

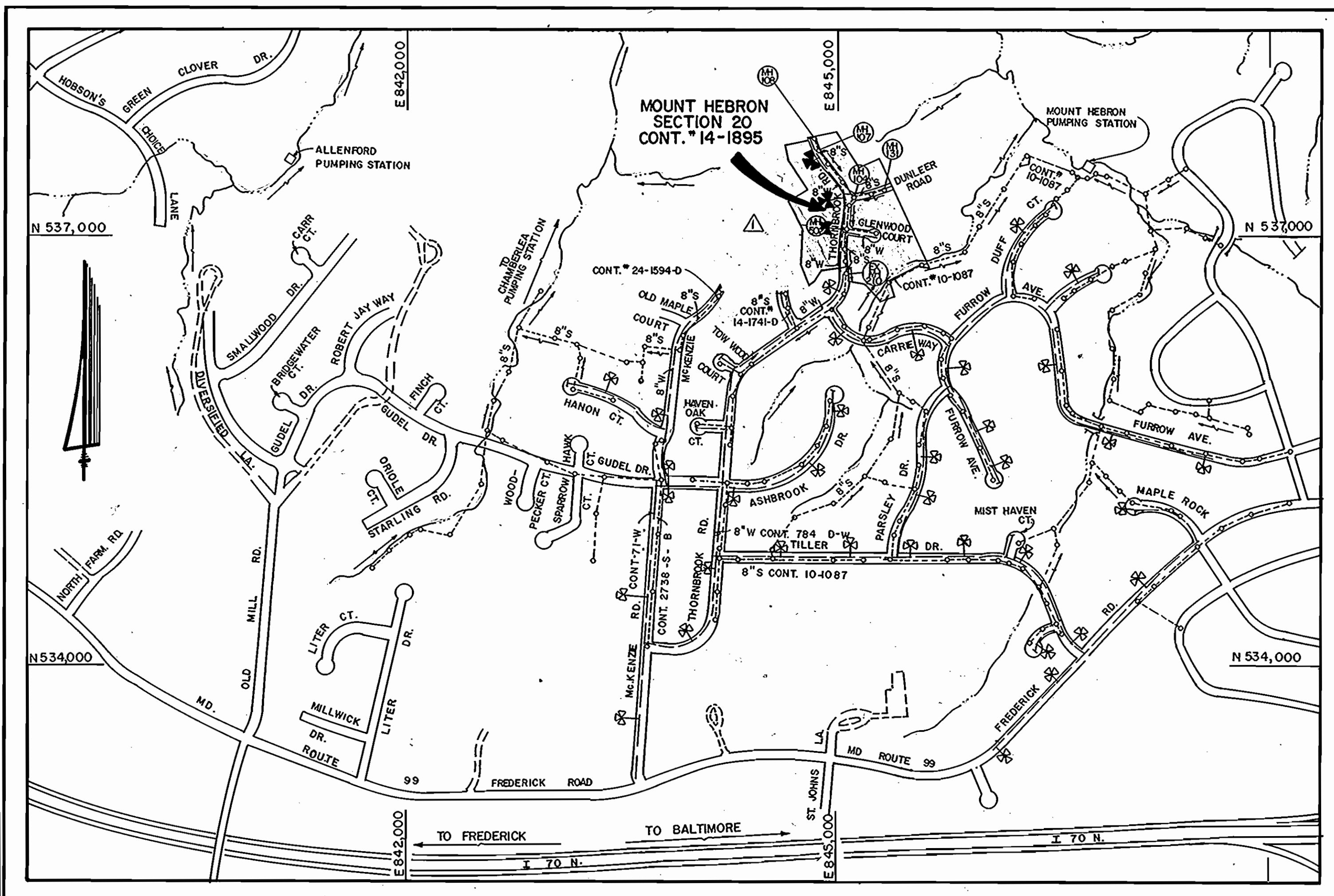
GENERAL NOTES

1. 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.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 6".
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, AMENDED 1989, THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
7. 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.
8. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

