






<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-17 #1							
Analysis Date: 03-21-12							
Analyzed By: WD							
Easting (ft): <div style="text-align: center;">687,106.1</div>		Northing (ft): <div style="text-align: center;">749,276.8</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-11.9 NAVD 88</div>	
USCS: <div style="text-align: center;">SW-SM</div>		Munsell: <div style="text-align: center;">Wet - 5Y-6/2 Dry - 5Y-7/2</div>		Comments:			
Dry Weight (g): <div style="text-align: center;">181.20</div>	Wash Weight (g): <div style="text-align: center;">172.14</div>	Pan Retained (g): <div style="text-align: center;">0.34</div>	Sieve Loss (%): <div style="text-align: center;">0.00</div>	Fines (%): #200 - 5.58 #230 - 5.18	Organics (%): <div style="text-align: center;">1.20</div>	Carbonates (%): <div style="text-align: center;">15.10</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	1.45	0.80	1.45	0.80	
5/16"	-3.00	8.00	0.16	0.09	1.61	0.89	
3.5	-2.50	5.66	0.85	0.47	2.46	1.36	
4	-2.25	4.76	0.45	0.25	2.91	1.61	
5	-2.00	4.00	0.41	0.23	3.32	1.84	
7	-1.50	2.83	1.35	0.75	4.67	2.59	
10	-1.00	2.00	1.48	0.82	6.15	3.41	
14	-0.50	1.41	2.72	1.50	8.87	4.91	
18	0.00	1.00	2.07	1.14	10.94	6.05	
25	0.50	0.71	1.80	0.99	12.74	7.04	
35	1.00	0.50	1.67	0.92	14.41	7.96	
45	1.50	0.35	1.52	0.84	15.93	8.80	
60	2.00	0.25	2.49	1.37	18.42	10.17	
80	2.50	0.18	9.56	5.28	27.98	15.45	
120	3.00	0.13	99.95	55.16	127.93	70.61	
170	3.50	0.09	38.23	21.10	166.16	91.71	
200	3.75	0.07	4.91	2.71	171.07	94.42	
230	4.00	0.06	0.73	0.40	171.80	94.82	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.32	3.10	2.81	2.59	2.50	-0.46	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.52	0.17	1.2	-3.14	13.31		

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Project Name: Bonita Beach							
Sample Name: B-17 #2							
Analysis Date: 03-21-12							
Analyzed By: WD							
Easting (ft): <div style="text-align: center;">687,106.1</div>		Northing (ft): <div style="text-align: center;">749,276.8</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: <div style="text-align: center;">SW</div>		Munsell: Wet - 5Y-7/1 Dry - 5Y-8/1		Comments:			
Dry Weight (g): <div style="text-align: center;">147.41</div>	Wash Weight (g): <div style="text-align: center;">147.41</div>	Pan Retained (g): <div style="text-align: center;">0.51</div>	Sieve Loss (%): <div style="text-align: center;">0.17</div>	Fines (%): #200 - 0.71 #230 - 0.53	Organics (%): <div style="text-align: center;">0.90</div>	Carbonates (%): <div style="text-align: center;">29.90</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	1.55	1.05	1.55	1.05	
5/16"	-3.00	8.00	0.23	0.16	1.78	1.21	
3.5	-2.50	5.66	0.55	0.37	2.33	1.58	
4	-2.25	4.76	0.20	0.14	2.53	1.72	
5	-2.00	4.00	0.91	0.62	3.44	2.34	
7	-1.50	2.83	2.73	1.85	6.17	4.19	
10	-1.00	2.00	6.18	4.19	12.35	8.38	
14	-0.50	1.41	10.20	6.92	22.55	15.30	
18	0.00	1.00	10.53	7.14	33.08	22.44	
25	0.50	0.71	8.60	5.83	41.68	28.27	
35	1.00	0.50	7.14	4.84	48.82	33.11	
45	1.50	0.35	6.06	4.11	54.88	37.22	
60	2.00	0.25	8.10	5.49	62.98	42.71	
80	2.50	0.18	12.88	8.74	75.86	51.45	
120	3.00	0.13	52.70	35.75	128.56	87.20	
170	3.50	0.09	16.66	11.30	145.22	98.50	
200	3.75	0.07	1.17	0.79	146.39	99.29	
230	4.00	0.06	0.26	0.18	146.65	99.47	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.35	2.96	2.83	2.42	0.22	-0.45	-1.40	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	1.56	0.34	1.65	-0.95	2.96		

