

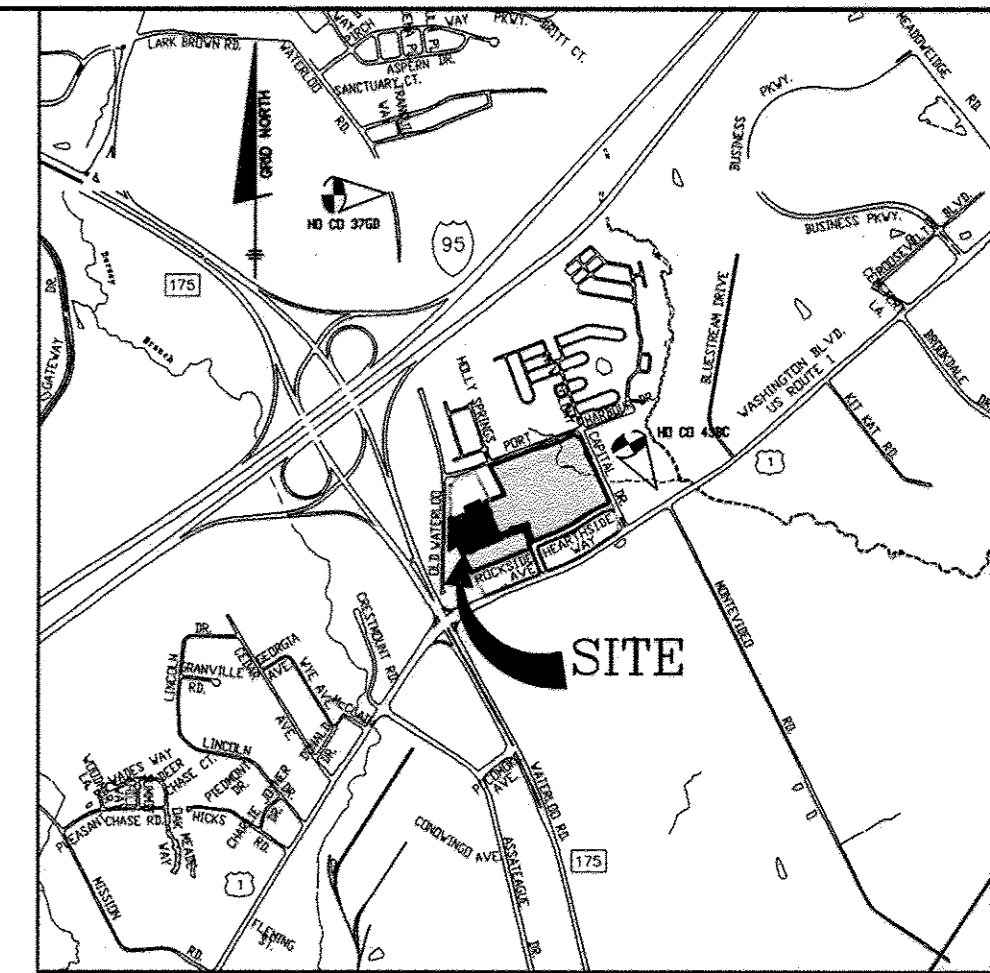
QUANTITIES				
ITEMS	ESTIMATED QUANTITIES	AS-BUILT		
		QUANTITIES	TYPE	MANUF./SUPPLIER
8" WATER (PVC C900)	1,960 L.F.	1960 L.F.	PVC	NORTH AMERICAN PIPE
6" WATER (FH LEADS-DIP)	70 L.F.	70 L.F.	PVC	NORTH AMERICAN PIPE
1.5" WHC	527 L.F.	527 L.F.	COPPER	MUELLER
1.5" TWHC	1015 L.F.	1015 L.F.	COPPER	MUELLER
1.5" WHC	19 EACH	19 EA.	COPPER	AY McDONALD
1.5" TWHC	37 EACH	37 EA.	COPPER	AY McDONALD
8" 1/8" HB	2 EACH	2 EA.	DIP	TYLER / UNION
FIRE HYDRANT	4 EACH	4 EA.	DIP	MUELLER
FH TEE & VALVE	4 EACH	4 EA.	DIP	TYLER / UNION
8"x8" TSV	2 EACH	2 EA.	SS	SMITH / BLAIR
8"x8" TEE	5 EACH	5 EA.	DIP	TYLER / UNION
8" WATER VALVES	8 EACH	8 EA.	DIP	MUELLER
8" SEWER (PVC)	1735 L.F.	1735 L.F.	PVC	NORTH AMERICAN PIPE
MH (G-5.12)	6 EACH	6 EA.	CONCRETE	CONTRACTORS PRECAST
MH (G-5.15)	2 EACH	2 EA.	CONCRETE	CONTRACTORS PRECAST
MH (S-1.31)	1 EACH	1 EA.	CONCRETE	CONTRACTORS PRECAST
4" SHC	615 L.F.	615 L.F.	PVC	NORTH AMERICAN PIPE
6"x4" TSHC	785 L.F.	785 L.F.	PVC	MULTI FITTINGS
4" SHC	25 EACH	25 EA.	PVC	NORTH AMERICAN PIPE
6"x4" TSHC	34 EACH	34 EA.	PVC	MULTI FITTINGS

NAME OF UTILITY CONTRACTOR: SEH CONTRACTORS
 SURVEY AND DRAFTING DIVISION AS-BUILT DATE:

PUBLIC WATER AND SEWER MAIN EXTENSIONS

HOWARD SQUARE PHASE 1, SECTION 3A SFA UNITS 45-101 (FUTURE UNITS 110-134, 160-169) 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

CONTRACT NO.: 14-4564-D



ADC MAP: 5054 GRID: E-3
VICINITY MAP
SCALE: 1" = 200'

GENERAL NOTES

PART 1 - GENERAL

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON FEBRUARY 2003 BY WINGS AERIAL MAPPING AND SUPPLEMENTED BY TOPOGRAPHIC SURVEY PERFORMED BY MILDENBERG BOENDER & ASSOCIATES IN DECEMBER 2007 AND ARE SHOWN AT 2' INTERVALS.
- THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM, NAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS 43R1 AND 43B2. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS ARE HO.CO. GEODETIC CONTROL STA. 43R1 & 43B2.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON 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 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 MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL 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.
- 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
BO&E (CONSTRUCTION SERVICES)	410-850-4620
BO&E (EMERGENCY)	410-885-1400
HO. CO. DPW - BUREAU OF UTILITIES	410-313-4900
COLONIAL PIPELINE CO.	410-785-1390
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 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.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE CUTTING OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(g) OF THE HOWARD COUNTY CODE.

