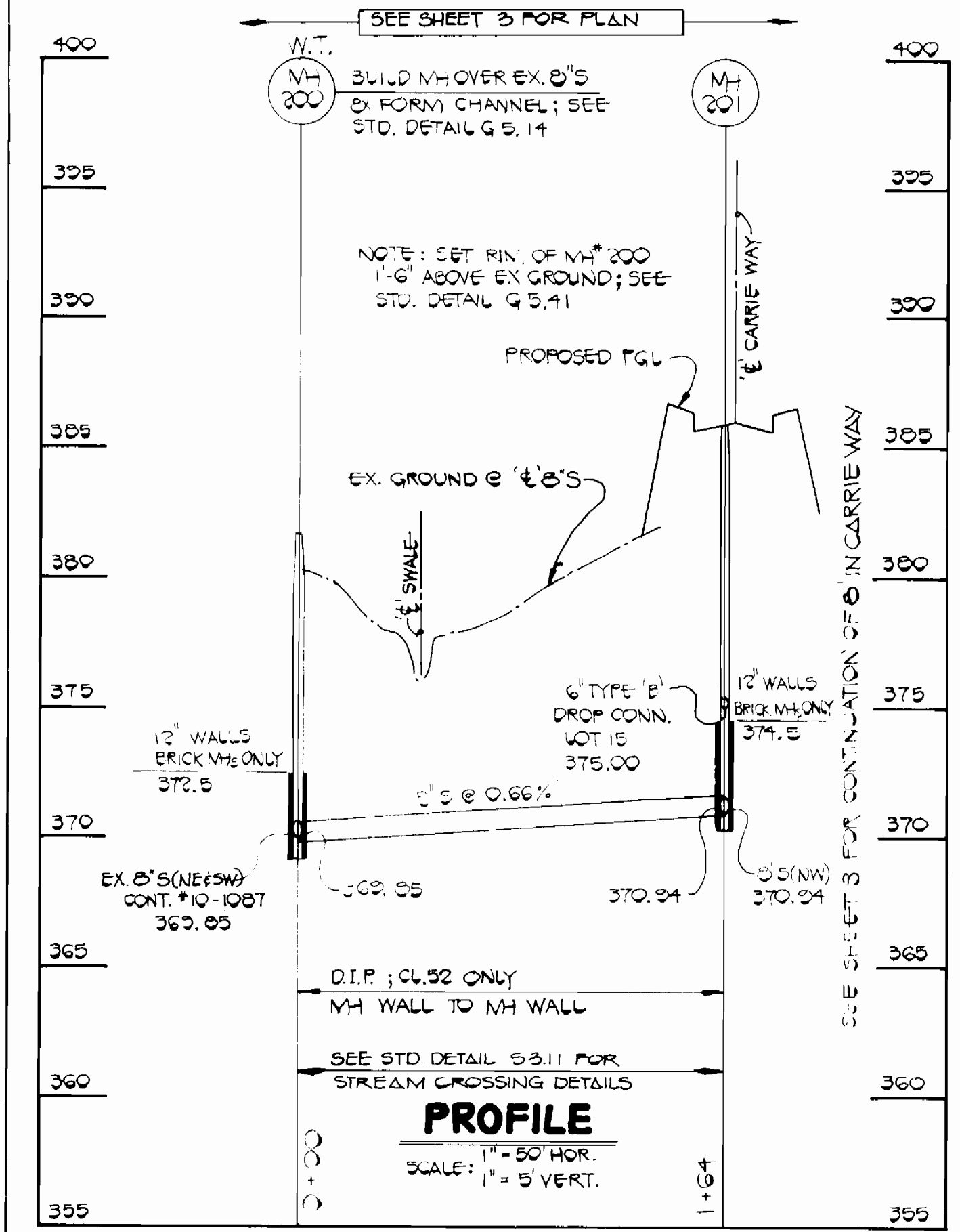
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>James M. ...</i> 9/2/88 DIRECTOR OF PUBLIC WORKS DATE <i>Robert W. ...</i> 9/2/88 CHIEF, BUREAU OF UTILITIES DATE	FISHER, COLLINS AND CARTER, INC. #9757 CONSULTING ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLICOTT CITY, MARYLAND 21043 <i>Terrella Fisher</i> TERRELLA, FISHER DATE	DES. J.O. DRN: A.S. CHK: T.A.F. DATE 11/12/88	G.W. I HY NO REVISE QUANTITIES REVISION DATE 11/12/88	TITLE SHEET 600 SCALE MAP NO. 17 BLOCK NO.	MOUNT HEBRON SECTION 19 CONTRACT NO. 14-1741-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 1 OF 4
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SEWER HOUSE CONNECTIONS INVERT ELEVATIONS AT PROPERTY LINE-		
STATION	LOT	ELEV.
MH 204 TO MH 205		
NH 204 RT.(DC)	LOT 2(DC)	405.66
MH 204 LT.(DC)	LOT 2(DC)	401.86
MH 205 LT.	LOT 7	400.22
MH 205 TO MH 206		
MH 205 LT.	LOT 7	400.22
0+41 RT.	LOT 41	400.60
1+25 LT.(1%)	LOT 6(1%)	400.35 (1%)
MH 206 LT.	LOT 42	401.17
MH 206 TO MH 207		
MH 206 RT.	LOT 42	401.17
0+83 LT.(1%)	LOT 4(1%)	402.03 (1%)
1+13 RT.	LOT 42	402.96
1+81 LT.	LOT 3	403.83
MH 207 TO MH 208		
0+54 LT.	LOT 2	406.24
0+64 RT.	LOT 21	407.66
MH 208 RT.	LOT 32	411.09
MH 208 LT.	LOT 1	410.75
MH 208 TO MH 213		
MH 208 LT.	LOT 7	400.22
1+13 LT.	LOT 34	409.78
MH 213 LT.	LOT 35	406.67
MH 213 TO MH 214		
1+10 RT.	LOT 14(1%)	411.64 (1%)
1+24 LT.	LOT 50	415.33
MH 214 RT.	LOT 45	415.79
MH 214 LT.	LOT 47	415.61
MH 214 LT.	LOTS 46 & 49	415.95

