

TYPE OF BUILDINGS
 NO. OF LOTS 82
 NO. OF W.H.C. 82
 NO. OF S.H.C. 82
 DRAINAGE AREA - LITTLE PATIENT

WATER AND SEWER CODE
 COUNTY USE
 WATER NO. E 14
 SEWER NO. 4400300

VICINITY MAP
 SCALE: 1" = 600'

GENERAL NOTES

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON N.A.S. STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MIN. OF 6". CLEAR ALL POLES BY 2'-0" MIN. OR TUNNEL AS REQ. THE OWNER HAS CONTACTED THE UTILITY COMPANY AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES ADDITIONAL BRACING OF POLES, ANY COSTS INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGE SHALL BE DEDUCTED FROM THE MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HO. CO. DESIGN MANUAL, VOL. IV, STD. SPECS. AND DETAILS FOR CONSTRUCTION. THE CONTRACTOR SHALL HAVE A COPY OF VOL. IV ON THE JOB.
- WHERE TEST PITS HAVE BEEN MADE ON EXIST UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - BALTO. G & E CO. - CONTRACTOR SERVICES 850-4670
 - BALTO. G & E CO. - UNDERGROUND DAMAGE CONTROL - 850-3004
 - BALTO. G & E CO. - TROUBLE SHOOTING - 298-3001
 - MISS UTILITY - 1-550-0100
 - COLONIAL PIPELINE CO. 705-1390
 - BUREAU OF UTILITIES, HOWARD CO. DEPT. OF PUBLIC WORKS 292-2366
 - C & P TELEPHONE CO 1-800-257-7777
- TREES & SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES & SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- CONTRACTOR SHALL REMOVE TREES, STUMPS & ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- ALL WATER MAINS ARE TO BE D.I.P. UNLESS OTHERWISE SHOWN.
- TOPS OF ALL WATER MAINS TO HAVE A MIN. OF 3'-5" COVER.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BRACED OR ANCHORED WITH CONCRETE, IN ACCORDANCE WITH THE STD. DETAILS, UNLESS OTHERWISE PROVIDED FOR ON THE DRWG'S.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED & BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STD. DETAILS. SOIL AROUND THE FIRE HYDRANTS SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1003 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAINS VALVES ON THE EXISTING WATER SYSTEM.
- ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., A.C.P. CLASS 2400 OR P.V.C. UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W/T IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVER. STD. DETAIL G 8-52. WHERE WATER TIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-0" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSES WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CAN NOT BE SERVED.

NOTE: WATER
 # 410 19 R2 WHC CONNECTION ABOVE 7/1/85

NOTE: SEWER
 # 119 41 AT 176 S.H.C. 1179-82 CONNECTIONS ABOVE 7/1/85

QUANTITIES			
ITEM	ESTM'Q	AS BUILT	MATERIAL/SUPPLIER
8" S	2006 LF	1990 3/4	1st in manufacturing Corp
MANHOLES	12 EA	12 EA	Concrete Products of America
8" W	1755 LF	1791 LF	Griffin Pipe Products
6" W	225 LF	389' 6"	"
FIRE HYDRANT	5 EA	5 EA	Muelter Co
BLOW OFF	2 EA	2 EA	Griffin Pipe Co
SHC (6)	980 LF	1562 1/4	1st in manufacturing Corp
1" W/H	834 LF	764 LF	Milwaukee Metals/Inverness Co
B VALVES	2	2	Muelter Co
G VALVE	1	1	"
3/4 W/H	610 LF	1008 LF	Milwaukee Metals/Inverness Co

BLANCH MARKS
 2142003 CONC. MON. 6" E. OF CONC. LUM. RTE. 75 N. LANE 0' 1" BELOW SURFACE
 2142001 K.E. 4" E. OF BURD PAVING RTE. 32 800' E. N. OF CARROLL HTS. AVE.

