

RICE POND VILLAGE
 - 100 YEAR STORM

DATE 11/8/2021
 Rev. 11/26/2021



AZIMUTH LAND DESIGN, LLC
 325 Donald Lynch Boulevard, Suite 100, Marlborough, MA 01752
 Telephone (508)-465-0137 james@azimuthtlanddesign.co

DRAINAGE STRUCTURE COMPUTATIONS

LOCATION		AREA		TIME OF FLOW		I (CFS)	CHAN- NEL OR PIPE SIZE	DESIGN				PROFILE				
STREET	FROM TO	INCREMENT	TOTAL "c"	TO INLET	IN CHAN- NEL			Tc	SLOPE	N	CAPACITY FULL	V (FPS)	LENGTH (FT)	FALL (FT)	LOSSES (FT)	UPPER INV.
HILLCREST CIRCLE	TOP DA	CS 0+624.07	.40													
			.95													
			0.13	65	8.1	-	8.1	700.59								
HILLCREST CIRCLE	CS 0+624.07	DMH 0+72					8"	.015	.012	1.44	4.2	13'	0.20		395.40	395.40
													0.20		395.40	395.70
HILLCREST CIRCLE	TOP DA	0+624.08	.40													
			.95													
			0.16	0.68	11	-	11	6.30	.69							
							8"	.018	.012	1.58	4.6	11'	0.20		395.40	395.40
													0.20		395.40	395.70

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STREET	FROM TO	INCREMENT	TOTAL	TO INLET	IN CHAN- NEL			Tc	SLOPE	N	CAPACITY	V (FPS)	LENGTH (F)	FALL (FT)	LOSSES (FT)	UPPER INV.
HILLCREST CIRCLE	TOP DMH 0+72.15		.40													
		.14	.95													
			0.29	.67	11	11					6.3	1.22				
HILLCREST CIRCLE	DMH 0+72.15 TO DMH 1+10						12"	.009	0.12	3.22	4.3	35'	0.30		35.25	34.95
													0.20		34.90	34.70
HILLCREST CIRCLE	DMH 1+10 TO DMH 1+75						21"	.011	.02	3.56	4.7	62'	0.70		34.70	34.00
														0.25	34.00	33.75

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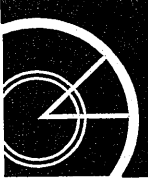
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LOCATION		AREA		TIME OF FLOW		Q (CFS)	CHAN- NEL or PIPE SIZE	DESIGN			PROFILE								
STREET	FROM TO	INCREMENT	TOTAL	"C"	MIN.			IN TO INLET	IN CHAN- NEL	Tc	SLOPE	N	CAPACITY FULL	V (FPS)	LENGTH (FT)	FALL (FT)	LOSSES (FT)	UPPER INV.	LOWER INV.
HILLCREST CIRCLE	TOP CB DA 3150R.02		.40	.40															
		.10	.95	.95															
			0.1286	6.8	6.8	7.4	0.76												
HILLCREST CIRCLE	CB DMH 3150R 3130													19'	0.60			358.10	358.10
															0.75			358.10	358.15
HILLCREST CIRCLE	TOP CS DA 3130 0.03		.40	.40															
		.09	.95	.95															
			0.1281	7.9	7.9	7.0	0.68							10	0.30			358.10	358.10
HILLCREST CIRCLE	CB DMH 3130C 3130																	358.10	358.10
																		358.10	358.15

RICE ROAD VILLAGES
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LOCATION		AREA		"C"	TIME OF FLOW MIN.		Q (CFS)	CHAN- NEL or PIPE SIZE	DESIGN			PROFILE							
STREET	FROM TO	INCREMENT	TOTAL		TO INLET	IN CHAN- NEL			Tc	SLOPE	N	CAPACITY FULL	V (FPS)	LENGTH (FT)	FALL (FT)	LOSSES (FT)	UPPER INV.	LOWER INV.	
HILLCREST CIRCLE	TOP DMH DA 3420	.05	.40	.40															
		.19	.95	.95															
			0.24	0.84	7.9	-	7.9	7.0	1.41										
HILLCREST CIRCLE	DMH 3430 TO DMH 3420								1.41		0.13	0.12	3.87	5.10	108	1.35	0.25	316.80	316.80
														0.25	316.80	316.55			
HILLCREST CIRCLE	TOP CB DA 215R	.02	.40	.40															
		.09	.95	.95															
			0.11	0.85	6.7	-	6.7	7.5	0.65										
HILLCREST CIRCLE	CB 215R TO DMH 2120								0.65		0.05	0.12	5.36	7.10	8	0.10	0.25	316.80	316.80
																	0.25	316.80	316.55

