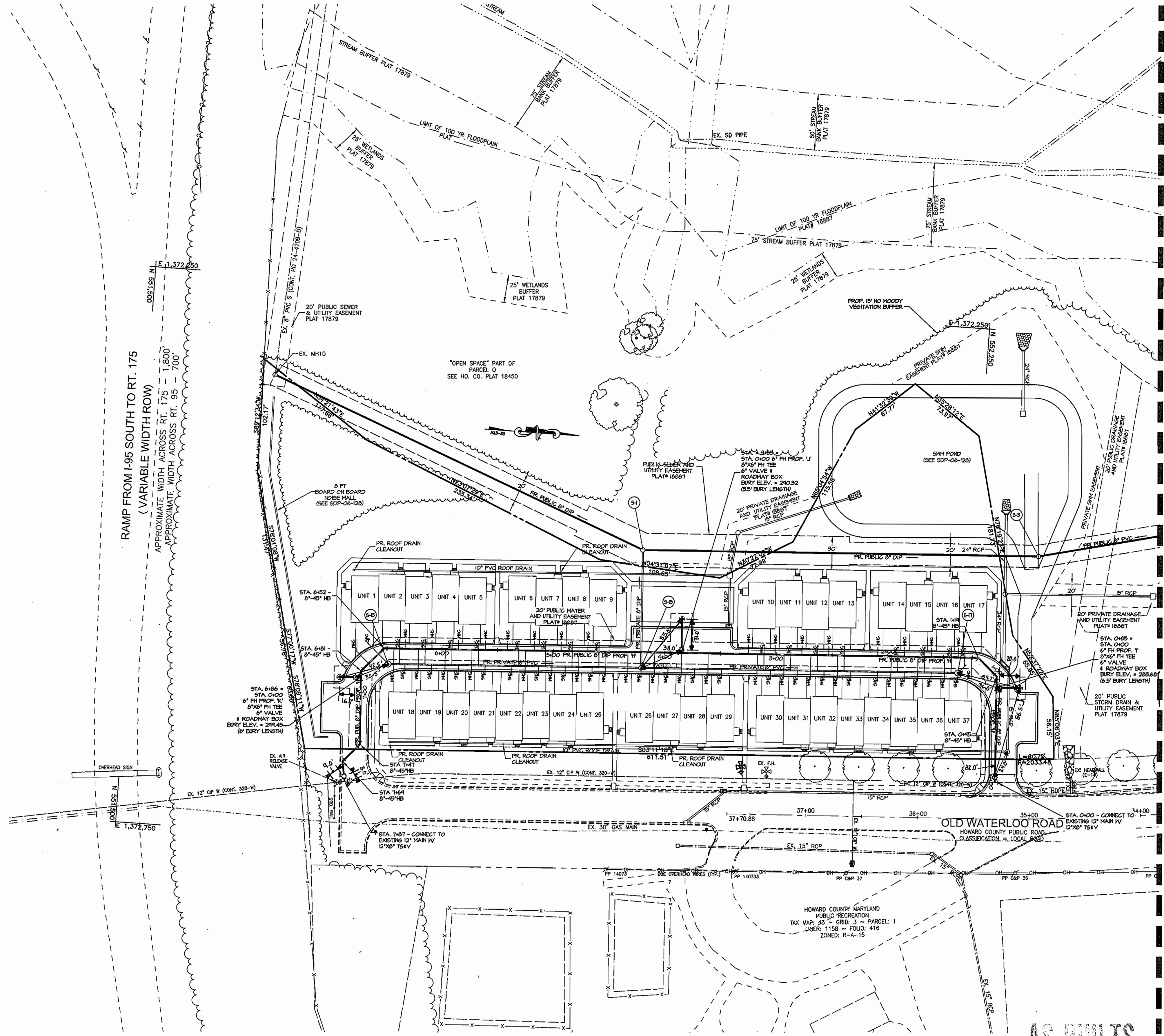


UNIT #	FROM	TO	DISTANCE	REMARKS
UNIT 1	LOT 1 WHC	LOT 1 SHC	10.0'	
	WHC LOT 1	6" F.H. VALVE	41.0'	STA. 6+86
	WHC LOT 1	FIRE HYDRANT	39.0'	
UNIT 1	SHC LOT 1	FIRE HYDRANT	41.5'	
	SHC LOT 1	MH S-13	27.0'	
	SHC LOT 1	SHC LOT 2	28.0'	
UNIT 2	SHC UNIT 2	MH S-13	24.5'	
	SHC UNIT 2	WHC UNIT 2	5.0'	
	SHC UNIT 2	6" F.H. VALVE	54.0'	STA. 6+86
UNIT 2	WHC UNIT 2	SHC UNIT 3	17.5'	
	WHC UNIT 2	MH S-13	28.0'	
	WHC UNIT 2	6" F.H. VALVE	58.0'	STA. 6+86
UNIT 3	SHC UNIT 3	MH S-13	39.8'	
	SHC UNIT 3	WHC UNIT 3	5.5'	
UNIT 3	WHC UNIT 3	MH S-13	45.5'	
	WHC UNIT 3	SHC UNIT 4	17.0'	
UNIT 4	SHC UNIT 4	MH S-13	61.0'	
	SHC UNIT 4	WHC UNIT 4	6.0'	
UNIT 4	WHC UNIT 4	MH S-13	67.0'	
	WHC UNIT 4	SHC UNIT 5	17.8'	
UNIT 5	SHC UNIT 5	MH S-13	83.0'	
	SHC UNIT 5	WHC UNIT 5	7.0'	
UNIT 5	WHC UNIT 5	MH S-13	90.5'	
	WHC UNIT 5	WHC UNIT 6	19.7'	
UNIT 6	WHC UNIT 6	SHC UNIT 6	10.0'	
	WHC UNIT 6	WHC UNIT 17	14.5'	
UNIT 6	SHC UNIT 6	WHC UNIT 17	34.0'	
	SHC UNIT 6	WHC UNIT 22	33.0'	
UNIT 7	WHC UNIT 7	SHC UNIT 7	16.0'	
	WHC UNIT 7	WHC UNIT 22	46.0'	
	WHC UNIT 7	WHC UNIT 23	38.0'	
UNIT 7	SHC UNIT 7	WHC UNIT 8	9.0'	
	SHC UNIT 7	WHC UNIT 23	35.0'	
UNIT 8	WHC UNIT 8	WHC UNIT 23	35.0'	
	WHC UNIT 8	SHC UNIT 8	9.0'	
	WHC UNIT 8	MH S-15	73.0'	
	SHC UNIT 8	WHC UNIT 9	15.0'	
	SHC UNIT 8	MH S-15	66.0'	
	SHC UNIT 8	WHC UNIT 24	31.0'	
UNIT 9	WHC UNIT 9	SHC UNIT 9	9.0'	
	WHC UNIT 9	MH S-15	53.0'	
UNIT 9	SHC UNIT 9	MH S-15	44.0'	
	SHC UNIT 9	WHC UNIT 25	32.0'	
UNIT 10	WHC UNIT 10	6" F.H. VALVE	60.5'	STA. 3+85
	WHC UNIT 10	FIRE HYDRANT	63.0'	
	WHC UNIT 10	SHC UNIT 10	15.0'	
UNIT 10	SHC UNIT 10	WHC UNIT 11	9.0'	
	SHC UNIT 10	6" F.H. VALVE	75.0'	STA. 3+85
UNIT 11	WHC UNIT 11	SHC UNIT 11	15.0'	
	WHC UNIT 11	6" F.H. VALVE	83.0'	STA. 3+85
UNIT 11	SHC UNIT 11	WHC UNIT 12	9.0'	
	SHC UNIT 11	WHC UNIT 31	32.5'	
UNIT 12	SHC UNIT 12	WHC UNIT 13	8.0'	
	SHC UNIT 12	WHC UNIT 32	30.0'	
UNIT 12	WHC UNIT 12	SHC UNIT 12	14.5'	
	WHC UNIT 12	WHC UNIT 32	34.0'	