PART 2 - WATER

- ALL WATER MAINS TO BE D.I.P. CLASS 54 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-6" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- FOR PVC WATER MAINS, ALL RECORDS FOR THE QUANTITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF AWWA STANDARD C900 FOR PVC PRESSURE PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF MATERIAL FOR USE. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE TEST RECORD RECEIVED.
- UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, SEVENTEEN (17) POUND SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES 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.

PART 3 - SEWER

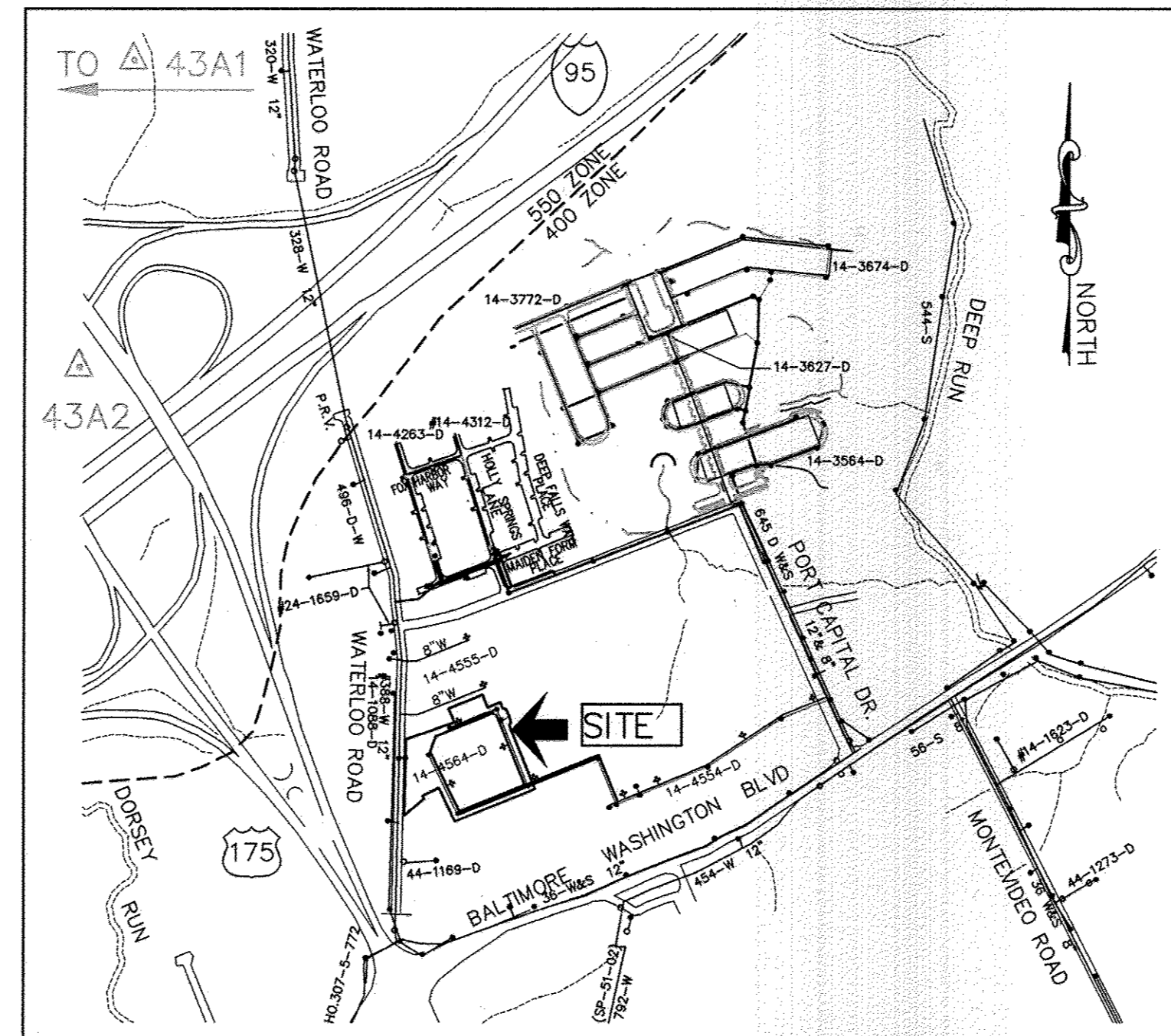
- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4' - 0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- FORCE MAINS SHALL BE D.I.P. ONLY.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G-5.52. 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.

NOTE: USE HO. CO. STD. DETAILS W-3.32 FOR TWIN AND W-3.29 FOR SINGLE OUTSIDE METER SETTINGS

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)

LEGEND

EXIST. WATER MAIN	
EXIST. SEWER MAIN	
EXIST. SEWER MANHOLE	
EXIST. STORM DRAIN	
PROP. WATER MAIN	
PROP. SEWER MAIN	
PROP. STORM DRAIN	
PROP. SEWER MANHOLE	
PROP. TERMINAL MANHOLE	
PROP. SEWER HOUSE CONNECTION	
PROP. DROP SEWER HOUSE CONN. (SEE PLAN VIEW FOR TYPE)	
PROP. WATER HOUSE CONNECTION	
PROP. FIRE HYDRANT	
PROP. VALVE	
PROP. PLUG & BUTTRESS	



