

QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" WATER MAIN	256 LF	256 L.F.	DIP	GRIFFIN PIPE
6" WATER MAIN	78 LF	78 L.F.	DIP	GRIFFIN PIPE
4" WATER MAIN	174 LF	174 L.F.	DIP	GRIFFIN PIPE
8" x 8" TEE & VALVE (TAPPING)	1 EA.	1	5" SCHEDULE 80	MUELLER
8" x 8" TEE & VALVE	1 EA.	1	"	"
8" x 4" TEE & VALVE	1 EA.	1	"	"
6" x 4" REDUCER	2 EA.	2	"	"
4" CAP & BUTTRESS W/ 1/2" DRAIN	2 EA.	2	"	U.S. PIPE & FOUNDRY
FIREHYDRANT	1 EA.	1	"	MUELLER
1-1/2" W/M	47 LF			
1" W/M	151 LF			
8" SEWER MAIN	958 LF		SRD-35	J.M. MANUFACTURING
MANHOLE	4 EA.	4	SANITARY	ATLANTIC CONCRETE
4" S/C	276 LF		SRD-35	J.M. MANUFACTURING
8" PLUS	1 EA.		"	"

- 6" VALVE & VALVE BOX 2 EA. (MUELLER)
- 6" CAP & BUTTRESS W/ 1/2" DRAIN 1 EA.
- 6" x 4" TEE 1 EA.
- 6" x 4" REDUCER 1 EA.
- 8" x 6" REDUCER 1 EA.

- 8" 1/2" VERT. BELD DIP\* 4 EA.
- 8" SPLIT SLEEVE DIP 1 EA.

WATER AND SEWER AS-BUILT FIELD MEASUREMENTS						
LOT #	DESCRIPTION	FROM	TO	TO	FROM	TO
2	MAYFIELD WOODS	SMH-2	W.H.C. 30.4	S.H.C. 46.8'	SMH-4	W.H.C. 10.0'
3	"	"	W.H.C. 61.2	S.H.C. 60.8	SMH-4	W.H.C. 65.0
4	"	"	W.H.C. 84.2	S.H.C. 84.2	SMH-4	W.H.C. 84.2
1	"	SMH-3	W.H.C. 100.0	S.H.C. 57.0	SMH-4	W.H.C. 58.0
2	"	SMH-3	W.H.C. 108.2	S.H.C. 131.0	SMH-4	W.H.C. 58.0
3	"	SMH-3	W.H.C. 174.0	S.H.C. 160.8	SMH-4	W.H.C. 24.7
4	"	SMH-3	W.H.C. 166.7	S.H.C. 160.0	SMH-4	W.H.C. 23.2
5	"	SMH-3	W.H.C. 82.0	S.H.C. 130.0	SMH-4	W.H.C. 17.9
6	"	SMH-3	W.H.C. 71.5	S.H.C. 58.0	M-1	W.H.C. 58.0
7	"	SMH-3	W.H.C. 104.3	S.H.C. 58.0	M-1	W.H.C. 97.0
8	"	SMH-3	W.H.C. 104.3	S.H.C. 58.0	M-1	W.H.C. 84.2
	8" VAL. @ MAYFIELD	SMH-1	W.H.C. 79.8'	S.H.C. 29.0'	SMH-1	W.H.C. 80.2'
	EH. VAL. STA. 2+34	F.H.	18.0'	M.H. 30.4'	SMH-3	S.H.C. 28.2'
	4" VAL. @ STA. 2+60	F.H.	24.0'	M.H. 15.8'	SMH-3	S.H.C. 18.0'
	6" VAL. @ STA. 2+62	F.H.	22.0'	M.H. 34.0'	SMH-3	S.H.C. 12.7'
	6" VAL. CAP/BUT. W/DRAIN	F.H.	86.6'	M.H. 21.4'	SMH-3	S.H.C. 51.0'
	6" VAL. @ STA. 2+75	F.H.	56.2'	M.H. 29.1'	SMH-3	S.H.C. 18.0'
	6" VAL. SEWER PLUG STA. 0+40	F.H.	72.0'	M.H. 85.0'	SMH-3	S.H.C. 41.2'

TYPE OF BUILDING - SINGLE FAM DET.  
 NO. OF LOTS/PARCELS - 11  
 NO. OF WATER HOUSE CONNECTIONS - 8  
 NO. OF SEWER HOUSE CONNECTIONS - 8  
 DRAINAGE AREA - PATAPSCO  
 TREATMENT PLANT - PATAPSCO

