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FINAL WATER AND SEWER PLAN

BRAMPTON HILLS WEST

2nd ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

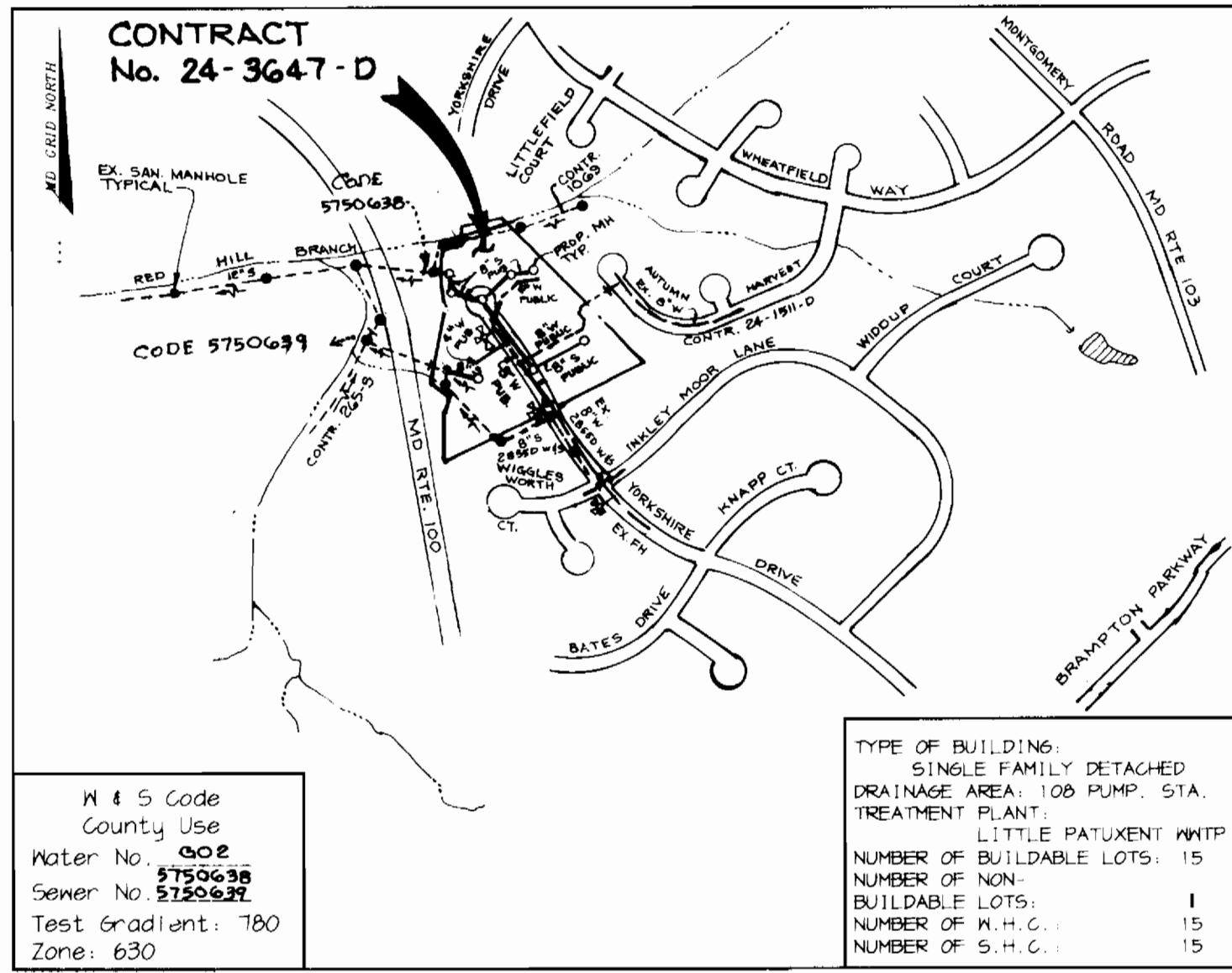
CONTRACT NO. 24-3647-D

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.S.S. data.
- All pipe elevations shown \curvearrowright are invert elevations.
- Clear all utilities by a minimum of 6". 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 \square 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
 Baltimore Gas & Electric Co. Contractor Services 850-4620
 Baltimore Gas & Electric Co. Underground Damage Control 787-9068
 Miss Utility 1-800-251-7777
 Colonial Pipeline Co. 745-3800
 Bureau of Utilities, Howard County Department of Public Works 313-4400
- 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 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 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 without coordination with the Bureau of Utilities.
- All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
- All sewer mains shall be D.I.P. and 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 16" walls are for brick manholes only.
- Manholes designated M.T. in plan and profile shall have watertight frame and covers, Standard Detail 65.52. 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.
- Manholes can be either brick or precast concrete structures.
- Contractor is solely responsible for construction means, methods, techniques, sequences, procedures, and safety precautions and programs.
- The fire hydrant shall be installed as per standard detail R.1.11.
- Fire hydrants will be located 3' FROM BACK OF CURB unless otherwise noted.
