






<b>Granularmetric Report</b> Depths and elevations based on measured values				 <b>COASTAL TECH</b> Coastal Geology & Sediments Laboratory  1333 Gateway Dr., Suite 1004 Melbourne, FL 32901 Phone (321) 751-1135 Fax (321) 751-2343			
Project Name: Bonita Beach							
Sample Name: B-5A #1							
Analysis Date: 05-16-12							
Analyzed By: MB							
Easting (ft): <div style="text-align: center;">688,922.8</div>		Northing (ft): <div style="text-align: center;">749,441.8</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-12.3 NAVD 88</div>	
USCS: <div style="text-align: center;">SW-SM</div>		Munsell: Wet - 5Y-6/2 Dry - 5Y-6/1		Comments:			
Dry Weight (g): <div style="text-align: center;">143.71</div>	Wash Weight (g): <div style="text-align: center;">136.13</div>	Pan Retained (g): <div style="text-align: center;">0.37</div>	Sieve Loss (%): <div style="text-align: center;">0.00</div>	Fines (%): #200 - 6.08 #230 - 5.54	Organics (%): <div style="text-align: center;">1.40</div>	Carbonates (%): <div style="text-align: center;">13.40</div>	Shells (%):
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.15	0.10	0.15	0.10	
3.5	-2.50	5.66	0.22	0.15	0.37	0.25	
4	-2.25	4.76	0.21	0.15	0.58	0.40	
5	-2.00	4.00	0.22	0.15	0.80	0.55	
7	-1.50	2.83	0.96	0.67	1.76	1.22	
10	-1.00	2.00	1.48	1.03	3.24	2.25	
14	-0.50	1.41	1.96	1.36	5.20	3.61	
18	0.00	1.00	1.95	1.36	7.15	4.97	
25	0.50	0.71	2.05	1.43	9.20	6.40	
35	1.00	0.50	2.08	1.45	11.28	7.85	
45	1.50	0.35	2.48	1.73	13.76	9.58	
60	2.00	0.25	5.46	3.80	19.22	13.38	
80	2.50	0.18	21.04	14.64	40.26	28.02	
120	3.00	0.13	66.40	46.20	106.66	74.22	
170	3.50	0.09	25.44	17.70	132.10	91.92	
200	3.75	0.07	2.88	2.00	134.98	93.92	
230	4.00	0.06	0.78	0.54	135.76	94.46	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.28	3.02	2.74	2.40	2.09	0.01	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.45	0.18	1.03	-2.54	10.1		

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Project Name: Bonita Beach							
Sample Name: B-5A #2							
Analysis Date: 05-16-12							
Analyzed By: LA							
Easting (ft): <div style="text-align: center;">688,922.8</div>		Northing (ft): <div style="text-align: center;">749,441.8</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-12.9 NAVD 88</div>	
USCS: <b>SW WITH GRAVEL</b>		Munsell: Wet - 5Y-7/2 Dry - 5Y-7/1		Comments: <div style="text-align: center;">Coarse material is shell</div>			
Dry Weight (g): <div style="text-align: center;">172.86</div>	Wash Weight (g): <div style="text-align: center;">172.86</div>	Pan Retained (g): <div style="text-align: center;">0.59</div>	Sieve Loss (%): <div style="text-align: center;">0.17</div>	Fines (%): #200 - 0.62 #230 - 0.49	Organics (%): <div style="text-align: center;">1.00</div>	Carbonates (%): <div style="text-align: center;">38.70</div>	Shells (%):
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	19.41	11.23	19.41	11.23	
5/8"	-4.00	16.00	0.00	0.00	19.41	11.23	
7/16"	-3.50	11.31	3.99	2.31	23.40	13.54	
5/16"	-3.00	8.00	3.70	2.14	27.10	15.68	
3.5	-2.50	5.66	3.26	1.89	30.36	17.57	
4	-2.25	4.76	2.01	1.16	32.37	18.73	
5	-2.00	4.00	1.71	0.99	34.08	19.72	
7	-1.50	2.83	4.59	2.66	38.67	22.38	
10	-1.00	2.00	4.83	2.79	43.50	25.17	
14	-0.50	1.41	7.29	4.22	50.79	29.39	
18	0.00	1.00	6.67	3.86	57.46	33.25	
25	0.50	0.71	5.87	3.40	63.33	36.65	
35	1.00	0.50	4.97	2.88	68.30	39.53	
45	1.50	0.35	5.02	2.90	73.32	42.43	
60	2.00	0.25	7.55	4.37	80.87	46.80	
80	2.50	0.18	20.47	11.84	101.34	58.64	
120	3.00	0.13	52.90	30.60	154.24	89.24	
170	3.50	0.09	15.88	9.19	170.12	98.43	
200	3.75	0.07	1.64	0.95	171.76	99.38	
230	4.00	0.06	0.22	0.13	171.98	99.51	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.31	2.91	2.77	2.14	-1.03	-2.92		
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	0.72	0.61	1.98	-0.1	2.04		