OWNER: EMAS MANOR, LLC, 946-A MARIMICH CT, ELDBERSBURG, MD, 21784  
 DEVELOPER: FAIRMONT REAL ESTATE SERVICES, MR. L. RAY RACHUBA, 946-A MARIMICH CT, ELDBERSBURG, MD, 21784

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

Jim Myers 12/31/02  
 U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT FOR F-02-54

John Klobutsky 12/31/02  
 HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND

Prepared by:  
 CHARLES R. CROCKEN AND ASSOCIATES, INC.  
 Civil Engineering - Land Planning  
 PO Box 307  
 Westminster, MD 21157  
 Tel. (410) 549-2708  
 Fax. (410) 549-9065

Robert B... 11-22-02  
 CHIEF BUREAU OF UTILITIES DATE

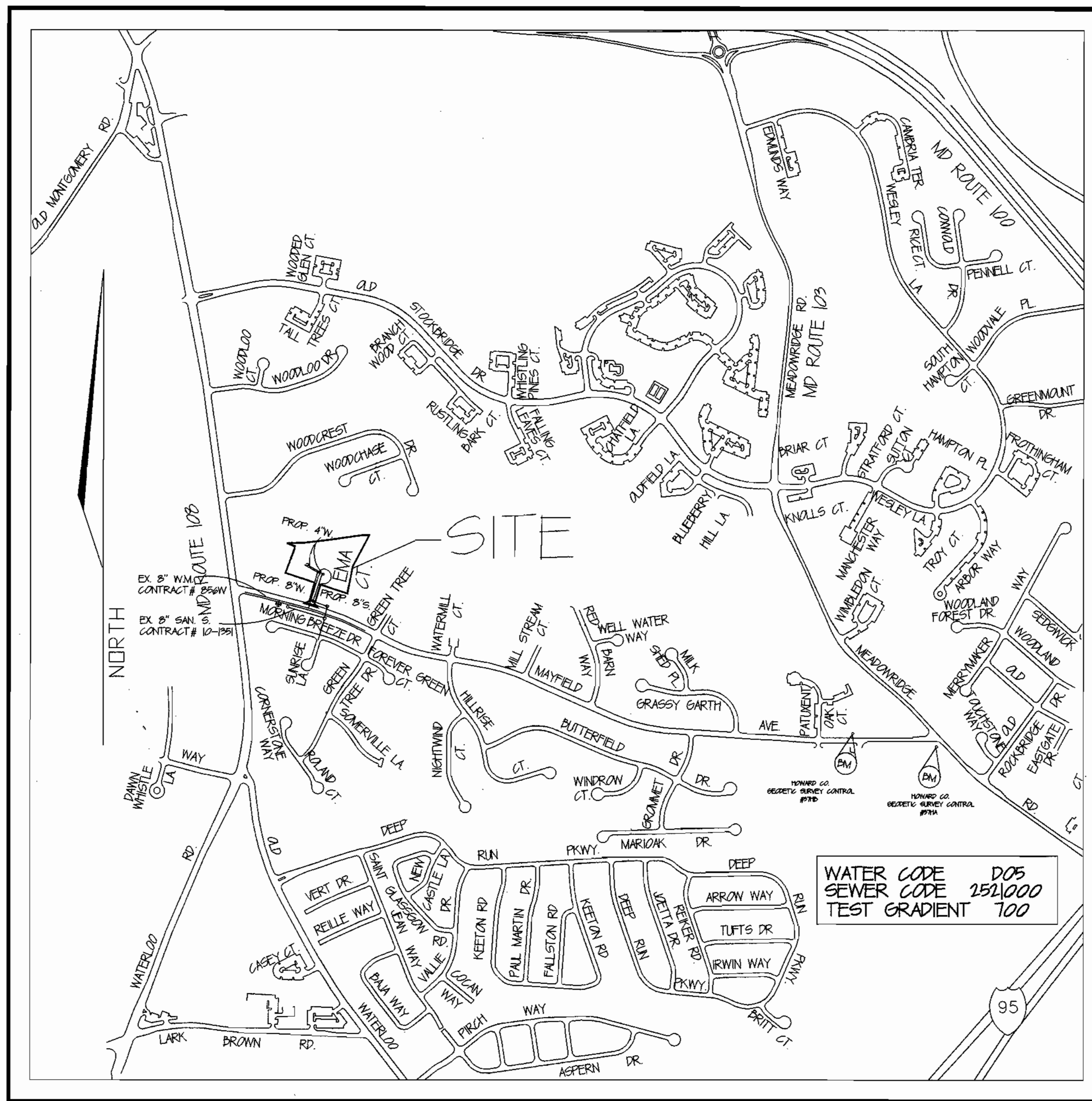
Chief Development Engineering Division  
 1/10/03  
 DATE

