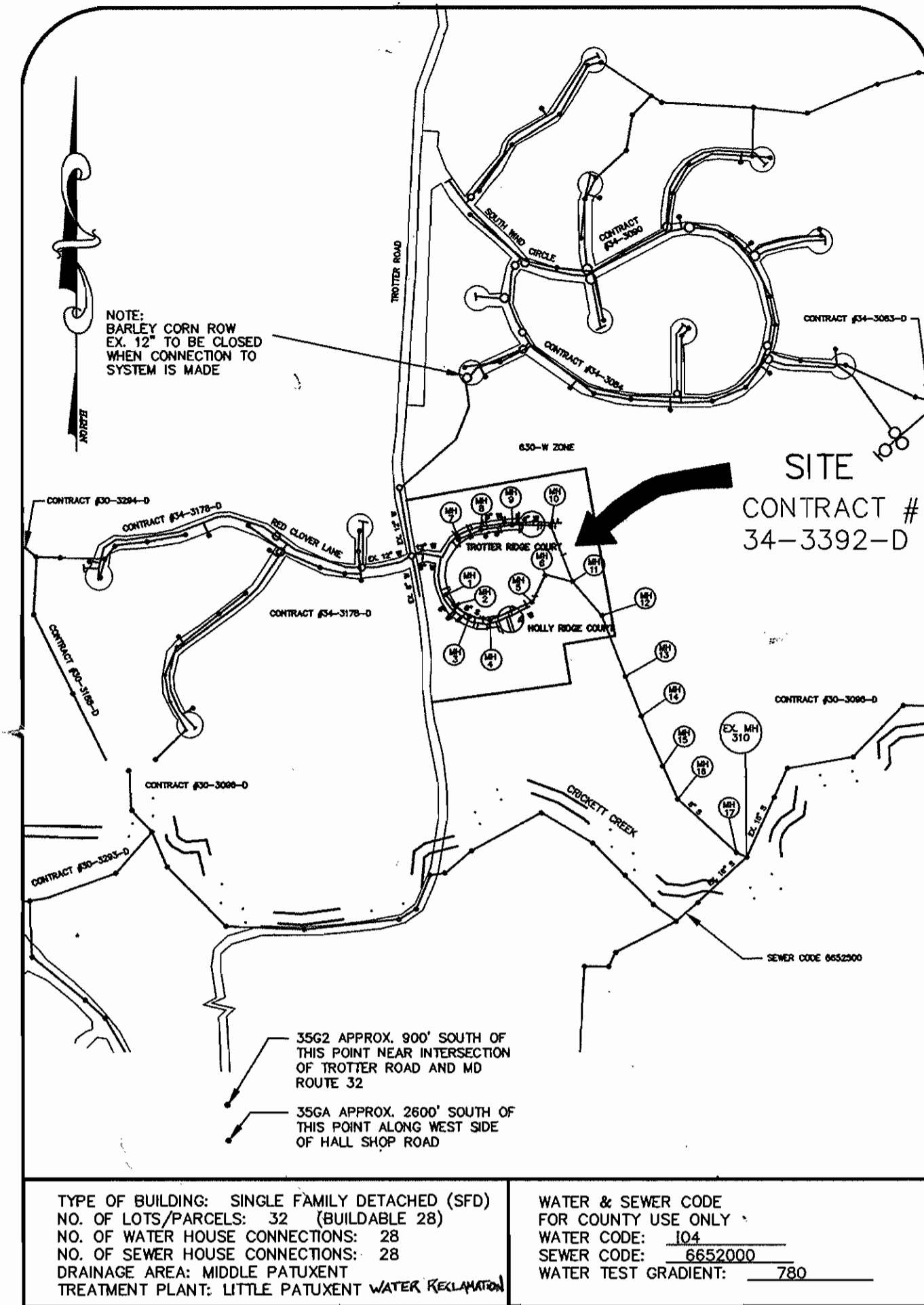


QUANTITIES			
ITEM	ESTIMATED QUANTITIES	AS-BUILT TYPE	SUPPLIER
8" WATER D.I.P.	1011 LF.	927	GRIFFIN PIPE
4" WATER D.I.P.	444 LF.	433	"
3/4" W.H.C.	679 LF.	763	HOWEL METALS
FIRE HYDRANTS	3	3	MUELLE CO.
8"x6" F.H.T.	3	3	"
12"x8" T.S. & V.	1	1	J-M MANUF.
8"x8" T	2	2	"
8" VALVE	3	3	MUELLE CO.
6" VALVE	3	3	"
8"x4" R	2	2	"
8"-1/16 H.B.	2	2	"
4"-1/32 H.B.	1	1	"
4"-1/32 H.B.	1	1	"
4" PLUG & BUTTRESS	2	2	"
8" PLUG & BUTTRESS	1	1	"
8" SEWER	1590 LF.	402	J-M MANUF.
8"D.I.P. CLASS 52 SWR	1447 LF.	1084	"
4" SHC	610 LF.	182	J-M MANUF.
MANHOLES	17	17	ATLANTIC CONC. PROD.
VERT. FT. OF MH	223 LF.		
NO. W.H.C.	28	28	
NO. SHC	26	26	
TWIN SHC	1	1	
6" SHC	80 LF.		GRIFFIN PIPE
WATERTIGHT MH, RIM AND COVER (G5.52)	6		ATLANTIC CONC. PRODUCTS
NAME OF UTILITY CONTRACTOR: C.C.S., INC.			
SURVEY & DRAFTING DIVISION AS-BUILT DATE:			
8" SEWER D.I.P. CLASS 52 SWR	879 L.F.		GRIFFIN PIPE
DHC P.V.C.	151		
DHC D.I.P.	299		
SHC G.P.			
STORM WATER RCP			ATLANTIC CONC. PRODUCTS
INLET PRECAST	4	4	ATLANTIC CONC. PRODUCTS
4" VALVE	2	2	MUELLE CO.