STATE HIGHWAY ADMINISTRATION : 531-5533
BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES: 850-4620
BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL: 859-9004
BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING: 298-9001
MISS UTILITY: 1-569-0100
COLONIAL PIPELINE COMPANY: 795-1390
BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 992-2366
C & P. TELEPHONE COMPANY 1-800-267-7777

9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
10. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
11. ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
12. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2" COVER UNLESS OTHERWISE NOTED.
13. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
14. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
15. 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 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
16. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
17. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS. (STD. DETAIL M.3.21).
18. 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.
19. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVERS STANDARD DETAIL G5.52 WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
20. ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., OR P.V.C. UNLESS OTHERWISE NOTED.
21. THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
22. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
23. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
24. MANHOLES LOCATED WITHIN PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAME AND COVER, STANDARD DETAIL G5.51.
25. 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.

QUANTITIES			
ITEM	ESTIMATED	AS-BUILT	SUPPLIER
8" SEWER	1,450 L.F.	1,450	CHARLOTTE PIPE
4" SEWER	842 L.F.	892	" "
MANHOLES	12 EACH	12	" "
8" WATER	1,337 L.F.	1,330	ATLANTIC STATES
6" WATER	281 L.F.	273	" "
FIRE HYDRANTS	3 EACH	3	MUELLER
1" WHC	180 L.F.	118	CAMBRIDGE LEE
3/4" WHC	531 L.F.	528	" "
8" VALVES	2 EACH	2	MUELLER



WATER & SEWER CODES
FOR COUNTY USE ONLY
WATER : 1103
SEWER : 145800

TYPE OF BUILDING	RESIDENTIAL
NUMBER OF LOTS 31 (29 BUILDABLE)	
NO. OF WATER HOUSE CONNECTIONS	29
NO. OF SEWER HOUSE CONNECTIONS	29
DRAINAGE AREA	PATAPSCO

VICINITY MAP
SCALE: 1" = 600'

CONTRACT NO. 14-1895-D MOUNT HEBRON SECTION 20 WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS

PLAN REFERENCE NUMBERS	
P - 89 - 33	
F - 90 - 99	

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-90-99.

APPROVED: *John R. Carter* 3/12/90, *James M. Adams* 3/19/90

HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CHIEF, BUREAU OF ENGINEERING, DATE 3/12/90
U.S. SOIL CONSERVATION SERVICE, DATE 3/19/90

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DIRECTOR OF PUBLIC WORKS: <i>James M. Adams</i> 3/12/90 CHIEF, BUREAU OF ENGINEERING, DATE CHIEF, BUREAU OF UTILITIES: <i>Robert J. ...</i> 3-5-90, DATE CHIEF, LAND DEVELOPMENT DIVISION: <i>...</i> 3/19/90, DATE	FISHER, COLLINS AND CARTER, INC. 39757 CONSULTING ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLCOTT CITY, MARYLAND 21043 TERRELL A. FISHER	STATE OF MARYLAND REGISTERED PROFESSIONAL ENGINEER NO. 9157 EXPIRES 12/31/91 TERRELL A. FISHER	DES: MJM DRN: SH CHK: PWK DATE: _____ BY NO. _____	TITLE SHEET AS-BUILT REVISE VICINITY MAP, QUANTITIES, AND INFO. BLOCK 9/25/90 REVISION: _____ DATE: _____ 600 SCALE MAP NO. 17 BLOCK NO. _____	MOUNT HEBRON SECTION 20 CONTRACT NO. 14-1895-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE AS SHOWN SHEET 1 OF 3 AS-BUILT
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MANHOLE TABULATION CHART