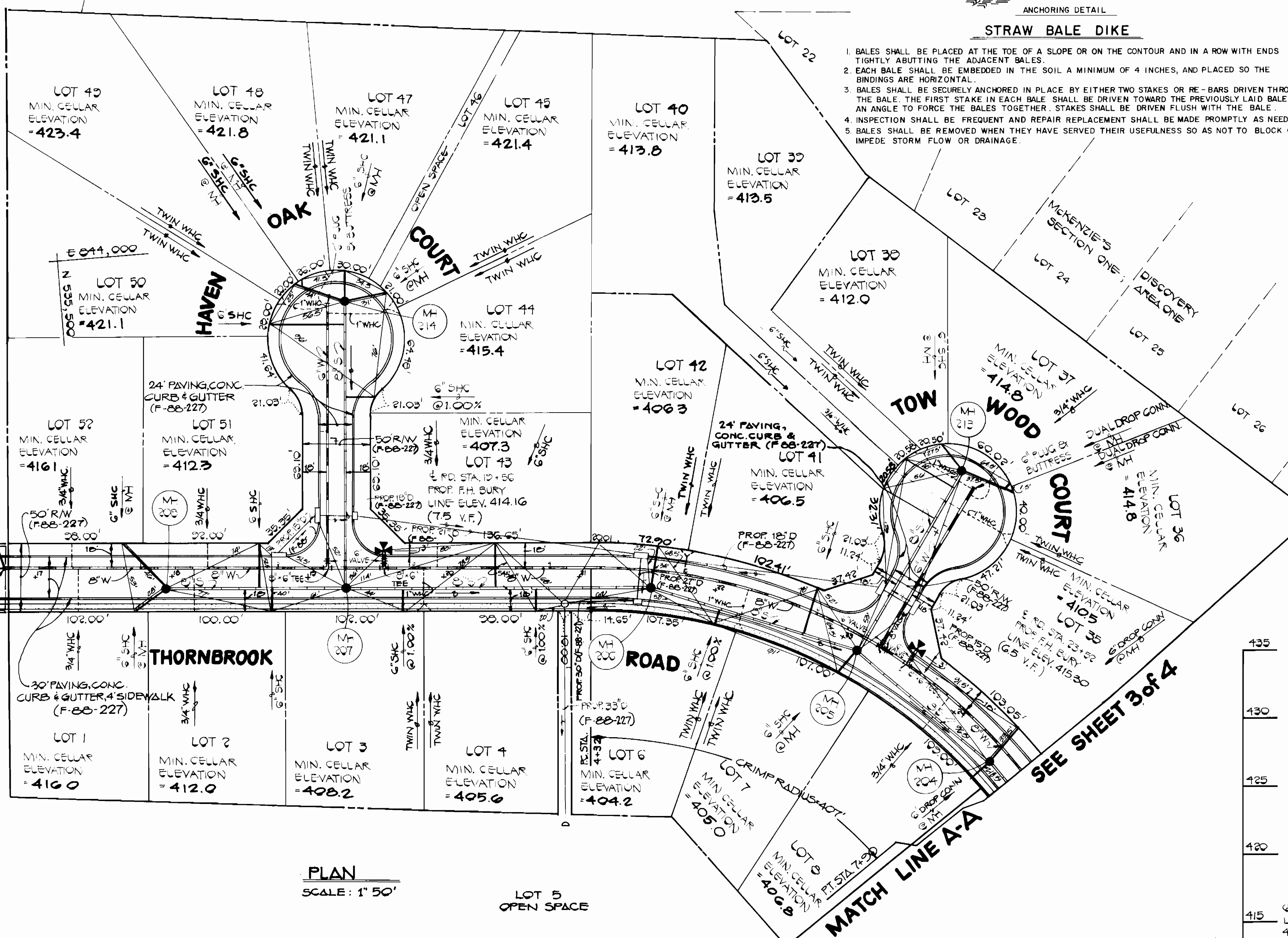
LIMIT OF WATER MAIN CONSTRUCTION THIS CONTRACT, REMOVE EX. 8" PLUG & BUTTRISS, CONNECT TO EX. 8" W.

MOUNT HEBRON SECTION 19 PLAT NO. 1400

EX. SIDEWALK & EX. CONC. CURB & GUTTER



PROFILE
SCALE: 1" = 5' VERT.

