

PUBLIC WATER AND SEWER PLANS SUMMER HAVEN

PHASE 1 & 2
HOWARD COUNTY, MARYLAND
CONTRACT NO. 14-4265-D

WATER AS-BUILT DATA

FROM	TO	DIST (FT)	FROM	TO	DIST (FT)	FROM	TO	DIST (FT)
#3 WHC	SHC 3	10	#17 WHC	SHC 17	10	#28 WHC	WHC 31	30
"	CLINLET 23	29	"	WHC 22	29	#29 WHC	1 1/2" DRAIN	34
"	CLINLET 14	49	"	SHC 18	37	"	SMH 210	18
#4 WHC	FH VALVE	30	#18 WHC	SHC 18	10	"	WHC 30	31
"	SHC 4	25	"	SHC 17	57	#30 WHC	SMH 210	21
"	SD MH 3	35	"	WHC 21	30	"	1 1/2" DRAIN	9
#5 WHC	SHC 5	16	#19 WHC	SMH 207	25	"	SHC 30	12
"	SMH 205	48	"	1 1/2" DRAIN	16	#31 WHC	1 1/2" DRAIN	38
#6 WHC	SMH 205	95	"	SHC 19	9	"	SMH 210	46
"	SHC 6	16	#20 WHC	SHC 20	10	"	SHC 28	37
"	FH	70	"	1 1/2" DRAIN	34	#32 WHC	WHC 27	32
#7 WHC	SHC 7	11	"	SMH 207	48	"	SHC 32	11
"	FH	20	#21 WHC	WHC 18	30	"	SHC 27	35
"	SHC 11	34	"	SHC 20	57	#33 WHC	SHC 33	18
#8 WHC	SHC 8	11	"	SHC 21	11	"	SMH 209	55
"	SHC 9	35	#22 WHC	SHC 22	11	"	WHC 26	31
#9 WHC	ML VALVE	11	"	SHC 16	32	#34 WHC	SHC 34	11
"	1 1/2" DRAIN	41	#23 WHC	SHC 23	10	"	SMH 209	19
"	SMH 206	50	"	SHC 16	32	"	WHC 25	33
#10 WHC	ML VALVE	27	"	WHC 16	30	#35 WHC	INLET 13	24
"	SMH 206	60	#25 WHC	SMH 209	32	"	INLET 12	38
"	SHC 10	9	"	WHC 34	34	"	POLE	32
#11 WHC	FH	47	"	SHC 25	17	#36 WHC	POLE	31
"	WHC 7	59	#26 WHC	SMH 208	39	"	TEMP. POLE	13
"	SHC 11	12	"	SHC 26	12	"	WHC 37	60
#12 WHC	SHC 11	52	"	WHC 33	35	#37 WHC	WHC 36	60
"	FH	48	#21 WHC	WHC 26	71	"	ELEC. BOX	37
"	SHC 12	10	"	SHC 32	29	"	TEMP. POLE	47
#13 WHC	SHC 16	8	"	WHC 32	31	#38 WHC	ELEC. BOX	50
"	SHC 23	33	#28 WHC	SMH 210	61	"	WHC 39	43
"	WHC 23	30	"	1 1/2" DRAIN	52	"	POLE	47
#21 WHC	SMH 203	49	#39 WHC	WHC 38	43	"	MAIL BOX	33
#21 WHC	SHC 24	10	"	FH	20	"	"	"
#21 WHC	SMH 204	120.5'	"	"	"	"	"	"

QUANTITIES

ITEMS	ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
MANHOLE	13	13	48" PRECAST	FREDERICK PRECAST CONCRETE, INC
8" SEWER	1774 LF	1770	SDR 35	NORTH AMERICAN / HD SUPPLY
8" D. SEWER	85 LF	85	CL 52	US PIPE / HD SUPPLY
4" SHC	670 LF	660	SDR 35	NORTH AMERICAN / HD SUPPLY
8"x6" TEE	2	2		SIGMA / HD SUPPLY
FIRE HYDRANT	2	2		KENNEDY / HD SUPPLY
6" CAP & BUTTRESS	2	2		SIGMA / HD SUPPLY
6" WATER	785 LF	825	C900	NORTH AMERICAN / HD SUPPLY
8" WATER	658 LF	670	C900	NORTH AMERICAN / HD SUPPLY
1" WHC	670 LF	700	K	CERRO / HD SUPPLY
6" VALVE	3	4		KENNEDY / HD SUPPLY
8" VALVE	3	2		KENNEDY / HD SUPPLY
1 1/2" DRAIN	3	3		FORD / HD SUPPLY
1 1/2" COPPER	25	25		CERRO / HD SUPPLY

WATER & SEWER COUNTY CODE
WATER CODE: A01
SEWER CODE: 2150300
TEST GRADIENT: 550

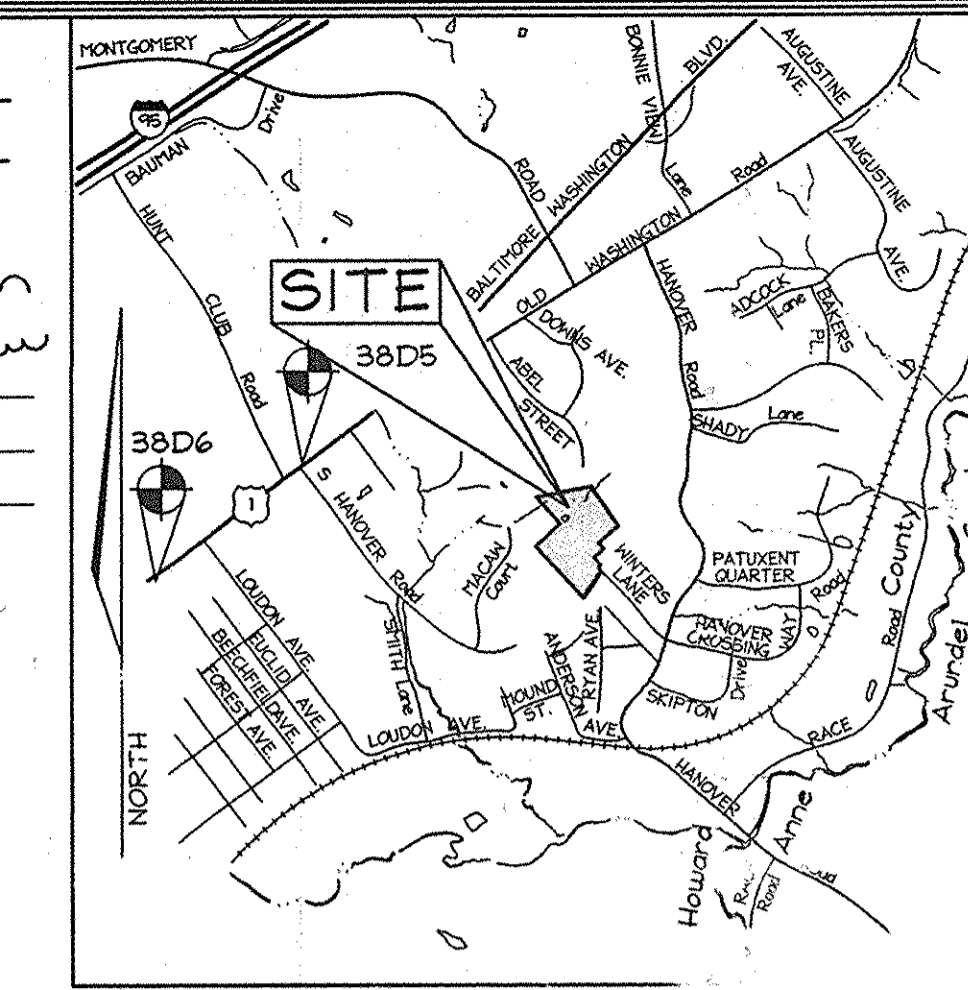
TYPE OF BUILDING:	RESIDENTIAL
NO. OF LOTS/PARCELS:	37
NO. OF WATER HOUSE CONNECTIONS:	33
NO. OF SEWER HOUSE CONNECTIONS:	34
DRAINAGE AREA:	PATAPSCO
TREATMENT PLANT:	PATAPSCO

LOCATION MAP

Scale: 1"=600'

LEGEND

- Existing Contour: ---552---
- Proposed Contour: ---552---
- Spot Elevation: +82.53
- Direction of Flow: [Symbol]
- Existing Trees to Remain: [Symbol]
- Existing Stream Buffer: SB - SB
- Existing Wetland Buffer: WB - WB
- Existing Wetland: W - W
- Wetland: [Symbol]
- Proposed Light Pole: [Symbol]



VICINITY MAP
SCALE: 1"=2000'

BENCHMARKS

Sta. 38D5	N 170,194.1301	E 422,613.4088	El.: 59.0479 (meters)
Sta. 38D5	N 558,378.575	E 1,306,524.158	El.: 149.726 (feet)
Sta. 38D6	N 169,821.3237	E 422,146.4858	El.: 53.4077 (meters)
Sta. 38D6	N 557,155.459	E 1,384,992.262	El.: 175.228 (feet)
Sta. 38D6	N 557,155.459	E 1,384,992.262	El.: 175.228 (feet)

GENERAL NOTES

PART I - GENERAL

- 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.
- Topography is based on an Aerial Topographic Survey prepared by Hings Aerial Mapping Co., Inc. in 1993, and supplemented by field run topographic by FSH Associates on October, 2005.
- 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 Station: No. 38D5 and No. 38D6.
 - All vertical controls are based on NAVD '88. Vertical controls provided on the drawings are Sta. 38D5 - Concrete Monument 3.5' SE of paving edge, 68.8' S of fire hydrant; Sta. 38D6 - Concrete Monument 4.8' E of paving edge, 7.5' S of C&P 118.
- All pipe elevations shown are invert elevations unless otherwise noted on the plans.
- Clear all utilities by a minimum of 12". 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 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 comply with all applicable codes.
- Where test pits have been made on the drawing, a note on the drawing shall indicate the locations of the test pits. A note on the drawing shall indicate the test pit for which test pits have not been dug shall be dug. The contractor shall schedule the test pits in advance of construction operations at his own expense.
- The contractor shall notify the following utility companies 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)	410,685,1400
Bureau of Utilities	410,313,4920
Colonial Pipeline Company	410,996,1390
Miss Utility	1,800,257,7777
State Highway Administration	410,571,5533
Verizon	1,800,743,0337 / 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 410,915,7450 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(a) of the Howard County Code.

PART II - WATER

- Tops of all water mains shall have a minimum of 12" clearance.
- Valves adjacent to tees shall be strapped.
- All fittings shall be buttressed or anchored with concrete in accordance with Standard Details unless otherwise provided for on the drawings.
- Fire hydrants shall be set to the bury line elevations shown on the drawings. Fire hydrants shall be installed in accordance with Standard Details. The fire hydrant shall be compacted in accordance with Standard Specifications.
- The Contractor shall not operate any water main valves on the existing water system.

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 16" walls are for brick manholes only.
- Manholes designated W.T. in plan and profile shall have watertight frame and cover, Standard Detail 65.52. Where watertight manhole frames 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.

PART II - WATER

- ALL WATER MAINS SHALL BE D.I.P. CLASS 54 OR POLYVINYL CHLORIDE (PVC) PIPE MEETING THE REQUIREMENTS OF AWWA C900 DR18, PRESSURE CLASS 150 AND THE HOWARD COUNTY DESIGN MANUAL VOL. IV - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND SUBSEQUENT AMENDMENTS THERETO.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS.
- ALL DUCTILE IRON PIPES TO BE USED IN THE PUBLIC WATER SYSTEM SHALL BE CLASS 54, DUCTILE IRON FITTINGS SHALL MEET THE REQUIREMENTS OF THE HOWARD COUNTY DESIGN MANUAL VOL. IV - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND SHALL BE EXTERIOR EPOXY COATED IN ACCORDANCE WITH AWWA C-116.
- ALL WATER HOUSE CONNECTIONS SHALL BE COPPER MEETING THE REQUIREMENTS OF AND CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOL. IV - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- ALL FIRE HYDRANT LEADS, INCLUDING THE TEE, SHALL BE DUCTILE IRON CLASS 54 MEETING THE REQUIREMENTS OF AND CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOL. IV - STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- THE FOLLOWING NOTE IS ADDED TO HOWARD COUNTY STANDARD DETAIL W-2.22, BUTTRESSES AND ANCHORAGES FOR VERTICAL BENDS "WHEN ANCHORING PVC PIPE THE STRAPPING IN CONTACT WITH THE PIPE SURFACE SHALL BE 1" WIDE BY 1/4" INCH THICK STEEL. THE REMAINING PORTION OF THE WRAP SHALL BE REINFORCING BAR SIZE IN ACCORDANCE WITH THE PERTINENT CHART SHOWN ON THE DETAIL."

NOTE: ALL WATER AND SEWER MAINS TO BE PVC UNLESS NOTED ON PLANS OTHERWISE

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 214 OF THE STANDARD SPECIFICATIONS AND WITH FINAL ROAD CONSTRUCTION PLANS F-06-008

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

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

John K. Robertson 8/25/06
John K. Robertson 8/25/06

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 28559, Expiration Date: 7-22-13

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

8-17-06

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

8/31/06

FSH Associates
Engineers Planners Surveyors
3339 Howard Lane Elkridge, MD 21075
Tel: 410-587-5200 Fax: 410-798-1562
E-mail: info@fsha.biz



DESIGN BY:	PS	KCP	G	AS-BUILT	12/29/13
DRAWN BY:	AY	881	5	ADD UTILITY CONNECTIONS FOR LOT 24	9-12-11
CHECKED BY:	ZYF	KCI	4	ASBUILT REVISIONS	9-7-10
DATE:	09, 2006	BE1	3	ELIMINATE WATER NOTES 11 & 12	2/20/10
		BE1	2	REVISE WATER MAINS FROM D.I.P. TO PVC	10-28-09
		BE1	1	MODIFY SEWER MAINS TO REDUCE DEPTH	1/22/09
		BY	NO.	REVISION	DATE