- The contractor shall notify the Bureau of Highways, Howard County, at (410) 313-7450 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 DPA requirements per Section 10.114(a) of the Howard County Code.
- Howard County DPA is hereby granted permission to access private lots shown on these plans in order to maintain public water and sewer house connections at the curb stops and/or cleanouts.

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER / SUPPLIER
8" WATER	517 LF	750 LF	CL 52 D.I.P.	ATLANTIC STATES
6" WATER	28 LF	26 LF	CL 52 D.I.P.	ATLANTIC STATES
3/4" W.K.	240 LF	230 LF	TYPE K COPPER	READING TUBE
4" WATER	349 LF	350 LF	CL 52 D.I.P.	ATLANTIC STATES
8" 1/16 HB	1 EA.	1.0 EA.	M.J. CL 52	UNION FOUNDRY
8" 1/8 HB	1 EA.	1.0 EA.	M.J. CL 52	" "
8" VALVES	3 EA.	3.0 EA.	WEDGE GATE VALVE	MUELLER COMP.
6" VALVES	2 EA.	2.0 EA.	" "	" "
1 1/2" DRAIN	1 EA.	1.0 EA.	BRASS BUSINESS ETC.	HERIT BRASS
8" x 8" T	2 EA.	2.0 EA.	M.J. CL 52	UNION FOUNDRY
8" x 8" TAPPING, SUBVEIL VALVE	1 EA.	1.0 EA.	M.J. CL 52	MUELLER COMP.
FIRE HYDRANTS	2 EA.	2.0 EA.	55 A473 CENTURON	" "
8" SEWER	1,011 LF	990 LF	5 DR 35	M.J. MANUFACTURE
8" DIP CL 52	81 LF	81 LF	CL 52 D.I.P.	ATLANTIC STATES
4" SHC	280 LF	295 LF	5 DR 35	M.J. MAND.
SEWER MANHOLES	9 EA.	9.0 EA.	4' PRECAST C 478	ATLANTIC CONG.
4" 1/16 HB	1 EA.	1.0 EA.	M.J. CL 52	UNION FOUNDRY
4" 1/8 HB	1 EA.	1.0 EA.	" "	" "
8" x 4" R.	1 EA.	1.0 EA.	" "	" "
AIR RELEASE MH	1 EA.	1.0 EA.	4' PRECAST C 478	ATLANTIC CONG. PROD.
4" VALVE	2 EA.	2.0 EA.	M.J. CL 52	MUELLER COMP.
8" x 4" T	1 EA.	1.0 EA.	M.J. CL 52	UNION FOUNDRY



VICINITY MAP
SCALE: 1"=600'

NAME OF UTILITY CONTRACTOR: C. J. MILLER INC.

CHECKBOX	
AS-BUILT DATE	
SURVEY AND DRAFTING DIVISION	

Review for Howard Soil Conservation District and meets technical requirements.