TYPE OF BUILDING: _____ SFA	NUMBER OF SHC'S: _____ 19
NUMBER OF UNITS: _____ 57	NUMBER OF SHC'S (FUTURE): _____ 6
NUMBER OF UNITS (FUTURE): _____ 35	NUMBER OF TSHC'S: _____ 19
TOTAL NUMBER OF UNITS: _____ 92	NUMBER OF TSHC'S (FUTURE): _____ 15
DRAINAGE AREA: _____ PATAPSCO	TOTAL NUMBER OF SHC'S: _____ 58
TREATMENT PLANT: _____ PATAPSCO WASTEWATER TREATMENT PLANT	NUMBER OF WHC'S: _____ 7
WATER ZONE: _____ 550	NUMBER OF WHC'S (FUTURE): _____ 7
TEST GRADIENT: _____ 700	NUMBER OF TWHC'S: _____ 25
	NUMBER OF TWHC'S (FUTURE): _____ 12
	TOTAL NUMBER OF WHC'S: _____ 55

LOCATION PLAN
SCALE: 1" = 600'

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

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

John K. Robertson 3/23/11
HOWARD SOIL CONSERVATION DISTRICT DATE

PLAN REFERENCE NUMBERS:
S-06-010, F-08-013, F-09-007,
SDP-08-046, SDP-08-078, SDP-92-79,
WP-92-165, WP-93-044, WP-93-094,
WP-94-047, WP-06-114, WP-07-052,
WP-08-020, WP-07-129, GP-08-024

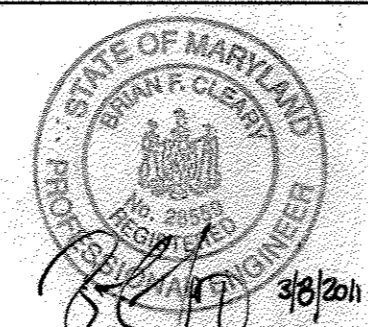
OWNER/DEVELOPER
ATAPCO HOWARD SQUARE II
STATUTORY TRUST
10 E. Baltimore St. Suite 1600
Baltimore, MD 21202
(410) 347-7189

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. 28599, Expiration Date: 7-22-2011

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

BENCHMARK
ENGINEERS, INC.
8480 BALTIMORE NATIONAL PIKE A SUITE 418
ELICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644



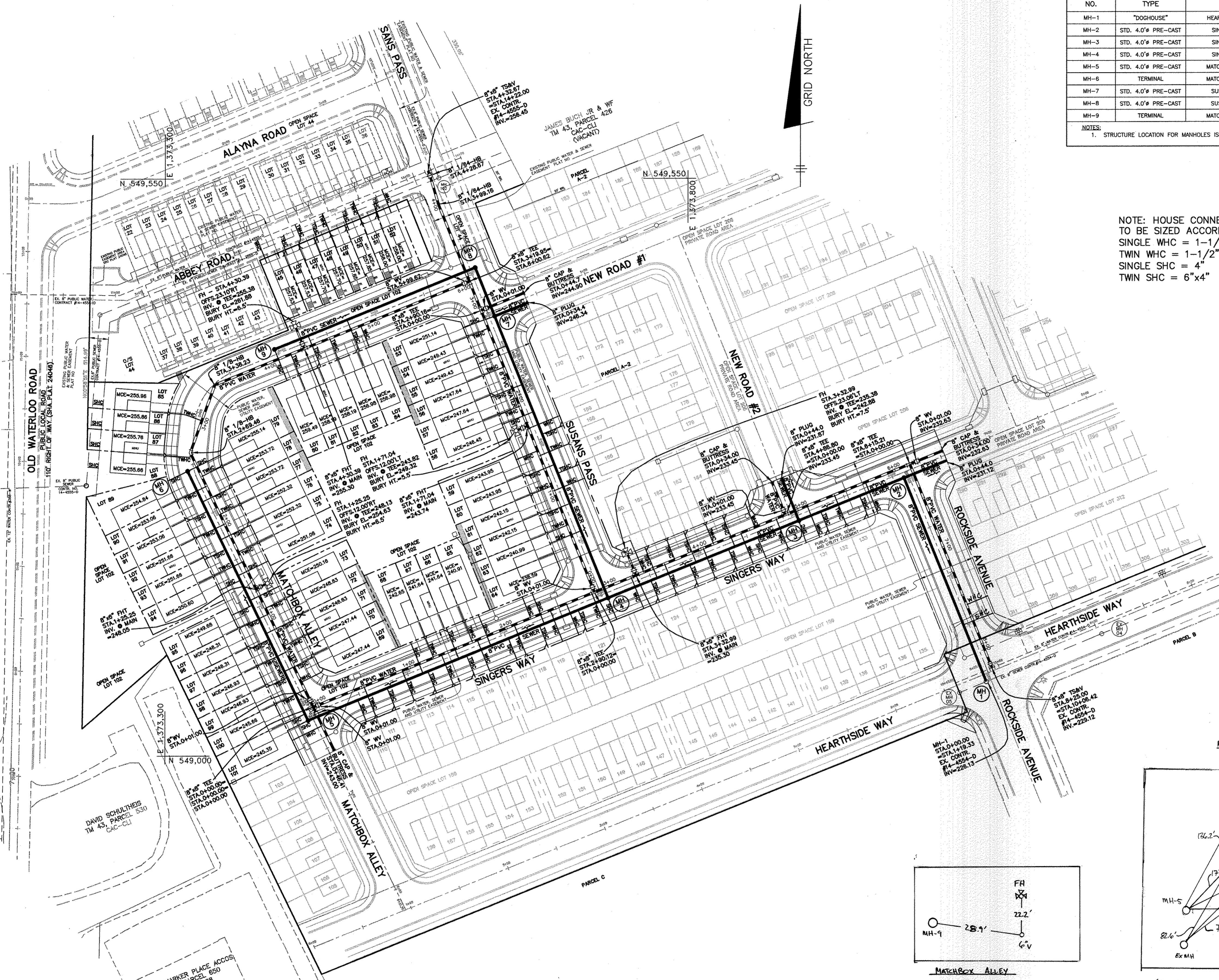
DES: BEI(MBA)			
DRN: BEI(MBA)			
CHK: BFC	KEI	2	Ac - Revisions
DATE: 03/01/11	BEI	1	REVISE QUANTITIES FOR NEW HOUSE CONNECTION, FUTURE LOT, PHASE 2 SECTION 3A
BY NO.			
REVISIONS			
DATE			