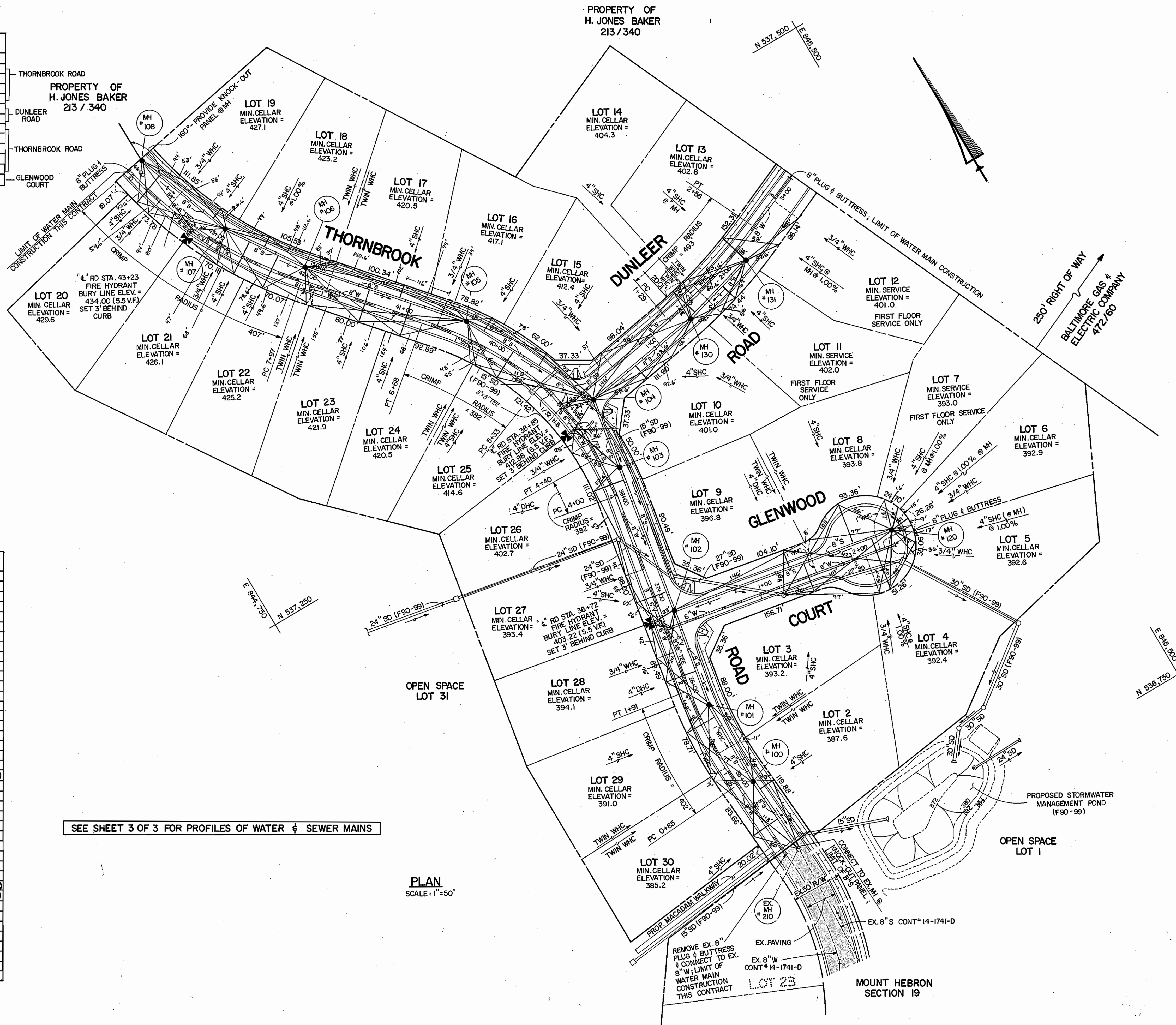
NO.	ROAD STA.	DISTANCE	RIM	SLOPE
108	44+05	7' RIGHT	438.08	+5.50%
107	42+95	8' RIGHT	432.00	+5.50%
106	42+07	7' RIGHT	428.48	+2.50%
105	40+38	8' RIGHT	422.62	+5.60%
131	2+25	7' RIGHT	404.37	-2.50%
130	1+47	7' RIGHT	407.15	-4.00%
104	0+21	7' RIGHT	412.53	-4.00%
103	38+28	7' RIGHT	409.81	+4.50%
102	36+77	7' RIGHT	403.02	+4.50%
101	35+76	7' RIGHT	398.47	+4.50%
100	34+92	7' RIGHT	394.69	+4.50%
120	IN CUL-DE-SAC		399.42	

