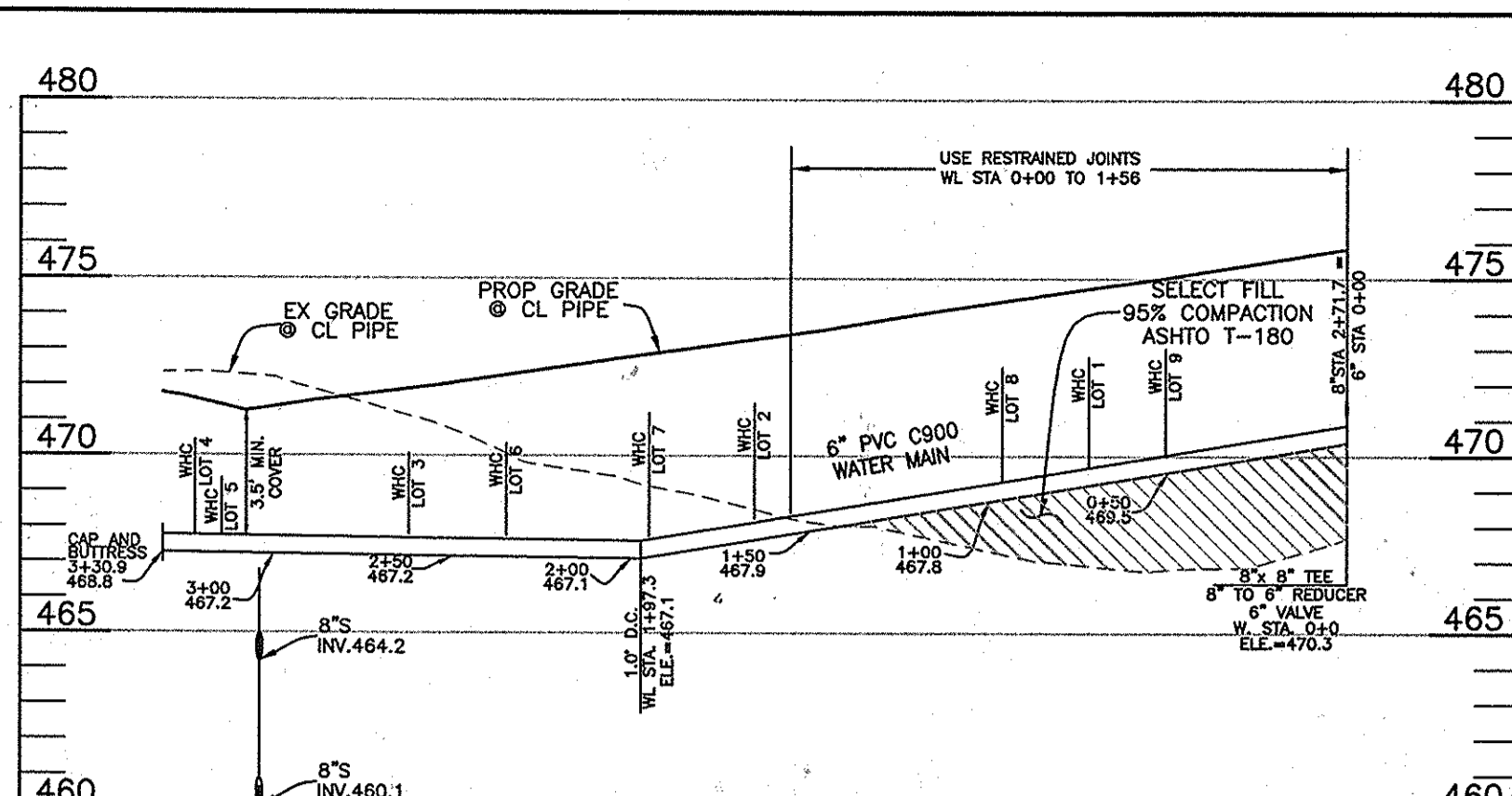