DESIGN	CHK	DATE	BY	NO.	REVISION	DATE
DESIGN	CHG					
DRAWN	CHG					
CHK	CRG					
DATE	9-7-01					

PLAN AND PROFILE FOR  
 WATER AND SEWER MAIN  
 600 SCALE MAP NO. 97 BLOCK NO. 14

EMA'S MANOR  
 LOTS 1-11 & NON-BUILDABLE PARCELS A & B  
 A SUBDIVISION OF PARCEL NO. 143 & P/O PARCEL 125  
 CONTRACT NO. 14-4004-D, P-02-54  
 1ST ELECTION DISTRICT, TAX MAP 37  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 1 OF 2



VICINITY MAP  
 SCALE: 1"=600'

# WATER AND SEWER CONSTRUCTION PLAN

## EMA'S MANOR

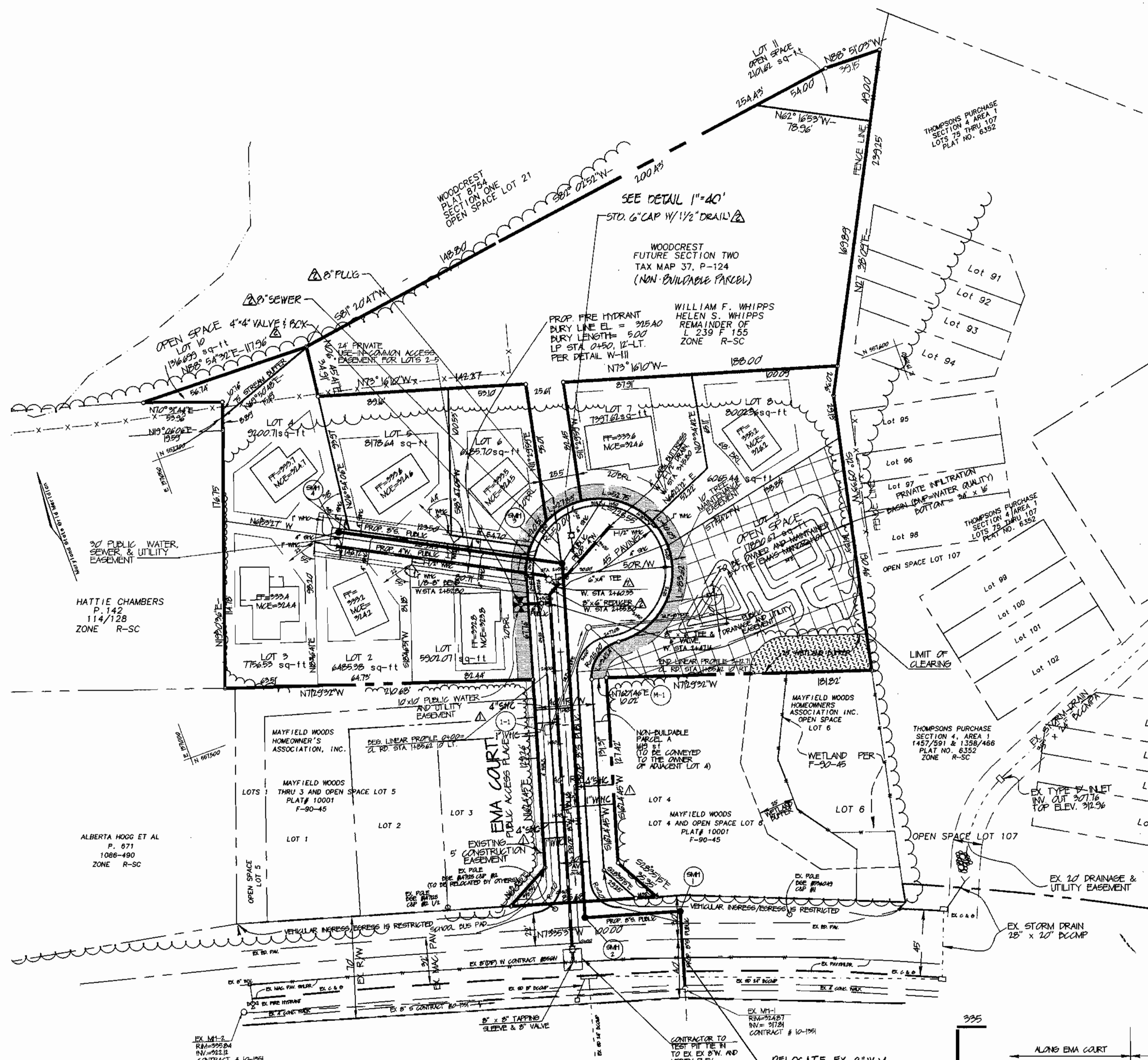
LOTS 1-11 & NON-BUILDABLE PARCELS A & B  
 A SUBDIVISION OF PARCEL 143 & P/O PARCEL 125  
 CONTRACT NO. 14-4004-D  
 1ST ELECTION DISTRICT TAX MAP 37  
 HOWARD COUNTY, MARYLAND