WATER HOUSE CONNECTION AS-BUILT LOCATIONS

LOT#	FROM	TO	DIST.
1	MH-7	WHC	34'
"	"	DHC	32'
"	DHC	WHC	13'
2	MH-8	"	57'
"	"	DHC	47'
"	DHC	WHC	12'
3	MH-8	WHC	35'
"	"	DHC	42'
"	DHC	WHC	9'
4	MH-9	"	43'
"	"	DHC	49'
"	DHC	WHC	12'
"	F.H.	"	22'
"	"	DHC	16'
5	MH-9	WHC	60'
"	"	DHC	62'
"	DHC	WHC	12'
6	MH-10	"	71'
"	"	DHC	60'
"	DHC	WHC	13'
7	MH-10	"	26'
"	"	DHC	22'
"	DHC	WHC	11'
8	MH-10	"	87'
"	"	DHC	40'
"	DHC	WHC	16'
9	MH-10	"	54'
"	"	DHC	42'
"	DHC	WHC	17'
10	MH-10	"	32'
"	"	DHC	148'
"	DHC	WHC	193'
11	MH-10	"	83'
"	"	DHC	90'
"	DHC	WHC	18'
12	MH-9	"	54'
"	"	DHC	59'
"	DHC	WHC	16'
13	MH-9	"	71'
"	"	DHC	67'
"	DHC	WHC	13'
"	F.H.	DHC	50'
"	"	WHC	43'
14	MH-8	"	44'
"	"	DHC	57'
"	DHC	WHC	11'
15	MH-7	"	34'
"	"	DHC	27'
"	DHC	WHC	12'
16	MH-7	"	35'
"	"	DHC	29'
"	DHC	WHC	12'
17	MH-2	"	25'
"	"	DHC	32'
"	DHC	WHC	12'
18	MH-3	"	58'
"	"	DHC	49'
"	DHC	WHC	10'
"	F.H.	DHC	50'
"	"	WHC	48'
19	MH-3	"	93'
"	"	DHC	82'
"	DHC	WHC	11'
20	MH-3	"	25'
"	"	DHC	24'
"	DHC	WHC	36'
21	MH-3	"	10'
"	"	DHC	41'
"	DHC	WHC	92'
22	MH-3	WHC	33'
"	"	DHC	21'
"	DHC	WHC	27'
23	MH-3	"	99'
"	"	DHC	107'
"	DHC	WHC	111'
24	MH-3	"	75'
"	"	DHC	66'
"	DHC	WHC	10'
25	MH-3	"	29'
"	"	DHC	44'
"	DHC	WHC	18'
"	F.H.	DHC	96'
"	"	WHC	41'
26	MH-3	"	46'
"	"	DHC	42'
"	DHC	WHC	8'
27	MH-3	"	46'
"	"	DHC	40'
"	DHC	WHC	13'
28	MH-2	"	43'
"	"	DHC	35'
"	DHC	WHC	11'



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 REQUIRED. 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, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY 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 DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAIL 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 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. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:  
 STATE HIGHWAY ADMINISTRATION 531-5533  
 BG & E CO. CONTRACTOR SERVICES 850-4620  
 BG & E CO. UNDERGROUND DAMAGE CONTROL 787-9068  
 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 WITH 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 THE MAIN.
- 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 STRAPPED 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, CSPX AND P.V.C. UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITH 2'-0" OF EXTERIOR MANHOLE WALL.
- 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 COVERS, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1' - 6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.
- ALL WATER AND SEWER MAINS ARE PUBLIC UNLESS OTHERWISE NOTED.
- WATER MAINS AND WATER 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.
- 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(a) OF THE HOWARD COUNTY CODE.

PUBLIC WATER & SEWER PLAN  
 CONTRACT NO. 34-3392-D  
 TROTTER RIDGE  
 TAX MAP 35 - PARCEL 24  
 5th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 DEPARTMENT OF PUBLIC WORKS

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

DEVELOPER'S SIGNATURE: \_\_\_\_\_ DATE: 2/27/96

DEVELOPER'S NAME: \_\_\_\_\_

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

ENGINEER'S SIGNATURE: R. K. KMAT DATE: 2/27/96

ENGINEER'S NAME: \_\_\_\_\_

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

J. A. Warfield/jpk DATE: 4/25/96

USDA-NATURAL RESOURCES CONSERVATION SERVICE

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

J. P. Roberts DATE: 4/25/96

HOWARD SCD

INDEX OF DRAWINGS	
NO.	DESCRIPTION
1	TITLE SHEET
2	WATER & SEWER PLAN
3	SEWER EXTENSION
4	WATER PROFILES
5	SEWER PROFILES
6	SEWER EXTENSION PROFILES
7	SEDIMENT & EROSION CONTROL NOTES & DETAILS

PLAN REFERENCE NUMBER:  
 P-95-14  
 S-94-17  
 WP-94-32  
 F-95-165

CONTRACT NO. 34-3392-D  
 TROTTER RIDGE  
 LOTS 1 - 32  
 WATER AND SEWER EXTENSION  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Michael A. Bonanni/for CHIEF, BUREAU OF UTILITIES RMB DATE: 4-10-96	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND Mr. M. J. ... CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 4/26/96	MILDENBERG, BOENDER & ASSOC., INC. Engineers Planners Surveyors 5072 Derrys Hall Drive, Suite 202, Elkton City, Maryland 21042 (410) 997-0296 Balt. (301) 821-5521 Wash. (410) 997-0298 Fax.	engineering MAT illustration MAT approval JH project 94008 date 6/95	BY NO. DATE	REVISION	DATE	600' SCALE MAP NO. 35 BLOCK NO. 8	TROTTER RIDGE LOTS: 1 - 32 CONTRACT #34-3392-D 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	scale AS SHOWN 1 OF 7
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NOTE LIMITS OF DISTURBANCE (L.O.D.) SHOWN ON THESE PLANS DELINEATE DISTURBED AREAS OUTSIDE THOSE SHOWN ON THE TROTTER RIDGE ROADS & STORM DRAINS PLANS; F-95-185.  
 \* ALL SEWER LINES PASSED AIR TEST.  
 \* WATER LINES PASSED PRESSURE TEST.  
 \* BACTERIOLOGICAL TEST APPROVED FOR WATER.  
 S0613'01"E

SEWER HOUSE CONNECTION TABLE				
LOTS #	SLOPE(%)	INV. @ PROPERTY LINE	MIN. BASEMENT ELEV.	TYPE OF CONNECTION
1	4.00	408.12	417.10	MANHOLE HC
2	5.00	407.91	414.76	SHC
3	3.00	413.44	418.40	DHC
4	2.00	416.98	421.00	DHC
5	2.00	412.42	416.00	DHC
6	2.00	407.90	411.50	DHC
7	2.00	401.76	408.00	MANHOLE HC
8	1.00	394.02	398.57	6" TSHC @ MH
9	1.00	394.02	397.50	6" TSHC @ MH
10	2.00	388.44	392.50	DHC
11	2.00	407.50	406.00	DHC
12	2.00	413.53	417.50	DHC
13	2.00	414.14	418.00	DHC
14	2.00	411.86	415.50	DHC
15	1.00	406.93	410.00	MANHOLE HC
16	1.00	399.35	402.50	MANHOLE HC
17	2.00	403.04	402.68	DHC
18	2.00	409.22	412.50	DHC
19	2.00	413.06	416.50	DHC
20	2.00	411.54	414.66	DHC
21	2.00	405.16	408.50	DHC
22	2.00	401.12	404.60	MANHOLE HC
23	2.00	403.02	407.50	DHC
24	2.00	403.50	407.92	DHC
25	2.00	403.44	407.50	MANHOLE HC
26	2.00	404.92	408.50	DHC
27	1.00	388.59	399.93 FIRST FLOOR	SHC
28	1.00	388.88	399.34 FIRST FLOOR	SHC

NOTE: LOTS 27, 28 CELLAR NOT SERVICED FOR SEWERAGE, FIRST FLOOR SERVICE ONLY.

