

QUANTITY TABLE

ITEMS	QUANTITIES ESTIMATED	QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
STANDARD MH	29	29 EA.	CONC.	ATLANTIC CONC. PRODUCTS
8" SEWER MAIN	4,267 L.F.	2,510 L.F. PVC 1,757 L.F. DIP	PVC DIP	DIAMOND SDR 35/HUGHES PIPE GRIFFIN PIPE PRODUCTS
4" SEWER HOUSE CONNECTION	1,086 L.F.	1,428 L.F.	PVC DIP	DIAMOND SDR 35/HUGHES PIPE GRIFFIN PIPE PRODUCTS
4" SEWER HOUSE CONNECTION	244 L.F.			TO BE DONE BY PRIVILEGE CONTRACTOR
# DROP HOUSE CONNECTIONS	3	3 EA.	CONC. BL'S 4" DIP	HORN'S CONCRETE CONSTR. GRIFFIN PIPE PRODUCTS
# SEWER HOUSE CONNECTIONS	52	52 EA.	CONC. BL'S 4" PVC	HORN'S CONCRETE CONSTR. DIAMOND SDR 35/HUGHES PIPE
# MH CONNECTIONS	12	12 EA.	PVC	DIAMOND SDR 35/HUGHES PIPE
8" WATER	3,106 L.F.	3,197 L.F.	DIP	GRIFFIN PIPE PRODUCTS
6" WATER	500 L.F.	574 L.F.	DIP	GRIFFIN PIPE PRODUCTS
4" WATER	238 L.F.	229 L.F.	DIP	GRIFFIN PIPE PRODUCTS
1" WHC	1,667 L.F.	1,666 L.F.	COPPER	CERRO COPPER/HUGHES PIPE
# WHC	66	66 EA.	VALVE BOXES	SIGMA/HUGHES PIPE
# TWIC	32 L.F.			ELIMINATED INSTALLED
# THHC	2			AS SINGLE 1" WHC'S
8"x8" TEE	2	2 EA.	M/DIP	SIGMA/HUGHES PIPE
8"x4" TEE	1	2 EA.	M/DIP	SIGMA/HUGHES PIPE
8" VALVE	9	9 EA.	GATE VALVE	KENNEDY VALVE/HUGHES PIPE
4" VALVE	1	1 EA.	GATE VALVE	KENNEDY VALVE/HUGHES PIPE
FIRE HYDRANTS	8	8 EA.	A-120 CL. B	KENNEDY F.H./HUGHES PIPE
8" x 6" F.H.T. & V.	8	8 EA.	GATE VALVE	KENNEDY VALVE/HUGHES PIPE
6" CAP & BUTTRESS	4	4 EA.	M/DIP CAP	TYLER/HUGHES PIPE
4" CAP & BUTTRESS	1	1 EA.	M/DIP CAP	TYLER/HUGHES PIPE
8" - 1/8 HB	7	4 EA.	M/DIP BEND	TYLER/HUGHES PIPE
8" - 1/16 HB	15	11 EA.	M/DIP BEND	TYLER/HUGHES PIPE
6" - 1/32 HB	2			ELIMINATED-CRIMPED PIPE
8" x 8" CROSS	1	1 EA.	M/DIP CROSS	TYLER/HUGHES PIPE
8" x 6" REDUCER	4	4 EA.	M/DIP REDUCER	TYLER/HUGHES PIPE
NAME OF UTILITY CONTRACTOR: GAINES AND COMPANY-REISTERSTOWN, MD.				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE JANUARY 2007				
4" - 1/8 HB	2	2 EA.	M/DIP BEND	TYLER/HUGHES PIPE

ELIMINATED BENDS
BARDEN CT, CRIMPED PIPE

INDEX OF DRAWINGS

NO.	DESCRIPTION
1	TITLE SHEET
2	WATER & SEWER PLAN
3	WATER & SEWER PLAN
4	WATER PROFILES
5	WATER & SEWER PROFILES AND WATER DETAIL
6	SEWER PROFILES
7	SEWER PROFILES AND MAINTENANCE OF TRAFFIC PLAN
8	WATER & SEWER HOUSE CONN. TABULATION CHART

DPZ FILE NOS.
F-05-104
P-05-07
S-01-08

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] 2/21/06
DEVELOPER'S SIGNATURE DATE
JAMES OWNERS, MANAGER, JAMESTOWN LANDING, L.C.
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] 2/21/06
ENGINEER'S SIGNATURE DATE
JOHN B. MILDENBERG
ENGINEER'S NAME

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.
[Signature] 3/21/06
SUBNATURAL RESOURCES DIVISION
CONSERVATION SERVICE

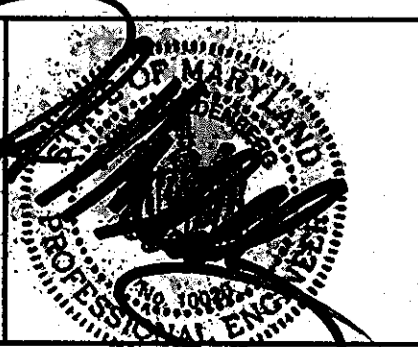
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE SOIL CONSERVATION DISTRICT.
[Signature] 3/21/06
HOWARD SCD

OWNER
JAMESTOWN LANDING, LC
8820 ELM STREET, SUITE 200
MCLEAN, VIRGINIA 22101
(703) 734-9730
JAMESTOWN LANDING, SECTION II
WATER & SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND
CONTRACT NO. 24-4274-D

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
[Signature] 3-9-06
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
[Signature] 3/9/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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

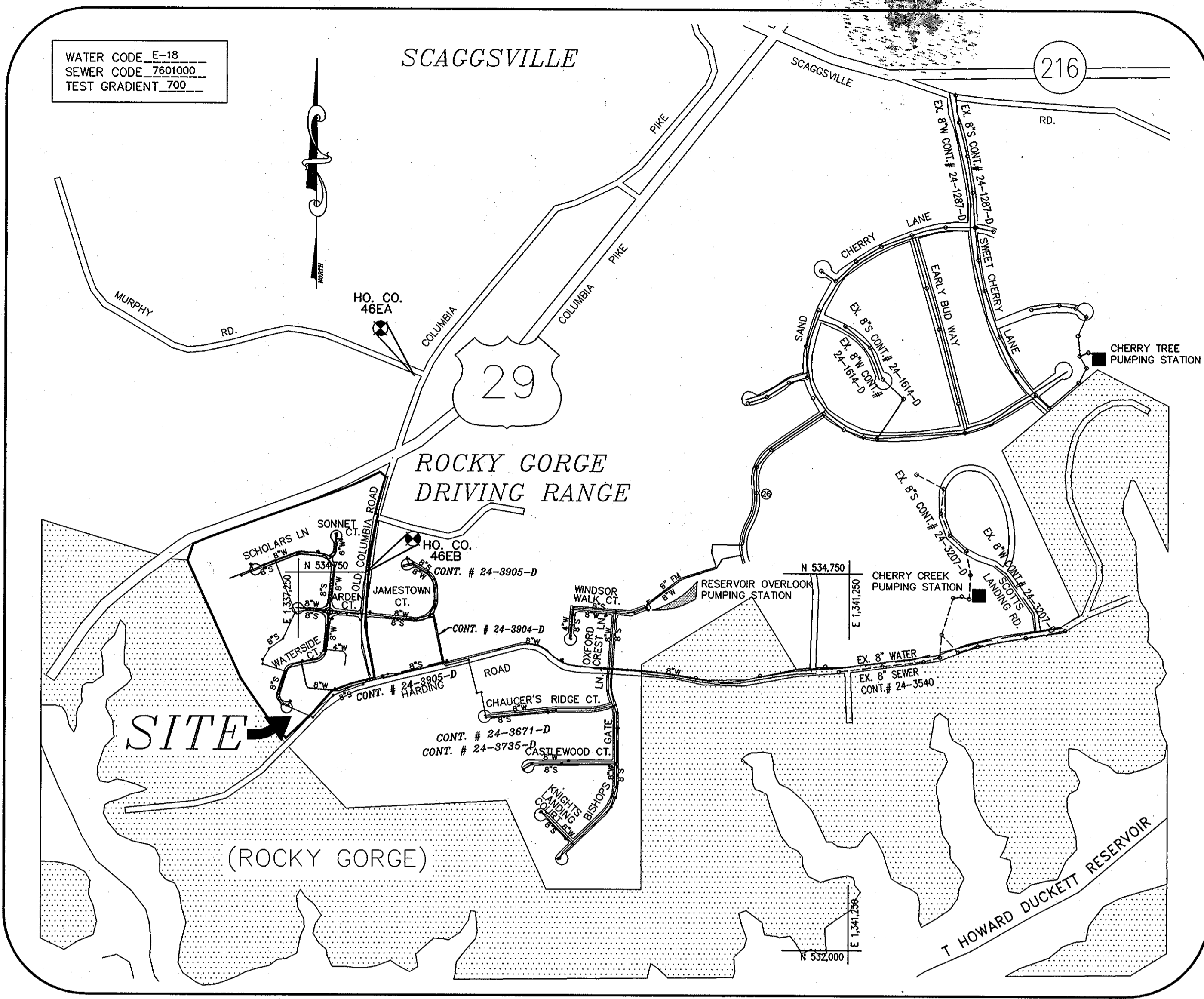


engineering	EGJ				
illustration	JJO				
approval	CRE				
project	2000-020	557	1	APD GENERAL NOTE #17	9/17/06
date	FEB 2006	BY	NO.	REVISION	DATE

TITLE SHEET
600' SCALE MAP NO. 46 BLOCK NO. 15

**JAMESTOWN LANDING, SECTION II,
LOTS 1 THRU 66**
CONTRACT NO. 24-4274-D
TAX MAP 46 PARCELS 229 & 352
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

scale AS SHOWN
1 of 8



VICINITY MAP

SCALE : 1" = 600'

TYPE OF BUILDING	SFD
No. OF UNITS	66
No. OF WATER HOUSE CONNECTION	62
No. OF TWIN WATER HOUSE CONNECTION	2
No. OF SEWER HOUSE CONNECTIONS	66
DRAINAGE AREA	LITTLE PATUXENT
TREATMENT PLANT	LITTLE PATUXENT WATER RECLAMATION PLANT

AS BUILT
DATE: JANUARY 2007

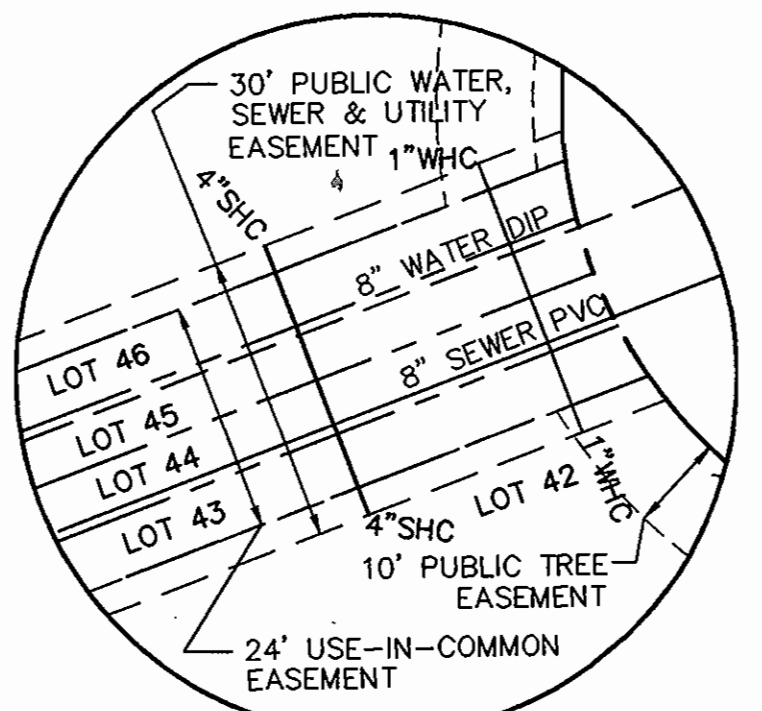
**CONTRACT NO.: 24-4274-D
JAMESTOWN LANDING, SECTION II,
LOTS 1 THRU 66
WATER & SEWER MAIN EXTENSIONS
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS**