SHC INVERT @ R CHART

STATION	LOT	ELEVATION
MH #107 TO MH #108		
0+15 RT	19	421.22
0+84 LT	20	423.71
MH #106 TO MH #107		
0+28 LT	22	419.31
0+45 RT	18	419.27 (1.00%)
0+60 LT	21	420.27
MH #105 TO MH #106		
0+59 LT	24	415.08
0+71 RT	17	415.16
1+01 LT	23	416.34
MH #104 TO MH #105		
0+62 RT	15	406.68
0+92 LT	25	409.15
1+28 RT	16	411.65
MH #130 TO MH #131		
0+09 LT	14	396.55
0+46 RT	11 (FF ONLY)	396.52
0 MH #131, LT.	13	397.57
0 MH #131, RT.	12 (FF ONLY)	396.95 (1.00%)
MH #104 TO MH #130		
0+56 RT	10	395.82
MH #102 TO MH #103		
0+20 LT	27	388.00
1+40 LT (DHC)	26	397.14
MH #102 TO MH #120		
1+24 LT (DHC)	9	391.36
1+38 RT	3	387.91
1+92 LT	8	388.44
2+10 RT	4	388.36 (1.00%)
0 MH #120 LT.	7 (FF ONLY)	388.35 (1.00%)
0 MH #120	6	388.33 (1.00%)
0 MH #120 RT.	5	388.42 (1.00%)
MH #101 TO MH #102		
0+35 LT (DHC)	28	388.64
MH #100 TO MH #101		
0+75 LT	29	385.51
EX. MH #210 TO MH #100		
0+35 LT	30	379.71
0+70 RT	2	382.13

SEE SHEET 3 OF 3 FOR PROFILES OF WATER & SEWER MAINS

PLAN
SCALE: 1"=50'



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. [Signature] 9/19/90
DIRECTOR OF PUBLIC WORKS DATE

