

3315 ws/1 Hidden Valley (lots 1-12) AS-BUILT 3/10/95

SEQUENCE OF CONSTRUCTION

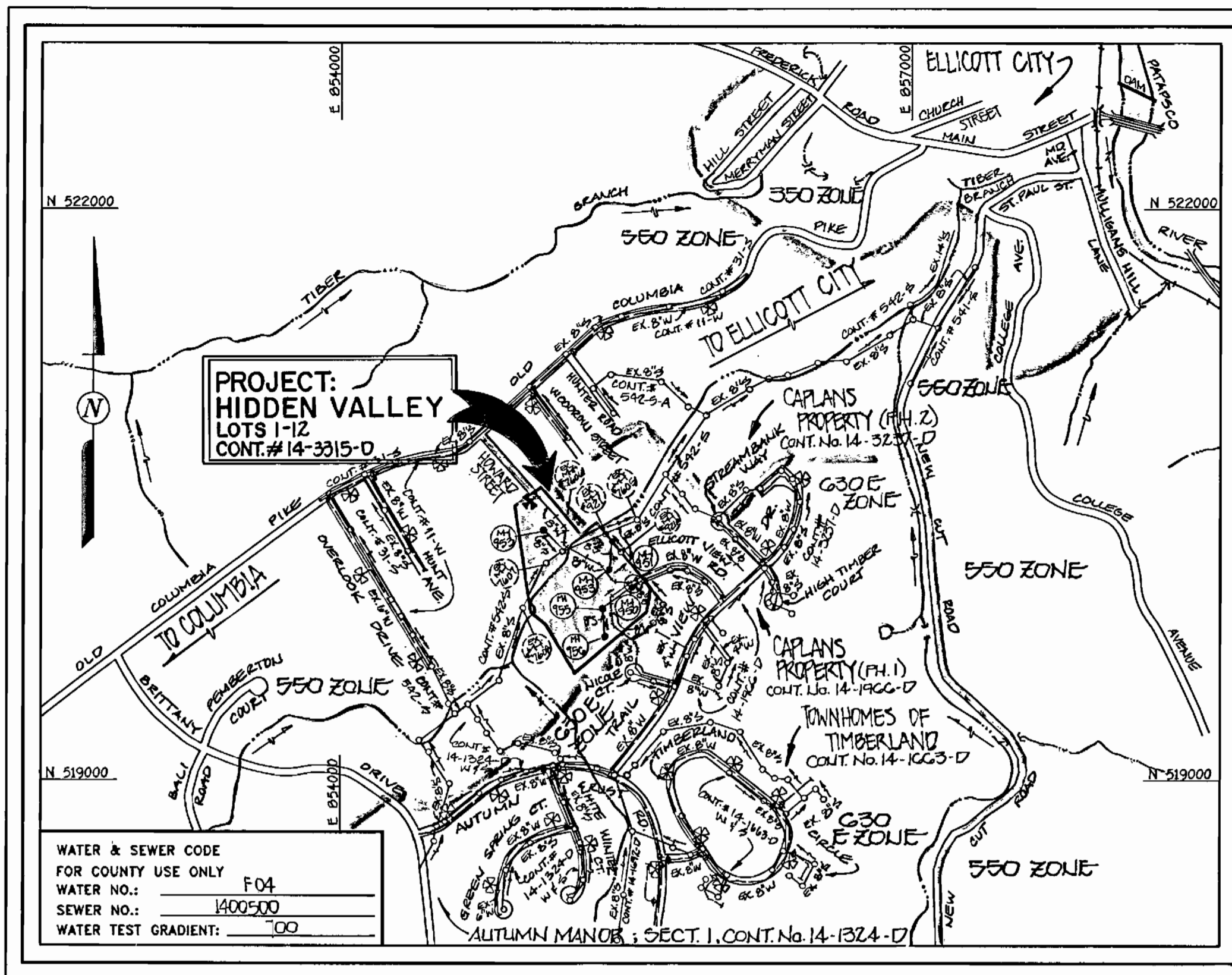
FOR WATER & SEWER MAIN INSTALLATION WITHIN WETLANDS/BUFFERS

1. OBTAIN NECESSARY GRADING PERMIT FROM HOWARD COUNTY (DEPT. OF L. & E.).
 2. INSTALL SEDIMENT & EROSION CONTROL MEASURES & CONSTRUCT DRAINAGE BASIN AS INDICATED.
 3. CLEAR & GRADE AS NECESSARY, ONLY WITHIN THE 20' WATER, SEWER & UTILITY EASEMENTS & ONLY AS NECESSARY FOR INSTALLATION OF THE UTILITIES.
 4. REMOVE & STOCKPILE BY TOPSOIL; (SEE A) OF COMPANION.
 5. EXCAVATE WATER & SEWER MAIN TRENCHES; (SEE B), C), D) & E) OF COMPANION.
 6. INSTALL WATER & SEWER MAIN; (SEE E) OF COMPANION.
 7. BACKFILL & COMPACT WATER & SEWER MAIN TRENCHES; (SEE F) OF COMPANION.
 8. INSTALL PIPE AS INDICATED FOR STREAM BANK PROTECTION; WATER MAIN AT STREAM CROSSING ONLY.
 9. RESTORE WATER & SEWER MAIN TRENCHES; REPLACE TOPSOIL & STABILIZE TRENCHES & ALL DISTURBED AREAS; (SEE G), H), & I) OF COMPANION.
 10. FOLLOWING APPROVAL FROM INSPECTOR, REMOVE SEDIMENT & EROSION CONTROL DEVICES & DRAINAGE BASIN.
- * COMPANION DENOTES CONDITIONS & MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS, AS LISTED ON THIS SHEET.