UNIT #	FROM	TO	DISTANCE	REMARKS
UNIT 13	WHC UNIT 13	WHC UNIT 33	32.9'	
	WHC UNIT 13	SHC UNIT 13	14.2'	
UNIT 13	SHC UNIT 13	WHC UNIT 33	29.5'	
	SHC UNIT 13	WHC UNIT 14	27.0'	
UNIT 14	WHC UNIT 14	SHC UNIT 14	19.0'	
	WHC UNIT 14	MH S-17	76.0'	
UNIT 14	SHC UNIT 14	WHC UNIT 15	5.0'	
	SHC UNIT 14	MH S-17	58.6'	
UNIT 15	WHC UNIT 15	SHC UNIT 15	9.0'	
	WHC UNIT 15	MH S-17	53.8'	
UNIT 15	SHC UNIT 15	WHC UNIT 16	5.0'	
	SHC UNIT 15	MH S-17	37.0'	
UNIT 16	WHC UNIT 16	SHC UNIT 17	16.5'	
	WHC UNIT 16	MH S-17	34.0'	
UNIT 16	SHC UNIT 16	MH S-17	22.7'	
	SHC UNIT 16	WHC UNIT 17	6.0'	
UNIT 17	WHC UNIT 17	MH S-17	25.0'	
	WHC UNIT 17	SHC UNIT 17	6.0'	
UNIT 17	SHC UNIT 17	MH S-17	21.5'	
	SHC UNIT 17	6" F.H. VALVE	43.5'	STA. 0+85
UNIT 18	SHC UNIT 18	MH S-13	19.0'	
	SHC UNIT 18	WHC UNIT 18	11.0'	
	SHC UNIT 18	6" F.H. VALVE	43.0'	STA. 6+86
UNIT 18	WHC UNIT 18	MH S-13	14.0'	
	WHC UNIT 18	6" F.H. VALVE	32.0'	STA. 6+86
UNIT 19	SHC UNIT 19	WHC UNIT 19	12.0'	
	SHC UNIT 19	MH S-13	40.5'	
	SHC UNIT 19	WHC UNIT 13	33.5'	
UNIT 19	WHC UNIT 19	MH S-13	29.0'	
	WHC UNIT 19	SHC UNIT 18	10.7'	
	WHC UNIT 19	6" F.H. VALVE	55.0'	STA. 6+86
UNIT 20	SHC UNIT 20	MH S-13	64.0'	
	SHC UNIT 20	WHC UNIT 20	12.0'	
UNIT 20	WHC UNIT 20	MH S-13	53.5'	
	WHC UNIT 20	SHC UNIT 19	12.5'	
	WHC UNIT 20	WHC UNIT 3	37.5'	
UNIT 21	SHC UNIT 21	MH S-13	88.0'	
	SHC UNIT 21	WHC UNIT 21	11.8'	
	SHC UNIT 21	WHC UNIT 5	32.0'	
UNIT 21	WHC UNIT 21	MH S-13	77.0'	
	WHC UNIT 21	SHC UNIT 20	12.0'	
	WHC UNIT 21	WHC UNIT 4	36.5'	
UNIT 22	SHC UNIT 22	SHC UNIT 22	12.0'	
	WHC UNIT 22	WHC UNIT 7	35.0'	
UNIT 22	SHC UNIT 22	SHC UNIT 21	20.0'	
	SHC UNIT 22	WHC UNIT 6	32.5'	
UNIT 23	WHC UNIT 23	MH S-15	80.0'	
	WHC UNIT 23	SHC UNIT 23	11.0'	
	WHC UNIT 23	WHC UNIT 7	37.0'	
UNIT 23	SHC UNIT 23	WHC UNIT 22	13.0'	
	SHC UNIT 23	WHC UNIT 7	34.0'	
UNIT 24	WHC UNIT 24	MH S-15	57.0'	
	WHC UNIT 24	SHC UNIT 24	14.5'	
UNIT 24	SHC UNIT 24	WHC UNIT 23	10.0'	
	SHC UNIT 24	WHC UNIT 8	33.5'	
UNIT 25	WHC UNIT 25	MH S-15	33.5'	
	WHC UNIT 25	SHC UNIT 25	14.5'	
	WHC UNIT 25	WHC UNIT 9	36.5'	
UNIT 25	SHC UNIT 25	WHC UNIT 24	9.0'	
	SHC UNIT 25	MH S-15	46.5'	
UNIT 26	SHC UNIT 26	MH S-15	9.0'	
	SHC UNIT 26	6" F.H. VALVE	40.5'	STA. 3+85
	SHC UNIT 26	WHC UNIT 26	13.0'	
UNIT 26	WHC UNIT 26	MH S-15	15.4'	
	WHC UNIT 26	WHC UNIT 25	19.5'	
	WHC UNIT 26	6" F.H. VALVE	53.0'	STA. 3+85
UNIT 27	SHC UNIT 27	6" F.H. VALVE	25.0'	STA. 3+85
	SHC UNIT 27	MH S-15	25.0'	
	SHC UNIT 27	WHC UNIT 27	13.5'	
UNIT 27	WHC UNIT 27	MH S-15	15.0'	
	WHC UNIT 27	SHC UNIT 26	9.5'	STA. 3+85
	WHC UNIT 27	6" F.H. VALVE	34.0'	
UNIT 28	SHC UNIT 28	6" F.H. VALVE	27.0'	STA. 3+85
	SHC UNIT 28	WHC UNIT 28	13.5'	
	SHC UNIT 28	MH S-15	50.0'	
UNIT 28	WHC UNIT 28	MH S-15	36.5'	
	WHC UNIT 28	6" F.H. VALVE	25.2'	STA. 3+85
	WHC UNIT 28	SHC UNIT 27	10.0'	

MATCHLINE - SEE SHEET 3 FOR CONTINUATION

LEGEND

---	EX. 2' CONTOUR
---	EX. 10' CONTOUR
---	EX. BUILDING
---	EX. CURB
---	EX. EASEMENT
---	EX. FENCE
---	EX. FLOODPLAIN
---	EX. GAS
---	EX. PAVEMENT
---	EX. PROPERTY LINE
---	EX. ROAD CENTERLINE
---	EX. SANITARY SEWER
---	EX. STORM DRAIN
---	EX. TREE LINE
---	EX. WATERLINE
---	EX. WETLAND
---	EX. WETLAND BUFFER
---	PROP. 2' CONTOURS
---	PROP. 10' CONTOURS
---	PROP. CENTERLINE OF ORANGE SHALE
---	PROP. CHAINLINK FENCE
---	PROP. CURB
---	PROP. TREE LINE
---	PROP. LIMIT OF DISTURBANCE
---	PROP. PAVEMENT
---	PROP. PUBLIC SANITARY SEWER LINE
---	PROP. BUILDING
---	PROP. PUBLIC SANITARY SEWER LINE
---	PROP. PUBLIC WATER LINE
---	PROP. PUBLIC STORM DRAIN

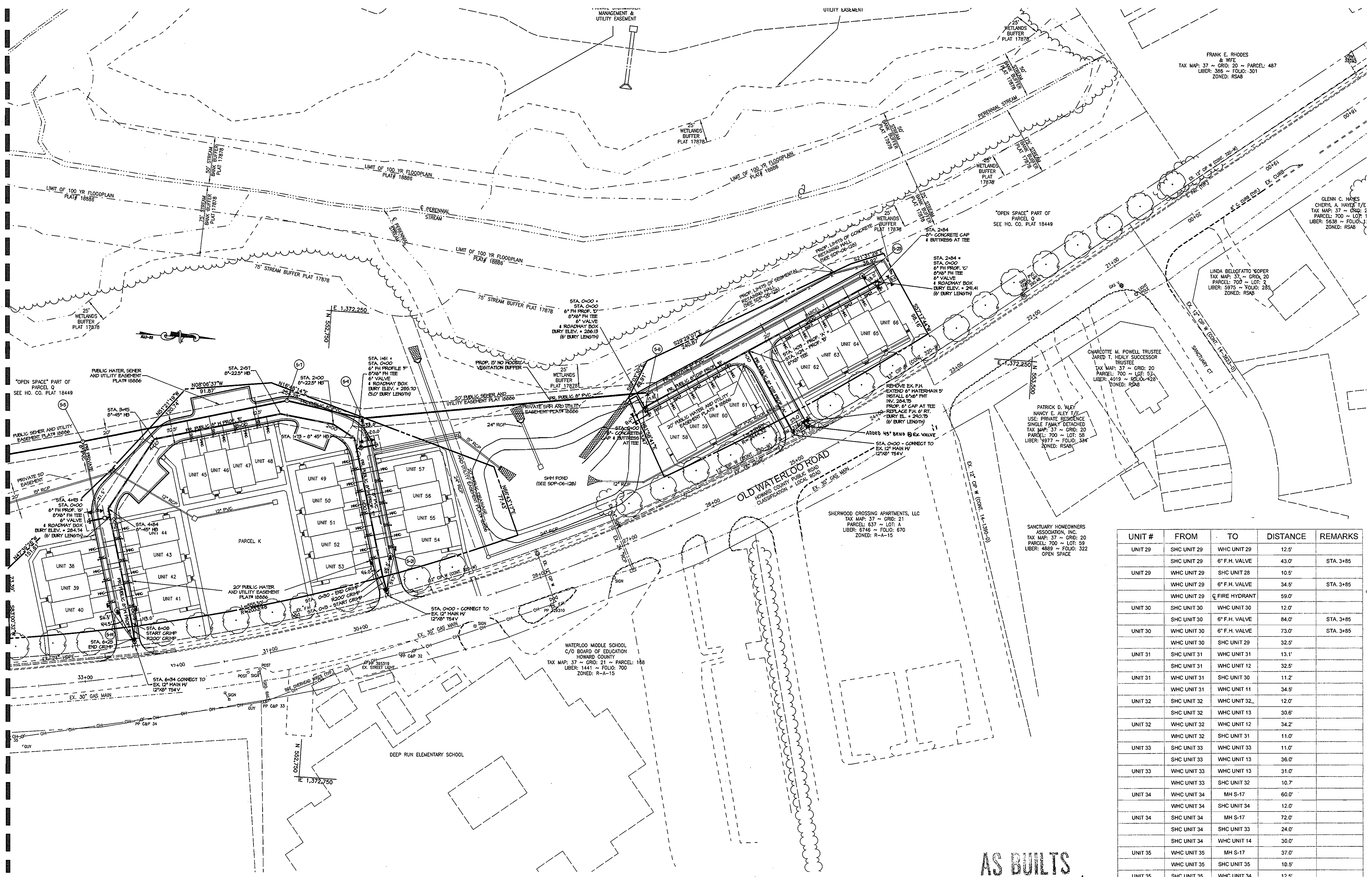
NOTES:
 SEE SHEET 3 FOR PARCELS J & K.
 1. ALL TOWNHOMES SHALL HAVE A 1" WATER HOUSE CONNECTION AND 3/4" INTERIOR WATER METER.
 2. ALL TOWNHOMES SHALL HAVE A 4" P.V.C. SEWER HOUSE CONNECTION.