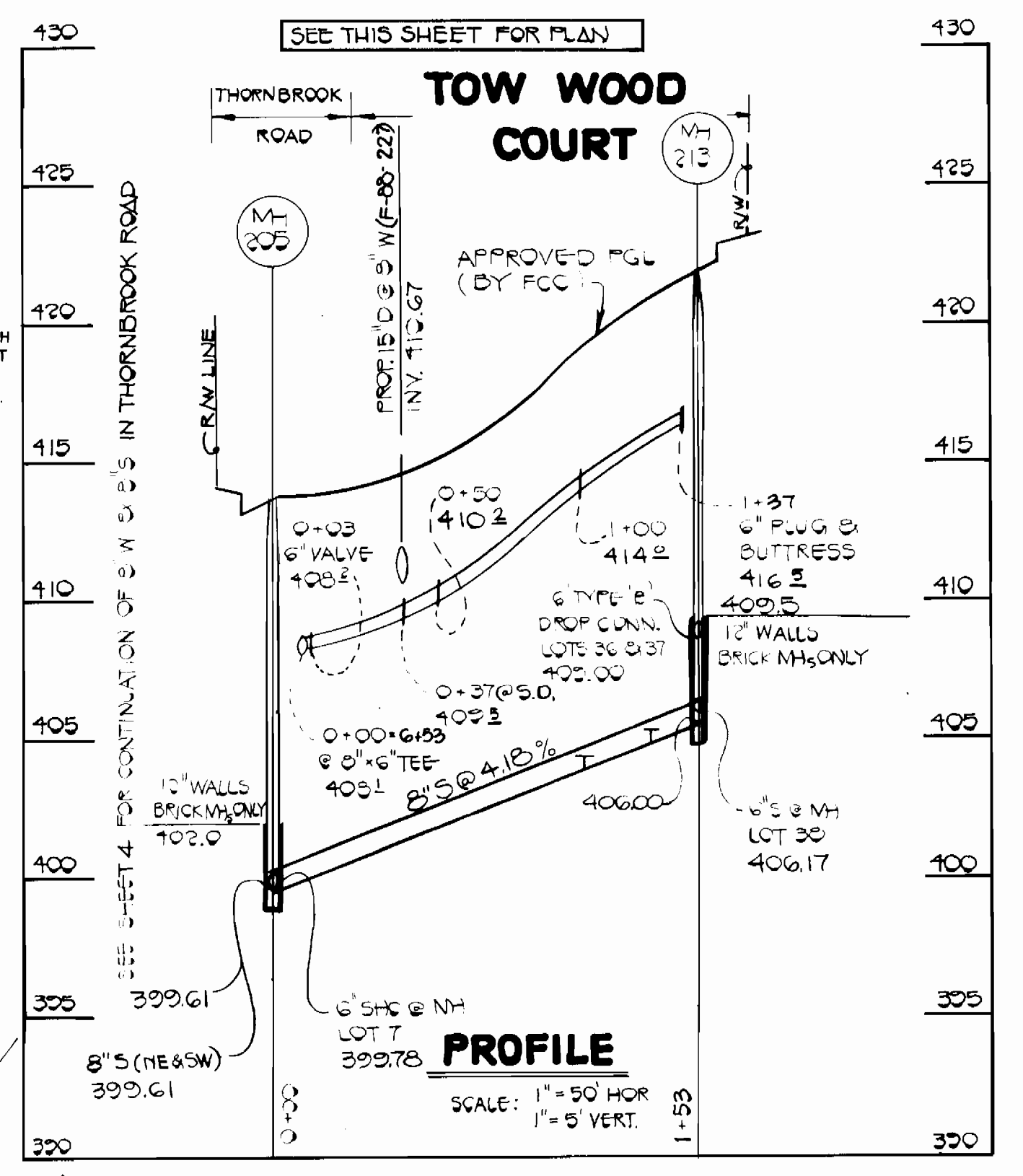
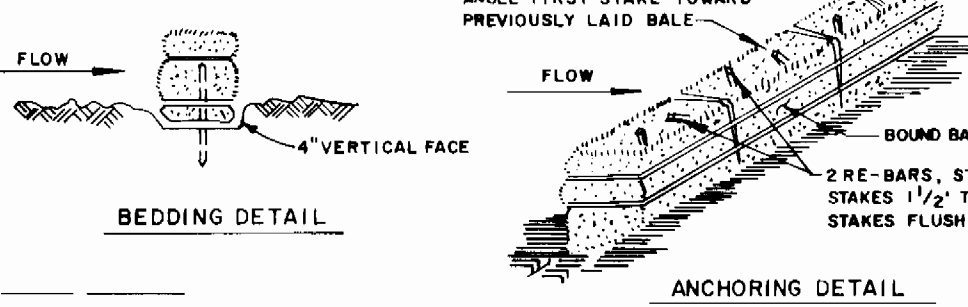


PLAN
SCALE: 1" = 50'

