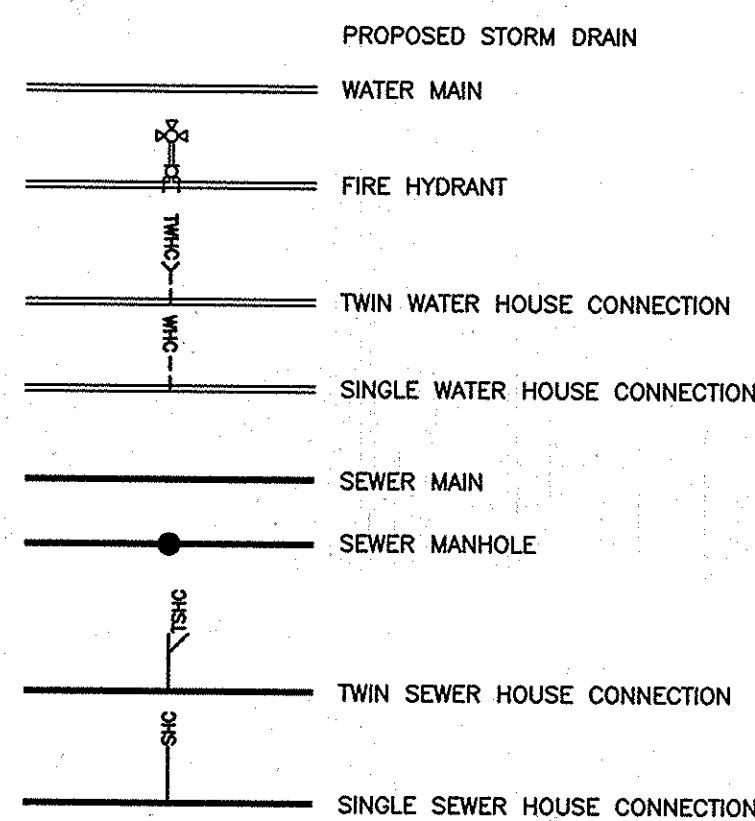


SIMPSON MILL - PHASE 3

PUBLIC WATER AND PUBLIC SEWER CONSTRUCTION PLANS

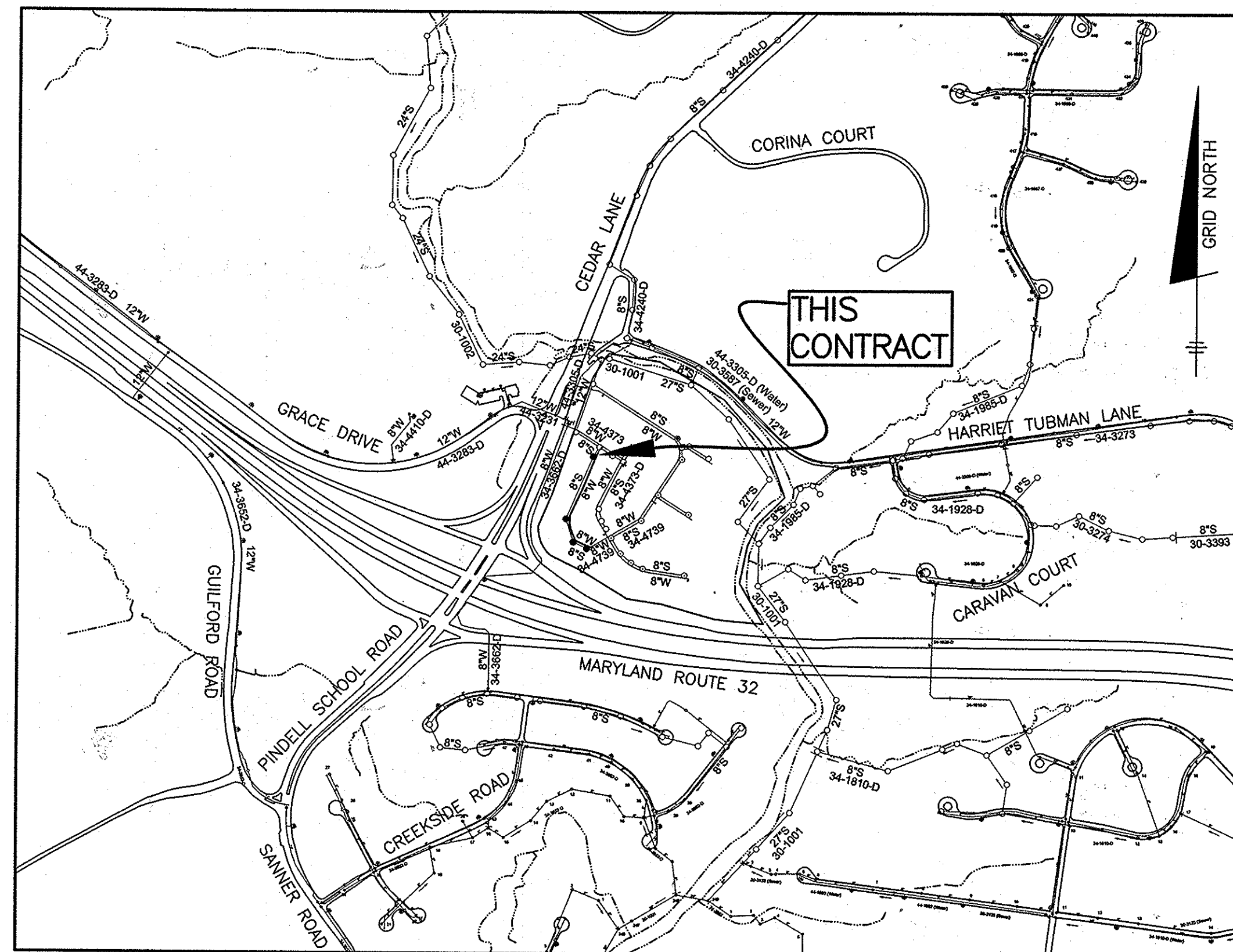
CONTRACT NO. 34-4927-D

LEGEND



QUANTITIES				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUF./SUPPLIER
8" PVC C900 WATER (DR18)	620 LF	620 LF	PVC C900 DR18	NATIONAL PIPE
FIRE HYDRANTS (INCL. 8"x6" TEE & VALVE)	1 EA	1 EA	5'-0" 684BB	AMERICAN DARLING
1.5" WHC	407 LF	407 LF	TYPE 'K'	CERRO FLOW PRODUCTS
8" PVC SEWER	611 LF	611 LF	PVC SDR 35	NORTH AMERICAN PIPE
4" MANHOLES	4 EA	4 EA	PRECAST CONC.	CONTRACTORS PRECAST
4" SHC	296 LF	296 LF	PVC SDR 35	NORTH AMERICAN PIPE
6" SHC	63 LF	63 LF	PVC SDR 35	NORTH AMERICAN PIPE

NAME OF UTILITY CONTRACTOR: **CONSOLIDATE CONSTRUCTION SERVICES INC (CCS)**
 SURVEY AND DRAFTING DIVISION AS-BUILT DATE: **7-18-16**



VICINITY MAP
SCALE: 1" = 600'

TYPE OF BUILDING:	SFA
NO. OF LOTS/PARCELS/UNITS:	23