QUANTITIES

ITEM	ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	SUPPLIER
8" WATER	1,450 LF.	150	1" POLYPROPYLENE	GREENSBORO PIPE CO.
6" WATER	19 LF.	73	1" POLYPROPYLENE	GREENSBORO PIPE CO.
8"x8" T.O.V.	1 EACH	1	1" POLYPROPYLENE	GREENSBORO PIPE CO.
1" WMC	17 LF.	52	1" POLYPROPYLENE	GREENSBORO PIPE CO.
3/4" WMC	192 LF.	206	1" POLYPROPYLENE	GREENSBORO PIPE CO.
FIRE HYDRANT	2 EACH	2	MULLER A-423	PERKINS ENTERPRISES
BUNDOFF ASSEMBLY	1 EACH	1	MULLER A-423	PERKINS ENTERPRISES
8" SEWER	370 LF.	370	1" POLYPROPYLENE	GREENSBORO PIPE CO.
6" SEWER D.I.P.	150 LF.	408	1" POLYPROPYLENE	GREENSBORO PIPE CO.
4" SEWER	302 EACH	350	1" POLYPROPYLENE	GREENSBORO PIPE CO.
MANHOLES	9 EACH	5	1" POLYPROPYLENE	GREENSBORO PIPE CO.

NAME OF UTILITY CONTRACTOR: FELLMER CONTRACTING INC.
 SURVEY & DRAFTING DIVISION AS-BUILT DATE:



WATER & SEWER CODE FOR COUNTY USE ONLY
 WATER NO.: F04
 SEWER NO.: 1400500
 WATER TEST GRADIENT: 0.00

TYPE OF BUILDING: RESIDENTIAL: SINGLE FAMILY DETACHED
 NUMBER OF LOTS: 12 (BUILDABLE: 10)
 NO. OF WATER HOUSE CONNECTIONS: 12
 NO. OF SEWER HOUSE CONNECTIONS: 12
 DRAINAGE AREA: PATAPSCO
 TREATMENT PLANT: PATAPSCO WASTEWATER
 TREATMENT PLANT: CITY OF BALTIMORE

VICINITY MAP
SCALE: 1"=600'

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 ARE INVERT ELEVATIONS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED.
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 (1991 AMENDMENTS) THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB SITE.
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. - 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
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 THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
11. ALL SEWER MAINS SHALL BE D.I.P., R.C.P., C.S.P.X., R.C.C.P., V.C.P.X., OR P.V.C. UNLESS OTHERWISE NOTED.
12. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
13. T.B. DENOTES TEST BORING.
14. MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
15. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G 5.52.
16. 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.
17. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.
18. ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
19. MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE AND COVERS, STANDARD DETAIL G5.51.
20. 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.
21. ALL WATER MAINS SHALL BE D.I.P., CLASS 52 UNLESS OTHERWISE NOTED.
22. TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2" COVER UNLESS OTHERWISE NOTED.
23. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
24. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
25. 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.
26. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
27. 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.
28. 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 18.114(c) OF THE HOWARD COUNTY CODE.

CONTRACT No. 14-3315-D
HIDDEN VALLEY
LOTS 1 - 12
SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

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

APPROVED: John R. Pollock 6/17/94
 HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN UNDER THIS CONTRACT AS SHOWN UNDER F-34-57
 REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

J. A. Wainwright 6/17/94
 U.S. SOIL CONSERVATION SERVICE DATE

- CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS**
- A) STOCKPILE & MAINTAIN CAREFULLY THE TOP 6" OF TOPSOIL MATERIAL TO BE REPLACED AS THE LAYER OF THE BACKFILLED MATERIAL.
 - B) REMOVE EXCESS FILL OR CONSTRUCTION MATERIAL OR DEBRIS TO AN OPEN DRAINAGE AREA.
 - C) PLACE MATERIALS IN A LOCATION & MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF THE NON-TIDAL WETLAND.
 - D) MAINTAIN THE HYDROLOGIC REGIME OF THE NON-TIDAL WETLANDS UPSTREAM, DOWNSTREAM, ADJACENT TO THE WATER & SEWER MAINS.
 - E) PLACE HEAVY EQUIPMENT ON MATS OR OUTRIGGERS DESIGN TO PREVENT DAMAGE TO THE NON-TIDAL WETLANDS.
 - F) USE PREVIOUSLY EXCAVATED MATERIAL AS BACKFILL UNLESS IT CONTAINS HAZARDOUS MATERIALS, UNIDENTIFIED DEBRIS, TOXIC MATERIAL OR OTHER DELETABLES. USE CLEAN BOTTOM MATERIAL WHEN EXCAVATED MATERIAL IS NOT AVAILABLE FOR USE AS BACKFILL.
 - G) ALL STABILIZATION IN THE WETLAND & BUFFER SHALL BE OF THE FOLLOWING SPECIES: ALLIUM, PEGANUM, (LIGULUM, MILETUM), MILLET, (SETARIA, TALICA), BARLEY (HORDEUM), CATO, (LIGULUM), (OR RYE (SECALE CEREALE)). THESE SPECIES ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF THE NATURAL WETLANDS SPECIES. OTHER NON-PERMANENT VEGETATION MAY ALSO BE ACCEPTABLE, BUT MUST BE APPROVED BY THE DIVISION. NEUTRALITY 31 SPECIES SHALL NOT BE UTILIZED IN THE WETLAND OR BUFFER AREAS. THIS AREA SHOULD BE SEEDED & MULCHED TO PRECLUDE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
 - H) UPON COMPLETION OF THE PROJECT, NON-TIDAL WETLANDS & THE 25-FOOT NON-TIDAL WETLAND BUFFER SHALL NOT BE MOVED OR OTHERWISE MANAGED TO PREVENT THE RE-COASTALMENT OF FORESTED COVER.
 - I) AFTER INSTALLATION HAS BEEN COMPLETED, MAKE FOOT COORDINATION GRADERS & ELEVATIONS OF NON-TIDAL WETLANDS THE SAME AS THE ORIGINAL GRADERS & ELEVATIONS.
 - J) TO PROTECT IMPORTANT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AND DETERMINED BY THE QUALIFICATION OF THE STREAM AS FOLLOWS:
 1. LOW-STREAM WORK MAY NOT BE CONDUCTED
 2. LOW-STREAM WORK MAY NOT BE CONDUCTED DURING THE PERIOD FROM 1 THROUGH 15, INCLUSIVE, DURING ANY YEAR.