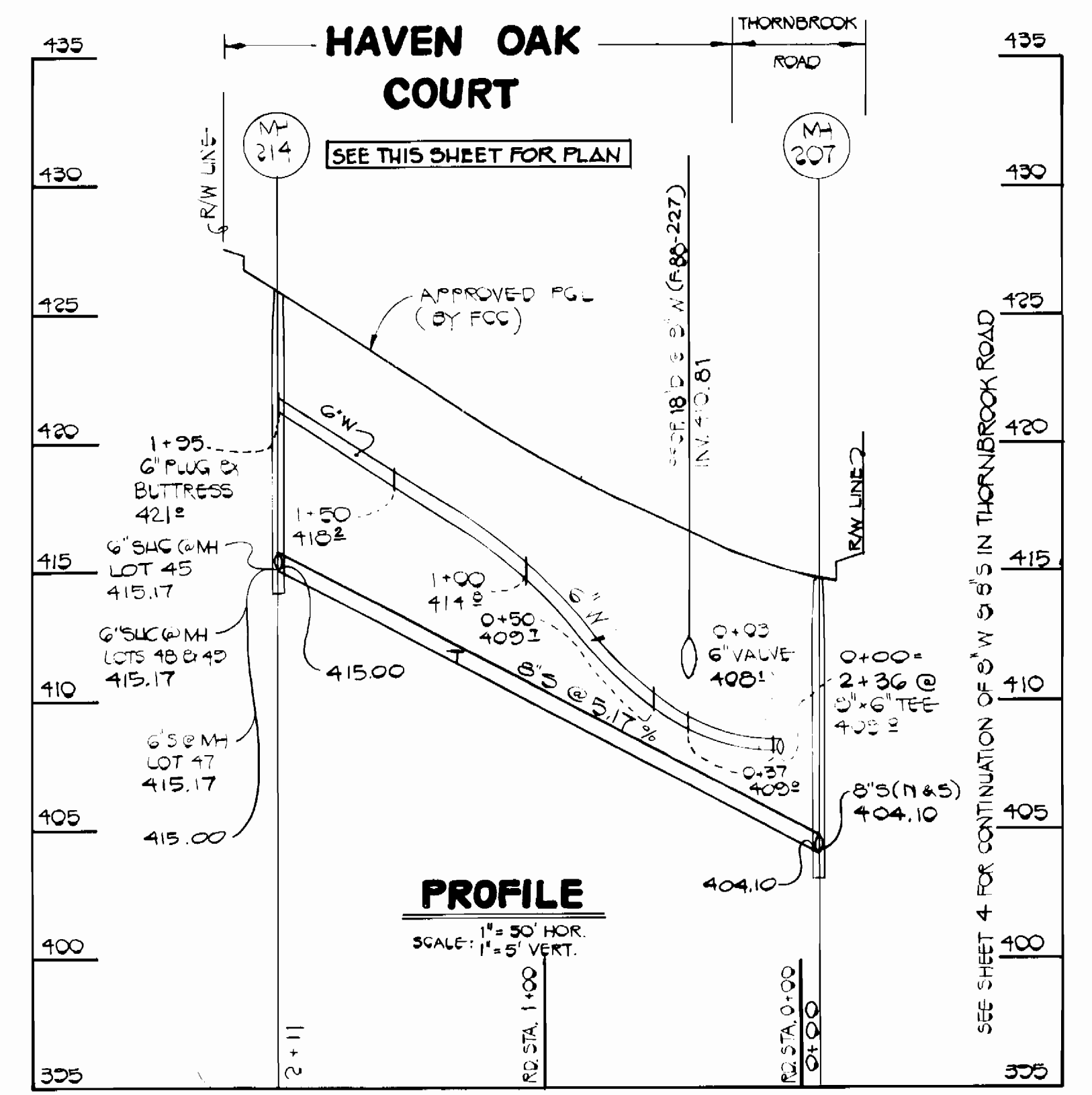
MANHOLE TABLE				
NO.	RD STA.	DIST.	RIM	SLOPE
204	24+44	7' RT.	416.29	-0.20%
205	23+15	3' RT.	413.64	+4.00%
206	21+53	6' RT.	409.65	0.00%
207	19+28	7' RT.	414.62	-3.14%
208	17+95	7' RT.	418.80	-3.14%
213	IN COURT	-	422.00	-
214	IN COURT	-	425.69	-

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.



PROFILE
SCALE: 1" = 50' HOR. 1" = 5' VERT.



PROFILE
SCALE: 1" = 50' HOR. 1" = 5' VERT.

SEE SHEET 3 FOR PROFILES IN THORNBROOK ROAD
SEE THIS SHEET FOR PROFILES IN HAVEN OAK COURT
SEE THIS SHEET FOR PROFILES IN TOW WOOD COURT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

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

*9757
J.O. DES. P.W.K.
DRN. J.O.
CHK. P.W.K.
DATE: 1/12/88
BY NO. REVISION DATE
TERRELL A. FISHER

NO.	DATE	REVISION
1	1/12/88	REVISE SHC CHART & TOW WOOD COURT PROFILE
2	1/12/88	REVISE SHC CHART & MIN. CELLAR ELEVATIONS

PLAN & PROFILES
WATER AND SEWER MAINS

MOUNT HEBRON SECTION 19
CONTRACT NO. 14-1741-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 4