Robert W. [Signature] 9-17-90
CHIEF BUREAU OF UTILITIES DATE

William [Signature] 9-18-90
CHIEF, LAND DEVELOPMENT DIVISION DATE

FISHER, COLLINS, AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21043

9757
STATE OF MARYLAND
TERRELL A. FISHER
REGISTERED PROFESSIONAL ENGINEER

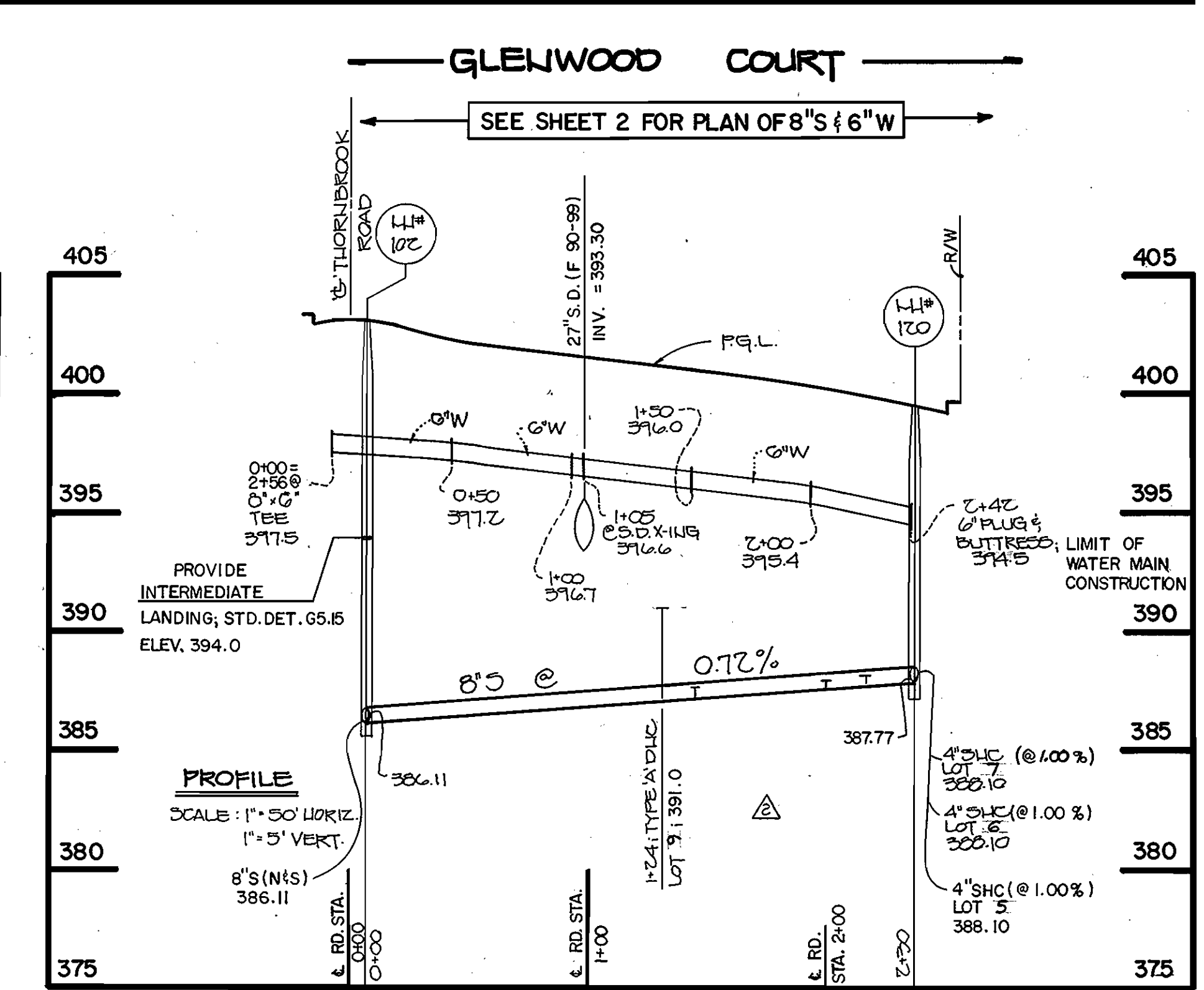
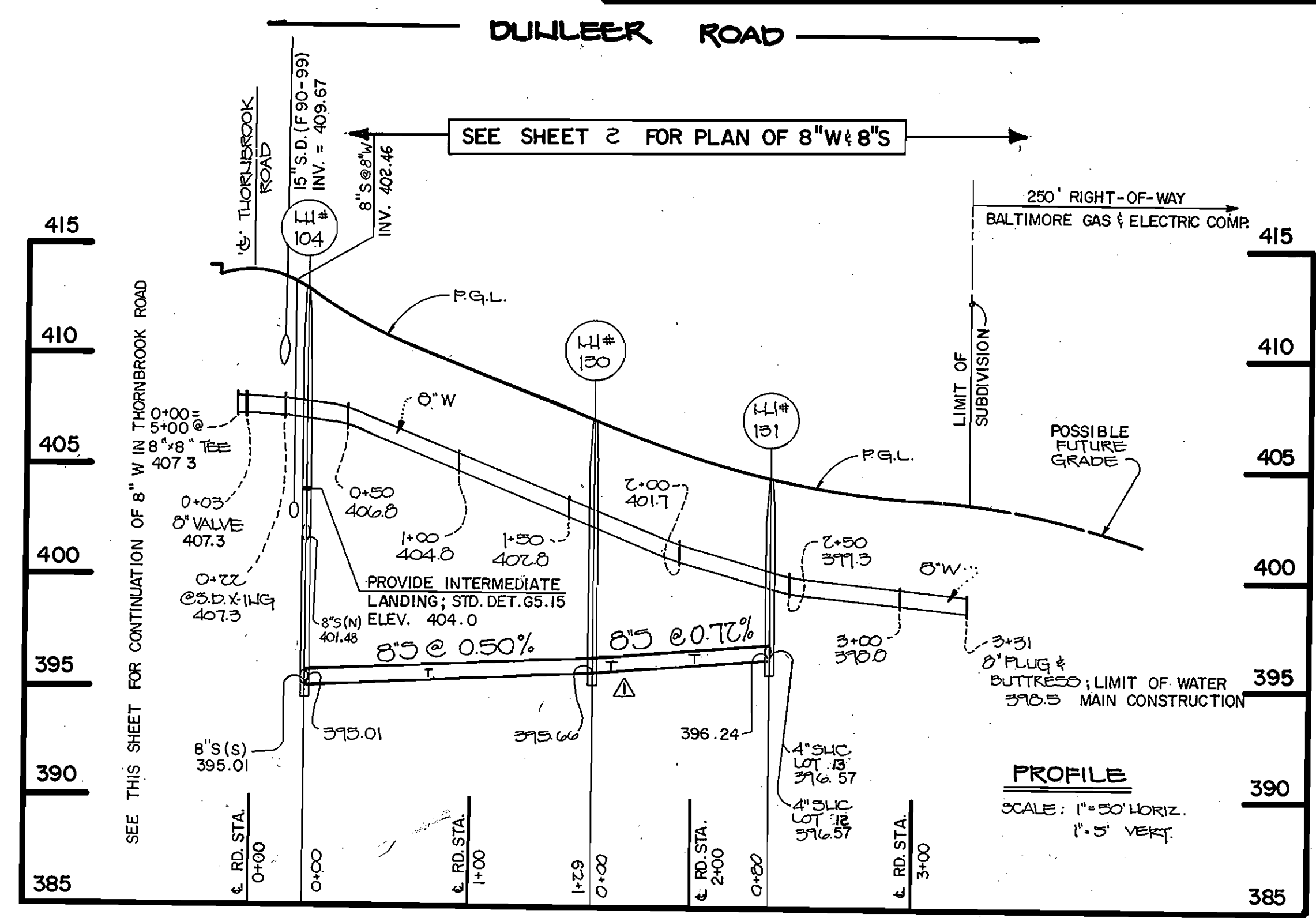
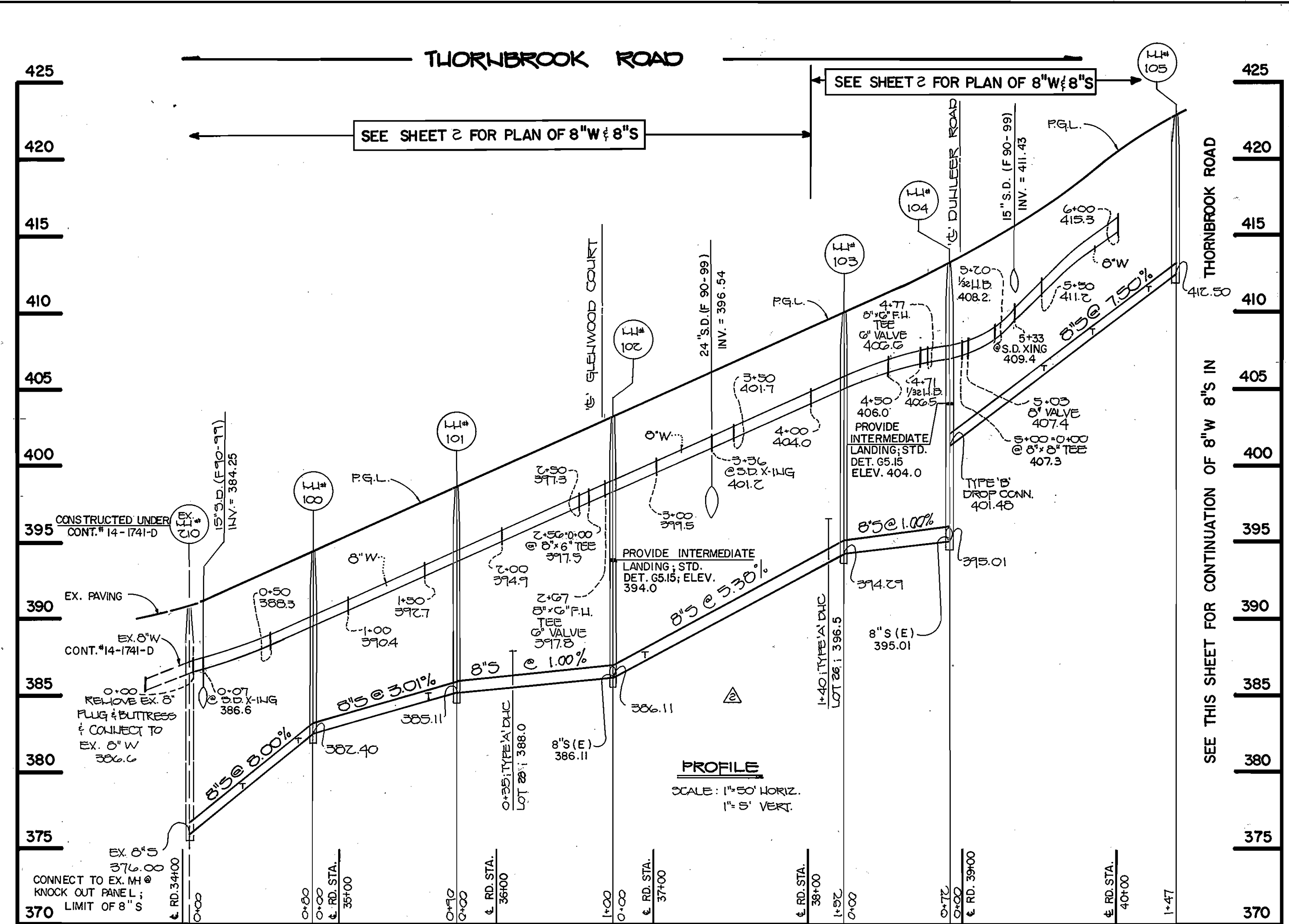