COVER SHEET

300' SCALE MAP NO. 38 BLOCK NO. 14

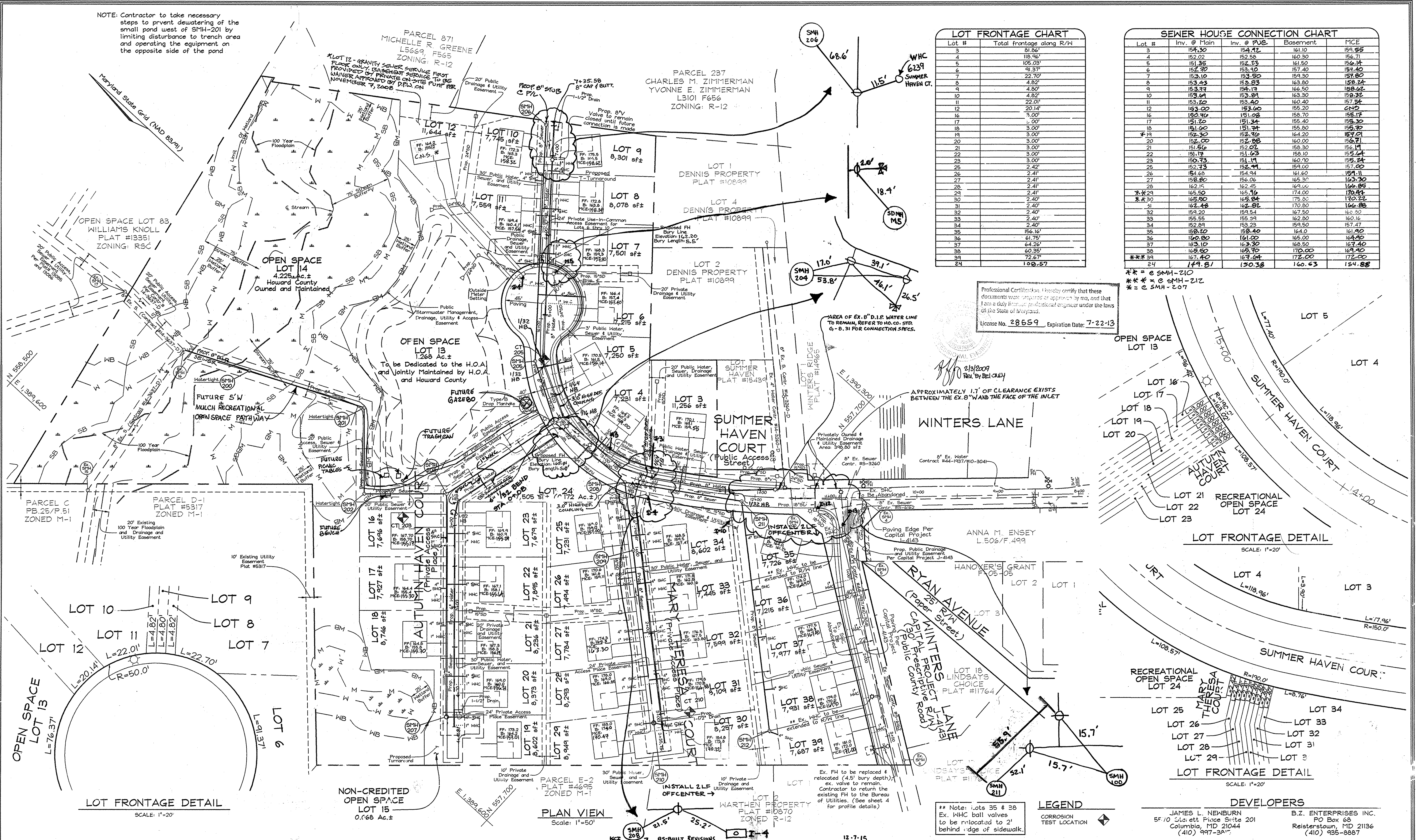
TAX MAP 3P GRID 14
1ST ELECTION DISTRICT

SUMMER HAVEN
Phase One and Two
LOTS 3 THRU 11, OPEN SPACE LOTS 12 THRU 15
AND LOTS 16 THRU 39
A Resubdivision of Summer Haven Lot 2, Plat #15439
CONTRACT NO. 14-4265-D

SCALE:
As Shown

SHEET NO.
1 of 5

NOTE: Contractor to take necessary steps to prevent dewatering of the small pond west of SMH-201 by limiting disturbance to trench area and operating the equipment on the opposite side of the pond

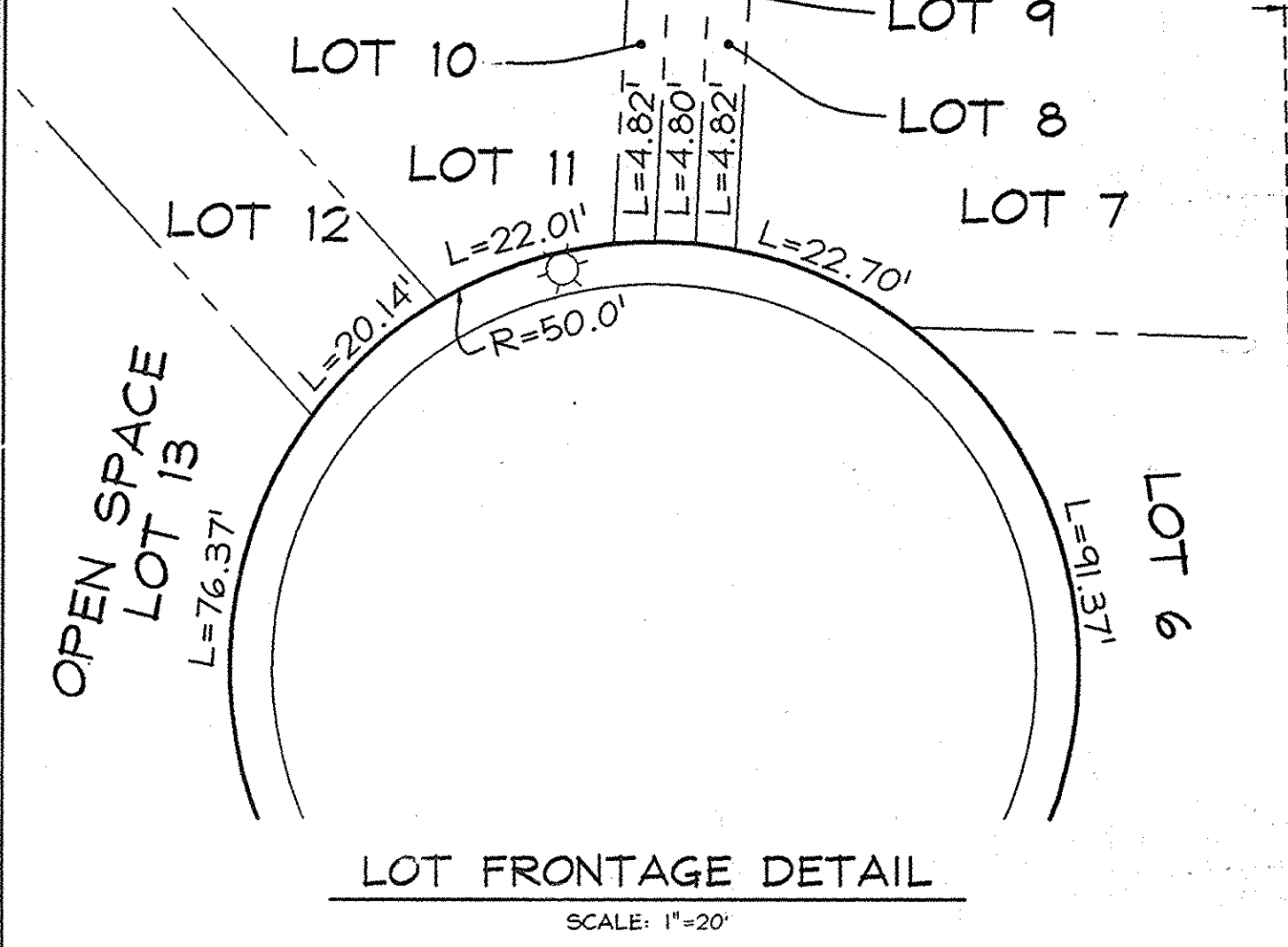
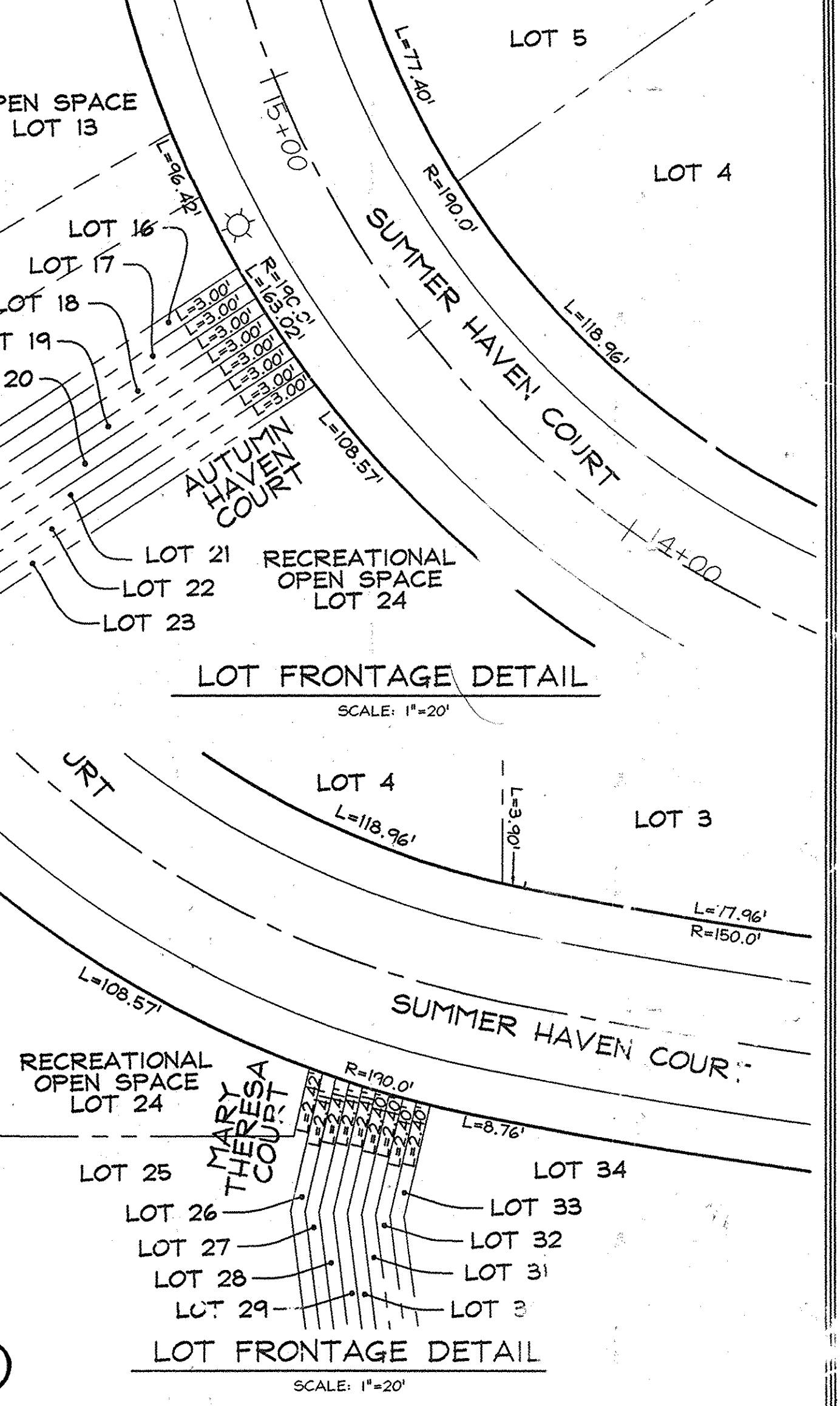


LOT FRONTAGE CHART	
Lot #	Total frontage along R/W
3	81.86'
4	118.96'
5	105.03'
6	91.37'
7	22.70'
8	4.82'
9	4.80'
10	4.82'
11	22.01'
12	20.14'
16	3.00'
17	3.00'
18	3.00'
19	3.00'
20	3.00'
21	3.00'
22	3.00'
23	3.00'
24	2.41'
25	2.41'
26	2.41'
27	2.41'
28	2.41'
29	2.41'
30	2.40'
31	2.40'
32	2.40'
33	2.40'
34	2.40'
35	156.16'
36	61.75'
37	64.26'
38	60.35'
39	72.67'
24	102.57'

SEWER HOUSE CONNECTION CHART				
Lot #	Inv. @ Main	Inv. @ PVE	Basement	MCE
3	154.30	154.42	161.10	154.55
4	152.02	152.58	160.30	156.71
5	151.25	152.23	161.50	156.14
6	152.70	153.10	157.40	157.40
7	153.10	153.50	159.30	157.80
8	153.43	153.83	163.80	158.24
9	153.77	154.17	166.50	158.62
10	153.81	154.21	163.30	158.32
11	153.20	153.60	160.40	157.54
12	153.00	153.40	155.20	157.00
16	150.70	151.02	158.70	155.17
17	151.20	151.54	155.40	155.30
18	151.60	151.94	155.80	155.72
19	152.30	152.70	164.20	157.01
20	152.00	152.36	160.00	156.71
21	151.50	151.82	158.30	156.14
22	151.17	151.63	158.10	155.64
23	150.73	151.17	160.70	155.24
24	151.60	152.00	154.00	154.11
25	152.30	152.70	161.60	154.11
26	152.41	152.81	165.30	154.11
27	152.80	153.20	162.00	154.11
28	152.41	152.81	162.00	154.11
29	152.41	152.81	162.00	154.11
30	152.40	152.80	162.00	154.11
31	152.40	152.80	162.00	154.11
32	152.40	152.80	162.00	154.11
33	152.40	152.80	162.00	154.11
34	152.40	152.80	162.00	154.11
35	156.16	156.16	164.00	161.40
36	61.75	61.75	165.00	164.40
37	64.26	64.26	165.50	167.40
38	60.35	60.35	170.00	168.40
39	72.67	72.67	172.00	172.00
24	149.81	150.38	160.63	154.88

Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 28659 Expiration Date: 7-22-13

** = @ SMH-210
 *** = @ SMH-212
 * = @ SMH-207



BY	NO.	REVISION	DATE
BEI	6	REVISE LOCATION OF WMC - SHC LOT 24	12-22-11
BEI	5	ADD UTILITY CONNECTIONS FOR LOT 24	9-12-11
KCI	4	AS-BUILT REVISIONS	9-7-10
BEI	3	ESTIMATE PROF. 8" W/ FROM STA 0+00 TO 0+71.84	2-26-10
BEI	2	REVISE WATER MAINS FROM D.I.P. TO P.V.C.	10-28-09
BEI	1	MODIFY SEWER MAINS TO REDUCE DEPTH	1/22/09

FINAL WATER AND SEWER PLAN
 600' SCALE MAP NO. 38 BLOCK NO. 14

DEVELOPERS
 JAMES L. NEWBURN
 5F10 Sittett Pines Suite 201
 Columbia, MD 21044
 (410) 997-3811