GENERAL NOTES

- APPROXIMATE LOCATIONS 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 SEPTEMBER 2000 BY MILDENBERG, BOENDER AND ASSOCIATES, INC.
- HORIZONTAL SURVEY CONTROLS ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD '83/'91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 46EA AND NO. 46EB. VERTICAL SURVEY CONTROLS:
ALL VERTICAL CONTROLS ARE BASED ON NAVD '29. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE GEODETIC CONTROL STATIONS 46EA AND 46EB.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATION UNLESS OTHERWISE SHOWN ON THE PLANS.
- 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 THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWNED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES. FOR DETAILS NOT SHOWN ON THE DRAWING, 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 AT THE LOCATIONS OF THE TEST PITS. 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.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
AT&T.....1-800-252-1133
BGE(CONSTRUCTION SERVICES).....410-850-4620
BGE(EMERGENCY).....410-850-1400
BUREAU OF UTILITIES.....410-313-9000
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 CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410)313-7450 AT LEAST FIVE WORKING DAYS BEFORE 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.
- THE CONTRACTOR SHALL USE CAUTION WHEN EXCAVATING IN THE VICINITY OF OVERHEAD ELECTRICAL LINES.
- REQUEST TO WAIVE BASEMENT GRAVITY SEWER SERVICE TO LOTS 14, 30, 31, 42, 43, & 46, FIRST FLOOR AND BASEMENT GRAVITY SEWER SERVICE FOR LOTS 44 & 45, AND CLEARANCE REQUIREMENTS FOR LOTS 28, 29, 32, 39, AND 40 WERE APPROVED ON DECEMBER 3, 2003 AND MARCH 5, 2004 SUBJECT TO THE FOLLOWING CONDITIONS:
1. THE SEWER BETWEEN MANHOLES 126 AND 127 SHALL BE DUCTILE IRON PIPE CLASS 54 WITH FIELD LOCK GASKETS.
2. THE SEWER HOUSE CONNECTIONS FOR LOTS 28 AND 29 SHALL BE RELOCATED TO THE LOW POINT OF THE LOTS AT THE REAR OF THE PROPERTIES.
3. A NOTE SHALL BE PLACED ON THE WATER AND SEWER PLAN AND ON THE SITE DEVELOPMENT PLAN REGARDING ACCESS TO PUBLIC WATER AND SEWER MAINS.
- IN CONJUNCTION WITH THE REQUEST IN GENERAL NOTE 26 A REQUEST TO ALLOW THE INSTALLATION OF 215 LF OF SEWER IN EXCESS OF 25 FEET DEEP WAS APPROVED ON MARCH 2, 2004 AND IS SUBJECT TO THE FOLLOWING CONDITIONS:
1. DUE TO THE DEPTH OF THE SEWER, RELOCATE THE SEWER BETWEEN MANHOLES 114 AND 117 INTO OLD COLUMBIA ROAD AWAY FROM THE OTHER UTILITIES.
2. THE SEWER BETWEEN MANHOLES 113 AND 117 SHALL BE DUCTILE IRON PIPE CLASS 54 WITH FIELD LOCK GASKETS. SEWER HOUSE CONNECTIONS FOR ALL PROPERTIES SERVED BY THIS PORTION OF THE SEWER SHALL ALSO BE DUCTILE IRON PIPE CLASS 54.
3. IN ORDER TO ALLOW ROOM FOR EXCAVATION OF THE DEEP SEWER, THE WATER MAIN SHALL BE LOCATED 10 FEET OFF OF AND PARALLEL TO THE EXPANDED EASEMENT LINE ON LOTS 6 AND 7. THE WATER MAIN SHALL HAVE RESTRAINED JOINT IN THE AREA FROM MANHOLE 113 TO MANHOLE 116.
- APPROVAL WAS GRANTED DECEMBER 3, 2003 WAIVING SECTION 5.485 TO REDUCE THE MINIMUM 10-FOOT HORIZONTAL CLEARANCE BETWEEN ANY PERMANENT STRUCTURE AND THE EDGE OF THE SIDEWALK OR 3' FROM THE BACK OF THE CURB LINE AS APPROPRIATE.
- REQUEST TO WAIVE BASEMENT GRAVITY SEWER SERVICE TO LOT 15 WAS APPROVED ON JULY 2, 2004 SUBJECT TO A NOTE BEING PLACED ON THE WATER AND SEWER PLANS AND TO THE DEVELOPMENT PLAN STATING GRAVITY SEWER SERVICE, FIRST FLOOR ONLY. BASEMENT SEWER SERVICE TO BE PROVIDED BY PRIVATE ON-SITE PUMP.
1. ALL WATER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
5. 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 SECTION 1005 OF THE STANDARD SPECIFICATIONS.
6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
SEWER
1. ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
2. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
3. FORCE MAINS SHALL BE D.I.P. ONLY.
4. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
5. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
6. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.

00-0001 (page 1) (final) (date 03-09-06) (rev. 6-16-2005) (dwp)

NOTES: (TO BE INCLUDED WITH THE SDP PLAN)
 1. LOTS 29, 32, 39, AND 40: NO IMPROVEMENTS SHALL BE CONSTRUCTED OR PLACED WITHIN THE PUBLIC WATER, SEWER, AND UTILITY EASEMENTS WHICH WILL IMPEDE OR HINDER ACCESS TO THE PUBLIC WATER AND SEWER MAINS. IMPROVEMENTS SUCH AS AIR-CONDITIONING UNITS, FIREPLACE CHIMNEYS, DECKS, FENCING, FOUNDATIONS, PLANTINGS AND TREES SHALL NOT BE PLACED WITHIN THE EASEMENT.
 2. THE PROPOSED STRUCTURES ON LOT 21 AND LOT 22 WILL NOT EXCEED 55' X 50' AND SHALL BE LOCATED AS FAR TO THE FRONT OF THE LOT AS POSSIBLE.

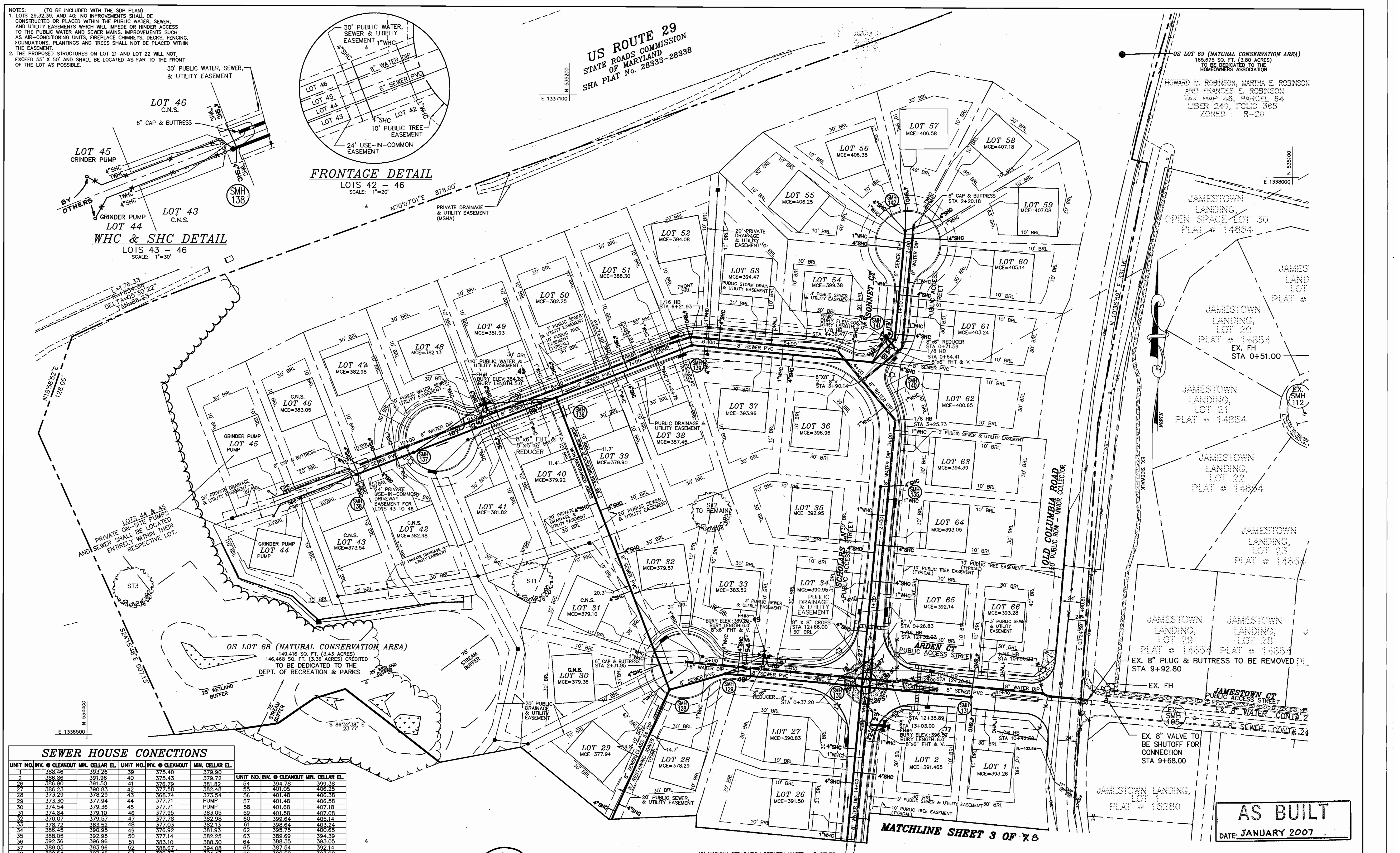


FRONTAGE DETAIL
 LOTS 42 - 46
 SCALE: 1"=20'

WHC & SHC DETAIL
 LOTS 43 - 46
 SCALE: 1"=30'

US ROUTE 29
 STATE ROADS COMMISSION
 OF MARYLAND
 SHA PLAT No. 28333-28338

OS LOT 69 (NATURAL CONSERVATION AREA)
 165,675 SQ. FT. (3.80 ACRES)
 TO BE DEDICATED TO THE HOMEOWNERS ASSOCIATION
 HOWARD M. ROBINSON, MARTHA E. ROBINSON
 AND FRANCES E. ROBINSON
 TAX MAP 46, PARCEL 64
 LIBER 240, FOLIO 365
 ZONED: R-20

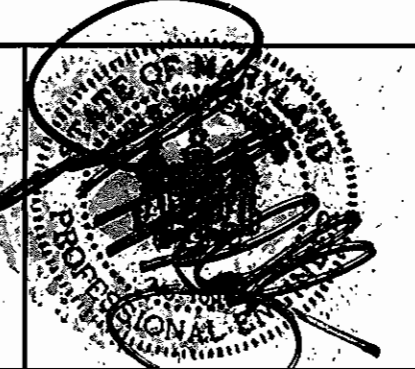


UNIT NO.	INV.	CLEANOUT	MIN.	CELLAR EL.	UNIT NO.	INV.	CLEANOUT	MIN.	CELLAR EL.
1	388.46	393.26	39	375.40	37	389.05	393.96	52	388.57
2	386.86	391.96	40	375.43	38	389.54	394.24	53	389.58
26	386.90	391.50	41	376.79	381.82	54	394.78	399.38	
27	386.23	390.83	42	377.58	382.48	55	401.05	406.25	
28	373.29	378.29	43	368.74	373.54	56	401.48	406.36	
29	373.30	377.94	44	377.71	PUMP	57	401.48	406.36	
30	374.54	379.36	45	377.71	PUMP	58	401.68	407.18	
31	374.84	379.10	46	377.95	383.05	59	401.58	407.08	
32	370.07	379.57	47	377.78	382.98	60	399.64	405.14	
33	378.72	383.62	48	377.03	382.13	61	398.64	403.24	
34	386.45	390.95	49	376.92	381.93	62	395.75	400.65	
35	388.05	392.95	50	377.14	382.25	63	389.69	394.39	
36	392.36	396.96	51	383.10	388.30	64	388.35	393.05	
37	389.05	393.96	52	388.57	394.08	65	387.54	392.14	
38	382.54	387.45	53	389.17	394.47	66	385.58	393.28	

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 3-8-06
 DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 3/3/06
 DATE

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 987-0286 Bal. (301) 621-5521 Wash. (410) 987-0286 Fax.



engineering	EGJ								
illustration	JJO								
approval	CRE								
project	2000-020								
date	JAN 2006	BY	NO.	REVISION					

WATER AND SEWER PLAN
 DATE: 600' SCALE MAP NO. 46 BLOCK NO. 15

JAMESTOWN LANDING, SECTION II, LOTS 1 THRU 66
 CONTRACT NO. 24-4274-D
 TAX MAP 46 PARCELS 229 & 352
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

scale
 1"=50'
 2 OF 8

AS BUILT
 DATE: JANUARY 2007

N 534200
E 1336600

WET POND
ON LOT 67 (NATURAL CONSERVATION AREA)
120,988 SQ. FT. (2.78 ACRES)
118,724 SQ. FT. (2.73 ACRES) CREDITED
TO BE DEDICATED TO THE
HOMEOWNERS ASSOCIATION

WASHINGTON SUBURBAN
SANITARY COMMISSION
ZONED : R-20

MATCHLINE SHEET 2 OF 7 & 8

UNIT NO.	INV. @ CLEANOUT	MIN. CELLAR EL.
3	387.76	392.36
4	390.57	394.77
5	390.57	395.41
6	365.72	369.82
7	367.12	372.02
8	389.93	394.13
9	370.09	374.69
10	369.51	374.50
11	367.51	371.06
12	367.93	371.23
13	369.03	372.83
14	369.98	374.78
15	369.93	374.83
16	369.80	375.14
17	369.60	374.60
18	370.05	375.05
19	370.11	375.61
20	370.29	375.39
21	371.01	375.21
22	372.09	376.52
23	372.77	377.47
24	374.41	379.91
25	388.27	392.87

NOTE: FOR LOTS LABELED C.N.S. GRAVITY SEWER SERVICE IS TO FIRST FLOOR ONLY, BASEMENT SEWER SERVICE TO BE PROVIDED BY PRIVATE ON-SITE PUMP.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