TITLE SHEET
PUBLIC WATER & SEWER MAINS

600 SCALE MAPS: 43 BLOCKS: 3 & 9

HOWARD SQUARE
PHASE 1, SECTION 3A
(L.9829 F.82, L.9816 F.608, L.3551 F.468)
TAX MAP 43, PARCEL 1, GRIDS 3 & 9
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT No. 14-4564-D

SCALE:
AS SHOWN
SHEET NO.
1 OF 4

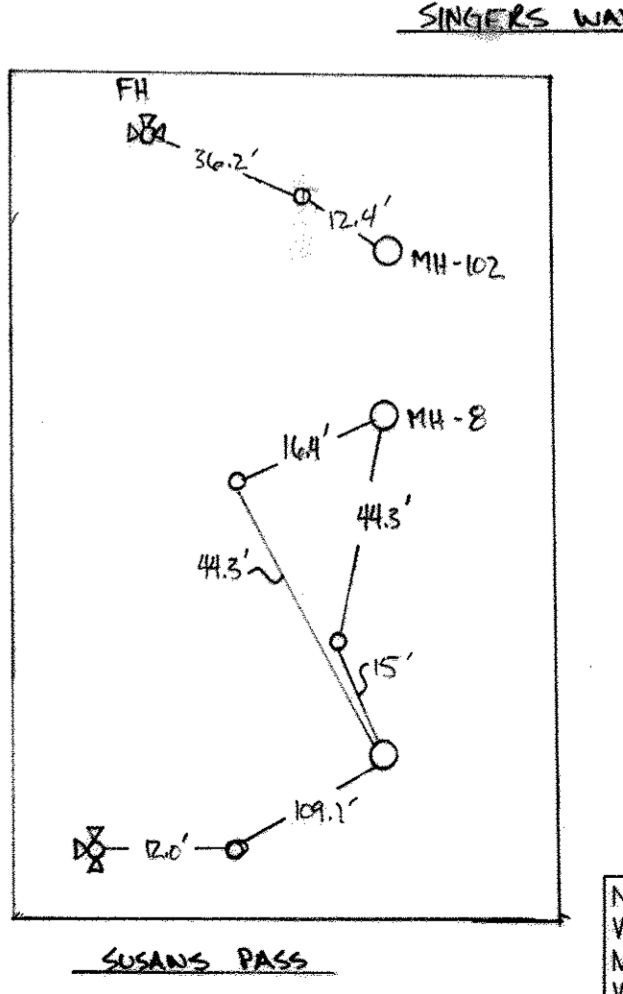
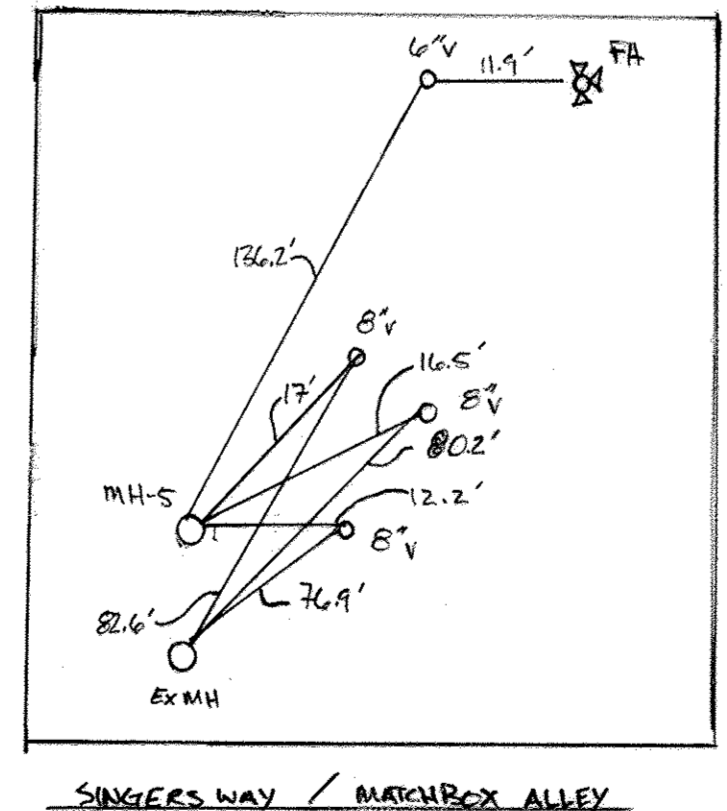
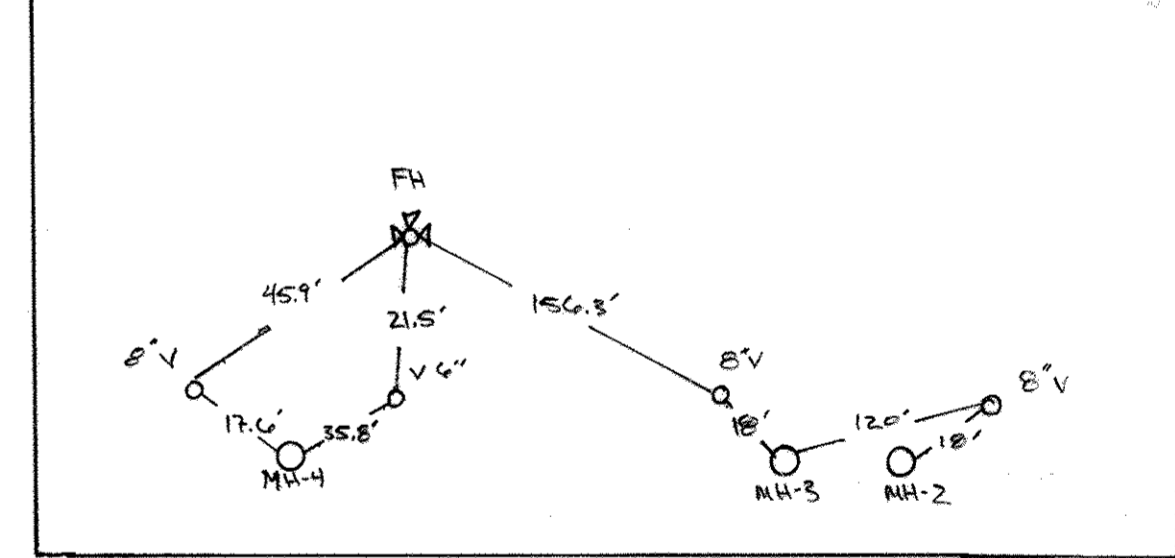
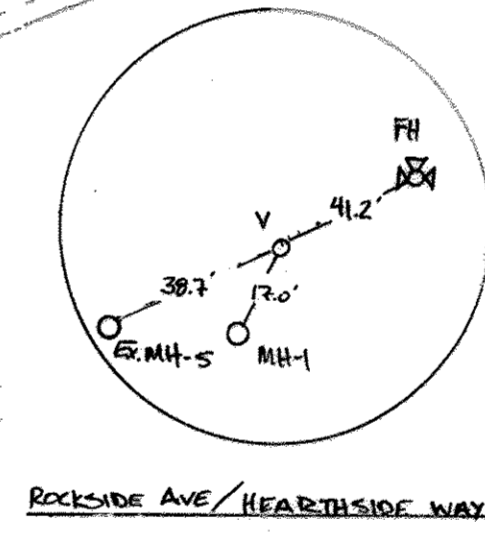


