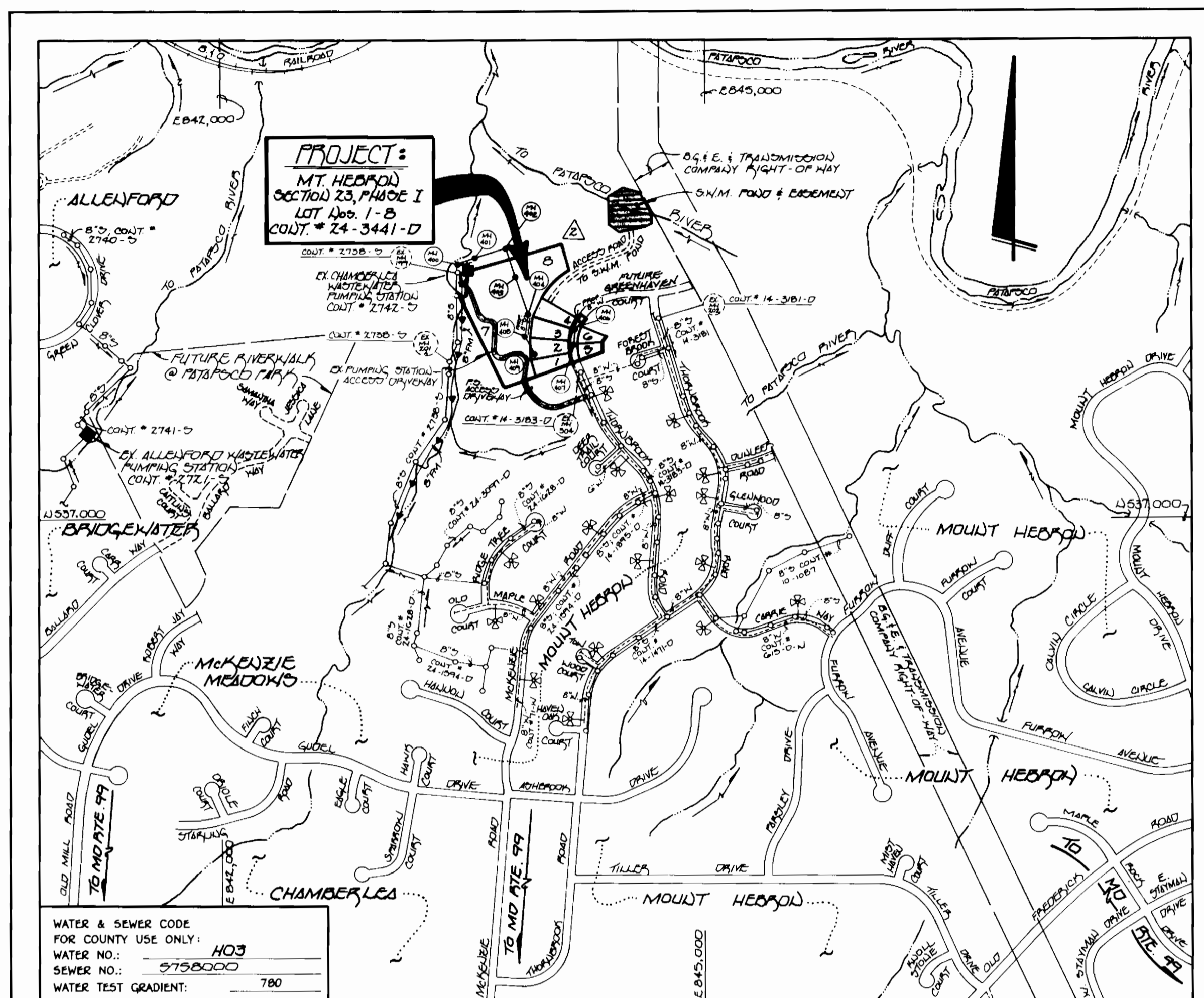


QUANTITIES				
ITEM	ESTIMATED	QUANTITIES	AS-BUILT TYPE	SUPPLIER
8" SDR-35	630 L.F.	630 L.F.	SDR-35	
8" SDR-35 (DIP)	835 L.F.	835 L.F.	CL-52	Griffin Pipe
MANHOLES	9 EACH	9 EA.	Pre-cast	Atlantic Precast
4" SDR-35	105 L.F.	125 L.F.	SDR-35	
8" 1/2 HD	2 EACH	2 EA.	CL-52	Griffin Pipe
8" HATCP	339 L.F.	339 L.F.	CL-52	Griffin Pipe
6" HATCP	20 L.F.	20 L.F.	CL-52	Griffin Pipe
PIPE HYDRANTS	1 EACH	1 EA.	Kannady	
1" RHC	10 L.F.	13 L.F.	K Type Copper	
3/4" RHC	136 L.F.	142 L.F.	K Type Copper	
8" G. TEE	1 EACH	1 EA.	CL-350 M.J.	
G. VALVE	1 EACH	1 EA.	Gate Valve	
8" Plug & Outlets	1 EACH	1 EA.	CL-350 M.J.	