SEDIMENT CONTROL MEASURES FOR THIS CONTACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 210 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN F-00-19

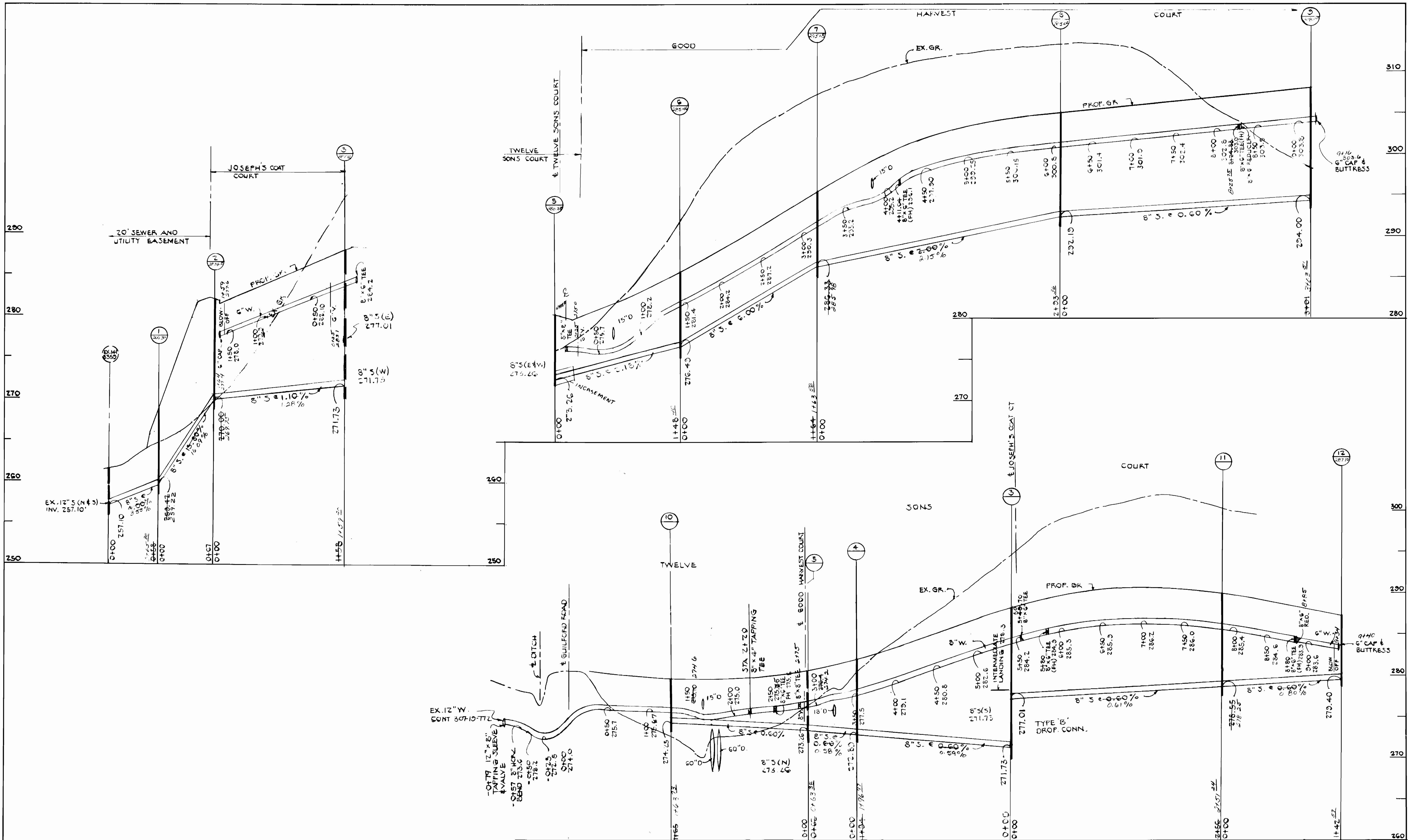
REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

James M. Helm 12-17-87
 S.O. SOIL CONSERVATION SERVICE DATE

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

Stephen L. Kuhn 12/17/87
 HOWARD COUNTY SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>James M. Helm</i> 12-23-87 DIRECTOR OF PUBLIC WORKS DATE <i>Ruth Beaman</i> 12-15-87 CHIEF, BUREAU OF UTILITIES DATE	HUDKINS ASSOCIATES, INC. 200 E. JOPPA ROAD TOWSON, MARYLAND 21204 828-9060 <i>Arthur Demand</i> 12-09-87 CHIEF, BUREAU OF ENGINEERING DATE CHIEF, LAND DEVELOPMENT DIVISION DATE	DES: D.B. W.P. CORRECTIONS PER LETTER 2-22-1988 7/1/88 DRN: D.B. W.H.K. CORRECTIONS PER LETTER 8-2-88 8/1/88 CHK: V.J.M. D.B. REVISE WATER MAIN TWELVE SONS CT. 11-7-88 W.H.C. LOTS 1, 2 & 3 REVISED 2-11-89 DATE: BY NO. REVISION DATE	WATER & SEWER PLAN TWELVE SONS COURT GOOD HARVEST CT. JOSEPH'S COAT CT. 600' SCALE MAP NO. _____ BLOCK NO. _____	SIGNAL HILL ELECTION DISTRICT 6 HOWARD COUNTY, MD. SCALE AS SHOWN SHEET 1 OF 3	CONTRACT NO. 24-1600-D 12-23-88
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PROFILES
SCALE: VERT 1" = 5'
HORIZ 1" = 50'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. ...
DIRECTOR OF PUBLIC WORKS
DATE: 11-15-87

Robert M. ...
CHIEF, BUREAU OF UTILITIES
DATE: 12-15-87

...
CHIEF, BUREAU OF ENGINEERING
DATE: 12-23-87

...
CHIEF, LAND DEVELOPMENT DIVISION
DATE: ...

HUOKINS ASSOCIATES, INC.
200 E. JOPLIA ROAD
TOWSON, MARYLAND 21284
828-3060

Arthur Edmond
12-02-87

DES: DB			
DRN: DB			
CHK: YJM	DB	ADD TEE @ STA. 7+20 TWELVE SONS CT.	2-11-91
	DB	REV. WATER MAIN, TWELVE SONS COURT	11-7-88
DATE:	BY NO.	REVISION	DATE

WATER & SEWER PLAN
TWELVE SONS COURT
GOOD HARVEST CT.
JOSEPH'S COAT CT.

600' SCALE MAP NO. _____ BLOCK NO. _____

SIGNAL HILL
ELECTION DISTRICT 6
HOWARD COUNTY, MD.

CONTRACT NO. 24-1600-D

SCALE AS SHOWN
SHEET 2 OF 3

SEWER AS-BUILT

WATER AS-BUILT

LOT #1	FIRE HYDRANT #1	141.4	VALVE BOX FIRE HYDRANT #1	741.8	MANHOLE # 10	35.9	LOT #1	FIRE HYDRANT #1	157.3	VALVE BOX FIRE HYDRANT #1	158	MANHOLE #10	42
LOT #2	FIRE HYDRANT #1	137.8	VALVE BOX FIRE HYDRANT #1	38.6	MANHOLE # 10	35.9	LOT #2	"	158.5	"	158.5	"	35.5
LOT #3	FIRE HYDRANT #1	17.7	VALVE BOX FIRE HYDRANT #1	85.6	MANHOLE # 10	111.7	LOT #3	"	39.8	"	39.8	"	44
LOT #4	MANHOLE #6	42.5	STORM DRAIN MANHOLE lot 3	46.4	STORM DRAIN MANHOLE lot 5	104.8	LOT #4	MANHOLE #6	42	STORM DRAIN MANHOLE lot #3	77.3	STORM DRAIN MANHOLE lot #5	32.7
LOT #5	MANHOLE #7	17.4	FIRE HYDRANT #4	142.9	STORM DRAIN MANHOLE lot 5	18.7	LOT #5	MANHOLE #7	47.9	FIRE HYDRANT #4	87	VALVE BOX FIRE HYDRANT #4	24.6
LOT #6	MANHOLE #7	42.3	FIRE HYDRANT #4	136.4	STORM DRAIN MANHOLE lot 5	18.7	LOT #6	MANHOLE #7	30.1	FIRE HYDRANT #4	101.8	VALVE BOX FIRE HYDRANT #4	41
LOT #7	MANHOLE #7	38.8	FIRE HYDRANT #4	57.6	VALVE BOX FIRE HYDRANT #4	37.3	LOT #7	"	32	"	19.7	"	9.6
LOT #8	MANHOLE #7	38.6	FIRE HYDRANT #4	36.8	VALVE BOX FIRE HYDRANT #4	164.6	LOT #8	"	91.8	"	16.8	"	17.5
LOT #9	FIRE HYDRANT #4	35.6	VALVE BOX FIRE HYDRANT #4	37.4	MANHOLE #8	38.5	LOT #9	"	100.8	"	12	"	12.4
LOT #10	FIRE HYDRANT #4	41	VALVE BOX FIRE HYDRANT #4	43.7	MANHOLE #8	84	LOT #10	FIRE HYDRANT #4	76.7	VALVE BOX FIRE HYDRANT #4	83.5	MANHOLE #8	124.8
LOT #11	FIRE HYDRANT #4	120.8	VALVE BOX FIRE HYDRANT #4	123	MANHOLE #8	27.7	LOT #11	"	62	"	83.5	"	119.1
LOT #12	FIRE HYDRANT #4	120.8	VALVE BOX FIRE HYDRANT #4	123	MANHOLE #8	27.7	LOT #12	"	163.5	"	164	"	45.5
LOT #13	FIRE HYDRANT #4	205.5	VALVE BOX FIRE HYDRANT #4	208.2	MANHOLE #8	50.5	LOT #13	"	168.7	"	169	"	41.8
LOT #14	FIRE HYDRANT #4	212.7	VALVE BOX FIRE HYDRANT #4	213.6	MANHOLE #8	33	LOT #14	FIRE HYDRANT #5	173.5	VALVE BOX FIRE HYDRANT #5	174.1	"	35.5
LOT #15	FIRE HYDRANT #5	131.5	VALVE BOX FIRE HYDRANT #5	132	MANHOLE #8	70.2	LOT #15	"	168.8	"	169.4	"	40
LOT #16	"	188	"	188.7	"	34.0	LOT #16	"	69.7	"	51.7	"	132
LOT #17	"	44.7	"	46.6	MANHOLE #9	130.8	LOT #17	"	79.7	"	12.5	MANHOLE #9	40.7
LOT #18	"	36.6	"	37	MANHOLE #9	125	LOT #18	"	35	"	26.6	"	82.7
LOT #19	"	79.4	"	79.4	"	59.7	LOT #19	"	84	"	82	"	32.9
LOT #20	"	45.3	"	45.4	"	60	LOT #20	"	70.2	"	70.5	"	49