Paul S. ... 7/23/18
NATURAL RESOURCES CONSERVATION SERVICE

This plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Jeff ... 7/23/18
HOWARD SOIL CONSERVATION DISTRICT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert ... 7/16/18
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Michael ... 7/27/18
CHIEF, DEVELOPMENT ENGINEERING DIVISION

RIEMER MUEGGE & ASSOCIATES, INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, Maryland 21045
tel 410.997.8900 fax 410.997.9282
SURVEY/DESIGN/PLANS/ESTIMATING

Arthur E. Muegge 7/27/18
ARTHUR E. MUEGGE #8707

DES: BLW
DRN: BLW
CHK: CJR
DATE: 6-20-18

K.C.I. 1
BY NO. ASBUILT CONDITIONS ADDED TO PLAN 2/22
REVISION DATE

"ASBUILT SET"
TITLE SHEET

600' SCALE MAP NO. 30 BLOCK NO. 6

BRAMPTON HILLS WEST
LOTS 1 THRU 16
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 24-3647-D

SCALE AS SHOWN

SHEET 1 OF 3

STRUCTURE SCHEDULE

STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	RIM SLOPE	TOP	REMARKS
SMH-1	4" MH	N 514 956 22 E 1,364,905 66	365 73	365 63	0 00%	10' ABOVE GRADE	HO. CO. STD. DETAIL 6 5.12
SMH-2	4" MH	N 514 498 51 E 1,364,911 43	396 10	396 00	1 41%	380 30	HO. CO. STD. DETAIL 6 5.12
SMH-3	TYPE B DROP MH	N 514 401 11 E 1,365,028 31	379 65	372 75	6 61%	384 50	HO. CO. STD. DETAIL 5 1.32
SMH-4	TYPE B DROP MH	N 514 111 81 E 1,365,236 95	391 56	384 25	3 08%	401 90	HO. CO. STD. DETAIL 5 1.32
SMH-5	4" MH	N 514 209 00 E 1,365,281 09	394 07	393 97	3 50%	405 00	HO. CO. STD. DETAIL 6 5.12
SMH-6	4" MH	N 514 266 61 E 1,365,433 63	-	400 37	2 00%	411 70	HO. CO. STD. DETAIL 6 5.12
SMH-7	4" MH	N 514 487 96 E 1,365,123 95	378 22	378 12	0 50%	390 30	HO. CO. STD. DETAIL 6 5.12
SMH-8	4" MH	N 514 511 88 E 1,365,191 18	-	378 96	0 50%	391 50	HO. CO. STD. DETAIL 6 5.12
SMH-9	4" MH	N 514 100 34 E 1,364,976 73	-	375 00	0 00%	381 00	HO. CO. STD. DETAIL 6 5.12

NOTES: LOCATION IS AT CENTER OF STRUCTURE
TOP ELEVATION IS TOP OF RIM.

