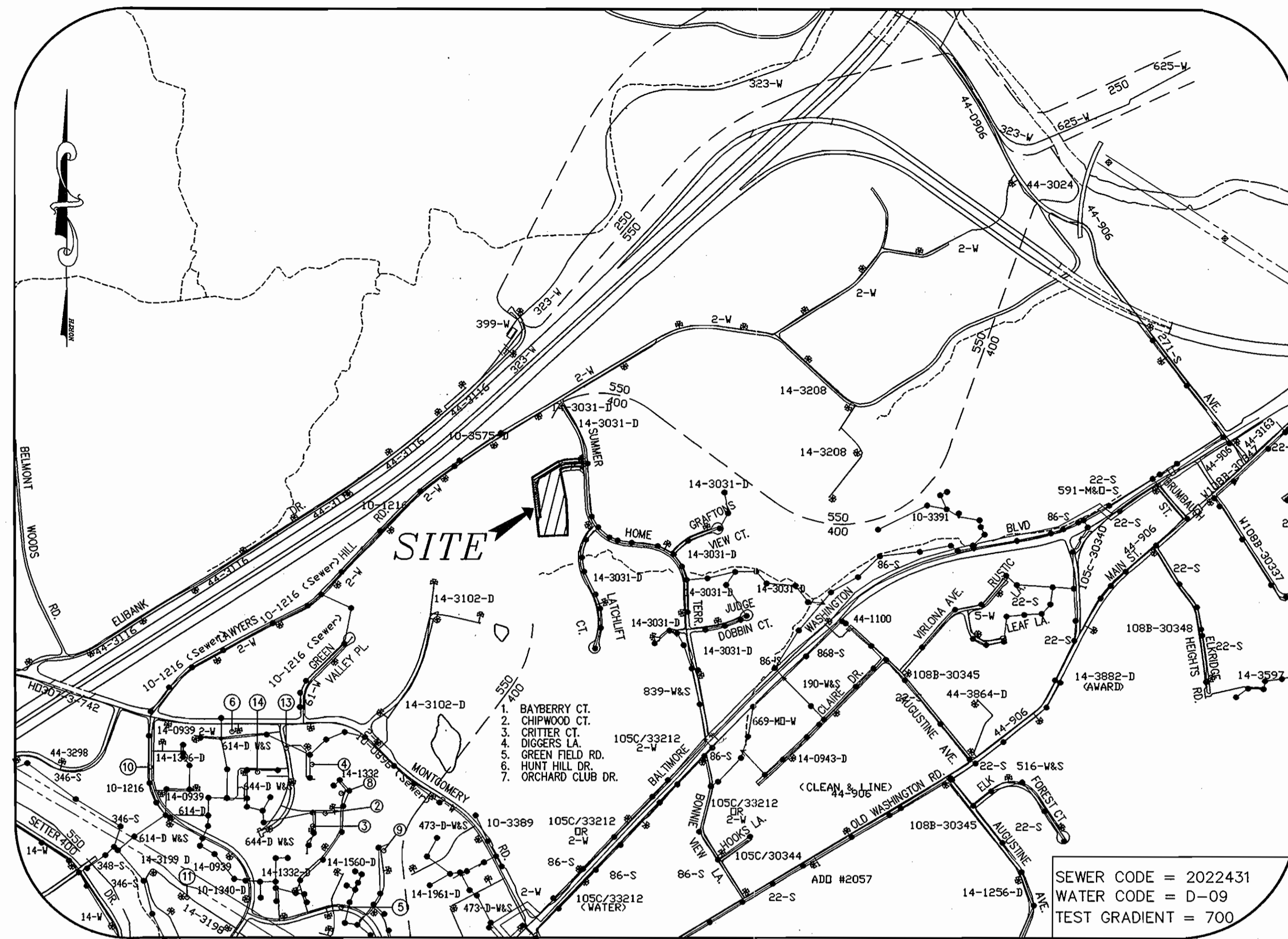


QUANTITY TABLE

ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
STANDARD MH (HO. CO. STD.G-5.01)	3	3	PRE-CAST	ATLANTIC CONCRETE
8" SEWER MAIN	397 L.F.	354	SDR 35	J.M. MFG./BRS.
8" SEWER MAIN (DIP)	257 L.F.	257	CL-52	U.S. PIPE/BRS
4" SEWER HOUSE CONNECTION	80 L.F.	80	SDR 35	J.M. MFG./BRS
SEWER HOUSE CONNECTIONS	3 EACH	3	SDR 35	J.M. MFG./BRS
# MANHOLE SEWER HOUSE CONNECTIONS	1 EACH	1	SDR 35	J.M. MFG./BRS
8" WATER MAIN	342 L.F.	342	CL-52	U.S. PIPE/BRS
6" WATER MAIN	249 L.F.	249	CL-52	U.S. PIPE/BRS
1" WATER HOUSE CONNECTION	57 L.F.	57	TYPE K	READING/BRS
# 1" W/C	4 EACH	4	PLASTIC	AMETEK/BRS
1/32 H.B. (8")	2 EACH	2	M.J.	U.S. PIPE/BRS
1/16 H.B. (8")	1 EACH	1	M.J.	U.S. PIPE/BRS
8"x6" F.H.T. & V.	1 EACH	1	DIP	U.S. PIPE/BRS
F.H.	1 EACH	1	50' CRUISE GATE VALVE	MUELLER/BRS
8" V.	1 EACH	1	M.J.	U.S. PIPE/BRS
8"x6" R.	1 EACH	1	M.J.	U.S. PIPE/BRS
1/8 H.B. (6")	1 EACH	1	M.J.	U.S. PIPE/BRS
6" CAP & BUTTRESS	1 EACH	1	M.J.	U.S. PIPE/BRS
NAME OF UTILITY CONTRACTOR: (CCS) CONSOLIDATED CONSTRUCTION SERVICES				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE				

PLAN REFERENCE NUMBERS:
F-03-166

**EROSION AND SEDIMENT CONTROL
FOR THIS CONTRACT IS PROVIDED
UNDER GP-04-062**



VICINITY MAP
SCALE 1"=600'

TYPE OF BUILDING	SFD
No. OF UNITS	4
No. OF WATER HOUSE CONNECTION	4
No. OF SEWER HOUSE CONNECTIONS	4
DRAINAGE AREA	PATAPSCO
TREATMENT PLANT	PATAPSCO WWTP

SEWER CODE = 2022431
WATER CODE = D-09
TEST GRADIENT = 700

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 NAD83/91 AS PROJECTED BY HOWARD COUNTY HORIZONTAL AND VERTICAL GEODETIC CONTROL NOS. 38AA & 38BA. THESE WATER AND SEWER DRAWINGS ARE BASED ON A FIELD RUN TOPOGRAPHIC STUDY PERFORMED BY MILDENBERG, BOENDER AND ASSOCIATES, INC. ON OR ABOUT FEBRUARY 2002.
- 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 12". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS 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 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 (410) 531-5533
BG & E CO. CONTRACTOR SERVICES (410) 850-4620
BG & E CO. UNDERGROUND DAMAGE CONTROL (410) 787-9068
MISS UTILITY 1-800-257-7777
COLONIAL PIPELINE CO. (410) 795-1390
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS (410) 313-4900
BUREAU OF UTILITIES (800) 356-2355
VERIZON
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED OUTSIDE 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.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410)313-2450 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 DPW REQUIREMENTS PER SECTION 18.114(g) OF HOWARD COUNTY CODE.
- 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 P.V.C. OR D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- 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.
- STATIONING SHOWN IS WATER MAIN AND CENTER LINE STATIONING.
- SEDIMENT CONTROL TO BE PROVIDED BY GP-04-062.
- ALL SEWER HOUSE CONNECTIONS TO BE 4" IN SIZE.
- ALL WATER HOUSE CONNECTIONS TO BE 1" IN SIZE UNLESS OTHERWISE NOTED.
- ALL HOUSES WILL HAVE SERVICE TO LOWEST FLOOR UNLESS OTHERWISE NOTED.
- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.

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] 4/21/04
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] 4/15/04
ENGINEER'S SIGNATURE DATE
JOHN B. MILDENBERG
ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.

[Signature] 5/29/04
SDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

[Signature] 5/20/04
HOWARD SCD DATE

**CONTRACT NO.: 14-4192-D
WIERKOWSKI PROPERTY
WATER AND SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS**

INDEX OF DRAWINGS

NO.	DESCRIPTION
1	TITLE SHEET
2	WATER AND SEWER PLAN
3	WATER AND SEWER PROFILES

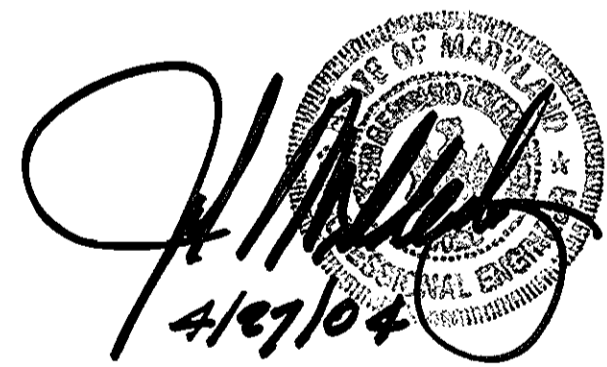
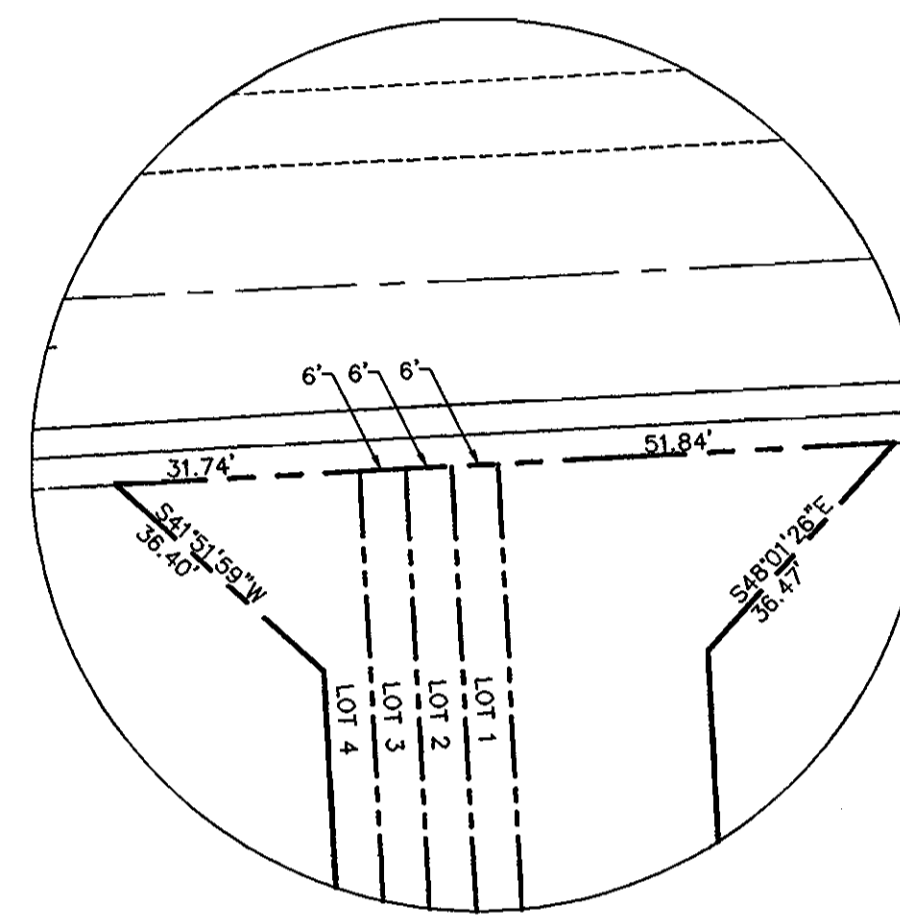
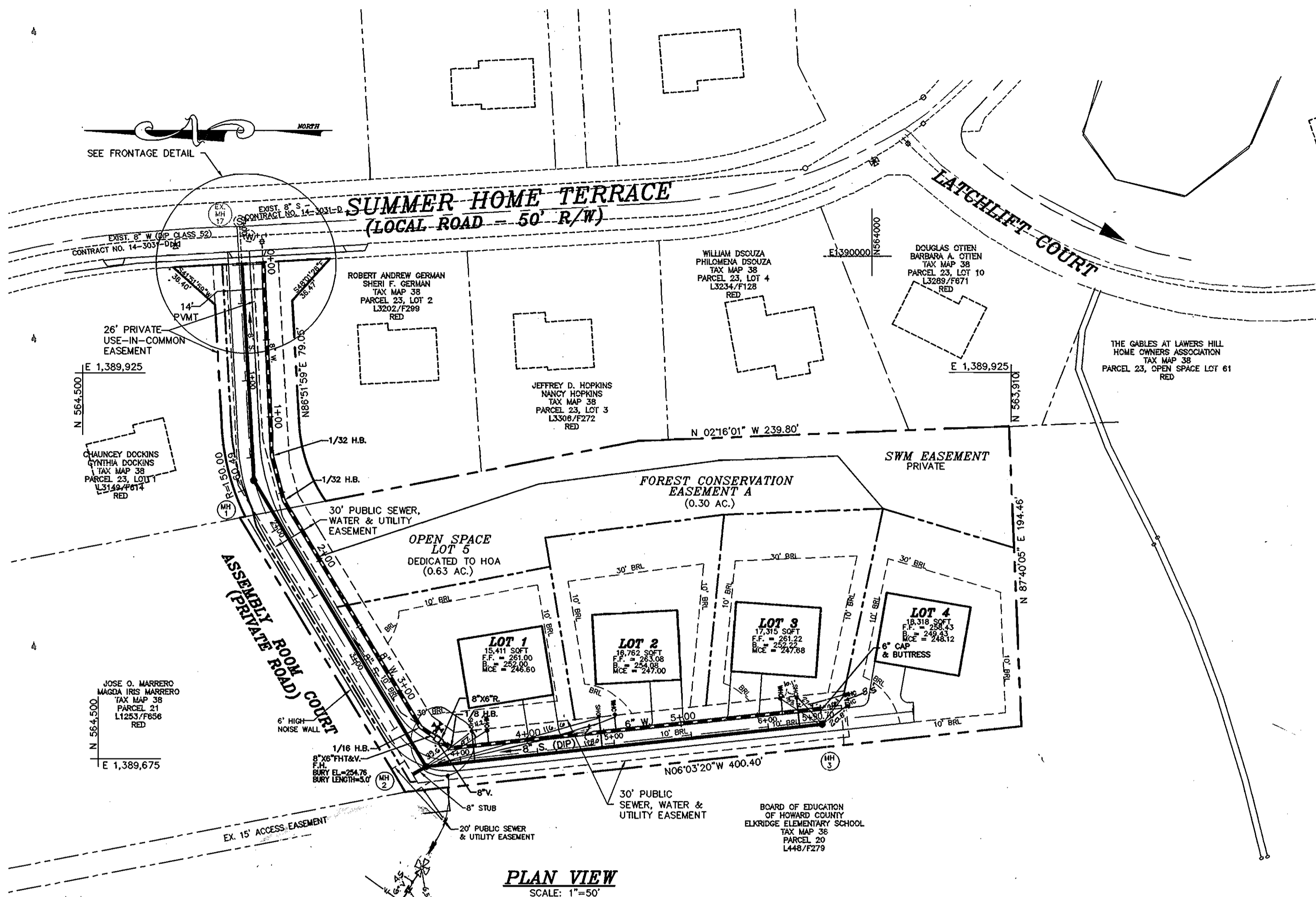
DEVELOPER

REUER LONG TERM HOLDINGS, LLC
8000 MAIN STREET
ELLCOTT CITY, MD 21043
(410) 480-9105

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>[Signature]</i> 5-5-04 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>[Signature]</i> 5/25/04 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE	MILDENBERG, BOENDER & ASSOC., INC. Engineers Planners Surveyors 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21043 (410) 897-0296 Fax (301) 821-5521 Wash. (410) 897-0298 Fax	engineering HSP illustration HSP approval JBM project 03-011 date APR 2004 BY NO. REVISION	K.C.I. 1 PROJECT DATA SHOWN ON PLAN 02/1/04	DATE 600' SCALE MAP NO. 38 BLOCK NO. 2	TITLE SHEET	WIERKOWSKI PROPERTY LOTS 1-4 & OPEN SPACE LOT 5 CONTRACT NO.: 14-4192-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND	scale AS SHOWN 1 OF 3
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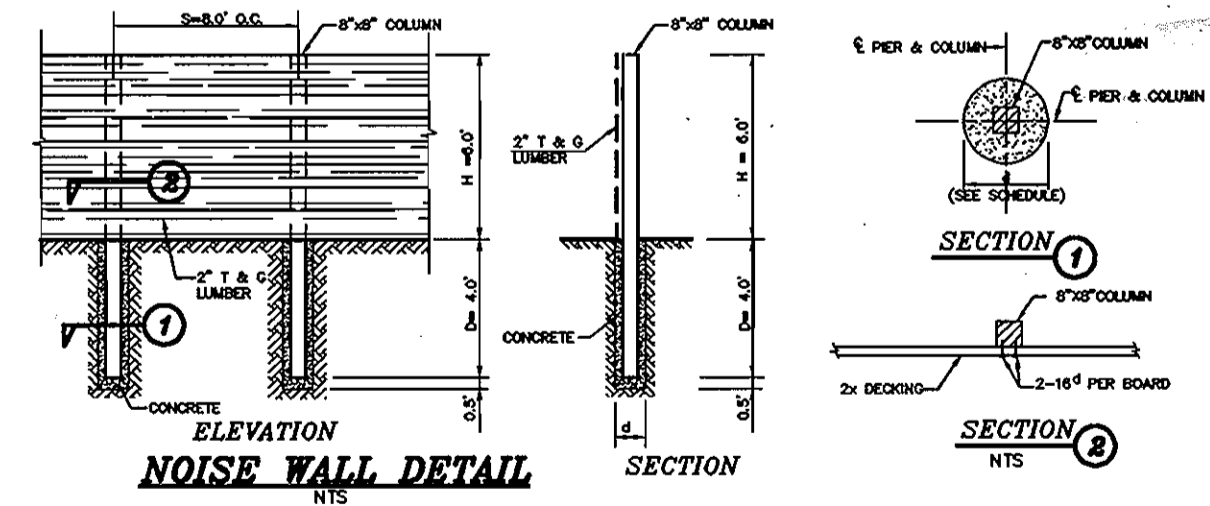
MANHOLE LOCATION CHART

SMH#	ROAD NAME	CL. STATION	OFFSET
01	ASSEMBLY ROOM COURT	1+64.87	0.47' RT.
02	ASSEMBLY ROOM COURT	3+79.52	6.65' RT.
03	ASSEMBLY ROOM COURT	6+34.72	1.98' RT.



WATER MAIN TABULATION CHART
ASSEMBLY ROOM COURT

ROAD C. STATION	APPURTENANCE	O/S FROM ROAD C.
1+50.57	1/32 H.B.	13.95' LT.
1+84.29	1/32 H.B.	13.92' LT.
3+61.27	1/16 H.B.	13.91' LT.
3+75.57	8" X 6" F.H.T.	13.64' LT.
3+77.72	F.H.	19.57' LT.
3+79.78	8" V.	12.91' LT.
3+83.76	8" X 6" R.	11.92' LT.
3+93.56	1/8 H.B.	7.79' LT.
6+34.72	6" CAP & BUTTRISS	8.02' LT.



NOTES:

- GENERAL
 - A-HIGHT OF BARRIER SHALL BE BASED ON ACOUSTIC REQUIREMENTS.
 - B-SHIELD WALLS HAVING A HEIGHT (H) NOT INDICATED IN THE TABLES SHALL BE CONSTRUCTED AS SHOWN IN THE HIGHER HEIGHT CATEGORY.
- SEWING
 - A. 2 INCH WOOD DECKING MATERIAL SHALL BE UTILIZED TO SPAN HORIZONTALLY BETWEEN POSTS. DESIGN CRITERIA IS BASED ON AN INCREASE IN STRESS FOR WIND LOADS AS CONSIDERED APPROPRIATE. DECKING SHALL BE MC1S.
 - B. SINGS IN CONTACT WITH THE GROUND AND FOR A DISTANCE OF 4" ABOVE GRADE SHALL BE TREATED WITH WOOD PRESERVATIVE.
- POST ALLOWABLE BENDING STRESS OF 1400 LBS. PER SQ. IN. AND A 33 1/3% INCREASE IN STRESS FOR WIND LOADS AS CONSIDERED APPROPRIATE. DESIGN CRITERIA IS BASED ON AN ALLOWABLE BENDING STRESS OF 1400 LBS. PER SQ. IN. AND A 33 1/3% INCREASE FOR WIND LOAD.
- POST EMBEDDED IN CONCRETE SHALL BE TREATED WITH A WOOD PRESERVATIVE IN THE AREA OF EMBEDMENT AND 12" ABOVE GRADE.
- CONCRETE
 - A. CONCRETE IN THE PIERS SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 2500 LBS. PER SQ. IN.
 - B. CONCRETE SHALL BE PLACED IN DRILLED PIERS UTILIZING THE EARTH AS THE FORMS.
- FOUNDATIONS
 - A. THE DRILLED PIERS HAVE BEEN DESIGNED UTILIZING AN ALLOWABLE PASSIVE PRESSURE OF 300 LBS. PER SQ. FT. AND THE FOLLOWING FORMULA:

$$D = \frac{M}{P}$$
 M= MOMENT AT TOP OF DRILLED PIER (FT/ABS)
 P= ALLOWABLE PASSIVE PRESSURE (300 LBS PER SQ.FT.)
 D= DEPTH OF PIER (FT.)
- ALTERNATIVE #1 (PRESERVATIVE TREATMENT) ALTERNATIVE #1 REPRESENTS THE ADDITIONAL COST FACTOR FOR TREATING THE BASIC WOOD STRUCTURE INDICATED ON THIS REFERENCE PLAN. THE NECESSITY FOR TREATMENT AND THE TYPE OF PRESERVATIVE WILL BE SUBJECT TO LOCAL CONDITIONS. ALL TREATMENTS SHALL CONFORM TO ANPA STD. C-14.
- ALTERNATIVE #2 (PAINTING) ALTERNATIVE #2 REPRESENTS THE ADDITIONAL COST FACTOR REQUIRED TO PAINT ONE SIDE OF THE BASIC WOOD STRUCTURE SHOWN ON THIS REFERENCE PLAN. PAINTING SHALL CONSIST OF 3 APPLICATIONS OF PAINT-2 COATS OF LATEX BASE PAINT CONFORMING TO FEDERAL SPECIFICATION TT-P-009966 SHALL BE APPLIED OVER PRIMER COAT CONFORMING TO FEDERAL SPECIFICATION TT-P-002550.
- ALTERNATIVE #3 (STAINING) ALTERNATIVE #3 REPRESENTS THE ADDITIONAL COST FACTOR REQUIRED TO STAIN ONE SIDE OF BASIC WOOD STRUCTURE. STAIN SHALL CONSIST OF 2 COATS OF SEMI-TRANSPARENT SEALER STAIN APPLIED IN ACCORDANCE WITH MANUFACTURES WRITTEN INSTRUCTIONS.

SEWER HOUSE CONNECTION TABLE

UNIT #	% SLOPE	INV. @ EASE.	MIN. CELLAR ELEV.
1	5	242.41	250.63
2	5	242.82	251.01
3	5	243.46	251.74
4	2	242.92	248.12

SCHEDULE

H	S	D	d	POST	SIZE
ft	ft	ft	ft	18"	8"x8"

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

R. J. ...
CHIEF, BUREAU OF UTILITIES
DATE: 5-5-04

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

M. ...
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 5/25/04

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
(410) 897-0236 Bldg. (301) 821-5221 Wash. (410) 897-0238 Fax.

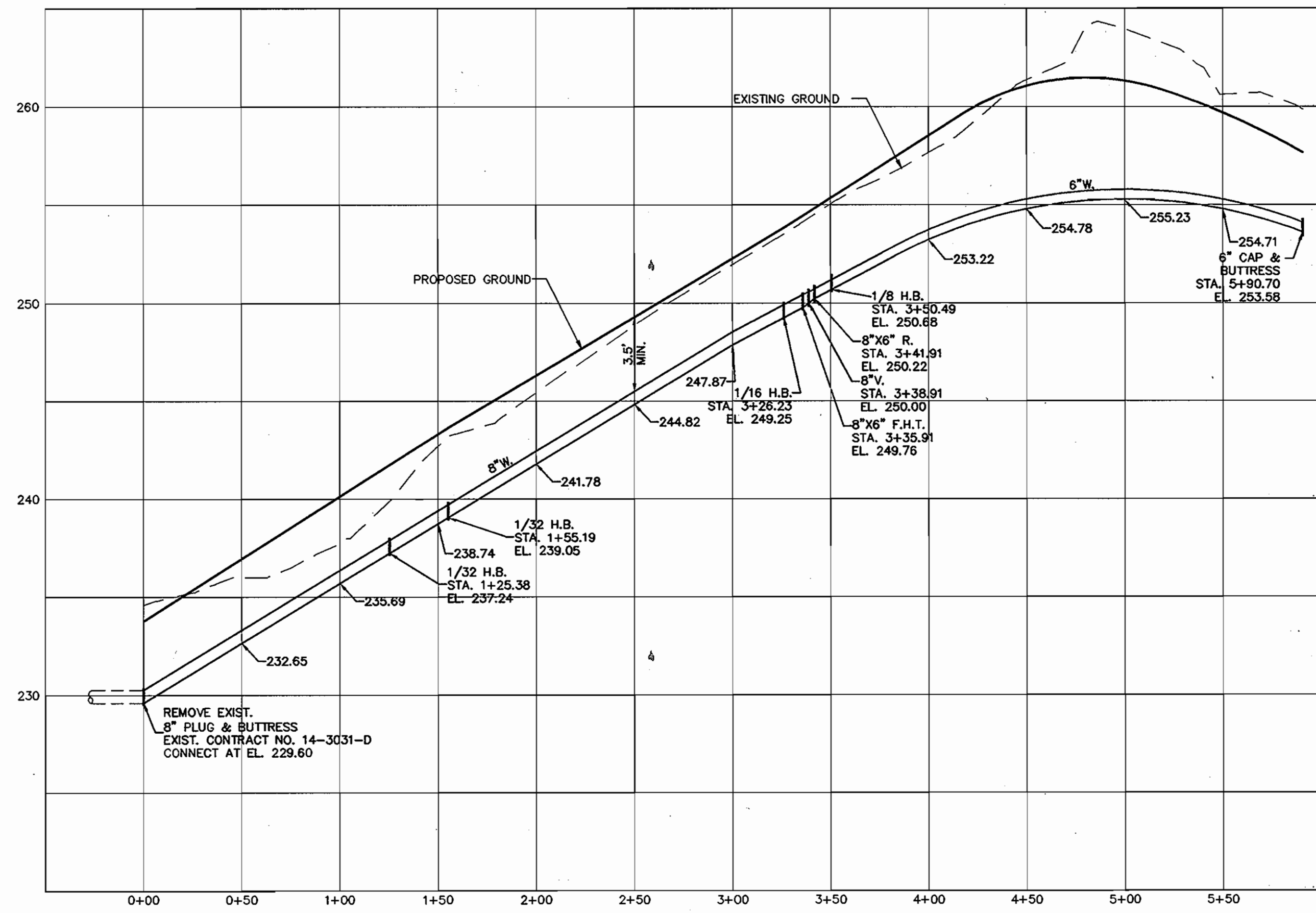
engineering					
illustration	HSP				
approval	JBM				
project	03-011	K.C.I.	1	ABSTRACT DATA SHOWN ON PLAN	2/1/06
date	APR 2004	BY	NO.	REVISION	DATE

WATER & SEWER PLAN

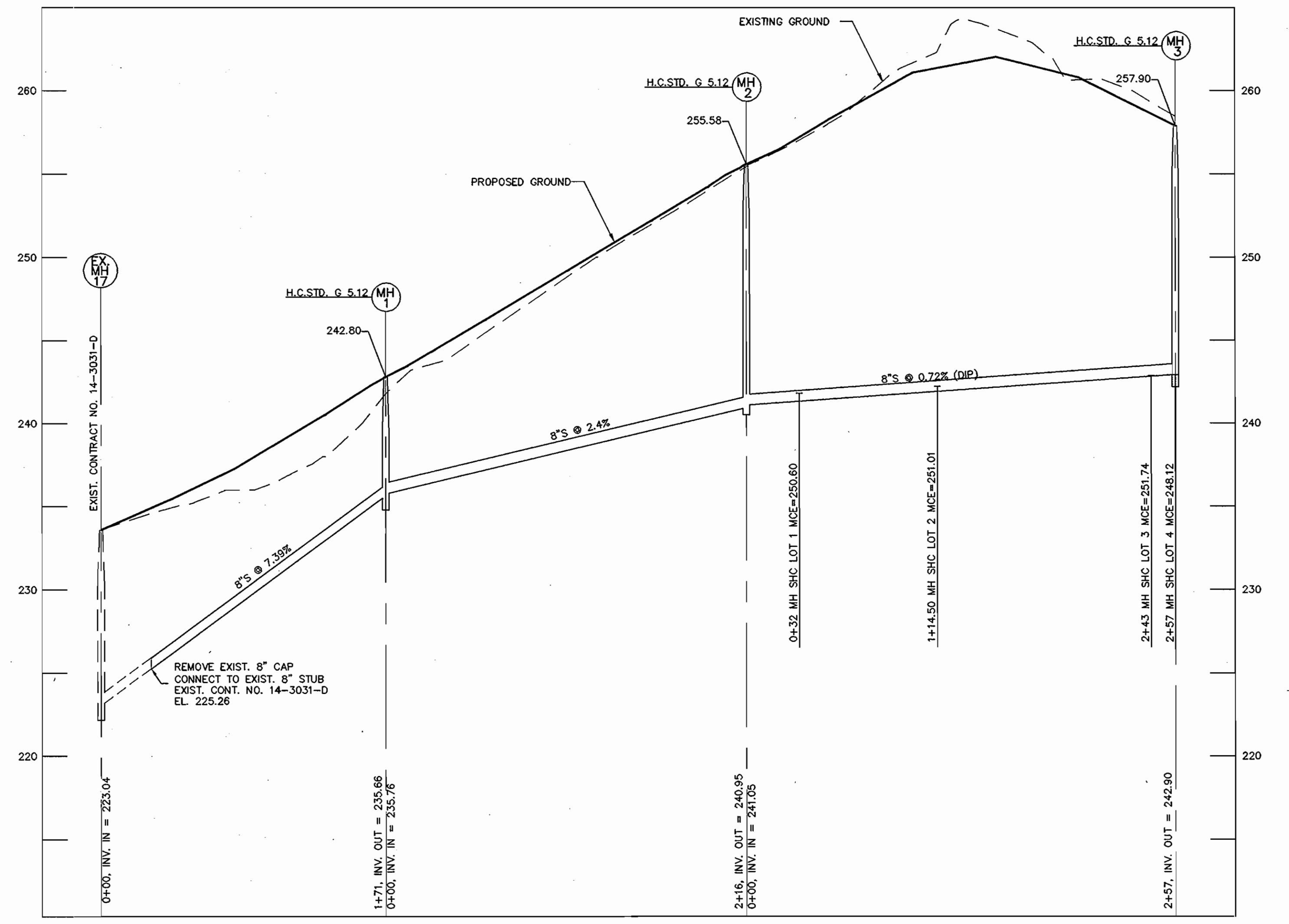
600' SCALE MAP NO. 38 BLOCK NO. 2

DEVELOPER
REUWER LONG TERM HOLDINGS, LLC
8000 MAIN STREET
ELLICOTT CITY, MD 21043
(410) 480-9105

WIERKOWSKI PROPERTY
LOTS 1-4 & OPEN SPACE LOT 5
CONTRACT NO.: 14-4192-D
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



WATER MAIN PROFILE
 SCALE: HOR. 1"=50'
 VER. 1"=5'



WATER MAIN PROFILE
 SCALE: HOR. 1"=50'
 VER. 1"=5'

[Handwritten Signature]
 4/27/04

DEVELOPER
 REUWER LONG TERM HOLDINGS, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MD 21043
 (410) 480-9105

03-011.DWG (W&S) (03011-PROFILES.DWG)

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
[Signature]
 5-5-04
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
[Signature]
 5/25/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

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engineering	HSP				
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date	APR 2004	BY	NO.	REVISION	DATE

WATER & SEWER PROFILES

WIERKOWSKI PROPERTY
 LOTS 1-4 & OPEN SPACE LOT 5
 CONTRACT NO.: 14-4192-D
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

scale AS SHOWN
3 OF 3