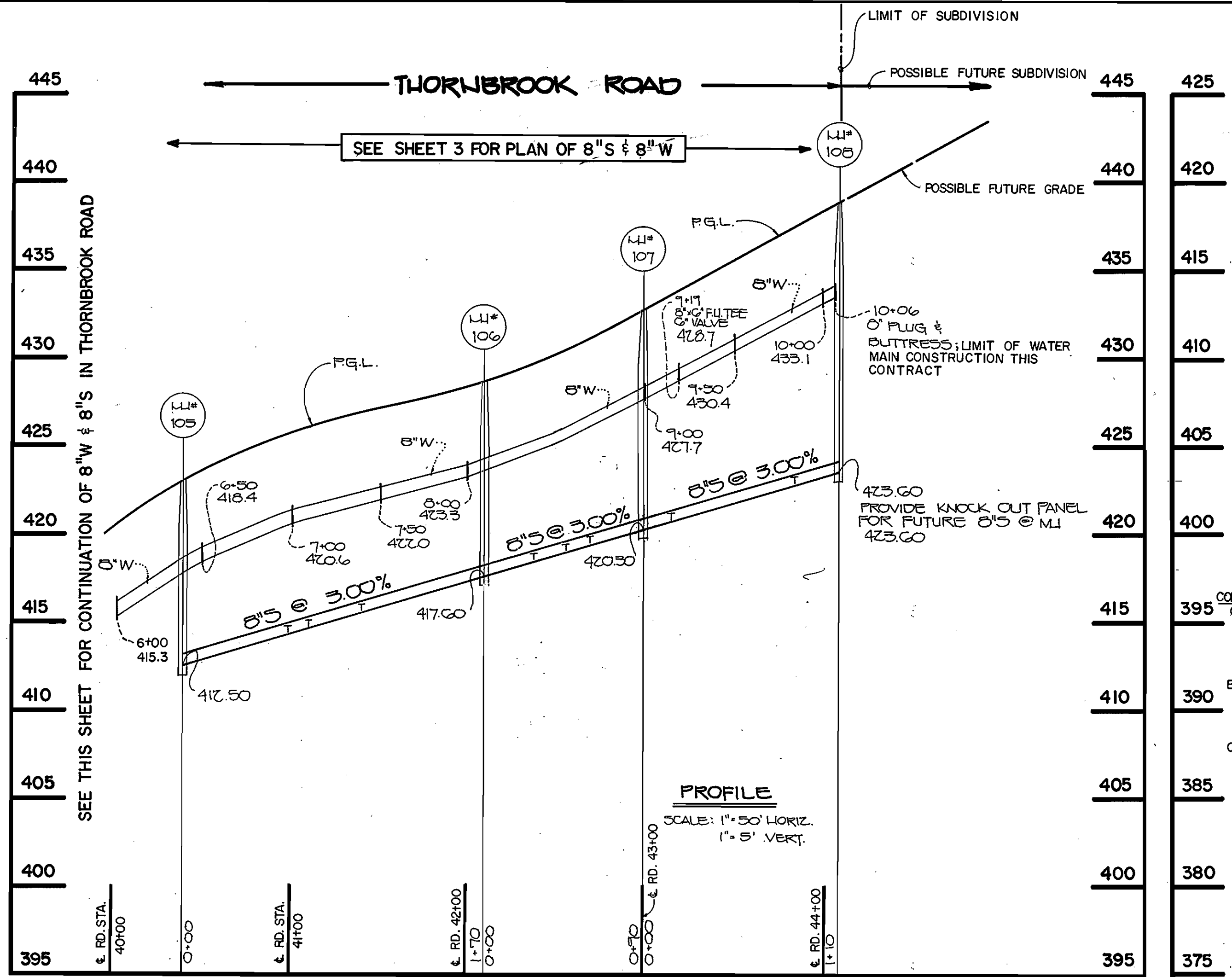
DES: MJM					
DRN: SFH					
CHK: PWK					
DATE: 9/1/90	M.M. AS-BUILT	9-25-91			
BY NO.	REVISION	DATE	600' SCALE MAP NO. 17	BLOCK NO.	