SEWER MANHOLE - STRUCTURE SCHEDULE								
NO.	TYPE	LOCATION	INVERT IN	SHC INV.	INVERT OUT	TOP ELEV.	HO.CO. STD.	REMARKS
MH-1	"DOGHOUSE"	HEARTHSIDE WAY STA.6+90.1 OFFS 7.1' RT.	226.13	-	226.13	234.40	G-5.15	EX. CONTR. #14-4554-D
MH-2	STD. 4.0' PRE-CAST	SINGERS WAY STA.5+01.5 OFFS 5.0' RT.	(2) 230.90	-	230.80	238.00	G-5.12	-
MH-3	STD. 4.0' PRE-CAST	SINGERS WAY STA.6+09.9 OFFS 5.0' RT.	(2) 231.65	231.65	231.55	239.40	G-5.12	-
MH-4	STD. 4.0' PRE-CAST	SINGERS WAY STA.3+04.8 OFFS 5.0' RT.	(2) 233.07	233.07	232.97	242.00	G-5.12	-
MH-5	STD. 4.0' PRE-CAST	MATCHBOX ALLEY STA.6+18.1 OFFS 5.0' RT.	240.91	240.91	240.81	250.00	G-5.12	-
MH-6	TERMINAL	MATCHBOX ALLEY STA.3+55.2 OFFS 6.3' RT.	-	(2) 250.50	250.13	257.33	S-1.31	-
MH-7	STD. 4.0' PRE-CAST	SUSANS PASS STA.4+71.1 OFFS 5.0' LT.	246.17	246.50	(2) 246.07	252.67	G-5.12	-
MH-8	STD. 4.0' PRE-CAST	SUSANS PASS STA.4+21.3 OFFS 5.0' RT.	248.27	-	248.17	254.88	G-5.12	-
MH-9	TERMINAL	MATCHBOX ALLEY STA.1+98.1 OFFS 5.0' RT.	-	254.85	254.51	260.66	S-1.31	-

NOTES:
1. STRUCTURE LOCATION FOR MANHOLES IS AT THE CENTER OF THE STRUCTURE.

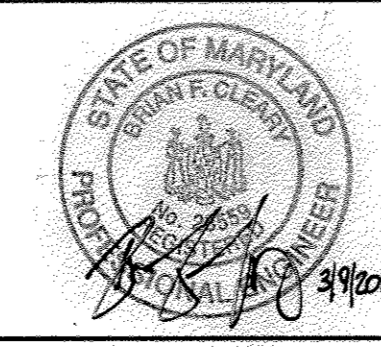
NOTE: HOUSE CONNECTIONS TO BE SIZED ACCORDINGLY:
SINGLE WHC = 1-1/2"
TWIN WHC = 1-1/2"
SINGLE SHC = 4"
TWIN SHC = 6"x4"