WATER MAIN TABULATION CHART		
TROTTER RIDGE COURT - HOLLY RIDGE COURT		
WATER MAIN STATION	APPURTENANCE	DIST. FROM C
0+00	4" PLUG & BUTTRESS	5.0' RT FROM CEN. OF ESMT.
0+09	1 1/2" DRAIN	12.0' RT FROM CEN. OF ESMT.
2+09.42	4"-1/32 H.B.	7.00' RT
2+54	4" V	7.00' RT
2+57	8" X 4" R	7.00' RT
2+60	8" X 6" F.H.T.	7.00' RT
5+98.34	8" V	7.00' RT
6+01.34	8" X 8" T	7.00' RT
6+04.34	8" V	7.00' RT
10+54.45	8"-1/16 H.B.	7.00' RT
10+58	8" X 6" F.H.T.	6.00' RT
10+61	8" X 4" R	4.00' RT
10+64	4" V	3.76' RT
12+36	1 1/2" DRAIN	12.0' RT FROM CEN. OF ESMT.
12+48.37	4" PLUG & BUTTRESS	7.0' RT FROM CEN. OF ESMT.

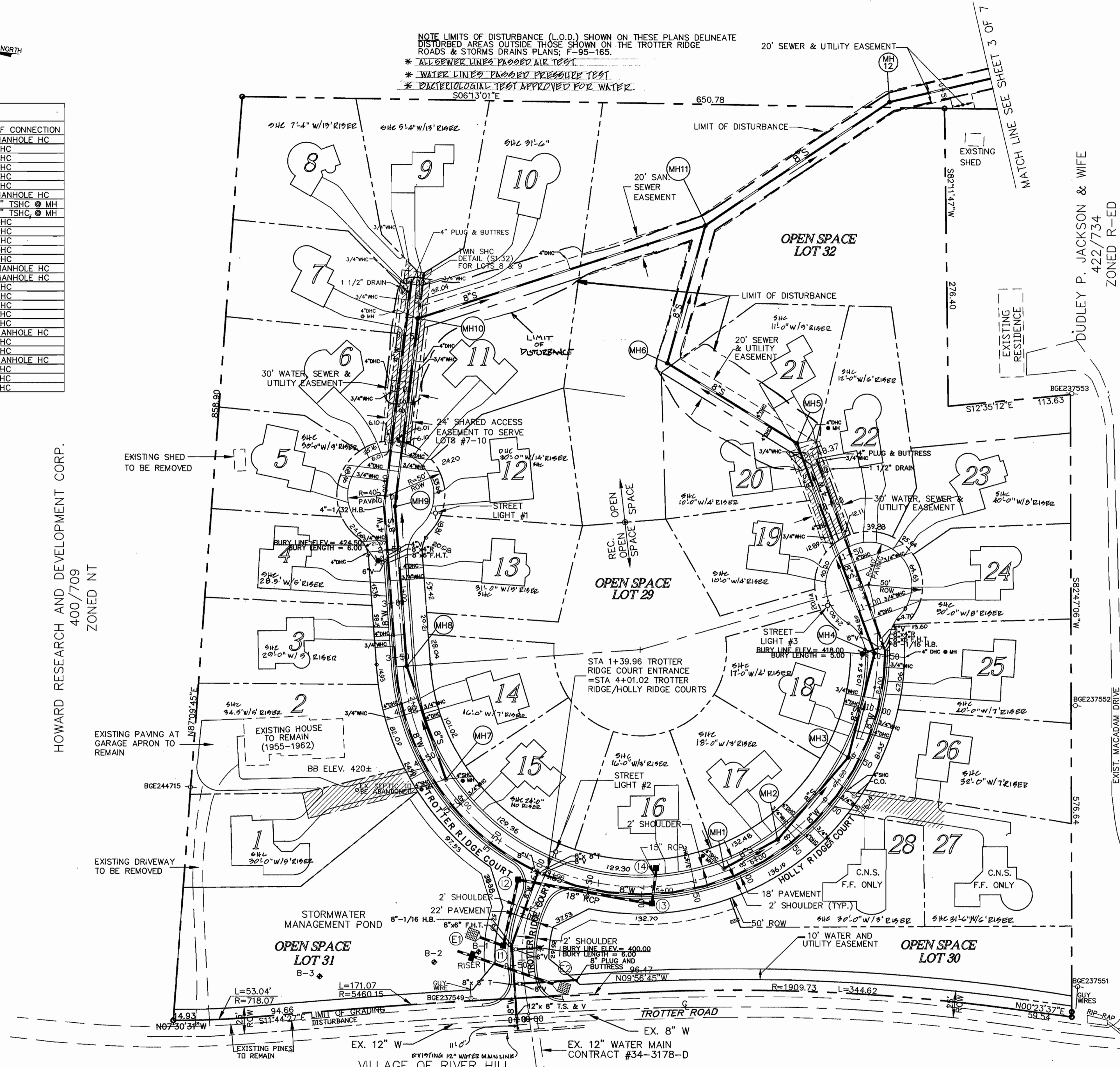
  

TROTTER RIDGE COURT		
WATER MAIN STATION	APPURTENANCE	DIST. FROM C
0+00	12" X 8" T.S.	11.52' LT
0+33.00	8" X 8" T	10.31' LT
0+65.00	6" V	6.00' LT
0+65.00	8" X 6" F.H.T.	9.15' LT
0+63.00	8"-1/16 H.B.	9.88' LT
1+37.00	8" X 8" T	6.88' LT

WATER MAIN CRIMP CHART		
TROTTER RIDGE COURT - HOLLY RIDGE COURT		
ROAD C STATIONS	APPURTENANCE	RADIUS
3+59.00	PC: BEGIN CRIMP	
10+54.45	PT: END CRIMP	227'

MANHOLE TABULATION CHART				
TROTTER RIDGE COURT - HOLLY RIDGE COURT				
MH NO.	C ROAD STATIONS	DISTANCE	RIM ELEV.	
1	5+69.5	3.0' LT	403.19	
2	6+27.1	3.0' LT	404.86	
3	7+29.4	3.0' LT	410.73	
4	8+31.7	3.0' LT	417.35	
5	ALONG ESMT. LOTS: 19 - 24		415.22	
6	ALONG ESMT. LOTS: 20 - 21		409.43	
7	2+74	7.00' LT	411.97	
8	1+59.3	7.00' LT	418.80	
9	0+111.3	7.00' RT	426.23	
10	ALONG ESMT. LOTS: 5 - 12		414.58	
11	ALONG ESMT. LOT 10		384.64	
12	ALONG ESMT.		378.84	

SEWER MANHOLE CHART		
MH NO.	TYPE	TYPES
EX. 310	TYPE "A" DROP	
4	INTERMEDIATE LANDING	
5	INTERMEDIATE LANDING	
9	INTERMEDIATE LANDING	
10	INTERMEDIATE LANDING	
11	TYPE "B" DROP	
11,14,15	WATERTIGHT MANHOLE RIM AND COVER	
16,17,3	STD DETAIL (G5.52)	