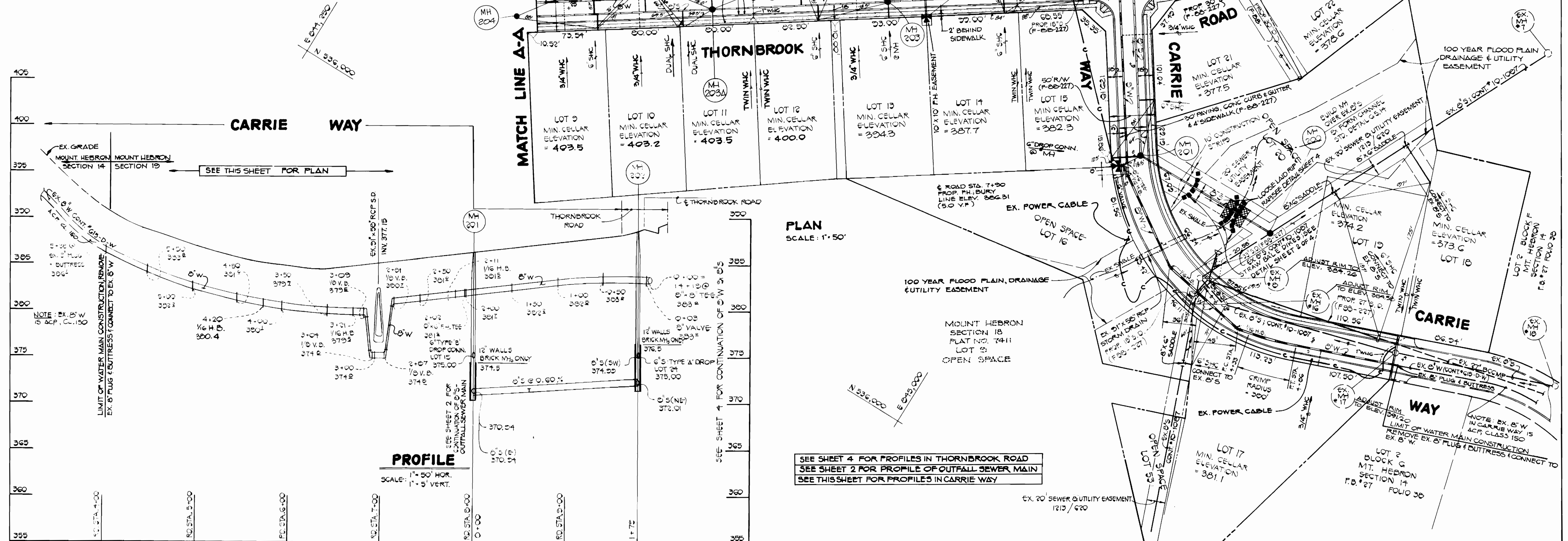
CONTRACT NO. 14-1741-D
MOUNT HEBRON SECTION 19
WATER AND SEWER MAINS EXTENSIONS
HOWARD COUNTY, MARYLAND

SEWER HOUSE CONNECTIONS INVERT ELEVATIONS AT PROPERTY LINE-		
STATION	LOT	ELEV.
EX. MH 7	TO MH 200	
1+84 LT.	LOT 19	366.28
2+76 LT.	LOT 12	368.22
MH 200 TO MH 201		
0+00 LT.(DC)	LOT 15(DC)	375.64
MH 201 TO MH 202		
0+60 LT.(DC)	LOT 21	371.74
0+00 RT.(DC)	LOT 24(DC)	375.66
MH 202 TO MH 203		
0+56 (DC)	LOT 24(DC)	375.66
1+30 RT.	LOT 25	378.57
1+54 RT.	LOT 26	382.52
0+00 LT.	LOT 23	383.56
MH 203 TO MH 203A		
0+75 LT.	LOT 13	389.03
0+75 RT.	LOT 12	395.00
0+95 RT.	LOT 30	393.86
MH 203A TO MH 203B		
0+33 LT.	LOT 31 (DC)	400.64
0+72 RT.(DC)	LOT 32 & 33(DC)	404.64
1+24 LT.	LOT 34	399.26
MH 203B TO MH 210		
0+50 LT.	LOT 23	374.79
MH 203 TO MH 211		
0+00 LT.	LOT 13	389.03
0+00 RT.	LOT 27	394.67
0+00 LT.	LOT 28	394.65
MH 211 TO MH 212		
0+00 LT.	LOT 27	394.67
0+00 RT.	LOT 28	394.65
EX. MH 8 TO EX. MH 9		
0+93 LT.	LOT 17	375.51

MANHOLE TABLE				
NO.	RD STA.	DISTANCE	RIM	SLOPE
200	SET 1'-6" ABOVE EXISTING GROUND			
201	8+00	7' RT.	386.00	+1.20%
202	3+100	7' RT.	388.22	-2.90%
203	28+44	7' RT.	401.93	-6.10%
203A	26+55	7' RT.	412.21	-3.10%
209	32+64	20' RT.	387.59	+1.00%
210	34+06	7' RT.	390.80	+5.00%
211	1+55	ON E	407.81	+4.00%
212	2+84	7' RT.	414.17	+6.30%
EX. MH # 8			384.26	+0.50%
EX. MH # 16			384.56	-1.30%
EX. MH # 17			391.20	-6.00%

CARRY WAY
THORNBROOK ROAD
CARRY WAY
* EX. RIMS TO BE ADJUSTED TO ELEVATIONS AND SLOPES INDICATED

SEE SHEET 2 of 4
MATCH LINE A-A



PLAN
SCALE: 1" = 50'

PROFILE
SCALE: 1" = 50' HOR.
1" = 5' VERT.