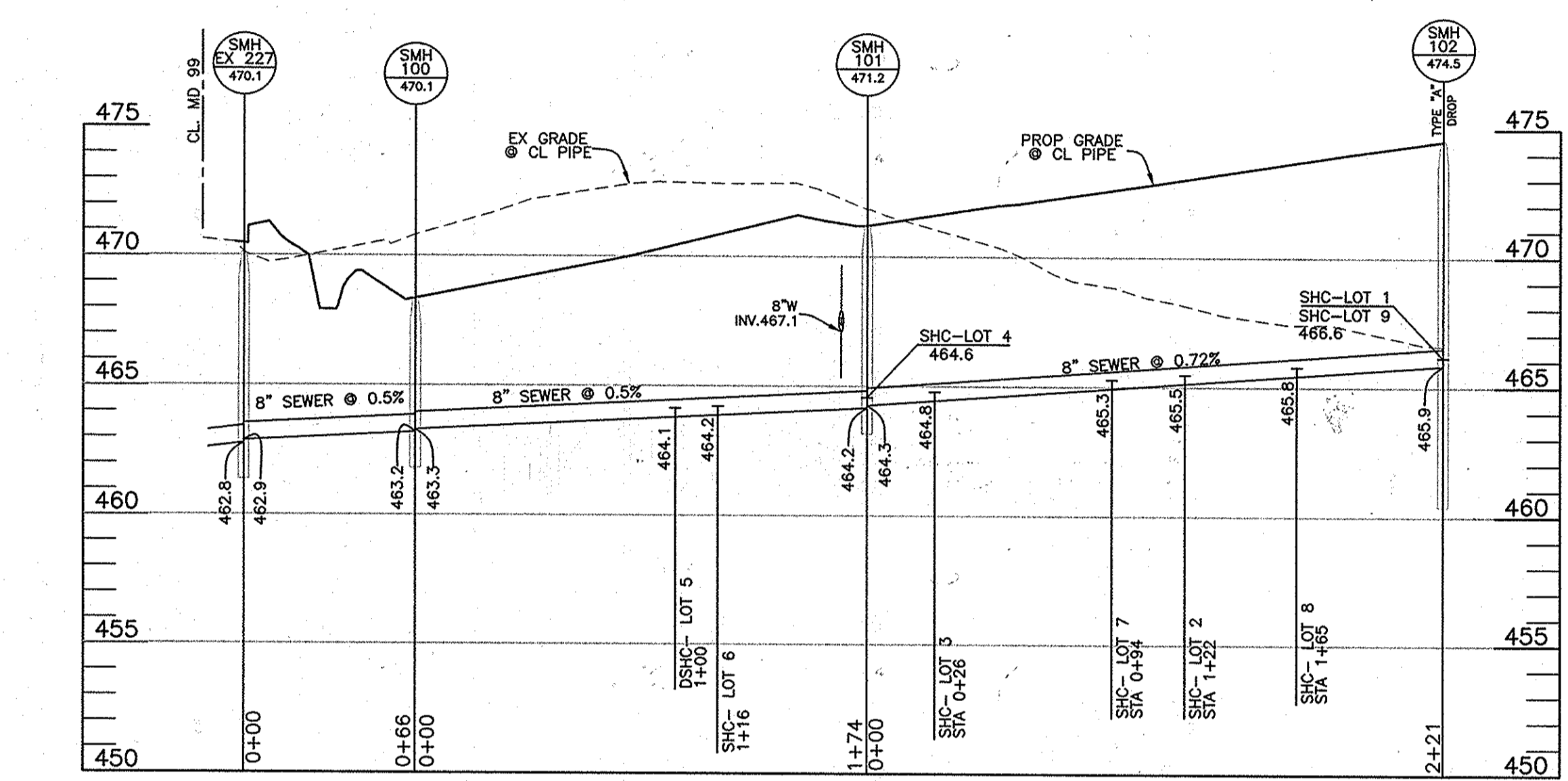