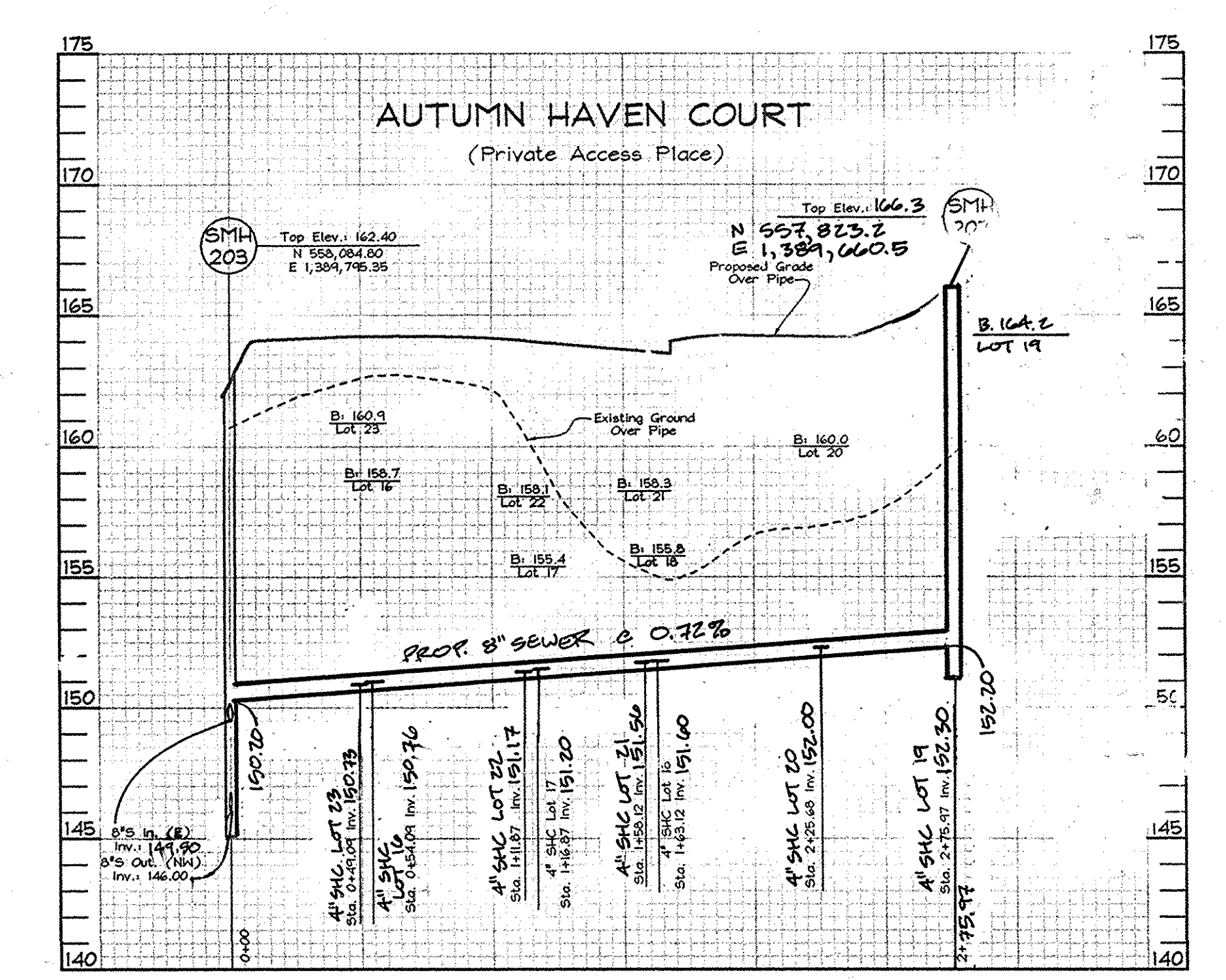
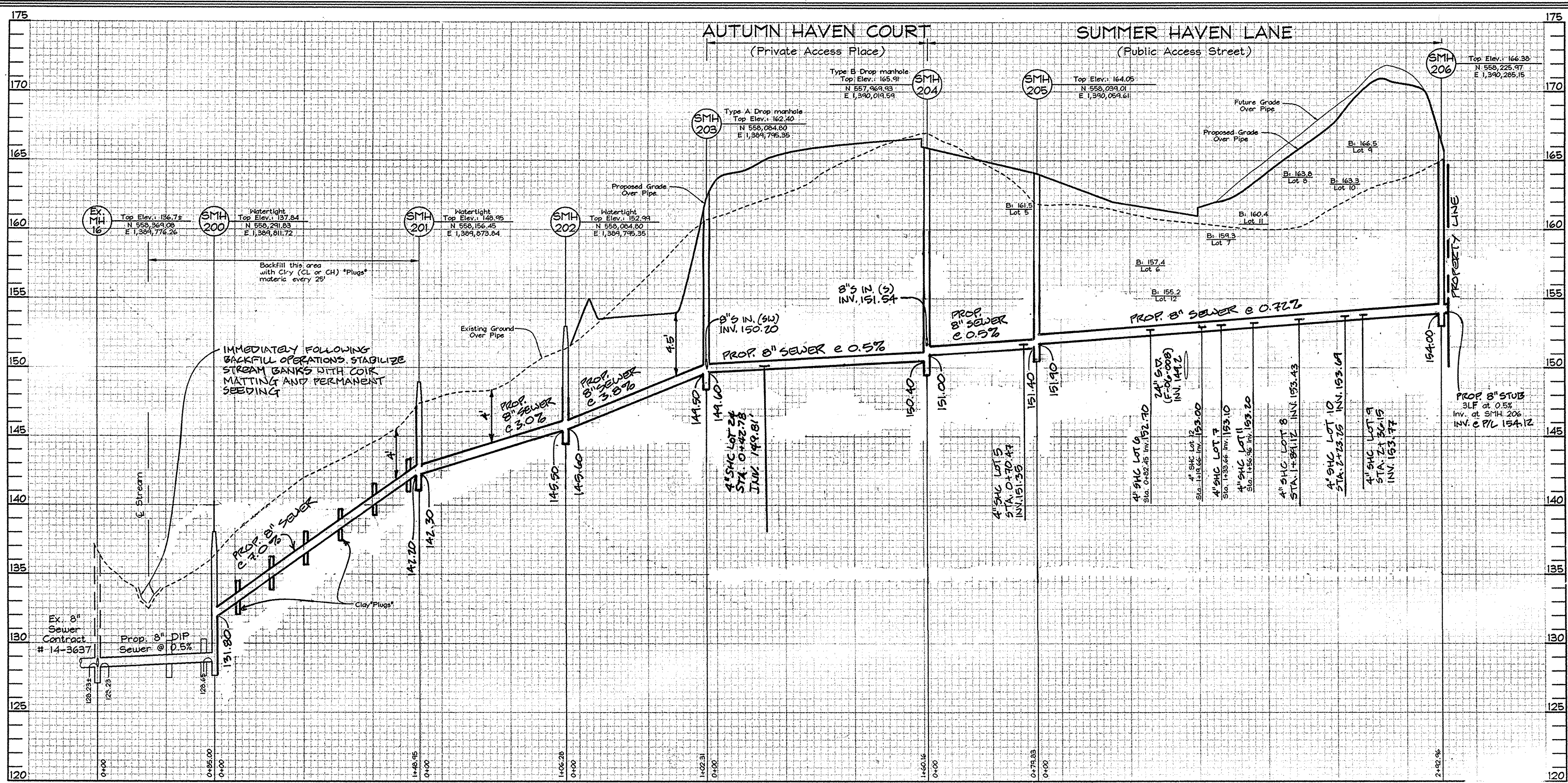
B.Z. ENTERPRISES INC.
 PO Box 68
 Reisterstown, MD 21136
 (410) 935-8887

SCALE: As Shown
 SHEET NO. 2 OF 5

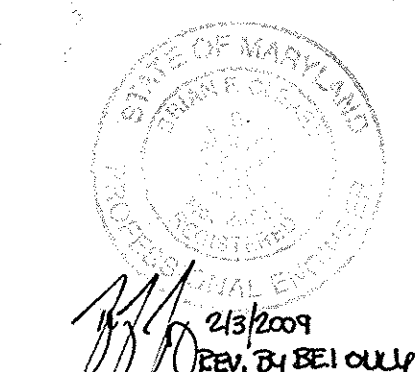
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

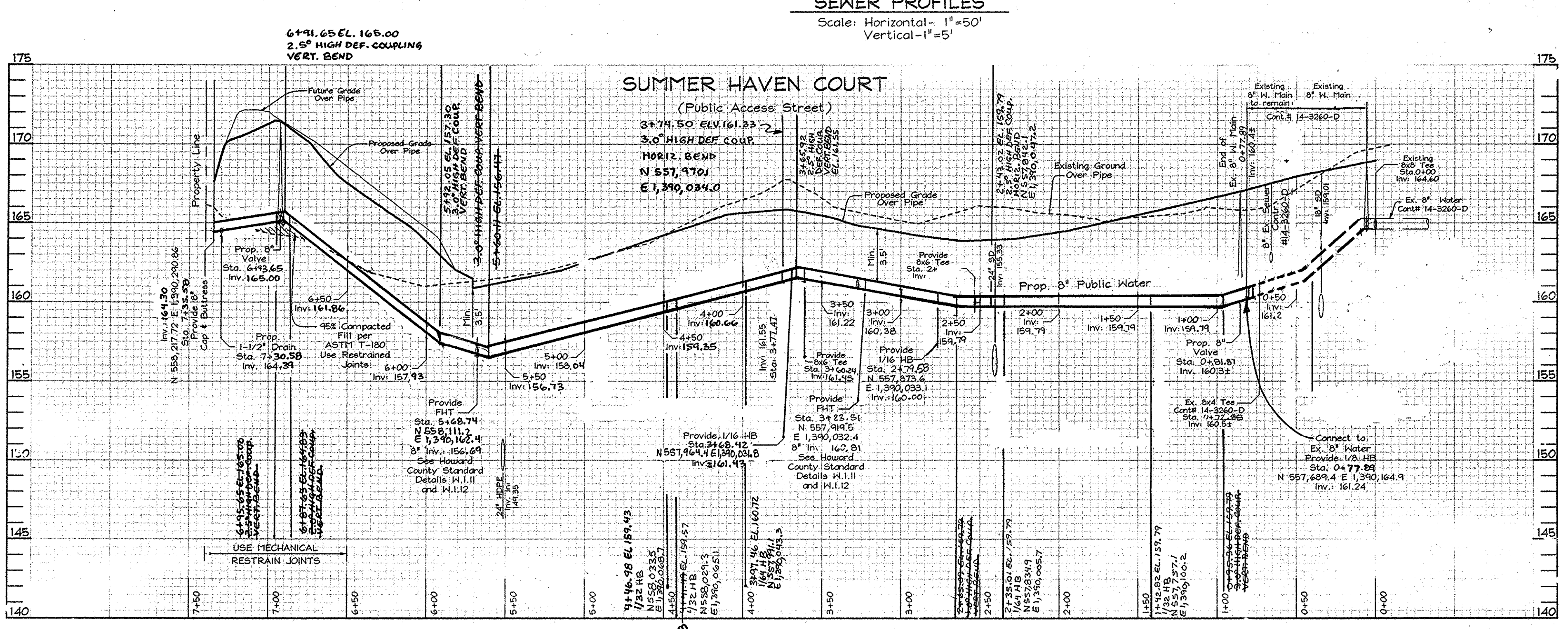
FSH Associates
 Engineers Planners Surveyors
 6339 Howard Lane Ellicott City, MD 21115
 Tel: (410) 567-5200 Fax: (410) 796-1152
 E-mail: info@fsa.biz



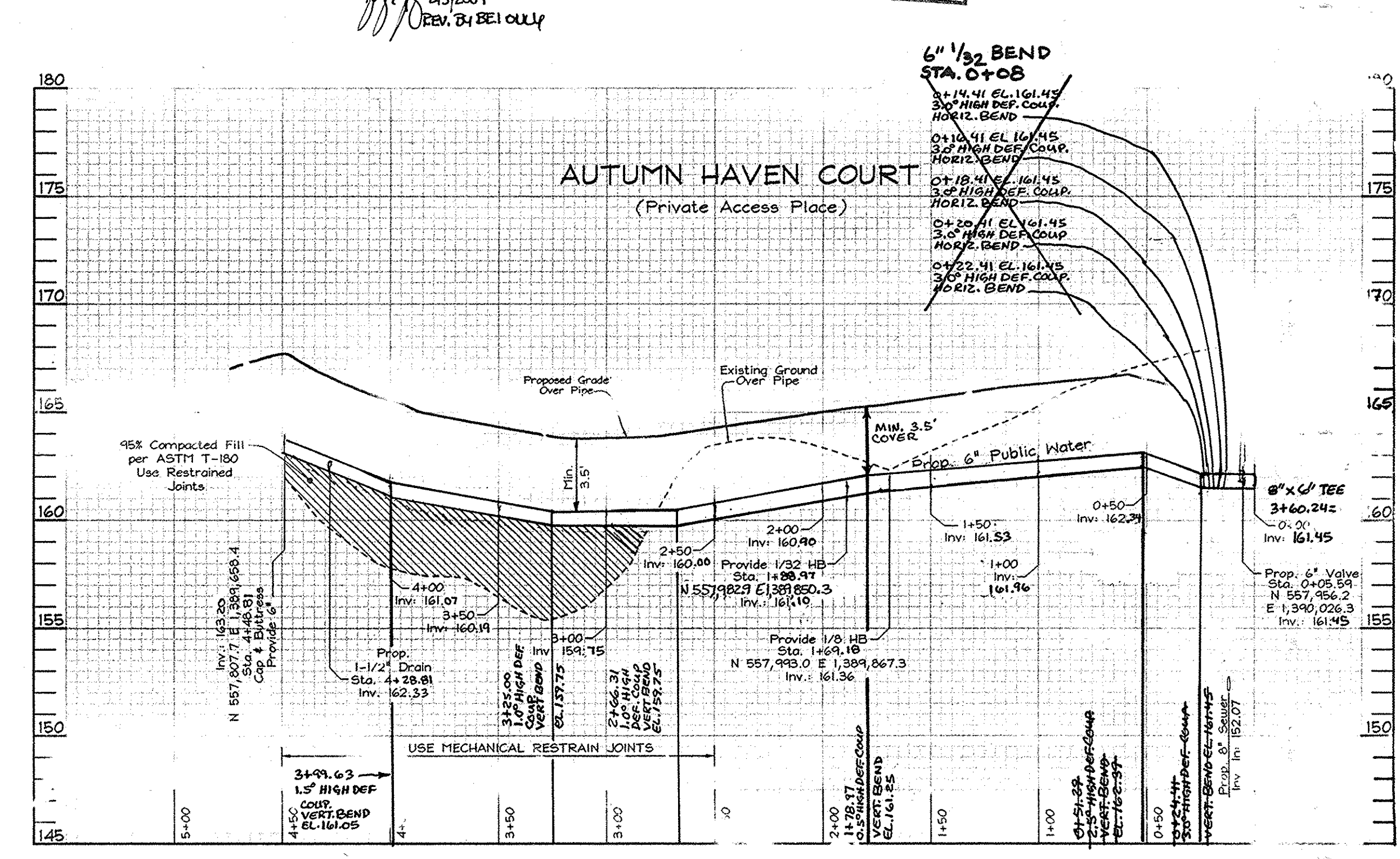
SEWER PROFILES
Scale: Horizontal-1"=50'
Vertical-1"=5'



Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 28 559, Expiration Date: 7-22-13



WATER PROFILES
Scale: Horizontal-1"=50'
Vertical-1"=5'



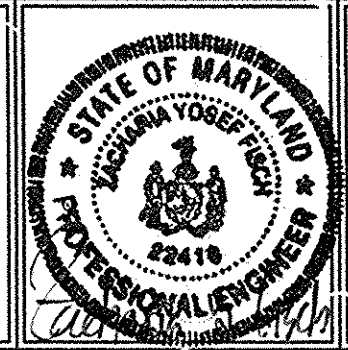
WATER PROFILES
Scale: Horizontal-1"=50'
Vertical-1"=5'

DEVELOPERS

JAMES L. NEWBURN, 5570 Sterett Place Suite 201, Columbia, MD 21044 (410) 997-8815
E Z ENTERPRISES INC., PO Box 68, Reisterstown, MD 21136 (410) 935-8887

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND
DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND
8-17-06
DATE

FSH Associates
Engineers Planners Surveyors
6339 Howard Lane Elkridge, MD 21075
Tel: 410-567-5200 Fax: 410-796-1562
e-mail: info@fsha.biz