AS BUILTS
 BY: DFI DATE: 1/11/08

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<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>Robert B. Benson</i> CHIEF, BUREAU OF UTILITIES</p> <p>3-21-07 DATE</p>	<p>DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND</p> <p><i>Michael J. ...</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION</p> <p>4/2/07 DATE</p>	<p>MORRIS & RITCHE ASSOCIATES, INC. ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS</p> <p>14280 PARK CENTER DRIVE, SUITE A LAUREL, MARYLAND 20707 (410) 792-9792 or (301) 776-1690 FAX (410) 792-7395</p> <p><i>Michael J. ...</i> PROFESSIONAL ENGINEER 3/13/07</p>	<p>DES: KSK BY NO. _____ REVISIONS _____ DATE _____</p> <p>DRN: MSP/MDC</p> <p>CHK: KSK</p> <p>DATE: 2/27/07</p>	<p style="text-align: center;">WATER AND SEWER PLAN</p> <p style="text-align: center;">600' SCALE MAP NO. 37 BLOCK NO. 20</p>	<p style="text-align: center;">SDP-06-128</p> <p style="text-align: center;">FINAL WATER & SEWER EXTENSION PLAN OLD WATERLOO ROAD ELK RIVER, MARYLAND GATEWAY OVERLOOK AT BENSON EAST CONTRACT NO. 24-4376-D</p> <p style="text-align: center;">PLAT: 18885 ZONED: NT ~ TAX MAP: 37 AND 43 ~ GRID: 20, 21 AND 2,3 PARCEL: 382 ~ LOTS: J, K & L 6TH ELECTION DISTRICT ~ HOWARD COUNTY, MARYLAND</p> <p style="text-align: right;">SCALE: 1" = 50' SHEET 2 OF 6</p>
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MATCHLINE - SEE SHEET 2 FOR CONTINUATION



LEGEND

---	EX. 2' CONTOUR
---	EX. 10' CONTOUR
---	EX. BUILDING
---	EX. CURB
---	EX. EASEMENT
---	EX. FENCE
---	EX. FLOODPLAIN
---	EX. GAS
---	EX. PAVEMENT
---	EX. PROPERTY LINE
---	EX. ROAD CENTERLINE
---	EX. SANITARY SEWER
---	EX. STORM DRAIN
---	EX. TREE LINE
---	EX. WATERLINE
---	EX. WETLAND
---	EX. WETLAND BUFFER
---	PROP. 2' CONTOUR
---	PROP. 10' CONTOUR
---	PROP. CENTERLINE OF ORANGE SHAKE
---	PROP. 6' CHALKLINE FENCE
---	PROP. CURB
---	PROP. TREE LINE
---	PROP. LIMIT OF DISTURBANCE
---	PROP. PAVEMENT
---	PROP. BUILDING
---	PROP. PUBLIC SANITARY SEWER LINE
---	PROP. PUBLIC WATER LINE
---	PROP. PUBLIC STORM DRAIN
---	PROP. PRIVATE STORM DRAIN

UNIT #	FROM	TO	DISTANCE	REMARKS
UNIT 29	SHC UNIT 29	WHC UNIT 29	12.5'	
	SHC UNIT 29	6" F.H. VALVE	43.0'	STA. 3+85
UNIT 29	WHC UNIT 29	SHC UNIT 28	10.5'	
	WHC UNIT 29	6" F.H. VALVE	34.5'	STA. 3+85
	WHC UNIT 29	6" FIRE HYDRANT	59.0'	
UNIT 30	SHC UNIT 30	WHC UNIT 30	12.0'	
	SHC UNIT 30	6" F.H. VALVE	84.0'	STA. 3+85
UNIT 30	WHC UNIT 30	6" F.H. VALVE	73.0'	STA. 3+85
	WHC UNIT 30	SHC UNIT 29	32.5'	
UNIT 31	SHC UNIT 31	WHC UNIT 31	13.1'	
	SHC UNIT 31	WHC UNIT 12	32.5'	
UNIT 31	WHC UNIT 31	WHC UNIT 30	11.2'	
	WHC UNIT 31	WHC UNIT 11	34.5'	
UNIT 32	SHC UNIT 32	WHC UNIT 32	12.0'	
	SHC UNIT 32	WHC UNIT 13	30.8'	
UNIT 32	WHC UNIT 32	WHC UNIT 12	34.2'	
	WHC UNIT 32	SHC UNIT 31	11.0'	
UNIT 33	SHC UNIT 33	WHC UNIT 33	11.0'	
	SHC UNIT 33	WHC UNIT 13	36.0'	
UNIT 33	WHC UNIT 33	WHC UNIT 13	31.0'	
	WHC UNIT 33	SHC UNIT 32	10.7'	
UNIT 34	WHC UNIT 34	MH S-17	60.0'	
	WHC UNIT 34	SHC UNIT 34	12.0'	
UNIT 34	SHC UNIT 34	MH S-17	72.0'	
	SHC UNIT 34	SHC UNIT 33	24.0'	
	SHC UNIT 34	WHC UNIT 14	30.0'	
UNIT 35	WHC UNIT 35	MH S-17	37.0'	
	WHC UNIT 35	SHC UNIT 35	10.5'	
UNIT 35	SHC UNIT 35	WHC UNIT 34	12.5'	
	SHC UNIT 35	WHC UNIT 15	31.0'	
	SHC UNIT 35	MH S-17	48.5'	

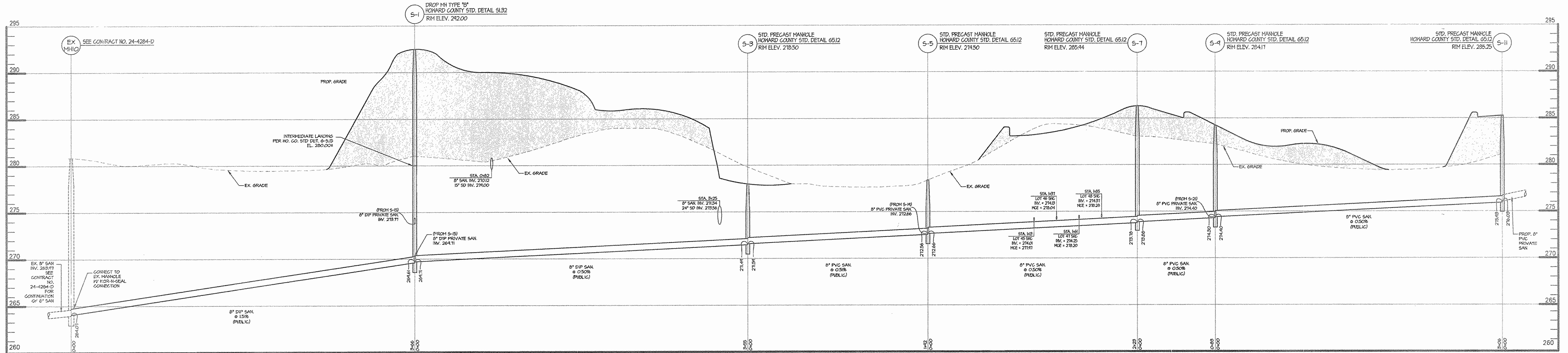
AS BUILT
BY: DFI DATE: 1/17/08

NOTES:
SEE SHEET 3 FOR PARCELS J & K.
1. ALL TOWNHOMES SHALL HAVE A 1" WATER HOUSE CONNECTION AND 3/4" INTERIOR WATER METER.
2. ALL TOWNHOMES SHALL HAVE A 4" P.V.C. SEWER HOUSE CONNECTION.

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DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND 3-21-07 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND 4/8/07 CHIEF, DEVELOPMENT ENGINEERING DIVISION	 MORRIS & RITCHE ASSOCIATES, INC. ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS 14280 PARK CENTER DRIVE, SUITE A LAUREL, MARYLAND 20707 (410) 792-9792 or (301) 776-1890 FAX (410) 792-7395	 3/13/07	DES: KSK BY NO. _____ DRN: MSP/MDC CHK: KSK DATE: 2/27/07	REVISIONS _____ _____ _____	DATE _____ _____ _____	WATER AND SEWER PLAN 600' SCALE MAP NO. 37 BLOCK NO. 20	FINAL WATER & SEWER EXTENSION PLAN OLD WATERLOO ROAD ELKCRIDGE, MARYLAND GATEWAY OVERLOOK AT BENSON EAST CONTRACT NO. 24-4378-D PLAT: 18885 ZONED: NT ~ TAX MAP: 37 ~ GRID: 20, 21 AND 2,3 PARCEL: 382 ~ LOTS: J, K & L 6TH ELECTION DISTRICT ~ HOWARD COUNTY, MARYLAND	SCALE: 1" = 50' SHEET 3 OF 6
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SDP-06-128



SANITARY PROFILE
FROM EX. SMH 10 TO S-11

SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'