R. J. Bauman 3-8-06
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

[Signature] 3/8/06
CHIEF, DEVELOPMENT ENGINEERING DIVISION

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



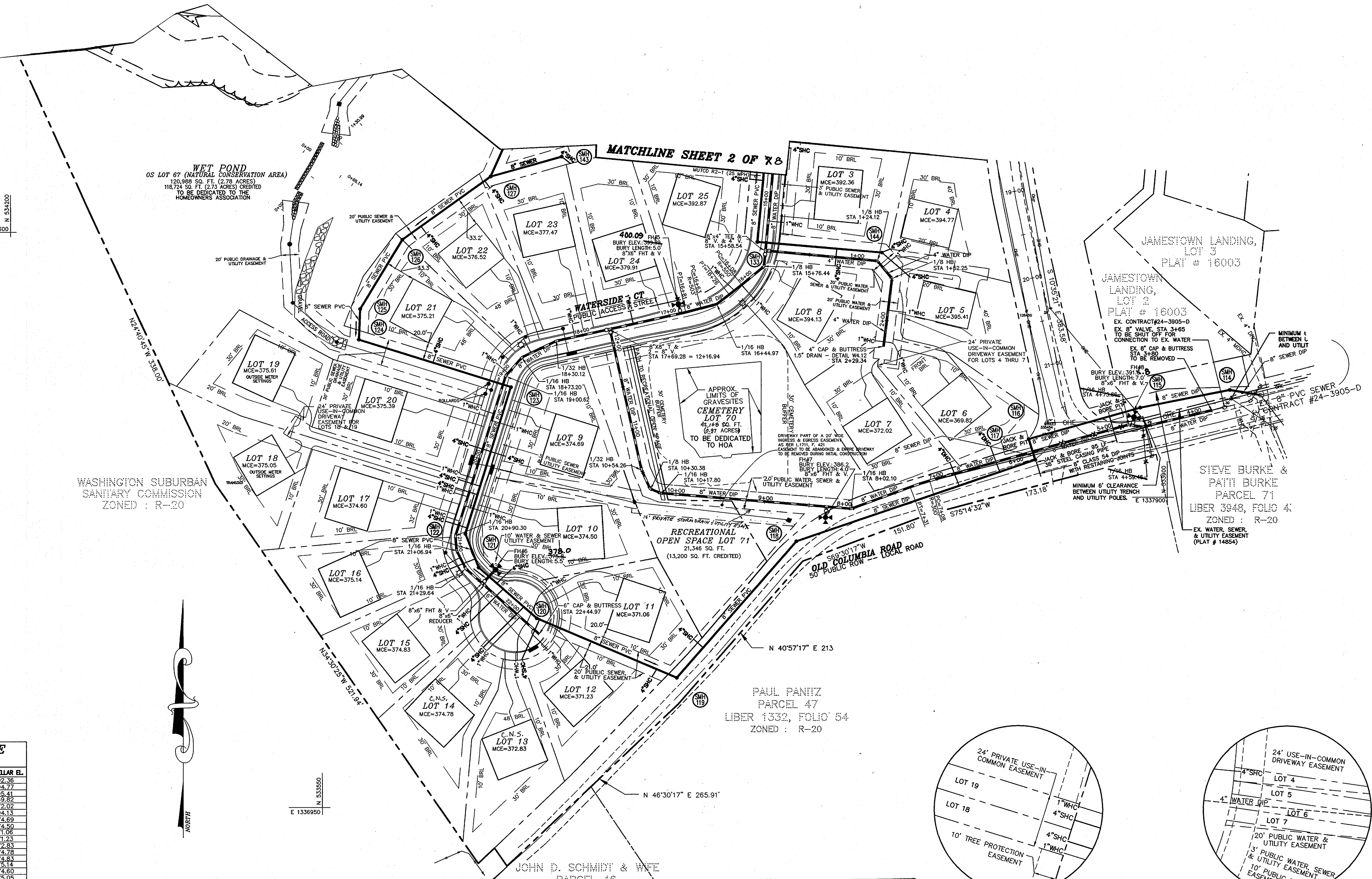
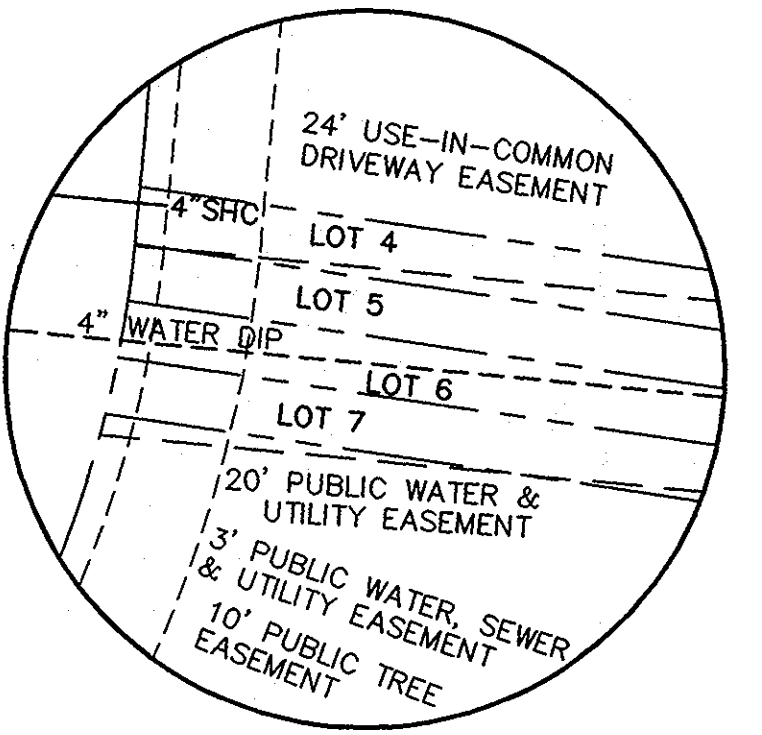
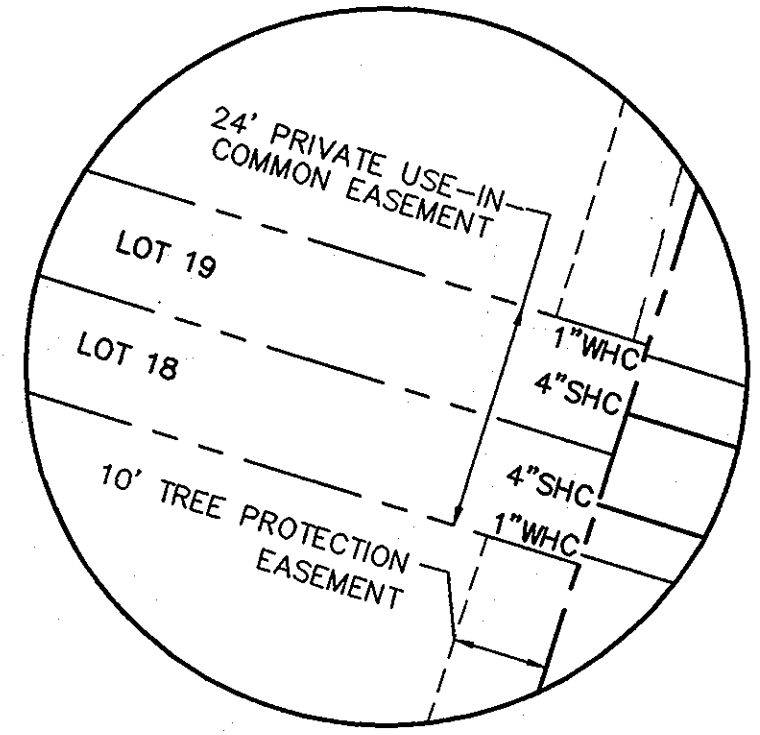
engineering	EGJ				
illustration	JJO				
approval	CRE				
project	2000-020	337	1	ADD C.N.S. LABEL TO LOT 13, ADD MISSING C.N.S. LABEL TO LOT 14, AND ADD NOTE	7/17/10
date	FEB 2006	BY	NO.	REVISION	DATE

AS BUILT
DATE: JANUARY 2007

WATER AND SEWER PLAN

**JAMESTOWN LANDING, SECTION II,
LOTS 1 THRU 66**
CONTRACT NO. 24-4274-D
TAX MAP 46 PARCELS 229 & 352
FIFTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