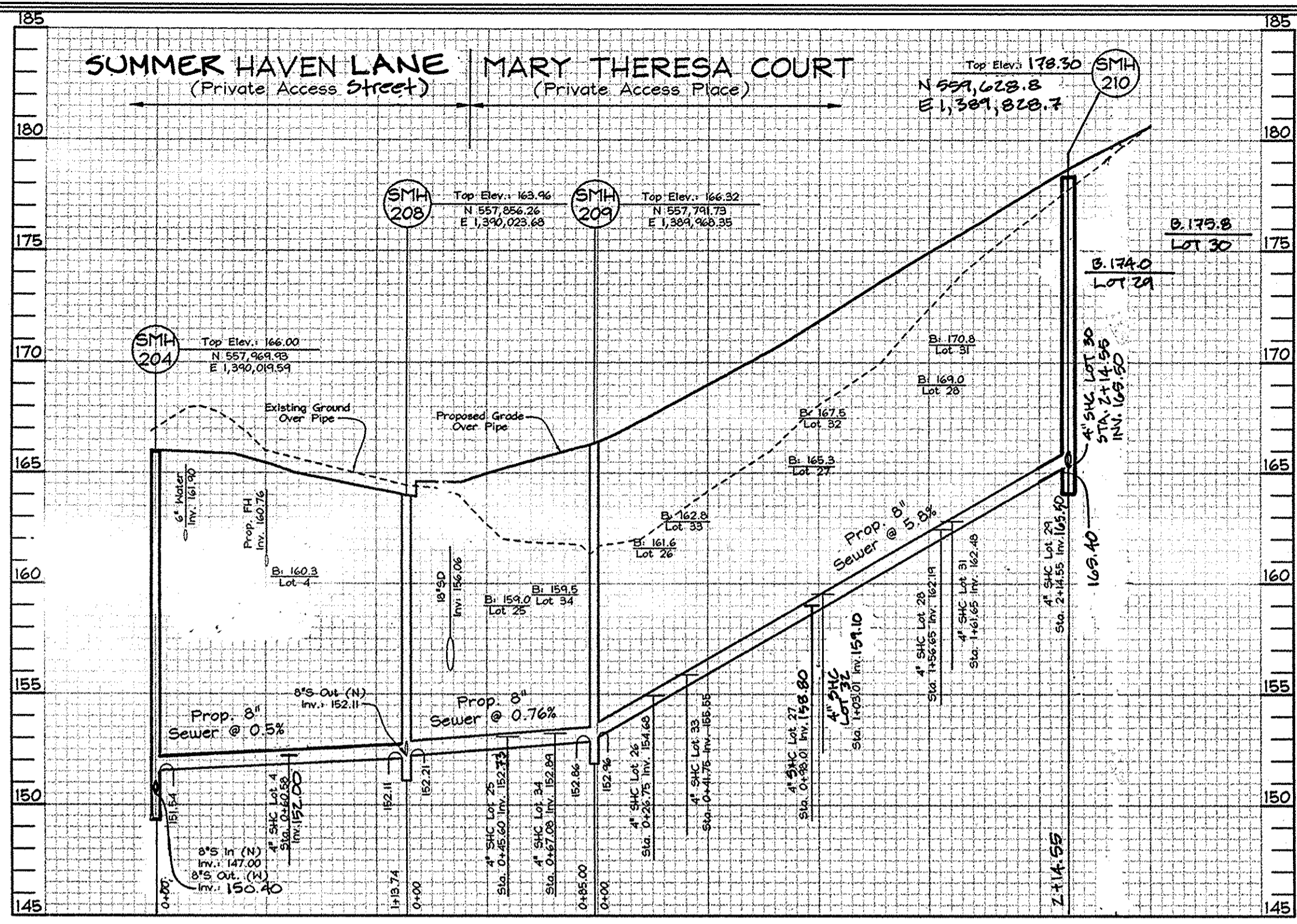
DESIGN BY: PS
DRAWN BY: AY
CHECKED BY: ZYF
DATE: Aug. 09, 2006

BY NO.	REVISION	DATE
BEI 6	REVISE PROFILE TO SHOW NEW SHC ON LOT 24	12-22-11
BEI 5	ADD UTILITY CONNECTIONS FOR LOT 24	10-12-11
KCI 4	ASBUILT REVISIONS	9-7-10
BEI 3	ELIMINATE PROP 8" W/FROM STA 0+00 TO 0+72.87 SUMMER HAVEN COURT	2-26-10
BEI 2	REVISE WATER MAINS FROM D.I.P TO P.V.C	10-29-09
BEI 1	MODIFY SEWER MAINS TO REDUCE DEPTH	11/22/09

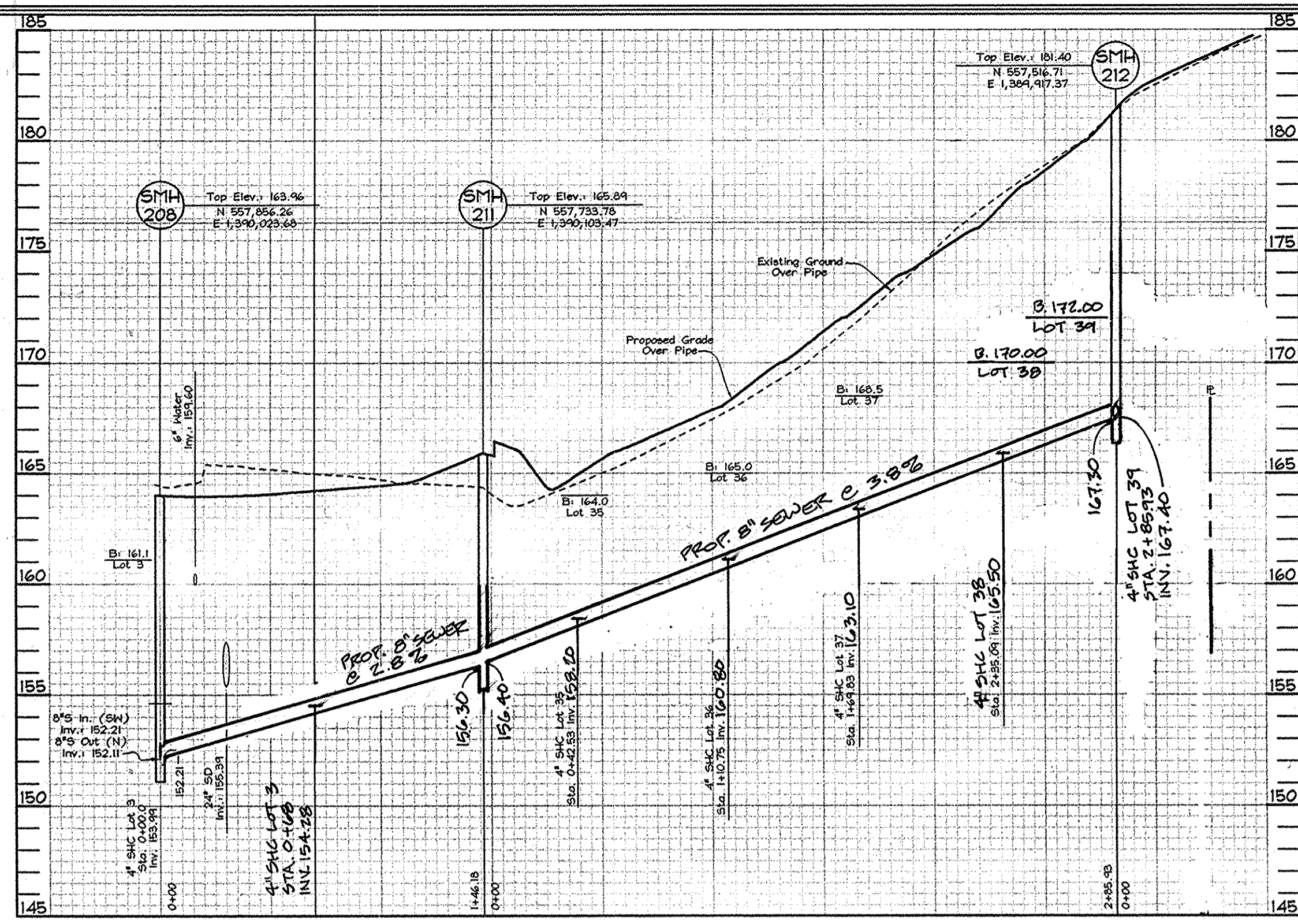
FINAL WATER AND SEWER PROFILE
600' SCALE M/P NO.: 3 BLOCK NO.: 14

SUMMER HAVEN
Phase One and Two
LOTS 3 THRU 11, OPEN SPACE LOTS 12 THRU 15 AND LOTS 16 THRU 39
A Resubdivision of Summer Haven Lot 2, Plat #15439
CONTRACT NO. 14-4265-D
TAX MAP: 38 GRID 14
1ST ELECTION DISTRICT
PARCELS 718, 721 & 238
HOWARD COUNTY, MARYLAND

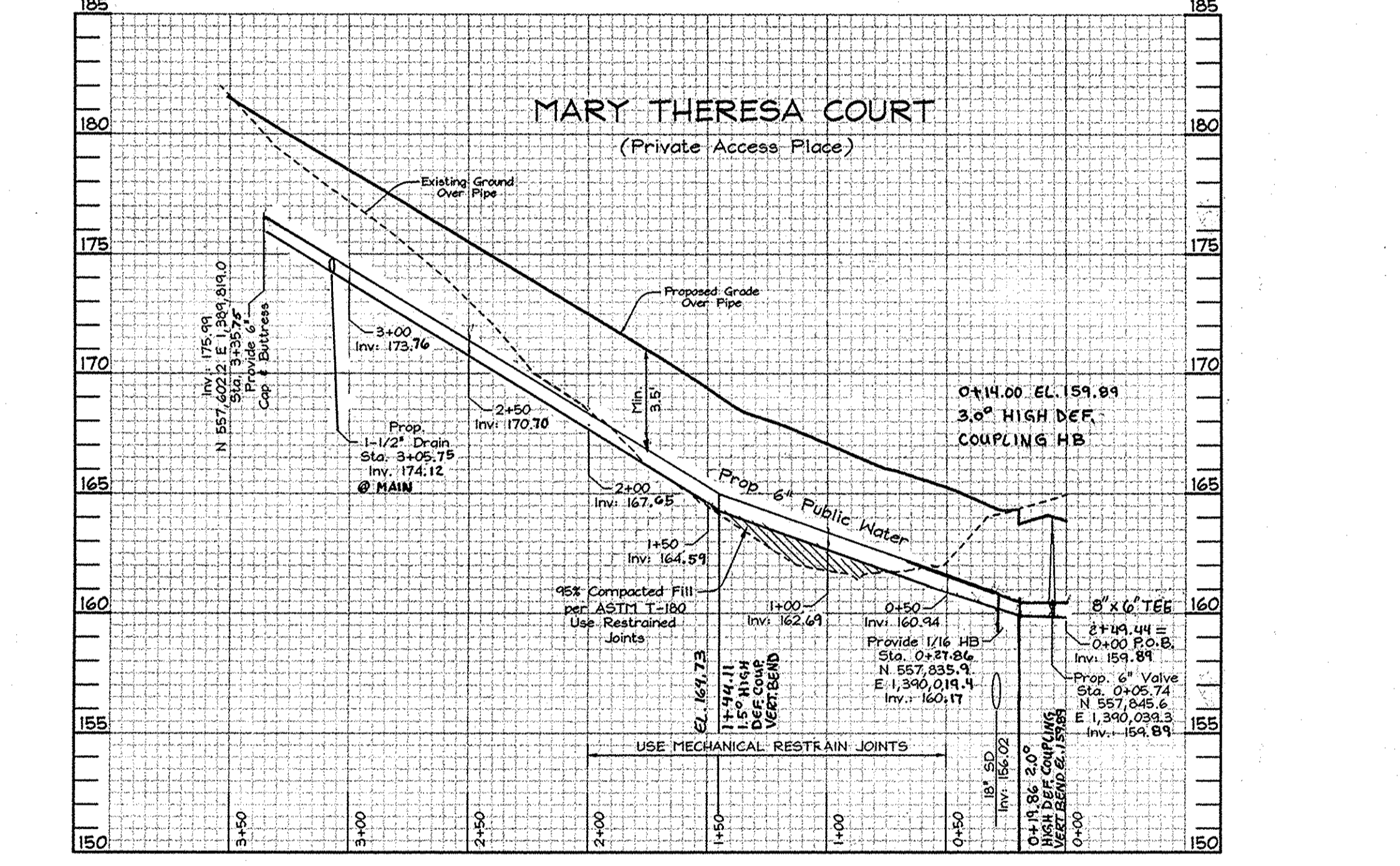
SCAI E: As Shown
SHEET NO: 3 OF 5



SEWER PROFILES
Scale: Horizontal-1"=50'
Vertical-1"=5'

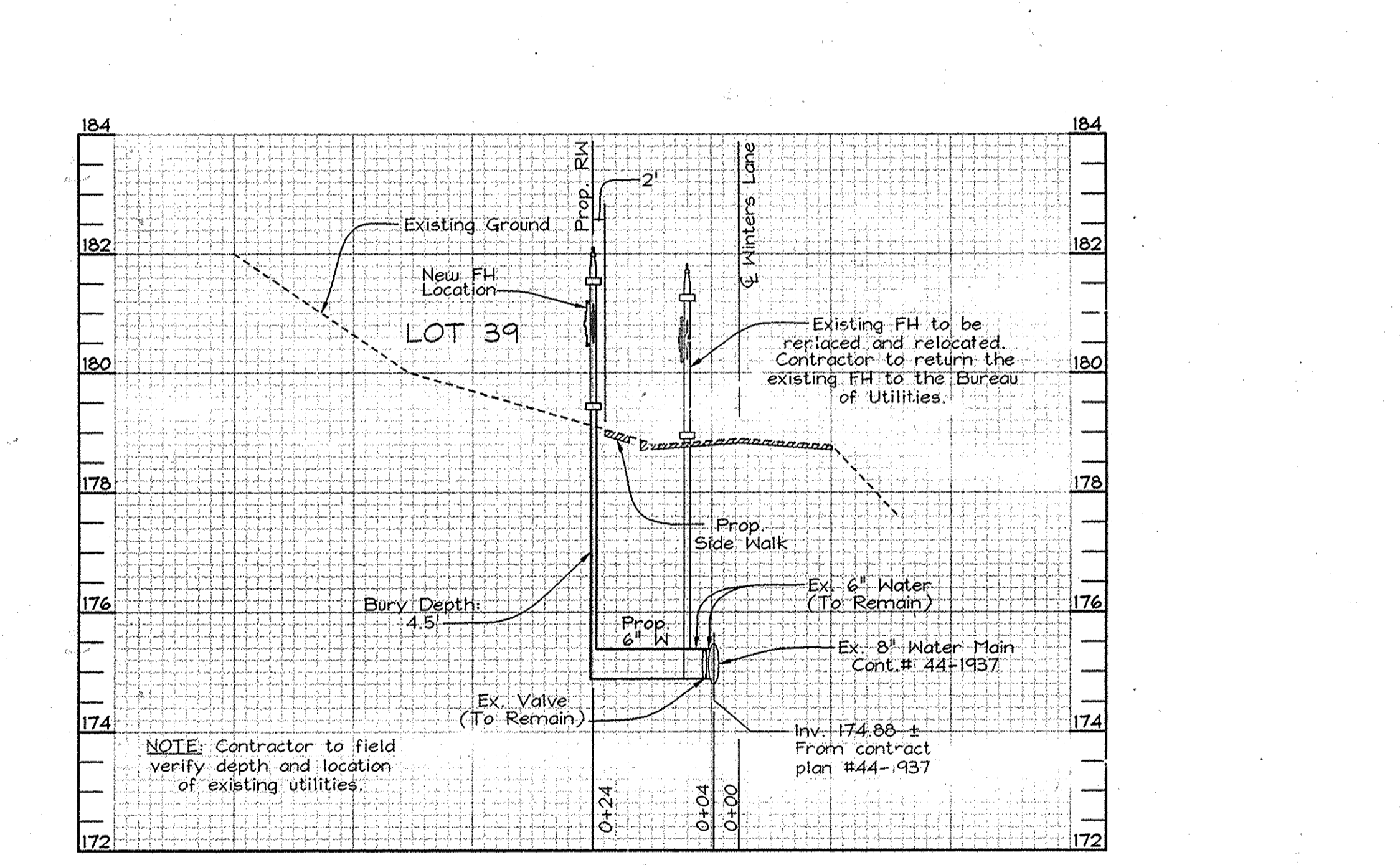


SEWER PROFILES
Scale: Horizontal-1"=50'
Vertical-1"=5'



WATER PROFILES
Scale: Horizontal-1"=50'
Vertical-1"=5'

NOTE: Ductile iron pipe with restrained joints shall be used for all sections of water mains in fill areas.