MOUNT HEBRON SECTION 20
CONTRACT NO. 14-1895-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 3

AS-BUILT

CONTRACT NO. 14-1895-D
MOUNT HEBRON SECTION 20
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND



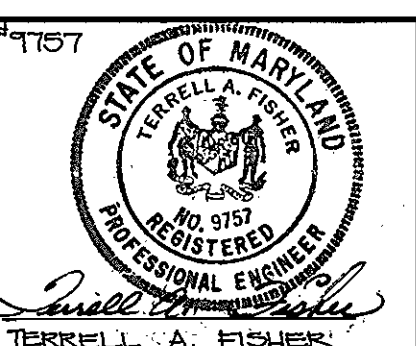
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. [Signature] 3/2/90
DIRECTOR OF PUBLIC WORKS DATE

Robert [Signature] 3-5-90
CHIEF, BUREAU OF UTILITIES DATE

Michael [Signature] 3/2/90
CHIEF, LAND DEVELOPMENT DIVISION DATE

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



DES: MJM				
DRN: MJM/SH				
CHK: PWK	SH	△	REVISE PROFILES OF THORNBROOK AND DULLEER RD., GLENWOOD CT	3/25/90
DATE:	JS	△	REVISE LOCATION OF ECH FOR LOT 36	4/10
BY NO.			REVISION	DATE

WATER & SEWER MAINS
PROFILES

600 SCALE MAP NO. 17 BLOCK NO.

MOUNT HEBRON
SECTION 20
CONTRACT NO. 14-1895-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 3

AS-BUILT