### GENERAL NOTES:

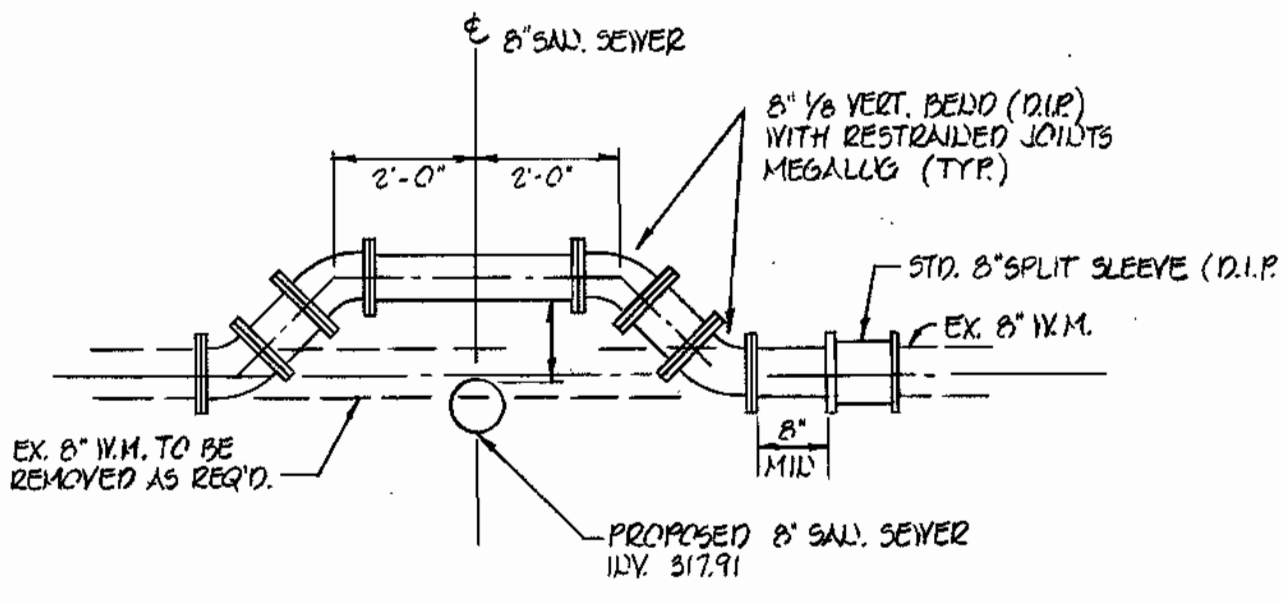
- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES (NORTH AMERICAN DATUM OF 1885 AND 1983), PER HOWARD COUNTY BENCHMARKS:  
 378 N 55649409 E 15750709 ELEV. 110.75'  
 378A N 55646395 E 157466350 ELEV. 124.45'
- VERTICAL CONTROLS ARE BASED ON NAVD83
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY MINIMUM OF 1'. CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTRACTED THE UTILITY COMPANIES AND HAS ARRANGEMENTS FOR DRAGING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE DRAGING OF ADDITIONAL POLES ANY COST INCURRED BY THE OWNER FOR DRAGING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE DRAGING 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 SYMBOLS AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS ARE 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.
- CONTRACTORS SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK ON THESE PLANS:  
 STATE HIGHWAYS ADMINISTRATION 591-5555  
 DEBE CO. CONTRACTORS SERVICES 850-4610  
 DEBE CO. UNDER GROUND DAMAGE CONTROL 787-3008  
 MISS UTILITY 1-800-251-7171  
 CALORNA PIPELINE CO. 788-1900  
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 918-4900  
 BUREAU OF UTILITIES
- 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 LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF MAIN.
- ALL WATER MAINS TO BE DIP CLASS 92 UNLESS OTHERWISE NOTED.
- TAPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TREES SHALL BE STRAPPED TO TREES.
- 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 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 WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.
- ALL SEWER MAINS SHALL BE DIP OR PVC UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTE.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICKMANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL 6552.
- WHERE WATERTIGHT 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 "CNS" INDICATES THAT CELLAR CANNOT BE SERVED.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT 410-318-2850 AT LEAST FIVE (5) 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 PDW REQUIREMENTS PER SECTION 1514(G) OF THE HOWARD COUNTY CODE.
- THE FIRE HYDRANT ON THE ROAD SHALL BE INSTALLED (a) 3 FEET FROM THE BACK OF THE CURB CURB OR (b) 2 FEET FROM THE FACE OF THE CONCRETE SIDEWALK.