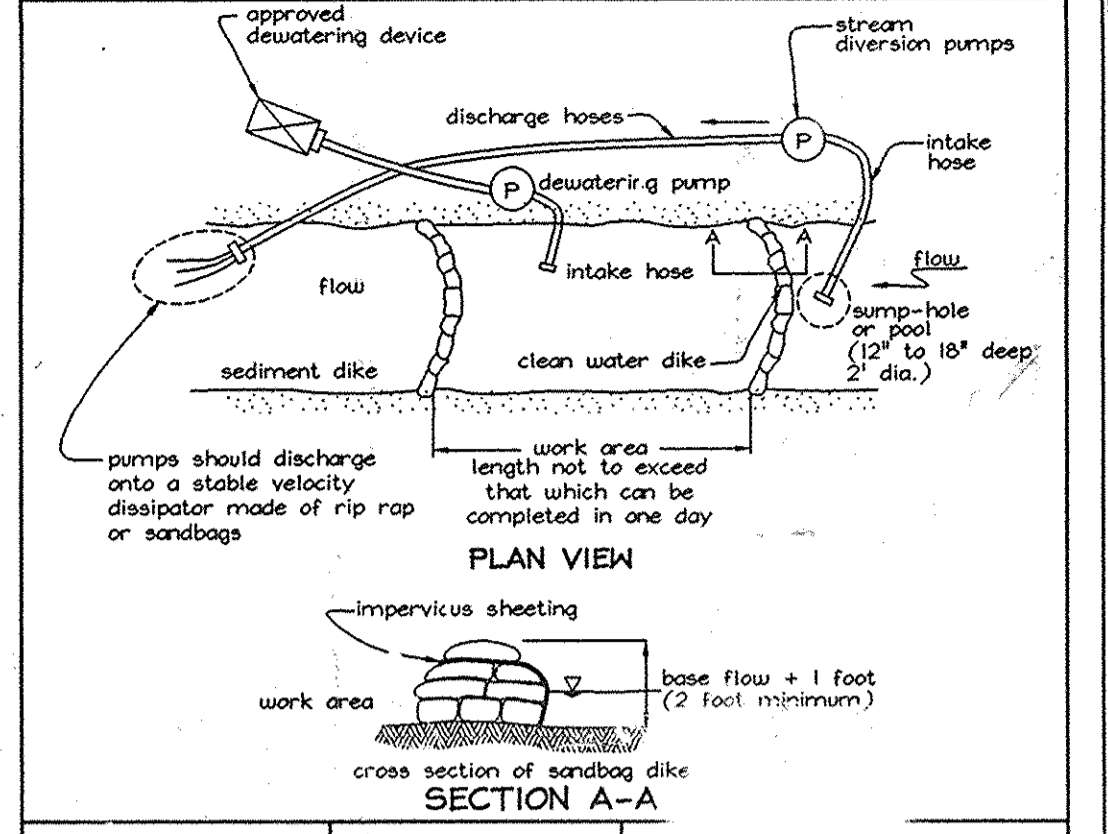
EX. FH RELOCATION & REPLACEMENT PROFILE
Scale: Horizontal-1"=20'
Vertical-1"=2'

NOTE: See Ho. Co. Std. Detail W.1.11 for more details.

BEST MANAGEMENT PRACTICES

- FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS
- NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, OR 100-YEAR FLOODPLAINS.
 - PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOOD PLAIN.
 - DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS HASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELTERIOUS SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED, USE CLEAN MATERIAL FREE OF HASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELTERIOUS SUBSTANCE.
 - PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
 - REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, OR WATERWAYS, OR PERMANENT MODIFICATION OF THE 100-YEAR FLOODPLAIN IN EXCESS OF THAT LOST UNDER THE ORIGINALLY AUTHORIZED STRUCTURE OR FILL.
 - RECTIFY ANY NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS OR 100-YEAR FLOODPLAIN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.
 - ALL STABILIZATION IN THE NONTIDAL WETLAND AND NONTIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES:
ANNUAL RYE GRASS (*Lolium multiflorum*)
MILLET (*Seteria italica*)
BARLEY (*Hordeum sp.*)
OATS (*Avena sp.*)
RYE (*Secale cereale*)
- THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS AND WATERWAYS DIVISION, KENTUCKY STATE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES. THE NWSA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
- AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST-CONSTRUCTION GRADES AND ELEVATIONS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.
 - TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM.
 - USE 1 WATERWAYS IN STREAM WORK SHALL BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.
 - STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.
 - CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPOUND WATER.

DETAIL I.2: PUMP-AROUND PRACTICE



MGMC 2.1: Pump-Around Practice
REVISED NOVEMBER 2000
PAGE 12-3

- DESCRIPTION:** The work shall consist of installing a temporary pump around and supporting measures to divert flow around in-stream construction sites.
- IMPLEMENTATION SEQUENCE:** Sediment control measures, pump around, and associated channel and bank construction shall be completed in the following sequence:
- Construction activities including the installation of erosion and sediment control measures shall not begin until all necessary easements and/or right-of-ways have been acquired. All existing utilities shall be marked in the field prior to construction. The contractor is responsible for any damage to existing utilities that may result from construction and shall repair the damage at his/her own expense to the county's satisfaction.
 - The contractor shall notify the Maryland Department of the Environment or WMA sediment control inspector at least 5 days before beginning construction. Additionally, the contractor shall inform the local environmental protection and resource management inspection and enforcement division and the provider of local utilities a minimum of 48 hours before starting construction.
 - The contractor shall conduct a pre-construction meeting on site with the WMA sediment control inspector, the county project manager, and the engineer to review limits of disturbance, erosion and sediment control requirements, and the sequence of construction. (The contractor shall stake out all limits of disturbance prior to the pre-construction meeting.) The participant will also designate the contractor's staging areas and flag all trees within the limits of disturbance which will be removed for construction access. Trees shall not be removed within the limit of disturbance without approval from the WMA or local authority.
 - Construction shall not begin until all sediment and erosion control measures have been installed and approved by the engineer and the sediment control inspector. The contractor shall stay within the limits of the disturbance as shown on the plans and minimize disturbance within the work area whenever possible.
 - Upon installation of all sediment control measures and approval by the sediment control inspector and the local environmental protection and resource management inspection and enforcement division, the contractor shall begin work at the upstream section and proceed downstream beginning with the establishment of stabilized construction entrances. The sequence of construction must be followed unless the contractor gets written approval for deviation from the WMA or local authority. The contractor shall only begin work in an area which can be completed by the end of the day (including grading adjacent to the channel). At the end of each work day, the work area must be stabilized and the pump around removed from the channel. Work shall not be conducted in the channel during rain events.
 - Sandbag dikes shall be situated at the upstream and downstream ends of the work area as shown on the plans, and stream flow shall be pumped around the work area. The pump shall discharge onto a stable velocity dissipater made of riprap or sandbags.
 - Water from the work area shall be pumped to sediment filters, measure such as a sediment bag. The measures shall be located such that the water drains back into the channel below the downstream sandbag dike.
 - Traversing a channel reach with equipment where no work is proposed should be avoided. If equipment has to traverse such a reach for access to another area, then timber mats or similar measures shall be used to minimize disturbance to the channel. Temporary stream crossings shall be used only when necessary and only where noted on the plans or specified by the engineer.
 - All stream restoration measures shall be installed as indicated by the plans and all banks shall be stabilized with the grading plans and typical cross-sections. All grading must be permanently stabilized at the end of each day with seed and mulch or seed and mulch as specified on the plans.
 - After an area is completed and stabilized, sandbag diversions, the water main, and sediment filtering measures shall be removed to the next work area. This shall be done by first opening the downstream sandbag dike to the new upstream sandbag dike, which will divert the flow upstream.
 - A pump around shall be installed on any base-flow to the work area. This shall be done downstream and of the work area. The water should discharge around.
 - If a tributary is to be restored, or all main stream reaches the tributary control practices, shall follow the same sequence construction on the tributary as on the main stream. The tributary shall continue to be pumped around.
 - The contractor is responsible for providing erosion control devices until the sediment control inspector approves the work area.
 - After construction, all disturbed areas shall be revegetated.

SEQUENCE OF CONSTRUCTION FOR SEWER

- Obtain grading permit and MDE Nontidal Wetlands and Waterways Permit (200663194/06NT-3126) and contact Howard County Sediment Control Inspector and MDE Inspector to arrange a pre-construction meeting. Re-use and repair any sediment control devices installed under F-06-008 within the water and sewer construction area.
- Clear for and install silt fence and pump around practice. (2 days)
- Install Sewer Manhole 200 and 8" DIP Sewer from Existing Sewer Manhole 16 to Sewer Manhole 200, use Utility Crossing detail, this sheet, for stream crossing. (1 week)
- Stabilize stream banks with permanent weeded seed mix and soil matting. Proceed with remaining sewer construction. (2 weeks)
- Stabilize all disturbed areas with permanent seeding mix.

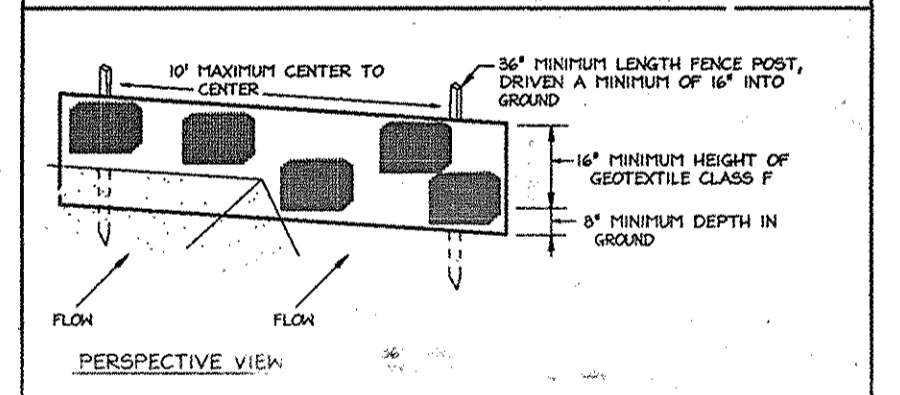
SEQUENCE OF CONSTRUCTION FOR WATER

- All work to be done within existing LOD per road construction drawings F-06-008. Connect to existing 8" water. Replace existing 8" water from Sta. 0+05.72 to Sta. 0+49.22. Reconnect to existing 8" water at Sta. 0+49.22. Existing 8" water to remain from Sta. 0+49.22 to Sta. 0+91. Prop. 8" valve at Sta. 0+90 to remain closed during construction.
- Proceed with remaining water construction.

NOTE: Following initial soil disturbance or any redistribution, permanent or temporary stabilization shall be completed within:

- 7 calendar days for all perimeter sediment control structures, dikes, silt fences and all slopes greater than 3:1.
- 14 calendar days for all other disturbed areas.

DETAIL 22 - SILT FENCE



CONSTRUCTION SPECIFICATIONS

- Fence posts shall be a minimum of 36" long, driven 16" minimum into the ground. Base posts shall be 1 1/2" x 1 1/2" square (minimum) cast of 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 100 pound per linear foot.
- Geotextile shall be installed according to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:
Tensile Strength: 50 lbs/in (min) Test: MFT 509
Tensile Modulus: 20 lbs/in (min) Test: MFT 509
Flow Rate: 0.3 gal ft² /minute (max.) Test: MFT 522
Filtering Efficiency: 75% (min.) Test: MFT 511
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt fence site shall be marked and approved to prevent sediment bypass.

DEVELOPERS
JAMES L. HEWIBURN
5570 Sterrett Place Suite 201
Columbia, MD 21044
(410) 997-3815
B.Z. ENTERPRISES INC.
PO Box 68
Reisterstown, MD 21136
(410) 935-8887

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Ruth Berman
CHIEF, BUREAU OF UTILITIES
8-17-06
DATE

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

FSH Associates
Engineers Planners Surveyors
6339 Howard Lane Elkridge, MD 21075
Tel: 410-567-5200 Fax: 410-796-1562
E-mail: info@fsha.biz

STATE OF MARYLAND
PLANNING & ZONING COMMISSION
2/3/2009
REV. BY 2011 ONLY

DESIGN BY:	PS		
DRAWN BY:	AY		
CHECKED BY:	ZTF		
DATE:	Aug. 09, 2008		
BY:	NO.	REVISION	DATE
BEI	2	REVISE WATER MAINS FROM D.I.P TO PVC	10-28-09
BEI	1	MODIFY SEWER MAINS TO REDUCE DEPTH	1/22/09

FINAL WATER AND SEWER PROFILE AND DETAILS
600' SCALE MAP NO.: 38 BLOCK NO.: 14

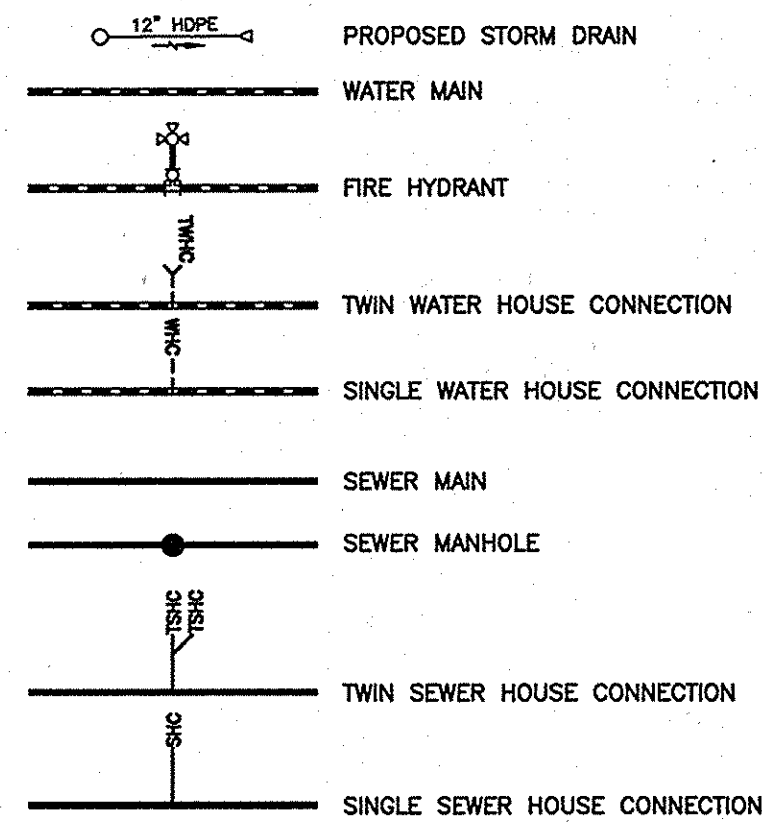
SUMMER HAVEN
Phase One and Two
LOTS 3 THRU 11, OPEN SPACE LOTS 12 THRU 15
AND LOTS 16 THRU 39
A Resubdivision of Summer Haven Lot 2, Plat #15439
CONTRACT NO. 14-4265-D
TAX MAP 38 GRILL 14
1ST ELECTION DISTRICT
SCALE: As Shown
SHEET NO. 4 OF 5

