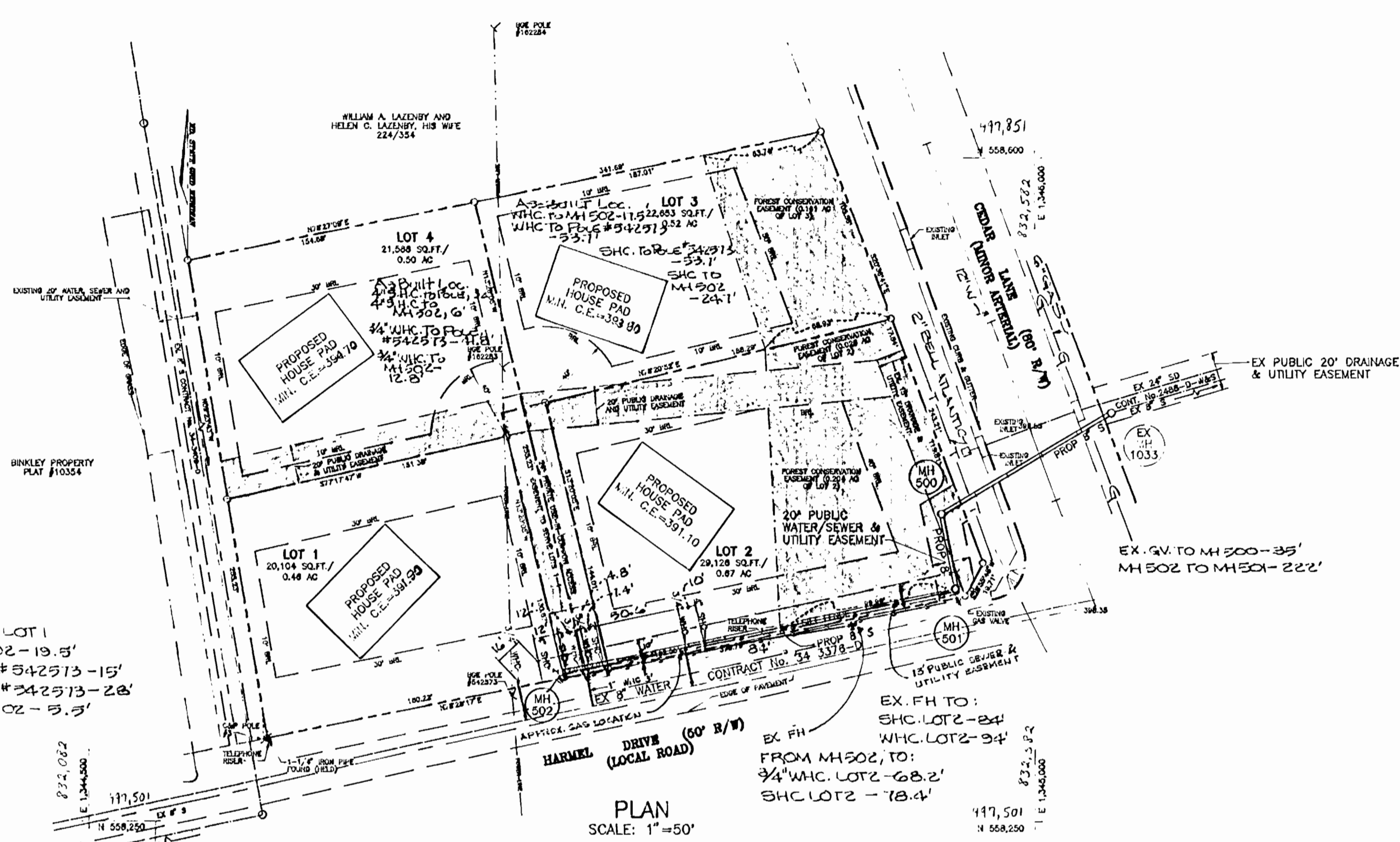


COORDINATES BASED ON NAD 83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 3505 AND 0025.