LOT #21	"	33	"	43.6	"	71	LOT #21	"	103	"	103	"	27
LOT #22	"	76.5	"	76.5	MANHOLE #5	177	LOT #22	"	106	"	106	"	25.5
LOT #23	"	82.4	"	72.5	MANHOLE #5	153.6	LOT #23	"	110.3	"	107.5	"	25
LOT #24	"	158.6	"	157	MANHOLE #5	64.6	LOT #24	"	159.4	"	157.2	"	38
LOT #25	"	164.7	"	164.7	"	51.3	LOT #25	"	75	"	69.4	"	40.2
LOT #26	"	152	VALVE BOX FIRE HYDRANT #4	152	"	51.3	LOT #26	"	78	"	71	"	59
LOT #27	"	141.7	VALVE BOX FIRE HYDRANT #4	141.4	"	54.4	LOT #27	"	51.3	"	42	"	105.4
LOT #28	"	115.1	FIRE HYDRANT #4	112	VALVE BOX FIRE HYDRANT #4	66.5	LOT #28	"	49.1	"	44.8	"	111.6
LOT #29	"	62.5	"	66.6	"	41.8	LOT #29	"	110.5	"	113	MANHOLE #8	104.5
LOT #30	"	51.8	"	45.7	"	45.7	LOT #30	"	120.4	"	119.6	"	109.9
LOT #31	"	37.2	"	37.2	"	47.9	LOT #31	"	312	"	311	"	30.2
LOT #32	"	130.6	"	130.6	STORM DRAIN MANHOLE lot #5	47.6	LOT #32	"	272.5	"	272	"	27.2
LOT #33	"	38.2	"	38.2	"	194.8	LOT #33	FIRE HYDRANT #4	165.4	VALVE BOX FIRE HYDRANT #4	165.4	"	76.3
LOT #34	"	88.2	"	88.2	"	194.8	LOT #34	"	165.4	"	165.4	"	76.3
LOT #35	"	48.3	MANHOLE #5	48.3	MANHOLE #5	33	LOT #35	MANHOLE #7	143	FIRE HYDRANT #4	23.6	VALVE BOX FIRE HYDRANT #4	35
LOT #36	"	97.4	MANHOLE #3	97.4	MANHOLE #3	33	LOT #36	"	143	"	40	"	34
LOT #37	"	34.7	"	34.7	"	32	LOT #37	"	30.7	"	88.1	"	84
LOT #38	"	38.6	"	38.6	"	66	LOT #38	"	25.6	"	94.5	"	70.8
LOT #39	"	28.4	"	28.4	"	76.3	LOT #39	MANHOLE #6	71.3	STORM DRAIN MANHOLE lot #3	71.3	STORM DRAIN MANHOLE lot #5	68
LOT #40	"	107.1	VALVE BOX FIRE HYDRANT #2	107.1	"	118.3	LOT #40	"	63.2	"	68.3	"	69
LOT #41	"	110	"	110	"	120.4	LOT #41	"	85	"	85	"	70.7
LOT #42	"	112.3	VALVE BOX FIRE HYDRANT #3	112.3	FIRE HYDRANT #3	112.3	LOT #42	STORM DRAIN MANHOLE lot #4	103.8	MANHOLE #4	143.4	MANHOLE #5	66.1
LOT #43	"	39.5	"	39.5	"	35.6	LOT #43	VALVE BOX FIRE HYDRANT #2	37.8	FIRE HYDRANT #2	63.2	MANHOLE #3	36.2
LOT #44	"	32.6	"	32.6	"	35.6	LOT #44	"	32.2	"	39.5	"	37.3
LOT #45	"	42.3	"	42.3	"	35	LOT #45	"	68.2	"	80	"	105.0
LOT #46	"	47.5	"	47.5	"	43.1	LOT #46	"	67.3	"	84	"	110.9
LOT #47	"	67.3	"	67.3	"	68.7	LOT #47	MANHOLE #11	72	VALVE BOX FIRE HYDRANT #3	162	FIRE HYDRANT #3	164.4
LOT #48	"	71.3	"	71.3	"	75.6	LOT #48	"	36.6	"	136	"	124.4
LOT #49	"	46.5	CENTER LINE OF HANDWALL	46.5	EXISTING MANHOLE B360	185	LOT #49	"	35.2	"	78	"	62.3
LOT #50	"	113.1	"	113.1	"	32	LOT #50	"	94.1	"	27.1	"	19.1
LOT #51	"	112.3	"	112.3	"	31.4	LOT #51	MANHOLE #2	151.1	"	31	"	16
LOT #52	"	105	VALVE BOX FIRE HYDRANT #3	105	FIRE HYDRANT #3	114	LOT #52	"	46.2	"	59	"	56.6
LOT #53	"	234.9	EXISTING MANHOLE B357	234.9	EXISTING MANHOLE B360	114	LOT #53	"	41.5	"	60.7	"	59.5
LOT #54	"	27.5	VALVE BOX FIRE HYDRANT #2	27.5	FIRE HYDRANT #2	123.4	LOT #54	"	23.3	"	15	"	79.9
LOT #55	"	123.8	"	123.8	"	117.6	LOT #55	"	21.5	"	77	"	63.5
LOT #56	"	32	FIRE HYDRANT #2	32	MANHOLE #3	77	LOT #56	"	35.6	"	85.3	"	78.2
LOT #57	"	276	"	276	"	12	LOT #57	MANHOLE #11	32.3	"	74.7	"	84.8
LOT #58	"	33.8	EXISTING MANHOLE B357	33.8	EXISTING MANHOLE B360	117.5	LOT #58	"	38.6	"	81	"	78.4
LOT #59	"	148	"	148	"	217	LOT #59	"	23.6	"	191.2	"	197.4
LOT #60	"	141.5	"	141.5	"	23.6	LOT #60	"	19	"	137.4	"	145.5
LOT #61	"	123	"	123	"	73	LOT #61	"	73	"	25.7	MANHOLE #3	112
LOT #62	"	14	"	14	"	71.3	LOT #62	VALVE BOX FIRE HYDRANT #2	57.6	FIRE HYDRANT #2	68.8	"	59.4
LOT #63	"	78.3	"	78.3	"	78.5	LOT #63	"	66.5	"	35	"	37.4
LOT #64	"	28.8	"	28.8	"	78.5	LOT #64	STORM DRAIN MANHOLE	93.5	MANHOLE #2	40.0	VALVE BOX 4" BLUES-CH	57
LOT #65	"	10	"	10	"	111.8	LOT #65	"	92	"	80.5	"	120.2
LOT #66	"	8	"	8	"	16.7	LOT #66	"	66.3	"	57.2	"	33.3
LOT #67	"	60.7	"	60.7	"	1.1	LOT #67	"	62.6	"	53.6	"	23.3
LOT #68	"	32.8	VALVE BOX FIRE HYDRANT #1	32.8	"	32.8	LOT #68	"	20.5	"	71.2	"	48.3
LOT #69	"	32.9	"	32.9	"	44.4	LOT #69	"	15.3	"	37.6	"	41.4
LOT #70	"	127.4	"	127.4	MANHOLE #10	11.3	LOT #70	VALVE BOX FIRE HYDRANT #2	109.5	FIRE HYDRANT #2	107.3	MANHOLE #3	71.7
LOT #71	"	"	"	"	"	"	LOT #71	"	115.4	"	113.9	"	65.9
LOT #72	"	"	"	"	"	"	LOT #72	STORM DRAIN MANHOLE lot #7	30.4	MANHOLE #4	49	MANHOLE #5	108
LOT #73	"	"	"	"	"	"	LOT #73	"	38.3	"	43	"	113.7
LOT #74	"	"	"	"	"	"	LOT #74	FIRE HYDRANT #1	72.8	"	45.9	"	26.6
LOT #75	"	"	"	"	"	"	LOT #75	"	57.1	VALVE BOX FIRE HYDRANT #1	49.1	MANHOLE #10	88.7
LOT #76	"	"	"	"	"	"	LOT #76	"	148	"	144.6	"	25.4

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE CHIEF, BUREAU OF ENGINEERING DATE

DES:	
DRN:	
CHK:	
DATE:	

BY	NO.	REVISION	DATE	600 SCALE MAP NO.	BLOCK NO.
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SIGNAL HILL AS-BUILTS SEWER & WATER
CONTRACT NO. 24-16 99 D
DRAWN BY- KATHY WILSON

SCALE AS SHOWN
SHEET 3 OF 3