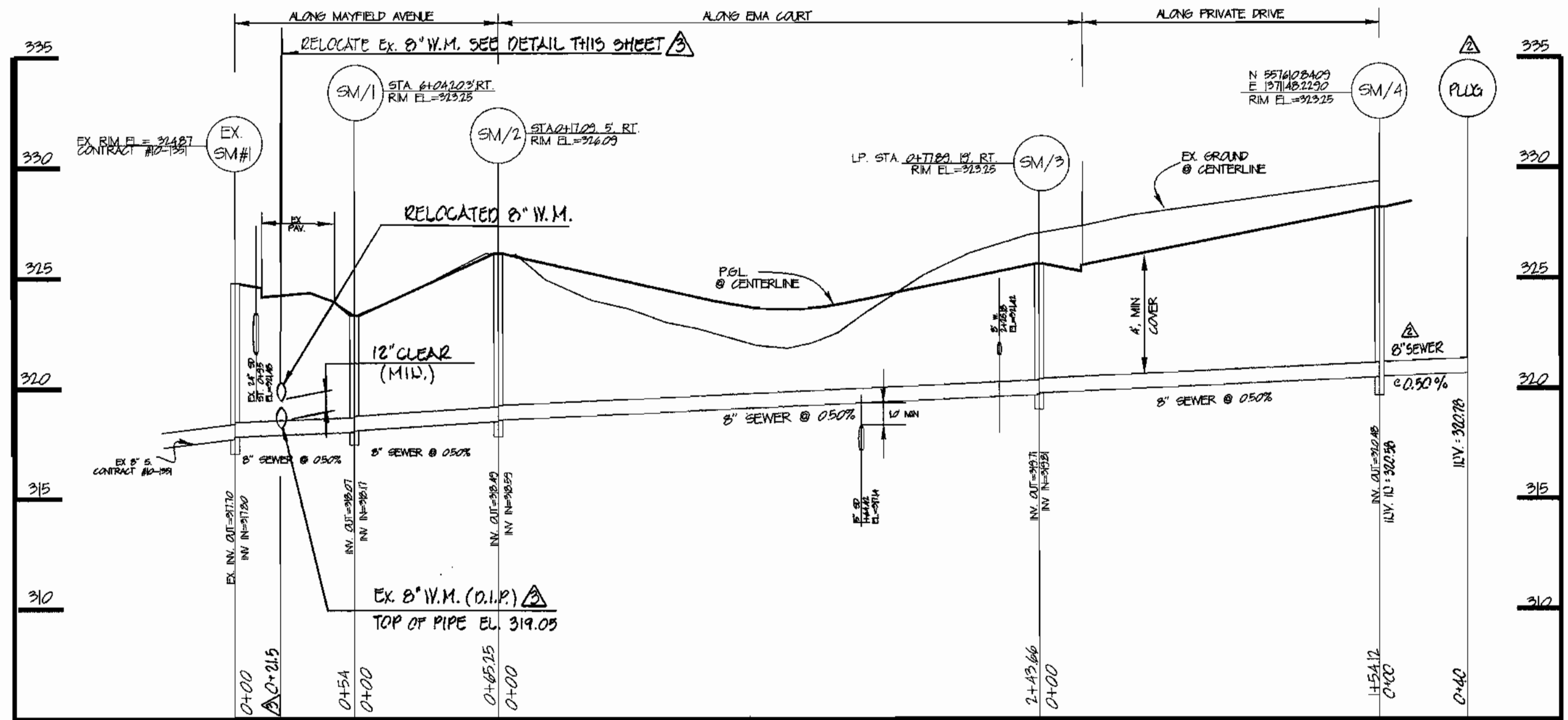
Charles R. Crocken



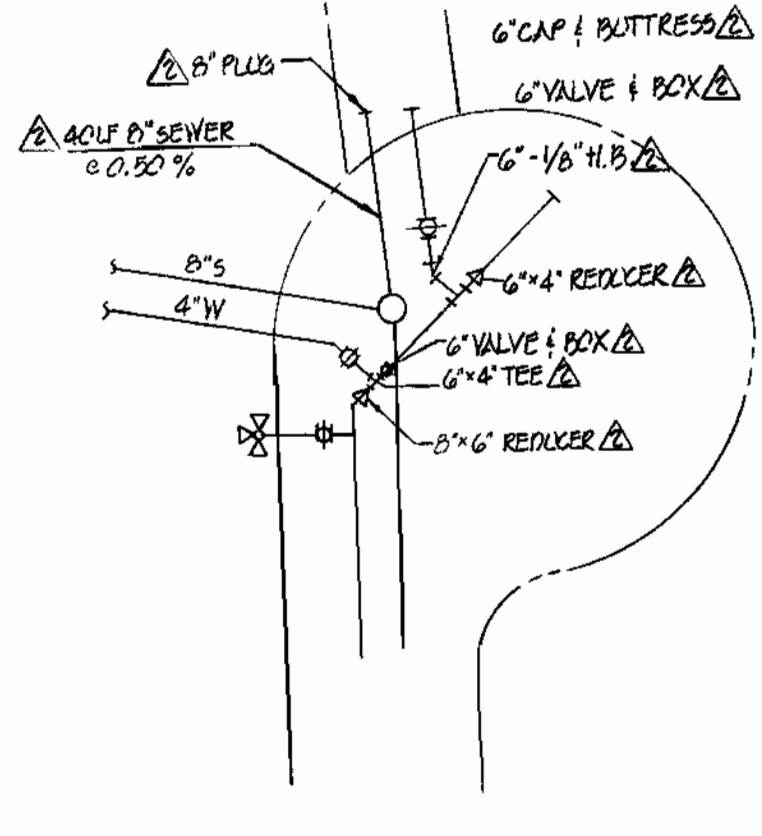
PLAN  
SCALE 1" = 50'