WATER PROFILE
MD 99 CONNECTION, 8" MAIN
SCALE: 1"=50' HORIZ., 1"=5' VERT.



WATER PROFILE
6" MAIN
SCALE: 1"=50' HORIZ., 1"=5' VERT.



SEWER PROFILE
EX MH 227 TO MH 102
SCALE: 1"=50' HORIZ., 1"=5' VERT.

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE

LOT	PULL 1	PULL 2	PULL 3
1	10' TO LOT 7 WHC	9' TO SMH 102	24' TO LOT 8 WHC
2	43.5' TO LOT 7 SHC	53.5' TO LOT 8 SHC	35' TO LOT 7 WHC
3	34' TO LOT 4 SHC	28' TO SMH 101	17.5' TO LOT 3 WHC
4	14' TO LOT 4 WHC	14' TO SMH 101	30' TO LOT 3 SHC
5	27' TO LOT 6 SHC	53' TO LOT 5 WHC	60' TO 1 1/2" DRAIN
6	27' TO LOT 6 SHC	42.5' TO LOT 6 WHC	50' TO SMH 101
7	24' TO LOT 6 WHC	14' TO LOT 7 WHC	43.5' TO LOT 2 SHC
8	40.5' TO LOT 2 WHC	42.5' TO LOT 8 WHC	53.5' TO LOT 2 SHC
9	24' TO LOT 8 WHC	30.5' TO LOT 7 WHC	25' TO SMH 102

WATER HOUSE CONNECTION AS-BUILT LOCATION TABLE

LOT	PULL 1	PULL 2	PULL 3
1	30.5' TO LOT 9 SHC	12' TO SMH 102	10' TO LOT 1 SHC
2	43' TO LOT 7 WHC	40.5' TO LOT 8 SHC	16' TO LOT 2 SHC
3	17.5' TO LOT 2 SHC	44' TO SMH 101	39' TO LOT 6 WHC
4	17' TO TEST STATION	18.5' TO 1 1/2" DRAIN	22' TO LOT 4 WHC
5	53' TO LOT 5 SHC	16' TO TEST STATION	43' TO LOT 2 SHC
6	28' TO LOT 3 WHC	26' TO LOT 2 SHC	43' TO LOT 2 SHC
7	14' TO LOT 7 SHC	35' TO LOT 2 SHC	43' TO LOT 2 WHC
8	26' TO SMH 102	26' TO LOT 8 SHC	42.5' TO LOT 2 SHC
9	38' TO LOT 1 WHC	38' TO SMH 102	20.5' TO LOT 9 SHC

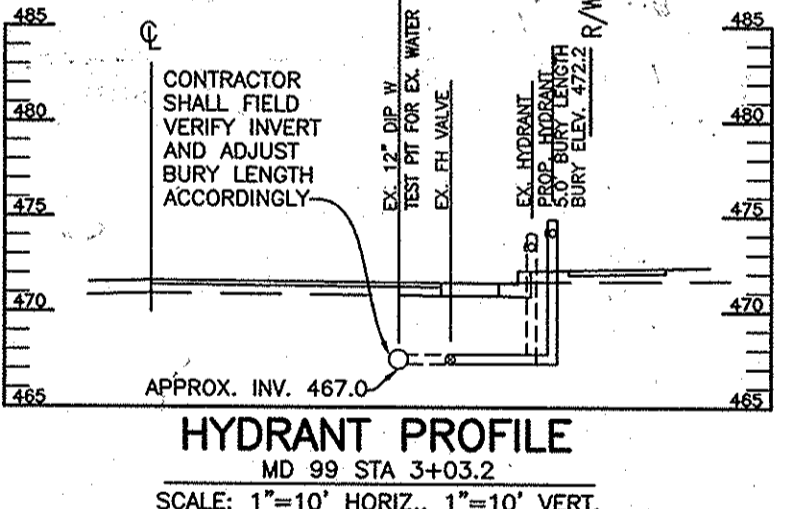
MANHOLE LOCATION TABLE

NO.	EASTING	NORTHING	ELEVATION
100	11594031.1576	11356988.4563	470.1
101	11593888.3037	11356974.2614	470.1
102	11593838.1817	11357193.6554	474.5

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

John R. Robertson 10/16/14
HOWARD SOIL CONSERVATION DISTRICT

OWNER/DEVELOPER:
HEBRON MANOR LLC
11807 WOLLINGFORD COURT
CLARKSVILLE, MARYLAND 21029
410-792-2565



HYDRANT PROFILE
MD 99 STA 3+03.2
SCALE: 1"=10' HORIZ., 1"=10' VERT.

