

DITCH COMPUTATIONS MAY 15, 2007			LAKEWATCH PLANTATION PLANNED COMMERCIAL DEVELOPMENT GILLS CREEK MAGISTERIAL DISTRICT FRANKLIN COUNTY, VIRGINIA										PREPARED BY: PHILIP W. NESTER P.O. BOX 827, ROCKY MOUNT, VA 24151 PH: 540-483-3582											
SIDE	STA	DITCH TYPE	AREA AC.	C	C*AREA	I ₂	Q ₂	SLOPE (%)	EARTH, n=0.03 DEPTH	VEL.	LINER, n=0.05 DEPTH	VEL.	RIPRAP, n=0.15 DEPTH	VEL.	I _D	Q _D	EARTH, n=0.03 DEPTH	VEL.	LINER, n=0.05 DEPTH	VEL.	RIPRAP, n=0.15 DEPTH	VEL.	REMARKS	
RTE 122/FIRSTWATCH DR		B	1.127	0.59	0.665	3.5	2.33	6.666	0.45	4.5	0.55	3.1	0.83	1.4		4.6	3.06	0.50	4.8	0.61	3.3	0.92	1.4	
AT CULVERT C - 1		B	4.291	0.74	3.175	3.3	10.48	6.000	0.81	6.3	0.99	4.3	1.49	1.9		4.4	13.97	0.91	6.8	1.10	4.6	1.66	2.0	
ACCESS ROAD DITCH @ A2/A3		B	2.219	0.88	1.953	4.2	8.20	1.200	1.00	3.3	1.22	2.2	1.84	1.0		5.6	10.94	1.12	3.5	1.35	2.4	2.04	1.0	
CULVERT C - 2 EXISTING																								
OUTLET DITCH CULVERT C - 3		B	12.991	0.50	6.496	3.3	21.44	25.000	0.81	12.9	0.99	8.8	1.49	3.9		4.4	28.58	0.91	13.9	1.10	9.5	1.66	4.2	
OUTLET DITCH CULVERT C - 4		B	7.827	0.64	5.009	4.1	20.54	25.000	0.80	12.8	0.97	8.7	1.47	3.8		5.4	27.05	0.89	13.7	1.08	9.3	1.62	4.1	
OUTLET DITCH CULVERT C - 5		B	5.882	0.75	4.412	3.7	16.32	12.500	0.84	9.3	1.01	6.3	1.53	2.8		4.9	21.62	0.93	10.0	1.13	6.8	1.70	3.0	
OUTLET DITCH CULVERT C - 6		B	2.672	0.58	1.550	3.9	6.04	7.700	0.63	6.1	0.77	4.1	1.16	1.8		5.1	7.90	0.70	6.5	0.85	4.4	1.28	1.9	
LAKEWATCH DRIVE (EXTENSION)																								
RIGHT CUT	34+50	B	8.300	0.73	6.059	3.1	18.78	4.895	1.15	7.1	1.40	4.8	2.11	2.1		4.2	25.45	1.29	7.6	1.57	5.2	2.36	2.3	
RIGHT CUT	35+00	B	1.421	0.71	1.009	3.1	3.13	4.895	0.59	4.5	0.71	3.1	1.08	1.3		4.2	4.24	0.66	4.9	0.80	3.3	1.21	1.5	
RIGHT CUT	36+00	B	1.165	0.73	0.850	5.0	4.25	4.895	0.66	4.9	0.80	3.3	1.21	1.5		7.1	6.04	0.75	5.3	0.91	3.6	1.38	1.6	
RIGHT CUT	37+00	B	0.803	0.74	0.594	6.2	3.68	4.895	0.63	4.7	0.76	3.2	1.15	1.4		8.1	4.81	0.69	5.0	0.84	3.4	1.27	1.5	
RIGHT CUT	38+00	B	0.424	0.74	0.314	6.2	1.95	2.969	0.54	3.3	0.66	2.3	0.99	1.0		8.1	2.54	0.60	3.5	0.73	2.4	1.09	1.1	
HIGH POINT	39+15.57																							
RIGHT CUT	40+00	B	0.685	0.72	0.493	5.8	2.86	2.168	0.66	3.2	0.80	2.2	1.21	1.0		7.3	3.60	0.72	3.4	0.88	2.3	1.32	1.0	
RIGHT CUT	41+00	B	0.807	0.66	0.533	5.0	2.66	5.379	0.55	4.5	0.66	3.1	1.00	1.3		6.4	3.41	0.60	4.8	0.72	3.3	1.09	1.4	
RIGHT CUT	42+00	B	0.984	0.67	0.659	4.5	2.97	5.379	0.57	4.6	0.69	3.1	1.04	1.4		5.4	3.56	0.61	4.8	0.74	3.3	1.11	1.4	
RIGHT CUT	43+00	B	12.991	0.50	6.496	3.3	21.44	5.379	1.19	7.6	1.44	5.1	2.18	2.3		4.4	28.58	1.33	8.1	1.61	5.5	2.43	2.4	
RIGHT CUT	44+00	B	11.769	0.48	5.649	3.3	18.64	5.379	1.13	7.3	1.37	5.0	2.07	2.2		4.4	24.86	1.26	7.8	1.53	5.3	2.30	2.3	
RIGHT CUT	45+00	B	0.447	0.76	0.340	5.1	1.73	2.989	0.52	3.2	0.63	2.2	0.95	1.0		5.7	1.94	0.54	3.3	0.65	2.3	0.99	1.0	
RIGHT CUT	46+25	B	1.971	0.65	1.281	4.2	5.38	1.000	0.97	2.8	1.18	1.9	1.78	0.9		5.5	7.05	1.08	3.0	1.30	2.1	1.97	0.9	
LOW POINT	46+25.06																							
RIGHT CUT	46+30	B	7.827	0.64	5.009	4.1	20.54	1.000	1.61	4.0	1.95	2.7	2.94	1.2		5.4	27.05	1.78	4.3	2.16	2.9	3.26	1.3	
RIGHT CUT	47+00	B	6.855	0.64	4.387	4.1	17.99	1.791	1.37	4.8	1.66	3.3	2.51	1.4		5.4	23.69	1.52	5.1	1.84	3.5	2.78	1.5	
RIGHT CUT	48+00	B	5.651	0.65	3.673	4.2	15.43	4.181	1.10	6.3	1.34	4.3	2.02	1.9		5.5	20.20	1.22	6.8	1.48	4.6	2.23	2.0	
RIGHT CUT	49+00	B	4.671	0.65	3.036	4.2	12.75	6.571	0.94	7.1	1.14	4.9	1.73	2.1		5.5	16.70	1.04	7.6	1.27	5.2	1.91	2.3	
RIGHT CUT	50+50	B	1.661	0.45	0.747	4.7	3.51	4.000	0.64	4.3	0.77	2.9	1.17	1.3		6.2	4.63	0.71	4.6	0.86	3.1	1.30	1.4	
RIGHT CUT	51+00	B	0.445	0.71	0.316	4.7	1.48	1.899	0.53	2.6	0.64	1.8	0.97	0.8		6.2	1.96	0.59	2.8	0.72	1.9	1.08	0.8	
RIGHT CUT	51+65	B	5.882	0.75	4.412	3.7	16.32	1.899	1.31	4.8	1.58	3.3	2.39	1.4		4.9	21.62	1.45	5.1	1.76	3.5	2.66	1.5	
RIGHT CUT	52+00	B	5.331	0.75	3.998	3.7	14.79	1.899	1.26	4.7	1.53	3.2	2.30	1.4		4.9	19.59	1.40	5.0	1.70	3.4	2.56	1.5	
RIGHT CUT	53+00	B	4.287	0.75	3.215	4.0	12.86	1.899	1.20	4.5	1.45	3.1	2.19	1.3		5.4	17.36	1.34	4.8	1.62	3.3	2.45	1.4	
RIGHT CUT	54+00	B	3.326	0.75	2.495	4.2	10.48	1.899	1.11	4.3	1.34	2.9	2.02	1.3		5.6	13.97	1.23	4.6	1.49	3.1	2.26	1.4	
RIGHT CUT	55+00	B	2.373	0.75	1.780	4.3	7.65	1.899	0.98	3.9	1.19	2.7	1.80	1.2		5.7	10.14	1.09	4.2	1.32	2.9	2.00	1.3	