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LOCATION		AREA		TIME OF FLOW		Q (CFS)	CHAN- NEL or PIPE SIZE	DESIGN				PROFILE					
STREET	FROM TO	INCREMENT	TOTAL	"C"	MIN.			IN CHAN- NEL	Tc	SLOPE	N	CAPACITY FULL	V (FPS)	LENGTH (FT)	FALL (FT)	LOSSES (FT)	UPPER INV.
HILLCREST CIRCLE	TOP DA DM14 2470	.07	.40	.40													
		.28	.95	.95													
			0.35	.84	7.9	-	7.9	7.02	0.06								
HILLCREST CIRCLE	DM14 2470						12"		0.03	0.02	5.14	6.80	42	0.90		316.50	313.75
																316.50	313.75
HILLCREST CIRCLE	TOP DA CS 1475	.07	.40	.40													
			.95	.95													
			0.11	.75	6.5	-	6.5	7.60	0.63								
HILLCREST CIRCLE	CS 1475						12"		0.03	0.02	5.87	7.80	10	0.30		316.50	313.75
	DM14 1475															316.50	313.75

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STREET	FROM TO	INCREMENT	TOTAL	TO INLET	IN CHAN- NEL			Tc	SLOPE	N	CAPACITY FULL	V (FPS)	LENGTH (FT)	FALL (FT)	LOSSES (FT)	UPPER INV
HILLCREST CIRCLE	TOP DMH DA 1175	.11	.40													
		.35	.95													
			0.46.82	11	-	11										
HILLCREST CIRCLE	DMH 1375 DMH 1375						15"	0.00	0.12	8.22	7.30	40'	0.80		395.15	395.95
													0.70		397.15	397.85
HILLCREST CIRCLE	DMH 1375 DMH 1375						15"	0.01	0.12	8.43	7.40	31'	0.65		397.10	397.75
															397.10	397.80
HILLCREST CIRCLE	DMH 1375 DMH 1375						15"	0.00	0.12	8.22	7.30	40'	0.80		391.90	391.70
															391.90	391.10
															391.90	391.10

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LOCATION		AREA		TIME OF FLOW		Q (CFS)	CHAN- NEL or PIPE SIZE	DESIGN				PROFILE					
STREET	FROM TO	INCREMENT	TOTAL	"C"	MIN.			IN TO INLET	IN CHAN- NEL	Tc	SLOPE	N	CAPACITY FULL	V (FPS)	LENGTH (F)	FALL (FT)	LOSSES (FT)
HILLCREST CIRCLE	DMH 12+95	DMH 12+50				2.38	15"	.02	8.43	7.40	34	0.70	390.90	390.90			
HILLCREST CIRCLE	TOP DA	CB 12+66.00		.40											0.75	390.70	391.45
			.16	.95													
			0.24	.77	7.6	7.2	1.33										
HILLCREST CIRCLE	CB 12+66	DMH 12+50				1.33	12"	.05	5.14	6.80	13	0.50	311.15	311.15			
															1.95	391.30	391.45

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LOCATION		AREA		TIME OF FLOW MIN.		Q (CFS)	CHAN- NEL or PIPE SIZE	DESIGN			PROFILE					
STREET	FROM TO	INCREMENT	TOTAL "C"	TO INLET	IN CHAN- NEL			Tc	SLOPE	N	CAPACITY FULL	V (FPS)	LENGTH (FT)	FALL (FT)	LOSSES (FT)	UPPER INV.
HILLCREST CIRCLE	TOP DA CS 12466	.03	.40	.40												
		.07	.95	.95												
			0.10	.79	7.2	-	7.2	7.4	0.58							
HILLCREST CIRCLE	CS DMH 12466						0.58	12"	0.53	0.12	6.16	8.10	9'	0.30	381.6	391.30
														1.85	381.6	389.15
HILLCREST CIRCLE	TOP DA DMH 12466	.22	.40	.40												
		.58	.95	.95												
			0.80	.80	11	-	11	6.3	4.03							
HILLCREST CIRCLE	DMH 12466						4.03	18"	.013	.012	11.33	6.70	102	1.35	389.45	398.10
															0.70	388.19