SEWER HOUSE CONNECTION CHART

LOT	INV. @ MAIN	INV. @ PL/ESMT	MCE	NOTES
1	466.6	466.7	469.2	
2	465.5	465.6	468.1	
3	464.8	464.9	467.3	
4	464.6	464.7	467.5	
5	464.1	464.2	466.7	
6	464.2	464.3	466.7	
7	465.3	465.5	468.0	
8	465.8	466.0	468.5	
9	466.6	466.8	469.4	

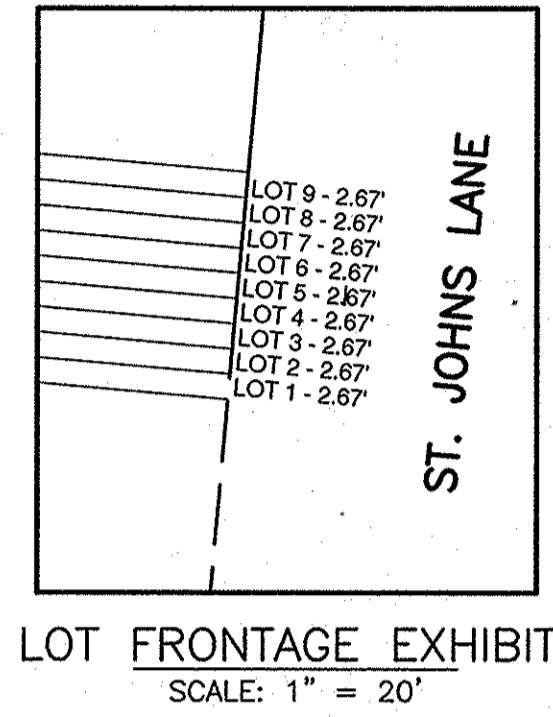
NOTE: ALL SEWER HOUSE CONNECTIONS ARE 1% SLOPES.

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	QUANTITIES AS-BUILT	TYPE	MANUF./SUPPLIER
8" D.I.P. WATER	28 LF	28 LF	DIP	ATLANTIC
8" C-900 PVC DR-18 WATER	264 LF	264 LF	PVC	NORTH AMERICAN
6" C-900 PVC DR-18 WATER	331 LF	331 LF	PVC	NORTH AMERICAN
12"x8" TAPPING SLEEVE & VALVE	1 EA.	1 EA.	DIP	FORD
8" VALVE	2 EA.	2 EA.	DIP	KENNEDY
6" VALVE	1 EA.	1 EA.	DIP	KENNEDY
FIRE HYDRANTS (INCLUDES 8"x8" TEE & 6" VALVE)	2 EA.	2 EA.	HYDRANT	KENNEDY
8"x8" TEE	1 EA.	1 EA.	DIP	STAR PIPE
8"x6" REDUCER	1 EA.	1 EA.	DIP	STAR PIPE
8" 1/16 BEND	2 EA.	2 EA.	DIP	STAR PIPE
8" PLUG AND BUTTRISS	1 EA.	1 EA.	DIP	STAR PIPE
6" PLUG AND BUTTRISS	1 EA.	1 EA.	DIP	STAR PIPE
1 1/2" WHC	120 LF	120 LF	COPPER	CAMBRIDGE LEE
8" PVC SEWER	461 LF	461 LF	SDR-35 PVC	NORTH AMERICAN
MANHOLES	3 EA.	3 EA.	CONCRETE	CONTRACTORS PRECAST
4" SHC	125 LF	125 LF	SDR-35 PVC	NORTH AMERICAN

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

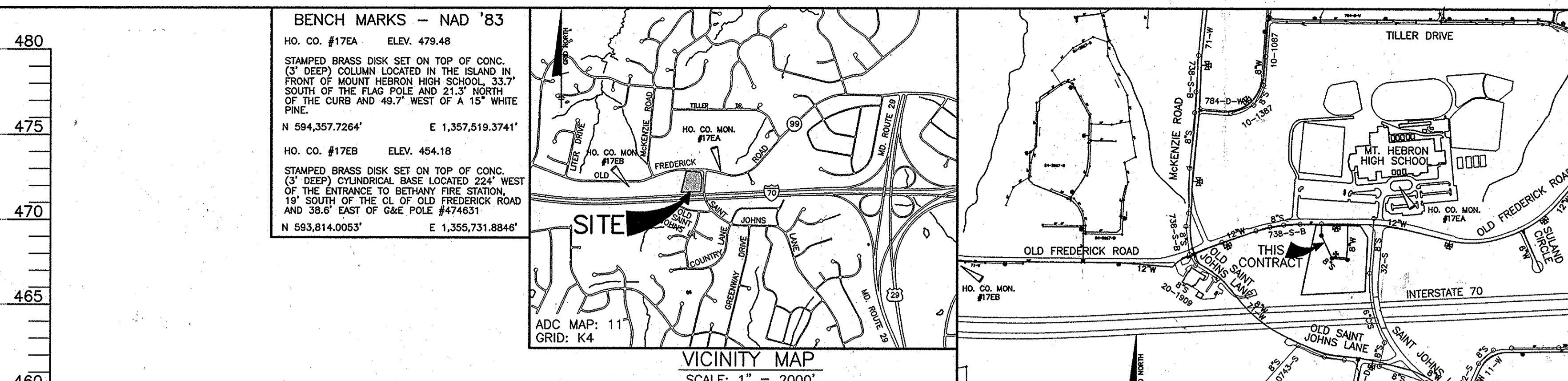
- ALL SEWER HOUSE CONNECTIONS SHALL BE 4 INCHES IN DIAMETER.
- ALL WATER HOUSE CONNECTIONS SHALL BE 1 1/2 INCH IN DIAMETER.
- ALL WATER MAINS ARE D.I.P. CLASS 54.
- ALL SEWER STATION/OFFSET SHOWN ON PLAN ARE TO THE MIDDLE OF THE MANHOLE.