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Project Name: Bonita Beach							
Sample Name: B-5A #3							
Analysis Date: 05-16-12							
Analyzed By: LA							
Easting (ft): <div style="text-align: center;">688,922.8</div>		Northing (ft): <div style="text-align: center;">749,441.8</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-13.4 NAVD 88</div>	
USCS: <div style="text-align: center;">SW</div>		Munsell: Wet - 5Y-6/1 Dry - 5Y-7/1		Comments:			
Dry Weight (g): <div style="text-align: center;">143.40</div>	Wash Weight (g): <div style="text-align: center;">138.22</div>	Pan Retained (g): <div style="text-align: center;">0.23</div>	Sieve Loss (%): <div style="text-align: center;">0.00</div>	Fines (%): #200 - 4.02 #230 - 3.77	Organics (%): <div style="text-align: center;">1.10</div>	Carbonates (%): <div style="text-align: center;">13.30</div>	Shells (%):
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	0.00	0.00	0.00	0.00	
5/16"	-3.00	8.00	0.00	0.00	0.00	0.00	
3.5	-2.50	5.66	0.00	0.00	0.00	0.00	
4	-2.25	4.76	0.08	0.06	0.08	0.06	
5	-2.00	4.00	0.42	0.29	0.50	0.35	
7	-1.50	2.83	1.54	1.07	2.04	1.42	
10	-1.00	2.00	2.43	1.69	4.47	3.11	
14	-0.50	1.41	4.59	3.20	9.06	6.31	
18	0.00	1.00	3.98	2.78	13.04	9.09	
25	0.50	0.71	2.94	2.05	15.98	11.14	
35	1.00	0.50	2.43	1.69	18.41	12.83	
45	1.50	0.35	2.13	1.49	20.54	14.32	
60	2.00	0.25	3.73	2.60	24.27	16.92	
80	2.50	0.18	16.02	11.17	40.29	28.09	
120	3.00	0.13	74.58	52.01	114.87	80.10	
170	3.50	0.09	20.53	14.32	135.40	94.42	
200	3.75	0.07	2.23	1.56	137.63	95.98	
230	4.00	0.06	0.36	0.25	137.99	96.23	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.59	3.14	2.95	2.71	2.36	1.82	-0.70	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.3	0.20	1.19	-1.99	6.08		