NUMBER OF SHC'S:	18
NUMBER OF WHC'S:	14
DRAINAGE AREA:	MIDDLE PATUXENT
TREATMENT PLANT:	
WATER ZONE:	550
TEST GRADIENT:	700

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

NOTE: ALL JOINTS AND CONNECTIONS LOCATED WITHIN STRUCTURAL FILL AREAS SHALL BE MECHANICALLY RESTRAINED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION)

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

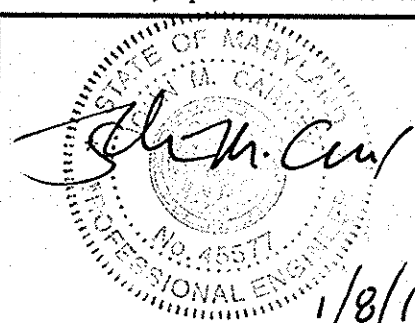
J. L. M. S. 1/8/16
HOWARD SOIL CONSERVATION DISTRICT

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE HOWARD COUNTY STANDARD SPECIFICATIONS AND AS PER SDP-15-057.

OWNER/DEVELOPER:
SIMPSON MILL, LLC
P.O. BOX 417
ELlicott 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. 45577, Expiration Date: 06-08-2016.

BENCHMARK ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE SUITE 315 & ELLICOTT CITY, MARYLAND 21043
(410) 465-8105 (F) 410-465-6844
WWW.BE-CVLENGINEERING.COM