LOT FRONTAGE EXHIBIT
SCALE: 1" = 20'

LEGEND

- EXIST. WATER MAIN
- EXIST. SEWER MAIN
- EXIST. SEWER MANHOLE
- PROP. WATER MAIN
- PROP. SEWER MAIN
- PROP. STORM DRAIN
- PROP. SEWER MANHOLE
- PROP. TERMINAL MANHOLE
- PROP. SEWER HOUSE CONNECTION
- PROP. WATER HOUSE CONNECTION (DOUBLE - 1 1/2")
- PROP. WATER HOUSE CONNECTION (SINGLE - 1")
- PROP. FIRE HYDRANT
- PROP. VALVE

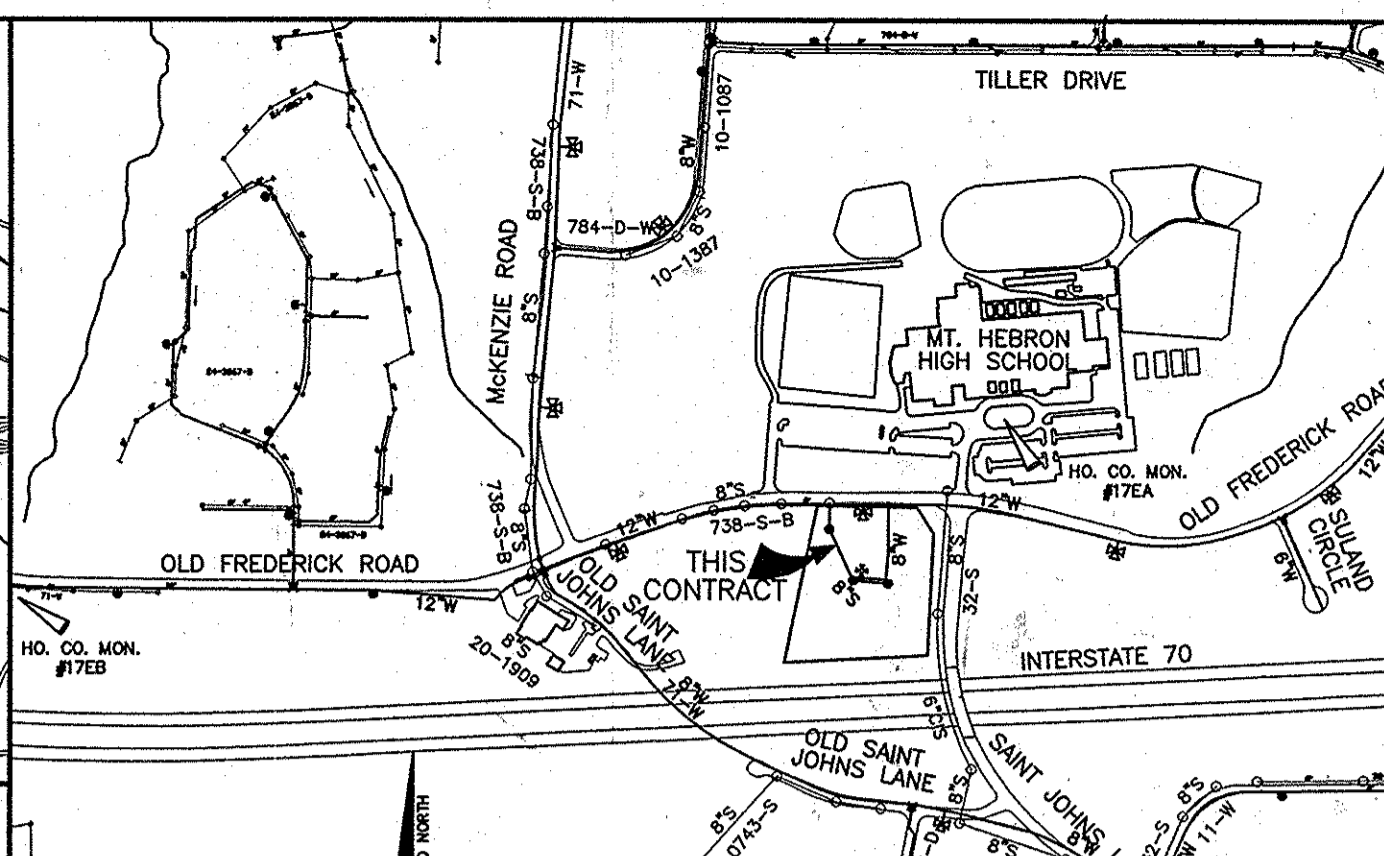
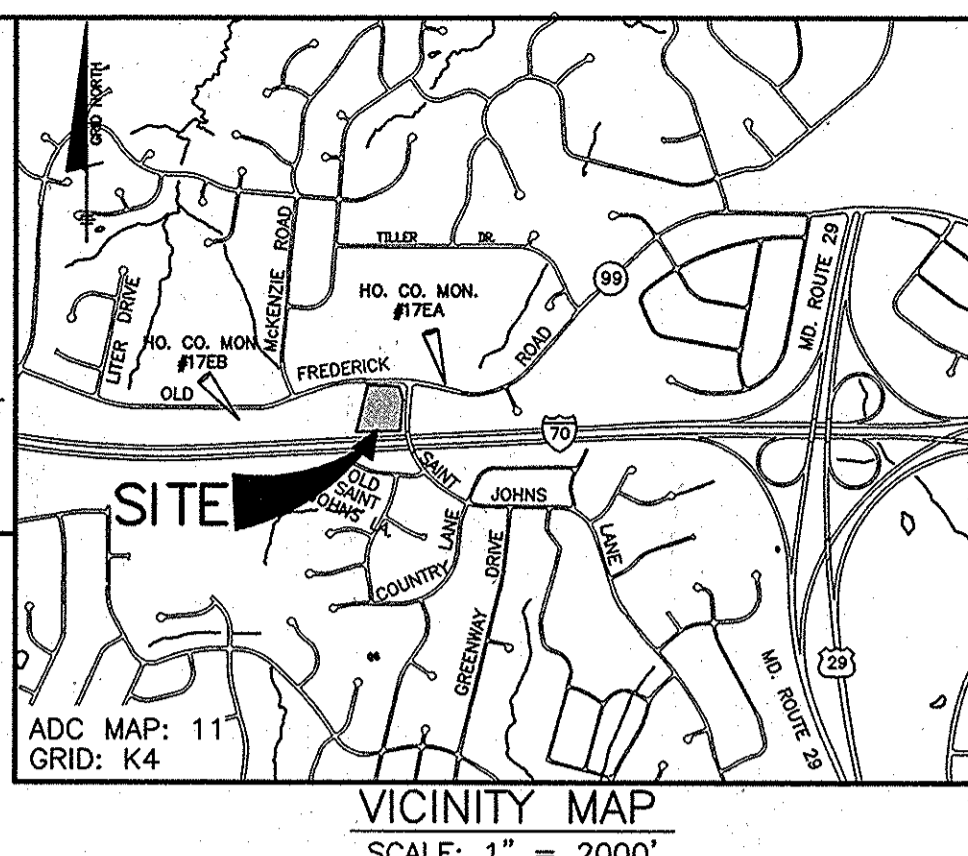


BENCH MARKS - NAD '83

HO. CO. #17EA ELEV. 479.48
STAMPED BRASS DISK SET ON TOP OF CONC. (3" DEEP) COLUMN LOCATED IN THE ISLAND IN FRONT OF MOUNT HEBRON HIGH SCHOOL, 33.7' SOUTH OF THE FLAG POLE AND 21.3' NORTH OF THE CURB AND 42.7' WEST OF A 1 1/2" WHITE PINE.