NAME OF UTILITY CONTRACTOR:
SURVEY & DRAFTING DIVISION AS-BUILT DATE:



WATER & SEWER CODE FOR COUNTY USE ONLY:
 WATER NO.: H03
 SEWER NO.: 5750000
 WATER TEST GRADIENT: 780

TYPE OF BUILDING: RESIDENTIAL SINGLE FAMILY DETACHED
 NUMBER OF LOTS: 8 (6 BUILDABLE)
 NO. OF WATER HOUSE CONNECTIONS: 6
 NO. OF SEWER HOUSE CONNECTIONS: 6
 DRAINAGE AREA: PATAPSCO
 TREATMENT PLANT: PATAPSCO WASTEWATER TREATMENT PLANT VIA THE CHAMBERLEA PUMPING STATION

VICINITY MAP

SCALE: 1"=600'

PLAN REFERENCE NUMBERS:
 394-24 195-06
 195-107

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 U.S.G.S. COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM.
- 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 (1991 AMENDMENTS) THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB SITE.
- 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. - UNDER GROUND DAMAGE CONTROL - 787-9068
 - MISS UTILITY - 1-800-257-7777
 - COLONIAL PIPELINE CO. - 795-1390
 - BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 313-4900
- 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 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 D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- T.B. DENOTES TEST BORING.
- MANHOLES SHOWN WITH 12" AND 18" 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 PLANS OR IN THE SPECIFICATIONS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAMES AND COVERS, STANDARD DETAIL G5.51.
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED AS TO HAVE ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- ALL WATER MAINS SHALL 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 ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS (W1.11 AND W2.13). SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-153; DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, @ (410) 313-2450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 10.114(a) OF THE HOWARD COUNTY CODE.

CONTRACT No. 24-3441-D
MT. HEBRON
 SECTION 23 - PHASE 1
 LOT NOS. 1-8
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 & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN F95-107

Signature of Developer: *Michael W. Conn* 3/18/96
 SIGNATURE OF DEVELOPER DATE

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

APPROVED: *John P. Robertson* 3/24/96
 HOWARD SOIL CONSERVATION DISTRICT DATE

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
J. H. Warfield 3/24/96
 USA NATURAL RESOURCES CONSERVATION SERVICE DATE