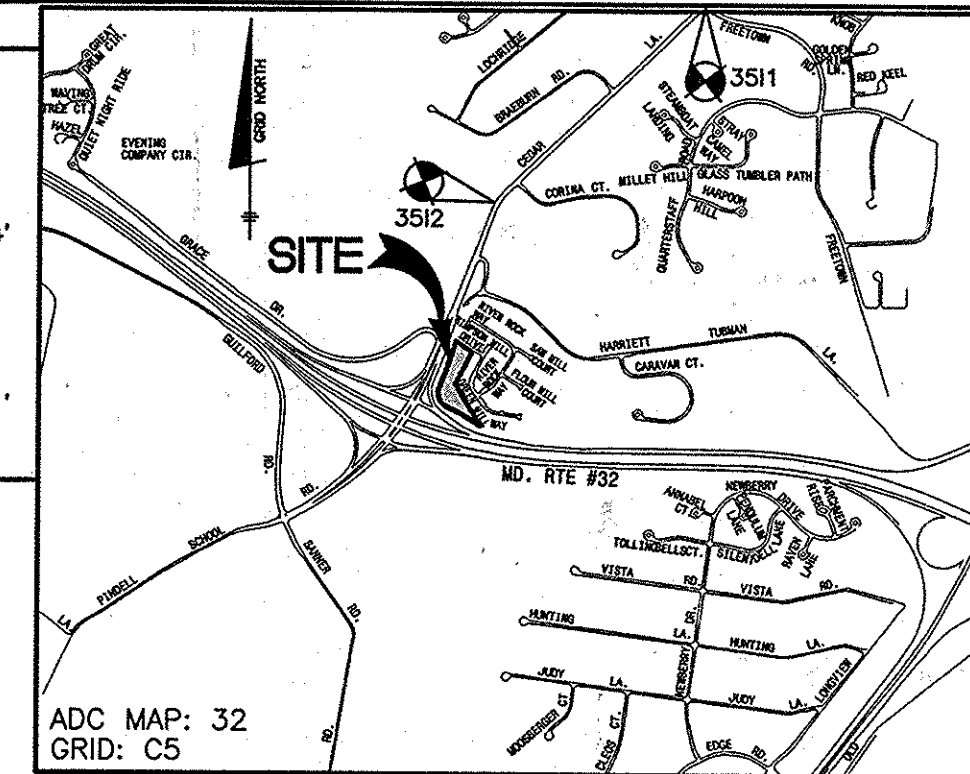


DES: JMC	
DRAFT: JMC/NAF	
CHK: JMC	
DATE: 1/2016	BY: NO.
	REVISIONS
	DATE

AS BUILT
DATE: 5-18-16

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

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 1344893.6204' ELEV. 400.034'	
HO. CO. #3512 STAMPED DISC SET ON TOP OF A 3" DEEP COLUMN OF CONCRETE 2" BELOW SURFACE. N 595100.7743' E 1342732.9971' ELEV. 329.719'	



VICINITY MAP
SCALE: 1" = 2000'

PART I 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 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 INCURRED FROM WORKERS OWNED BY THE CONTRACTOR SHALL BE DEDUCTED FROM MONIES OWED BY 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 LOCATION 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 DETECTED 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)	410-637-8713
BUREAU OF UTILITIES	410-313-4900
COLONIA PIPELINE CO.	410-757-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
VERISYS	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 DWP REQUIREMENTS PER SECTION 18.114(c) OF THE HOWARD COUNTY CODE.
- A DESIGN MANUAL WATER REQUESTS APPROVED 6/19/15 FOR I) SECTION 3.3.a.(3) WATER PIPE MATERIALS, II) SECTION 4.5.f USE OF TWIN SEWER HOUSE CONNECTIONS, AND III) SECTION 5.4.b.(5) MINIMUM HORIZONTAL CLEARANCE BETWEEN ANY PERMANENT STRUCTURE AND A PUBLIC UTILITY EASEMENT REQUIREMENTS WAS APPROVED WITH THE FOLLOWING CONDITIONS:
 i) PVC C900 SHALL BE ALLOWED TO BE INSTALLED INTO EXISTING PHASE 1 CONTRACT 34-4373-D AND PHASE 2 CONTRACT 43-4739-D PVC C900.
 ii) TIGHT LOTS AND LACK OF AVAILABLE FRONTAGE ALLOWS FOR THE USE OF TWIN SEWER HOUSE CONNECTIONS ON THE FOLLOWING LOTS: 155/156, 157/158, 162/163, 165/167/168/169.
 iii) ENCROACHMENT INTO THE REQUIRED 10 FT PUBLIC UTILITY EASEMENT SETBACK IS APPROVED TO WITHIN 5' OF THE EASEMENT.

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 UNBUTRESSED 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 BUTRESSED 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 HOWARD COUNTY DESIGN MANUAL SHALL BE SUBMITTED WITH THE BURY LINE CERTIFICATIONS OR PRESSURE PIPE SHALL BE SUBMITTED WITH THE 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 SHORTFALL ANODES SHALL BE INSTALLED ON ALL WELDS AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. MAGNESIUM ANODES SHALL BE INSTALLED ON ALL WELDS AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSES. ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.

(continued)

PART II WATER (continued)

- PROPER ASSEMBLY OF GASKETED PVC PIPE JOINTS: THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF THE PVC PIPE.
- ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS OR HIGH DEFLECTION (HD) COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF PVC PIPE JOINTS IS PERMITTED. WHERE HIGH DEFLECTION COUPLINGS OR 5-DEGREE SWEEPS ARE PERMITTED, THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (20-FOOT LONG) ON EITHER SIDE OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP. THE CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE #57 STONE ON BOTH SIDES OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP. TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING. PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1 1/2- DEGREE ON EITHER END OF THE COUPLING), SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF ANWA C900, SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTIFIED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL. FIVE DEGREE SWEEPS SHALL BE BELL STOP COUPLINGS RATED FOR A MINIMUM 225 PSI, OR 18 MEETING THE REQUIREMENTS OF ANWA C900 AND SHALL BE MULTI FITTING (DEXT) OR EQUAL.
- WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO OVER-CORRECT CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF ANWA C900 PVC PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR PLAIN ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFLECTION COUPLINGS AND 5-DEGREE SWEEPS. BELL STOPS SHALL BE PLACED AT THE PROPER INSERTION LINE FOR THE FITTING. THE BELL STOP SHALL BE MANUFACTURED DUCTILE IRON AND INCORPORATES AN EXPANSION RETENTION SPRING TO ALLOW FOR PIPE EXPANSION AND CONTRACTION. THE BELL STOPS SHALL BE SERIES 5000 MEGA-STOP, AS MANUFACTURED BY EBAA IRON, INC. OR APPROVED EQUAL.

PART III SEWER

- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INDIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERIGHT FRAME AND COVER. STANDARD 18" WALL WATERIGHT 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.

SIMPSON MILL - PHASE 3
LOTS 153-175

SCALE:
AS SHOWN

TITLE SHEET
PUBLIC WATER & SEWER MAINS

TAX MAP: 35 - BLOCK: 23 - PARCEL: 116 - ZONED: PDR - ELECTION DISTRICT: 1
CONTRACT NO. 34-4927-D

SHEET NO.
1 OF 3

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Professional Engineer Seal for Charles M. Conroy, License No. 45577, State of Maryland.