SANITARY SEWER CLEAN-OUT CHART							
UNIT NO.	STATION @ MAIN	4" INVERT @ MAIN	LENGTH OF SERVICE	SLOPE OF SERVICE	INV. @ ESMT	TOP C/O ELEV.	MIN. CELLAR ELEVATION (MCC)
S-5 TO S-7							
45	1+13	273.39	22.50'	2.00%	274.01	284.89	277.97
46	1+31	273.51	22.50'	2.00%	274.13	285.42	278.04
47	1+61	273.63	22.50'	2.00%	274.25	286.00	278.20
48	1+85	273.75	22.50'	2.00%	274.37	286.48	278.28

SANITARY SEWER STRUCTURE SCHEDULE (PUBLIC)								LOCATION	
STR. NO.	TOP ELEV.	INV. IN	INV. IN	INV. OUT	TYPE	REMARKS	NORTHING	EASTING	
SMH-1	292.00	269.71	273.77	269.61	H.C. STD. DETAIL S1.32	DROP MH TYPE "B"	551,954.496	1,372,473.224	
SMH-3	278.50	271.59	---	271.49	H.C. STD. DETAIL G5.12	STANDARD PRECAST MH	552,308.626	1,372,453.496	
SMH-5	279.50	272.66	272.66	272.56	H.C. STD. DETAIL G5.12	STANDARD PRECAST MH	552,494.815	1,372,408.208	
SMH-7	285.94	273.88	---	273.78	H.C. STD. DETAIL G5.12	STANDARD PRECAST MH	552,709.447	1,372,349.509	
SMH-9	284.17	274.40	---	274.30	H.C. STD. DETAIL G5.12	STANDARD PRECAST MH	552,790.935	1,372,362.890	
SMH-11	285.25	276.03	---	275.93	H.C. STD. DETAIL G5.12	STANDARD PRECAST MH	553,093.529	1,372,314.316	

● COORDINATES TO CENTERLINE OF STRUCTURE

AS BUILTS
BY: DFI DATE: 11/7/08

UNIT #	FROM	TO	DISTANCE	REMARKS
UNIT 36	WHC UNIT 36	MH S-17	25.0'	
	WHC UNIT 36	SHC UNIT 36	10.7'	
UNIT 36	SHC UNIT 36	MH S-17	15.3'	
	SHC UNIT 36	WHC UNIT 35	12.5'	
UNIT 37	WHC UNIT 37	MH S-17	14.5'	
	WHC UNIT 37	6" F.H. VALVE	24.0'	STA. 0+85
UNIT 37	WHC UNIT 37	SHC UNIT 37	10.5'	
	SHC UNIT 37	MH S-17	8.0'	
UNIT 37	SHC UNIT 37	WHC UNIT 36	13.0'	
	8" VALVE @	8" VALVE	EX. 12" VALVE	3.0'
STA. 7+67	8" VALVE	EX. AIR RELEASE VALVE	9.0'	
T.S. & V.				
FIRE HYDRANT	FIRE HYDRANT	6" F.H. VALVE	16.7'	STA. 0+86
@ STA. 0+86	FIRE HYDRANT	MH S-13	42.5'	
	6" F.H. VALVE	MH S-13	30.5'	
FIRE HYDRANT	FIRE HYDRANT	6" F.H. VALVE	31.0'	STA. 3+85
@ STA. 3+85	FIRE HYDRANT	MH S-15	55.0'	
	6" F.H. VALVE	MH S-15	38.0'	
FIRE HYDRANT	FIRE HYDRANT	6" F.H. VALVE	20.0'	STA. 0+85
@ STA. 0+85	FIRE HYDRANT	MH S-17	55.0'	
	6" F.H. VALVE	MH S-17	36.0'	
8" VALVE @	8" VALVE	S.D. MANHOLE	24.0'	
STA. 0+00	8" VALVE	F.H. @ STA. 0+85	86.5'	
T.S. & V.	8" VALVE	6" F.H. VALVE	82.0'	STA. 0+85
UNIT 66	S-23	SHC	25.0'	
	SHC UNIT 65	SHC	10.7'	
	WHC UNIT 65	SHC	10.7'	
UNIT 66	S-23	WHC	25.3'	
	SHC UNIT 66	WHC	15.0'	
	F.H. @ STA. 2+84	WHC	19.5'	
UNIT 65	S-23	SHC	34.0'	
	WHC UNIT 66	SHC	15.5'	
	F.H. @ STA. 2+84	SHC	35.0'	
UNIT 65	S-23	WHC	43.3'	
	F.H. @ STA. 2+84	WHC	46.0'	
	SHC UNIT 65	WHC	11.5'	

UNIT #	FROM	TO	DISTANCE	REMARKS
UNIT 64	S-23	SHC	53.0'	
	F.H. @ STA. 2+84	SHC	57.3'	
	WHC UNIT 65	SHC	11.0'	
UNIT 64	S-23	WHC	65.5'	
	F.H. @ STA. 2+84	WHC	70.8'	
	SHC UNIT 64	WHC	12.0'	
UNIT 63	S-23	SHC	76.7'	
	F.H. @ STA. 2+84	SHC	82.6'	
	WHC UNIT 63	SHC	12.0'	
UNIT 63	S-23	WHC	88.3'	
	F.H. @ STA. 2+84	WHC	95.0'	
	SHC UNIT 63	WHC	13.3'	
UNIT 62	S-23	SHC	99.0'	
	WHC UNIT 63	SHC	11.0'	
	WHC UNIT 62	SHC	13.4'	
UNIT 62	S-23	WHC	11.2'	
	SHC UNIT 63	WHC	23.7'	
	SHC UNIT 61	WHC	64.0'	
UNIT 61	S-11	SHC	78.0'	
	WHC UNIT 61	SHC	10.0'	
	F.H. @ STA. 0+00	SHC	88.5'	
UNIT 61	MH S-11	WHC	89.0'	
	SHC UNIT 61	WHC	10.0'	
	F.H. @ STA. 0+00	WHC	98.5'	
UNIT 60	MH S-11	SHC	54.5'	
	WHC UNIT 60	SHC	12.5'	
	F.H. @ STA. 0+00	SHC	63.0'	
UNIT 60	MH S-11	WHC	66.5'	
	SHC UNIT 60	WHC	12.5'	
	F.H. @ STA. 0+00	WHC	75.5'	
UNIT 59	MH S-11	SHC	33.0'	
	WHC UNIT 59	SHC	12.0'	
	F.H. @ STA. 0+00	SHC	39.5'	
UNIT 59	MH S-11	WHC	43.5'	
	SHC UNIT 59	WHC	12.0'	
	F.H. @ STA. 0+00	WHC	51.5'	

GENERAL NOTES

- CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- CONTRACTOR TO TEST PIT TO DETERMINE EXACT DEPTH, LOCATION AND SIZE FOR ALL PROPOSED UTILITY CROSSINGS WITH EXISTING UTILITIES.
- ALL EXISTING VALVES TO BE RAISED TO PROPOSED GRADE, BY CONTRACTOR, AS NEEDED.
- THIS PLAN ASSUMES DEMOLITION/RELOCATION OF EXISTING UTILITIES, PAVING, STREET SIGNS, CULVERTS, ETC. WITHIN THE AREA OF R/W IMPROVEMENTS HAS ALREADY BEEN PERFORMED. SEE SITE DEVELOPMENT PLAN FOR THIS WORK.
- SEE PUBLIC ROAD & STORM DRAIN PLANS FOR R/W IMPROVEMENTS.
- SEE SITE DEVELOPMENT PLAN FOR CONTINUATION OF PRIVATE WATER & SEWER.
- ALL SEWER HOUSE CONNECTIONS SHALL BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAILS S 2.11 & S 2.22.
- TRAFFIC BEARING CLEAN OUT COVERS PER HOWARD COUNTY STANDARD DETAIL S 3.21 ARE TO BE USED FOR CLEANOUTS LOCATED IN PAVED AREAS.

CONTROLLED AND 95% COMPACTED FILL PER AASHTO T-180, TO BE CERTIFIED BY AN APPROVED ON-SITE GEOTECHNICAL ENGINEER

COMPACTED SPECIFICATIONS FOR UTILITIES IN FILL

- WHERE UTILITY PIPES ARE TO BE PLACED ON COMPACTED FILL, THE FOLLOWING APPLIES:
- PRIOR TO PLACEMENT OF COMPACTED FILL, ANY SOFT OR OTHERWISE UNSUITABLE SOILS ENCOUNTERED AT THE EXISTING RAINE BOTTOM OR SLOPE, SHALL BE UNDERCUT AND REMOVED FROM THE CONSTRUCTION AREA.
 - ACCEPTABLE COMPACTED FILL SHALL BE PLACED IN SIX INCH THICK LOOSE LIFTS AND COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY A.A.S.H.T.O. METHOD T-180.
 - THE COMPACTED FILL SHALL BE BENCHED INTO THE EXISTING VIRGIN SLOPES WITH EACH LIFT PLACED TO A SMOOTH TRANSITION FROM VIRGIN TO FILL SOILS.