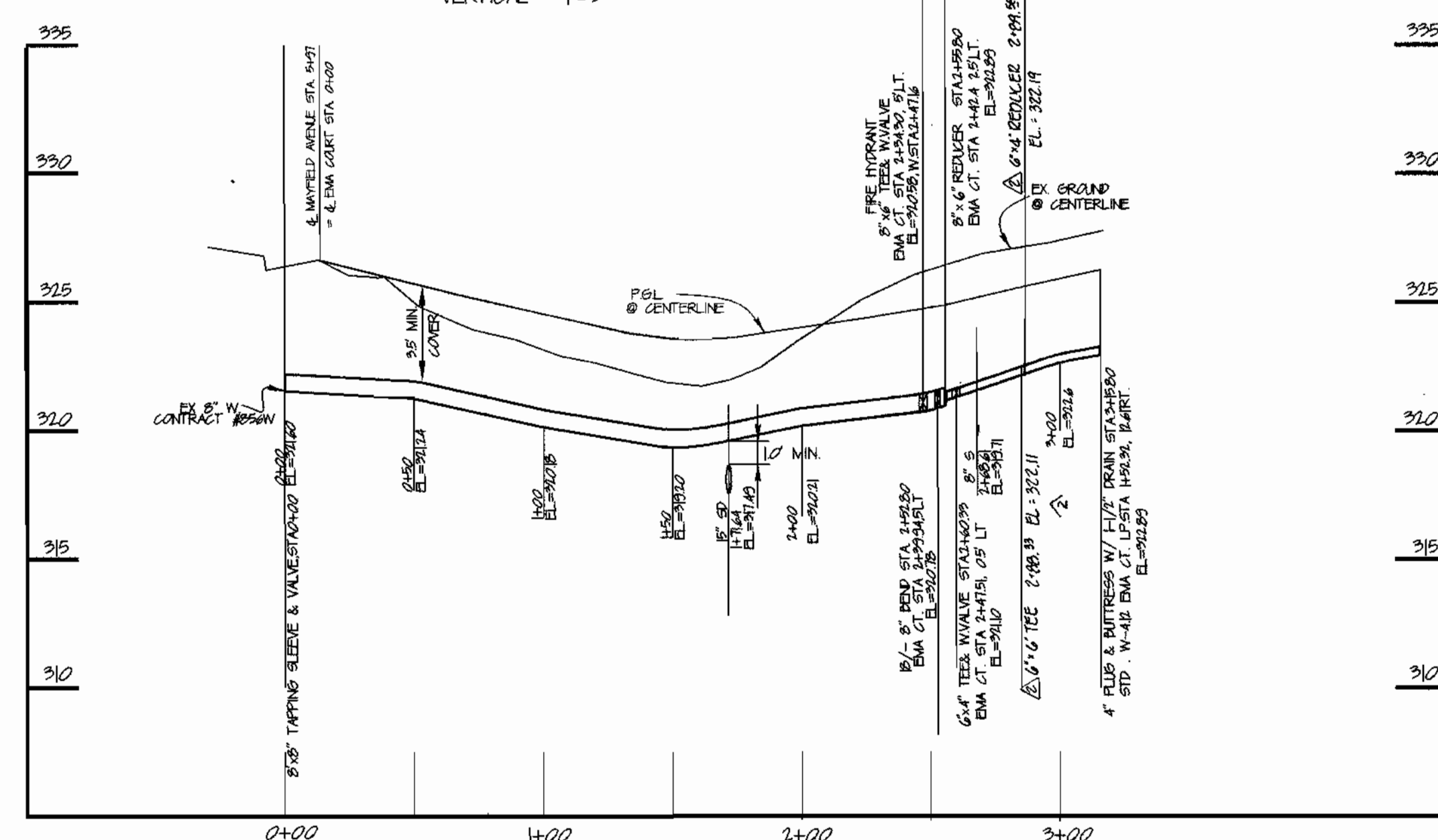
DETAIL 8" W.M. X-11/3  
SCALE: 3/8" = 1'-0"



8" SEWER MAIN PROFILE  
SCALE: HORIZONTAL - 1" = 50'  