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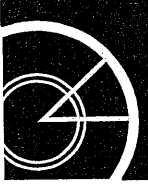
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LOCATION		AREA		TIME OF FLOW		Q (CFS)	CHAN-NEL or PIPE SIZE	DESIGN				PROFILE				
STREET	FROM TO	INCREMENT	TOTAL "C"	TO INLET	IN CHAN-NEL			Tc	SLOPE	N	CAPACITY FULL	V (FPS)	LENGTH (FT)	FALL (FT)	LOSSES (FT)	UPPER INV.
HILLCREST CIRCLE	TOP DA 11420209	CB 11420209	.40													
		.14	.95													
			0.23.73	57	-	57.78	1.31	0.33	0.12	6.16	8.10	9'	0.30		388.12	388.30
HILLCREST CIRCLE	CS DMA 114501150						1.31							0.40	388.30	387.90
HILLCREST CIRCLE	TOP DA 11450131	DMA 11450131	.40													
		.72	.95													
			1.03.78	11	-	11.63	5.06	.10	.02	9.94	5.90	6'	0.60		387.90	387.30
HILLCREST CIRCLE	DMA 114501085	DMA 114501085					5.06								387.30	387.10

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LOCATION		AREA		TIME OF FLOW MIN.		Q (CFS)	DESIGN				PROFILE						
STREET	FROM TO	INCREMENT	TOTAL "C"	TO INLET	IN CHAN- NEL		Tc	CHAN- NEL or PIPE SIZE	SLOPE	N	CAPACITY FULL	V (FPS)	LENGTH (FT)	FALL (FT)	LOSSES (FT)	UPPER INV.	LOWER INV.
HILLCREST CIRCLE	TOP DA CB	0.07	.40														
		.24	.95														
			0.31.83	8	8	7.0	180	12"	.023	.012	5.14	6.80	13	0.30		388.0	388.0
HILLCREST CIRCLE	CB DNR 10+95L						180	12"	.023	.012	5.14	6.80	13	0.30		388.0	388.0
														0.60		387.4	387.10
HILLCREST CIRCLE	TOP DA CB	0.28	.40														
		.28	.95														
			0.56.68	6.1	6.1	6.17	289	12"	.030	.012	5.87	7.80	10	0.30		388.0	387.10
HILLCREST CIRCLE	CB DNR 10+95L						289	12"	.030	.012	5.87	7.80	10	0.30		388.0	387.10
																387.10	387.10

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LOCATION		AREA		TIME OF FLOW			Q (CFS)	CHAN-NEL or PIPE SIZE	DESIGN				PROFILE						
STREET	FROM TO	INCREMENT	TOTAL	"C"	TO INLET	IN CHAN-NEL			Tc	SLOPE	N	CAPACITY	V (FPS)	LENGTH (F)	FALL (FT)	LOSSES (FT)	UPPER INV.	LOWER INV.	
HILLCREST CIRCLE	TOP DA DMH 10+85	.60	.40	.40															
		1.21	.95	.95															
			1.90	.76	11	-	11	6.3	9.10										
HILLCREST CIRCLE	DMH 10+85								9.10	18"	0.18	0.12	13.33	7.90	11	0.20	587.0	285.90	
														1.85	286.90	285.05			
HILLCREST CIRCLE	TOP DA CS	1.06	.40	.40															
		.10	.95	.95															
			0.16	.74	7.9	-	7.9	7.970	0.83										
									0.83	12	0.15	0.12	4.15	5.80	20	0.30	587.0	287.40	
																	0.20	587.0	287.40

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LOCATION		AREA		TIME OF FLOW		Q (CFS)	CHAN- NEL or PIPE SIZE	SLOPE	CAPACITY FULL	V (FPS)	LENGTH (FT)	PROFILE		
STREET	FROM TO	TOTAL INCREMENT	"C" INLET	TO CHAN- NEL	Tc MIN.							FALL (FT)	UPPER INV.	LOWER INV.
HILLCREST CIRCLE	TOP CS DA	CS 6477.03	.40											
		.12	.95											
		0.15	.84	6.8	6.8	7.40	9.5							
HILLCREST CIRCLE	CS DA	DMH 6493.09					12"	.020	4.80	6.30	15'	0.30	57.15	57.15
												0.20	57.15	57.15
HILLCREST CIRCLE	TOP DMH DA	DMH 6493.09	.40											
		.22	.95											
		0.31	.79	7.9	7.9	7.01	12"	.019	4.67	6.20	36'	0.76	57.15	57.15
HILLCREST CIRCLE	DMH DA	DMH 6493.09												
													0.20	57.15