RIGHT CUT	56+00	B	1.218	0.77	0.938	4.3	4.03	1.899	0.77	3.4	0.94	2.3	1.42	1.0		5.7	5.35	0.86	3.6	1.04	2.5	1.57	1.1	
RIGHT CUT	57+00	B	0.684	0.61	0.417	4.3	1.79	1.899	0.57	2.7	0.69	1.9	1.04	0.8		5.6	2.34	0.63	2.9	0.76	2.0	1.15	0.9	
RIGHT CUT	57+70	B	2.672	0.58	1.550	3.9	6.04	1.899	0.90	3.7	1.09	2.5	1.65	1.1		5.1	7.90	1.00	4.0	1.21	2.7	1.82	1.2	
RIGHT CUT	59+00	B	0.787	0.58	0.456	4.3	1.96	1.899	0.59	2.8	0.72	1.9	1.08	0.8		5.6	2.56	0.65	3.0	0.79	2.0	1.19	0.9	
RIGHT CUT	60+00	B	0.276	0.56	0.155	4.4	0.68	1.899	0.40	2.2	0.48	1.5	0.73	0.6		5.8	0.90	0.44	2.3	0.53	1.6	0.81	0.7	
SECOND WATCH DRIVE																								
LEFT CUT	11+00	B	0.165	0.54	0.089	6.2	0.55	3.500	0.33	2.6	0.40	1.8	0.60	0.8		8.0	0.71	0.36	2.7	0.44	1.9	0.66	0.8	
LEFT CUT	12+00	B	0.384	0.54	0.207	6.0	1.24	6.500	0.40	4.0	0.48	2.7	0.72	1.2		7.0	1.45	0.42	4.1	0.51	2.8	0.77	1.2	
LEFT CUT	13+00	B	0.560	0.54	0.302	5.8	1.75	8.000	0.43	4.7	0.52	3.2	0.79	1.4		6.7	2.03	0.46	4.9	0.55	3.3	0.83	1.5	
LEFT CUT	14+00	B	0.751	0.50	0.376	5.6	2.10	4.000	0.53	3.8	0.64	2.6	0.96	1.1		6.5	2.44	0.56	3.9	0.68	2.7	1.02	1.2	
LEFT CUT	15+00	B	0.957	0.48	0.459	5.4	2.48	2.000	0.64	3.0	0.77	2.1	1.17	0.9		6.1	2.80	0.67	3.1	0.81	2.1	1.22	0.9	
END LEFT SIDE																								
RIGHT CUT	11+00	B	0.164	0.65	0.107	6.2	0.66	3.500	0.32	2.6	0.39	1.8	0.58	0.8		8.0	0.85	0.35	2.8	0.43	1.9	0.64	0.8	
RIGHT CUT	12+00	B	0.383	0.60	0.230	6.0	1.38	6.500	0.37	3.9	0.45	2.7	0.69	1.2		7.0	1.61	0.40	4.1	0.48	2.8	0.73	1.2	
RIGHT CUT	13+00	B	0.606	0.60	0.364	5.8	2.11	8.000	0.42	4.7	0.51	3.2	0.77	1.4		6.7	2.44	0.45	4.9	0.54	3.3	0.82	1.5	
RIGHT CUT	14+00	B	0.834	0.51	0.425	5.6	2.38	4.000	0.55	3.9	0.67	2.7	1.01	1.2		6.5	2.76	0.58	4.0	0.71	2.8	1.07	1.2	
RIGHT CUT	15+00	B	1.066	0.56	0.597	5.4	3.22	2.000	0.70	3.2	0.85	2.2	1.29	1.0		6.1	3.64	0.74	3.3	0.89	2.3	1.35	1.0	

DITCH TYPE A: TOE DITCH, 2:1 BOTH SIDES
DITCH TYPE B: CUT DITCH, 3:1 AND 2:1

DITCHLINE COMPUTATIONS
LAKEWATCH DRIVE (EXTENSION)
SECOND WATCH DRIVE
COMMERCIAL LOT C-27
LAKEWATCH PLANTATION
PLANNED COMMERCIAL DEVELOPMENT
DEVELOPED BY: LAKE WATCH, L.L.C.
GILLS CREEK MAGISTERIAL DISTRICT
FRANKLIN COUNTY, VIRGINIA
JOB NO 21-04
MAY 15, 2007
SHEET 9 OF 32
REVISED AUGUST 1, 2007