PLAN REFERENCE NUMBERS:
 PRELIMINARY EQUIVALENT S-73-05
 P-94-51 SGP 94-103

CONTRACT NO. 14-3315-D
 HIDDEN VALLEY
 LOTS 1 - 12
 SEWER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James J. Lewis 6/22/94
 DIRECTOR OF PUBLIC WORKS DATE

Robert J. Brown 6-14-94
 CHIEF, BUREAU OF UTILITIES DATE

Paul J. Brown 6/22/94
 CHIEF, BUREAU OF ENGINEERING DATE

John Wainwright 6/22/94
 CHIEF, LAND DEVELOPMENT DIVISION DATE

#9757
 STATE OF MARYLAND
 PROFESSIONAL SURVEYOR
 TERRELL A. FISHER

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 SUITE 100, 9171 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2855

DES: M.V./M.M.
 DRWN: M.V.
 CHK: P.W.K.
 DATE: 10/27/93

ADD SEQUENCE OF CONSTRUCTION / CONTROLS WETLANDS 9-19-94

TITLE SHEET

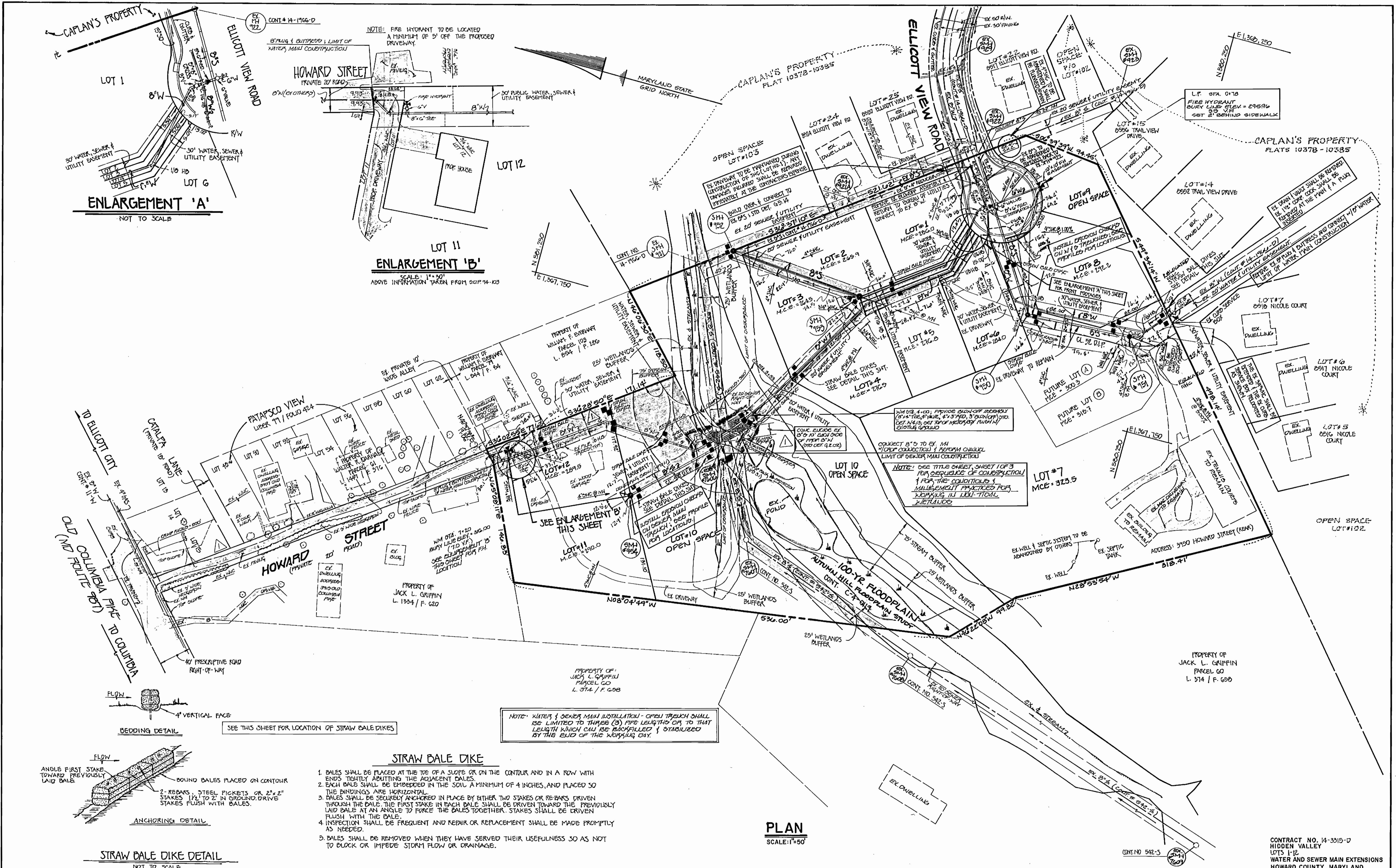
600' SCALE MAP NO. 25 BLOCK NO. 13

HIDDEN VALLEY
 CONTRACT No. 14-3315-D
 LOTS 1 - 12
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 1 OF 3

AS-BUILT 3/10/95

3315 w/2 Hidden Valley AS-BUILT 3/6/95



DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works: <i>James P. Lewis</i> 6/22/94 Chief, Bureau of Engineering: <i>Robert W. ...</i> 6/14/94 Chief, Bureau of Utilities: <i>Robert W. ...</i> 6/14/94		FISHER, COLLINS, AND CARTER, INC. CONSULTING ENGINEERS AND LAND SURVEYORS 9171 BALTIMORE NATIONAL PIKE SUITE 100 ELLICOTT CITY, MARYLAND 21043 (410) 401-2835 Terrell A. Fisher		DES: M.V./M.M. DRN: M.S.V. CHK: P.W.K. DATE: 10/27/93		WATER AND SEWER MAINS PLAN REVISION 1-30-95 7-21-94		HIDDEN VALLEY LOTS 1-12 CONTRACT NO. 14-3315-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT NO. 14-3315-D LOTS 1-12 WATER AND SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND		SCALE AS SHOWN SHEET 2 OF 3
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AS-BUILT 3/6/95