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Project Name: Bonita Beach							
Sample Name: B-5A #4							
Analysis Date: 05-16-12							
Analyzed By: LA							
Easting (ft): <div style="text-align: center;">688,922.8</div>		Northing (ft): <div style="text-align: center;">749,441.8</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-14.8 NAVD 88</div>	
USCS: <div style="text-align: center;">SW-SM</div>		Munsell: <div style="text-align: center;">Wet - 5Y-5/1 Dry - 5Y-6/1</div>		Comments:			
Dry Weight (g): <div style="text-align: center;">157.44</div>	Wash Weight (g): <div style="text-align: center;">147.38</div>	Pan Retained (g): <div style="text-align: center;">0.62</div>	Sieve Loss (%): <div style="text-align: center;">0.04</div>	Fines (%): #200 - 7.81 #230 - 6.84	Organics (%): <div style="text-align: center;">2.60</div>	Carbonates (%): <div style="text-align: center;">44.00</div>	Shells (%):
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	5.12	3.25	5.12	3.25	
5/16"	-3.00	8.00	6.90	4.38	12.02	7.63	
3.5	-2.50	5.66	4.19	2.66	16.21	10.29	
4	-2.25	4.76	2.58	1.64	18.79	11.93	
5	-2.00	4.00	2.42	1.54	21.21	13.47	
7	-1.50	2.83	6.11	3.88	27.32	17.35	
10	-1.00	2.00	8.00	5.08	35.32	22.43	
14	-0.50	1.41	9.42	5.98	44.74	28.41	
18	0.00	1.00	8.69	5.52	53.43	33.93	
25	0.50	0.71	5.69	3.61	59.12	37.54	
35	1.00	0.50	3.82	2.43	62.94	39.97	
45	1.50	0.35	3.25	2.06	66.19	42.03	
60	2.00	0.25	4.49	2.85	70.68	44.88	
80	2.50	0.18	7.99	5.07	78.67	49.95	
120	3.00	0.13	33.02	20.97	111.69	70.92	
170	3.50	0.09	28.42	18.05	140.11	88.97	
200	3.75	0.07	5.07	3.22	145.18	92.19	
230	4.00	0.06	1.52	0.97	146.70	93.16	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.36	3.11	2.50	-0.79	-1.67	-3.30	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	1	0.50	2.32	-0.61	1.95		

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Project Name: Bonita Beach							
Sample Name: B-5A #5							
Analysis Date: 05-16-12							
Analyzed By: LA							
Easting (ft): <div style="text-align: center;">688,922.8</div>		Northing (ft): <div style="text-align: center;">749,441.8</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-15.8 NAVD 88</div>	
USCS: <div style="text-align: center;">SW-SM</div>		Munsell: Wet - 5Y-5/1 Dry - 5Y-6/1		Comments:			
Dry Weight (g): <div style="text-align: center;">148.33</div>	Wash Weight (g): <div style="text-align: center;">136.47</div>	Pan Retained (g): <div style="text-align: center;">1.99</div>	Sieve Loss (%): <div style="text-align: center;">0.00</div>	Fines (%): #200 - 11.43 #230 - 9.33	Organics (%): <div style="text-align: center;">1.90</div>	Carbonates (%): <div style="text-align: center;">16.40</div>	Shells (%):
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	Grams Retained	% Weight Retained	Cum. Grams Retained	C. % Weight Retained	
3/4"	-4.25	19.03	0.00	0.00	0.00	0.00	
5/8"	-4.00	16.00	0.00	0.00	0.00	0.00	
7/16"	-3.50	11.31	1.14	0.77	1.14	0.77	
5/16"	-3.00	8.00	0.39	0.26	1.53	1.03	
3.5	-2.50	5.66	0.46	0.31	1.99	1.34	
4	-2.25	4.76	0.65	0.44	2.64	1.78	
5	-2.00	4.00	1.13	0.76	3.77	2.54	
7	-1.50	2.83	1.88	1.27	5.65	3.81	
10	-1.00	2.00	2.28	1.54	7.93	5.35	
14	-0.50	1.41	3.12	2.10	11.05	7.45	
18	0.00	1.00	2.20	1.48	13.25	8.93	
25	0.50	0.71	1.38	0.93	14.63	9.86	
35	1.00	0.50	1.18	0.80	15.81	10.66	
45	1.50	0.35	1.02	0.69	16.83	11.35	
60	2.00	0.25	1.41	0.95	18.24	12.30	
80	2.50	0.18	3.04	2.05	21.28	14.35	
120	3.00	0.13	35.32	23.81	56.60	38.16	
170	3.50	0.09	62.05	41.83	118.65	79.99	
200	3.75	0.07	12.72	8.58	131.37	88.57	
230	4.00	0.06	3.11	2.10	134.48	90.67	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.62	3.44	3.14	2.72	2.53	-1.11	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.6	0.16	1.48	-2.45	8.32		