Professional Engineer Seal for Charles M. Conroy, License No. 45577, State of Maryland.

DES: JMC	
DRAFT: JMC/NAF	
CHK: JMC	
DATE: 1/2016	BY: NO.
	REVISIONS
	DATE

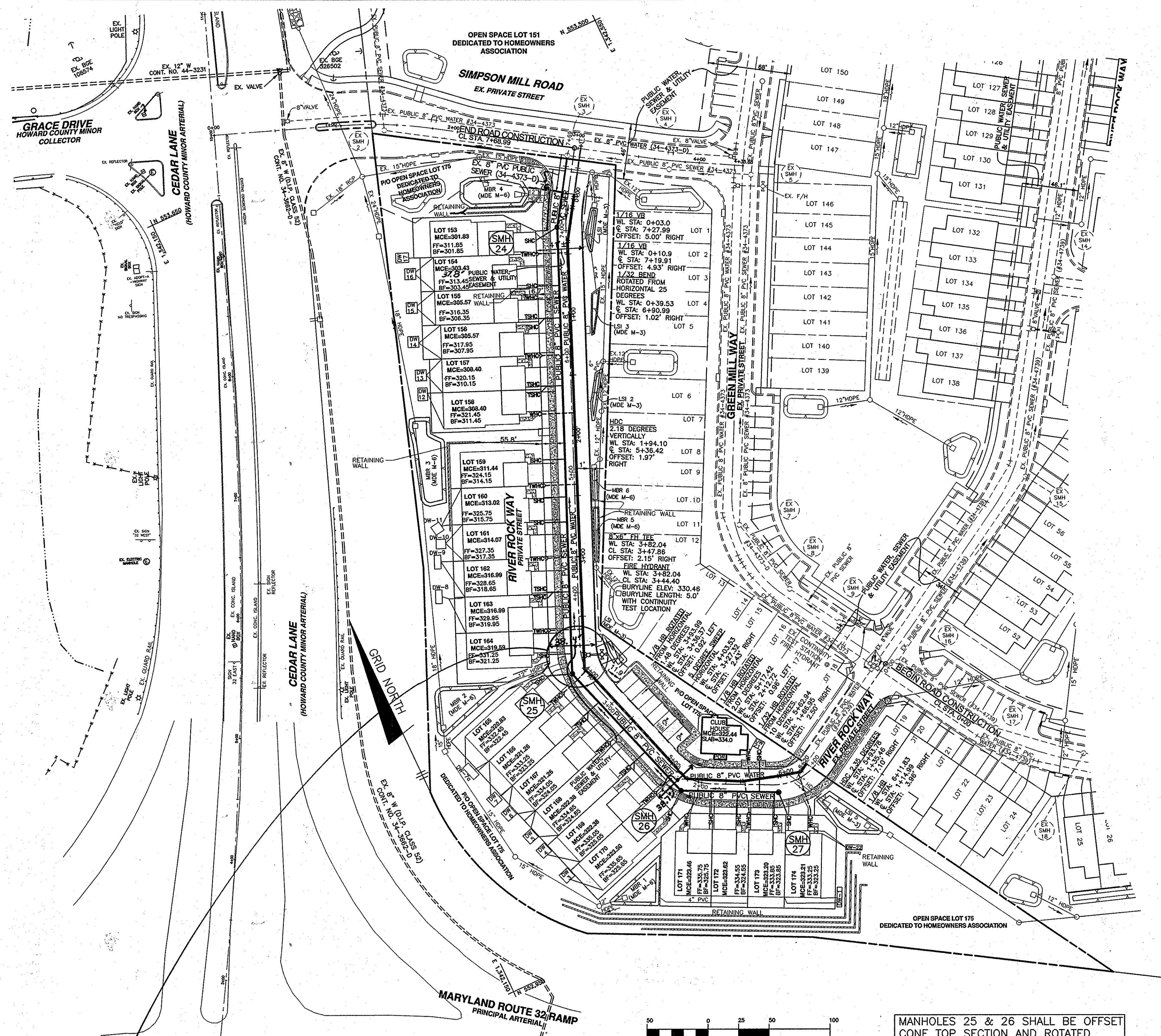
600 SCALE MAP NO: 35	BLOCK: 23	200 SCALE MAP NO: 136
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MANHOLE	LOCATION	RIM ELEVATION	HO. CO. STD
24	CL STA. 7+03.24 OFFS. 7.00' LEFT (RIVER ROCK WAY)	313.71	G-5.11
25	CL STA. 3+36.71 OFFS. 11.67' LEFT (RIVER ROCK WAY)	330.84	G-5.11
26	CL STA. 2+12.53 OFFS. 12.53' LEFT (RIVER ROCK WAY)	333.47	G-5.11
27	CL STA. 1+37.33 OFFS. 6.28' LEFT (RIVER ROCK WAY)	331.71	S-1.31