HOWARD RESEARCH AND DEVELOPMENT CORP.  
 400/709  
 ZONED N1

DUDLEY P. JACKSON & WIFE  
 422/734  
 ZONED R-ED

ELWIN BROWN  
 328/398  
 ZONED R-20

JOHN DUE  
 441/722  
 MARYLAND ENVIRONMENTAL TRUST

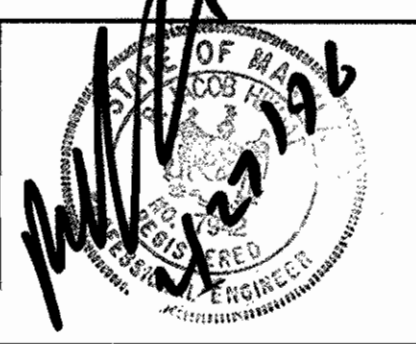
NOTE: SECTION 1, AREA 4  
 MAIN WATER LINE CONNECTION WAS AT  
 EOG 11'0" WEST WARD S. ORIGINAL LOC.  
 WAS ERRONEOUSLY MARKED.

PLAN  
 SCALE: 1"=50'

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Michael A. Stovall for  
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND  
 Howard P. ...  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

MILDENBERG,  
 BOENDER & ASSOC., INC.  
 Engineers Planners Surveyors  
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
 (410) 997-0296 Fax (301) 821-5521 Wash. (410) 997-0298 Fax

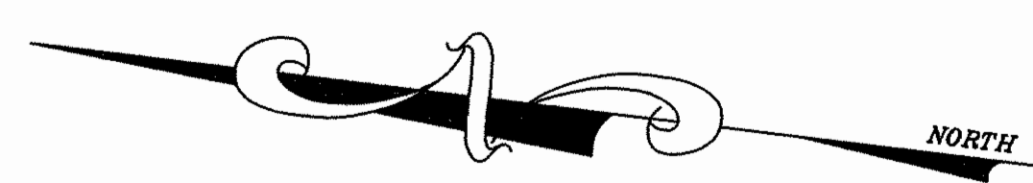


engineering	MAT				
illustration	MAT				
approval	JH				
project	94008	RCJ	1	ADD LOT FRONTAGE LOTS 1-28	5-7-96
date	6/95	BY	NO.	REVISION	DATE

WATER & SEWER  
 PLAN  
 600' SCALE MAP NO. 35  
 BLOCK NO. 8

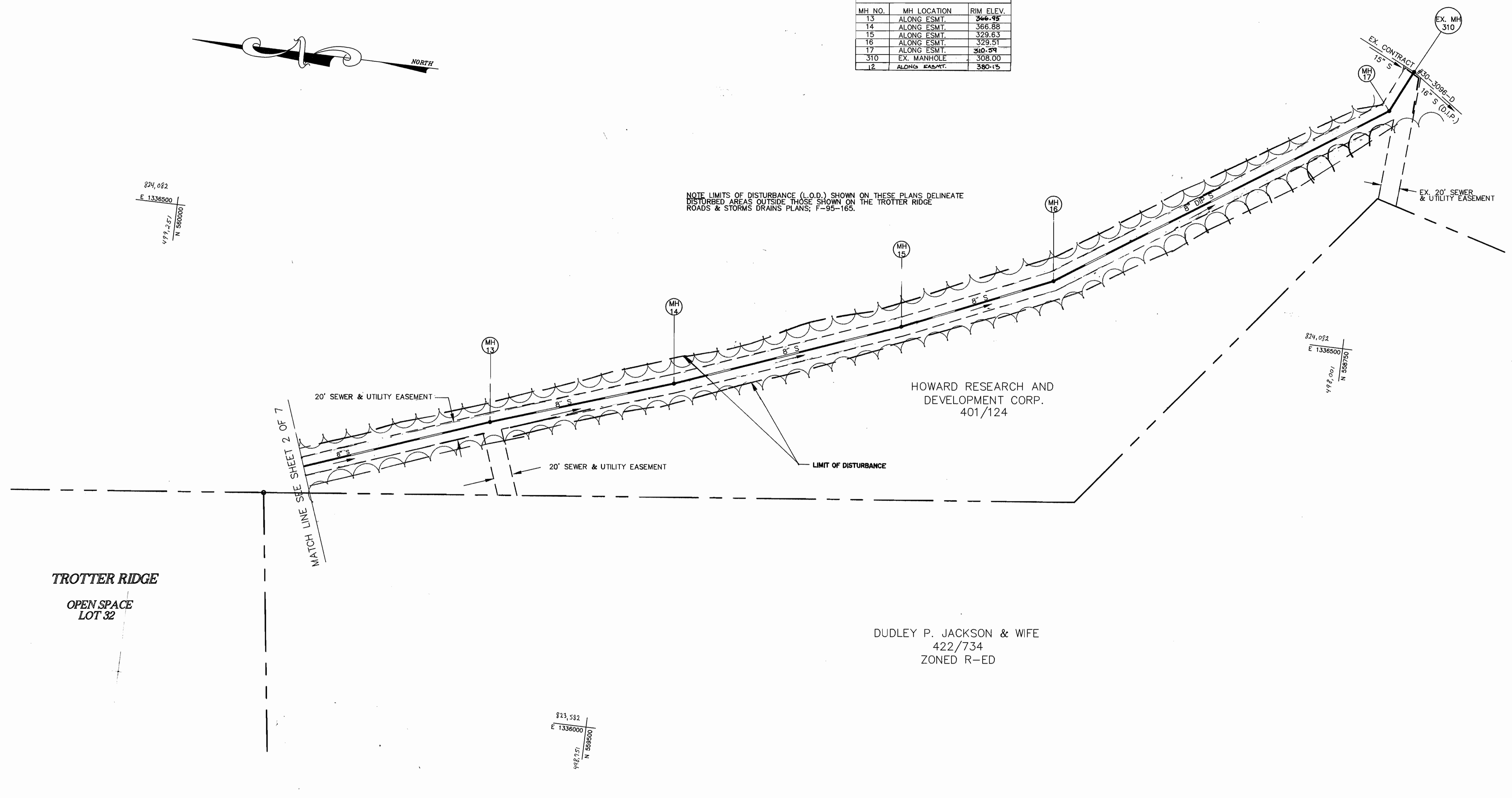
TROTTER RIDGE  
 LOTS: 1-32  
 CONTRACT #34-3392-D  
 5TH-ELECTION-DISTRICT  
 HOWARD COUNTY, MARYLAND

scale  
 AS-SHOWN  
 2 OF 7



MANHOLE TABULATION CHART		
MH NO.	MH LOCATION	RIM ELEV.
13	ALONG ESMT.	366.95
14	ALONG ESMT.	366.88
15	ALONG ESMT.	329.63
16	ALONG ESMT.	329.51
17	ALONG ESMT.	310.59
310	EX. MANHOLE	308.00
12	ALONG ESMT.	380.15

NOTE LIMITS OF DISTURBANCE (L.O.D.) SHOWN ON THESE PLANS DELINEATE DISTURBED AREAS OUTSIDE THOSE SHOWN ON THE TROTTER RIDGE ROADS & STORMS DRAINS PLANS; F-95-165.

