

DRILLING LOG		DIVISION: South Atlantic	INSTALLATION: Jacksonville District	SHEET 1 of 1
1. PROJECT CAPTIVA ISLAND SAND STUDY		10. SIZE AND TYPE OF BIT 3 5/8"		
2. LOCATION (Coordinates or Station) X = 547616.59 Y= 769431.52		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) NGVD		
3. DRILLING AGENCY: Alpine Ocean Seismic Survey Inc.		12. MANUFACTURER'S DESIGNATION OF DRILL ALPINE PNEUMATIC VIBRACORE		
4. HOLE NO. (As shown on drawing title and file number) CIVC-00-29		13. TOT NO. OF OVERBURDEN SAMPLES TAKEN Disturbed: 0.0 Undisturbed: 0.0		
5. NAME OF DRILLER MAURIZIO ROSSI		14. TOTAL NO. OF CORE BOXES		
6. DIRECTION OF HOLE VERTICAL		15. ELEVATION GROUND WATER		
7. THICKNESS OF BURDEN 0.0 FT		16. DATE HOLE Started 8/11/00 Completed 14:59		
8. DEPTH DRILLED INTO ROCK N/A		17. ELEVATION TOP OF HOLE -33.7 ft		
9. TOTAL DEPTH OF HOLE 16.8 ft		18. TOTAL CORE RECOVERY FOR BORING 100%		
		19. SIGNATURE OF GEOLOGIST ID		

ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	CORE REC %	SAMPLE NUMBER	REMARKS
-33.7	0					
-35.3	1		SHELLY SAND, gray (5Y-6/1), (SP).		1	Sample #1, Depth = 1.0' Mean (mm):0.78, Phi Sorting:1.64 Silt: 0.94% (SW)
	2					
	3		SAND, some shell hash/fragments, gray (5Y-6/1), (SP).		2	Sample #2, Depth = 4.0' Mean (mm): 0.37, Phi Sorting: 1.18 Silt: 1.13% (SW)
-38.8	4					
	5					
-40	6		SHELLY SAND, gray (5Y-6/1), (SP).		3	Sample #3, Depth = 6.0' Mean (mm): 0.48, Phi Sorting: 1.37 Silt: 1.58% (SW)
	7					
	8		SAND, some shell hash, gray (5Y-6/1), (SP).		4	Sample #4, Depth = 8.0 Mean(mm): 0.37, Phi Sorting: 1.05 Silt: 1.62% (SP)
-43.7	9					
	10					
	11		SAND, some shell hash, gray (5Y-6/1), (SP).		5	Sample #5, Depth = 12.0 Mean(mm): 0.33, Phi Sorting: 1.11 Silt : 2.02% (SW)
-47.7	12					
	13					
	14		SHELLY SAND, light gray (5Y-7/1), (SP).			
-49.7	15		SAND, little shell hash, light gray (5Y-7/1), (SP).			
-50.5	16		CARBONATE CLASTS, size ranges from silt/clay to 2.5" fragments, calcareous, white (5Y-8/1), (GM).			
	17					
	18		Expansion			
-52.9	19					
	20		End of Boring			
	21		Note: 1) Soils are field visually classified in accordance with the Unified Soil Classification System.			Note: This column contains laboratory data.
	22					
	23					
	24					

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-29#1
 Date: 1/1/2001
 By: ID



2841 N. W. Boca Raton Blvd. Boca Raton FL 33428

Elevation:	-34.7	Feet	Easting:	547616.59	State Plane	1983
Reference:	NGVD 29		Northing:	769431.52	FLA West	Feet