SIMPSON MILL - PHASE 1

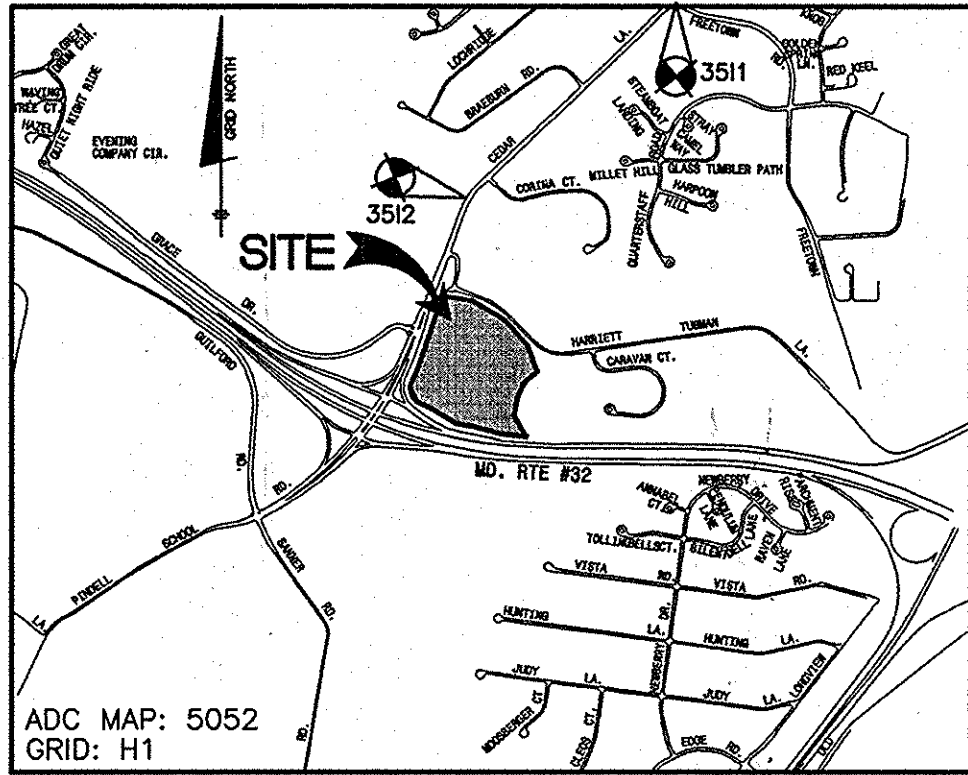
PUBLIC WATER AND PUBLIC SEWER CONSTRUCTION PLANS

CONTRACT NO. 34-4373-D

LEGEND



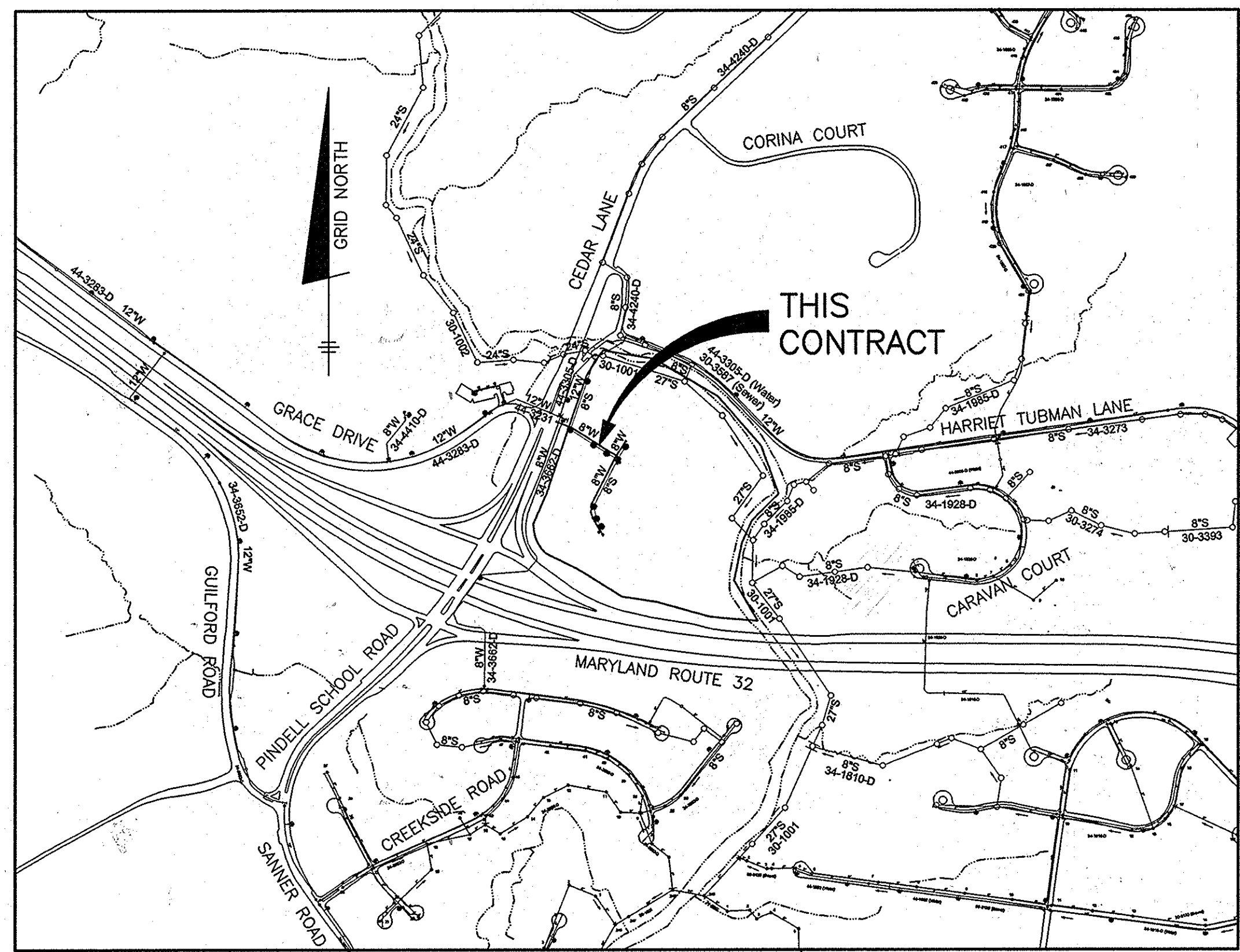
BENCH MARKS NAD'83	
HO. CO. #3511 STAMPED DISC SET ON TOP OF A 3' DEEP COLUMN OF CONCRETE 2" BELOW SURFACE N 557110.3963' E 1344693.6204' ELEV. 400.034'	
HO. CO. #3512 STAMPED DISC SET ON TOP OF A 3' DEEP COLUMN OF CONCRETE 2" BELOW SURFACE N 555100.7743' E 1342732.9971' ELEV. 329.719'	



QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUF./SUPPLIER
8" PVC C900 WATER (DR18)	967 LF	967 LF	DR18000	North American
FIRE HYDRANTS (INCL. 1"x6" TEE & VALVE)	2 EA	2 EA	B62B	AMERICAN DARLING
1.0" COPPER WHC	30 LF	30 LF	TYPE K	MULLER
1.5" COPPER WHC	476 LF	476 LF	TYPE K	MULLER
8"x8" TS&V	1 EA	1 EA	# 66255	SMITH BLAIR
8" PVC SEWER (SDR 35)	1226 LF	1226 LF	PVC SDR 35	North American
MANHOLES	9 EA	9 EA	PRECAST	CONTRACTOR PRECAST CORP
TYPE 'B' DROP MH	3 EA	3 EA	PRECAST	CONTRACTOR PRECAST CORP
4" PVC SHC	434 LF	434 LF	PVC SDR 35	North American

NAME OF UTILITY CONTRACTOR: CONSOLIDATED CONSTRUCTION SERVICES, INC.
SURVEY AND DRAFTING DIVISION AS-BUILT DATE:

WELL AND SEPTIC ABANDONMENT CHART		
ADDRESS	WELL/SEPTIC	ACTION
6701 CEDAR LANE	WELL	TO BE ABANDONED BY A LICENSED WELL DRILLER
	SEPTIC	1,000 Gp SEPTIC TANK PUMPED, CRUSHED & FILLED IN OCTOBER, 2011



SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET PUBLIC WATER & SEWER MAINS
2	PLAN VIEW PUBLIC WATER & SEWER MAINS
3	PROFILES PUBLIC WATER & SEWER MAINS

TYPE OF BUILDING:	SFA
NO. OF LOTS/PARCELS/UNITS:	30
NUMBER OF SHC'S:	30
NUMBER OF WHC'S:	31
DRAINAGE AREA:	MIDDLE PATENT
TREATMENT PLANT:	
WATER ZONE:	550
TEST GRADIENT:	700

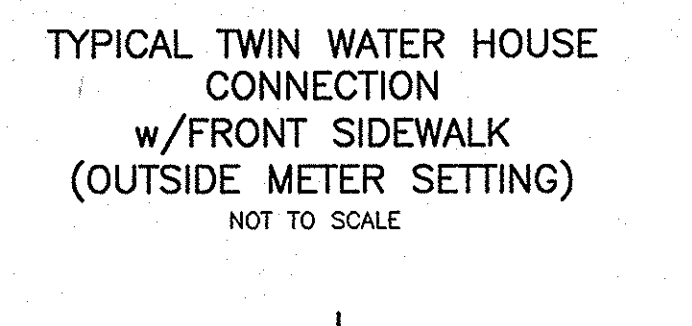
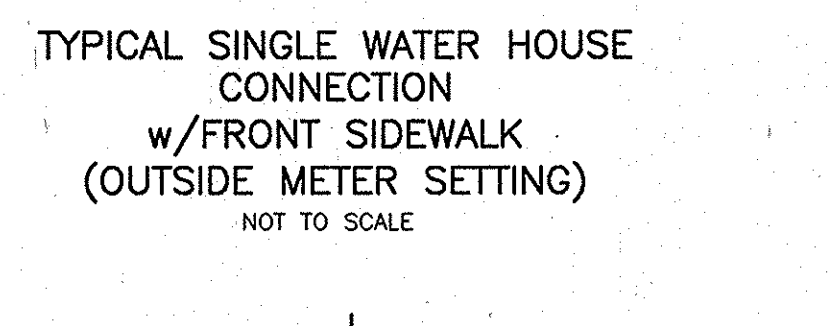
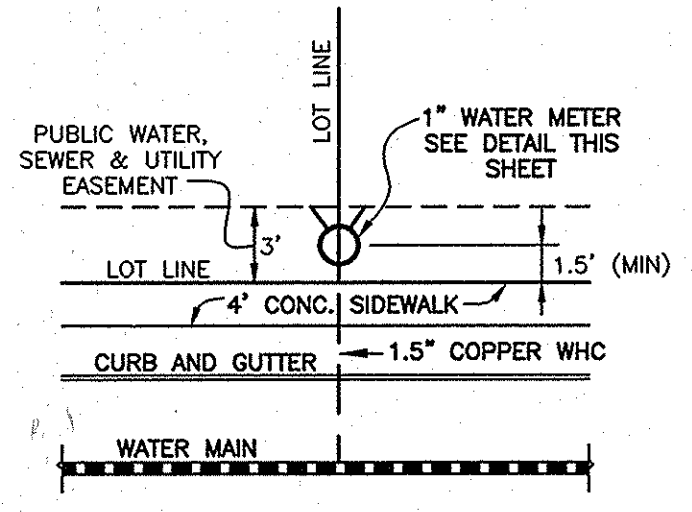
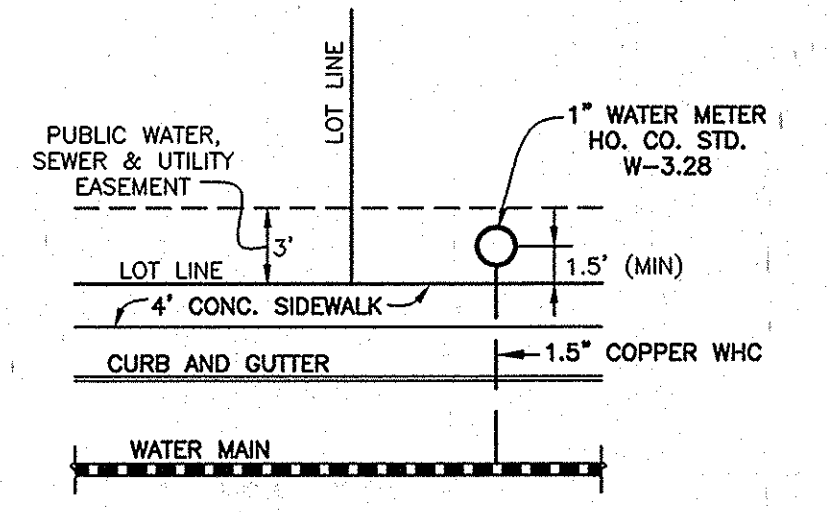
THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John R. Roberts 5/21/12
DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER SDP-12-015