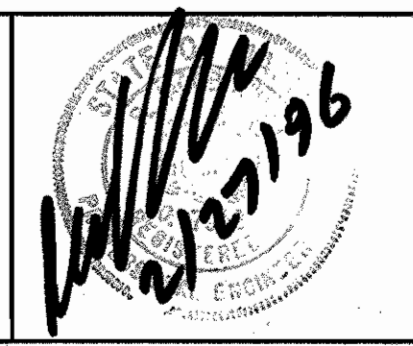


CONTRACT NO. 34-3392-D  
TROTTER RIDGE  
LOTS 1 - 32  
WATER AND SEWER EXTENSION  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*Nicholas Susanna*  
CHIEF, BUREAU OF UTILITIES RMB DATE 9/19/96

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
*Michael P. ...*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 4/20/96

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
(410) 987-0296 Balt. (301) 621-5521 Wash. (410) 987-0296 Fax

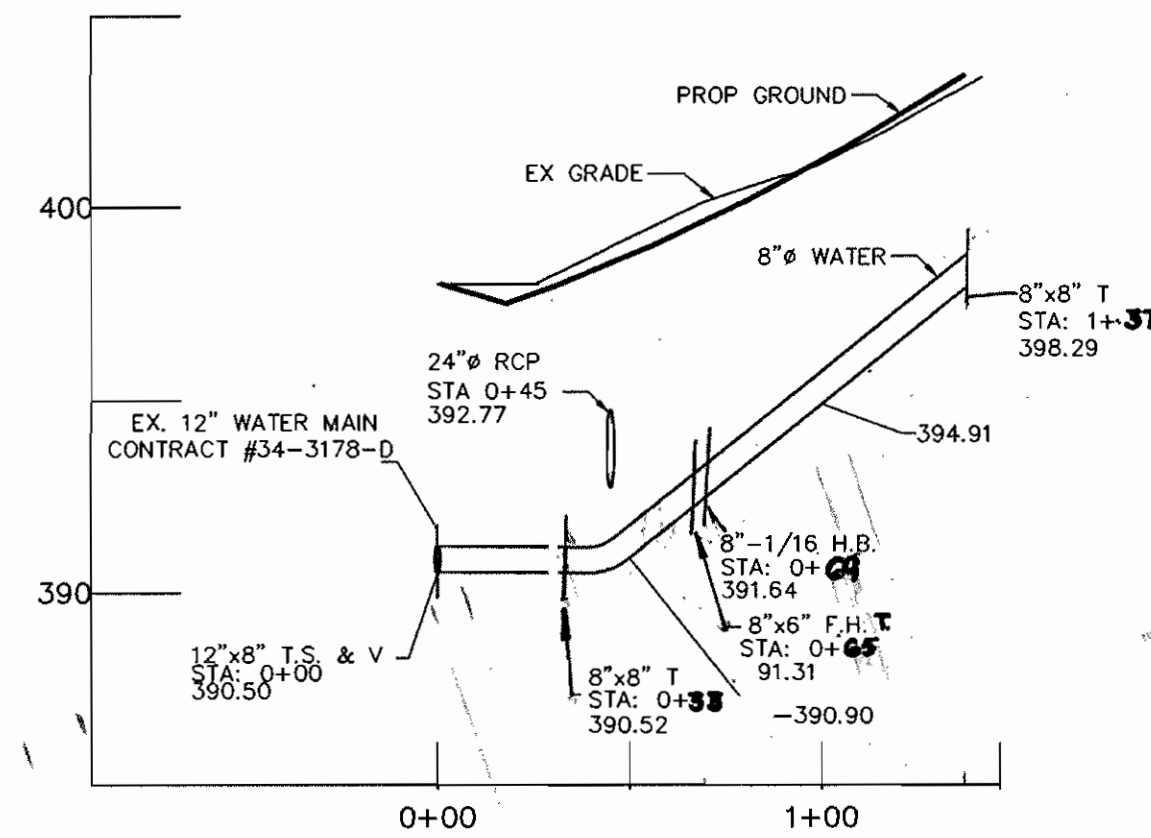


engineering	MAT				
illustration	MAT				
approval	JH				
project	94008				
date	6/95	BY	NO.	REVISION	DATE

**SEWER EXTENSION PLAN**  
600' SCALE MAP NO. 35 BLOCK NO. 8

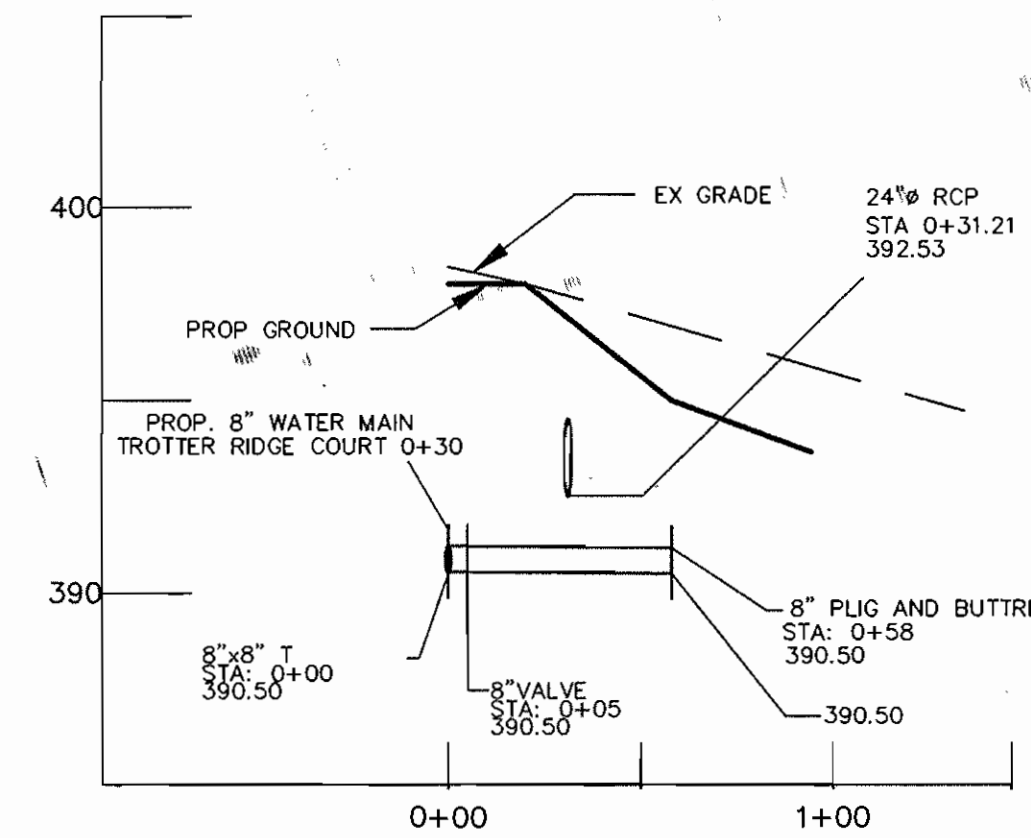
**TROTTER RIDGE**  
LOTS: 1 - 32  
CONTRACT #34-3392-D  
5th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