BENCHMARKS

HOWARD COUNTY SURVEY CONTROL STATION 30CA
N 515 083 45 E 1,364 681 19
ELEVATION 380 14

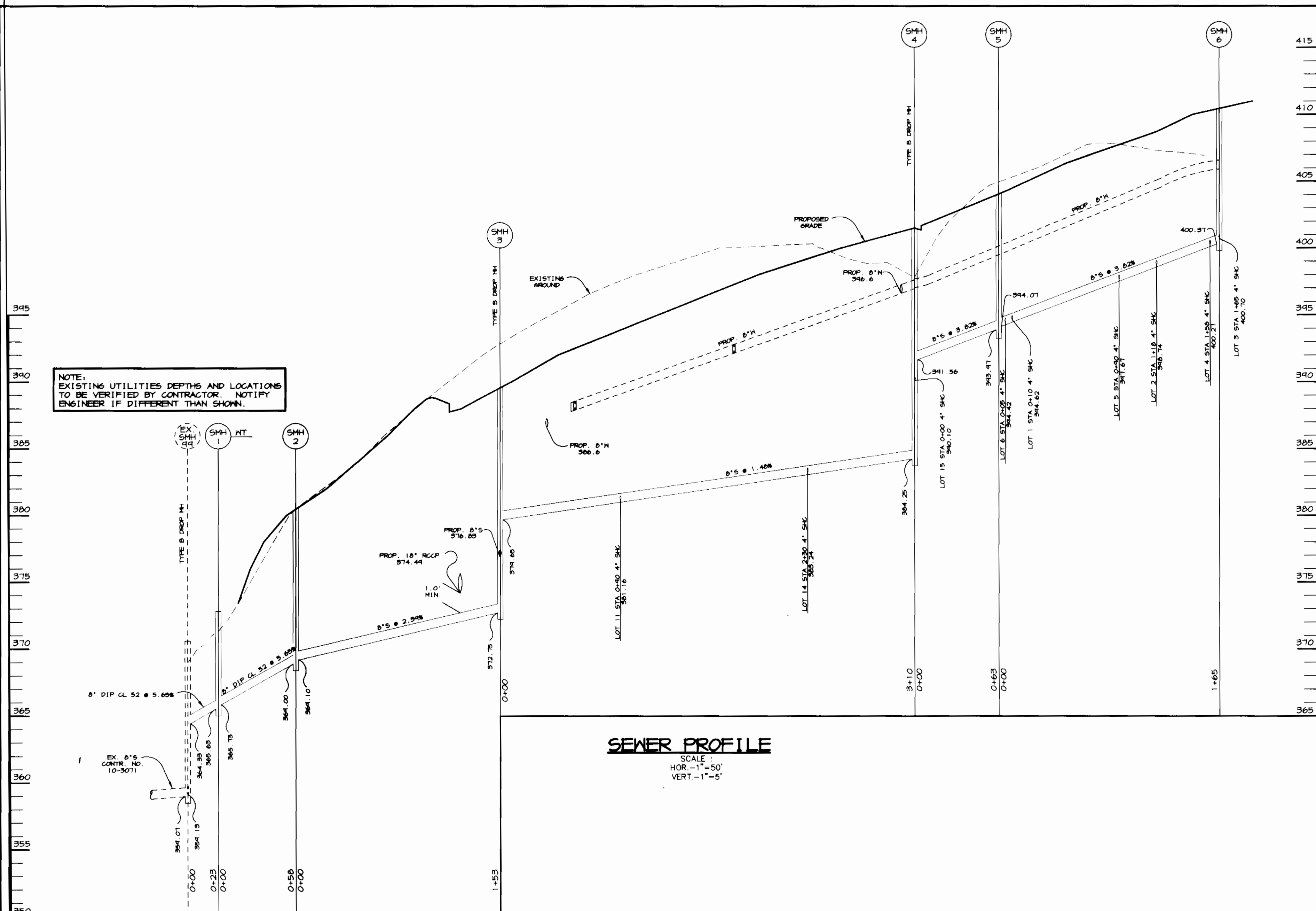
HOWARD COUNTY SURVEY CONTROL STATION 30FC
N 512 916 53 E 1,364 610 17
ELEVATION 386 93