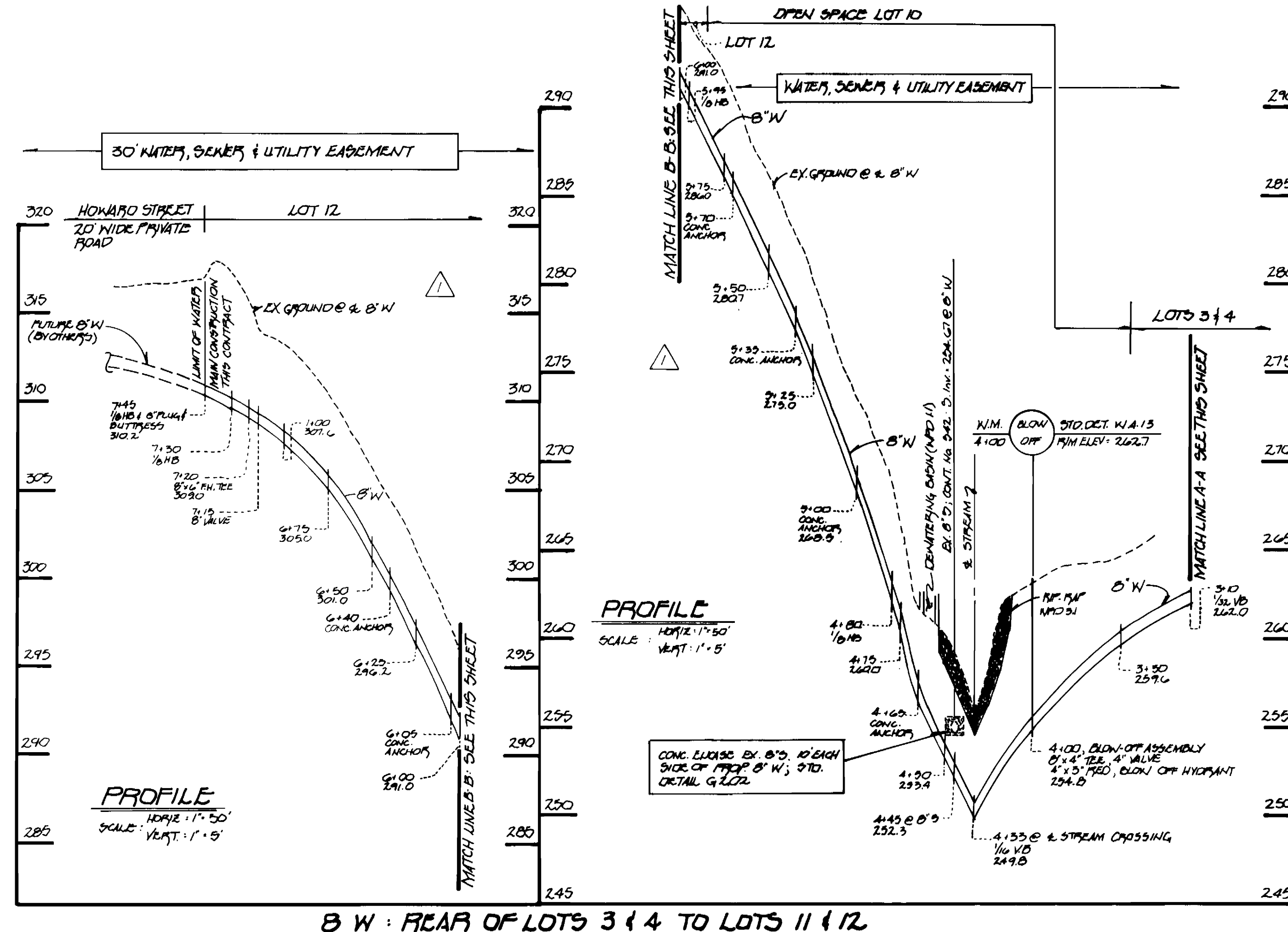
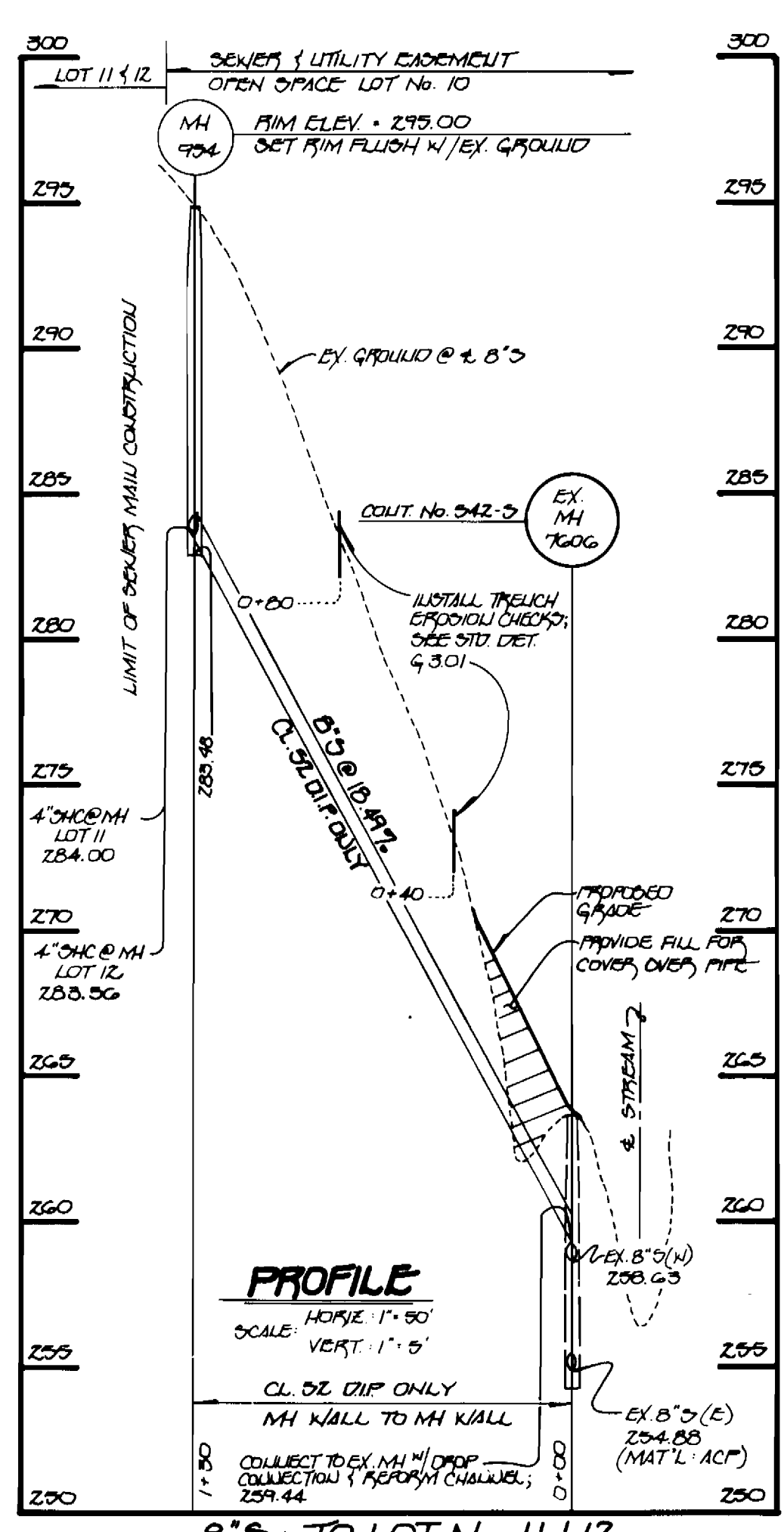