WATER LINE DATA CHART				
APPURTENANCE	WATERLINE STATION	LOCATION	OFFSET	COMMENT
END = 8" TSV	8+25.0 = EX.10+08.4	ROCKSIDE AVE. STA.0+03.0	5.0 RT.	HEARTHSIDE WAY STA.7+00.1
8" TEE	8+15.21 = 0+00.00	SINGERS WAY STA.6+19.9	5.0 LT.	-
8" TEE	4+86.80 = 0+00.00	SINGERS WAY STA.4+91.5	5.0 LT.	NEW ROAD #2
8" FH TEE	3+32.99	SINGERS WAY STA.3+37.7	5.0 LT.	-
FIRE HYDRANT	3+32.98 (23.06 LT.)	SINGERS WAY STA.3+37.7	28.1 LT.	BURY HT. = 6.0'
8" TEE = PI	2+90.12 = 0+00	SINGERS WAY STA.2+94.8	5.0 LT.	SUSANS PASS STA.7+51.2
8" W	0+01.00	SINGERS WAY STA.0+05.7	5.0 LT.	-
8" TSV = PI	0+00.0 = 0+00.0	SINGERS WAY STA.0+04.7	5.0 LT.	MATCHBOX ALLEY STA.6+08.9
8" W	0+01.00	SINGERS WAY STA.6+20.9	5.0 LT.	-
8" CAP & BUTTRESS	0+34.00	SINGERS WAY STA.6+53.9	5.0 LT.	8" CAP & BUTT. END = P/L
8" TEE = PI	0+00.0 = 2+90.12	SUSANS PASS STA.7+51.2	5.0 RT.	SINGERS WAY STA.2+94.8
8" W	2+89.12	SUSANS PASS STA.7+50.2	5.0 RT.	-
8" FH TEE	1+71.04	SUSANS PASS STA.5+80.2	5.0 RT.	-
FIRE HYDRANT	1+71.04 (12.00 LT.)	SUSANS PASS STA.5+80.2	17.0 RT.	BURY HT. = 5.0'
8" TEE = PI	2+90.16 = 0+00.0	SUSANS PASS STA.4+61.1	5.0 RT.	NEW ROAD #1 STA.0+00.0
8" TEE = PI	3+19.95 = 6+00.62	SUSANS PASS STA.4+31.3	5.0 RT.	MATCHBOX ALLEY STA.0+05.0
1/4" HB	3+99.16	SUSANS PASS STA.3+52.1	5.0 RT.	-
1/4" HB	4+28.67	SUSANS PASS STA.3+22.7	2.1 RT.	-
END = 8" TSV	4+32.67 = EX.14+22.00	SUSANS PASS STA.3+18.7	2.1 RT.	ABBEY ROAD STA.0+02.1
8" TEE = PI	0+00.0 = (2)0+00.0	MATCHBOX ALLEY STA.6+08.9	5.0 LT.	SINGERS WAY STA.0+04.7
8" W	0+01.00	MATCHBOX ALLEY STA.6+07.9	5.0 LT.	-
8" FH TEE	1+25.25	MATCHBOX ALLEY STA.4+83.5	5.0 LT.	-
FIRE HYDRANT	1+25.25 (12.00 RT.)	MATCHBOX ALLEY STA.4+83.5	17.0 RT.	BURY HT. = 5.5'
1/8" HB	2+69.46	MATCHBOX ALLEY STA.3+39.1	1.7 LT.	-
1/8" HB	3+38.23	MATCHBOX ALLEY STA.2+88.3	5.0 LT.	-
8" FH TEE	4+30.39	MATCHBOX ALLEY STA.1+75.2	5.0 LT.	-
FIRE HYDRANT	4+30.39 (23.10' RT.)	MATCHBOX ALLEY STA.1+75.2	18.1 RT.	BURY HT. = 6.5'
8" W	5+99.62	MATCHBOX ALLEY STA.0+11.3	5.0 LT.	-
8" TEE = PI	6+00.62 = 3+19.95	MATCHBOX ALLEY STA.0+12.3	5.0 LT.	SUSANS PASS STA.4+31.3
8" W	0+01.00	MATCHBOX ALLEY STA.6+09.9	5.0 LT.	-
8" CAP & BUTTRESS	0+46.41	MATCHBOX ALLEY STA.6+55.2	5.0 LT.	8" CAP & BUTT. END = P/L
8" TEE = PI	0+00.0 = 2+90.16	NEW ROAD #1 STA.0+05.0BK	5.0 LT.	SUSANS PASS STA.4+61.1
8" W	0+01.00	NEW ROAD #1 STA.0+04.0BK	5.0 LT.	-
8" CAP & BUTTRESS	0+44.7	NEW ROAD #1 STA.0+39.7	5.0 LT.	8" CAP & BUTT. END = P/L
8" TEE = PI	0+00.0 = 4+86.80	NEW ROAD #2 STA.0+05.0	5.0 LT.	SINGERS WAY STA.4+91.5
8" W	0+01.00	NEW ROAD #2 STA.0+06.0	5.0 LT.	-
8" CAP & BUTTRESS	0+34.00	NEW ROAD #1 STA.0+39.0	5.0 LT.	8" CAP & BUTT. END = P/L



WATER AND SEWER PLAN
SCALE: 1" = 50'

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. 28599, Expiration Date: 7-22-2011



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DATE: 3/12/11

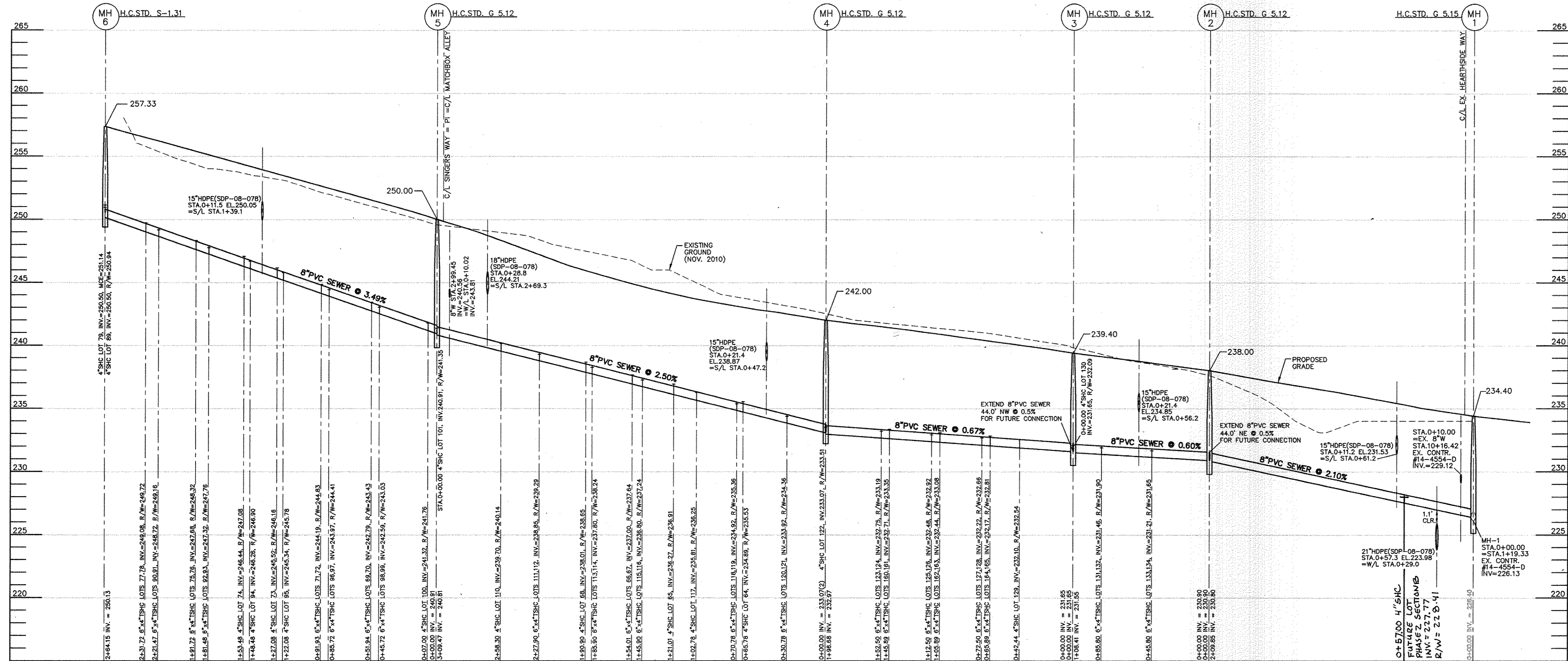
DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
DATE: 3/11/11