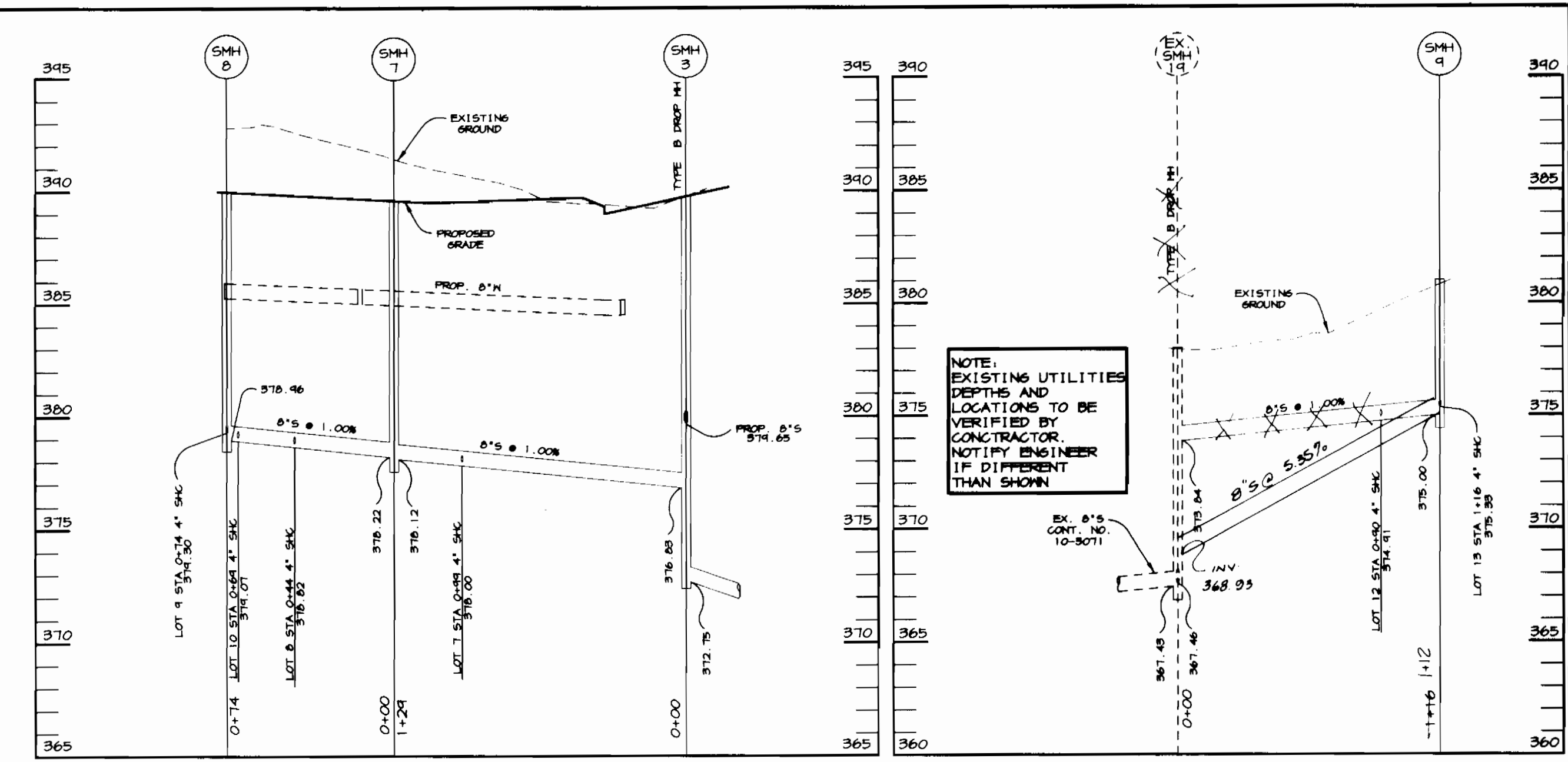
NOTE: VALVE AT ILLKEY MOOR LANE AND YORKSHIRE DRIVE INTERSECTION TO BE CLOSED DURING PROP. WATER CONNECTION.