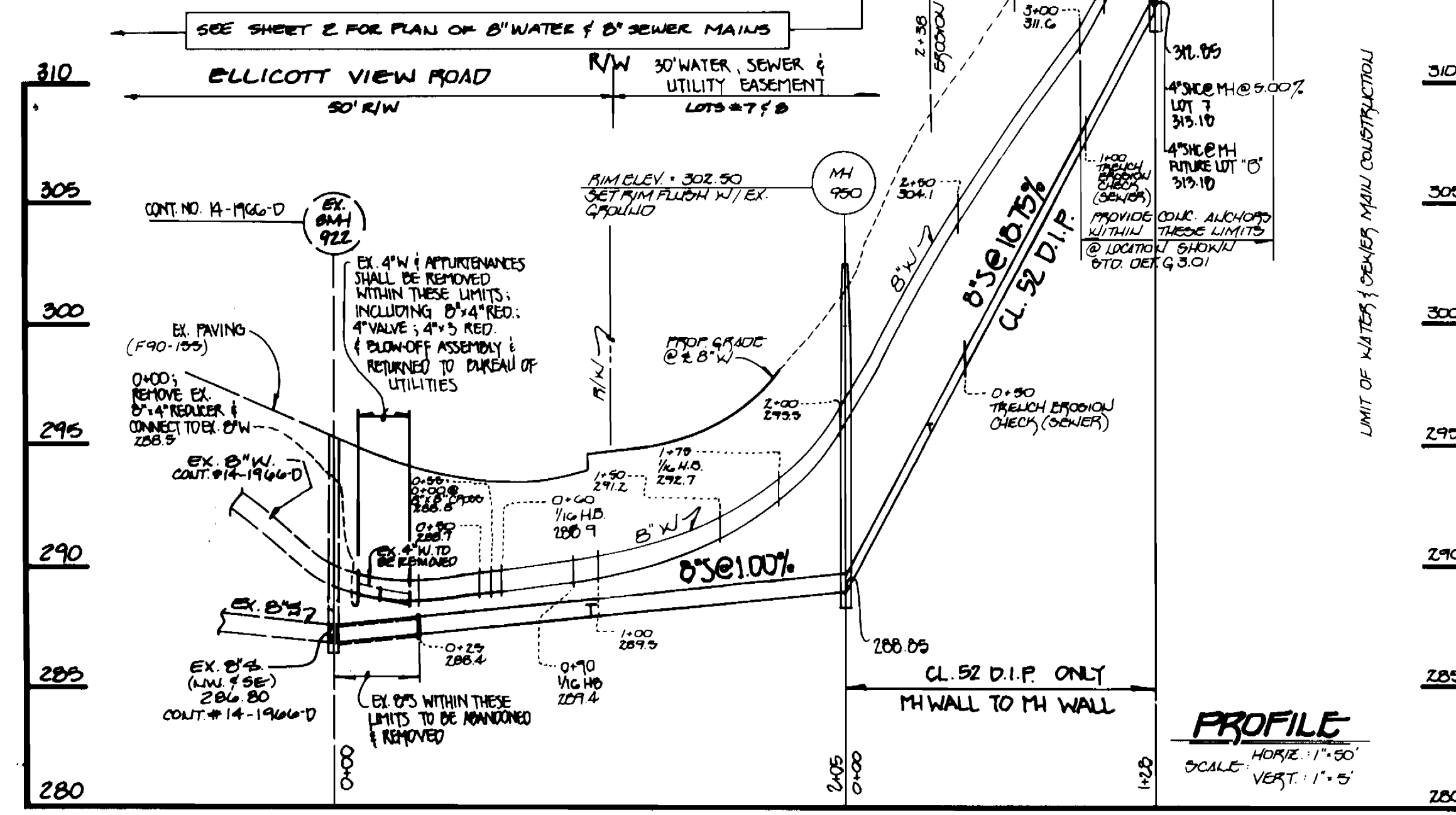
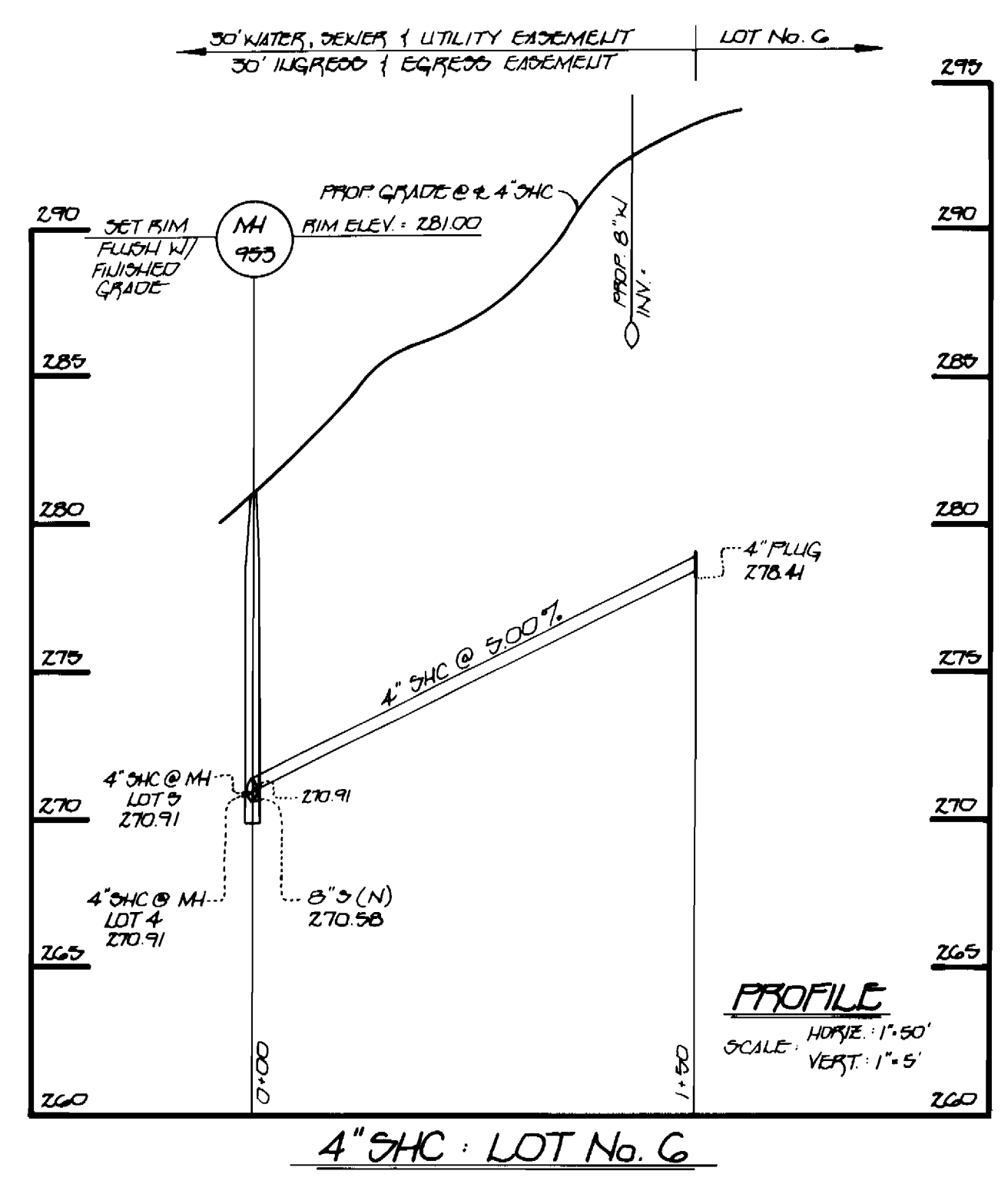