SEE SHEET 4 FOR PROFILES IN THORNBROOK ROAD
SEE SHEET 2 FOR PROFILE OF OUTFALL SEWER MAIN
SEE THIS SHEET FOR PROFILES IN CARRY WAY

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert A. Benjamin
DIRECTOR OF PUBLIC WORKS
DATE: 9-31-89

Michael J. P. ...
CHIEF, BUREAU OF ENGINEERING
DATE: 9-2-88

...
CHIEF, LAND DEVELOPMENT DIVISION
DATE: 9-2-88

FISHER, COLLINS AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS

8388 COURT AVENUE
ELLCOTT CITY, MARYLAND 21043

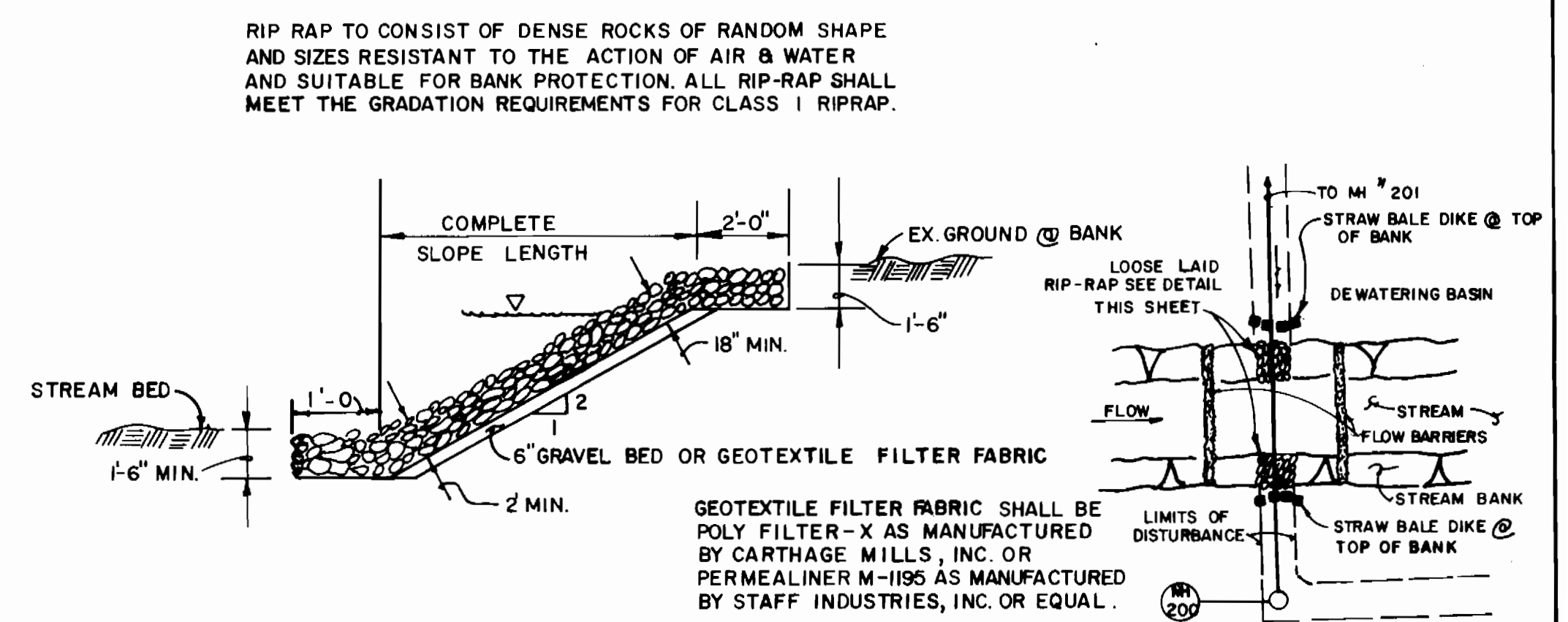
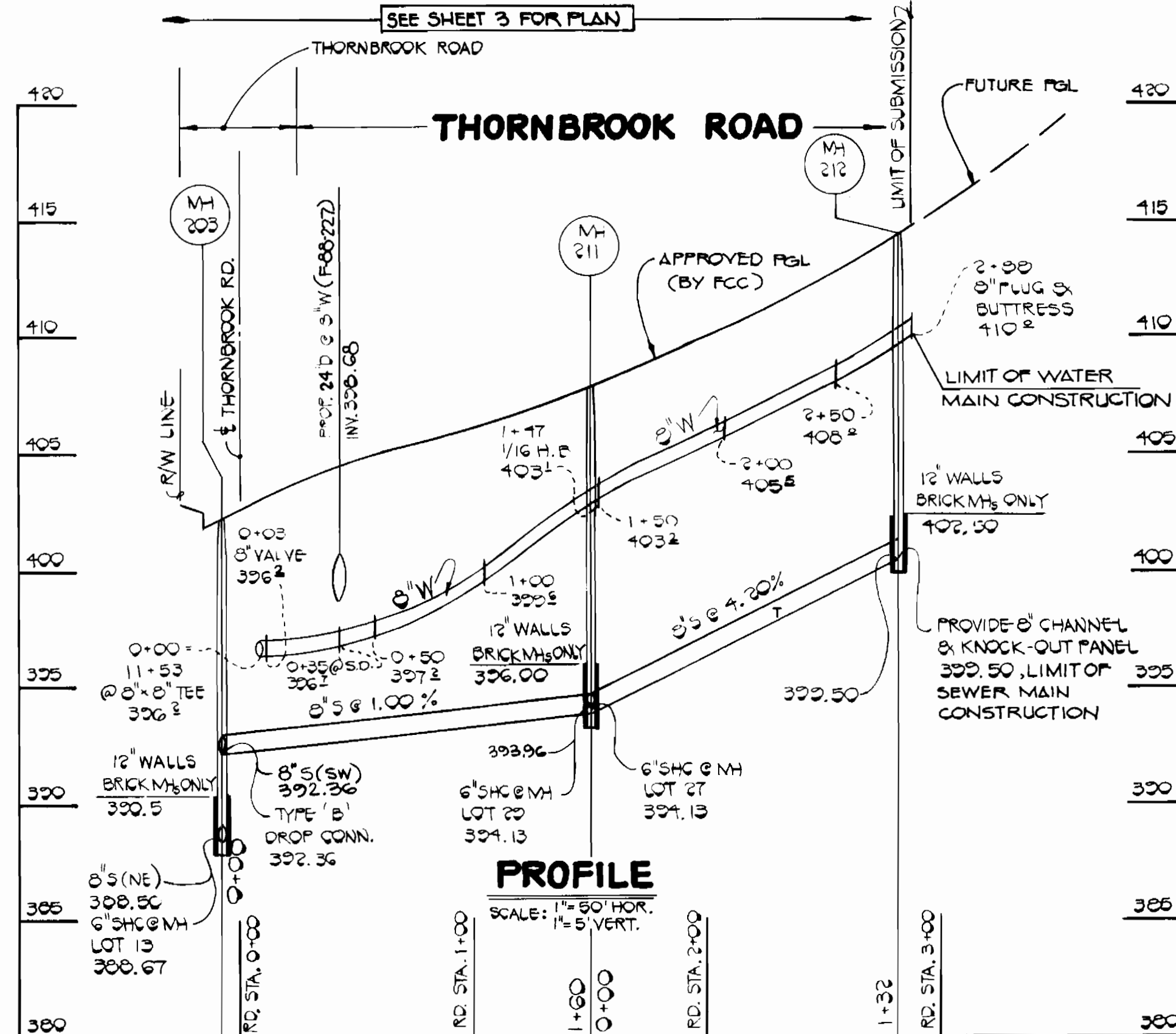
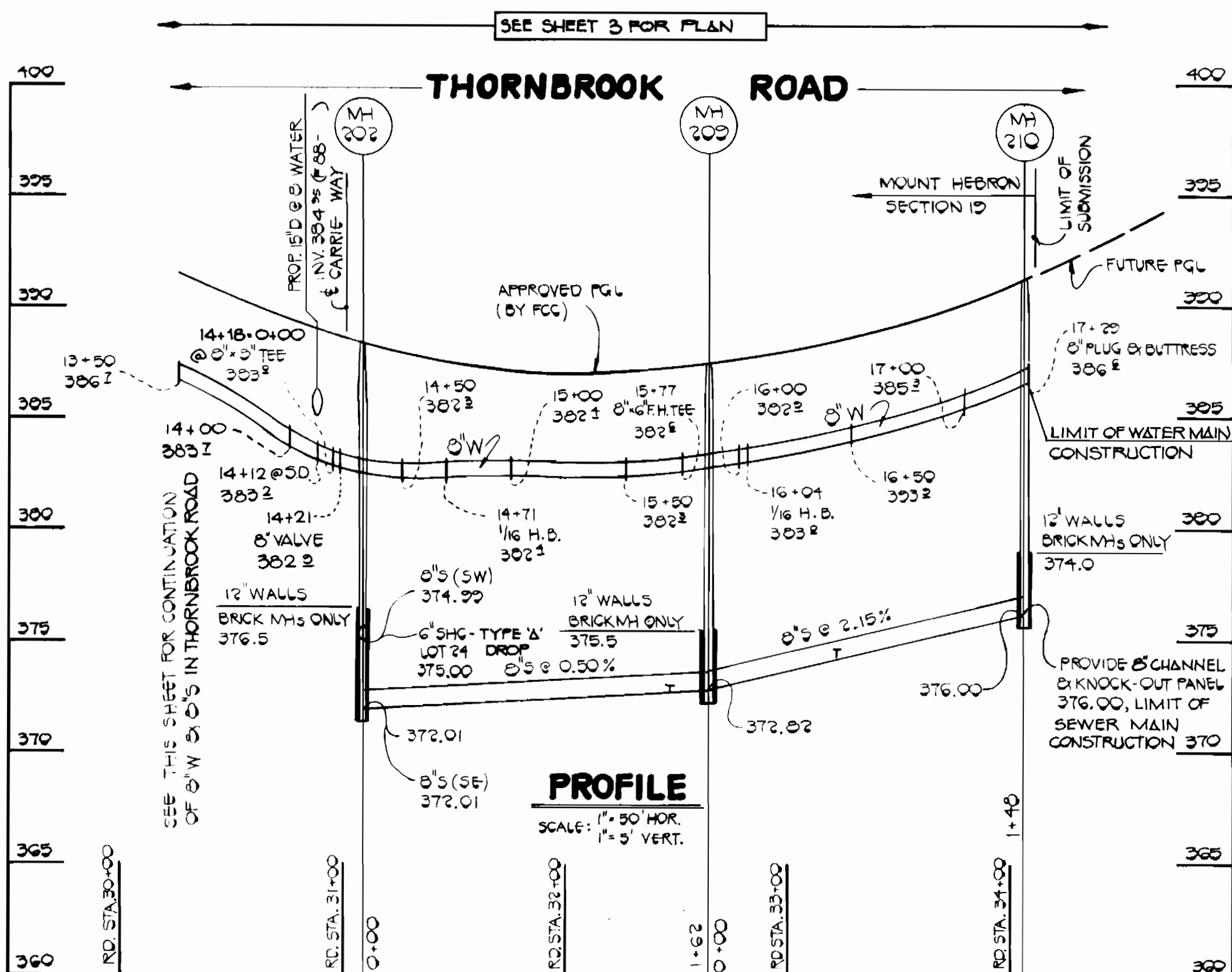
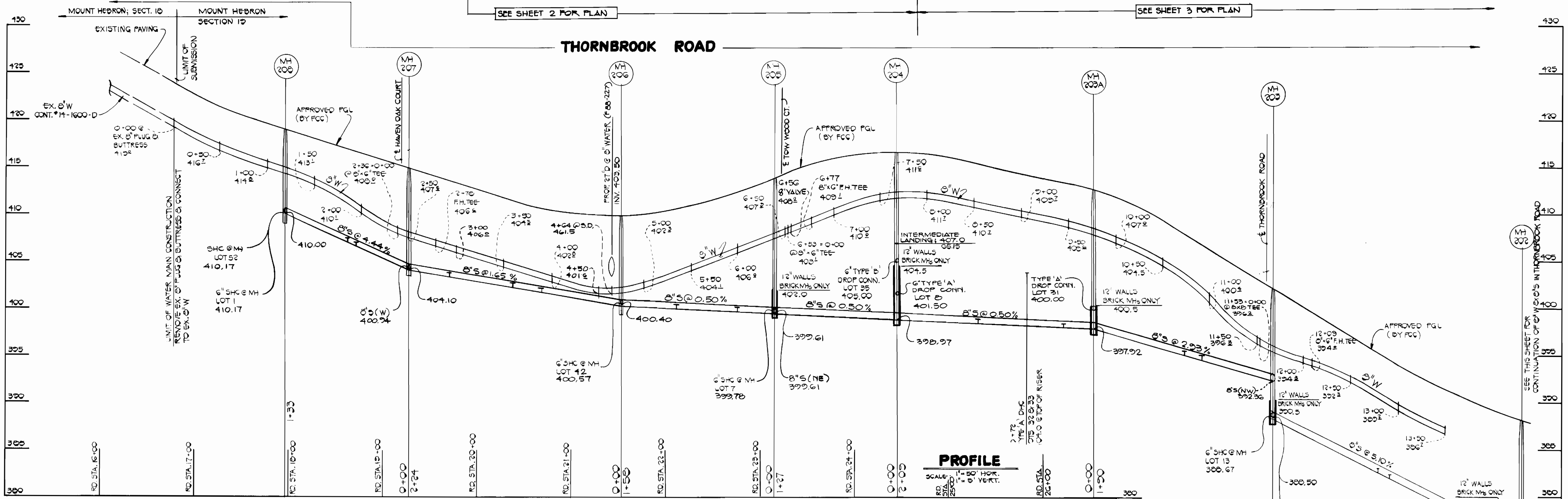
Terrell A. Fisher
DATE: 11/1/88