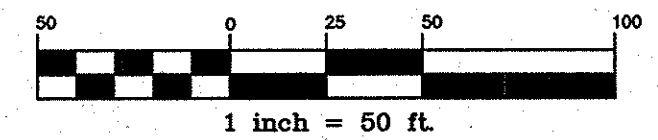
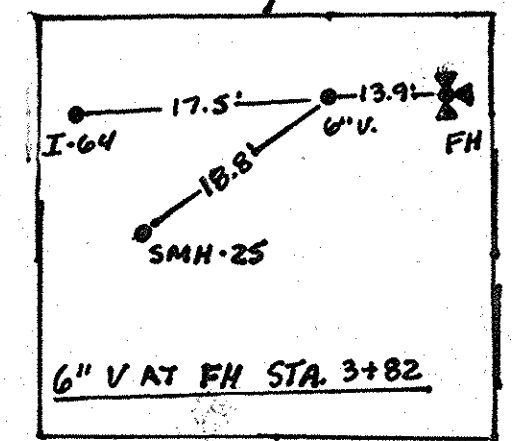
LOT	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
153	7710 RIVER ROCK WAY	SMH-24 TO SHC 22.6'	LOT 153 W/M TO SHC 12.8'
154	7712 RIVER ROCK WAY	SMH-24 TO SHC 35.6'	SHC TO M-21 9.8'
155	7714 RIVER ROCK WAY	M-21 TO SHC 68.1'	SMH-24 TO SHC 77.2'
156	7716 RIVER ROCK WAY	M-21 TO SHC 63.3'	SMH-24 TO SHC 83.2'
157	7718 RIVER ROCK WAY	M-21 TO SHC 55.1'	I-55 TO SHC 83.3'
158	7720 RIVER ROCK WAY	M-21 TO SHC 58.5'	I-55 TO SHC 77.4'
159	7722 RIVER ROCK WAY	M-21 TO SHC 87.4'	I-55 TO SHC 45.1'
160	7724 RIVER ROCK WAY	A-55 TO SHC 53.4'	LOT 159 W/M TO SHC 18.8'
161	7726 RIVER ROCK WAY	I-55 TO SHC 60.2'	LOT 159 W/M TO SHC 29.9'
162	7730 RIVER ROCK WAY	FH TO SHC 74.3'	M-23 TO SHC 49.1'
163	7732 RIVER ROCK WAY	FH TO SHC 67.4'	M-23 TO SHC 48.6'
164	7734 RIVER ROCK WAY	I-64 TO SHC 15.9'	SMH-25 TO SHC 27.3'
165	7738 RIVER ROCK WAY	SMH-25 TO SHC 22.3'	I-64 TO SHC 21.2'
166	7740 RIVER ROCK WAY	FH TO SHC 53.4'	SMH-25 TO SHC 38.3'
167	7742 RIVER ROCK WAY	FH TO SHC 50.4'	SMH-25 TO SHC 45.2'
168	7744 RIVER ROCK WAY	SMH-26 TO SHC 44.8'	FH TO SHC 97.5'
169	7746 RIVER ROCK WAY	SMH-26 TO SHC 38.1'	FH TO SHC 103.1'
170	7748 RIVER ROCK WAY	SMH-26 TO SHC 32.1'	I-65 TO SHC 99.9'
171	7752 RIVER ROCK WAY	SMH-27 TO SHC 58.5'	I-65 TO SHC 68.9'
172	7754 RIVER ROCK WAY	SMH-27 TO SHC 41.4'	I-65 TO SHC 56.2'
173	7756 RIVER ROCK WAY	SMH-27 TO SHC 30.5'	I-65 TO SHC 40.4'
174	7758 RIVER ROCK WAY	SMH-27 TO SHC 19.4'	I-65 TO SHC 39.5'
175	7745 RIVER ROCK WAY	I-65 TO SHC 19.4'	SMH-27 TO SHC 32.3'

FITTING	WATERLINE STATION	LOCATION ON RIVER ROCK WAY	NORTHING	EASTING
1/16 BEND	0+03.0	STA. 7+27.99 OFFSET: 5.00' RIGHT	553524.5292	1342472.2894
1/16 BEND	0+10.9	STA. 7+19.91 OFFSET: 4.93' RIGHT	553517.8990	1342467.9940
1/32 BEND	0+39.53	STA. 6+90.99 OFFSET: 1.02' RIGHT	553493.8884	1342452.4258
HDC	1+94.10	STA. 5+36.42 OFFSET: 1.97' RIGHT	553351.3131	1342392.6847
8"x6" TEE	3+82.04	STA. 3+47.86 OFFSET: 2.15' RIGHT	553177.8049	1342319.9722
FIRE HYDRANT	3+82.04	STA. 3+44.40	553172.0828	1342333.6262
1/8 BEND	3+93.99	STA. 3+36.37 OFFSET: 0.92' LEFT	553166.9537	1342315.4248
5' SWEEP	+03.53	STA. 3+27.32 OFFSET 2.43' RIGHT	553158.1263	1342319.0332
1/8 BEND	5+17.42	STA. 2+12.72 OFFSET 0.96' LEFT	553049.3487	1342352.7747
1/32 BEND	5+62.94	STA. 1+66.95 OFFSET 2.50' RIGHT	553028.1187	1342393.0272
HDC	5+93.78	STA. 1+35.46 OFFSET: 7.10' RIGHT	553019.2536	1342422.5607
1/8 BEND	6+11.83	STA. 1+14.99 OFFSET: 3.96' RIGHT	553014.7750	1342440.0597