USCS:	SW	Munsel Dry:	5Y-6/1	Munsel Wet:	5Y-6/1
Comments:	0				

Dry Wt.	52.17	Percent Silt:	0.94
Wash Wt.	51.68		

Sieve Size	PHI Size	mm Size	Grams Retained	% Weight Retained	Cum. Grams Retained	C % Weight Retained
5/8	-4.000	16.000	0.000	0.000	0.000	0.000
5/16	-3.000	8.000	0.610	1.169	0.610	1.169
5	-2.000	4.000	2.830	5.425	3.440	6.594
7	-1.500	2.828	1.530	2.933	4.970	9.527
10	-1.000	2.000	2.830	5.425	7.800	14.951
14	-0.500	1.414	3.850	7.380	11.650	22.331
18	0.000	1.000	5.070	9.718	16.720	32.049
25	0.500	0.707	7.250	13.897	23.970	45.946
35	1.000	0.500	8.010	15.354	31.980	61.300
45	1.500	0.354	7.710	14.779	39.690	76.078
60	2.000	0.250	7.990	15.315	47.680	91.394
80	2.500	0.177	3.350	6.421	51.030	97.815
120	3.000	0.125	0.600	1.150	51.630	98.965
170	3.500	0.088	0.040	0.077	51.670	99.042
200	3.750	0.074	0.010	0.019	51.680	99.061
230	4.000	0.063	0.000	0.000	51.680	99.061
Pan	Pan	0.053	0.490	0.939	52.170	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-2.29	-0.93	-0.36	0.63	1.46	1.76	2.28

Median phi:	0.63	Median mm:	0.65
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	0.29	0.82	1.37	-0.37	1.03
Moment	0.36	0.78	1.64	-0.39	1.65

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-29#2
 Date: 1/1/2001
 By: ID



2841 N. W. Boca Raton Blvd. Boca Raton FL 33428

Elevation:	-37.7	Feet	Easting:	547616.59	State Plane	1983
Reference:	NGVD 29		Northing:	769431.52	FLA West	Feet

USCS:	SW	Munsel Dry:	5Y-6/1	Munsel Wet:	5Y-6/1
Comments:	0				

Dry Wt.	45.85	Percent Silt:	1.13
Wash Wt.	45.33		

Sieve Size	PHI Size	mm Size	Grams Retained	% Weight Retained	Cum. Grams Retained	C % Weight Retained
5/8	-4.000	16.000	0.000	0.000	0.000	0.000
5/16	-3.000	8.000	0.000	0.000	0.000	0.000
5	-2.000	4.000	0.720	1.570	0.720	1.570
7	-1.500	2.828	0.300	0.654	1.020	2.225
10	-1.000	2.000	0.460	1.003	1.480	3.228
14	-0.500	1.414	1.020	2.225	2.500	5.453
18	0.000	1.000	1.670	3.642	4.170	9.095
25	0.500	0.707	2.670	5.823	6.840	14.918
35	1.000	0.500	4.660	10.164	11.500	25.082
45	1.500	0.354	6.870	14.984	18.370	40.065
60	2.000	0.250	11.940	26.041	30.310	66.107
80	2.500	0.177	11.450	24.973	41.760	91.080
120	3.000	0.125	3.250	7.088	45.010	98.168
170	3.500	0.088	0.260	0.567	45.270	98.735
200	3.750	0.074	0.010	0.022	45.280	98.757
230	4.000	0.063	0.050	0.109	45.330	98.866
Pan	Pan	0.053	0.520	1.134	45.850	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.60	0.55	1.00	1.69	2.18	2.36	2.78

Median phi:	1.69	Median mm:	0.31
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.36	0.39	0.96	-0.55	1.17
Moment	1.42	0.37	1.18	-0.53	1.86

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-29#3
 Date: 1/1/2001
 By: ID



2841 N. W. Boca Raton Blvd. Boca Raton FL 33428

Elevation:	-39.7	Feet	Easting:	547616.59	State Plane	1983
Reference:	NGVD 29		Northing:	769431.52	FLA West	Feet

USCS:	SW	Munsel Dry:	5Y-6/1	Munsel Wet:	5Y-6/1
Comments:	0				

Dry Wt.	49.35	Percent Silt:	1.58
Wash Wt.	48.57		

Sieve Size	PHI Size	mm Size	Grams Retained	% Weight Retained	Cum. Grams Retained	C % Weight Retained
5/8	-4.000	16.000	0.000	0.000	0.000	0.000
5/16	-3.000	8.000	0.000	0.000	0.000	0.000
5	-2.000	4.000	0.700	1.418	0.700	1.418
7	-1.500	2.828	0.920	1.864	1.620	3.283
10	-1.000	2.000	1.580	3.202	3.200	6.484
14	-0.500	1.414	1.940	3.931	5.140	10.415
18	0.000	1.000	2.550	5.167	7.690	15.583
25	0.500	0.707	4.510	9.139	12.200	24.721
35	1.000	0.500	6.400	12.969	18.600	37.690
45	1.500	0.354	7.790	15.785	26.390	53.475
60	2.000	0.250	11.810	23.931	38.200	77.406
80	2.500	0.177	8.080	16.373	46.280	93.779
120	3.000	0.125	2.210	4.478	48.490	98.257
170	3.500	0.088	0.060	0.122	48.550	98.379
200	3.750	0.074	0.020	0.041	48.570	98.419
230	4.000	0.063	0.000	0.000	48.570	98.419
Pan	Pan	0.053	0.780	1.581	49.350	100.000