PLAN
1" = 50'

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Robert Beaman</i> 7/27/98 CHIEF, BUREAU OF UTILITIES DATE	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND <i>John Cummins</i> 7/27/98 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE	RIEMER MUEGGE & ASSOCIATES, INC. ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING 8818 Centre Park Drive, Columbia, Maryland 21045 Tel 410.997.8900 fax 410.997.9282 SURVEYING/PERMITS/PINALS WSE.DWG	DES: BLW DRN: BLW CHK: CJR DATE: 6/26/98 BY NO. 1	DESIGNED BY: 1 DATE: 2/99	'AS BUILT SET' PLAN OF WATER AND SEWER MAINS 600' SCALE MAP NO. 30 BLOCK NO. 6	BRAMPTON HILLS WEST LOTS 1 THRU 16 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND CONTRACT 24-3647-D	SCALE: 1" = 50'
							SHEET 2 OF 3

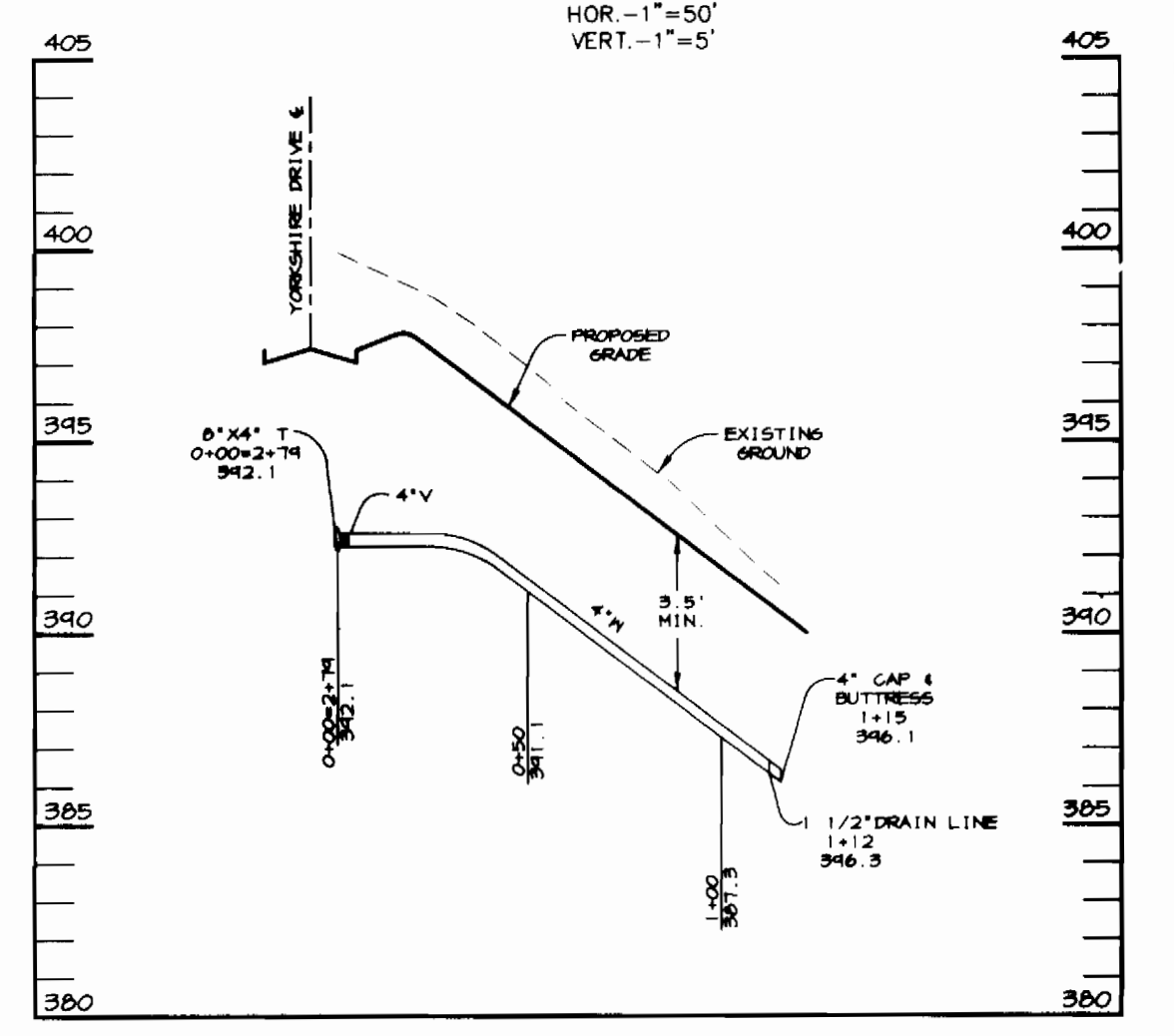


SEWER PROFILE
SCALE:
HOR. - 1"=50'
VERT. - 1"=5'