Water & Sewer As-Builts

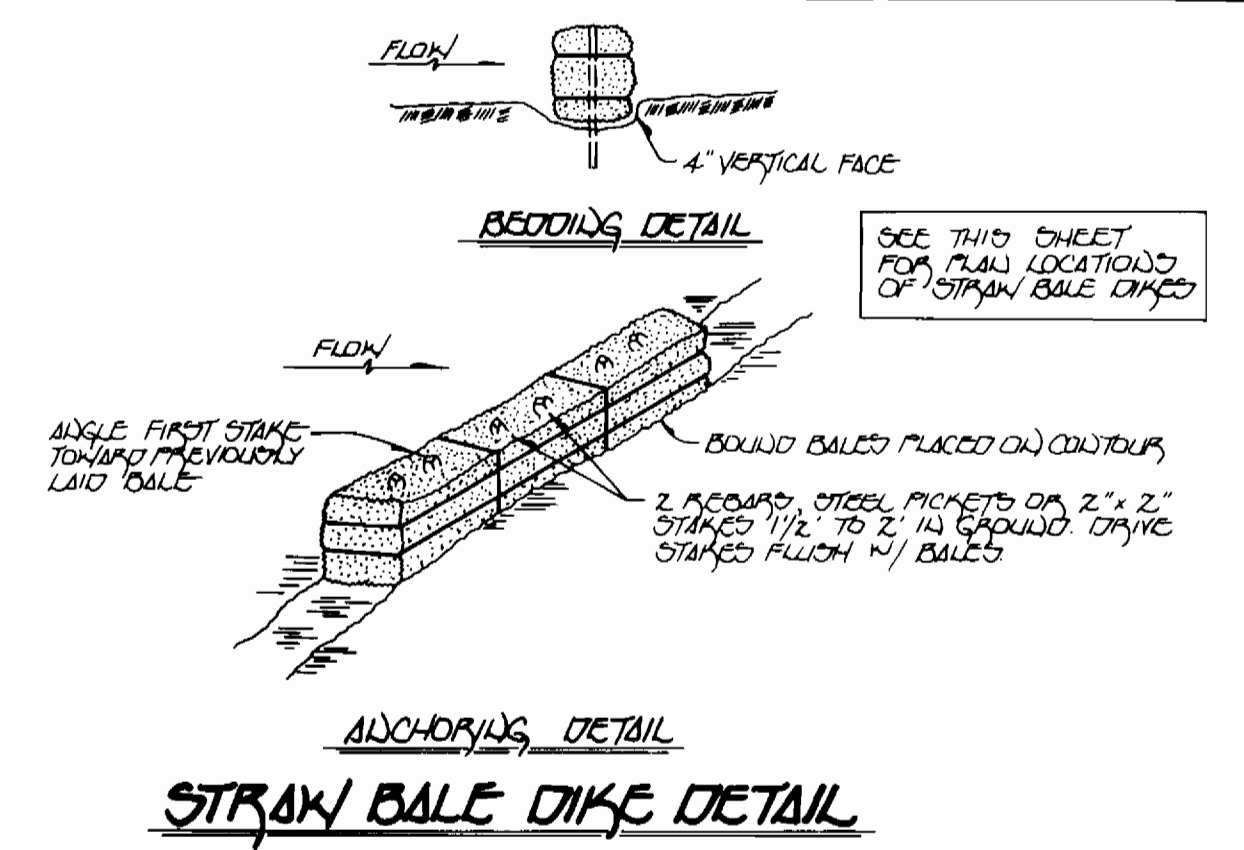
CONTRACT NO. 24-3441-D
 MT. HEBRON
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 WATER AND SEWER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert A. Bennett</i> 3-18-96 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>John P. Robertson</i> 3/24/96 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE	Fisher, Collins & Carter, Inc. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTRAL NATIONAL SQUARE OFFICE BUILDING 10272 BALTIMORE NATIONAL PIKE ELLSWORTH CITY, MARYLAND 21041 (410) 461-2855 TERRELL A. FISHER	#9757 DES: M.J.M. DRWN: J.M.H. CHK: P.W.K. DATE: 10/13/95	REVISIONS: FCC Δ REVISION VICINITY MAP (SEWER MAIN LOCATIONS) 8/95 FCC Δ REVISION QUANTITIES FOR 8" SDR-35 & 4" SDR-35 8/95	TITLE SHEET	600' SCALE MAP NO. 17 BLOCK NO. 3	SCALE AS SHOWN SHEET 1 OF 3
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NOTE: EX EVERGREEN TREES WHICH ARE REMOVED DURING INSTALLATION OF THE SEWER MAIN SHALL BE REPLANTED WITHIN THE PUMPING STATION SITE AT THE LOCATIONS DETERMINED BY THE BUREAU OF UTILITIES (313-4100) & DESIGNATED BY EVERGREEN TREE

SEQUENCE OF CONSTRUCTION

1. OBTAIN WATER & SEWER CONSTRUCTION PLAN APPROVAL.
2. NOTIFY WPD UTILITY 48 HOURS BEFORE BEGINNING ANY WORK (1-800-257-7117). NOTIFY HOWARD COUNTY CONSTRUCTION/INSPECTION DIVISION 24 HOURS BEFORE STARTING ANY WORK (410) 315-1870.
3. INSTALL THE REQUIRED DECIMENT & EROSION CONTROL DEVICES AS INDICATED ON SHEETS 2 & 3.
4. THE CONTRACTOR SHALL INSPECT & PROVIDE NECESSARY MAINTENANCE ON ALL DECIMENT & EROSION CONTROL DEVICES AFTER EACH RAINFALL & ON A DAILY BASIS.
5. CLEAR & GRADE AS NECESSARY, ONLY AS REQUIRED FOR EXCAVATION & INSTALLATION OF THE SEWER MAIN.
6. REMOVE THE EXISTING B' PLUG (CONTRACT NO. 2142-0) & BUILD PROPOSED MH # 400 OVER & CONNECT TO EXISTING B' SEWER.
7. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE BUILDINGS, PAVEMENT, CHAIN LINK FENCE & OTHER FACILITIES DURING INSTALLATION OF THE SEWER MAIN WITHIN THE SITE OF THE EXISTING PUMPING STATION.
8. THE EXISTING EVERGREEN TREES WHICH ARE REMOVED DURING INSTALLATION OF THE SEWER MAIN SHALL BE REPLANTED WITHIN THE PUMPING STATION SITE AT THE LOCATIONS DETERMINED BY THE BUREAU OF UTILITIES.
9. STABILIZE, SEED & MULCH ALL DISTURBED AREAS IN ACCORDANCE WITH THE RECOMMENDED SEEDING NOTES PROVIDED UNDER F 95-107.
10. FOLLOWING SUCCESSFUL STABILIZATION OF ALL DISTURBED AREAS, & AFTER PERMITS/HAS BEEN OBTAINED FROM THE HOWARD COUNTY DECIMENT CONTROL INSPECTOR, REMOVE ALL DECIMENT & EROSION CONTROL DEVICES.