BENCHMARK ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLSWORTH CITY, MARYLAND 21043
PHONE: 410-465-8105 FAX: 410-465-6844

DES:	BEI(MBA)			
DRN:	BEI(MBA)			
CHK:	BFC	KL	1	AS - BUNTERS
DATE:	03/01/11	BY:	NO.	ADD WHC & SHC TO FUTURE LOT PHASE 2, SECTION B
DATE:	03/01/11	REVISIONS:		

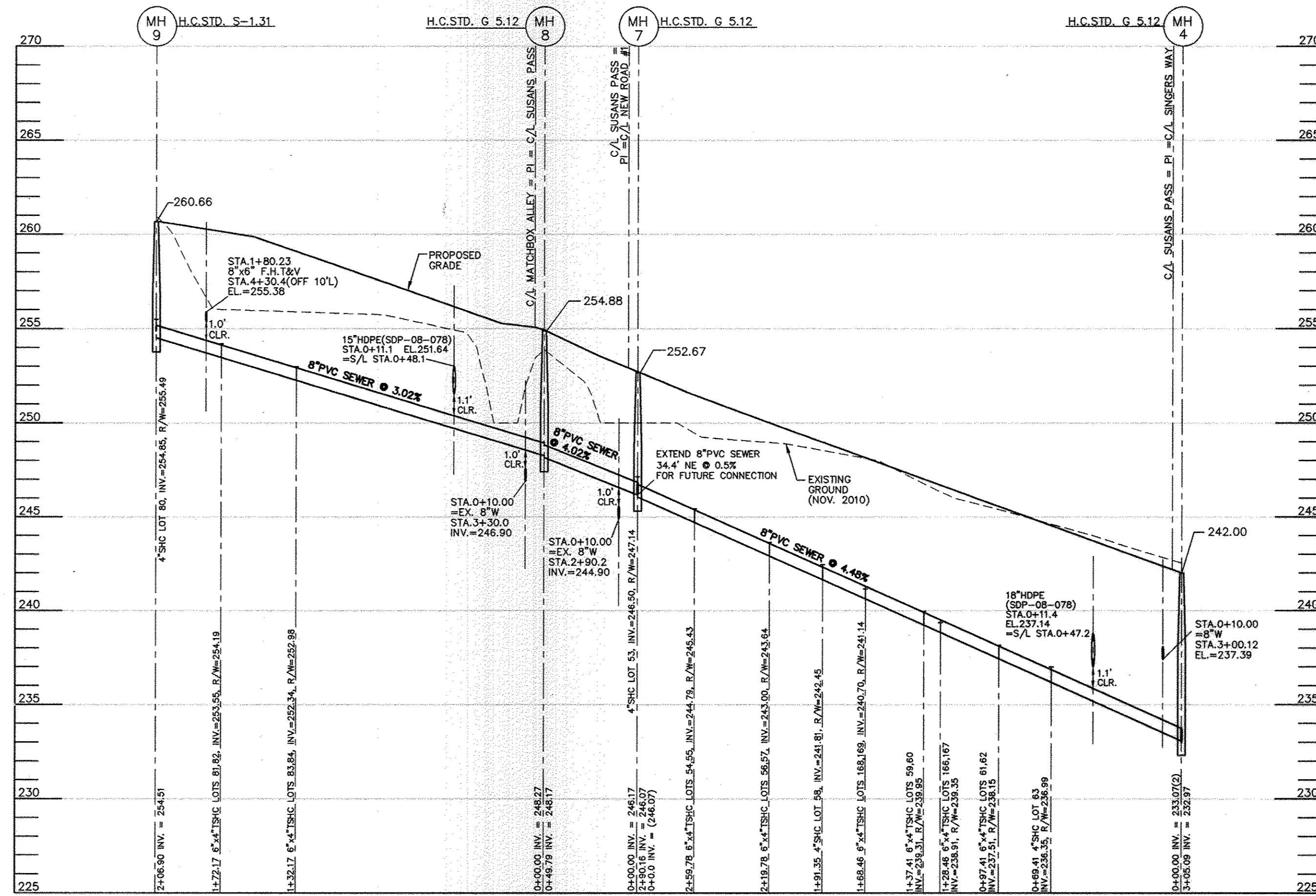
PLAN VIEW
PUBLIC WATER & SEWER MAINS
600 SCALE MAPS: 43
BLOCKS: 3 & 9

HOWARD SQUARE
PHASE 1, SECTION 3A
(L.9829 F.82, L.9816 F.608, L.3551 F.468)
TAX MAP 43, PARCEL 1, GRIDS 3 & 9
FIRST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CONTRACT No.14-4564-D
OWNER/DEVELOPER
ATAPCO HOWARD SQUARE II
STATUTORY TRUST
10 E. Baltimore St. Suite 1600
Baltimore, MD 21202
(410) 347-7189
SCALE: AS SHOWN
SHEET NO. 2 OF 4