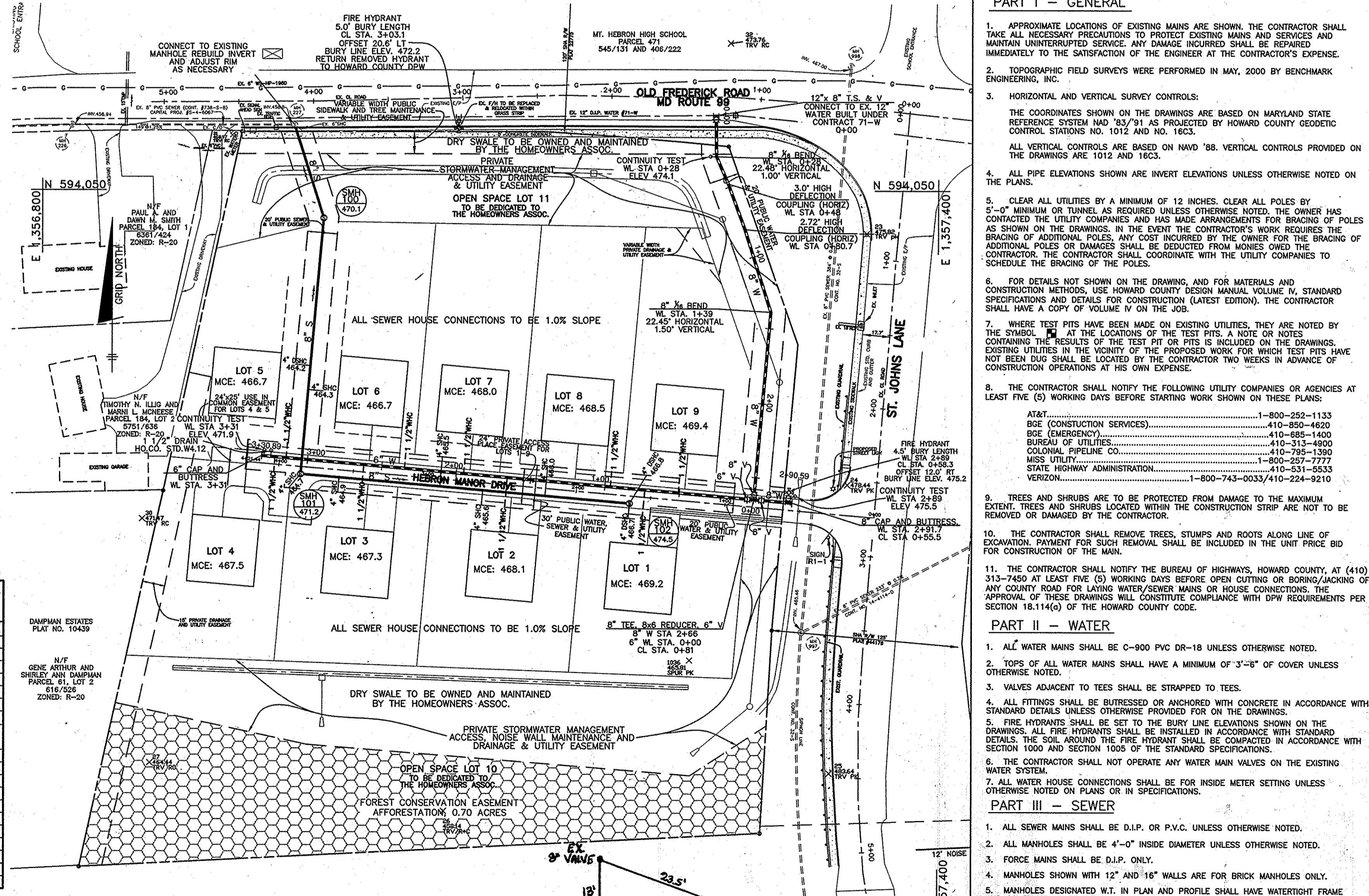
N 594,357.7264' E 1,357,519.3741'
HO. CO. #17EB ELEV. 454.18
STAMPED BRASS DISK SET ON TOP OF CONC. (3" DEEP) CIRCULAR BASE LOCATED 224' WEST OF THE ENTRANCE TO BETHANY FIRE STATION, 19' SOUTH OF THE CL. OF OLD FREDERICK ROAD AND 38.6' EAST OF G&E POLE #474631