SDP-06-128

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Rdtm
CHIEF, BUREAU OF UTILITIES

3-21-07
DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

MD
CHIEF, DEVELOPMENT ENGINEERING DIVISION

4/6/07
DATE

MRA
MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS

14280 PARK CENTER DRIVE, SUITE A
LAUREL, MARYLAND 20707
(410) 792-9792 or (301) 776-1660
FAX (410) 792-7395

MD
2/27/07

DES: KSK
BY NO. _____
REVISIONS _____
DATE: 2/27/07

DRN: MSP/MDC
CHK: KSK

BY NO.	REVISIONS	DATE

SEWER PROFILES

600' SCALE MAP NO. 37 BLOCK NO. 20

FINAL WATER & SEWER EXTENSION PLAN
OLD WATERLOO ROAD
ELKCRIDGE, MARYLAND
GATEWAY OVERLOOK AT BENSON EAST
CONTRACT NO. 24-4376-D

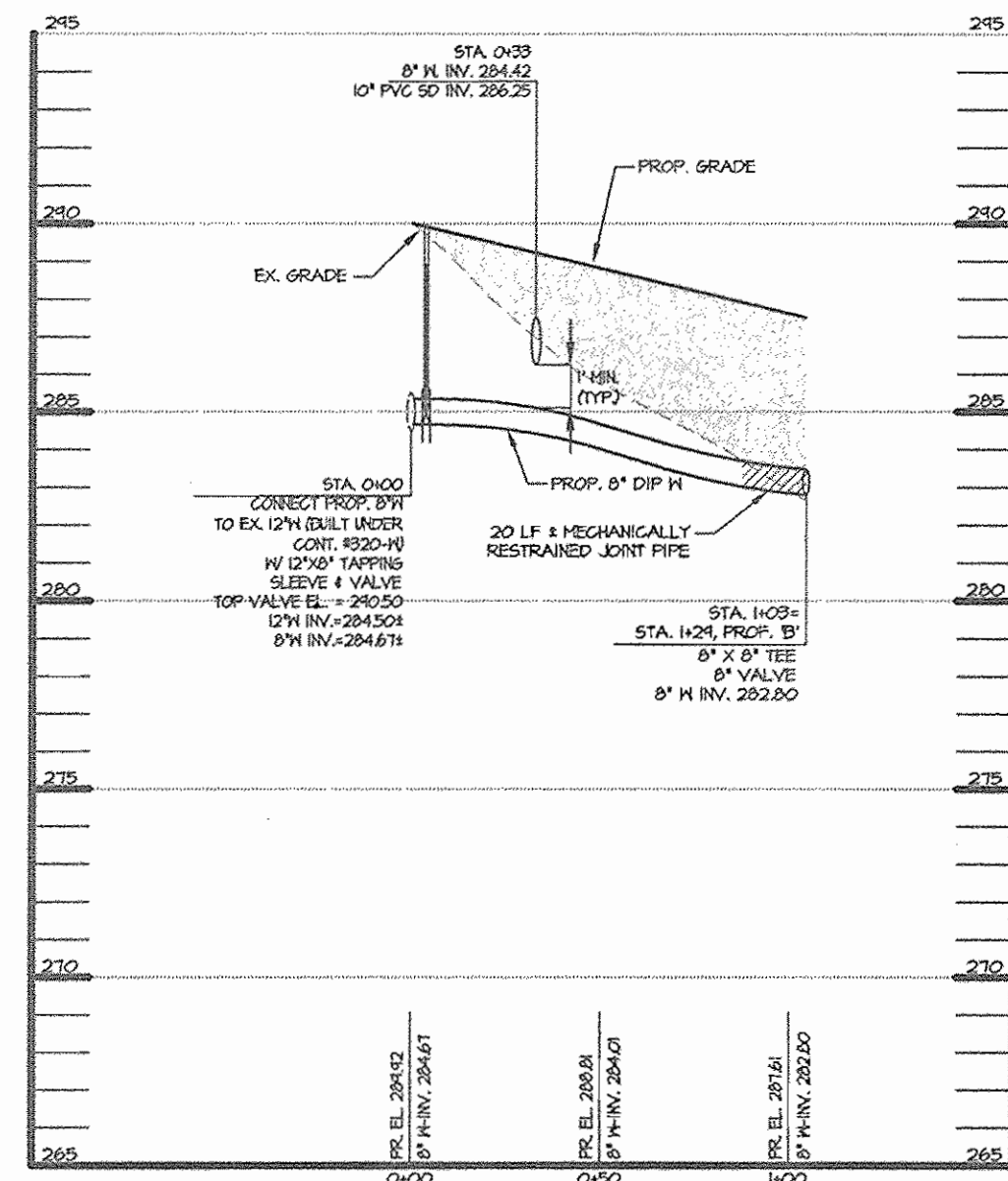
PLAT: 18885
ZONED: NT ~ TAX MAP: 37 AND 43 ~ GRID: 20, 21 AND 2,3
PARCEL: 382 ~ LOTS: J, K & L
6TH ELECTION DISTRICT ~ HOWARD COUNTY, MARYLAND

SCALE:
AS SHOWN

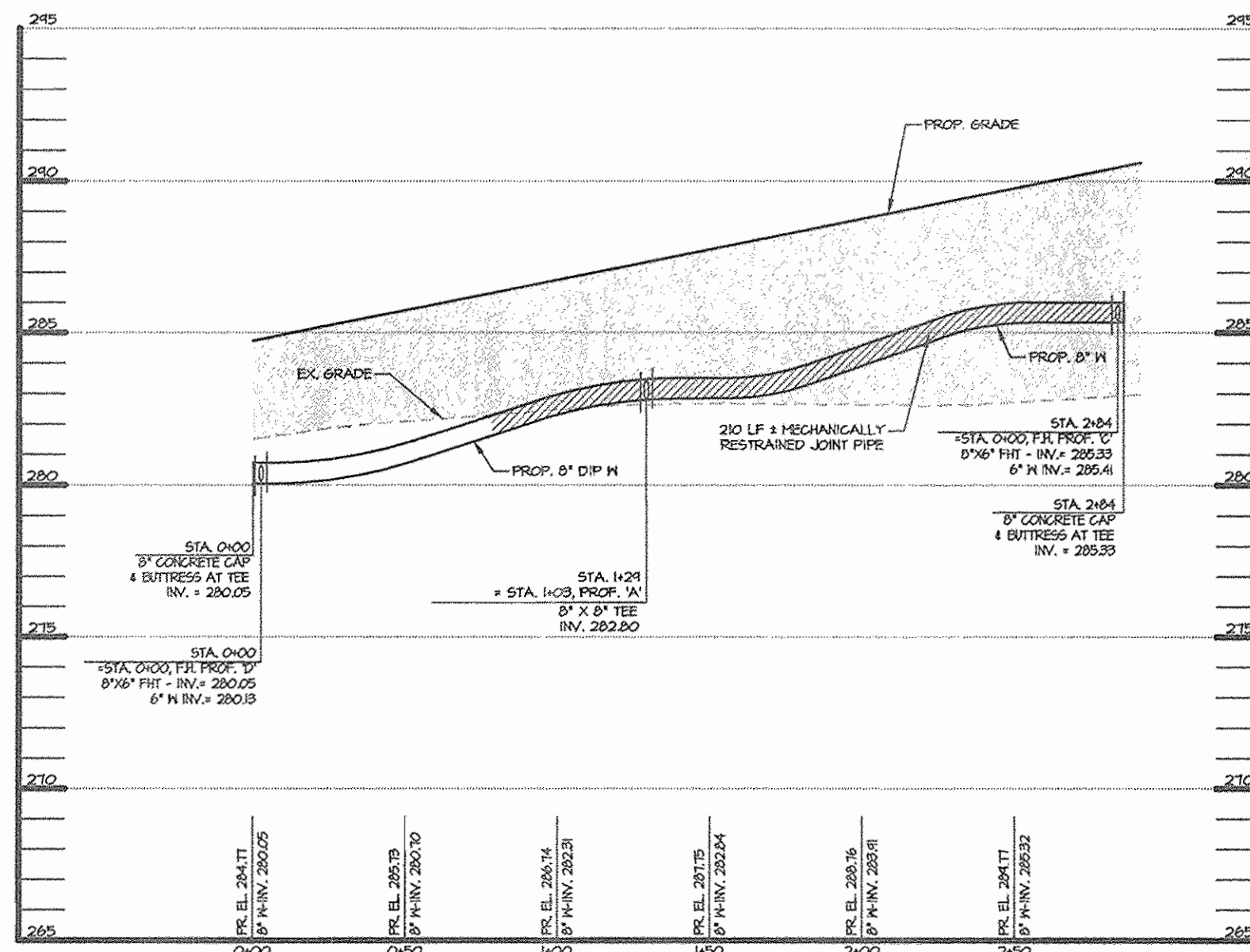
SHEET
4 OF 6

P:\PROJECTS\1419\1419.DWG (B) Final.dwg 1:47:19 PM 04-06-07 2/27/2007 1:00:34 PM C:\Users\...
 1:1. Copyright 2007 Morris & Ritchie Associates, Inc.