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Project Name: Bonita Beach							
Sample Name: B-17 #3							
Analysis Date: 03-21-12							
Analyzed By: WD							
Easting (ft): <div style="text-align: center;">687,106.1</div>		Northing (ft): <div style="text-align: center;">749,276.8</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-13.8 NAVD 88</div>	
USCS: <div style="text-align: center;">SW-SM</div>		Munsell: <div style="text-align: center;">Wet - 5Y-6/2 Dry - 5Y-7/1</div>		Comments:			
Dry Weight (g): <div style="text-align: center;">160.23</div>	Wash Weight (g): <div style="text-align: center;">147.70</div>	Pan Retained (g): <div style="text-align: center;">0.52</div>	Sieve Loss (%): <div style="text-align: center;">0.02</div>	Fines (%): #200 - 9.09 #230 - 8.16	Organics (%): <div style="text-align: center;">1.80</div>	Carbonates (%): <div style="text-align: center;">16.70</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	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	1.17	0.73	1.17	0.73	
5/16"	-3.00	8.00	2.39	1.49	3.56	2.22	
3.5	-2.50	5.66	1.93	1.20	5.49	3.42	
4	-2.25	4.76	0.70	0.44	6.19	3.86	
5	-2.00	4.00	0.83	0.52	7.02	4.38	
7	-1.50	2.83	2.21	1.38	9.23	5.76	
10	-1.00	2.00	2.16	1.35	11.39	7.11	
14	-0.50	1.41	2.87	1.79	14.26	8.90	
18	0.00	1.00	2.23	1.39	16.49	10.29	
25	0.50	0.71	1.54	0.96	18.03	11.25	
35	1.00	0.50	1.41	0.88	19.44	12.13	
45	1.50	0.35	1.15	0.72	20.59	12.85	
60	2.00	0.25	1.49	0.93	22.08	13.78	
80	2.50	0.18	3.23	2.02	25.31	15.80	
120	3.00	0.13	54.22	33.84	79.53	49.64	
170	3.50	0.09	58.83	36.72	138.36	86.36	
200	3.75	0.07	7.29	4.55	145.65	90.91	
230	4.00	0.06	1.49	0.93	147.14	91.84	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.47	3.35	3.00	2.64	2.50	-1.78	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.41	0.19	1.63	-2.34	7.45		