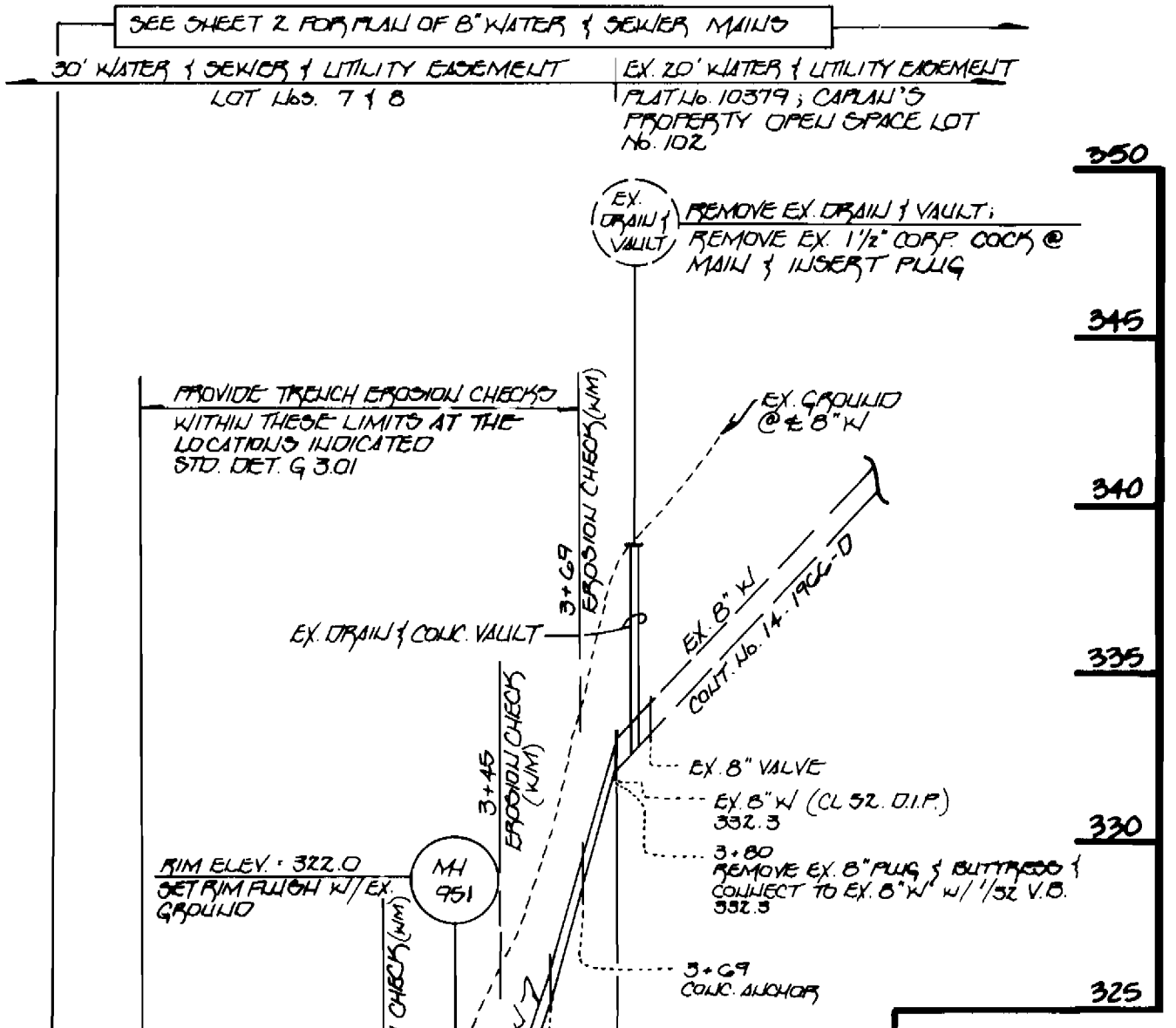
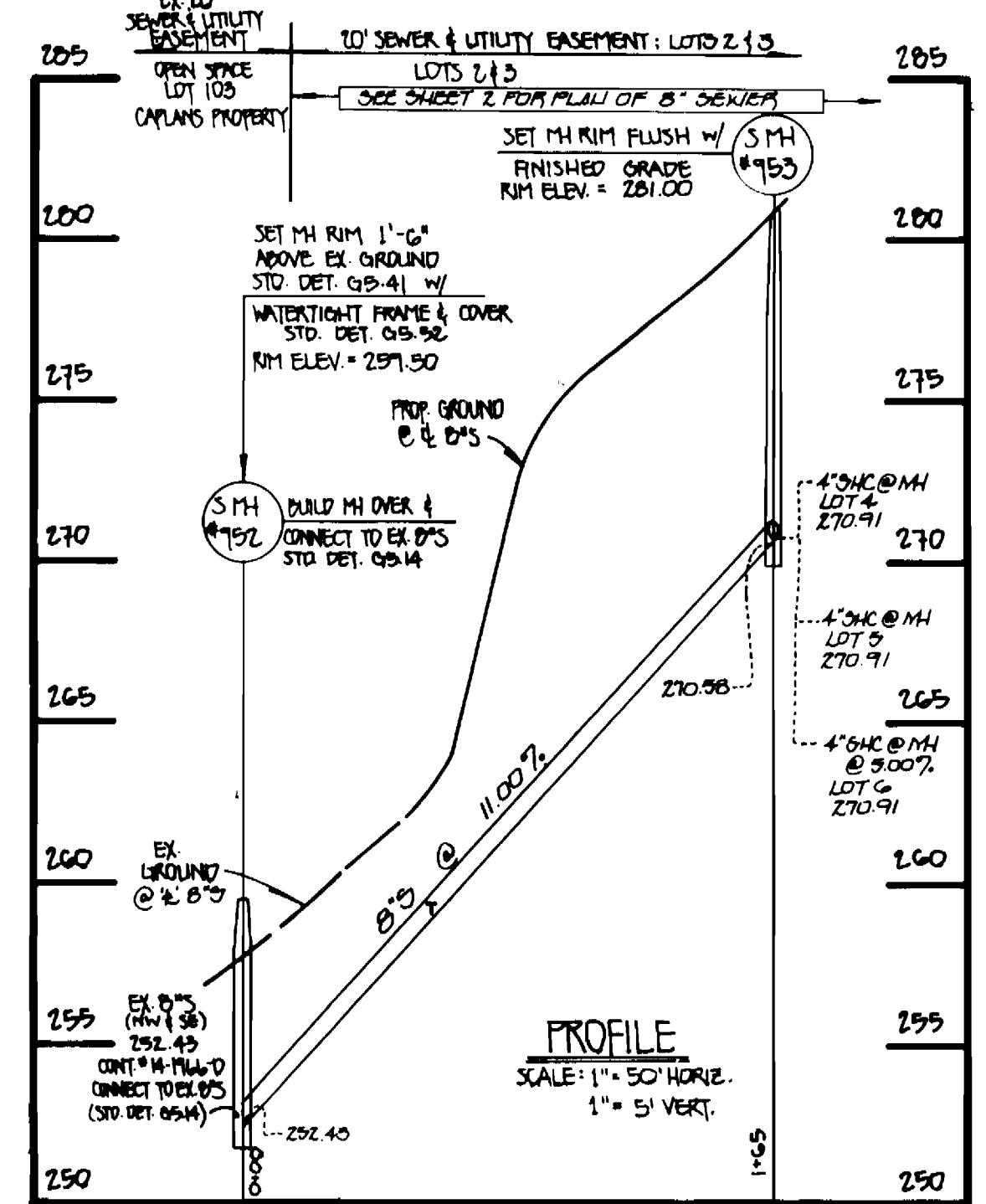