SEWER MAIN PROFILES
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

SEWER HOUSE CONNECTION AS-BUILT LOCATION TABLE							
LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2	LOT NUMBER	ADDRESS	LOCATION DIMENSION 1	LOCATION DIMENSION 2
LOT 45	ABBEY ROAD	EL. SUSANS PASS	SMALL - 102	LOT 91	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 46	ABBEY ROAD	EL. SUSANS PASS	SMALL - 102	LOT 92	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 47	ABBEY ROAD	EL. SUSANS PASS	SMALL - 102	LOT 93	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 48	ABBEY ROAD	EL. SUSANS PASS	SMALL - 102	LOT 94	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 49	ABBEY ROAD	EL. SUSANS PASS	SMALL - 102	LOT 95	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 50	ABBEY ROAD	EL. SUSANS PASS	SMALL - 102	LOT 96	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 51	ABBEY ROAD	EL. SUSANS PASS	SMALL - 102	LOT 97	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 52	ABBEY ROAD	EL. SUSANS PASS	SMALL - 102	LOT 98	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 53	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 99	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 54	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 100	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 55	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 101	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 56	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 102	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 57	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 103	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 58	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 104	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 59	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 105	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 60	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 106	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 61	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 107	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 62	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 108	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 63	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 109	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 64	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 110	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 65	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 111	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 66	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 112	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 67	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 113	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 68	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 114	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 69	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 115	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 70	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 116	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 71	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 117	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 72	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 118	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 73	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 119	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 74	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 120	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 75	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 121	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 76	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 122	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 77	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 123	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 78	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 124	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 79	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 125	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 80	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 126	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 81	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 127	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 82	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 128	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 83	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 129	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 84	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 130	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 85	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 131	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 86	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 132	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 87	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 133	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 88	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 134	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 89	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 135	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102
LOT 90	SUSANS PASS	M.H. - 2	SMALL - 102	LOT 136	MATCHBOX ALLEY	EL. SUSANS PASS	SMALL - 102



SEWER HOUSE CONNECTION TABLE			
LOT #	% SLOPE	INV. @ SHC	MIN. CELLAR ELEV.
45	5%	252.53	257.53
46	5%	252.53	257.53
47	5%	252.70	257.70
48	5%	252.70	257.70
49	5%	252.85	257.85
50	5%	252.85	257.85
51	5%	253.00	258.00
52	5%	253.00	258.00
53	5%	245.50	245.50
54	2%	244.79	249.43
55	2%	244.79	249.43
56	2%	243.00	247.64
57	2%	243.00	247.64
58	2%	241.81	246.45
59	2%	239.31	243.95
60	2%	239.31	243.95
61	2%	237.51	242.15
62	2%	237.51	242.15
63	2%	236.35	240.99
64	2%	236.35	240.99
65	2%	236.27	240.91
66	2%	237.00	241.64
67	2%	237.00	241.64
68	2%	238.01	242.65
69	2%	242.79	247.44
70	2%	242.79	247.44
71	2%	244.19	248.83
72	2%	244.19	248.83
73	2%	245.52	250.16
74	2%	246.44	251.08
75	2%	247.68	252.32
76	2%	247.68	252.32
77	2%	248.08	253.72
78	2%	248.08	253.72
79	2%	254.85	258.48
80	2%	254.85	258.48
81	2%	253.55	257.19
82	2%	253.55	257.19
83	2%	250.86	254.50
84	2%	250.86	254.50
85	2%	250.96	254.60
86	2%	250.96	254.60
87	2%	250.86	254.50
88	2%	250.66	254.30
89	2%	250.50	254.14
90	2%	248.72	252.36
91	2%	248.72	252.36
92	2%	247.32	250.96
93	2%	247.32	250.96
94	2%	246.26	249.90
95	2%	245.34	248.98
96	2%	243.97	247.61
97	2%	243.97	247.61
98	2%	242.59	246.23
99	2%	242.59	246.23
100	2%	241.32	245.06
101	2%	240.91	244.65
110	2%	239.70	244.14
111	2%	238.85	243.29
112	2%	238.85	243.29
113	2%	237.80	242.24
114	2%	237.80	242.24
115	2%	236.80	241.24
116	2%	236.80	241.24
117	2%	235.81	240.25
118	2%	234.92	239.36
119	2%	233.92	238.36
120	2%	233.92	238.36
121	2%	233.92	238.36
122	2%	233.07	237.51
123	2%	232.75	237.19
124	2%	232.75	237.19
125	2%	232.48	236.92
126	2%	232.48	236.92
127	2%	232.22	236.66
128	2%	232.22	236.66
129	2%	232.10	236.54
130	2%	232.10	236.54
131	2%	231.46	235.90
132	2%	231.46	235.90
133	2%	231.21	235.65
134	2%	231.21	235.65
160	2%	237.77	237.77
161	2%	232.71	237.35
162	2%	232.44	237.08
163	2%	232.44	237.08
164	2%	232.17	236.81
165	2%	232.17	236.81
166	2%	232.10	236.74
167	2%	231.81	236.45
168	2%	231.81	236.45
169	2%	231.70	236.34
FUTURE LOT PH2, SEC. B	2%	237.77	237.77

OWNER/DEVELOPER
ATAPCO HOWARD SQUARE II
 STATUTORY TRUST
 10 E. Baltimore St. Suite 1600
 Baltimore, MD 21202
 (410) 347-1189

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)

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

CHEF, BUREAU OF UTILITIES
 DATE: 3/11/11

DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

CHEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 3/21/11

BENCHMARK
 ENGINEERS & LAND SURVEYORS & PLANNERS
 ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE & SUITE 418
 ELLSWORTH CRT., MARYLAND 21043
 PHONE: 410-465-6100 FAX: 410-465-6844

DES:	BEI(MBA)			
DRN:	BEI(MBA)			
CHK:	BFC	KCL	E	AS-BUILT
DATE:	03/01/11	BY	NO.	

PROFILE VIEWS
 PUBLIC WATER & SEWER MAINS

REVISIONS
 DATE: 03/01/11

HOWARD SQUARE
 PHASE 1, SECTION 3A
 (L.9829 F.82, L.9816 F.608, L.3551 F.468)
 TAX MAP 43, PARCEL 1, GRIDS 3 & 9
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN
 SHEET NO. 3 OF 4
 CONTRACT No. 14-4564-D