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-1.23	0.02	0.51	1.39	1.95	2.20	2.64

Median phi:	1.39	Median mm:	0.38
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.00	0.50	1.13	-0.52	1.10
Moment	1.07	0.48	1.37	-0.48	1.76

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-29#4
 Date: 1/1/2001
 By: ID



2841 N. W. Boca Raton Blvd. Boca Raton FL 33428

Elevation:	-41.7	Feet	Easting:	547616.59	State Plane	1983
Reference:	NGVD 29		Northing:	769431.52	FLA West	Feet

USCS:	SP	Munsel Dry:	5Y-6/1	Munsel Wet:	5Y-6/1
Comments:	0				

Dry Wt.	56.33	Percent Silt:	1.62
Wash Wt.	55.47		

Sieve Size	PHI Size	mm Size	Grams Retained	% Weight Retained	Cum. Grams Retained	C % Weight Retained
5/8	-4.000	16.000	0.000	0.000	0.000	0.000
5/16	-3.000	8.000	0.000	0.000	0.000	0.000
5	-2.000	4.000	0.030	0.053	0.030	0.053
7	-1.500	2.828	0.350	0.621	0.380	0.675
10	-1.000	2.000	0.630	1.118	1.010	1.793
14	-0.500	1.414	1.050	1.864	2.060	3.657
18	0.000	1.000	1.520	2.698	3.580	6.355
25	0.500	0.707	4.170	7.403	7.750	13.758
35	1.000	0.500	6.780	12.036	14.530	25.794
45	1.500	0.354	10.540	18.711	25.070	44.506
60	2.000	0.250	15.720	27.907	40.790	72.413
80	2.500	0.177	11.320	20.096	52.110	92.508
120	3.000	0.125	3.000	5.326	55.110	97.834
170	3.500	0.088	0.210	0.373	55.320	98.207
200	3.750	0.074	0.040	0.071	55.360	98.278
230	4.000	0.063	0.050	0.089	55.410	98.367
Pan	Pan	0.053	0.910	1.615	56.320	99.982

PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.25	0.59	0.97	1.60	2.06	2.29	2.73

Median phi:	1.60	Median mm:	0.33
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.39	0.38	0.88	-0.36	1.11
Moment	1.43	0.37	1.05	-0.33	1.66

Gradation Analysis Report

Proj Name: Captiva Island
 Sample: CIVC-00-29#5
 Date: 1/1/2001
 By: ID



2841 N. W. Boca Raton Blvd. Boca Raton FL 33428

Elevation:	-45.7	Feet	Easting:	547616.59	State Plane	1983
Reference:	NGVD 29		Northing:	769431.52	FLA West	Feet

USCS:	SW	Munsel Dry:	5Y-6/1	Munsel Wet:	5Y-6/1
Comments:	0				

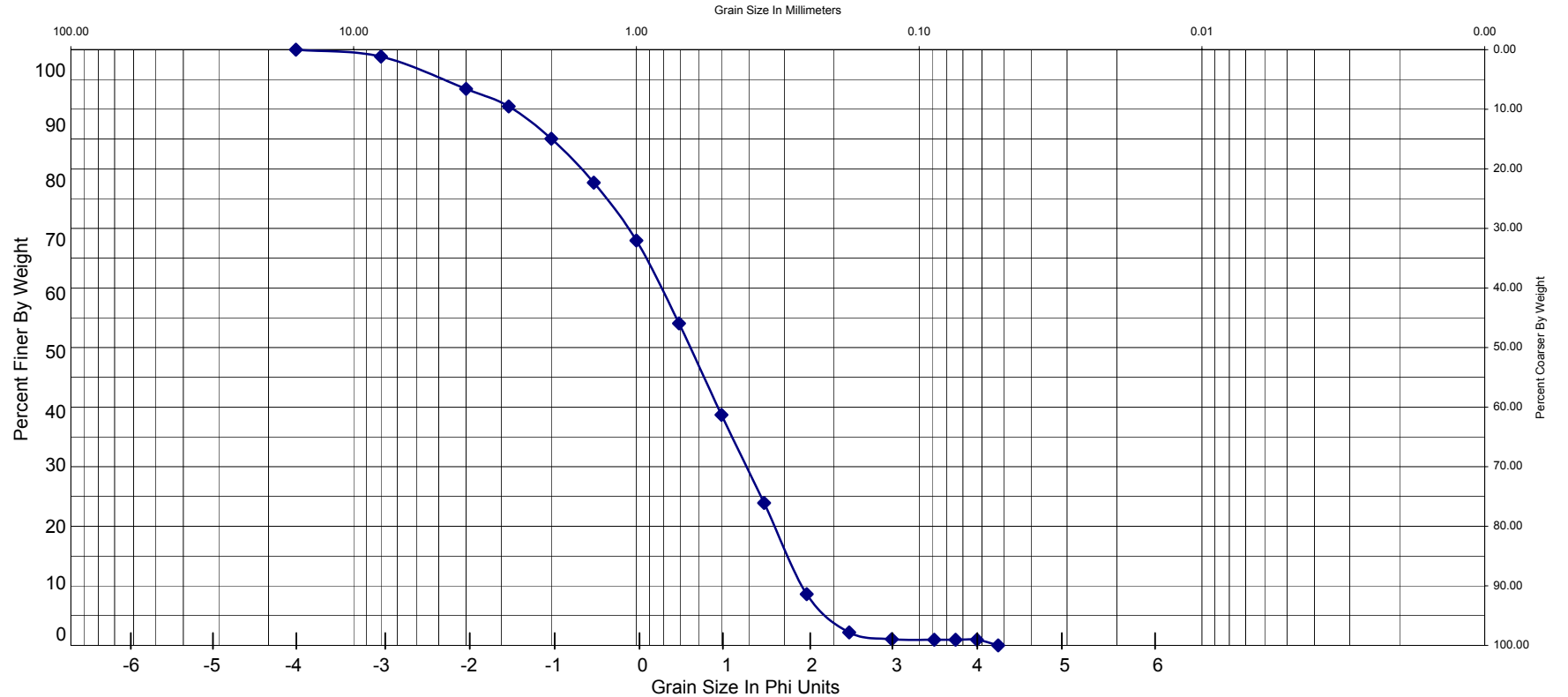
Dry Wt.	59.40	Percent Silt:	2.02
Wash Wt.	58.21		

Sieve Size	PHI Size	mm Size	Grams Retained	% Weight Retained	Cum. Grams Retained	C % Weight Retained
5/8	-4.000	16.000	0.000	0.000	0.000	0.000
5/16	-3.000	8.000	0.160	0.269	0.160	0.269
5	-2.000	4.000	0.290	0.488	0.450	0.758
7	-1.500	2.828	0.690	1.162	1.140	1.919
10	-1.000	2.000	0.760	1.279	1.900	3.199
14	-0.500	1.414	0.410	0.690	2.310	3.889
18	0.000	1.000	1.710	2.879	4.020	6.768
25	0.500	0.707	2.870	4.832	6.890	11.599
35	1.000	0.500	4.370	7.357	11.260	18.956
45	1.500	0.354	6.310	10.623	17.570	29.579
60	2.000	0.250	15.900	26.768	33.470	56.347
80	2.500	0.177	18.030	30.354	51.500	86.700
120	3.000	0.125	6.060	10.202	57.560	96.902
170	3.500	0.088	0.520	0.875	58.080	97.778
200	3.750	0.074	0.120	0.202	58.200	97.980
230	4.000	0.063	0.000	0.000	58.200	97.980
Pan	Pan	0.053	1.200	2.020	59.400	100.000