VERTICAL - 1" = 5'



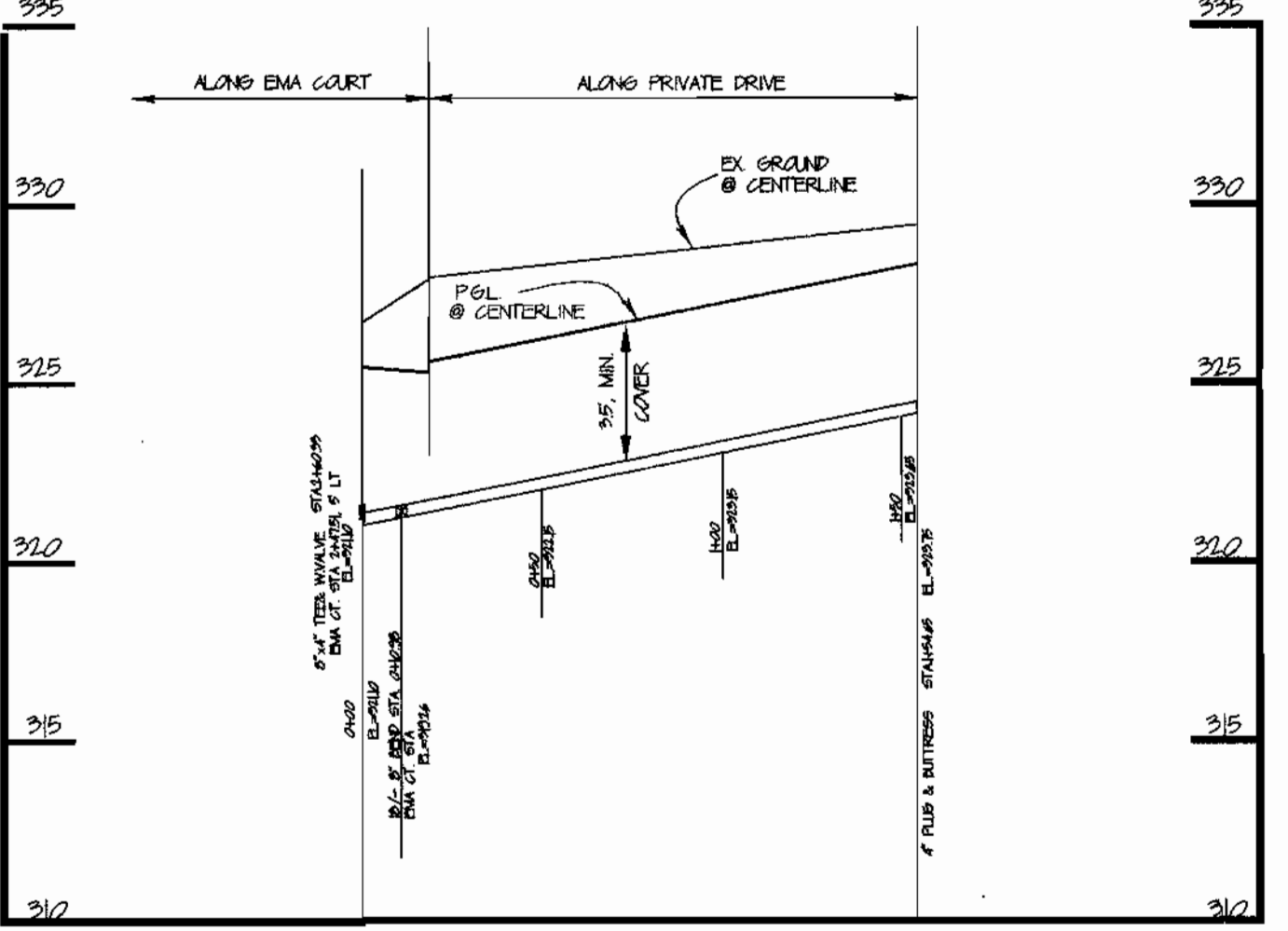
DETAIL  
2ND REDLINE REVISION  
SCALE: 1" = 40'