scale AS SHOWN  
3 OF 7



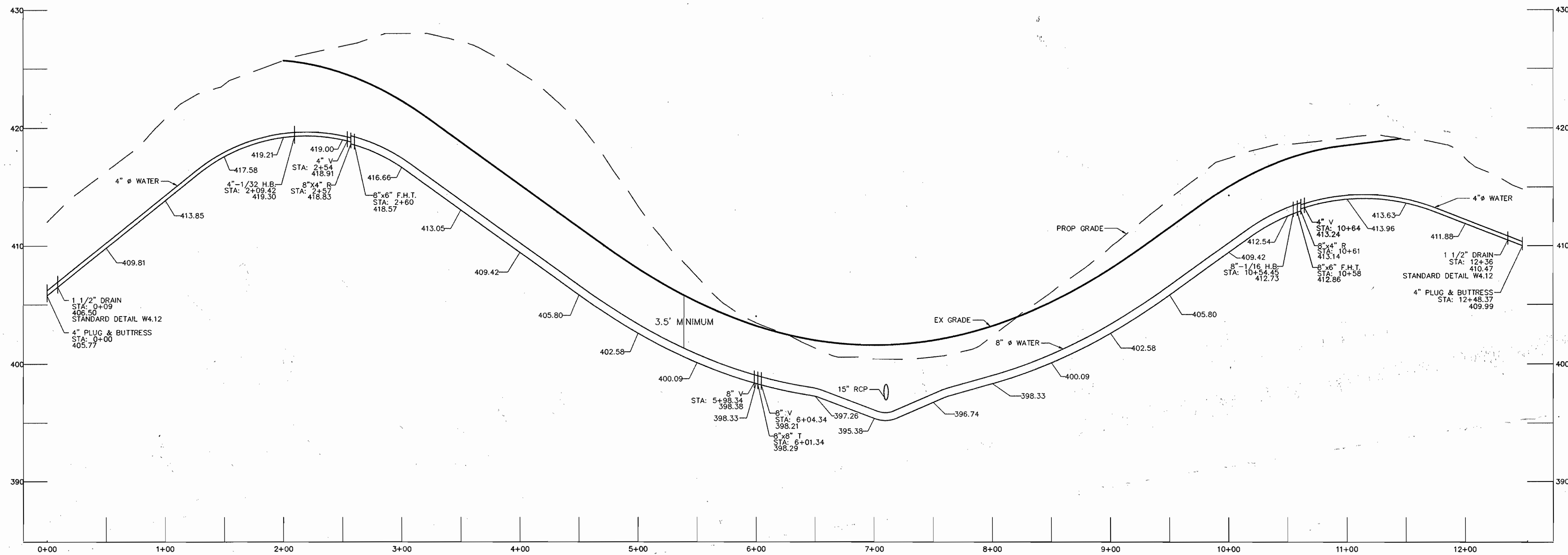
8" WATER PROFILE  
(TROTTER RIDGE COURT - ENTRANCE)

SCALE: HOR. 1" = 50'  
VER. 1" = 5'



8" WATER PROFILE  
(FUTURE EXTENSION PIPE)

SCALE: HOR. 1" = 50'  
VER. 1" = 5'



8" WATER PROFILE  
TROTTER RIDGE COURT - HOLLY RIDGE COURT

SCALE: HOR. 1" = 50'  
VER. 1" = 5'  
SEE SHEET 2 FOR PLAN OF 8" WATER MAIN

CONTRACT NO. 34-3392-D  
TROTTER RIDGE  
LOTS 1 - 32  
WATER AND SEWER EXTENSION  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

MILDENBERG,  
BOENDER & ASSOC., INC.

Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
(410) 997-0298 Bat. (301) 621-5521 Wash. (410) 997-0298 Fax.

*Handwritten signature and date: 2/23/96*

engineering	MAT				
illustration	MAT				
approval	JH				
project	94008				
date	6/95	BY	NO.	REVISION	DATE

WATER PROFILES

600' SCALE MAP NO. 35 BLOCK NO. 8

TROTTER RIDGE

LOTS: 1 - 32  
CONTRACT #34-3392-D  
5th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

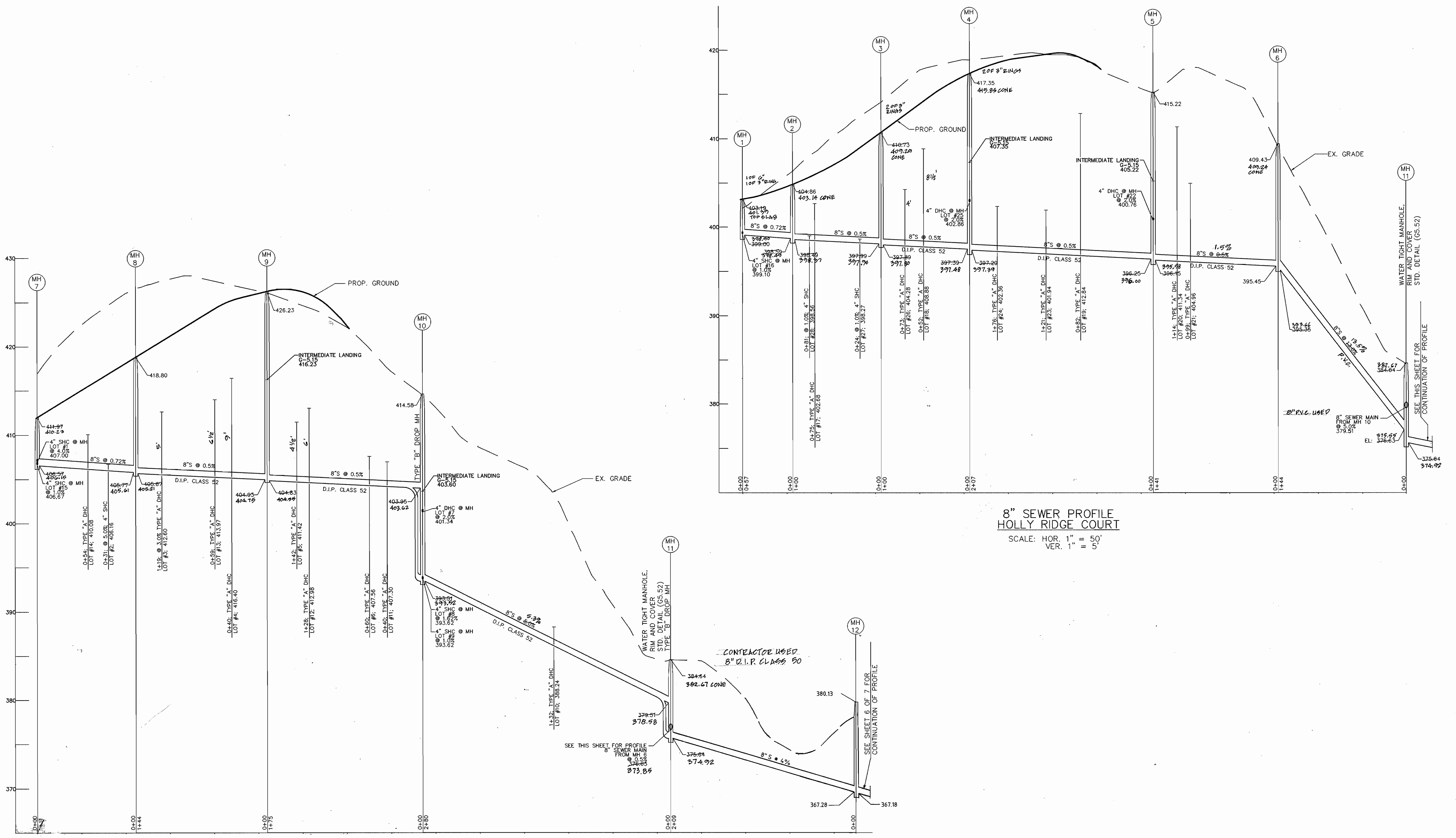
scale  
AS SHOWN

4 OF 7

94008WP

*Handwritten signature: Michael A. Brannan*  
CHIEF, BUREAU OF UTILITIES RMB DATE 4-19-96

*Handwritten signature: [Signature]*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 4/20/96



8" SEWER PROFILE  
HOLLY RIDGE COURT  
SCALE: HOR. 1" = 50'  
VER. 1" = 5'

8" SEWER PROFILE  
TROTTER RIDGE COURT  
SCALE: HOR. 1" = 50'  
VER. 1" = 5'

CONTRACT NO. 34-3392-D  
TROTTER RIDGE  
LOTS 1 - 32  
WATER AND SEWER EXTENSION  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
Michael A. ...  
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND  
...  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

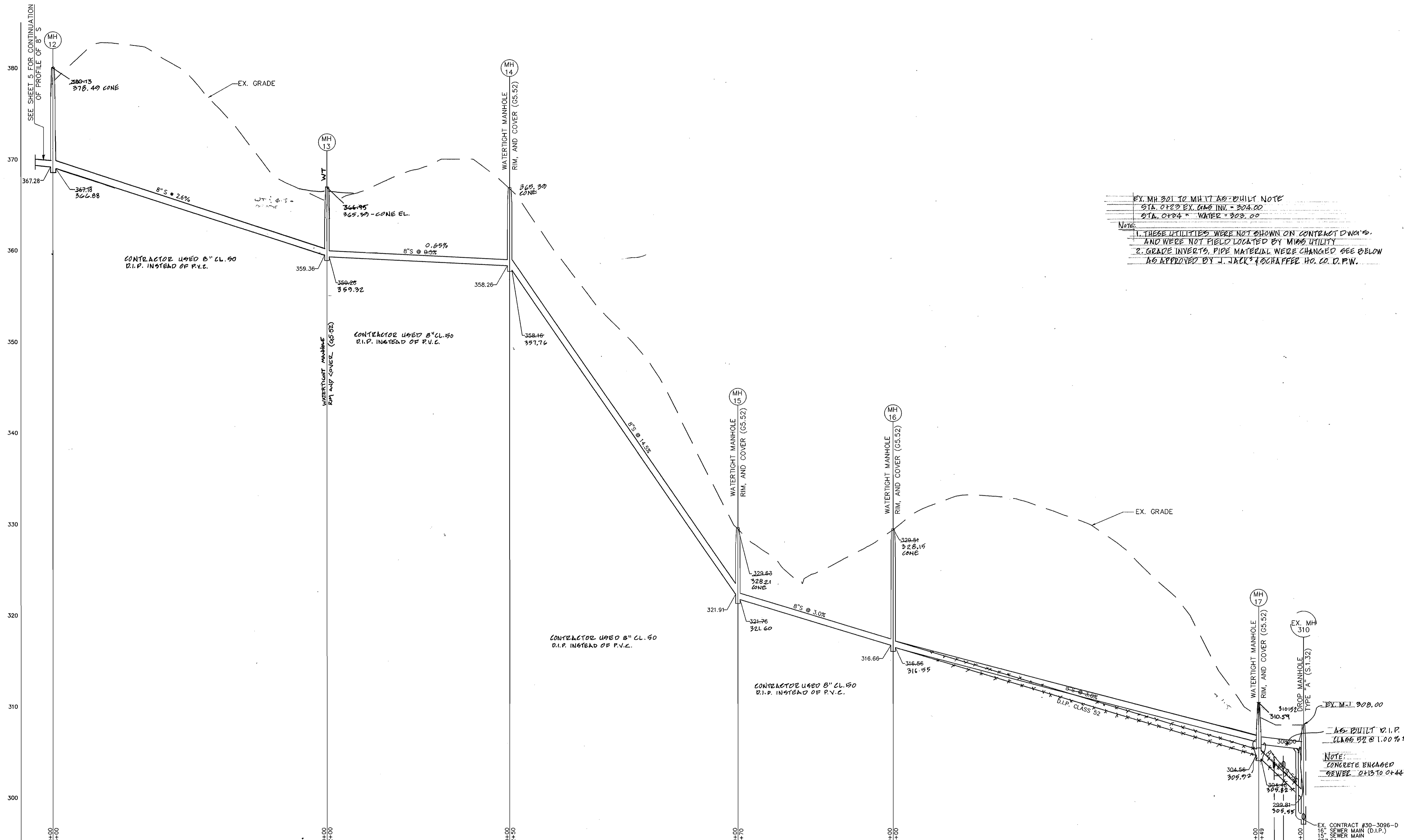
**MILDENBERG,  
BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors  
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042  
(410) 997-0286 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax

*Handwritten signature and date: 2/27/96*

engineering	MAT				
illustration	MAT				
approval	JH				
project	95008	RCJ	1	LOWER SEWER MAIN ON PROFILE & PROVIDE COVER OVER IT	9/5/96
date	6/95	BY	NO.	REVISION	DATE

**SEWER PROFILES**  
600' SCALE MAP NO. 35 BLOCK NO. 8

**TROTTER RIDGE**  
LOTS: 1 - 32  
CONTRACT #34-3392-D  
5th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
scale AS SHOWN  
5 OF 7



EX. MH 301 TO MH 17 AS-BUILT NOTE  
 STA. 0+23 EX. GAS INV. = 304.00  
 STA. 0+24 " WATER = 303.00

NOTE:  
 1. THESE UTILITIES WERE NOT SHOWN ON CONTRACT DWG'S AND WERE NOT FIELD LOCATED BY MISS UTILITY  
 2. GRADE INVERTS, PIPE MATERIAL WERE CHANGED SEE BELOW  
 AS APPROVED BY J. JACKS & SCHAFFER HO. CO. D.P.W.

8" SEWER EXTENSION PROFILE

SCALE: HOR. 1" = 50'  
 VER. 1" = 5'

EX. M.L. 308.00  
 AS-BUILT V.P.P.  
 CLASS 52 @ 1.00% S

NOTE:  
 CONCRETE ENCASED  
 SEWER 2+13 TO 0+44

EX. CONTRACT #30-3096-D  
 15" SEWER MAIN (D.I.P.)  
 15" SEWER MAIN  
 297.64

CONTRACT NO. 34-3392-D  
 TROTTER RIDGE  
 LOTS 1 - 32  
 WATER AND SEWER EXTENSION  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

Michael A. G... 4/19/96  
 CHIEF, BUREAU OF UTILITIES RMB DATE

DEPARTMENT OF PLANNING & ZONING  
 HOWARD COUNTY, MARYLAND

4-... 4/26/96  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

MILDENBERG,  
 BOENDER & ASSOC., INC.  
 Engineers Planners Surveyors  
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Handwritten signature and date: 2/27/96

engineering	MAT				
illustration	MAT				
approval	JH				
project	94008	RCJ	1	LOWER SEWER MAIN ON PROFILE	9/5/96
date	6/95	BY	NO.	REVISION	DATE

SEWER EXTENSION  
 PROFILE

600' SCALE MAP NO. 35 BLOCK NO. 8

TROTTER RIDGE  
 LOTS: 1 - 32  
 CONTRACT #34-3392-D  
 5th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

scale  
 AS SHOWN  
 6 OF 7

HOWARD SOIL CONSERVATION DISTRICT  
PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs./1000 sq.ft.).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq.ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding - For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs. per acre 1.4 lbs./1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (.05 lbs./1000 sq.ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) - 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) - Use sod. Option (3) - Seed with 60 lbs./acre Kentucky 31 Tall Fescue and mulch with 2 tone/acre well anchored straw.

Mulching - Apply 1-1/2 to 2 tons per acre (70 to 90 lbs./1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

Maintenance - Inspect all seeding areas and make needed repairs, replacements and reseeding.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, for not previously loosened.

Soil Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq.ft.)

Seeding: For periods March 1 thru April 30 and from August 15 thru October 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs./1000 sq.ft.) For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq.ft.). For the period November 16 thru November 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs./1000 sq.ft.) of unrotted weed free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gal per acre (8 gal/1000 sq.ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

STANDARD SEDIMENT CONTROL NOTES

- 1) A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction. (313-1855).
- 2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", and revisions thereto.
- 3) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec.51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec.52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 6) All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- 7) Site Analysis:
 

Total Area of Site:	15.0 Acres
Area Disturbed:	1.27 Acres
Area to be roofed or paved:	0 Acres
Area to be vegetatively stabilized:	1.27 Acres
Total Cut:	17,950 Cu. Yds.
Total fill:	17,950 Cu. Yds.
Total waste/borrow area location:	0
- 8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- 9) Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- 10) On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- 11) Trenches for the construction of utilities is limited to three pipe lengths or that which can be back filled and stabilized within one working day, whichever is shorter.

SEQUENCE OF OPERATIONS:

1. OBTAIN THE REQUIRED GRADING PERMIT.
2. INSTALL THE REQUIRED SEDIMENT AND EROSION CONTROL DEVICES; AS INDICATED ON SHEETS 2 AND 3 OF 7, AND F-95-165. SEE NOTE #13
3. INSTALL TREE PROTECTION FENCE WHERE APPLICABLE.
4. CLEAR AND GRUB AREAS SURROUNDING SEDIMENT CONTROL FEATURES.
5. CLEAR AND GRUB AS NECESSARY; ONLY AS REQUIRED FOR EXCAVATION AND INSTALLATION OF THE WATER AND SEWER MAINS. ONLY WITHIN THE DESIGNATED WATER, SEWER & UTILITY EASEMENTS OR WITHIN THE LIMIT OF DISTURBANCE.
6. CLEAR SITE PER LIMIT INDICATED.
7. STABILIZE, SEED & MULCH ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES SHOWN ON THIS SHEET.
8. INSPECT ALL SEDIMENT CONTROL DEVICES DAILY AND AFTER EACH RAINFALL, REPAIR AS NECESSARY.
9. WHEN ALL CONTRIBUTING AREAS TO SEDIMENT CONTROL DEVICE HAVE BEEN PERMANENTLY STABILIZED, AND AFTER PERMISSION HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL EROSION & SEDIMENT CONTROL DEVICES.
10. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A.) 7 CALENDAR DAYS FOR ALL PERIMETER SLOPES AND GREATER THAN 3:1 B.) 14 DAYS FOR ALL OTHER DISTURBED GRADED AREAS ON THE PROJECT SITE.
11. NOTE LIMITS OF DISTURBANCE (L.O.D.) SHOWN ON THESE PLANS DELINEATE DISTURBED AREAS OUTSIDE THOSE SHOWN ON THE TROTTER RIDGE ROADS & STORMS DRAINS PLANS; F-95-165.
12. **RE CONSTRUCTION OF UTILITIES: CONTRACTOR SHALL OPEN ONLY THAT SECTION OF TRENCH WHICH CAN BE BACKFILLED AND STABILIZED EACH DAY. IF TRENCH AND STABILIZED EACH DAY, IF TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY, SILT FENCE SHALL BE PLACED BELOW (DOWN SLOPE) OF THE TRENCH. PLACE ALL EXCAVATED MATERIAL ON THE UPRILL SIDE OF THE TRENCH. ANY SEDIMENT CONTROL DEVICES DISTURBED BY UTILITY CONTRACTOR ARE TO BE REPAIRED IMMEDIATELY.**

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 2/27/96  
DEVELOPER'S SIGNATURE DATE

DEVELOPER'S NAME

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

*[Signature]* 2/27/96  
ENGINEER'S SIGNATURE DATE

ENGINEER'S NAME  
MICHAEL A. BOENDER

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

HOWARD SCD DATE

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*[Signature]* 4-19-96  
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING  
HOWARD COUNTY, MARYLAND

*[Signature]* 4/26/96  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**MILDENBERG, BOENDER & ASSOC., INC.**  
Engineers Planners Surveyors

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*[Signature]* 2/27/96  
REGISTERED PROFESSIONAL ENGINEER

engineering	MAT				
illustration	MAT				
approval	JH				
project	94008				
date	6/95	BY	NO.	REVISION	DATE

**SEDIMENT & EROSION CONTROL NOTES & DETAILS**

600' SCALE MAP NO. 35 BLOCK NO. 8

**TROTTER RIDGE**  
LOTS: 1 - 32  
CONTRACT #34-3392-D  
5th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

scale  
AS SHOWN  
7 of 7

94085C