scale
1"=50'
3 of 8

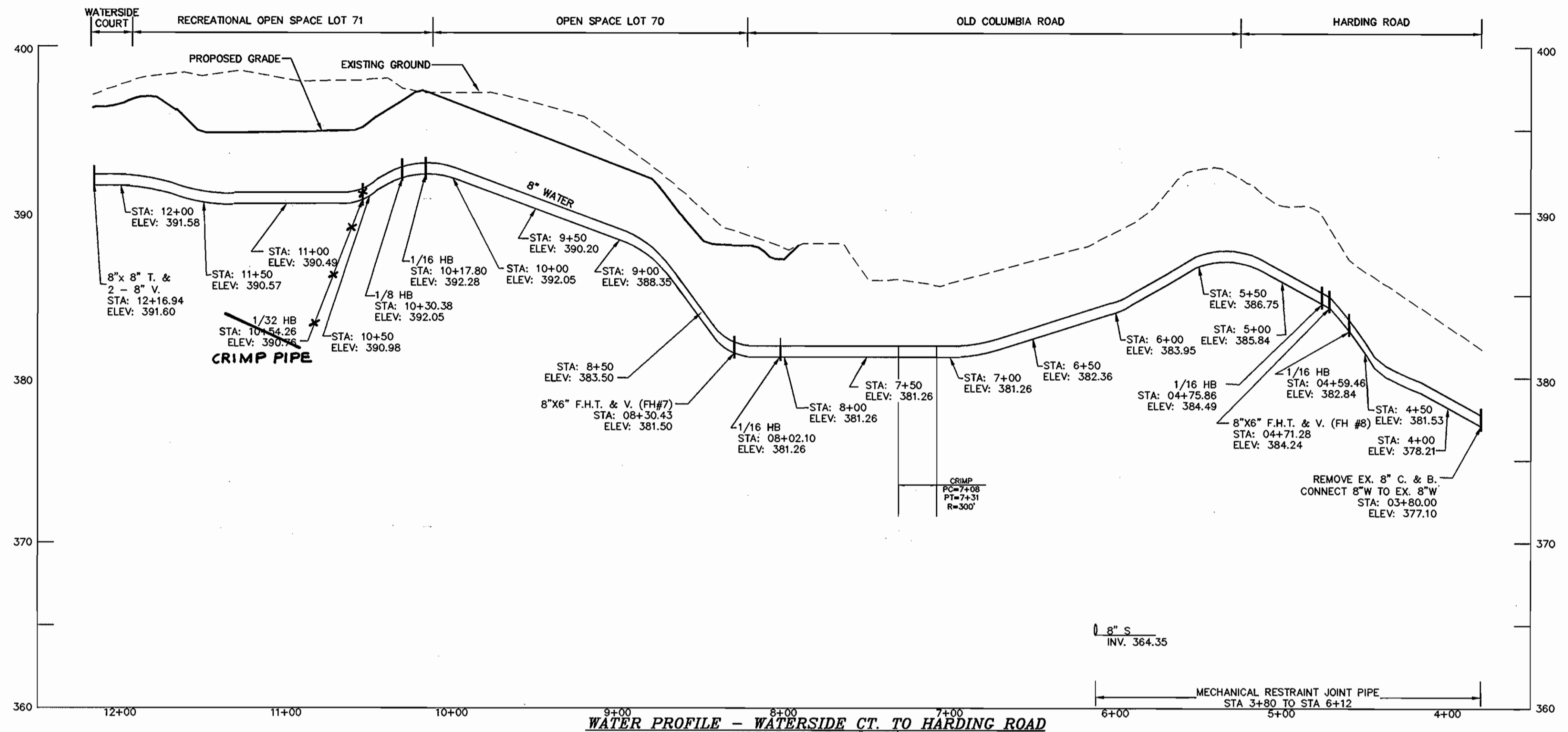


00-020 Viny Viny - I:\Viny Viny\020-11-ws_2-6-2005.dwg

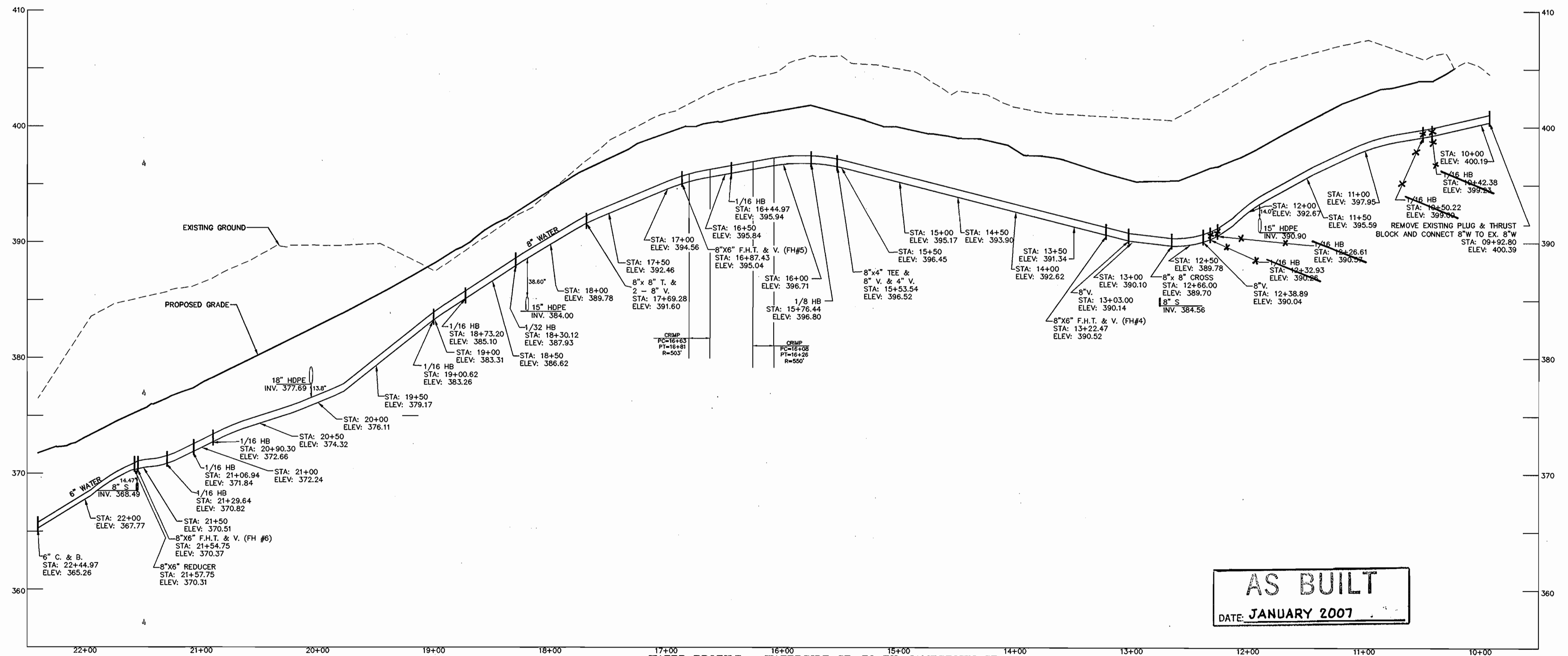
WATER MAIN TABULATION CHART

APPURTENANCE	ROAD NAME OR NORTHING & EASTING	CL ROAD STATION	OFFSET
8" x 8" T.	WATERSIDE COURT	4+93.16	----
8" V.	WATERSIDE COURT	4+93.16	10.79 LT
1/32 HB	WATERSIDE COURT	4+93.16	162.84 LT
1/8 HB	N 533909.8480 E 1337318.8807	----	----
1/16 HB	N 533905.0954 E 1337330.5318	----	----
8"x6" F.H.T. & V.	N 533877.3212 E 1337516.2988	----	----
1/16 HB	N 533887.1101 E 1337545.2802	----	----
1/16 HB	N 533981.9125 E 1337856.8018	----	----
8"x6" F.H.T. & V.	N 533990.7579 E 1337863.0201	----	----
1/16 HB	N 533979.4763 E 1337872.9562	----	----
6" C. & B.	WATERSIDE COURT	9+24.20	21.12 LT
8"x6" F.H.T. & V.	WATERSIDE COURT	8+72.37	20.93 LT
8" X 6" REDUCER	WATERSIDE COURT	8+75.37	1.33 RT
1/16 HB	WATERSIDE COURT	8+48.19	4.65 RT
1/16 HB	WATERSIDE COURT	8+26.85	6.36 RT
1/16 HB	WATERSIDE COURT	8+11.69	6.27 RT
1/16 HB	WATERSIDE COURT	6+27.72	4.31 RT
1/16 HB	WATERSIDE COURT	6+52.82	1.12 RT
1/32 HB	WATERSIDE COURT	5+59.62	4.90 RT
8" V.	WATERSIDE COURT	4+95.00	5.00 RT
8" x 8" T.	WATERSIDE COURT	4+93.12	5.00 RT
8"x6" F.H.T. & V.	WATERSIDE COURT	4+11.57	15.91 RT
1/16 HB	WATERSIDE COURT	3+68.80	1.94 RT
1/8 HB	WATERSIDE COURT	3+02.87	10.10 LT
8" V.	WATERSIDE COURT	2+82.28	6.00 LT
8"x4" TEE	WATERSIDE COURT	2+80.00	6.00 LT
8"x6" F.H.T. & V.	WATERSIDE COURT	0+51.57	27.08 LT
8" V.	WATERSIDE COURT	0+32.23	5.00 LT
8" x 8" CROSS	WATERSIDE COURT/ARDEN CT	2+51.92	5.00 RT
8" V.	ARDEN COURT	2+24.80	5.00 RT
1/16 HB	ARDEN COURT	2+18.57	5.00 RT
1/16 HB	ARDEN COURT	2+12.75	8.00 RT
1/16 HB	ARDEN COURT	0+36.89	8.00 RT
1/16 HB	ARDEN COURT	0+29.65	5.00 RT
6" C. & B.	N 534738.4303 E 1336839.7604	----	----
8"x6" F.H.T. & V.	SCHOLARS LANE	8+87.76	19.94 RT
8"x6" REDUCER	SCHOLARS LANE	8+90.76	5.00 RT
1/16 HB	SCHOLARS LANE	6+19.31	7.87 RT
1/8 HB	SCHOLARS LANE	4+38.61	8.00 RT
8" V.	SCHOLARS LANE	3+94.38	5.72 LT
8" x 8" T. & 8" V.	SCHOLARS LANE/SONNET CT	3+92.03	8.00 LT
1/8 HB	SCHOLARS LANE	3+28.01	8.00 RT
8" V.	SCHOLARS LANE	0+31.67	5.00 RT
8" x 8" CROSS	SCHOLARS LANE/ARDEN CT	0+05.00	5.00 RT
6" C. & B.	N 534491.6605 E 1337245.3906	----	----
8"x6" F.H.T. & V.	ARDEN COURT	3+86.68	22.32 RT
8"x6" REDUCER	ARDEN COURT	3+89.68	5.00 RT
8" V.	ARDEN COURT	2+88.76	5.00 RT
8"x6" F.H.T. & V.	SONNET COURT	0+56.26	14.21 LT
1/16 HB	SONNET COURT	0+55.00	10.32 RT
6" C. & B.	N 535040.3419 E 1337529.5785	----	----
8"x6" REDUCER	SONNET COURT	0+60.00	8.00 RT

NOTE: - CONTRACTOR TO VERIFY THE LOCATION OF EXISTING APPURTENANCES.



WATER PROFILE - WATERSIDE CT. TO HARDING ROAD
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



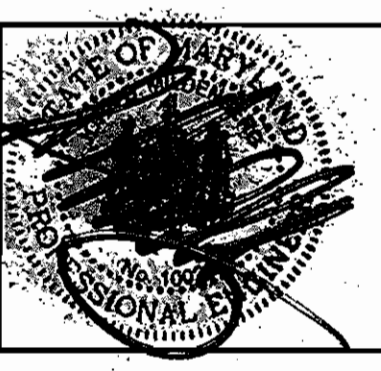
WATER PROFILE - WATERSIDE CT. TO EX. JAMESTOWN CT.
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

AS BUILT
 DATE: JANUARY 2007

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 R. J. ...
 3-8-06

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 ...

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 987-0286 Baltimore (301) 621-5321 Wash. (410) 987-0286 Fax.

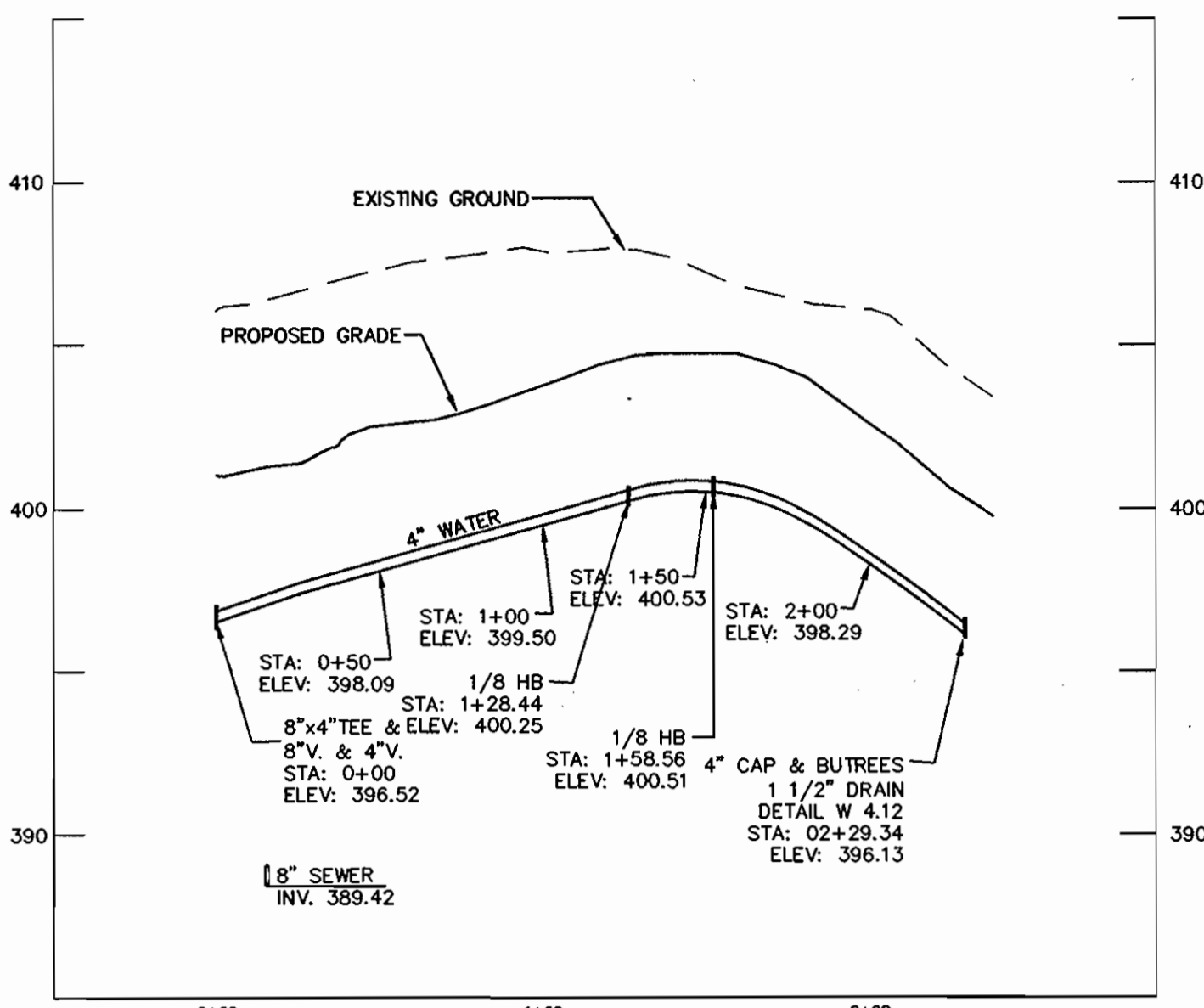


engineering	EGJ				
illustration	JJO				
approval	CRE				
project	2000-020				
date	JAN 2006	BY	NO.	REVISION	DATE

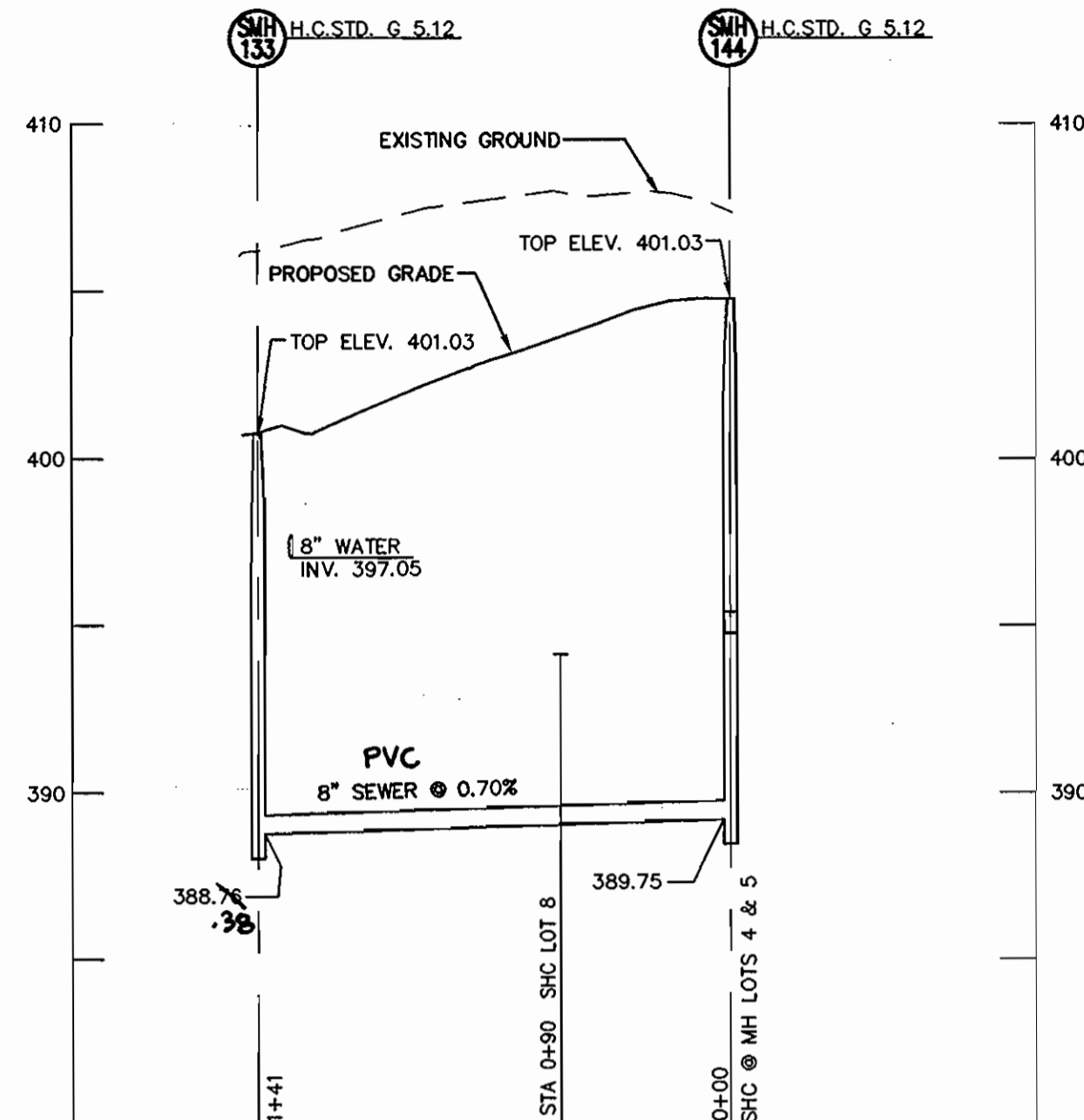
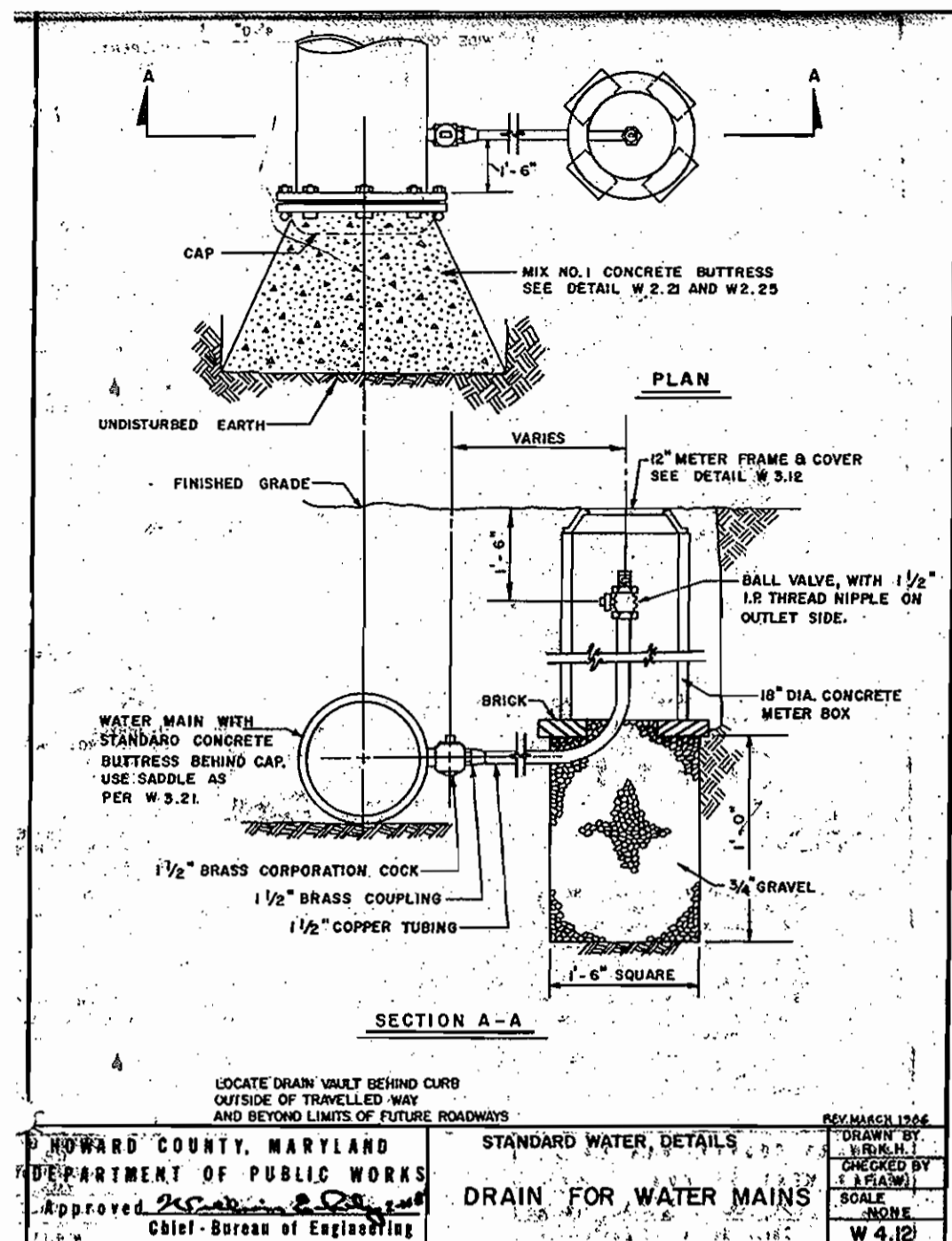
WATER PROFILES
 600' SCALE MAP NO. 46 BLOCK NO. 15