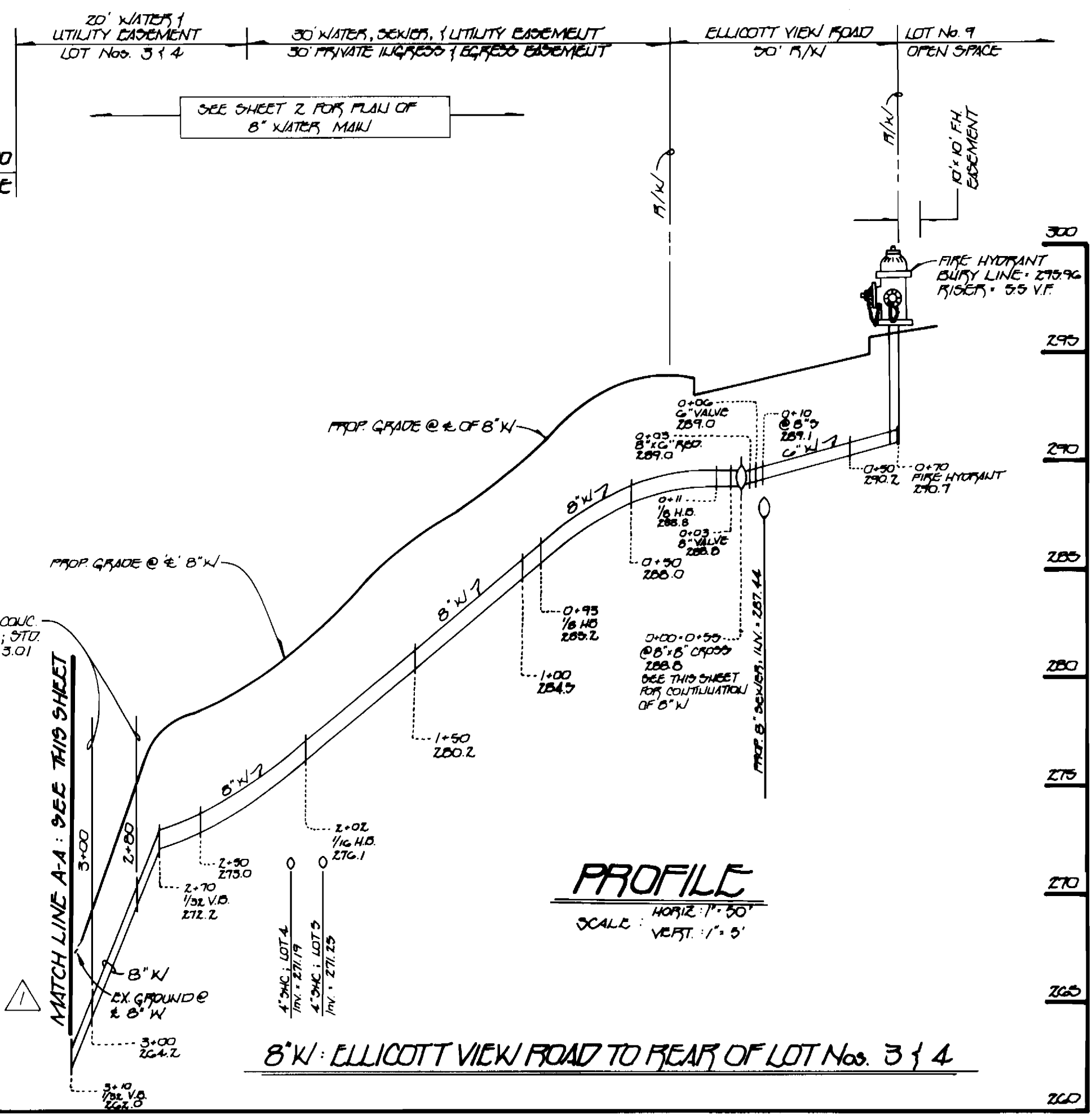
AS-BUILT 2/21/95