DES: J.O.	DRN: J.O.	CHK: P.W.K.	DATE: 11/1/88
REVISE 3/4" CHART AND MIN. CELLAR ELEV.	1/16/88		

PLAN & PROFILES
WATER AND SEWER MAINS

MOUNT HEBRON
SECTION 19
CONTRACT NO. 14-1741-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 4



PLAN VIEW: SEDIMENT CONTROL @ EX. SWALE
CONTRACT NO. 14-1741-D
MOUNT HEBRON
SECTION 19
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 7/6/88
DIRECTOR OF PUBLIC WORKS DATE

[Signature] 3/31/88
CHIEF, BUREAU OF UTILITIES DATE

FISHER, COLLINS AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS

8388 COURT AVENUE
ELLCOTT CITY, MARYLAND 21043

#9757

[Signature]
TERRELL A. FISHER

DES. P.W.K.	
DRN. J.O.	
CHK. P.W.K.	
DATE: 11/1/88	
G.W. 1	REVISE SEWER PROFILES
BY NO.	REVISION
DATE: 11/1/88	4/1/88

PROFILES
WATER AND SEWER MAINS

600' SCALE MAP NO. 17 BLOCK NO.

MOUNT HEBRON
SECTION 19
CONTRACT NO. 14-1741-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 4 OF 4