JAMESTOWN LANDING, SECTION II, LOTS 1 THRU 66
 CONTRACT NO. 24-4274-D
 TAX MAP 46 PARCELS 229 & 352
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

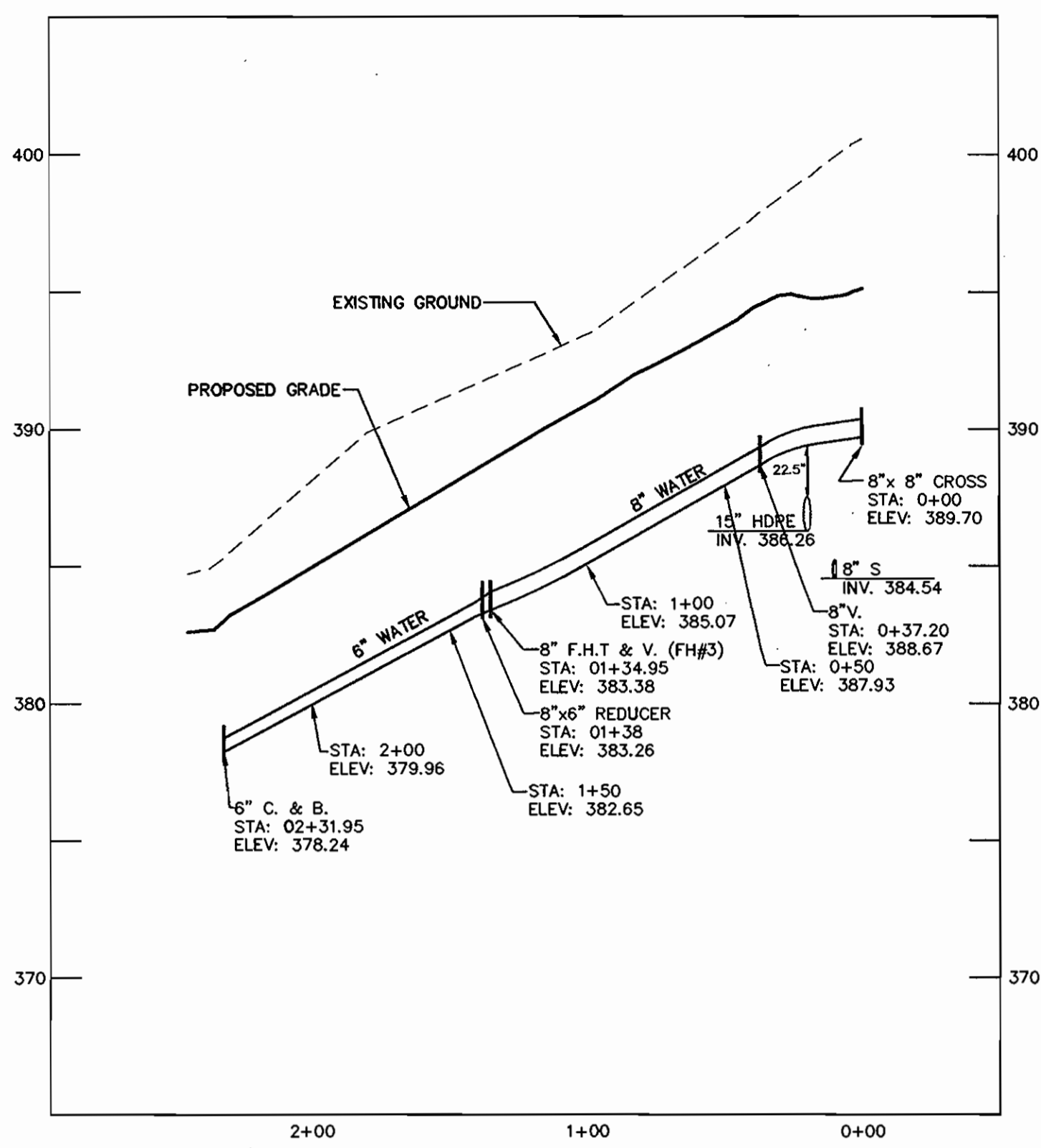
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 4 OF 8



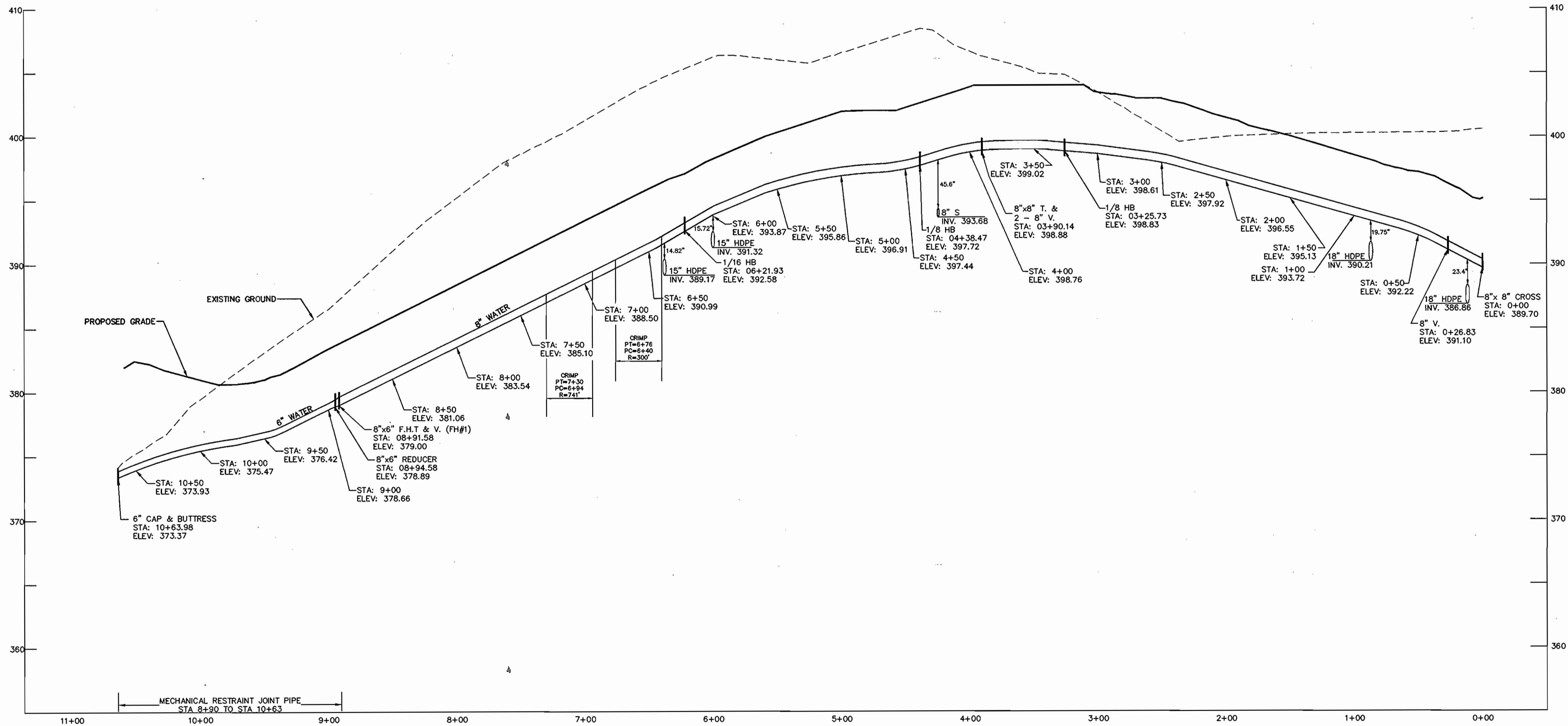
WATER PROFILE - 4" WATER FOR LOTS 4-7
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



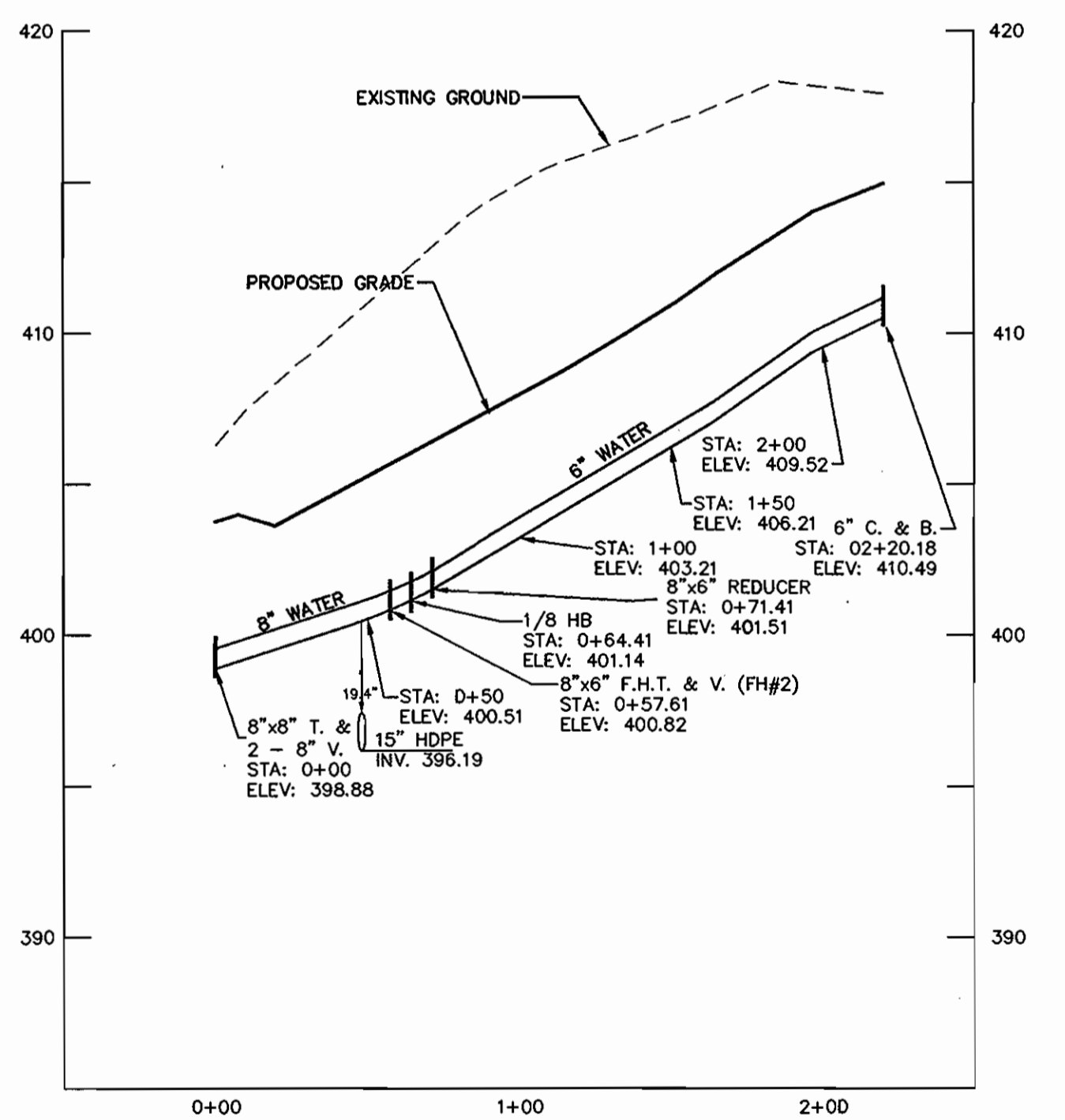
SEWER PROFILE - SMH 133 TO SMH 144
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



WATER PROFILE - ARDEN CT. WEST OF SCHOLARS LN.
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



WATER PROFILE - SCHOLARS LANE TO ARDEN CT.
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



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

AS BUILT
 DATE: JANUARY 2007

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 R. L. Benjamin 3-8-06
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 [Signature] 3/3/06
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

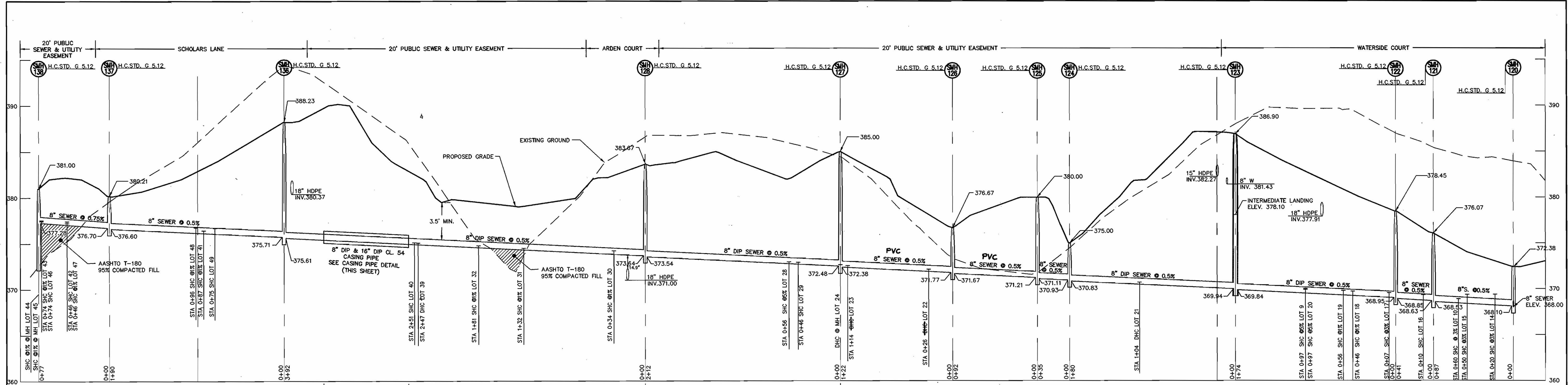
MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
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engineering	EGJ				
illustration	JJO				
approval	CRE				
project	2000-020				
date	JAN 2006	BY	NO.	REVISION	DATE