3315 ws/3 Hidden Valley

S.H.C. INVERT ELEVATIONS @ PROPERTY LINE		
STATION	LOT	ELEVATION
EX. MH # 722 TO MH # 750		
1+08 LT.	0 @ 1.00%	288.38
MH # 750 TO MH # 751		
0+35 RT.	FUTURE LOT 11	275.78
0+51 RT.	FUTURE LOT 10	313.40
0+71 RT.	1 @ 5.00%	314.99
EX. MH # 751 TO EX. MH # 752		
1+25 RT.		280.92
MH # 752 TO MH # 753		
0+60 RT.	3	299.40
0+70 LT.	2	260.50
0+74 RT.	4	271.41
0+78 RT.	5	271.61
EX. MH # 753 TO MH # 754		
0+78 RT.		284.70
0+78 RT.		283.82
MH # 752 TO MH # 755		
0+78 RT.		278.41

MANHOLE TABULATION CHART		
NO.	LOCATION	RIM ELEV.
750	20' SEWER & UTILITY EASEMENT (LOT 7)	302.90
751	" " " " (LOT 7)	312.00
752	" " " " (LOTS 2 & 3)	291.50
753	" " " " (LOTS 2 & 3)	281.00
754	20' SEWER & UTILITY EASEMENT (LOTS 11 & 12)	275.00

NOTE: WATER & SEWER MAIN INSTALLATION - OPEN TRENCH SHALL BE LIMITED TO THREE (3) PIPE LENGTHS OR TO THAT LENGTH WHICH CAN BE BACKFILLED & STABILIZED BY THE END OF THE WORKING DAY.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DATE: 6/22/94
DATE: 6/14/94

FISHER, COLLINS, AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
9171 BALTIMORE NATIONAL PIKE
SUITE 100
ELLICOTT CITY, MARYLAND 21043
(410) 461-2855
DATE: 10/27/93

DES: MSV/MM
DRN: M.S.V.
CHK: P.W.K.
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WATER AND SEWER MAINS
PROFILES
600' SCALE MAP NO. 25 BLOCK NO. 13

HIDDEN VALLEY
LOTS 1-12
CONTRACT NO. 14-3315-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 3 OF 3

AS-BUILT 2/21/95