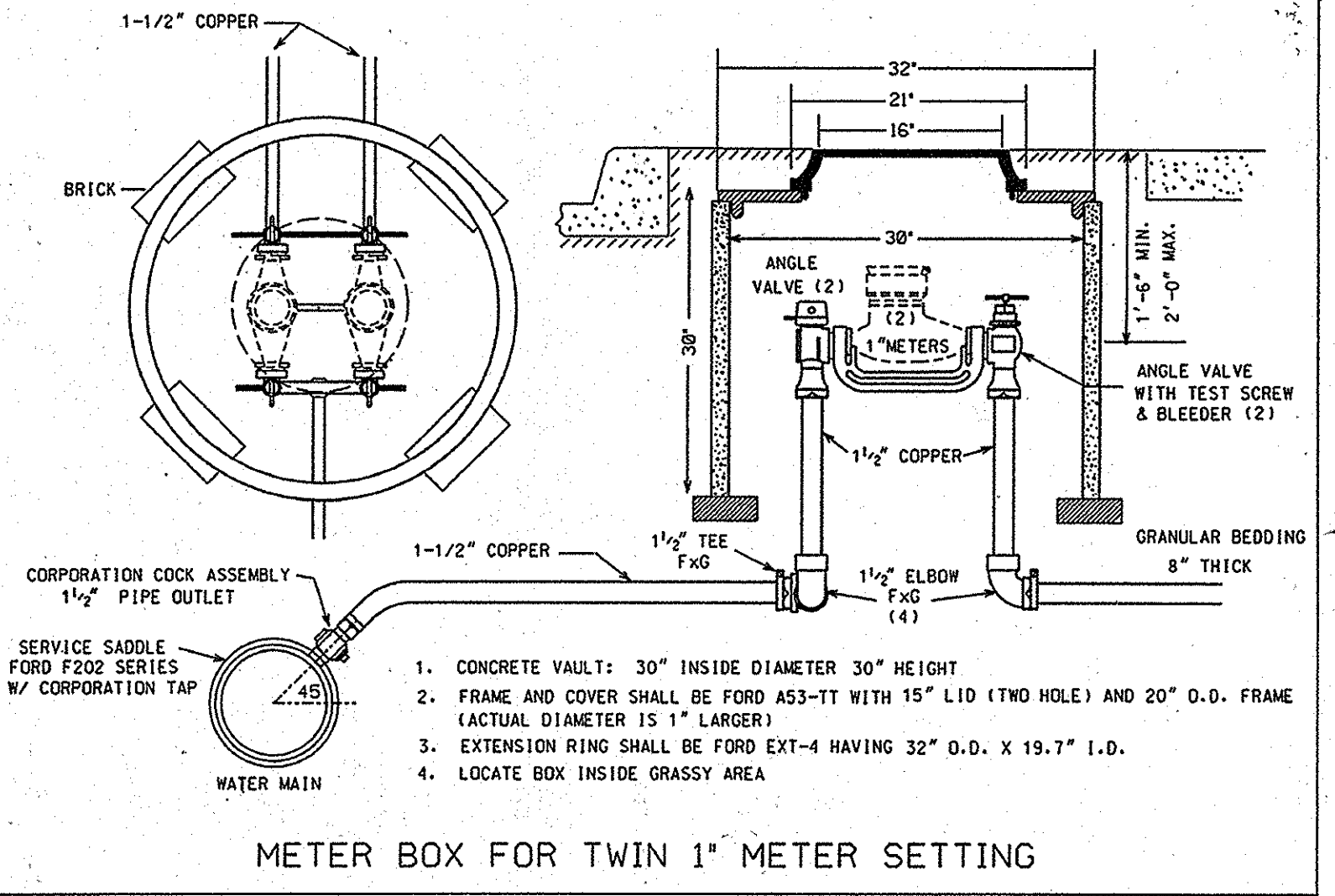
OWNER/DEVELOPER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLCOTT CITY, MARYLAND 21041
410-465-4244

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 28559, Expiration Date: 7-22-2013.



NOTE:
SEE HO. CO. STD. DETAIL W-3.28 FOR SINGLE OUTSIDE METER SETTING
SEE DETAIL BELOW FOR TWIN OUTSIDE METER SETTINGS

NOTE: HOUSE CONNECTIONS TO BE SIZED ACCORDINGLY:
SINGLE WHC = 1.5"
TWIN WHC = 1.5"
SINGLE SHC = 4"
TWIN SHC = 6"x4"



NOTE: HO. CO. STD. DETAILS C-5.01 THRU C-5.03 ARE NOT APPLICABLE; THIS PROJECT IS NOT WITHIN AN AREA IDENTIFIED AS HAVING CORROSIVE SOILS

GENERAL NOTES

- PART I**
- 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 IN MAY, 2007 BY SILL, ADCOCK & ASSOCIATES AND IN FEBRUARY, 2003 BY BENCHMARK ENGINEERING, INC.
 - 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. 3512 AND NO. 3511.
 - ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE 3512 AND 3511.
 - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED 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 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 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 (CONTRACTOR SERVICES).....410-637-8713
BGE (EMERGENCY).....410-685-0123
BUREAU OF UTILITIES.....410-313-4900
COLONIAL PIPELINE CO.....410-795-1390
MISS UTILITY.....1-800-257-7777
STATE HIGHWAY ADMINISTRATION.....410-531-5535
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 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(a) OF THE HOWARD COUNTY CODE.

PART II WATER

- ALL WATER MAINS TO BE D.I.P. CLASS 54 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF 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 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 THE STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
- FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIAL FOR USE. THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE TEST RECORDS RECEIVED.
- UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, SEVENTEEN (17) POUND SPECTRUM ANCHORS SHALL BE INSTALLED ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. MAGNESIUM ANCHORS SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSES. ZINC ANCHORS SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.

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 16" 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 MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL INDICATES THAT CELLAR CANNOT BE SERVED.

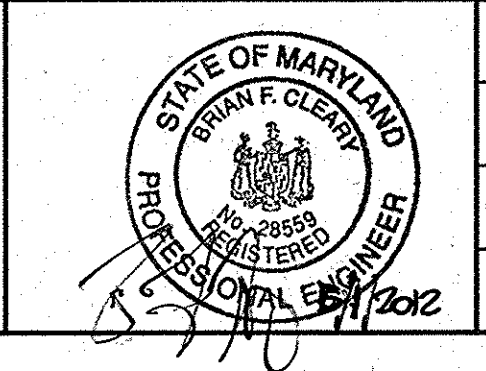
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

S. C. Chan 5/21/12
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

W. J. Williams 6/14/12
DATE

BENCHMARK
ENGINEERS AND SURVEYORS PLANNERS
ENGINEERING, INC.
6480 BALTIMORE NATIONAL PIKE & SUITE 418 A ELLCOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
60 THOMAS JOHNSON DRIVE & FREDERICK, MARYLAND 21702
(P) 301-371-3505 (F) 301-371-3508
WWW.BE-CO.ENG/ENGINEERING.COM



DES:	DBT/MCR		
DRAFT:	DBT/MCR		
CHK:	BFC	KCT	AS-BUILT
DATE:	5/2012	BEI	REVISE WATER AND SEWER MAIN QUANTITIES
BY:	NO.		
			REVISIONS
			DATE

TITLE SHEET
PUBLIC WATER & SEWER MAINS

600 SCALE MAP NO: 35 BLOCK: 23 200 SCALE MAP NO: 136

SIMPSON MILL - PHASE 1
LOTS 1 thru 18 AND 139 thru 150

TAX MAP: 35 - BLOCK: 23 - PARCEL: 116 - ZONED: R-SA-8 - ELECTION DISTRICT: 1
TAX MAP: 35 - BLOCK: 23 - PARCEL: 258, 476 - ZONED: POR - ELECTION DISTRICT: 1

CONTRACT NO. 34-4373-D

SCALE: AS SHOWN
SHEET NO. 1 OF 3

Lot	Dimension	Road
1	25.00	Green Mill Way
2	20.00	Green Mill Way
3	20.00	Green Mill Way
4	25.00	Green Mill Way
5	25.00	Green Mill Way
6	20.00	Green Mill Way
7	20.00	Green Mill Way
8	25.00	Green Mill Way
9	29.00	Green Mill Way
10	24.00	Green Mill Way
11	24.00	Green Mill Way
12	22.89	Green Mill Way
13	20.24	Green Mill Way
14	24.00	Green Mill Way
15	24.00	Green Mill Way
16	24.00	Green Mill Way
17	24.00	Green Mill Way
18	28.00	Green Mill Way
139	25.00	Green Mill Way
140	20.00	Green Mill Way
141	20.00	Green Mill Way
142	20.00	Green Mill Way
143	20.00	Green Mill Way
144	20.00	Green Mill Way
145	20.00	Green Mill Way
146	25.00	Green Mill Way
147	25.00	Green Mill Way
148	20.00	Green Mill Way
149	20.00	Green Mill Way
150	25.00	Green Mill Way

LOT	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1	6718 GREEN MILL WAY	MAIN TO SH 20'	FHT TO SH 60'
2	6720 GREEN MILL WAY	MAIN TO SH 30'	FHT TO SH 78'
3	6722 GREEN MILL WAY	MAIN TO SH 32'	FHT TO SH 86'
4	6724 GREEN MILL WAY	MAIN TO SH 32'	FHT TO SH 115'
5	6726 GREEN MILL WAY	MAIN TO SH 32'	FHT TO SH 121'
6	6732 GREEN MILL WAY	MAIN TO SH 32'	SMH-7 TO SH 106'
7	6734 GREEN MILL WAY	MAIN TO SH 31'	SMH-7 TO SH 81'
8	6736 GREEN MILL WAY	MAIN TO SH 31'	SMH-7 TO SH 76'
9	6738 GREEN MILL WAY	MAIN TO SH 31'	SMH-7 TO SH 43'
10	6740 GREEN MILL WAY	MAIN TO SH 31'	SMH-7 TO SH 44'
11	6742 GREEN MILL WAY	MAIN TO SH 31'	SMH-7 TO SH 40'
12	6744 GREEN MILL WAY	MAIN TO SH 31'	SMH-7 TO SH 25'
13	6746 GREEN MILL WAY	MAIN TO SH 31'	SMH-7 TO SH 23'
14	6750 GREEN MILL WAY	MAIN TO SH 31'	SMH-7 TO SH 51'
15	6752 GREEN MILL WAY	MAIN TO SH 23'	SMH-7 TO SH 57'
16	6754 GREEN MILL WAY	MAIN TO SH 23'	SMH-7 TO SH 56'
17	6756 GREEN MILL WAY	MAIN TO SH 23'	SMH-7 TO SH 56'
18	6758 GREEN MILL WAY	MAIN TO SH 23'	SMH-7 TO SH 62'
139	6729 GREEN MILL WAY	MAIN TO SH 24'	SMH-7 TO SH 136'
140	6727 GREEN MILL WAY	MAIN TO SH 24'	SMH-7 TO SH 149'
141	6725 GREEN MILL WAY	MAIN TO SH 24'	FHT TO SH 108'
142	6723 GREEN MILL WAY	MAIN TO SH 22'	FHT TO SH 117'
143	6721 GREEN MILL WAY	MAIN TO SH 22'	FHT TO SH 167'
144	6719 GREEN MILL WAY	MAIN TO SH 22'	FHT TO SH 136'
145	6717 GREEN MILL WAY	MAIN TO SH 22'	SMH-3 TO SH 45'
146	6715 GREEN MILL WAY	MAIN TO SH 22'	SMH-5 TO SH 241'
147	6711 GREEN MILL WAY	MAIN TO SH 21'	SMH-6 TO SH 48'
148	6709 GREEN MILL WAY	MAIN TO SH 21'	SMH-6 TO SH 47'
149	6707 GREEN MILL WAY	MAIN TO SH 21'	SMH-2 TO SH 81'
150	6705 GREEN MILL WAY	MAIN TO SH 20'	SMH-3 TO SH 81'

LOT	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
1	6718 GREEN MILL WAY	MAIN TO WH 13'	WH TO FHT 63'
2	6720 GREEN MILL WAY	MAIN TO WH 13'	WH TO FHT 63'
3	6722 GREEN MILL WAY	MAIN TO WH 13'	WH TO FHT 97'
4	6724 GREEN MILL WAY	MAIN TO WH 13'	WH TO FHT 133'
5	6726 GREEN MILL WAY	MAIN TO WH 14'	WH TO FHT 133'
6	6732 GREEN MILL WAY	MAIN TO WH 14'	WH TO SMH-7 43'
7	6734 GREEN MILL WAY	MAIN TO WH 14'	WH TO SMH-7 43'
8	6736 GREEN MILL WAY	MAIN TO WH 14'	WH TO SMH-7 52'
9	6738 GREEN MILL WAY	MAIN TO WH 14'	WH TO SMH-7 52'
10	6740 GREEN MILL WAY	MAIN TO WH 14'	WH TO SMH-7 52'
11	6742 GREEN MILL WAY	MAIN TO WH 14'	WH TO SMH-7 37'
12	6744 GREEN MILL WAY	MAIN TO WH 14'	WH TO SMH-7 37'
13	6746 GREEN MILL WAY	MAIN TO WH 14'	WH TO SMH-7 45'
14	6750 GREEN MILL WAY	MAIN TO WH 10'	WH TO SMH-5 32'
15	6752 GREEN MILL WAY	MAIN TO WH 10'	WH TO SMH-5 32'
16	6754 GREEN MILL WAY	MAIN TO WH 10'	WH TO SMH-5 36'
17	6756 GREEN MILL WAY	MAIN TO WH 10'	WH TO SMH-5 36'
18	6758 GREEN MILL WAY	MAIN TO WH 11'	WH TO SMH-1 28'
139	6729 GREEN MILL WAY	MAIN TO WH 27'	WH TO SMH-7 108'
140	6727 GREEN MILL WAY	MAIN TO WH 27'	WH TO SMH-7 122'
141	6725 GREEN MILL WAY	MAIN TO WH 24'	WH TO FHT 122'
142	6723 GREEN MILL WAY	MAIN TO WH 23'	WH TO FHT 92'
143	6721 GREEN MILL WAY	MAIN TO WH 23'	WH TO FHT 252'
144	6719 GREEN MILL WAY	MAIN TO WH 22'	WH TO FHT 136'
145	6717 GREEN MILL WAY	MAIN TO WH 22'	WH TO FHT 43'
146	6715 GREEN MILL WAY	MAIN TO WH 22'	WH TO FHT 141'
147	6711 GREEN MILL WAY	MAIN TO WH 21'	WH TO SMH-5 93'
148	6709 GREEN MILL WAY	MAIN TO WH 21'	WH TO SMH-5 93'
149	6707 GREEN MILL WAY	MAIN TO WH 21'	WH TO SMH-2 29'
150	6705 GREEN MILL WAY	MAIN TO WH 20'	WH TO SMH-3 29'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

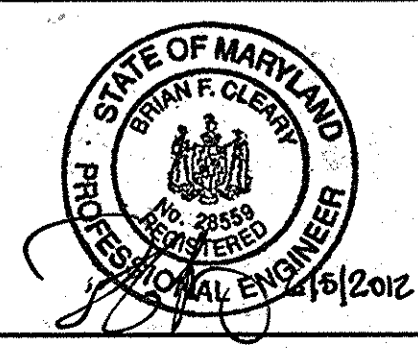
CHIEF, BUREAU OF UTILITIES
6/18/12

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION
6/18/12

BENCHMARK
ENGINEERS AND PLANNERS
2480 BALTIMORE NATIONAL PIKE SUITE 418 ELLICOTT CITY, MARYLAND 21043
(P) 410-465-8105 (F) 410-465-6944