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Project Name: Bonita Beach				1333 Gateway Dr., Suite 1004 Melbourne, FL 32901 Phone (321) 751-1135 Fax (321) 751-2343			
Sample Name: B-17 #4							
Analysis Date: 03-21-12							
Analyzed By: WD							
Easting (ft): <div style="text-align: center;">687,106.1</div>		Northing (ft): <div style="text-align: center;">749,276.8</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-15.4 NAVD 88</div>	
USCS: <div style="text-align: center;">SW-SM</div>		Munsell: <div style="text-align: center;">Wet - 5Y-6/1 Dry - 5Y-7/1</div>		Comments:			
Dry Weight (g): <div style="text-align: center;">152.46</div>	Wash Weight (g): <div style="text-align: center;">138.56</div>	Pan Retained (g): <div style="text-align: center;">0.43</div>	Sieve Loss (%): <div style="text-align: center;">0.00</div>	Fines (%): #200 - 10.76 #230 - 9.40	Organics (%): <div style="text-align: center;">1.80</div>	Carbonates (%): <div style="text-align: center;">19.70</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	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	1.21	0.79	1.21	0.79	
5/16"	-3.00	8.00	1.41	0.92	2.62	1.71	
3.5	-2.50	5.66	1.83	1.20	4.45	2.91	
4	-2.25	4.76	1.85	1.21	6.30	4.12	
5	-2.00	4.00	1.37	0.90	7.67	5.02	
7	-1.50	2.83	2.15	1.41	9.82	6.43	
10	-1.00	2.00	2.22	1.46	12.04	7.89	
14	-0.50	1.41	2.70	1.77	14.74	9.66	
18	0.00	1.00	2.27	1.49	17.01	11.15	
25	0.50	0.71	1.72	1.13	18.73	12.28	
35	1.00	0.50	1.49	0.98	20.22	13.26	
45	1.50	0.35	1.15	0.75	21.37	14.01	
60	2.00	0.25	1.29	0.85	22.66	14.86	
80	2.50	0.18	2.51	1.65	25.17	16.51	
120	3.00	0.13	43.85	28.76	69.02	45.27	
170	3.50	0.09	58.83	38.59	127.85	83.86	
200	3.75	0.07	8.20	5.38	136.05	89.24	
230	4.00	0.06	2.08	1.36	138.13	90.60	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.51	3.39	3.06	2.65	2.35	-2.01	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	2.39	0.19	1.7	-2.16	6.5		

<b>Granularmetric Report</b> Depths and elevations based on measured values				 <b>COASTAL TECH</b> Coastal Geology & Sediments Laboratory			
Project Name: Bonita Beach				1333 Gateway Dr., Suite 1004 Melbourne, FL 32901 Phone (321) 751-1135 Fax (321) 751-2343			
Sample Name: B-17 #5							
Analysis Date: 03-21-12							
Analyzed By: WD							
Easting (ft): <div style="text-align: center;">687,106.1</div>		Northing (ft): <div style="text-align: center;">749,276.8</div>		Coordinate System: <div style="text-align: center;">Florida State Plane West</div>		Elevation (ft): <div style="text-align: center;">-20.4 NAVD 88</div>	
USCS: <div style="text-align: center;">SM</div>		Munsell: Wet - 5Y-5/2 Dry - 5Y-6/1		Comments:			
Dry Weight (g): <div style="text-align: center;">189.09</div>	Wash Weight (g): <div style="text-align: center;">165.19</div>	Pan Retained (g): <div style="text-align: center;">1.71</div>	Sieve Loss (%): <div style="text-align: center;">0.16</div>	Fines (%): #200 - 15.17 #230 - 13.71	Organics (%): <div style="text-align: center;">2.50</div>	Carbonates (%): <div style="text-align: center;">44.20</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	5.17	2.73	5.17	2.73	
5/16"	-3.00	8.00	6.56	3.47	11.73	6.20	
3.5	-2.50	5.66	6.03	3.19	17.76	9.39	
4	-2.25	4.76	2.29	1.21	20.05	10.60	
5	-2.00	4.00	3.24	1.71	23.29	12.31	
7	-1.50	2.83	8.90	4.71	32.19	17.02	
10	-1.00	2.00	7.76	4.10	39.95	21.12	
14	-0.50	1.41	8.94	4.73	48.89	25.85	
18	0.00	1.00	4.79	2.53	53.68	28.38	
25	0.50	0.71	2.69	1.42	56.37	29.80	
35	1.00	0.50	2.03	1.07	58.40	30.87	
45	1.50	0.35	2.04	1.08	60.44	31.95	
60	2.00	0.25	2.89	1.53	63.33	33.48	
80	2.50	0.18	6.15	3.25	69.48	36.73	
120	3.00	0.13	48.42	25.61	117.90	62.34	
170	3.50	0.09	34.13	18.05	152.03	80.39	
200	3.75	0.07	8.39	4.44	160.42	84.83	
230	4.00	0.06	2.76	1.46	163.18	86.29	
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.70	3.35	2.76	-0.59	-1.61	-3.17	
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis		
Statistics	1.26	0.42	2.38	-0.8	2.06		