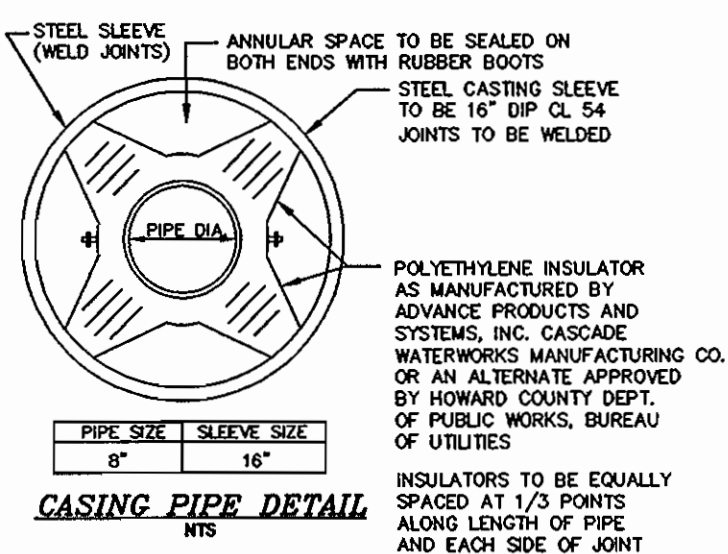
WATER & SEWER PROFILES AND WATER DETAIL
 600' SCALE MAP NO. 46 BLOCK NO. 15

JAMESTOWN LANDING, SECTION II, LOTS 1 THRU 66
 CONTRACT NO. 24-4274-D
 TAX MAP 46 PARCELS 229 & 352
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

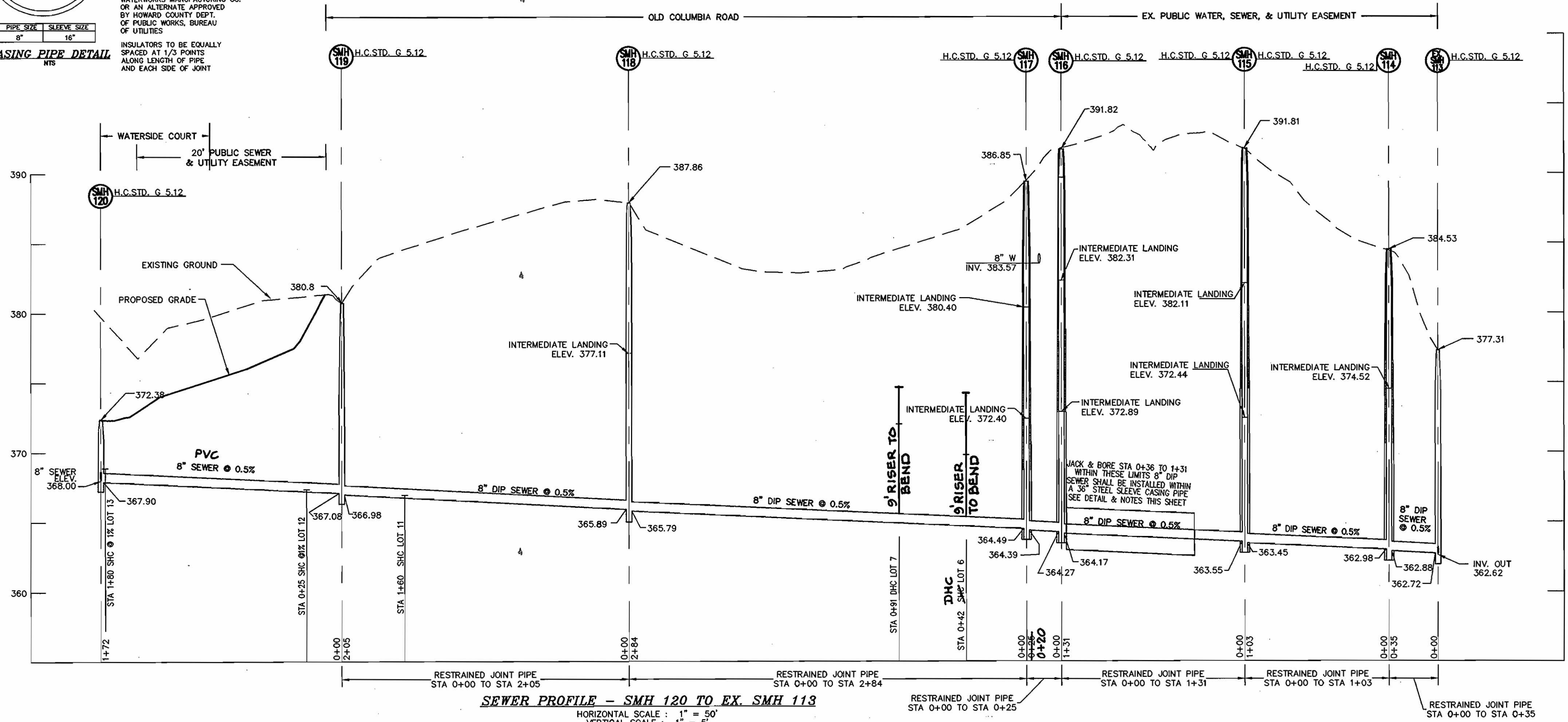
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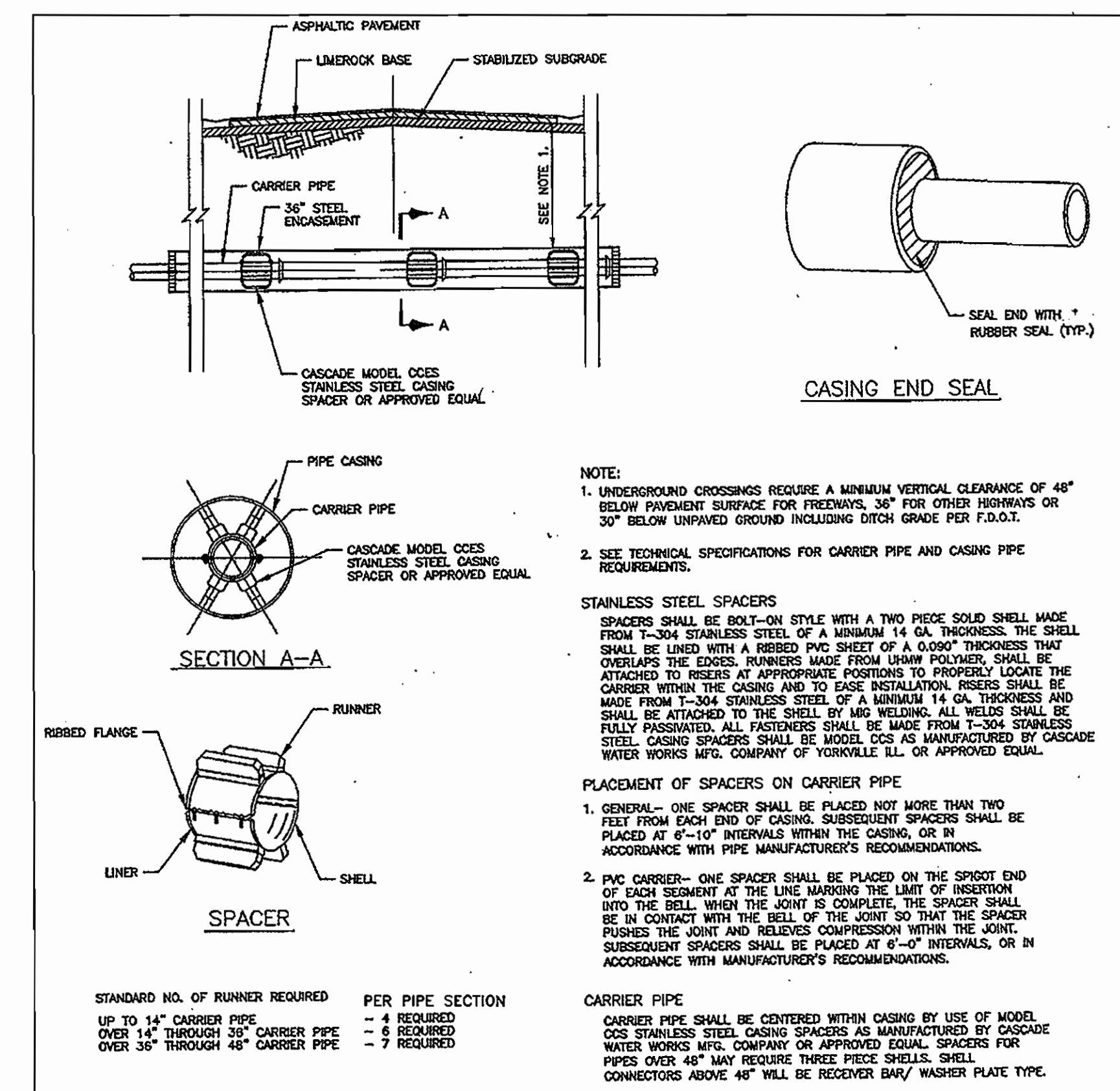
SEWER PROFILE - SMH 138 TO SMH 120
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 5'



CASING PIPE DETAIL
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 5'



SEWER PROFILE - SMH 120 TO EX. SMH 113
 HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 5'



CASING END SEAL
 NOTE:
 1. UNDERGROUND CROSSINGS REQUIRE A MINIMUM VERTICAL CLEARANCE OF 48" BELOW PAVEMENT SURFACE FOR FREEWAYS, 36" FOR OTHER HIGHWAYS AND 30" BELOW UNPAVED GROUND INCLUDING DITCH GRADE PER F.D.O.T.
 2. SEE TECHNICAL SPECIFICATIONS FOR CARRIER PIPE AND CASING PIPE REQUIREMENTS.
STAINLESS STEEL SPACERS
 SPACERS SHALL BE BOLT-ON STYLE WITH A TWO PIECE SOLID SHELL MADE FROM 1-304 STAINLESS STEEL OF A MINIMUM 1/4 GA. THICKNESS. THE SHELL SHALL BE LINED WITH A REINFORCED PVC SHEET OF A 60/30 THROUSER THAT OVERLAPS THE EDGES. RUNNERS MADE FROM UHMW POLYMER SHALL BE ATTACHED TO THE SPACERS AT APPROPRIATE POSITIONS TO PROPERLY LOCATE THE CARRIER WITHIN THE CASING AND TO EASE INSTALLATION. RISERS SHALL BE MADE FROM 1-304 STAINLESS STEEL OF A MINIMUM 1/4 GA. THICKNESS AND FULLY PASSED. ALL FASTENERS SHALL BE MADE FROM 1-304 STAINLESS STEEL. CASING SPACERS SHALL BE MODEL C25 AS MANUFACTURED BY CASCADE WATER WORKS MFG. COMPANY OF YORKVILLE IL. OR APPROVED EQUAL.
PLACEMENT OF SPACERS ON CARRIER PIPE
 1. GENERAL - ONE SPACER SHALL BE PLACED NOT MORE THAN TWO FEET FROM EACH END OF CASING. SUBSEQUENT SPACERS SHALL BE PLACED AT 6'-10" INTERVALS WITHIN THE CASING, OR IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATIONS.
 2. PVC CARRIER - ONE SPACER SHALL BE PLACED ON THE SPIGOT END OF EACH SEGMENT AT THE LINE MARKING THE LIMIT OF INSERTION INTO THE BELL. WHEN THE JOINT IS COMPLETE, THE SPACER SHALL BE IN CONTACT WITH THE BELL OF THE JOINT SO THAT THE SPACER PUSHES THE JOINT AND RELIEVES COMPRESSION WITHIN THE JOINT. IN SUBSEQUENT SPACERS SHALL BE PLACED AT 6'-0" INTERVALS, OR IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
CARRIER PIPE
 CARRIER PIPE SHALL BE CENTERED WITHIN CASING BY USE OF MODEL C25 STAINLESS STEEL CASING SPACERS AS MANUFACTURED BY CASCADE WATER WORKS MFG. COMPANY OR APPROVED EQUAL. SPACERS FOR PIPES OVER 48" MAY REQUIRE THREE PIECE SHELLS. SHELL CONNECTORS ABOVE 48" WILL BE RECEIVER END/ WASHER PLATE TYPE.

AS BUILT
 DATE: JANUARY 2007

JACK AND BORE DETAIL
 N.T.S.