Lot	Dimension (ft)	Road
153	19.03	River Rock Way
154	28.00	River Rock Way
155	28.00	River Rock Way
156	28.00	River Rock Way
157	28.00	River Rock Way
158	33.00	River Rock Way
159	37.31	River Rock Way
160	30.00	River Rock Way
161	30.00	River Rock Way
162	30.00	River Rock Way
163	30.00	River Rock Way
164	38.58	River Rock Way
165	18.80	River Rock Way
166	28.00	River Rock Way
167	28.00	River Rock Way
168	28.00	River Rock Way
169	28.00	River Rock Way
170	30.00	River Rock Way
171	20.96	River Rock Way
172	30.00	River Rock Way
173	30.00	River Rock Way
174	31.81	River Rock Way



LOT	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
153	7710 RIVER ROCK WAY	SMH-24 TO WHC 3.1'	W/M TO WHC 2.5'
154	7712 RIVER ROCK WAY	W/M TO WHC 3.5'	SMH-24 TO WHC 3.0'
155	7714 RIVER ROCK WAY	W/M TO WHC 3.8'	SMH-24 TO WHC 6.6'
156	7716 RIVER ROCK WAY	W/M TO WHC 3.3'	M-21 TO WHC 5.3'
157	7718 RIVER ROCK WAY	W/M TO WHC 2.7'	M-21 TO WHC 5.5'
158	7720 RIVER ROCK WAY	W/M TO WHC 3.5'	I-55 TO WHC 84.3'
159	7722 RIVER ROCK WAY	W/M TO WHC 3.8'	I-55 TO WHC 47.4'
160	7724 RIVER ROCK WAY	W/M TO WHC 4.2'	I-55 TO WHC 48.7'
161	7726 RIVER ROCK WAY	W/M TO WHC 3.6'	I-55 TO WHC 85.9'
162	7730 RIVER ROCK WAY	W/M TO WHC 3.3'	I-55 TO WHC 84.3'
163	7732 RIVER ROCK WAY	W/M TO WHC 2.9'	I-64 TO WHC 28.6'
164	7734 RIVER ROCK WAY	W/M TO WHC 2.2'	I-64 TO WHC 27.9'
165	7738 RIVER ROCK WAY	W/M TO WHC 3.4'	SMH-25 TO WHC 21.4'
166	7740 RIVER ROCK WAY	W/M TO WHC 3.5'	SMH-25 TO WHC 21.9'
167	7742 RIVER ROCK WAY	W/M TO WHC 3.7'	FH TO WHC 76.5'
168	7744 RIVER ROCK WAY	W/M TO WHC 4.1'	FH TO WHC 73.7'
169	7746 RIVER ROCK WAY	W/M TO WHC 3.2'	SMH-26 TO WHC 24.1'
170	7748 RIVER ROCK WAY	W/M TO WHC 3.1'	SMH-26 TO WHC 23.5'
171	7752 RIVER ROCK WAY	W/M TO WHC 3.4'	SMH-27 TO WHC 78.3'
172	7754 RIVER ROCK WAY	W/M TO WHC 2.4'	I-65 TO WHC 40.2'
173	7756 RIVER ROCK WAY	W/M TO WHC 3.2'	I-65 TO WHC 48.1'
174	7758 RIVER ROCK WAY	I-65 TO WHC 50.1'	SMH-27 TO WHC 35.6'
175	7745 RIVER ROCK WAY	W/M TO WHC 3.1'	SMH-27 TO WHC 38.3'

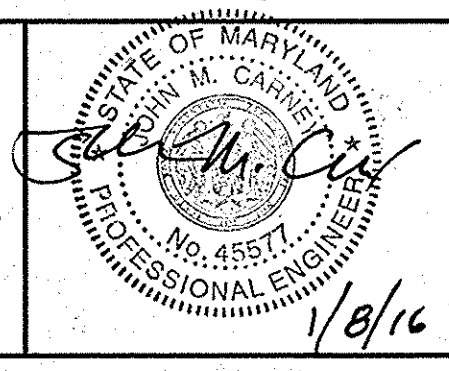


MANHOLES 25 & 26 SHALL BE OFFSET CONE TOP SECTION AND ROTATED SUCH THAT THE MANHOLE COVER IS NOT IN THE CURB AND GUTTER

AS BUILTS
DATE: 5-18-16

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. 45577, Expiration Date: 06-08-2016.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES
DATE: 1/14/16