WATER MAIN PROFILE  
SCALE: HORIZONTAL - 1" = 50'  
VERTICAL - 1" = 5'

MAYFIELD WOODS 4" SHC INVERTS  
4" SHC INVERT TABLE

8" SEWER STATION	INVERT @ STA. 8" S	INVERT @ 2.00 %	LOT #	MILL. CELLAR ELEV.	8" SEWER STATION	IN. @ 8" SEWER	IN. @ 4"	LOT #
0+66	318.83	319.33	3	321.93	SM1 2			
0+92	318.95	319.45	4	322.15	2+23.08	319.71	320.72	LOT 8
1+44	319.22	319.72	2	324.42	SM1 3	319.81	320.81	LOT 7
					0+54	320.08	320.93	LOT 1
					0+56	320.09	320.93	LOT 6
					1+30	320.46	320.86	LOT 2
					1+38	320.50	320.7	LOT 5
					SM1 4	320.58	320.9	LOT 9
					SM1 4	320.58	320.94	LOT 4



4" WATER MAIN PROFILE  
SCALE: HORIZONTAL - 1" = 50'  
VERTICAL - 1" = 5'

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
*Jim Meyer* 12/3/02  
NATURAL RESOURCES CONSERVATION SERVICE DATE  
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT FOR F-2-54  
*John Chobot* 12/3/02  
HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
Prepared by:  
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Fax. (410) 549-9063  
11-22-02  
1/10/03

DESIGN	CHK	BY	NO	REVISION	DATE
DESIGN	CHK	K.C.I.	1	ASBUILT DATA ADDED TO PLAN	10/2/03
DRAWN	CHK	T.A.P.	1	ADDED RELOC. 8" W.M. X-11/3 MAYFIELD AVE.	9-22-03
CHK	CHK	T.A.P.	1	ADDED 8" SEWER & WATER EXTENSION	8-01-03
DATE	3-17-01	BY	NO	ADDED WHC'S & SHC'S FOR LOTS 'MAYFIELD WOODS'	7-22-03

PLAN AND PROFILE FOR  
WATER AND SEWER MAIN  
600 SCALE MAP NO. 37 BLOCK NO. 14

EMA'S MANOR  
LOTS 1-11 & NON-BUILDABLE PARCELS A+B  
A SUBDIVISION OF PARCEL NO. 143 & P6 PARCEL 185  
CONTRACT NO. 14-0004-D, F-02-54  
1ST ELECTION DISTRICT, TAX MAP 37  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 2 OF 2