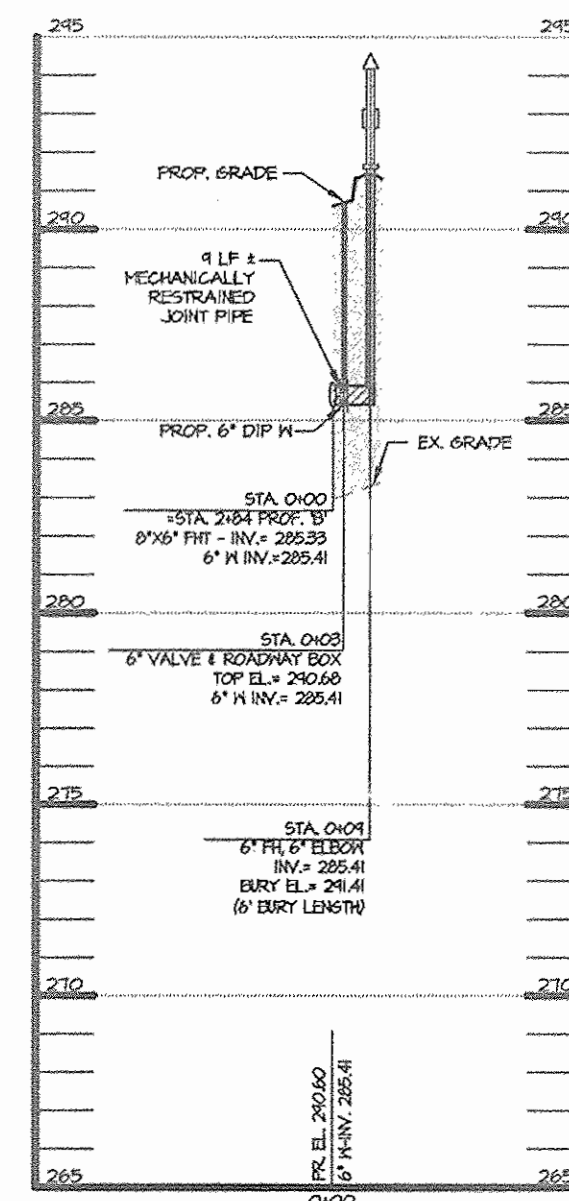
UNIT #	FROM	TO	DISTANCE	REMARKS
UNIT 58	MH S-11	SHC	18.0'	
	WHC UNIT 58	SHC	12.0'	
	F.H. @ STA 0+00	SHC	14.5'	
UNIT 58	MH S-11	WHC	24.0'	
	F.H. @ STA 0+00	WHC	26.5'	
	SHC UNIT 58	WHC	12.0'	
UNIT 54	MH S-21	SHC	11.5'	
	WHC UNIT 54	SHC	13.0'	
	WHC UNIT 53	SHC	33.0'	
UNIT 54	MH S-21	WHC	23.0'	
	WHC UNIT 54	WHC	13.0'	
	WHC UNIT 53	WHC	34.4'	
UNIT 55	MH S-21	SHC	32.5'	
	6" F.H.V. STA 1+61	SHC	92.0'	
	WHC UNIT 52	SHC	33.5'	
UNIT 55	MH S-21	WHC	47.0'	
	6" F.H.V. STA 1+61	WHC	79.0'	
	WHC UNIT 52	WHC	34.5'	
UNIT 55	MH S-21	SHC	56.0'	
	6" F.H.V. STA 1+61	SHC	68.0'	
	WHC UNIT 51	SHC	33.0'	
UNIT 56	MH S-21	WHC	70.0'	
	6" F.H.V. STA 1+61	WHC	56.0'	
	WHC UNIT 51	WHC	35.0'	
UNIT 57	MH S-21	SHC	81.0'	
	6" F.H.V. STA 1+61	SHC	45.5'	
	WHC UNIT 50	SHC	33.5'	
UNIT 57	MH S-21	WHC	94.0'	
	6" F.H.V. STA 1+61	WHC	34.5'	
	WHC UNIT 50	WHC	34.5'	
UNIT 53	MH S-21	SHC	24.8'	
	WHC UNIT 53	SHC	11.4'	
	SHC UNIT 52	SHC	12.5'	
UNIT 53	MH S-21	WHC	27.7'	
	SHC UNIT 53	WHC	11.4'	
	SHC UNIT 54	WHC	33.0'	
UNIT 52	MH S-21	SHC	35.0'	
	6" F.H.V. STA 1+61	SHC	96.6'	
	WHC UNIT 52	SHC	13.0'	
UNIT 52	MH S-21	WHC	45.7'	
	6" F.H.V. STA 1+61	WHC	84.6'	
	SHC UNIT 53	WHC	13.0'	



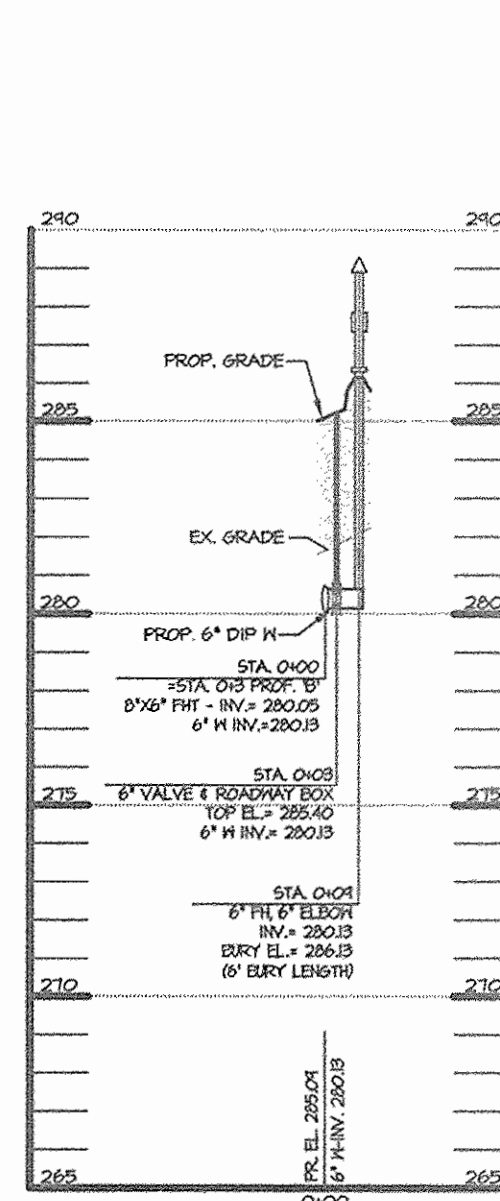
WATER LINE PROFILE 'A'
SCALE: HOR. 1" = 50'
VERT. 1" = 5'



WATER LINE PROFILE 'B'
SCALE: HOR. 1" = 50'
VERT. 1" = 5'

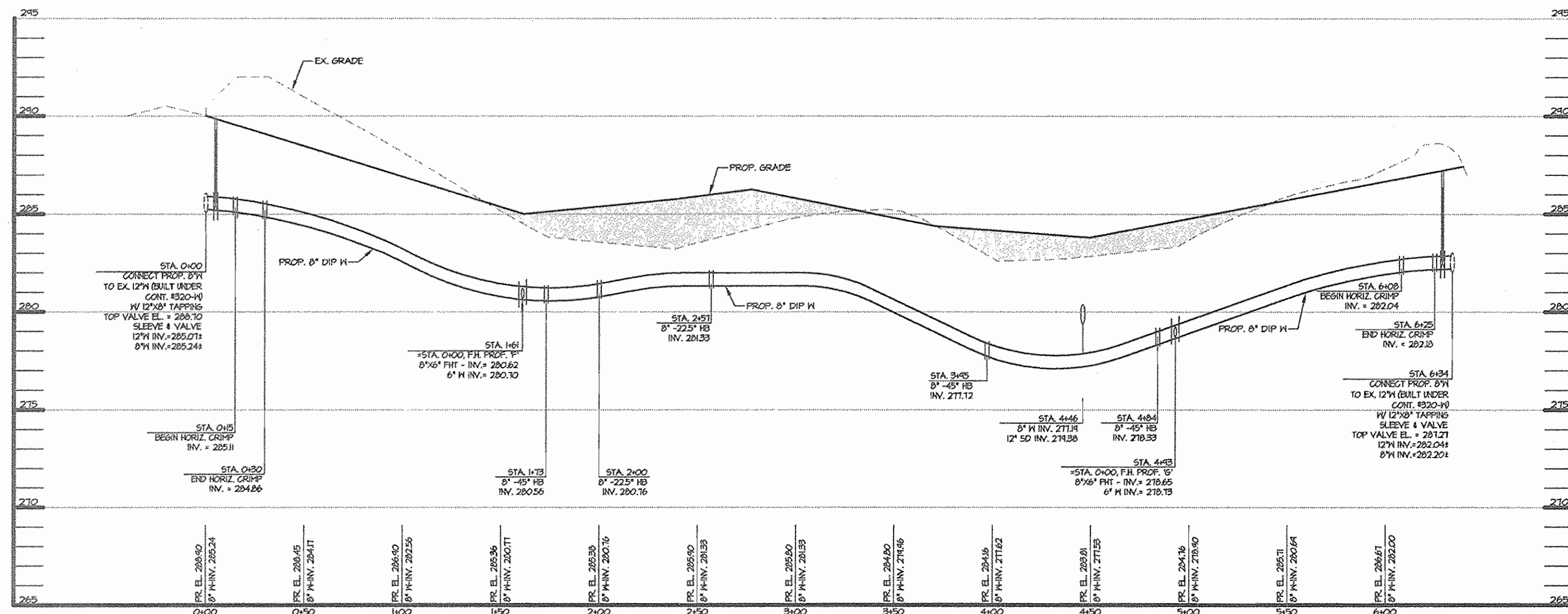


F.H. PROFILE 'C'
SCALE: HOR. 1" = 50'
VERT. 1" = 5'