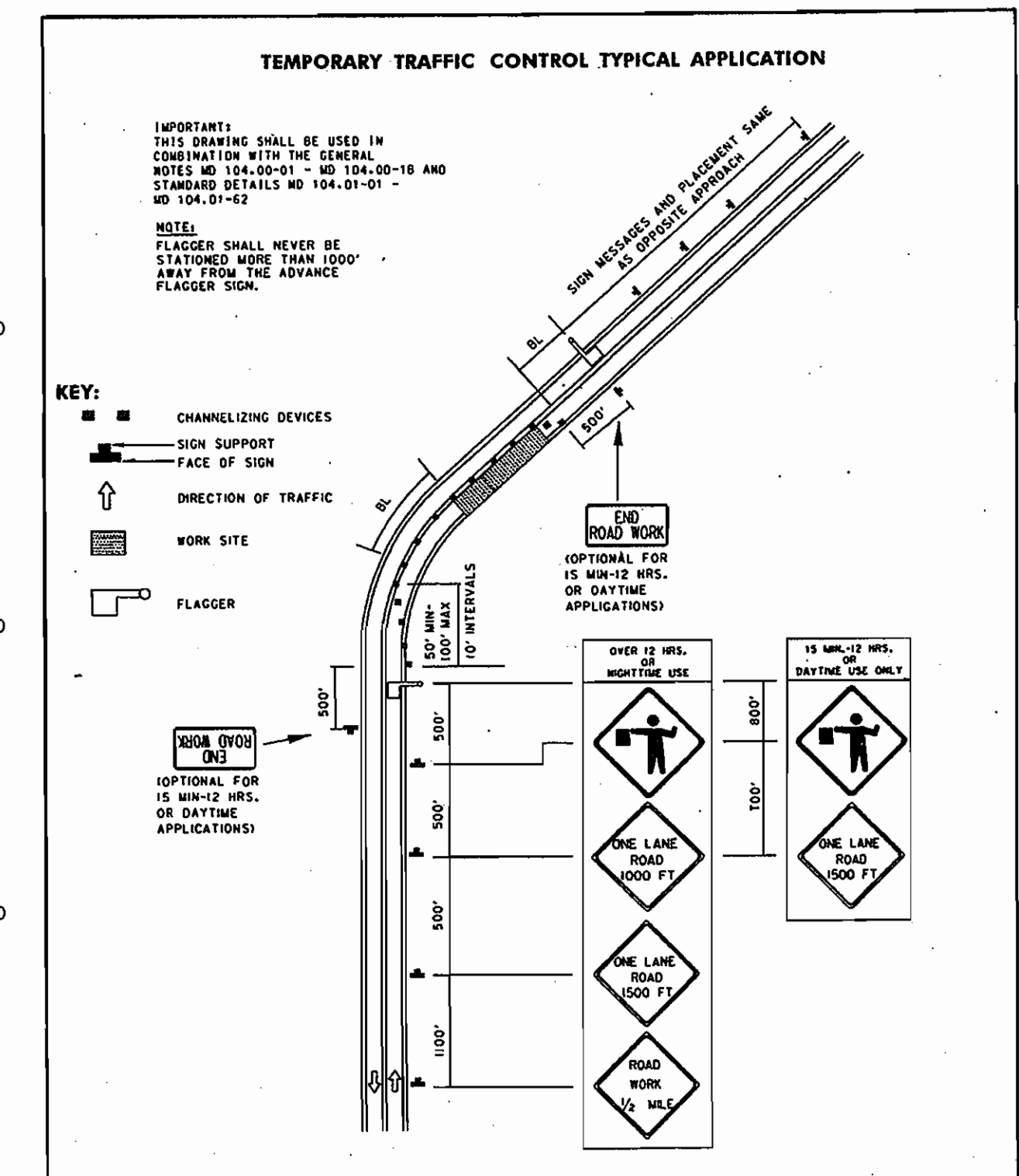
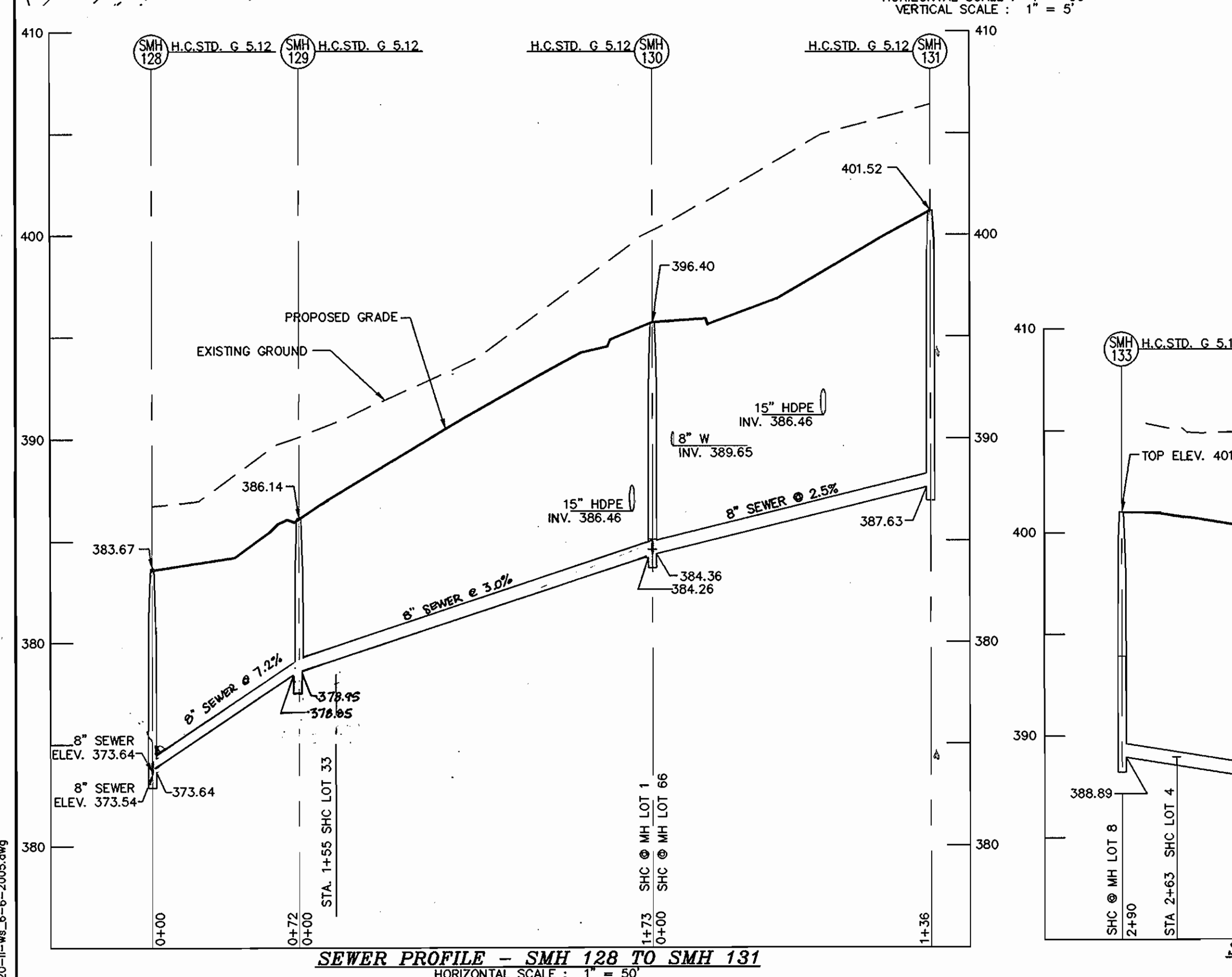
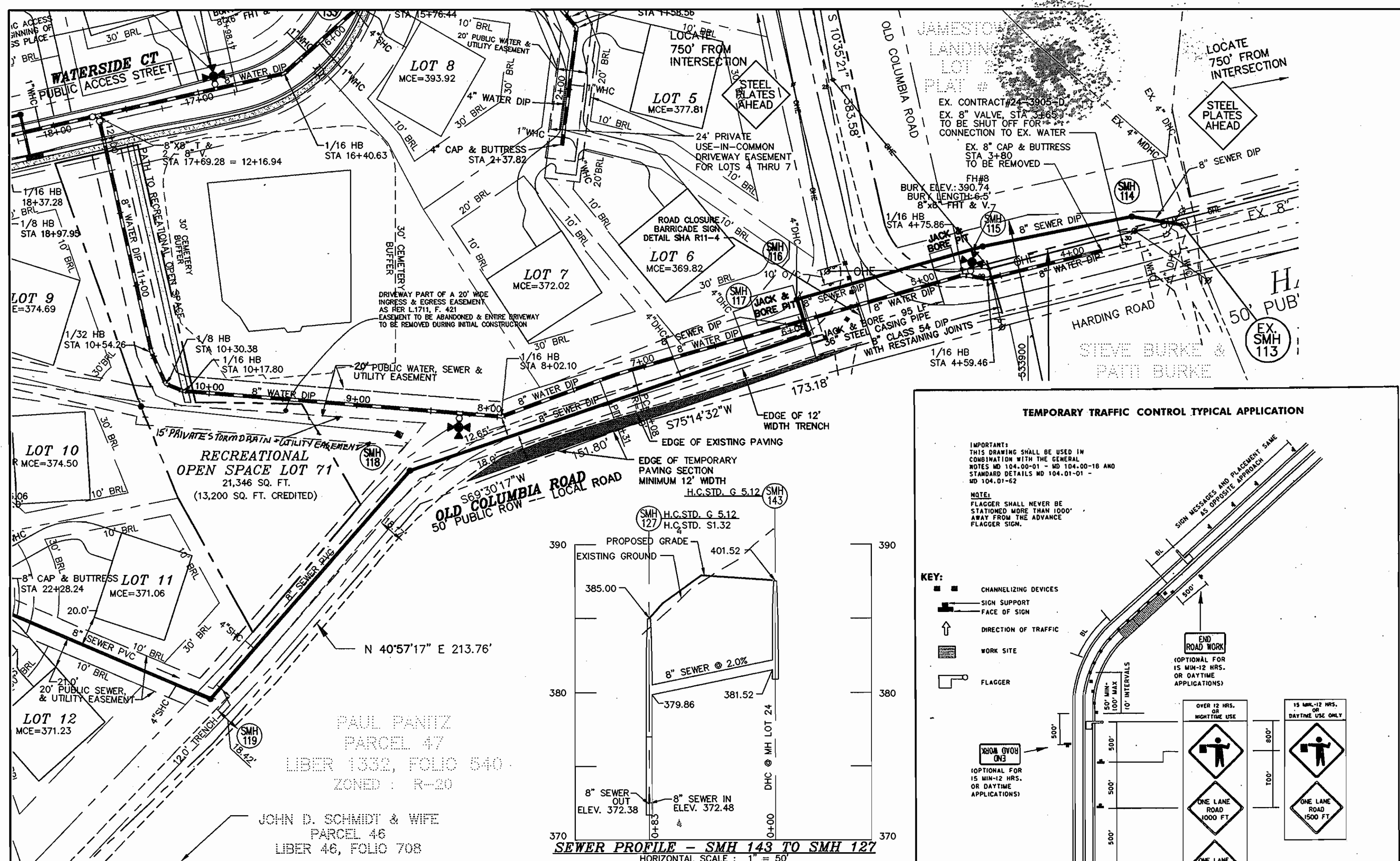
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
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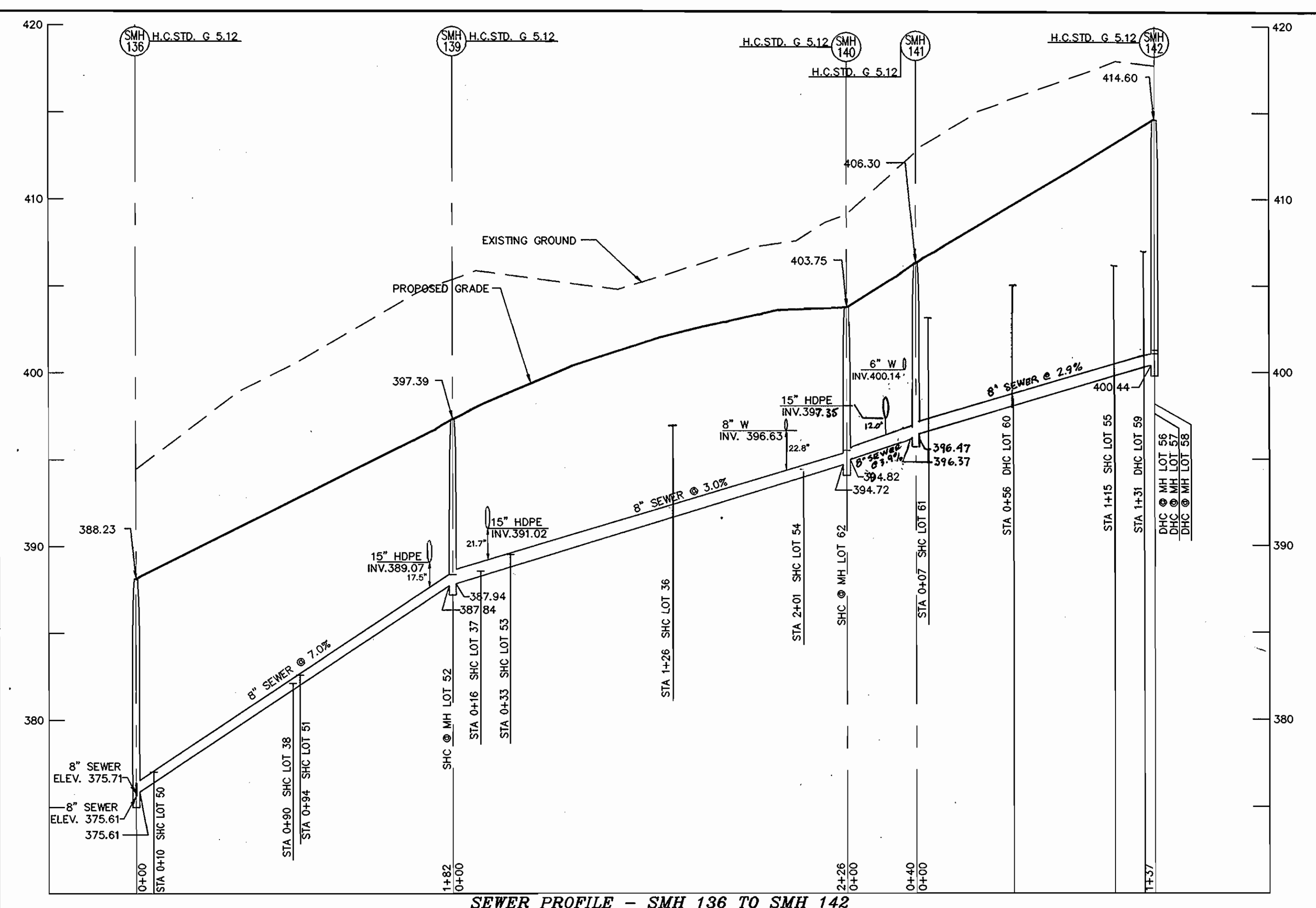
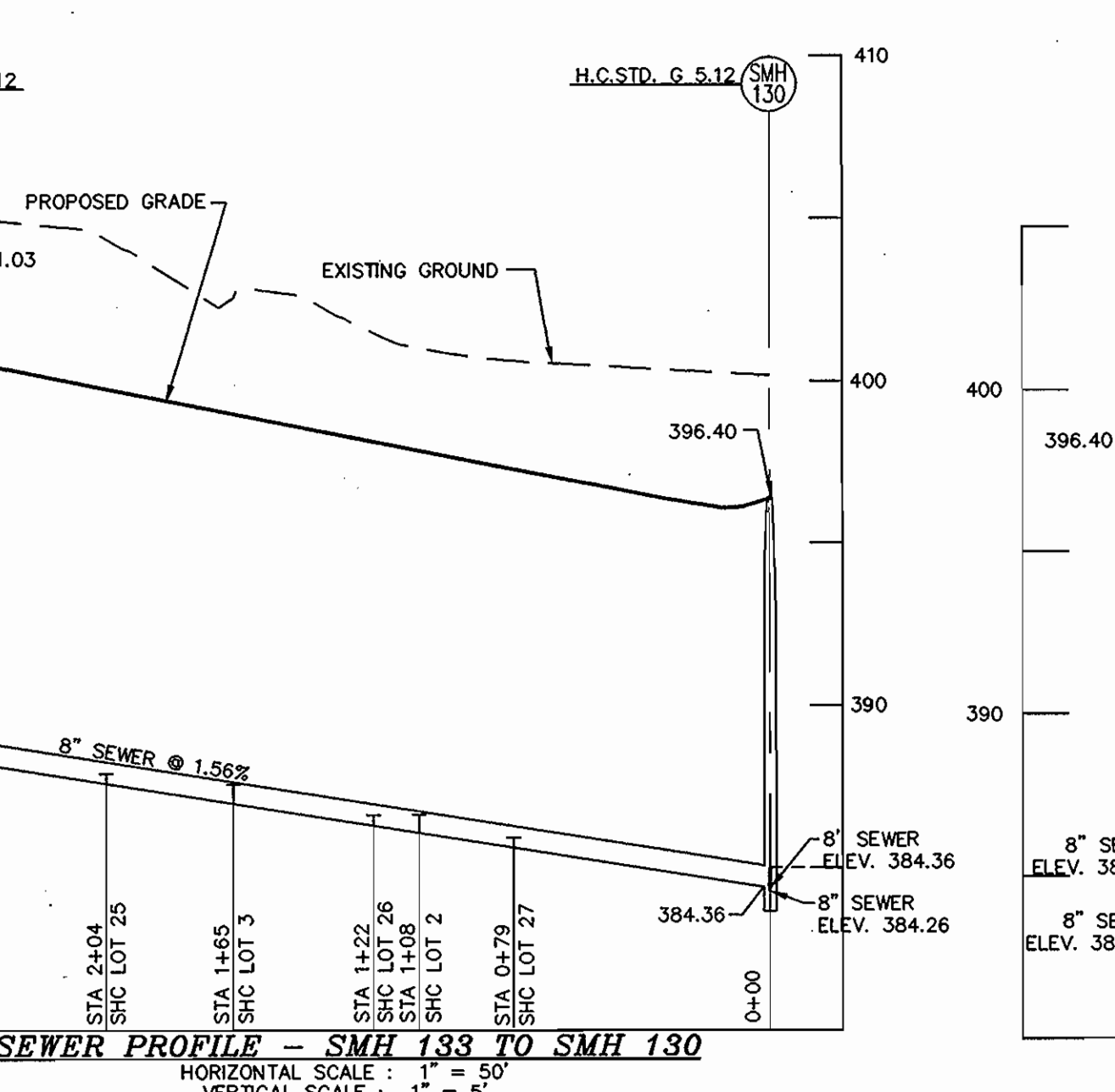
engineering	EGJ				
illustration	JJO				
approval	CRE				
project	2000-020				
date	JAN 2006	BY	NO.	REVISION	DATE