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 1/14/16

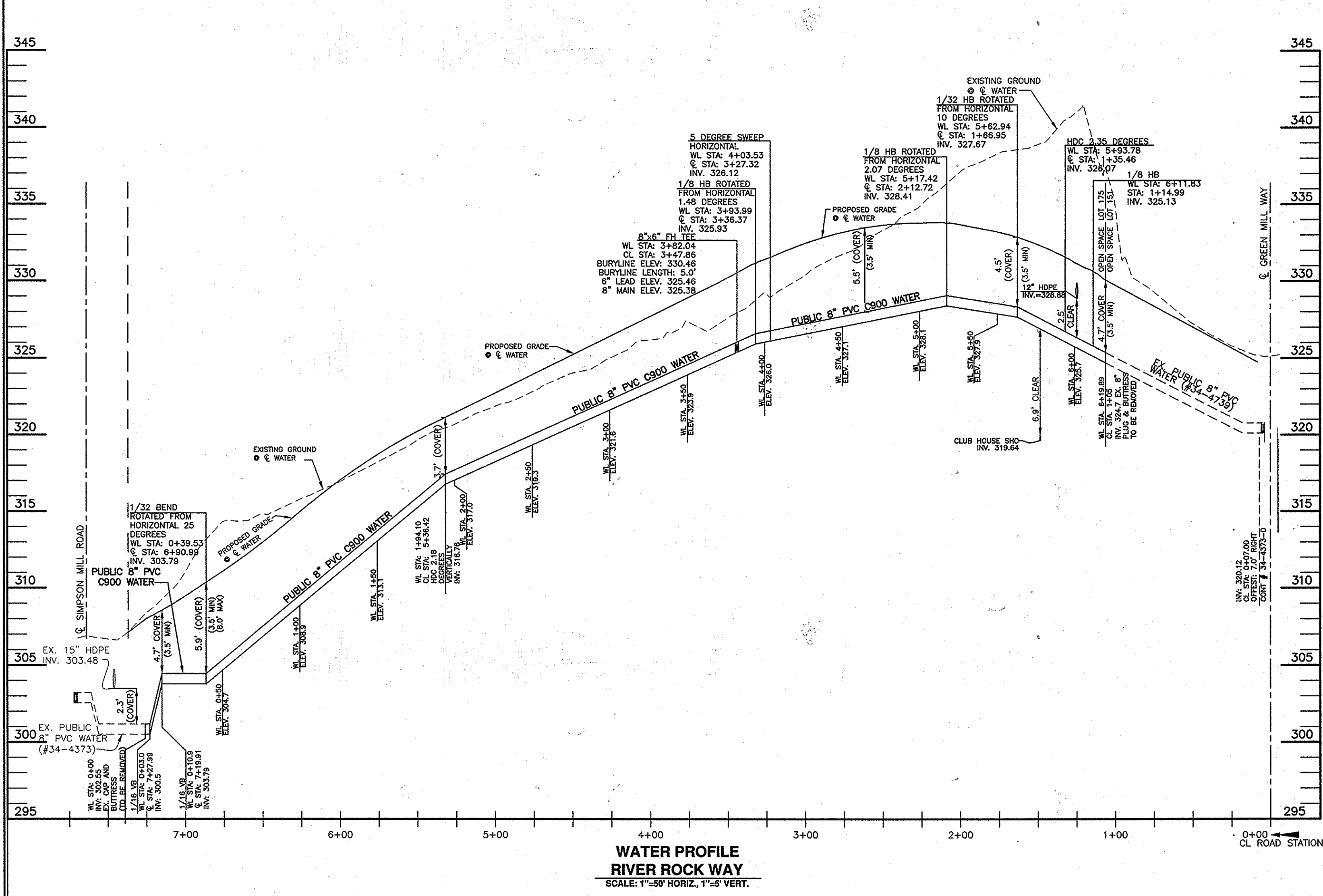
BENCHMARK
ENGINEERS, LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE SUITE 315 • ELLCOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6544
WWW.BEI-CIVILENGINEERING.COM

DES: JMC			
DRAFT: JMC/NAF			
CHK: JMC			
DATE: 1/2016	BY NO.	REVISIONS	DATE

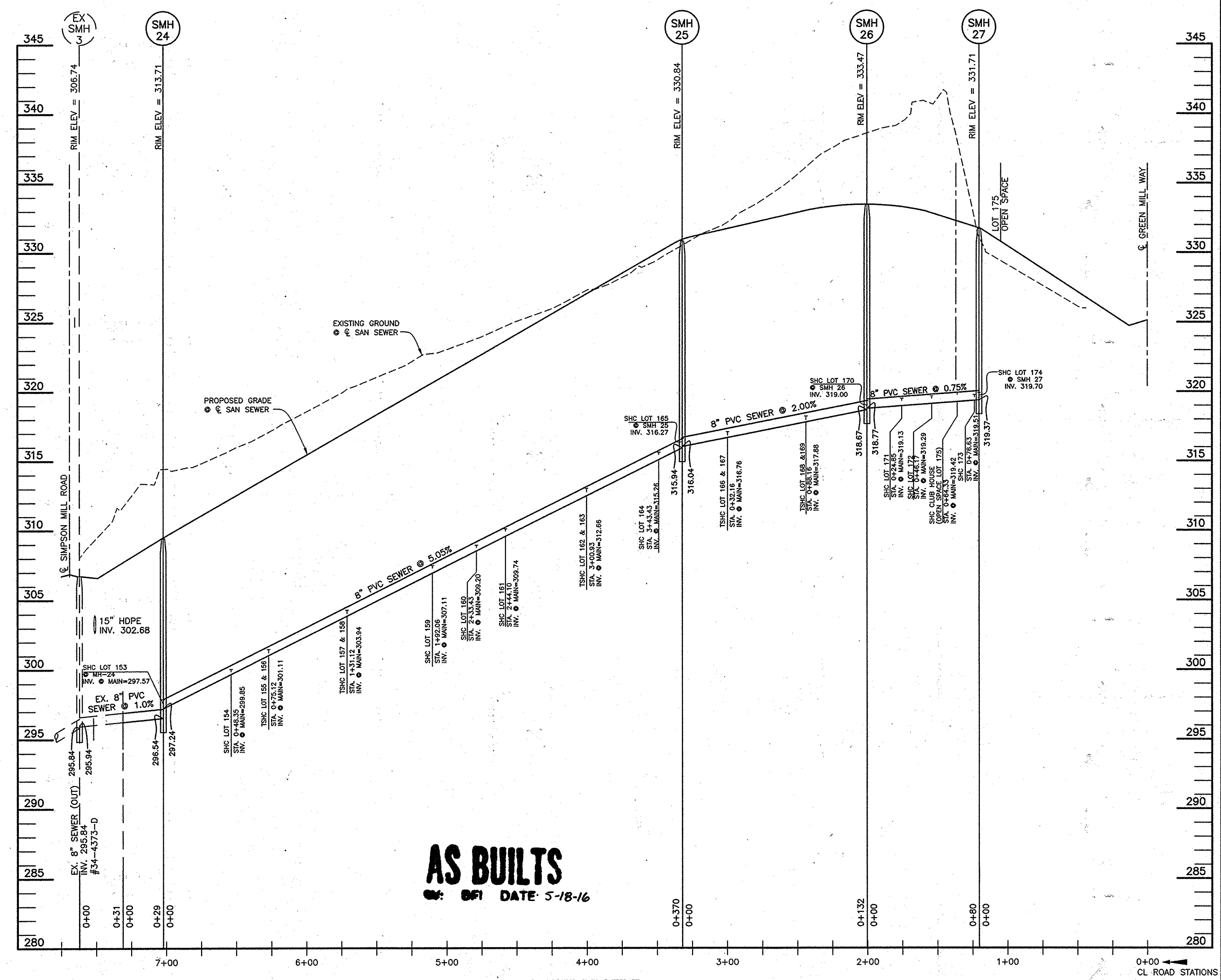
PLAN VIEW
PUBLIC WATER & SEWER MAINS
600 SCALE MAP NO: 36 BLOCK: 23 200 SCALE MAP NO: 136