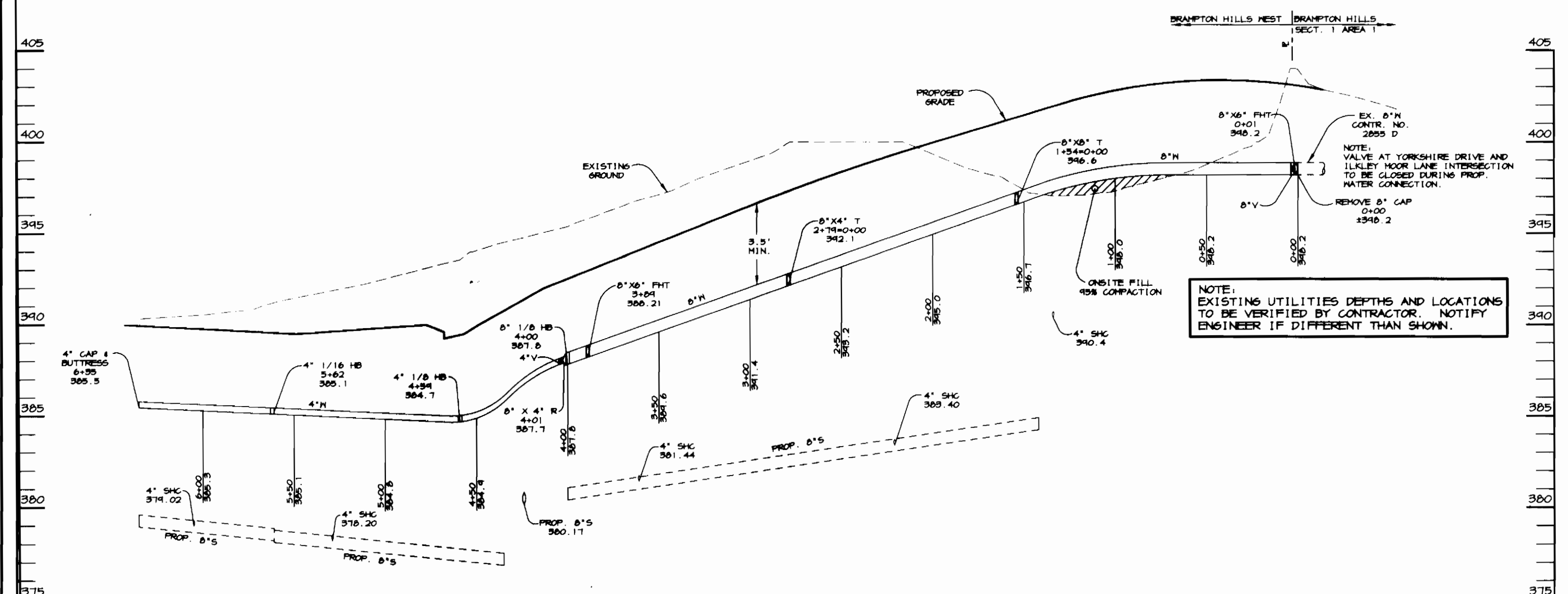


SEWER PROFILE #2
SCALE:
HOR. - 1"=50'
VERT. - 1"=5'