- STRAY BALE DIKE DETAIL**
1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE OUTSLOPE (1) A MIN WITH ENDS TIGHTLY ADJOINING THE ADJACENT BALES.
 2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES, & PLACED SO THE BOUNDARIES ARE HORIZONTAL.
 3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR ICE 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.
 4. INSPECTION SHALL BE FREQUENT & REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS REQUIRED.
 5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPED STORM FLOW OR OUTFLOW.

NOTE: STRAY BALE DIKES SHOWN UNDER THIS CONTRACT ARE TO BE PROVIDED IN ADDITION TO THE DECIMENT & EROSION CONTROL MEASURES PROVIDED UNDER F 95-107.

NOTE: THE ENTIRE SEWER MAIN RUN FROM MH 401-MH 402, MH 402-MH 403 & MH 403-MH 404 SHALL UTILIZE CLASS 52 R.I.P. WITH RESTRAINED JOINTS.

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

NOTE: The Contractor Shall Take All Necessary Precautions To Protect The Buildings, Pavement, Chain Link Fence & Other Facilities During Installation of the Sewer Main within the site of the Existing Pumping Station.

NOTE: THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE BUILDINGS, PAVEMENT, CHAIN LINK FENCE & OTHER FACILITIES DURING INSTALLATION OF THE SEWER MAIN WITHIN THE SITE OF THE EXISTING PUMPING STATION.

SHC INVERT @ PROPERTY LINE CHART

STATION	LOT	ELEVATION
@ MH 404 LT	MH 404 TO MH 405	393.24
0 + 40 LT	4 (CONCRETE @ MH)	394.20
0 + 20 LT	5 (CHC @ MH)	431.59
@ MH 407 LT	6 (CHC @ MH)	432.43
0 + 70 LT	7	387.37
@ MH 409	7 (CHC @ MH)	388.06

MH TABULATION CHART

MH #	R.D. STA.	DISTANCE	SLOPE	RIM ELEVATION
400				287.50
401				299.50
402				369.25
403				400.50
404				403.50
406	19+49	0.00%		444.41
407	10+45	1.00%		443.15
408				395.50
409				394.7

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert Baines 3-18-96
CHIEF, BUREAU OF UTILITIES DATE

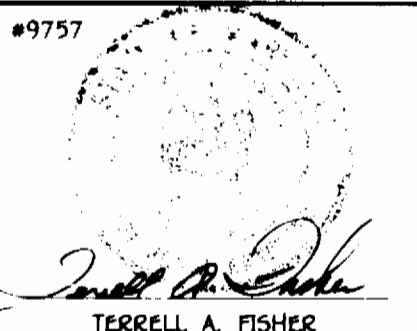
DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

[Signature] 7/2/96
CHIEF, DEVELOPMENT & ENGINEERING DIVISION DATE

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

CENTENNIAL SQUARE OFFICE PARK
10722 CANTONMENT NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2855

[Signature]
TERRELL A. FISHER



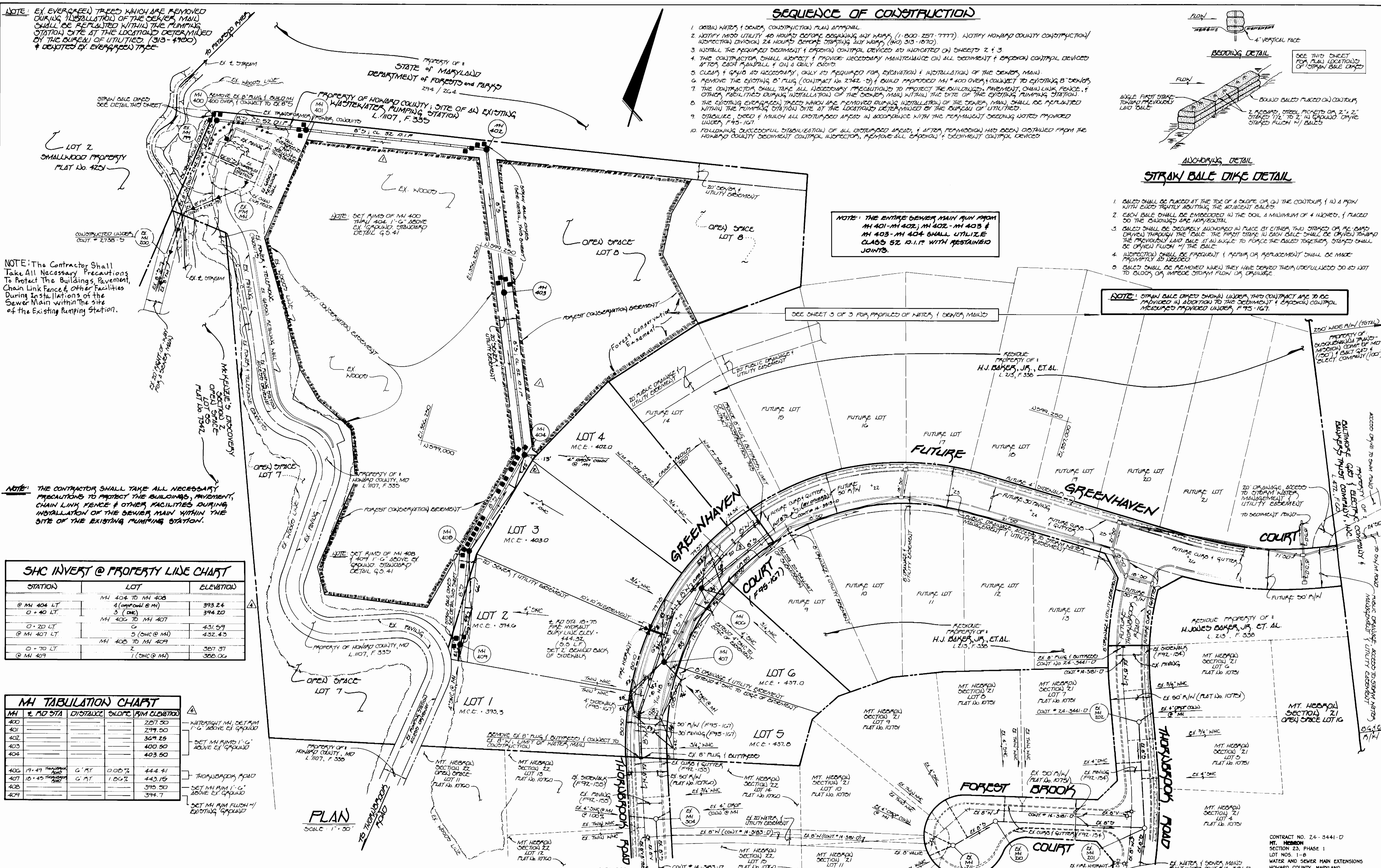
DES:	J.M.M.	DATE:	10/13/95
DRWN:	J.M.M.	BY:	NO.
CHK:	P.W.K.	REVISION:	