SIMPSON MILL - PHASE 3
LOTS 153-175
SCALE: 1" = 50'
SHEET NO. 2 OF 3
TAX MAP: 35 - BLOCK: 23 - PARCEL: 116 - ZONED: POR - ELECTION DISTRICT: 1
CONTRACT NO. 34-4927-D

SHC CHART							
Lot Number	S/L Sta.	Invert @ main or manhole	Drop House	SHC Slope	Invert @ PUE	Minimum Cellar Elevation	Basement Elevation
153	MH-24	297.57	no	1.80%	297.89	301.83	301.85
154	48.35	299.85	no	1.10%	300.05	303.43	303.45
155	75.12	301.11	no	2.00%	301.47	305.57	306.35
156	75.12	301.11	no	2.00%	301.47	305.57	307.98
157	131.12	303.94	no	2.00%	304.30	308.40	310.15
158	131.12	303.94	no	2.00%	304.30	308.40	311.45
159	182.06	307.11	no	2.00%	307.48	311.44	314.15
160	223.43	308.69	no	2.00%	309.06	313.02	315.75
161	244.10	309.74	no	2.00%	310.11	314.07	317.35
162	301.93	312.66	no	2.00%	313.03	316.99	318.65
163	301.93	312.66	no	2.00%	313.03	316.99	319.95
164	353.43	315.26	no	2.00%	315.63	319.59	321.25
165	MH-25	316.27	no	2.00%	316.67	320.83	322.45
166	32.16	316.76	no	2.00%	317.10	321.26	323.25
167	32.16	316.76	no	2.00%	317.10	321.26	324.05
168	88.16	317.88	no	2.00%	318.22	322.38	324.85
169	88.16	317.88	no	2.00%	318.22	322.38	325.05
170	MH-26	319.00	no	2.00%	319.36	323.50	325.65
171	24.85	319.13	no	2.00%	319.50	323.46	325.75
172	46.17	319.29	no	2.00%	319.66	323.62	324.55
173	76.63	319.51	no	1.30%	319.76	323.20	323.85
174	MH-27	319.70	no	1.10%	319.90	323.21	323.25
CLUB	64.33	319.42	no	2.00%	319.94	322.44	334.3



**WATER PROFILE
RIVER ROCK WAY**
SCALE: 1"=50' HORIZ, 1"=5' VERT.



AS BUILT
DATE: 5-18-16

**SEWER PROFILE
RIVER ROCK WAY**
SCALE: 1"=50' HORIZ, 1"=5' VERT.

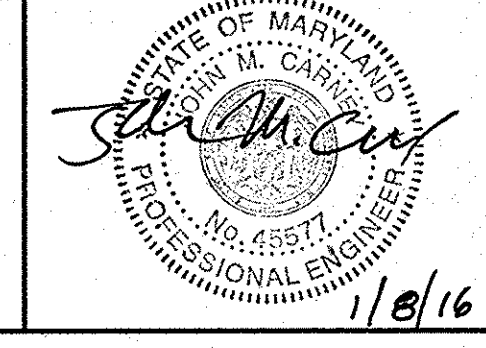
OWNER/DEVELOPER:
SIMPSON MILL, LLC
P.O. BOX 417
ELLCOTT CITY, MARYLAND 21041
410-465-4244

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. 45577, Expiration Date: 06-06-2016.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

**BENCHMARK
ENGINEERING, INC.**
8460 BALTIMORE NATIONAL PIKE & SUITE 315 • ELLCOTT CITY, MARYLAND 21043
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DES: JMC	
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REVISIONS	
DATE	

**PROFILES OF
PUBLIC WATER & SEWER MAINS**

**SIMPSON MILL - PHASE 3
LOTS 153-175**

TAX MAP: 35 - BLOCK: 23 - PARCEL: 116 - ZONED: POR - ELECTION DISTRICT: 1

CONTRACT NO. 34-4927-D

SCALE:
AS SHOWN

SHEET NO.
3 OF 3