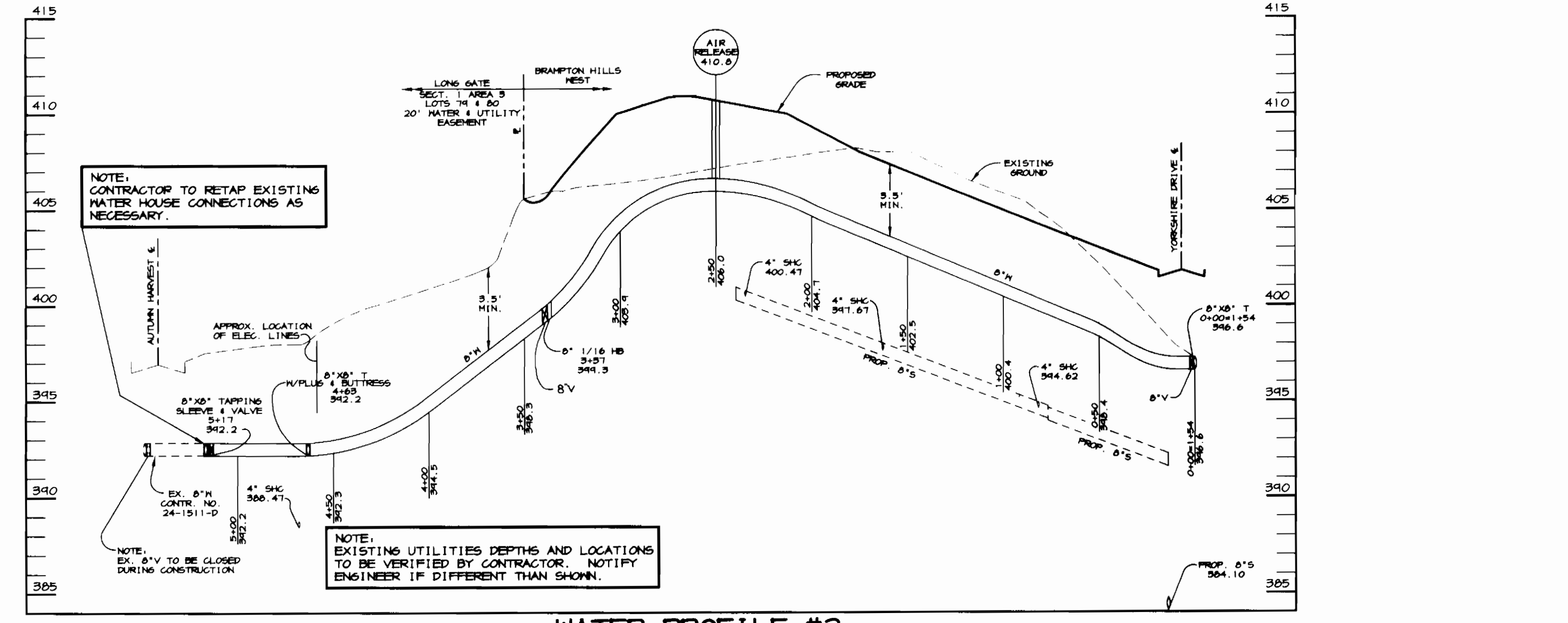
SEWER PROFILE #3
SCALE:
HOR. - 1"=50'
VERT. - 1"=5'



WATER PROFILE #3
SCALE:
HOR. - 1"=50'
VERT. - 1"=5'



WATER PROFILE #1
SCALE:
HOR. - 1"=50'
VERT. - 1"=5'



WATER PROFILE #2
SCALE:
HOR. - 1"=50'
VERT. - 1"=5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
7-16-98
DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND
7/27/98
DATE

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ARTHUR E. MUEGGE #8707

DES:	BLW		
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CHK:	CJR		
DATE:	6/26/98		
NO.	1	ASBUILT CONDITIONS ADDED TO PLANS	2/99
BY	NO.	REVISION	DATE

"ASBUILT SET"
PROFILES OF WATER AND SEWER MAINS
600' SCALE MAP NO. 30 BLOCK NO. 6

BRAMPTON HILLS WEST
LOTS 1 THRU 16
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT 24-3647-D

SCALE AS SHOWN
SHEET 3 OF 3