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LOCATION		AREA		TIME OF FLOW		Q (CFS)	CHAN- NEL or PIPE SIZE	DESIGN				PROFILE				
STREET	FROM TO	INCREMENT	TOTAL	"C"	MIN.			I	SLOPE	N	CAPACITY FULL	V (FPS)	LENGTH (FT)	FALL (FT)	LOSSES (FT)	UPPER INV.
HILLCREST CIRCLE	TOP DA	DMH 8+85	.30	.40												
			.78	.95												
			1.08	.80	9.1	9.1	5.88	.026	.012	9.38	8.3	96'	7.50		51.70	38.70
HILLCREST CIRCLE	DMH 8+85	DMH 9+85					5.88	15"						0.20	38.70	38.70
HILLCREST CIRCLE	TOP DA	CB 9+75	.18	.40												
			.25	.95												
			0.43	.72	7.1	7.1	2.22									
HILLCREST CIRCLE	CB 9+75	DMH 9+85					2.22	12"	0.33	0.02	6.16	8.10	9'	0.30	50.80	38.05
														0.70	38.10	38.10

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STREET	FROM TO	INCREMENT	TOTAL "C"	TO INLET	IN CHAN-NEL	Tc		CHAN-NEL or PIPE SIZE	SLOPE	N	CAPACITY	V (FPS)	LENGTH (FT)	FALL (FT)	LOSSES (FT)	UPPER INV.	LOWER INV.
HILLCREST CIRCLE	TOP DA DMH 48 2125	1.03	.40														
			.95														
			1.51	.78	9.1	-	9.1	8.93									
HILLCREST CIRCLE	DMH 2125 10+60							8.93	.02	14.05	8.3	71	1.40	0.30	289.00	289.70	
														0.30	287.00	287.30	
HILLCREST CIRCLE	TOP DA C/S 10+50	.08	.40														
			.95														
			0.14	.71	5.3	-	5.3	0.79									
HILLCREST CIRCLE	C/S DMH 10+50							0.79	.033	6.16	8.10	9	0.30		288.30	288.00	
														0.70	288.00	287.30	

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STREET	FROM TO	INCREMENT	TOTAL	"C"	TO INLET		IN CHAN- NEL	Tc	SLOPE	N	CAPACITY	V (FPS)	LENGTH (FT)	FALL (FT)	LOSSES (FT)	UPPER INV.	LOWER INV.
HILLCREST CIRCLE	TOP DMH 10+70	DA 10+70	.54	.40													
			1.11	.95													
			1.65.77	9.1	9.1	6.8	8.64			15.71	9.3	6'	0.15			387.3	387.15
HILLCREST CIRCLE	DMH 10+60	DMH 10+70												2.10		387.15	385.05
HILLCREST CIRCLE	TOP DMH 10+70	DA 10+70	1.20	.40													
			2.35	.95													
			3.55.76	11	11	6.3	17.00										
HILLCREST CIRCLE	DMH 10+70	DMH A								27.22	9.10	18'	0.30			385.05	384.75
														0.35		384.75	384.40

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STREET	FROM TO	INCREMENT	TOTAL "C"	TO INLET	IN CHAN- NEL			Tc	SLOPE	N	CAPACITY	V (FPS)	LENGTH (FT)	FALL (FT)	LOSSES (FT)
HILLCREST CIRCLE	DMH A CDS UNIT					LOW FLOW	8"	.029	2.00	5.9	7'	0.70		384.85	384.70
HILLCREST CIRCLE	DMH C CDS UNIT					LOW FLOW	8"	.029	2.00	5.9	7'	0.20		384.85	384.10
HILLCREST CIRCLE	DMH A DMH B						18"	.019	13.70	8.10	8'	0.15		384.85	384.15
HILLCREST CIRCLE	DMH B DMH C						18"	.019	13.70	8.10	8'	0.15		384.85	384.00
HILLCREST CIRCLE	DMH C INFILTRATION STRUCTURE					17.00	24"	.020	29.83	10.0	10'	0.20		378.70	378.50