N 593,814.0053' E 1,355,731.8846'



PART II - WATER (CONTINUED)

- PROPER ASSEMBLY OF GASKETED PVC PIPE JOINTS. THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTHS OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF PVC PIPE.
- ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS OR HIGH DEFLECTION (HD) COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF PVC PIPE JOINTS IS PERMITTED. WHERE HIGH DEFLECTION COUPLINGS OR 5-DEGREE SWEEPS ARE PERMITTED, THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (20-FOOT LONG) ON EITHER SIDE OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP. THE CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE #57 STONE ON BOTH SIDES OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTOR EQUIPMENT DIRECTLY OVER THE FITTING.
- PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1/2-DEGREE ON EITHER END OF THE COUPLING). SHALL BE RATED FOR A MINIMUM 225 PSI MEETING THE REQUIREMENTS OF ANNA C200 AND SHALL BE MULTI FITTINGS (EVS) BLUE BRUTE DR18 OR EQUAL.
- FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI DR18 MEETING THE REQUIREMENTS OF ANNA C200 AND SHALL BE MULTI FITTINGS (EVS) BLUE BRUTE DR18 OR EQUAL.
- WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF ANNA C-900 PVC PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR PLAIN ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFLECTION COUPLINGS AND 5 DEGREE SWEEPS. BELL STOPS SHALL BE PLACED AT THE PROPER INSERTION LINE FOR THE FITTING. THE BELL STOP SHALL BE MANUFACTURED OF DUCTILE IRON AND INCORPORATE AN EXPANSION RETENTION SPRING TO ALLOW FOR PIPE EXPANSION AND CONTRACTION. THE BELL STOPS SHALL BE SERIES 5000 MEGA-STOP, AS MANUFACTURED BY EBAA IRON, INC. OR APPROVED EQUAL.



PLAN VIEW
SCALE: 1" = 50'

GENERAL NOTES

- PART I - GENERAL**
- APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGES INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
 - TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED IN MAY, 2000 BY BENCHMARK ENGINEERING, INC.
 - HORIZONTAL AND VERTICAL SURVEY CONTROLS:
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83/'91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 1012 AND NO. 16C3.
ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE 1012 AND 16C3.
ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
 - CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. 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, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES 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 (LATEST EDITION). 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 'A' 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.
 - THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
AT&T.....1-800-252-1133
BGE (CONSTRUCTION SERVICES).....410-850-4620
BOE (EMERGENCY).....410-685-1400
BUREAU OF UTILITIES.....410-313-4900
COLONIAL PIPELINE CO.....410-795-1390
CONTRACTOR'S ASSOCIATION.....410-257-7777
STATE HIGHWAY ADMINISTRATION.....410-531-5533
VERIZON.....1-800-743-0033/410-224-9210
 - TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
 - THE 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.
 - THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE (5) WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(g) OF THE HOWARD COUNTY CODE.
- PART II - WATER**
- ALL WATER MAINS SHALL BE C-900 PVC DR-18 UNLESS OTHERWISE NOTED.
 - TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-0" OF COVER UNLESS OTHERWISE NOTED.
 - VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
 - ALL FITTINGS SHALL BE BUTTRISSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH 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 INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SORE SHALL BE COMPUTED IN ACCORDANCE WITH STANDARD SECTION 1000 AND SECTION 1005 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 PLANS OR IN SPECIFICATIONS.
- PART III - SEWER**
- 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.
 - FORCE MAINS SHALL BE D.I.P. ONLY.
 - 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 COVER, STANDARD DETAIL 05.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-0" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
 - HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644

DESIGN: AAM
DRAFT: AAM
CHK: DAM
DATE: 07/2008

BY NO. REVISIONS DATE

600 SCALE MAP NO. 17 BLOCK: 15

HEBRON MANOR
LOTS 1-9 AND OPEN SPACE LOTS 10 AND 11
SECOND ELECTION DISTRICT
CONTRACT NO. 24-4453-D

SCALE: AS SHOWN
SHEET NO. 1 OF 1