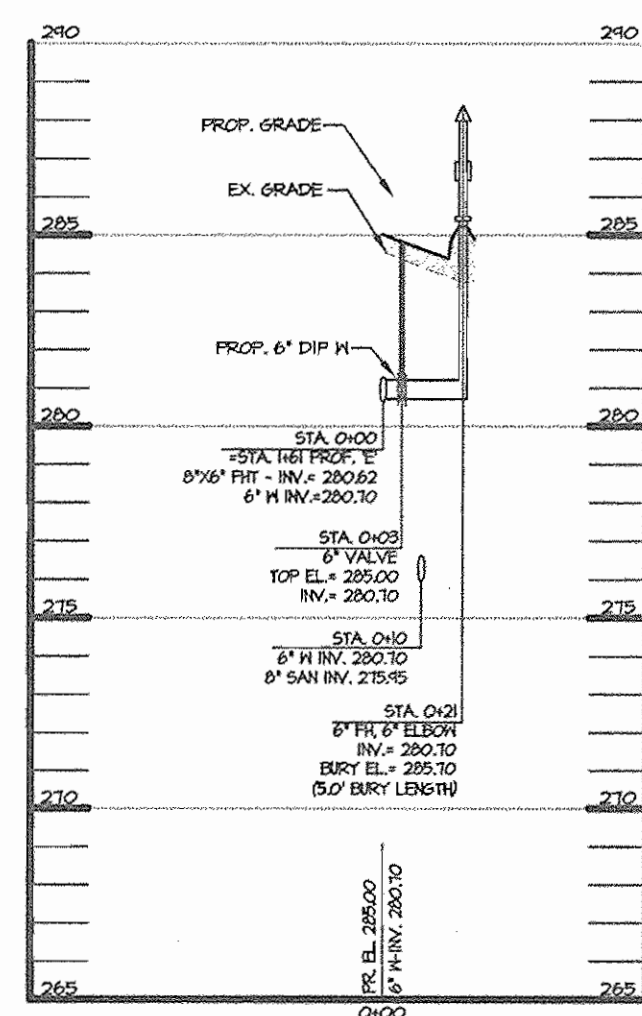


F.H. PROFILE 'D'
SCALE: HOR. 1" = 50'
VERT. 1" = 5'

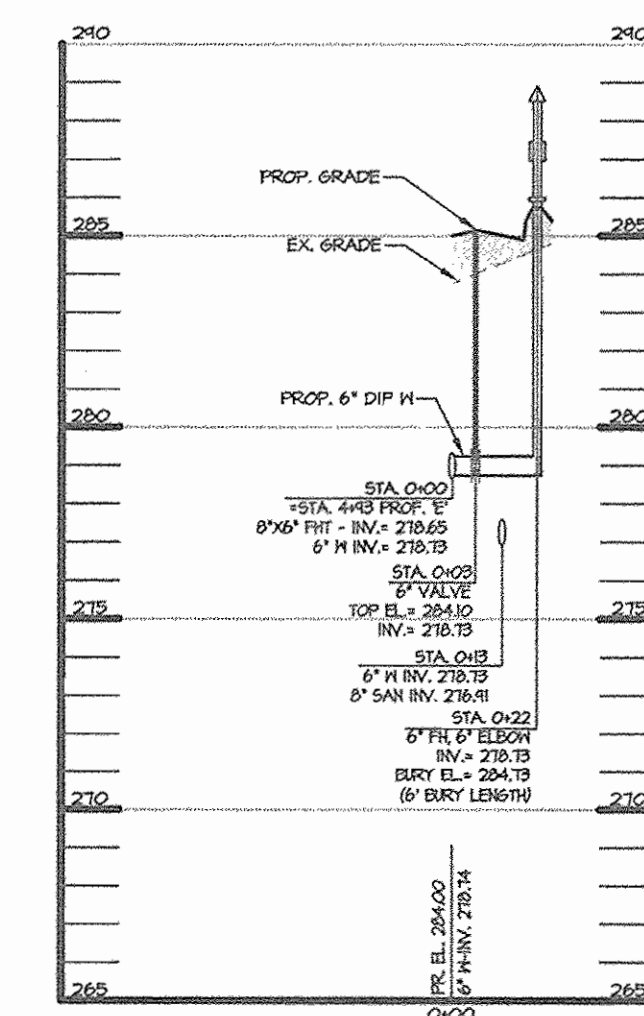
UNIT #	FROM	TO	DISTANCE	REMARKS
UNIT 51	MH S-21	SHC	58.0'	
	6" F.H.V. STA 1+61	SHC	71.0'	
	WHC UNIT 51	SHC	10.3'	
UNIT 51	MH S-21	WHC	66.0'	
	6" F.H.V. STA 1+61	WHC	61.0'	
	SHC UNIT 51	WHC	10.3'	
UNIT 50	MH S-21	SHC	78.0'	
	6" F.H.V. STA 1+61	SHC	48.5'	
	WHC UNIT 50	SHC	11.0'	
UNIT 50	MH S-21	WHC	89.0'	
	6" F.H.V. STA 1+61	WHC	38.0'	
	SHC UNIT 50	WHC	11.0'	
UNIT 49	F.H. STA 1+61	SHC	34.6'	
	6" F.H.V. STA 1+61	SHC	25.0'	
	WHC UNIT 57	SHC	37.5'	
UNIT 49	F.H. STA 1+61	WHC	32.0'	
	6" F.H.V. STA 1+61	WHC	16.3'	
	WHC UNIT 57	WHC	34.0'	
UNIT 48	S-7	SHC	45.5'	
	WHC UNIT 48	SHC	14.0'	
UNIT 48	S-7	WHC	34.7'	
	SHC UNIT 48	WHC	14.0'	
UNIT 47	S-7	SHC	98.0'	
	WHC UNIT 47	SHC	13.5'	
UNIT 47	S-7	WHC	55.0'	
	SHC UNIT 47	WHC	13.5'	
UNIT 46	S-7	SHC	89.0'	
	WHC UNIT 46	SHC	12.0'	
UNIT 46	S-7	WHC	78.3'	
	SHC UNIT 46	WHC	12.0'	
UNIT 45	WHC UNIT 45	SHC	12.0'	
	SHC UNIT 45	SHC	26.0'	
UNIT 45	SHC UNIT 45	WHC	12.0'	
	SHC UNIT 46	WHC	13.5'	
UNIT 40	6" F.H.V. STA 4+93	SHC	83.0'	
	S-19	SHC	13.5'	
	WHC UNIT 40	SHC	11.0'	
UNIT 40	6" F.H.V. STA 4+93	WHC	82.5'	
	S-19	WHC	23.0'	
	SHC UNIT 40	WHC	11.0'	



WATER LINE PROFILE 'E'
SCALE: HOR. 1" = 50'
VERT. 1" = 5'



F.H. PROFILE 'F'
SCALE: HOR. 1" = 50'
VERT. 1" = 5'



F.H. PROFILE 'G'
SCALE: HOR. 1" = 50'
VERT. 1" = 5'

CONTROLLED AND 95% COMPACTED FILL PER AASHTO T-180, TO BE CERTIFIED BY AN APPROVED ON-SITE GEOTECHNICAL ENGINEER

COMPACTED SPECIFICATIONS FOR UTILITIES IN FILL

- WHERE UTILITY PIPES ARE TO BE PLACED ON COMPACTED FILL, THE FOLLOWING APPLIES:
- PRIOR TO PLACEMENT OF COMPACTED FILL, ANY SOFT OR OTHERWISE UNSUITABLE SOILS ENCOUNTERED AT THE EXISTING RAVINE BOTTOM OR SLOPE, SHALL BE UNDERCUT AND REMOVED FROM THE CONSTRUCTION AREA.
 - ACCEPTABLE COMPACTED FILL SHALL BE PLACED IN SIX INCH THICK LOOSE LIFTS AND COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY A.A.S.H.T.O. METHOD T-160.
 - THE COMPACTED FILL SHALL BE BENCHED INTO THE EXISTING VIRGIN SLOPES WITH EACH LIFT PLACED TO A SMOOTH TRANSITION FROM VIRGIN TO FILL SOILS.

AS BUILTS
BY: DJE DATE: 1/1/08

SDP-06-128

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

R. L. B... 3-21-07
CHIEF, BUREAU OF UTILITIES

... 4/2/07
CHIEF, DEVELOPMENT ENGINEERING DIVISION

MRA
MORRIS & RITCHE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS

14280 PARK CENTER DRIVE, SUITE A
LAUREL, MARYLAND 20707
(410) 792-9792 or (301) 776-1690
FAX (410) 792-7395

DATE: 2/27/07

DES:	BY NO.	REVISIONS	DATE
KSK			
MSP/MDC			
KSK			

WATER PROFILES

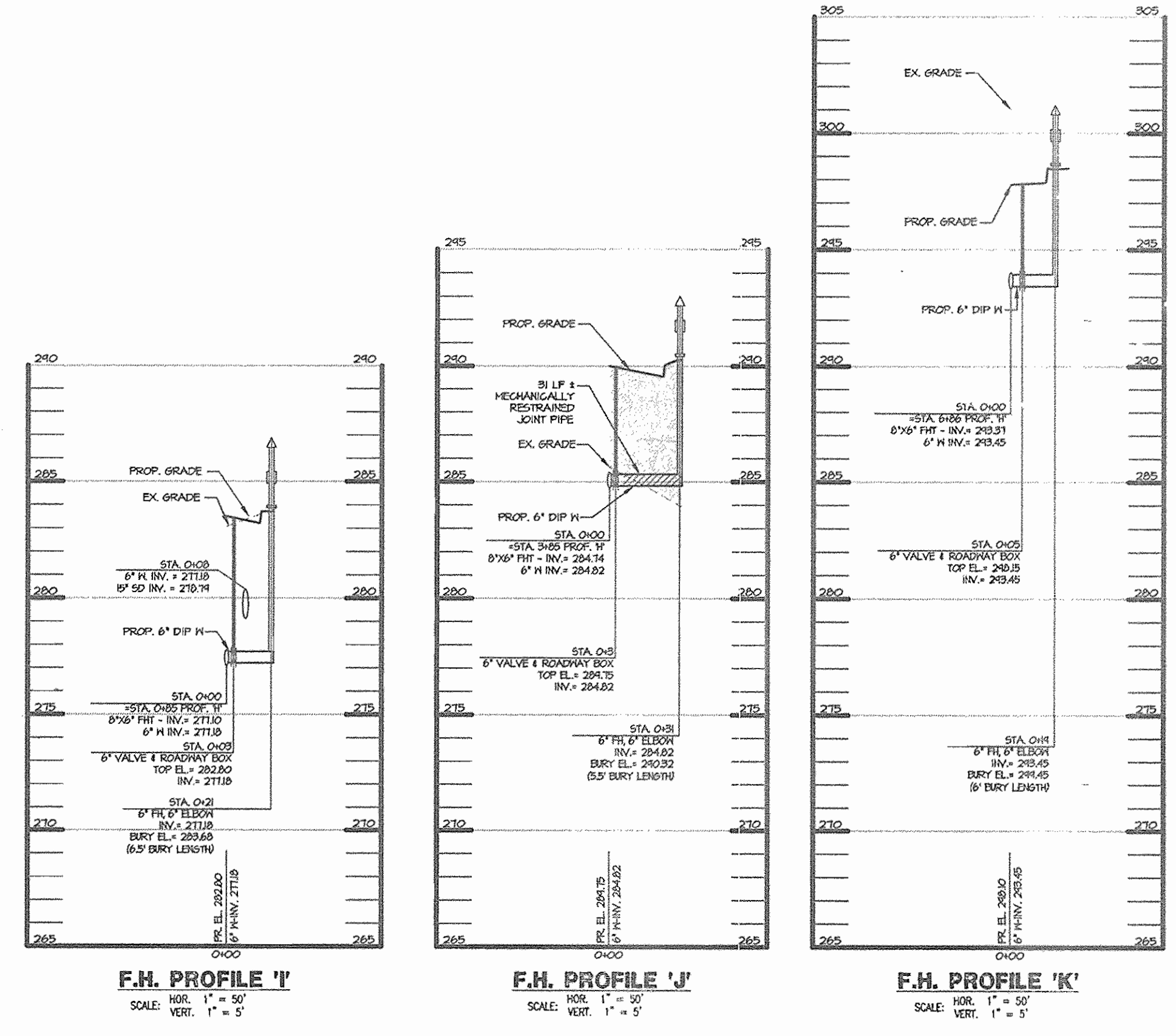
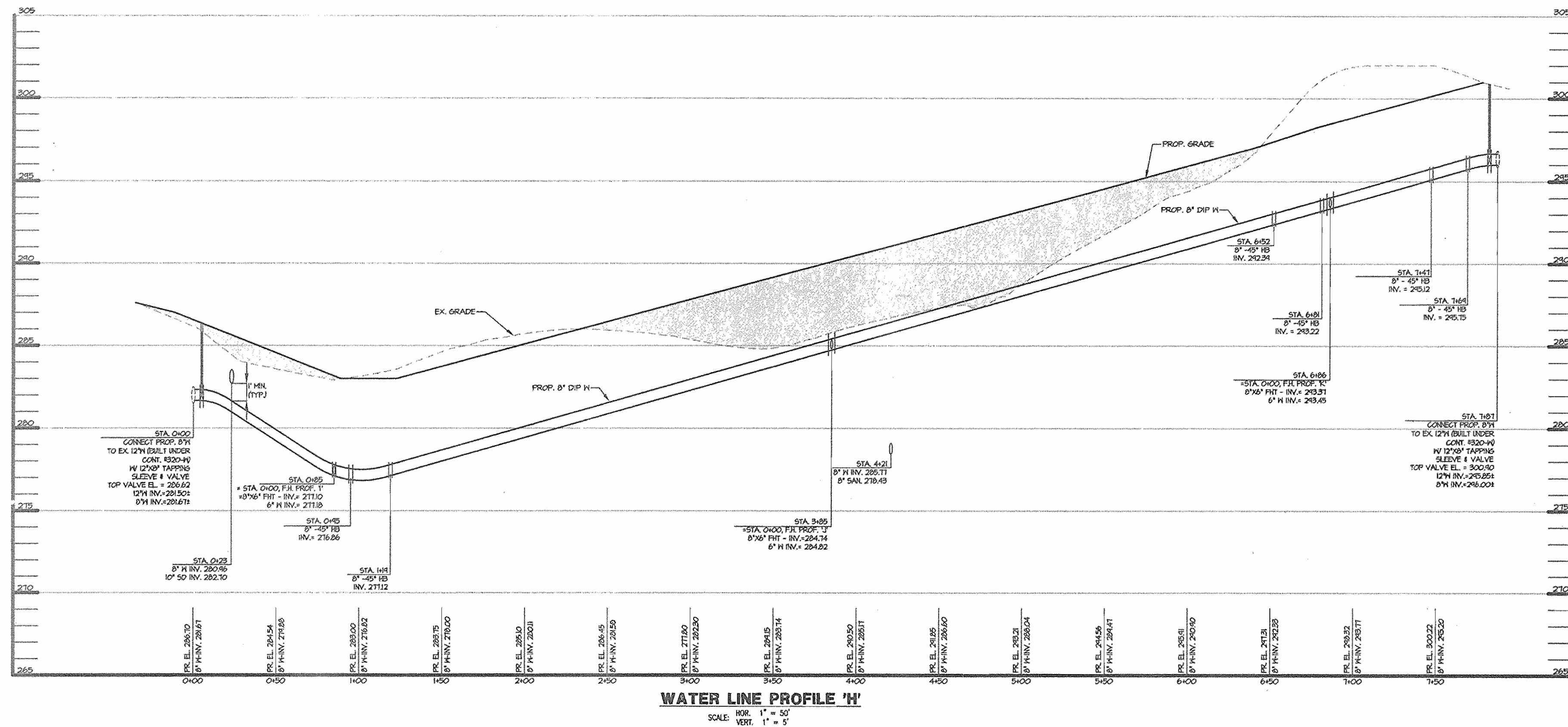
600' SCALE MAP NO. 37 BLOCK NO. 20

FINAL WATER & SEWER EXTENSION PLAN
OLD WATERLOO ROAD
ELKCRIDGE, MARYLAND
GATEWAY OVERLOOK AT BENSON EAST
CONTRACT NO. 24-4376-D

SCALE: AS SHOWN

SHEET 5 OF 6

ZONED: NT ~ TAX MAP: 37 AND 43 ~ GRID: 20, 21 AND 2,3
PARCEL: 382 ~ LOTS: J, K & L
6TH ELECTION DISTRICT ~ HOWARD COUNTY, MARYLAND



UNIT #	FROM	TO	DISTANCE	REMARKS
UNIT 39	6\"/>			

UNIT #	FROM	TO	DISTANCE	REMARKS
UNIT 42	6\"/>			

UNIT #	FROM	TO	DISTANCE	REMARKS
6\"/>				

CONTROLLED AND 95% COMPACTED FILL PER AASHTO T-180, TO BE CERTIFIED BY AN APPROVED ON-SITE GEOTECHNICAL ENGINEER

COMPACTED SPECIFICATIONS FOR UTILITIES IN FILL
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 B. ACCEPTABLE COMPACTED FILL SHALL BE PLACED IN SIX INCH THICK LOOSE LIFTS AND COMPACTED TO AT LEAST 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY A.A.S.H.T.O. METHOD T-180.
 C. THE COMPACTED FILL SHALL BE BENCHED INTO THE EXISTING VIRGIN SLOPES WITH EACH LIFT PLACED TO A SMOOTH TRANSITION FROM VIRGIN TO FILL SOILS.

AS BUILTS
 BY: DFI DATE: 1/17/08

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Robert n. Burgess CHIEF, BUREAU OF UTILITIES DATE: 3-21-07	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND [Signature] CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE:	MIRA MORRIS & RITCHE ASSOCIATES, INC. ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS 14280 PARK CENTER DRIVE, SUITE A LAUREL, MARYLAND 20707 (410) 792-0792 or (301) 778-1690 FAX (410) 792-7395	DES: KSK DRN: MSP/MDC CHK: KSK DATE: 2/27/07	BY NO. _____ REVISIONS _____ DATE _____	WATER PROFILES 600' SCALE MAP NO. 37 BLOCK NO. 20	SDP-06-128 FINAL WATER & SEWER EXTENSION PLAN OLD WATERLOO ROAD ELKCRIDGE, MARYLAND GATEWAY OVERLOOK AT BENSON EAST CONTRACT NO. 24-4378-D ZONED: NT ~ TAX MAP: 37 AND 43 ~ GRID: 20, 21 AND 2,3 PARCEL: 382 ~ LOTS: J, K & L 6TH ELECTION DISTRICT ~ HOWARD COUNTY, MARYLAND SHEET 6 OF 6
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