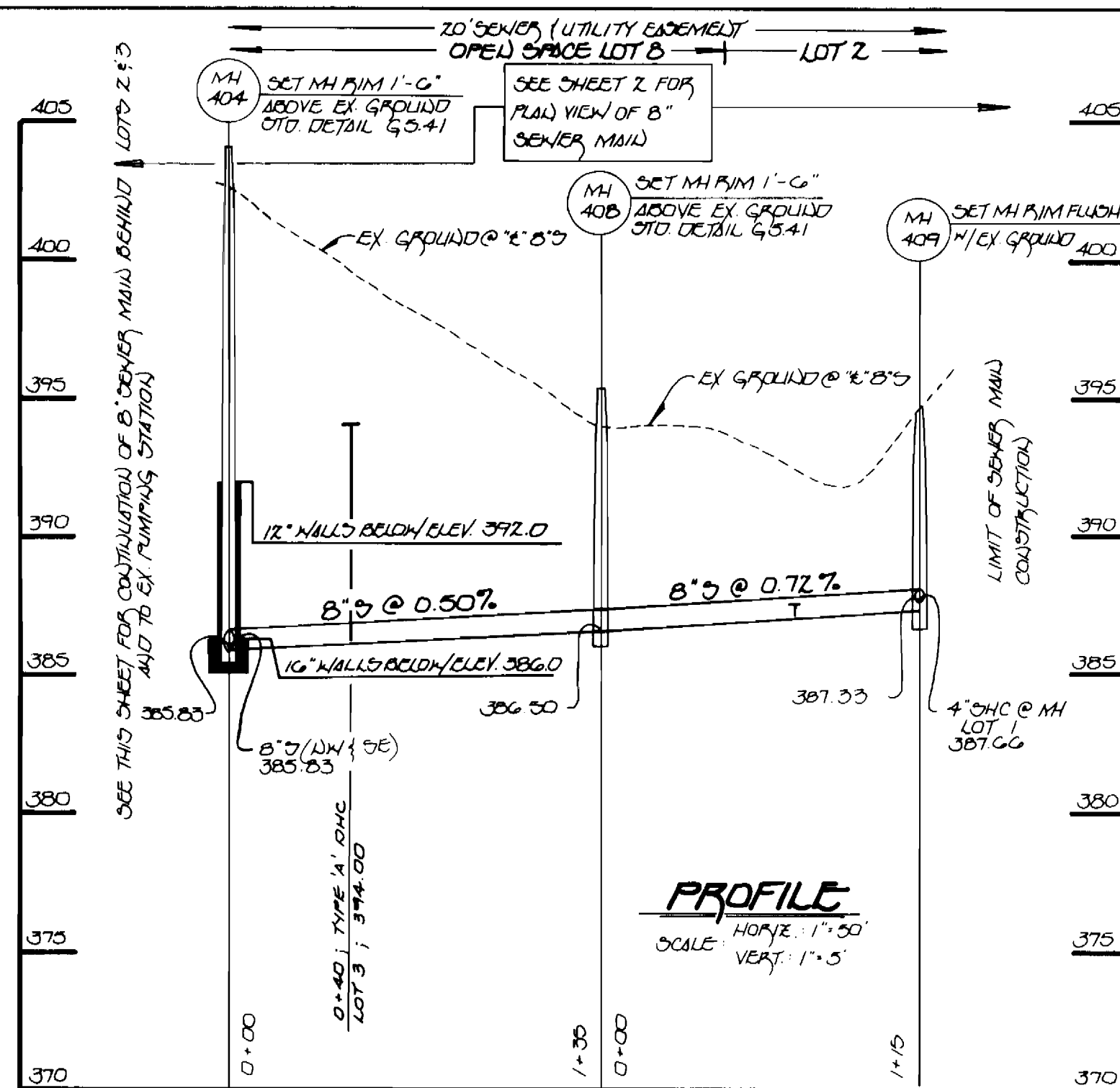
**PLAN VIEW
WATER & SEWER MAINS**

600' SCALE MAP NO. 17 BLOCK NO. 3

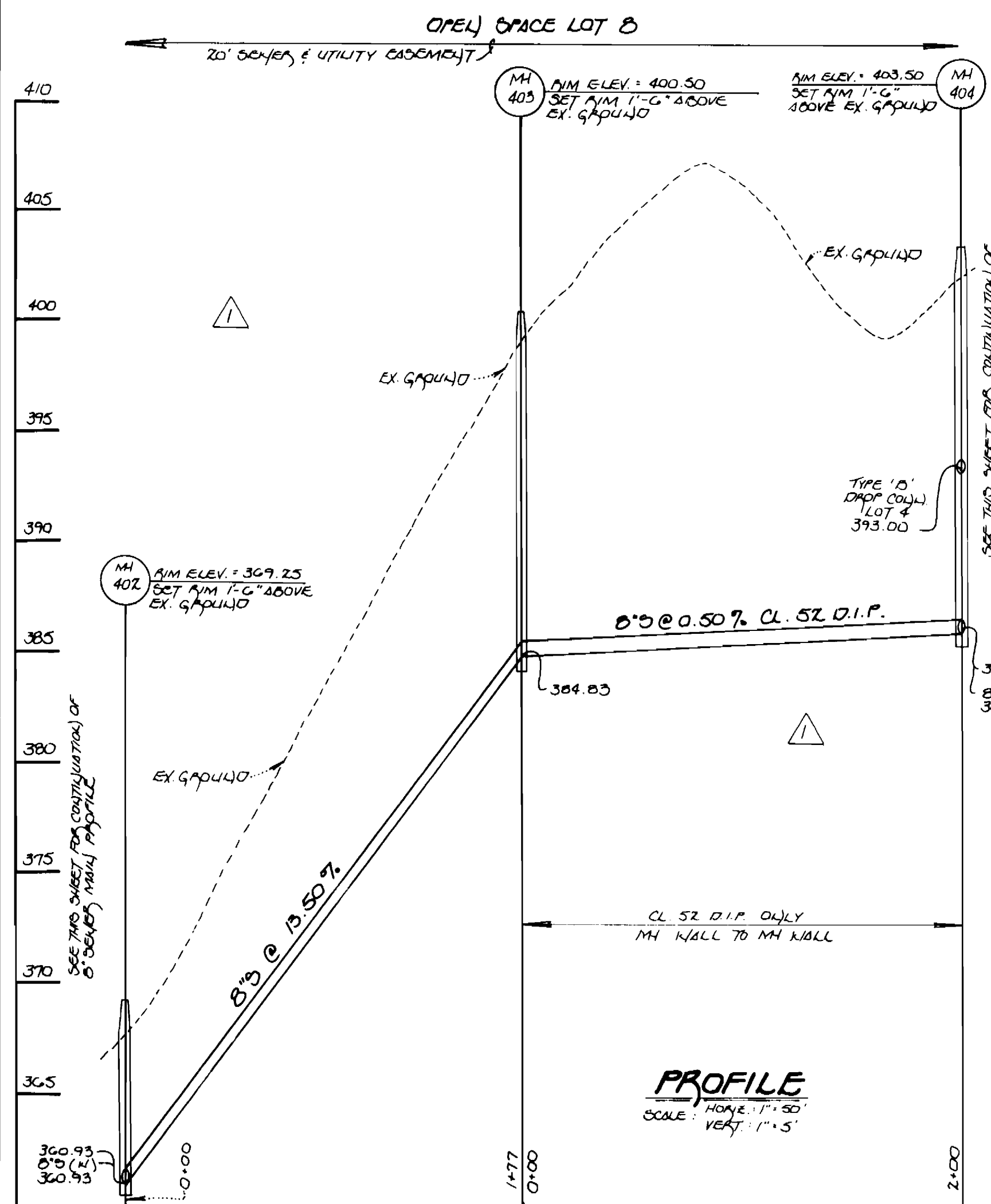
**MT. HEBRON
SECTION 23 - PHASE 1
LOT NOS. 1-8
CONTRACT NO. 24-3441-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND**