TYPE OF BUILDING:	SINGLE FAMILY DETACHED
NO. OF LOTS/PARCELS:	4 BUILDABLE: 4
NO. OF WATER HOUSE CONNECTIONS:	4
NO. OF SEWER HOUSE CONNECTIONS:	4
DRAINAGE AREA:	LITTLE PATUXENT
TREATMENT PLANT:	WATER RECLAMATION PLANT SAVAGE

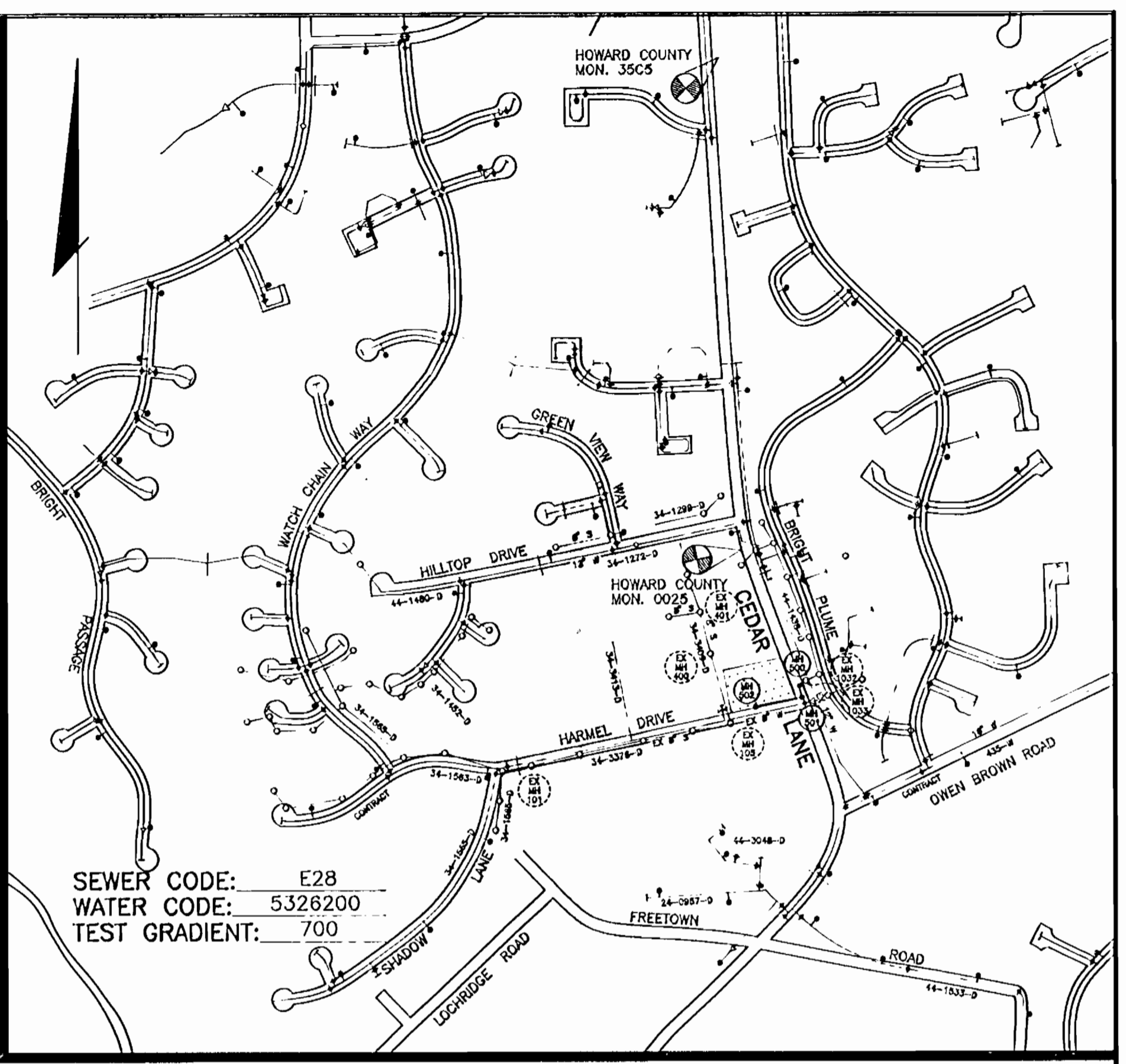


GENERAL NOTES

- 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 DATA.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTRACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- 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 (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 \square 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.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN THESE PLANS:

STATE HIGHWAY ADMINISTRATION	531-5533
B.G.&E. CO. CONTRACTOR SERVICES	850-4620
B.G.&E. CO. UNDER GROUND DAMAGE CONTROL	787-0088
MISS UTILITY	1-800-257-7777
COLONIAL PIPELINE CO.	795-1390
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF UTILITIES	313-4900
- 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 THE CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (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 MAIN OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPV REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.
- COORDINATES BASED ON NAD '83, MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 3505 AND NO. 0025.

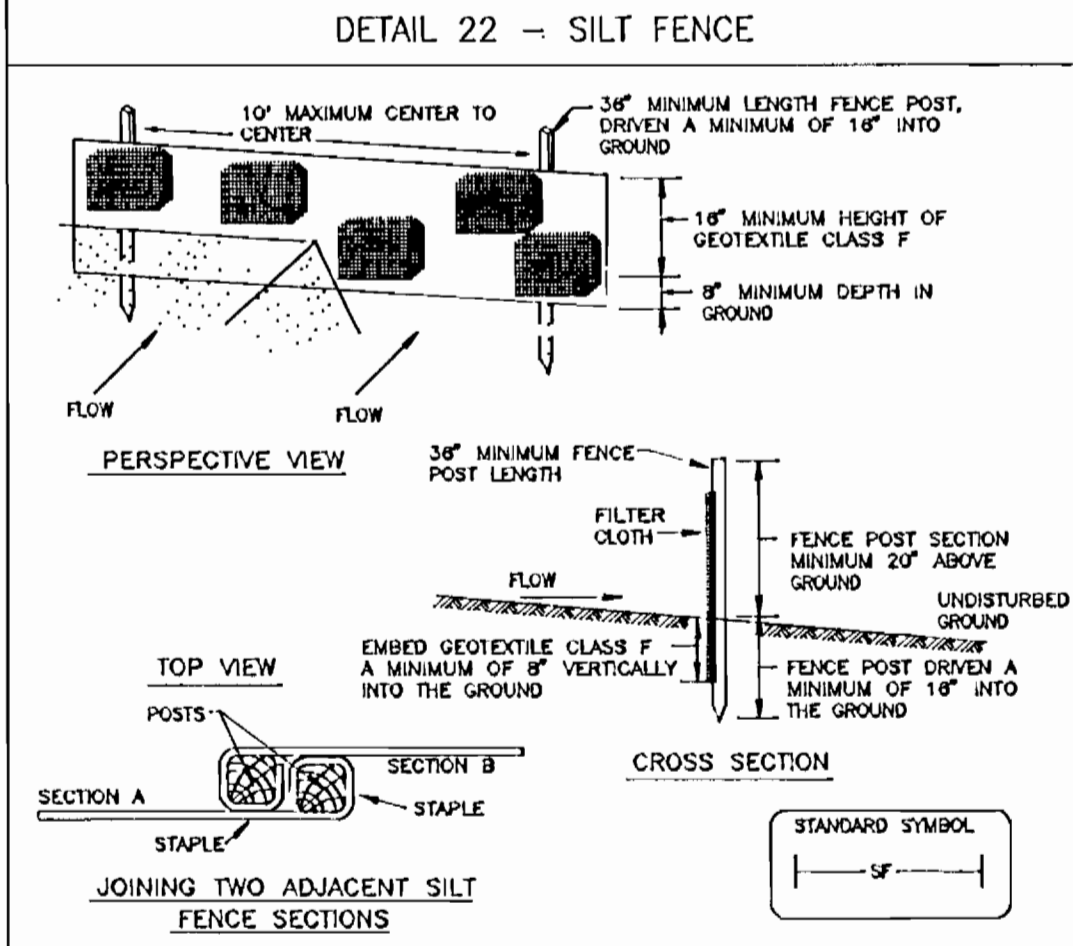
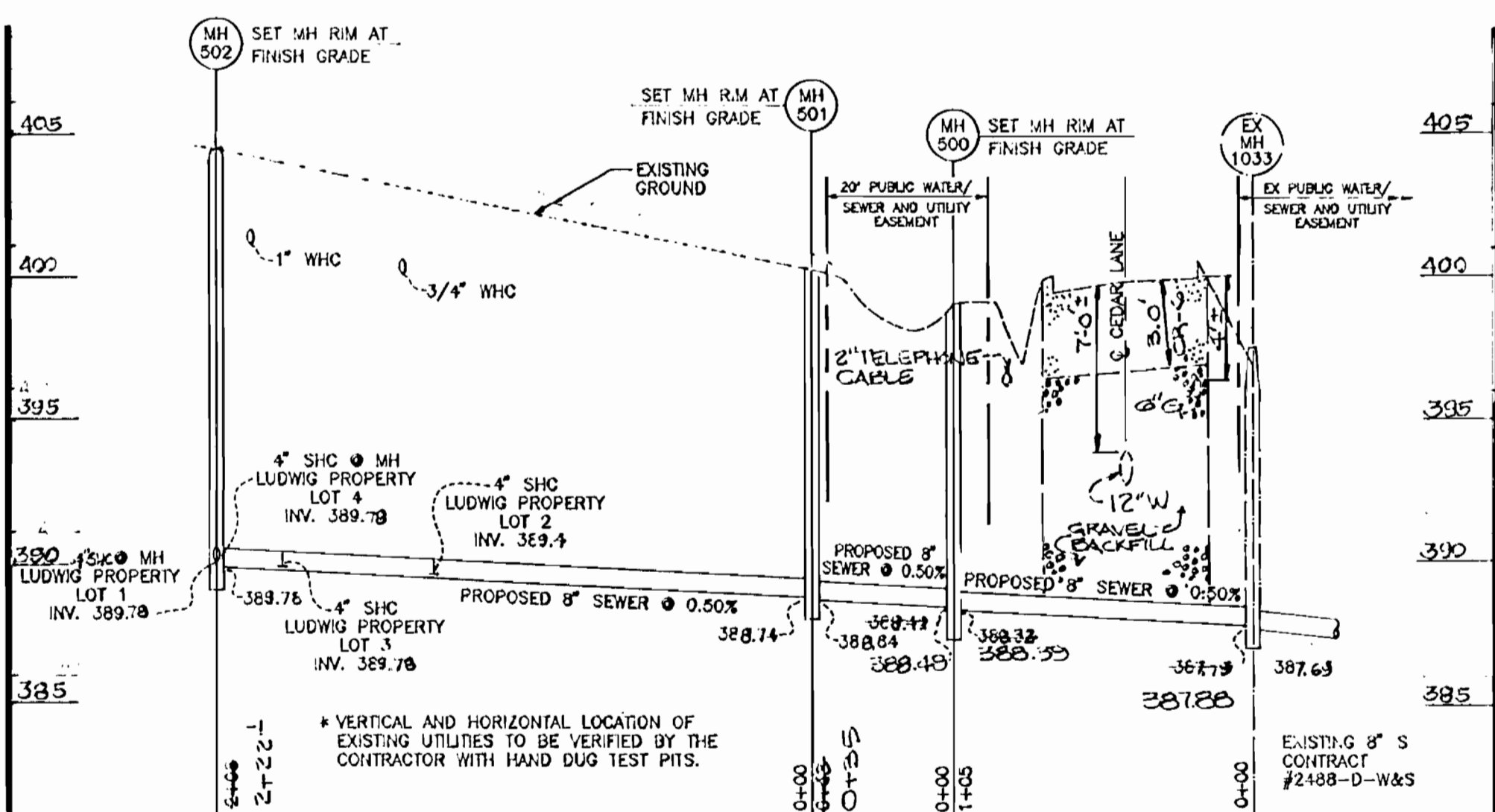
3505	N 582,148.418	E 1,344,554.508
0025	N 559,255.308	E 1,344,883.984



VICINITY MAP SCALE: 1"=600'

SHC INVERTS @ R CHART

STATION	LOT	ELEVATION
MH 501 TO MH 502		
1+32 RT	LOT 2	388.62
1+85 RT	LOT 3	388.88
@ MH 502 RT	LOT 4	389.17
@ MH 502 RT	LOT 1	389.21



PART III - SEWER

- ALL SEWER MAINS SHALL BE DIP CLASS 52 AND 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.
- FORCE MAIN 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 WATER TIGHT FRAME AND COVERS, STANDARD DETAIL 05.52. WHERE WATER TIGHT MANHOLE FRAME AND COVER IS 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.

PART II - WATER

- 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 RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND 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 WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE WATER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.
- A STATE HIGHWAY UTILITY PERMIT WILL BE REQUIRED PRIOR TO CONSTRUCTION WITHIN ROUTE 1 RIGHT-OF-WAY. JACK AND BORE METHOD UNDER ROUTE 1 WILL BE REQUIRED BY THE S.H.A. UTILITY ENGINEER.

ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER, SUPPLIER
1" W.H.C.	15 LF.	14 LF.	TYPE K COPPER	READING/MUNICIPAL CONTRACTOR SALES INC.
3/4" W.H.C.	44 LF.	51 LF.	TYPE K COPPER	"
4" SEWER	22 LF.	11 LF.	TYPE SDR-35 P.V.C.	J.M. ETI/
8" SEWER	38 LF.	353.5' ±	TYPE SDR-35 P.V.C.	J.M. ETI/
MANHOLES	3	3	PRECAST CONCRETE	ATLANTIC CONCRETE PRODUCTS INC.

AS-BUILT

QUANTITIES

NAME OF UTILITY CONTRACTOR: FALLSTON UTILITIES INC., R. SKILUMAN-FOREMAN
SURVEY AND DRAFTING DIVISION AS-BUILT DATE 3-19-98

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARD SPECIFICATIONS.

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

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

John R. Robertson 4/19/98
John A. Wayfield 4/19/98

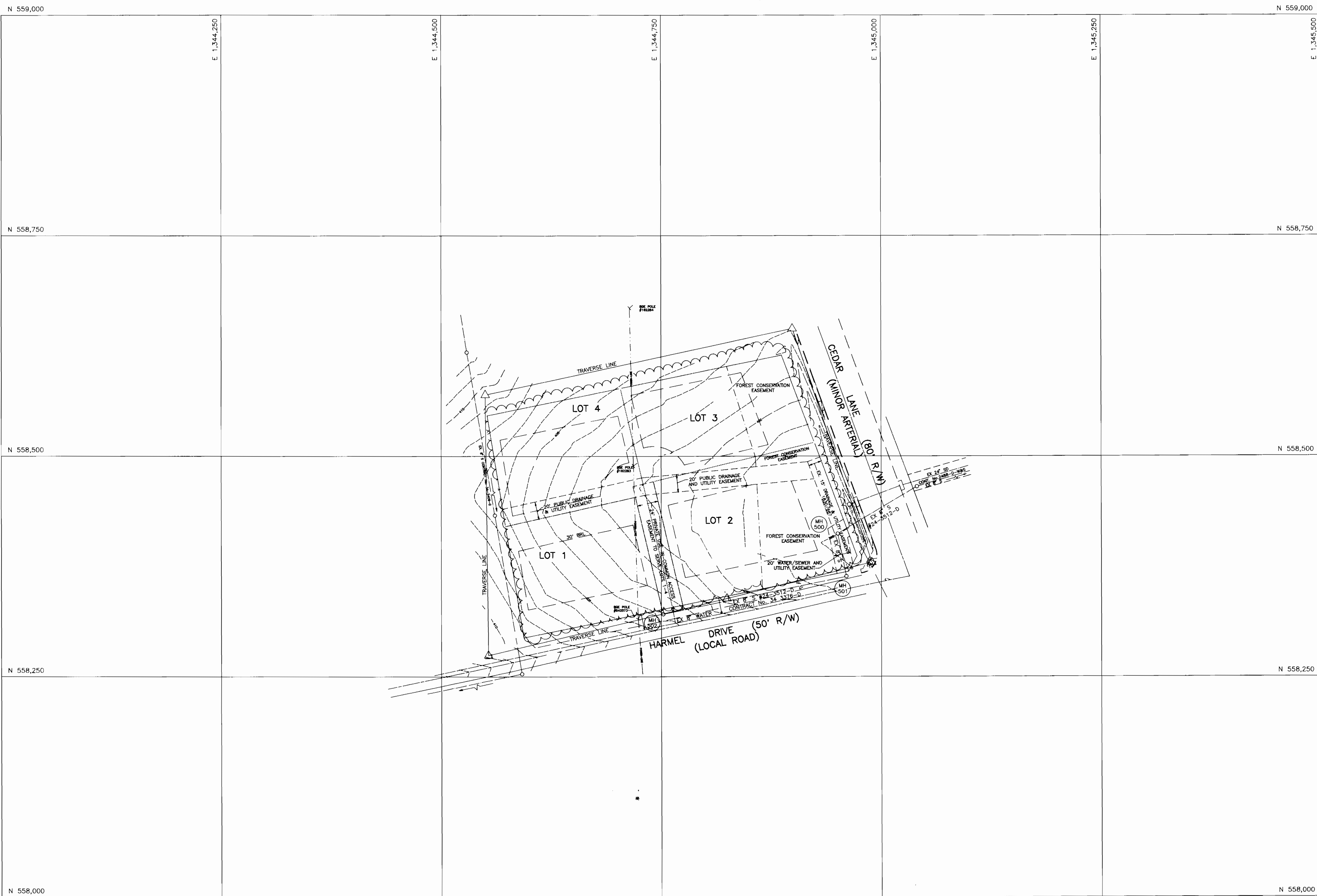
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND	DEPARTMENT OF PLANING & ZONING HOWARD COUNTY, MARYLAND	MARKS-VOGEL ASSOCIATES, INC. ENGINEERS - SURVEYORS - PLANNERS 3891 PARK AVENUE, SUITE 101 BELLGATE CITY, MARYLAND 21048 TELEPHONE: (410) 461-5828 FAX: (410) 465-3968	DES: D.G.H. DRN: D.G.H. CHK: R.H.V. DATE: 3/25/98	PLAN OF SEWER MAIN	LUDWIG PROPERTY CONTRACT 24-3512-D	SCALE AS SHOWN SHEET 1 OF 1
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TAX MAP #35 LOT 4 BLOCK 'B' CEDAR ACRES ZONED R-20
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

3/27/98 10:49 AM

PROPERTY

TOPOGRAPHIC SURVEY PLAT



LEGEND

- SUBDIVISION BOUNDARY
- LOT BOUNDARY
- ROAD CENTERLINE
- EDGE OF ROAD

SUBD. NAME LUDWIG PROPERTY

SEC. _____ AREA _____

STREET NAME HARMEL DRIVE

CAP. PROJ. NO. _____

CONTRACT NO. 24-3512-D

FIELD BOOK NO. _____

SCALE: 1"=50'

PREPARED BY:

MARKS AND VOGEL ASSOCIATES, INC.

3691 PARK AVENUE, SUITE 101

ELLICOTT CT, MARYLAND 21043

TELEPHONE: (410) 461-5828

4			8		
3			7		
2			6		
1			5		
NO.	REVISION	DATE	NO.	REVISION	DATE