60 THOMAS JOHNSON DRIVE FREDERICK, MARYLAND 21702
(P) 301-371-3505 (F) 301-371-3508
WWW.BE-CMENGINEERING.COM



DES: DBT/MCR
DRAFT: DBT/MCR
CHK: BFC
DATE: 06/2012

REVISIONS
1 AS-BUILT
2 AS-BUILT
3 AS-BUILT

DATE: 12-14-15
DATE: 5-22-15
DATE: 8-8-12

PLAN VIEW
PUBLIC WATER & SEWER MAINS

600 SCALE MAP NO: 36 BLOCK: 23 200 SCALE MAP NO: 136

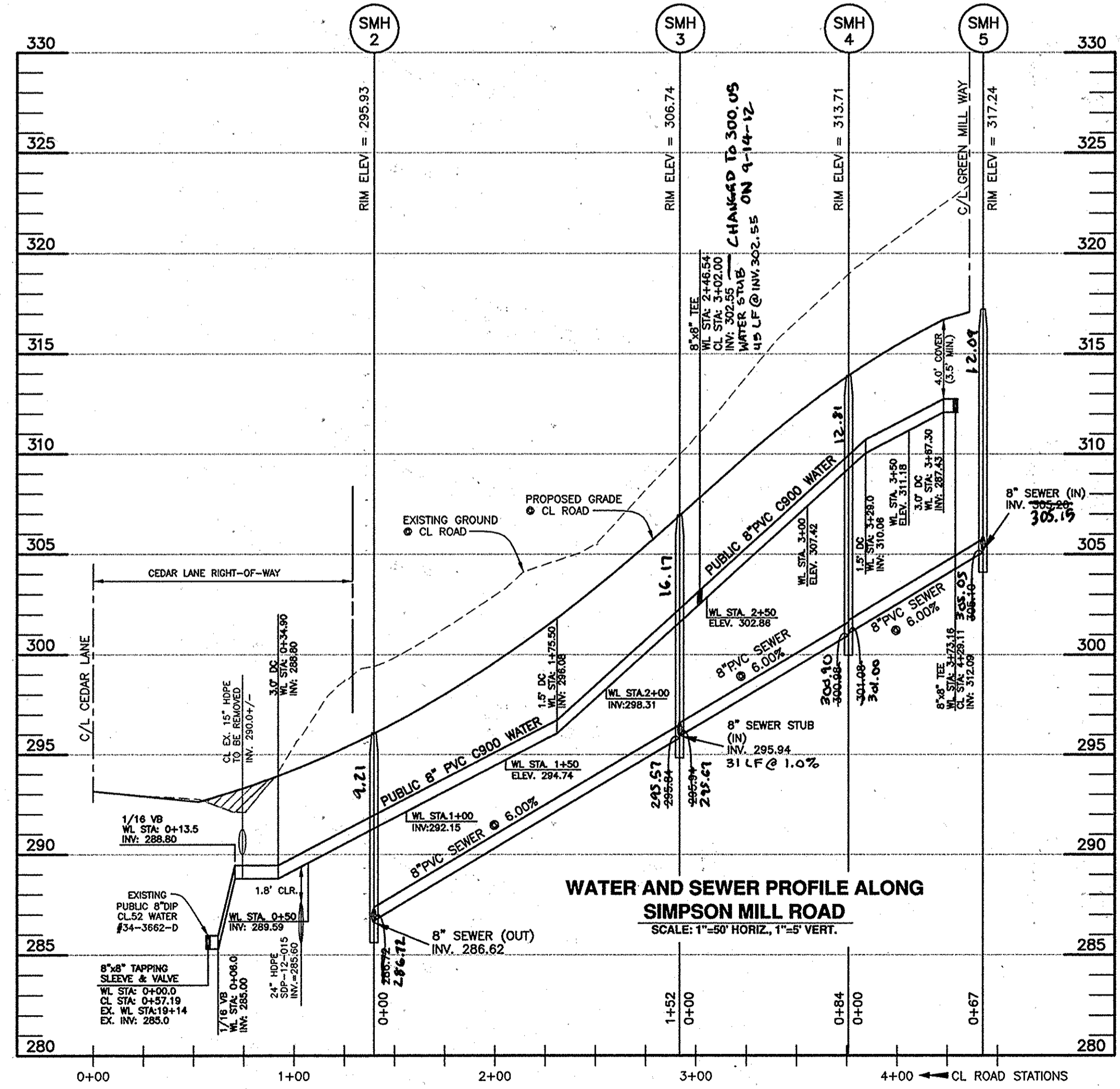
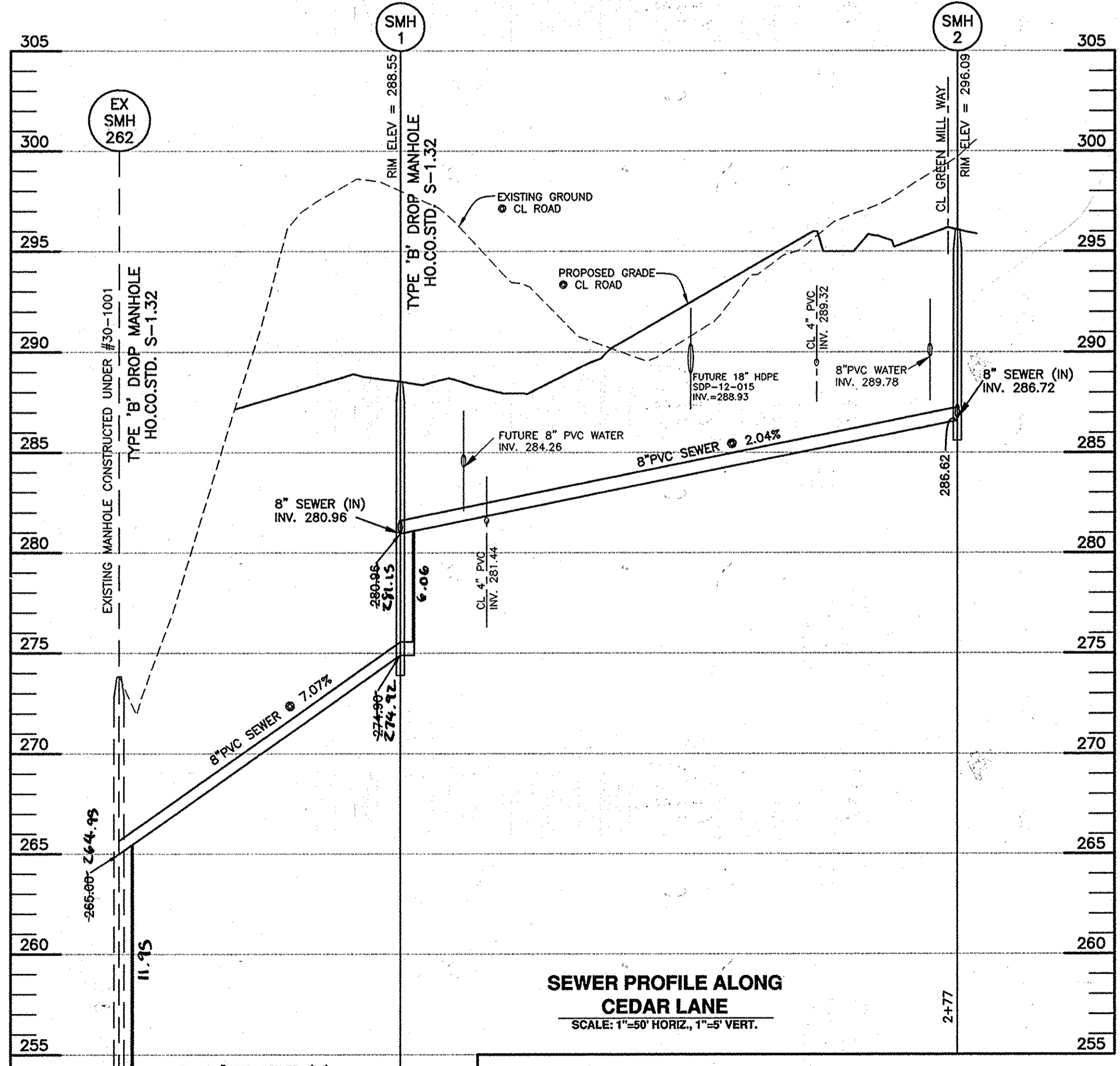
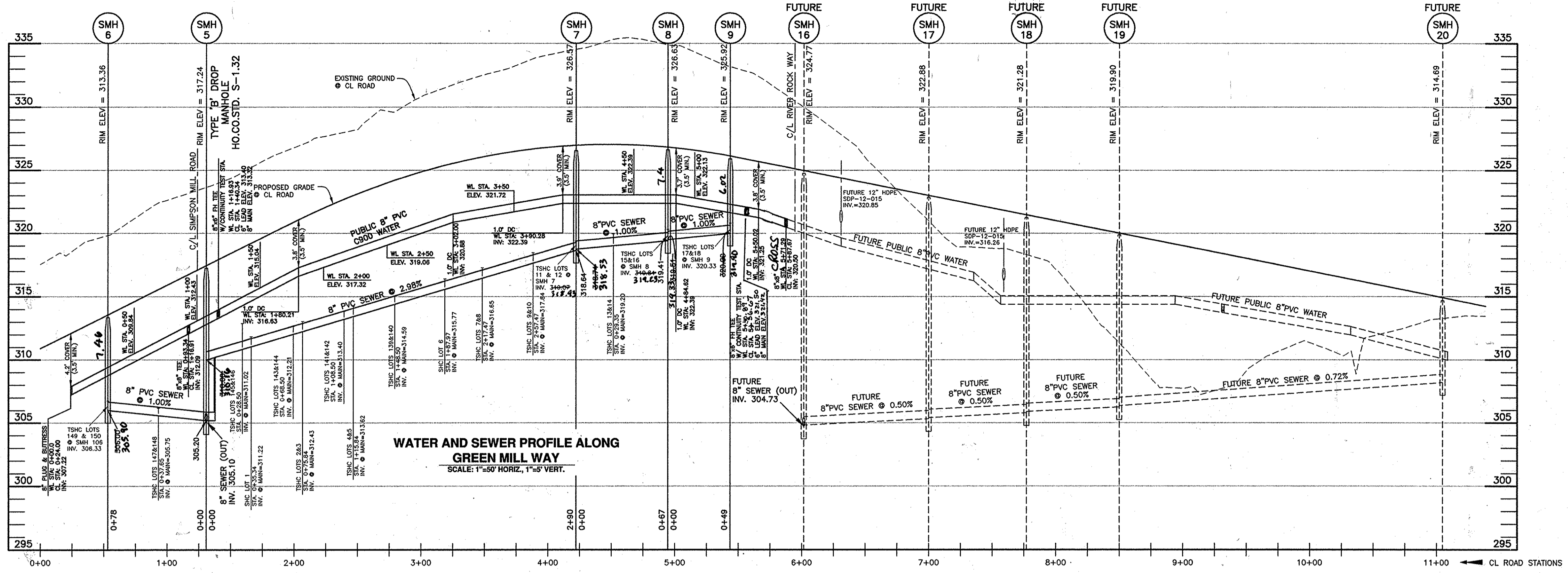
SIMPSON MILL - PHASE 1
LOTS 1 thru 18 AND 139 thru 150

TAX MAP: 35 - BLOCK: 23 - PARCEL: 116 - ZONED: R-SA-8 - ELECTION DISTRICT: 1
TAX MAP: 35 - BLOCK: 23 - PARCEL: 258, 476 - ZONED: POR - ELECTION DISTRICT: 1

CONTRACT NO. 34-4373-D

SCALE:
1" = 50'

SHEET NO.
2 OF 3



Lot Number	S/L Sta.	Invert @ main or manhole	Drop House	S/C Slope	Invert @ PUE	Minimum Cellar	Basement Elevation
1	0+35.34	311.22	no	2.00%	311.84	315.94	321.17
2	0+75.84	312.43	no	2.00%	313.05	317.15	321.84
3	0+75.84	312.43	no	2.00%	313.05	317.15	322.51
4	1+15.84	313.62	no	2.00%	314.24	318.34	323.85
5	1+15.84	313.62	no	2.00%	314.24	318.34	325.19
6	1+87.97	315.77	no	2.00%	316.39	320.49	326.81
7	2+17.47	316.65	no	2.00%	317.27	321.37	327.48
8	2+17.47	316.65	no	2.00%	317.27	321.37	327.48
9	2+57.47	317.84	no	2.00%	318.46	322.56	328.15
10	2+57.47	317.84	no	2.00%	318.46	322.56	328.15
11	MH-7	319.07	no	2.00%	319.71	323.81	328.15
12	MH-7	319.07	no	2.00%	319.71	323.81	328.15
13	0+29.35	318.03	no	2.00%	318.79	323.05	328.21
14	0+29.35	318.03	no	2.00%	318.79	323.05	328.21
15	MH-8	319.84	no	2.00%	320.32	324.58	328.21
16	MH-8	319.84	no	2.00%	320.32	324.58	327.54
17	MH-9	320.33	no	2.00%	320.81	325.07	326.87
18	MH-9	320.33	no	2.00%	320.81	325.07	326.87
139	1+48.50	314.59	no	2.00%	315.03	319.07	325.73
140	1+48.50	314.59	no	2.00%	315.03	319.07	325.06
141	1+08.50	313.40	no	2.00%	313.84	317.88	324.39
142	1+08.50	313.40	no	2.00%	313.84	317.88	323.72
143	0+68.50	312.21	no	2.00%	312.65	316.69	322.38
144	0+68.50	312.21	no	2.00%	312.65	316.69	321.71
145	0+28.50	311.02	no	2.00%	311.46	315.50	321.04
146	0+28.50	311.02	no	2.00%	311.46	315.50	319.70
147	0+37.65	305.75	no	2.00%	306.19	310.23	317.46
148	0+37.65	305.75	no	2.00%	306.19	310.23	316.12
149	MH-6	306.33	no	2.00%	306.77	310.81	315.45
150	MH-7	306.33	no	2.00%	306.77	310.81	314.11

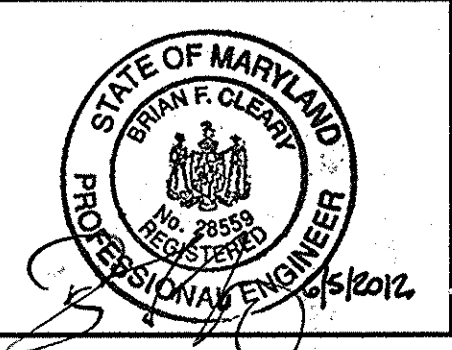
OWNER/DEVELOPER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLCOTT CITY, MARYLAND 21041
410-465-4244

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 28559, Expiration Date: 7-22-2013.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES
DATE: 6/10/12

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 6/14/12

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 418 ELLCOTT CITY, MARYLAND 21043
(P) 410-463-8108 (F) 410-463-6944
60 THOMAS JOHNSON DRIVE & FREDERICK, MARYLAND 21702
(P) 301-371-3505 (F) 301-371-3506
WWW.BEI-CIVLENGINEERING.COM



DES:DBT/MCR
DRAFT:DBT/MCR
CHK: BFC
DATE: 06/2012
BY: KCI Z
NO. AS-BUILT
REVISIONS: REVISE FH LOCATION TO STA. 5+40.00, REVISE TEE AT END OF WATER TO A CROSS. SHOW W/S STRIPS NEAR SMH 2
DATE: 5-22-15
DATE: 6/8/12

PROFILES OF PUBLIC WATER & SEWER MAINS
600 SCALE MAP NO: 35 BLOCK: 23 200 SCALE MAP NO: 136

SIMPSON MILL - PHASE 1
LOTS 1 thru 18 AND 139 thru 150
TAX MAP: 35 - BLOCK: 23 - PARCEL: 116 - ZONED: R-SA-8 - ELECTION DISTRICT: 1
TAX MAP: 35 - BLOCK: 23 - PARCEL: 258, 476 - ZONED: POR - ELECTION DISTRICT: 1
CONTRACT NO. 34-4373-D

SCALE: AS SHOWN
SHEET NO. 3 OF 3