SEWER PROFILES
 600' SCALE MAP NO. 46 BLOCK NO. 15

**JAMESTOWN LANDING, SECTION II,
 LOTS 1 THRU 66**
 CONTRACT NO. 24-4274-D
 TAX MAP 46 PARCELS 229 & 352
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 scale
 AS SHOWN
 6 of 7

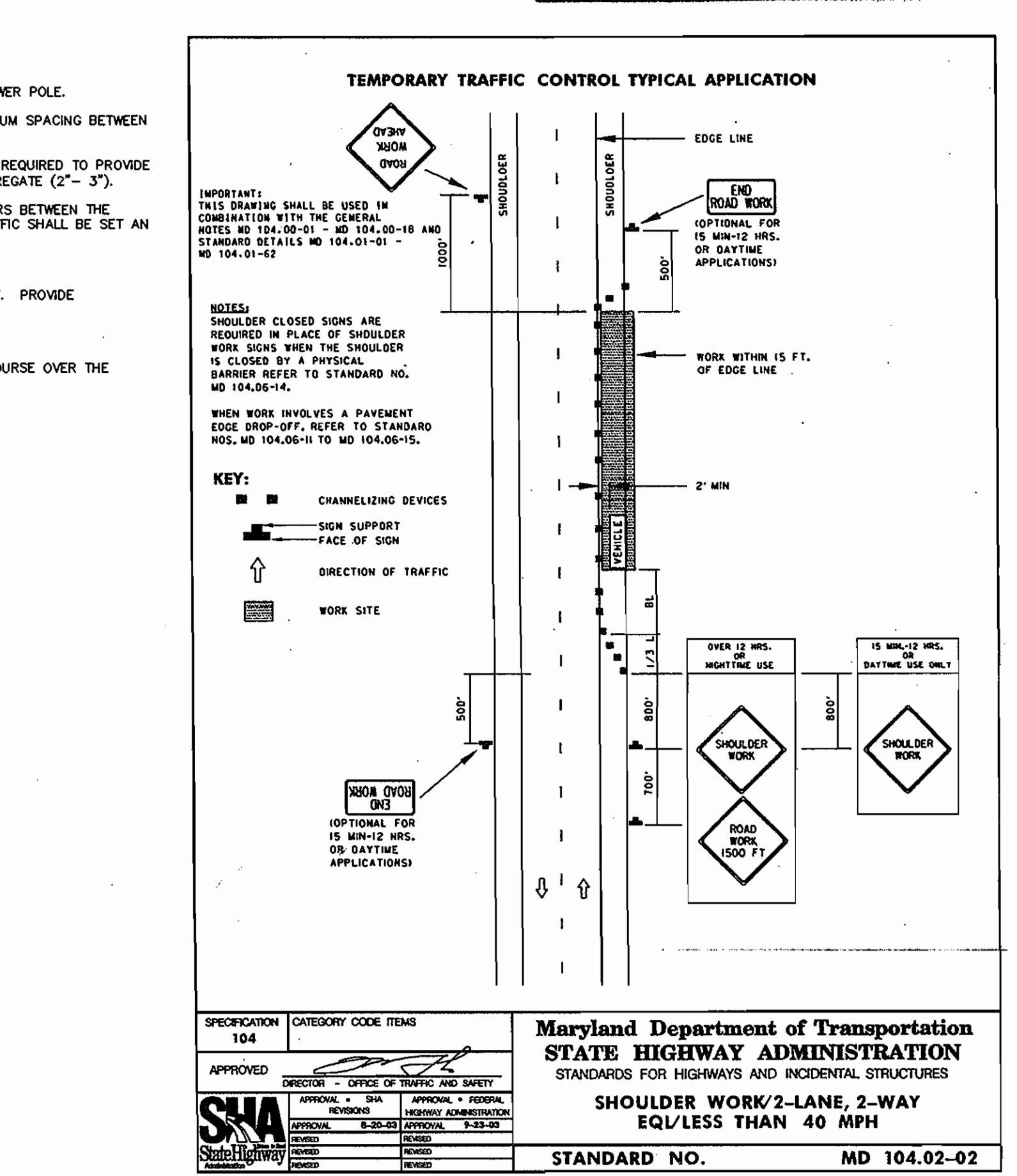
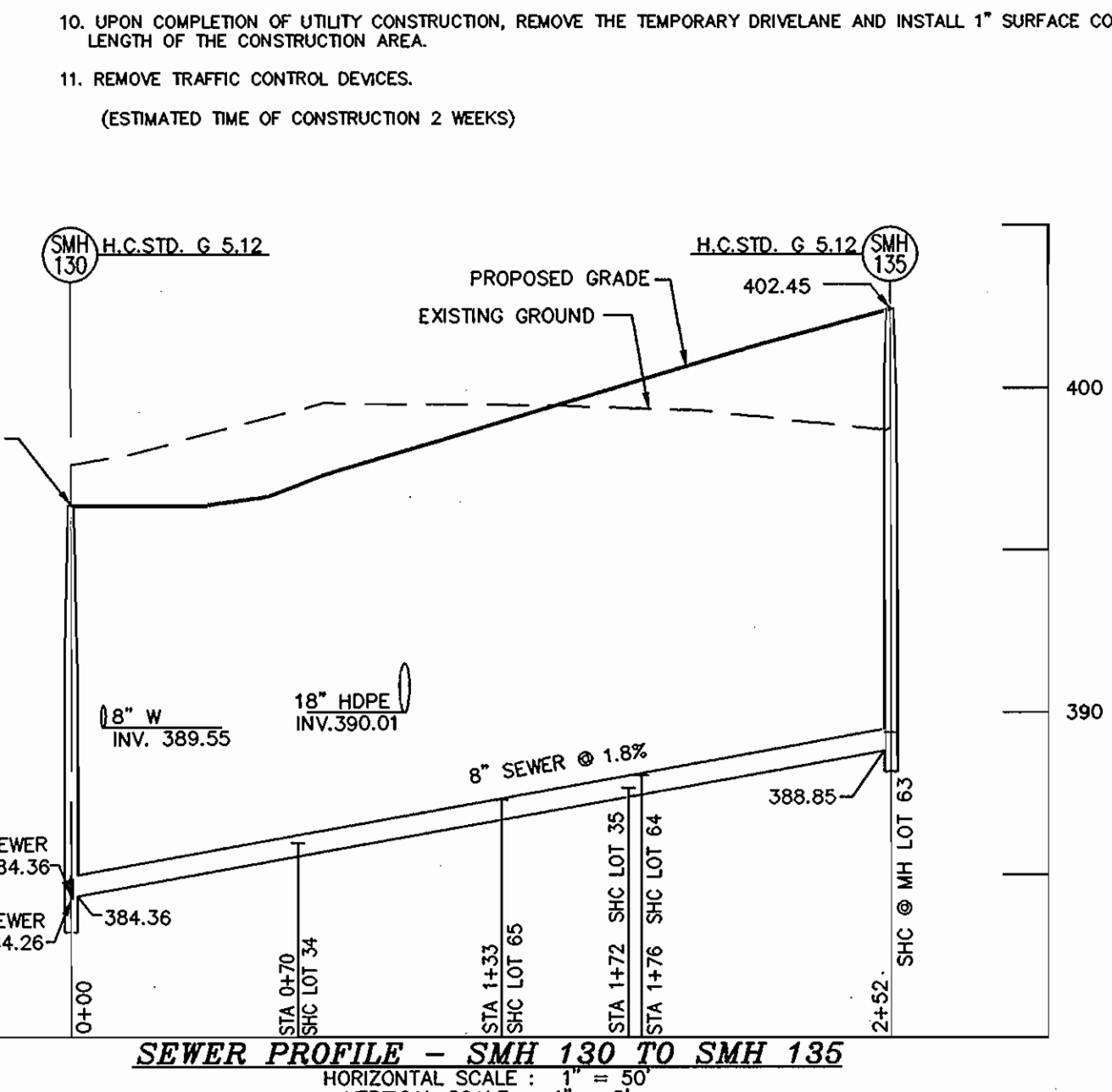


Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
FLAGGING OPERATION-2-LANE, 2-WAY
EQL/LESS THAN 40 MPH
 STANDARD NO. MD 104.02-10



SEQUENCE OF CONSTRUCTION FOR SEWER AND WATER CONSTRUCTION ON OLD COLUMBIA ROAD:

- MOBILIZATION AND STORAGE OF ALL MATERIALS SHALL BE MAINTAINED OUTSIDE OF THE PUBLIC RIGHT-OF-WAY.
- EXCAVATE JACK AND BORE PITS AND INSTALL SEWER BETWEEN MANHOLES 115 AND 116.
- INSTALL SEWER FROM MANHOLE 115 TO EXISTING SEWER. MAINTAIN 6' CLEARANCE FROM EDGE OF TRENCH TO POWER POLE.
- INSTALL TEMPORARY TRAFFIC CONTROL IN ACCORDANCE WITH STANDARD DETAIL MD 104.02-10 at MH 116. MAXIMUM SPACING BETWEEN BARRELS SHALL BE 10' O.C.
- INSTALL TEMPORARY DRIVELANE ON THE EAST SIDE OF OLD COLUMBIA ROAD IN THE AREA OF CONSTRUCTION AS REQUIRED TO PROVIDE A MINIMUM DRIVELANE WIDTH OF 12'. TEMPORARY DRIVELANE SHALL CONSIST OF ONE LIFT OF 6" CRUSHED AGGREGATE (2" x 3").
- OPEN ONLY THE LENGTH OF TRENCH THAT THE UTILITY CAN BE COMPLETED EACH DAY. INSTALL JERSEY BARRIERS BETWEEN THE TRENCH AND THE DRIVE LANE FOR THE LENGTH OF THE OPEN TRENCH. THE BARRIERS FACING ON-COMING TRAFFIC SHALL BE SET AN ANGLE TO DIRECT TRAFFIC TO THE OPEN LANE.
- USE TRENCH BOXES AND SHORING AS REQUIRED LIMITING THE TRENCH WIDTH TO A MAXIMUM OF 12 FEET.
- AT THE END OF EACH WORK DAY BACK FILL AND INSTALL STEEL PLATES OVER THE OPEN PORTION OF PAVEMENT. PROVIDE TEMPORARY COLD PATCH AROUND PLATES.
- AFTER THE COMPLETION OF THE SEWER WITHIN THE PUBLIC RIGHT-OF-WAY, INSTALL THE WATER MAIN.
- UPON COMPLETION OF UTILITY CONSTRUCTION, REMOVE THE TEMPORARY DRIVELANE AND INSTALL 1" SURFACE COURSE OVER THE LENGTH OF THE CONSTRUCTION AREA.
- REMOVE TRAFFIC CONTROL DEVICES.
(ESTIMATED TIME OF CONSTRUCTION 2 WEEKS)



Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
SHOULDER WORK-2-LANE, 2-WAY
EQL/LESS THAN 40 MPH
 STANDARD NO. MD 104.02-02

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 DATE: 3-9-06

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 DATE: 3/9/06

MILDENBERG, BOENDER & ASSOC., INC.
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engineering: EGJ
 illustration: JJO
 approval: CRE
 project: 2000-020
 date: FEB 2006

SEWER PROFILES
 AND
MAINTENANCE OF TRAFFIC PLAN
 600' SCALE MAP NO. 46 BLOCK NO. 15

JAMESTOWN LANDING, SECTION II,
LOTS 1 THRU 66
 CONTRACT NO. 24-4274-D
 TAX MAP 46 PARCELS 229 & 352
 FIFTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

scale: AS SHOWN
 7 of 8