SCALE AS SHOWN
SHEET 2 OF 3

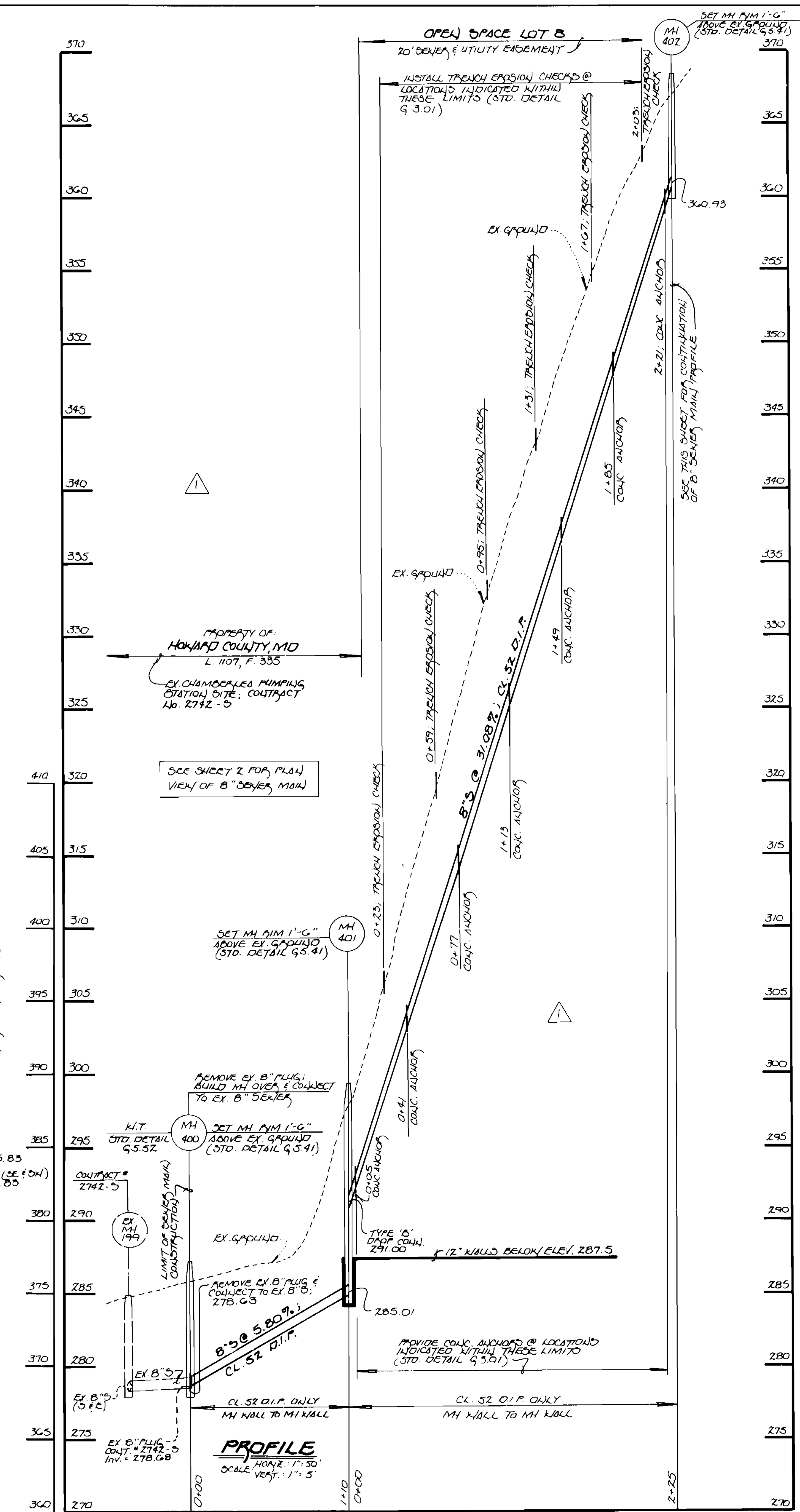




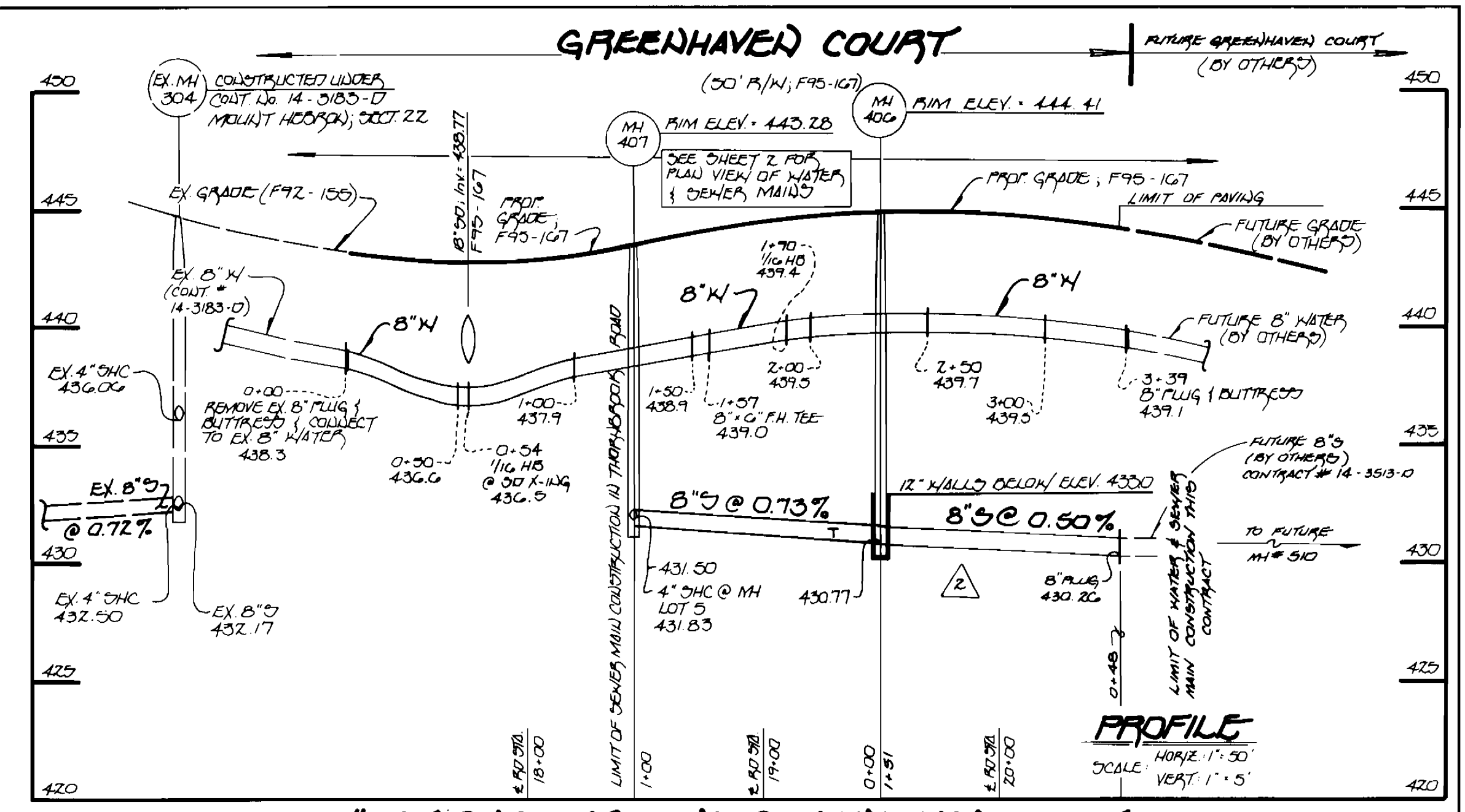
8" SEWER MAIN BEHIND LOT NOS. 2 & 3



8" SEWER MAIN OUTFALL



8" SEWER MAIN OUTFALL

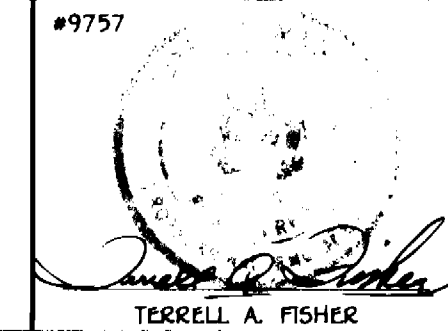


8" WATER & SEWER MAINS GREENHAVEN COURT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
3-18-96
DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
DATE

Fisher, Collins & Carter, Inc.
CIVIL ENGINEERING CONSULTANTS &
LAND SURVEYORS
CENTENNIAL SQUARE OFFICE (MAY)
10272 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2500



DES: J.M.M.
DRWN: J.M.M.
CHK: P.W.K.
DATE: 10/13/95
BY: NO. REVISION

WATER & SEWER MAINS
PROFILES
600' SCALE MAP NO. 17 BLOCK NO. 3

MT. HEBRON
SECTION 23 - PHASE 1
LOT NOS. 1-B
CONTRACT NO. 24-3441-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 3

CONTRACT NO. 24-3441-D
MT. HEBRON
SECTION 23, PHASE 1
LOT NOS. 1-B
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND