

**GENERAL NOTES**

- PART I**
- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
  - TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON JANUARY, 2004. BY FREDERICK WARD ASSOCIATES.
  - HORIZONTAL AND VERTICAL SURVEY CONTROLS:  
THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 1861, NO. 24C2.  
ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROL PROVIDED ON THE DRAWINGS ARE NO. 1861 & NO. 24C2 (ENGINEER/SURVEY FIRM SHALL PROVIDE DESCRIPTION OF VERTICAL CONTROL POINTS, I.E., IRON BARS, CROSS CUTS ON CONCRETE STRUCTURES, ETC.)
  - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED.
  - CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED 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 MONIES 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  $\odot$  AT THE LOCATION OF THE TEST PIT. A NOTES 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 OPERATION AT HIS OWN EXPENSE.
  - THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN THESE PLANS:  
AT & T \_\_\_\_\_ 1-800-252-1133  
BGE (CONTRACTOR SERVICE) \_\_\_\_\_ 410-850-4620  
BGE (EMERGENCY) \_\_\_\_\_ 410-685-1400  
BUREAU OF UTILITIES \_\_\_\_\_ 410-313-4900  
COLONIAL PIPELINE CO \_\_\_\_\_ 410-795-1390  
MISS UTILITY \_\_\_\_\_ 1-800-257-7777  
STATE HIGHWAY ADMINISTRATION \_\_\_\_\_ 410-531-5533  
VERIZON \_\_\_\_\_ 1-800-743-0033/410-224-9210
  - 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 THE 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) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD 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 THE HOWARD COUNTY CODE.

**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'-6" 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 INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE 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.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND WITH SITE DEVELOPMENT PLAN SDP-06-016

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

*John R. Robertson* 7/18/06  
HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

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

*Jim Meyer* 7/18/06  
SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Chris Pannunzi* 7/21/06  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Jim Meyer* 7/18/06  
BUREAU OF UTILITIES DATE

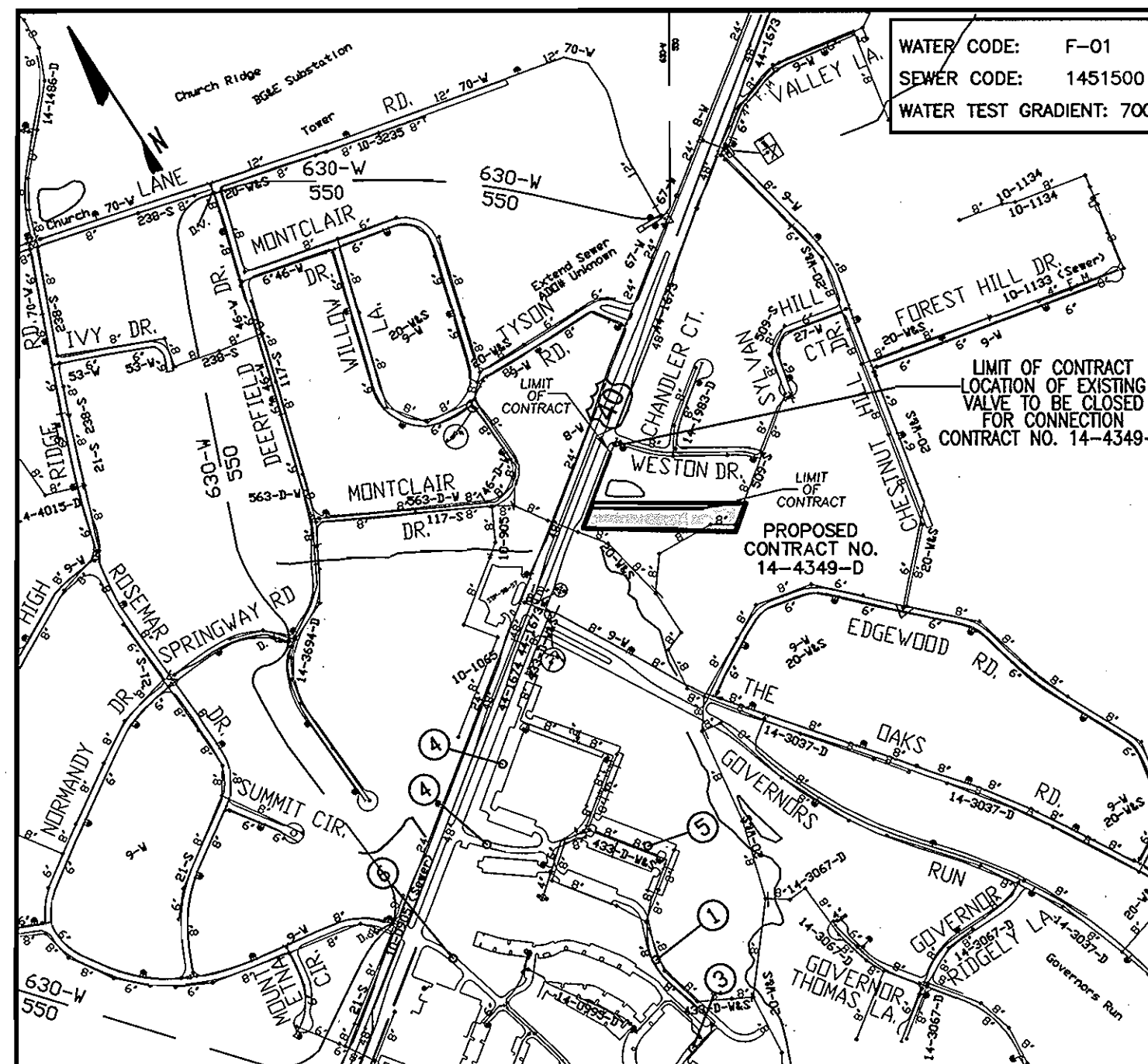
**PART III - SEWER**

- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT FRAME AND COVERS ARE 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.

**WATER AND SEWER FIELD ADJUST DATA**

LOT NO	TO	FROM	DISTANCE
A	WHC	F.H. @ STA 1 + 26.6	8.2'
"	SHC	F.H. @ STA 1 + 26.6	23.7
"	"	F.H. @ STA 1 + 26.6	15.0
"	"	SMH 2	24.0
B	WHC	F.H. @ STA 1 + 26.6	40.2'
"	"	SMH 3	27.0'
"	SHC	F.H. @ STA 1 + 26.6	31.5'
"	"	SMH 3	26.5'
C	WHC	F.H. @ STA 1 + 26.6	51.0'
"	"	SMH 3	34.1'
"	SHC	F.H. @ STA 1 + 26.6	41.8'
"	"	SMH 3	43.1'
D	WHC	F.H. @ STA 1 + 26.6	64.0'
"	"	SMH 3	63.8'
"	SHC	F.H. @ STA 1 + 26.6	72.8'
"	"	SMH 3	66.0'
E	WHC	F.H. @ STA 1 + 26.6	85.0'
"	"	SMH 3	73.0'
"	SHC	F.H. @ STA 1 + 26.6	103.6'
"	"	SMH 3	83.6'
F	WHC	F.H. @ STA 1 + 26.6	120.1'
"	"	EXISTING SH	87.3'
"	SHC	F.H. @ STA 1 + 26.6	110.0'
"	"	SMH 3	72.0'
G	WHC	F.H. @ STA 1 + 26.6	140.3'
"	"	EXISTING SH	45.1'
"	SHC	F.H. @ STA 1 + 26.6	143.7'
"	"	SMH 3	81.0'
H	WHC	F.H. @ STA 1 + 26.6	188.4'
"	"	EXISTING SH	39.0'
"	SHC	F.H. @ STA 1 + 26.6	177.0'
"	"	EXISTING SH	56.0'
I	WHC	F.H. @ STA 1 + 46.85	126.8'
"	"	EXISTING SH	39.0'
"	SHC	F.H. @ STA 1 + 46.85	117.1'
"	"	EXISTING SH	36.0'
J	WHC	F.H. @ STA 1 + 46.85	23.8'
"	"	EXISTING SH	34.7'
"	SHC	F.H. @ STA 1 + 46.85	104.8'
"	"	EXISTING SH	34.0'
K	WHC	F.H. @ STA 1 + 46.85	82.4'
"	"	EXISTING SH	27.3'
"	SHC	F.H. @ STA 1 + 46.85	73.2'
"	"	EXISTING SH	46.0'
L	WHC	F.H. @ STA 1 + 46.85	48.9'
"	"	SMH 2	73.4'
"	SHC	F.H. @ STA 1 + 46.85	60.0'
"	"	EXISTING SH	56.0'
M	WHC	F.H. @ STA 1 + 46.85	38.5'
"	"	SMH 2	63.4'
"	SHC	F.H. @ STA 1 + 46.85	20.0'
"	"	SMH 2	36.2'
N	WHC	F.H. @ STA 1 + 46.85	5.0'
"	"	SMH 2	33.5'
"	SHC	F.H. @ STA 1 + 46.85	45.0'
"	"	SMH 1	17.2'

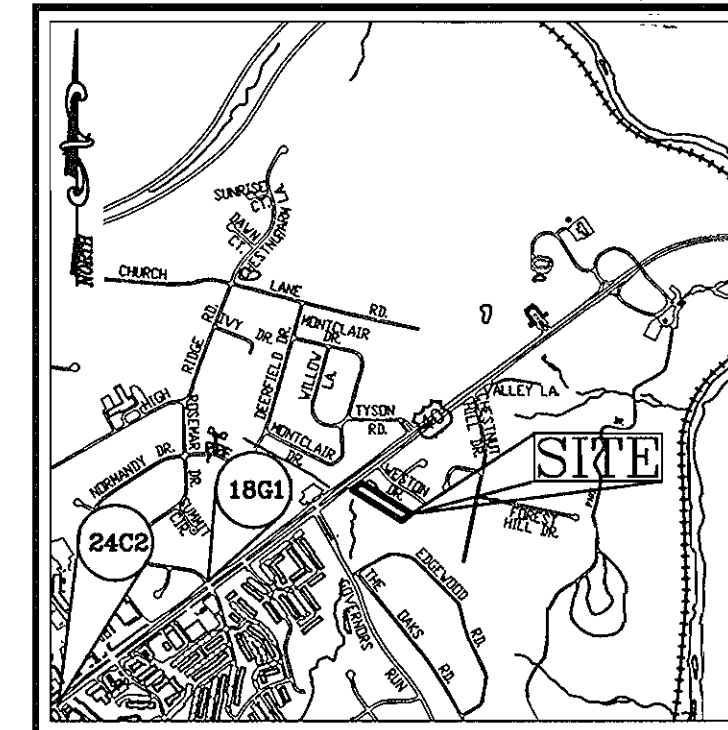
NO. OF BUILDINGS:	1
NO. OF WATER HOUSE CONNECTIONS:	14
NO. OF SEWER HOUSE CONNECTIONS:	14
DRAINAGE AREA:	PATAPSCO RIVER LOWER NORTH BRANCH
TREATMENT PLANT:	



**LOCATION PLAN**

SCALE: 1"=600'

BENCHMARKS				
NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM#1-18G1	589984.958	1,367,750.248	124.511	CONC. MON. AT SURFACE
BM#2-24C2	586,648.312	1,366,038.195	108.131	CONC. MON. AT SURFACE



**VICINITY MAP**  
SCALE: 1"=2000'

# FEDERLINE PROPERTY

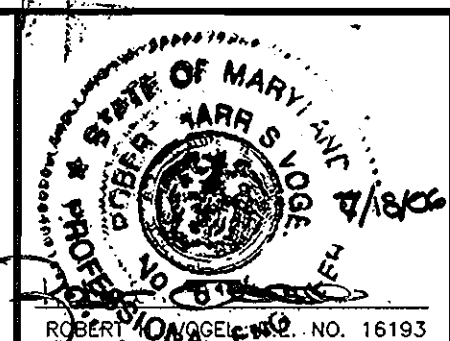
## FINAL WATER

### CONTRACT NO. 14-4349-D

QUANTITIES				
NAME OF UTILITY CONTRACTOR : CONSOLIDATED CONSTRUCTION SERVICES (... CCS)				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE :				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
8" W. (DIP)	702 LF	264 L.F.	WATER DIP	CRIFIAN PIPE
6" W. (DIP)	17 LF	17 L.F.	DIP	
8"x6" FIREHYDRANT TEE & VALVE	2 EACH	2 EA		MUELLER CO.
8"x8" TEE	2 EACH	1 EA	SIGMA	SIGMA
8" VALVE	2 EACH	2 EA		MUELLER CO.
8" CAP & BUTTRESS	2 EACH	2 EA		SIGMA
1/16 HB	1 EACH	1 EA		SIGMA
1-1/2 WHC	140 LF	154 L.F.	COPPER	CAMBRIDGE

SEWER & WATER  
"AS-BUILTS"

**ROBERT H. VOGEL ENGINEERING, INC.**  
ENGINEERS • SURVEYORS • PLANNERS  
8407 MAIN STREET ELLICOTT CITY, MD 21043  
TEL: 410.461.7666 FAX: 410.461.8961



DESIGN BY: MY				
DRAWN BY: MY				
CHECKED BY: RHV				
DATE: 10.04.05	BY	NO	REVISION	DATE
			AS-BUILT DATA ADDED TO PLAN	5/14/07

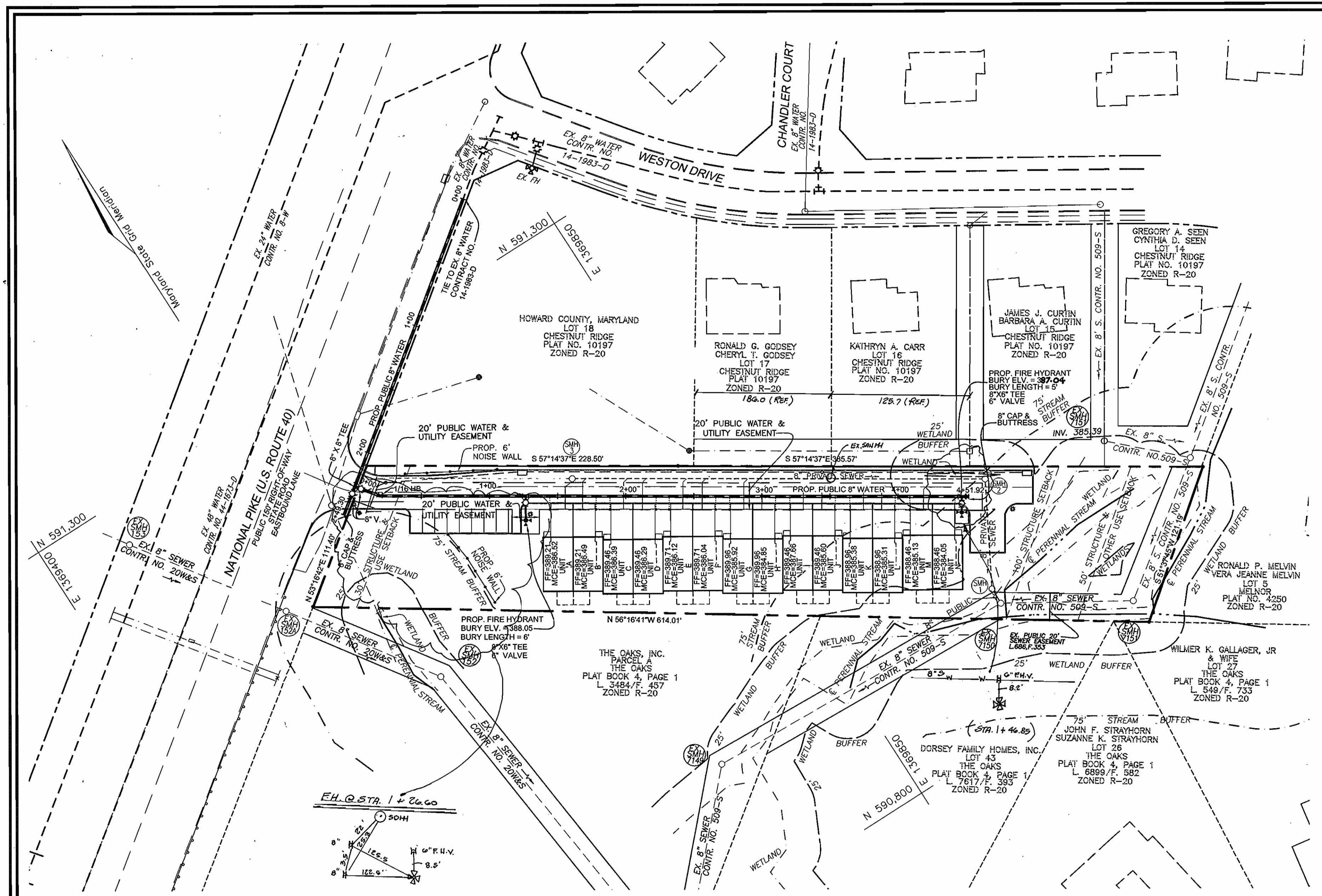
**FINAL WATER CONSTRUCTION PLAN**

600' SCALE MAP NO. 18 BLOCK NO. 20

**FEDERLINE PROPERTY**  
A TOWNHOUSE CONDOMINIUM COMMUNITY  
CONTRACT NO. 14-4349-D

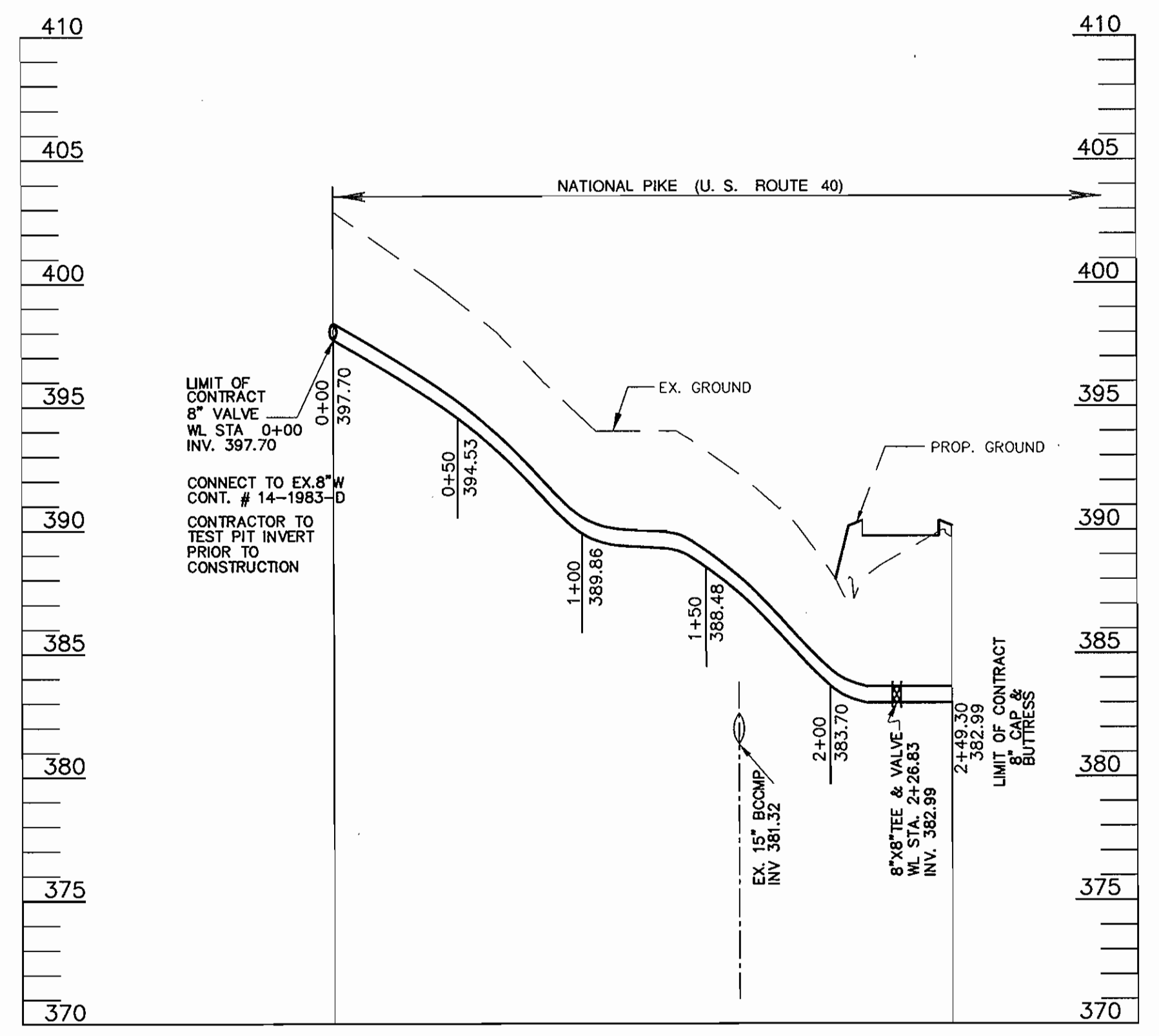
TAX MAP 18 BLOCK 20 2ND ELECTION DISTRICT  
PARCEL 61' HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 1 OF 2

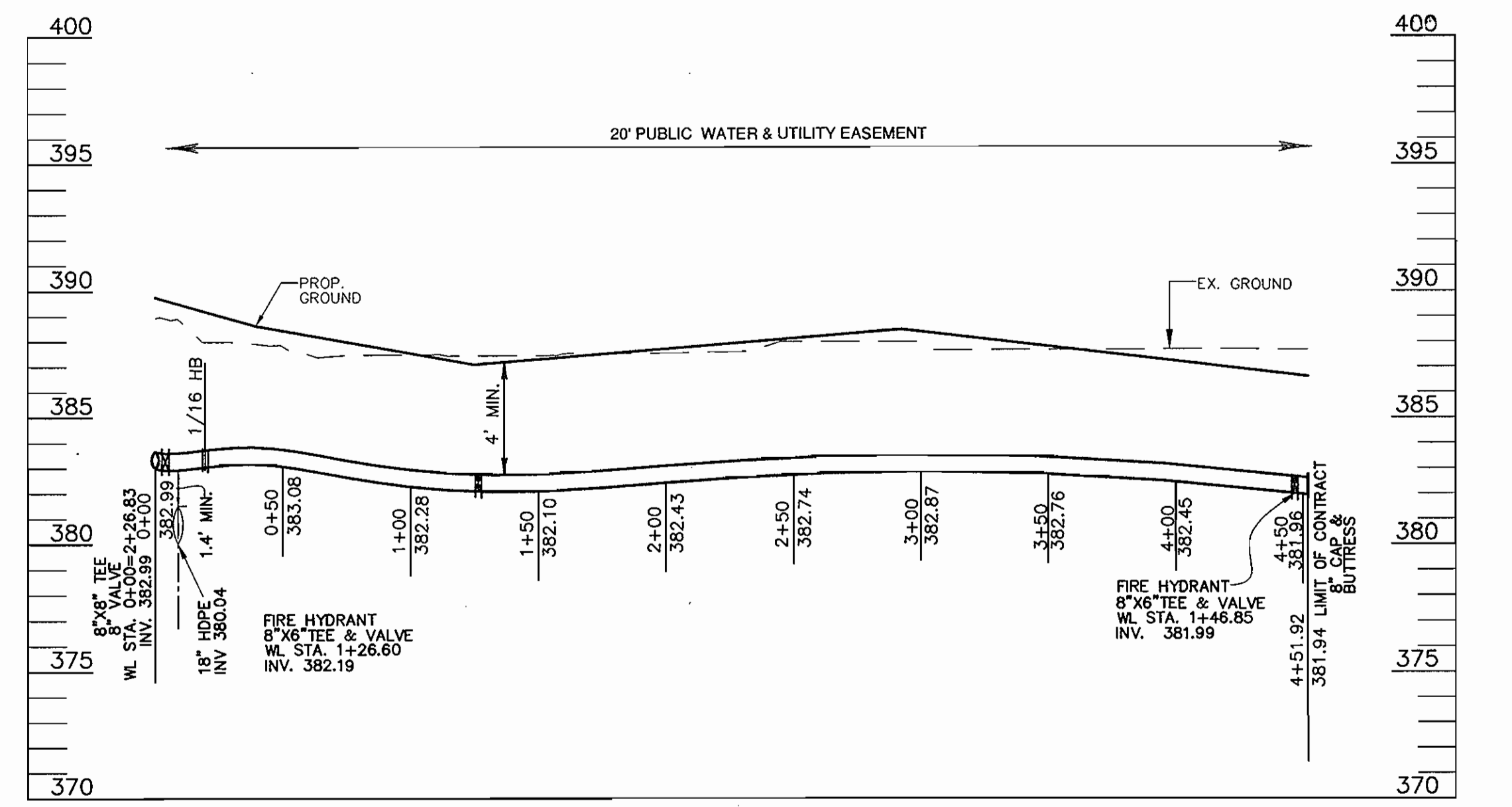


ALL WATER HOUSE CONNECTIONS ARE 1-1/2\"/>

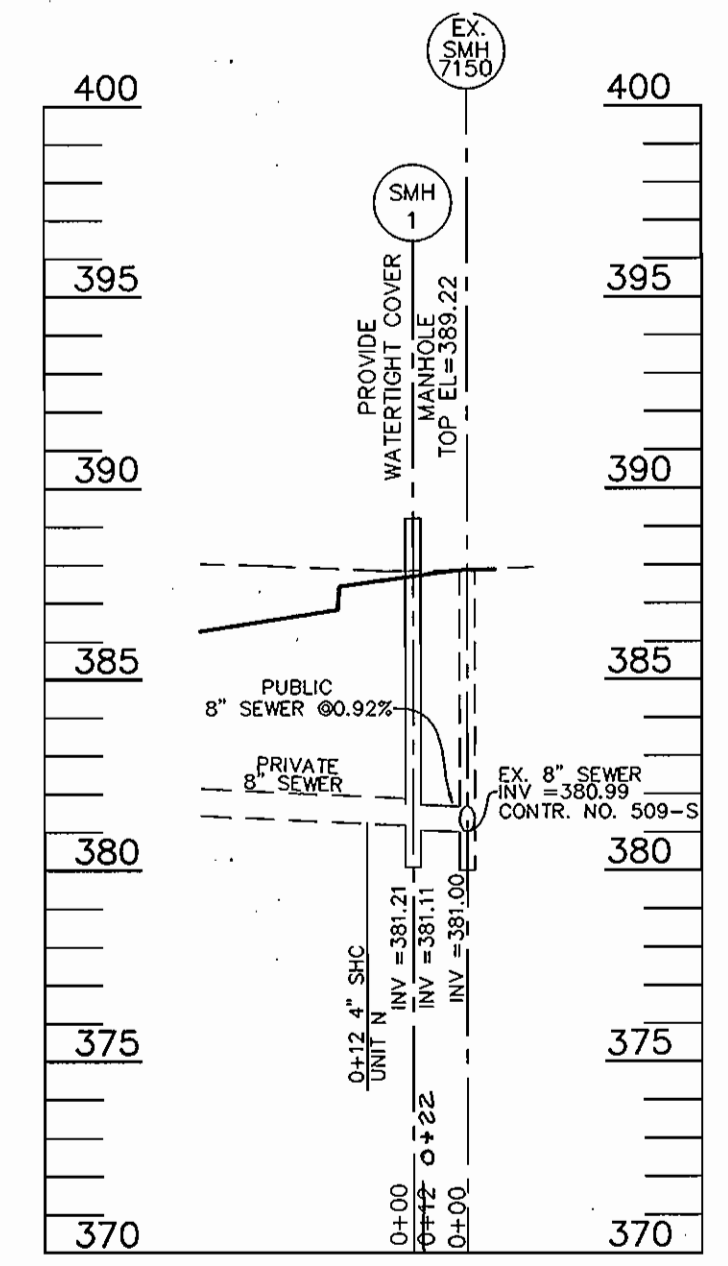
PLAN  
SCALE: 1\"/>



WATER PROFILE  
SCALE: 1\"/>



WATER PROFILE  
SCALE: 1\"/>

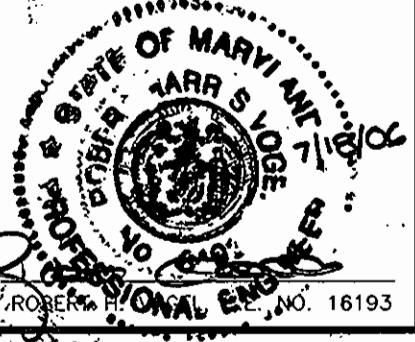


SEWER PROFILE  
SCALE: 1\"/>

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 [Signature] 7/21/06  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 [Signature] 7/18/06  
 CHIEF, BUREAU OF UTILITIES DATE

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 ELLICOTT CITY, MD 21043 FAX: 410.461.8961



DESIGN BY: MY				
DRAWN BY: MY				
CHECKED BY: RHV				
DATE: 10.04.05				
BY NO		REVISION		DATE

**FINAL WATER CONSTRUCTION PLAN**  
 600' SCALE MAP NO. 18 BLOCK NO. 20

**FEDERLINE PROPERTY**  
 A TOWNHOUSE CONDOMINIUM COMMUNITY  
 CONTRACT NO. 14-4349-D  
 TAX MAP 18 BLOCK 20 PARCEL '81'  
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DEVELOPER  
 LAND DESIGN & DEVELOPMENT, INC.  
 5300 DORSEY HALL DRIVE  
 ELLICOTT CITY, MARYLAND 21042  
 (443) 637-0422

SCALE AS SHOWN  
 SHEET 2 OF 2

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