PHI 5	PHI 16	PHI 25	PHI 50	PHI 75	PHI 84	PHI 95
-0.31	0.80	1.28	1.88	2.31	2.46	2.91

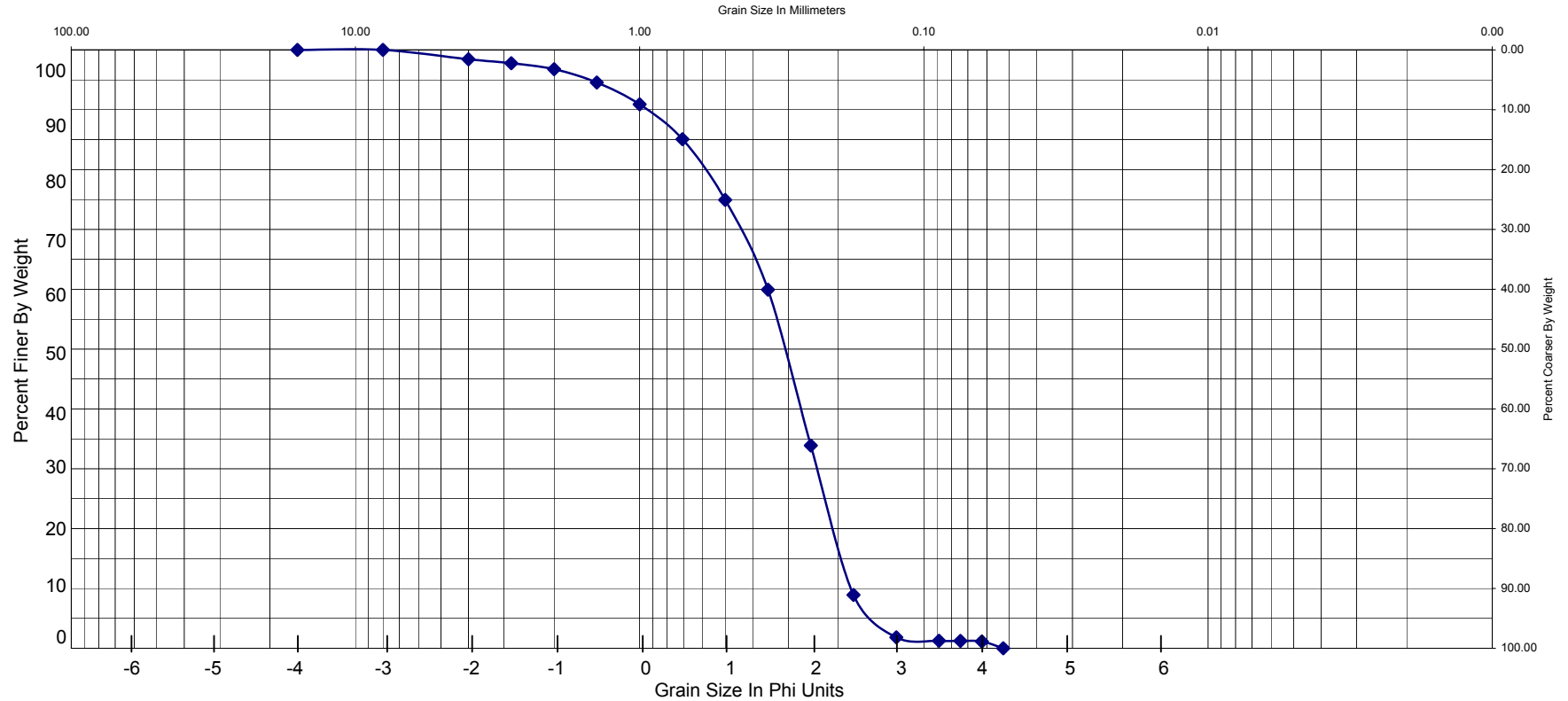
Median phi:	1.88	Median mm:	0.27
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	Mean phi	Mean mm	Sorting	Skewness	Kurtosis
Graphic	1.55	0.34	0.90	-0.62	1.29
Moment	1.62	0.33	1.11	-0.57	1.94



Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-29#1	1.0		SW	0.94	0.65	0.78	-0.39	1.65	1.64	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
 <div> COASTAL PLANNING & ENGINEERING, INC. 2481 N. W. BOCA RATON BLVD. BOCA RATON, FLORIDA 33431 </div>													Easting (X): 547616.59 Feet
													Northing (Y): 769431.52 Feet
													Sample Elevation: -34.7 NGVD 29
													Coord. System: State Plane 1983 FLA West



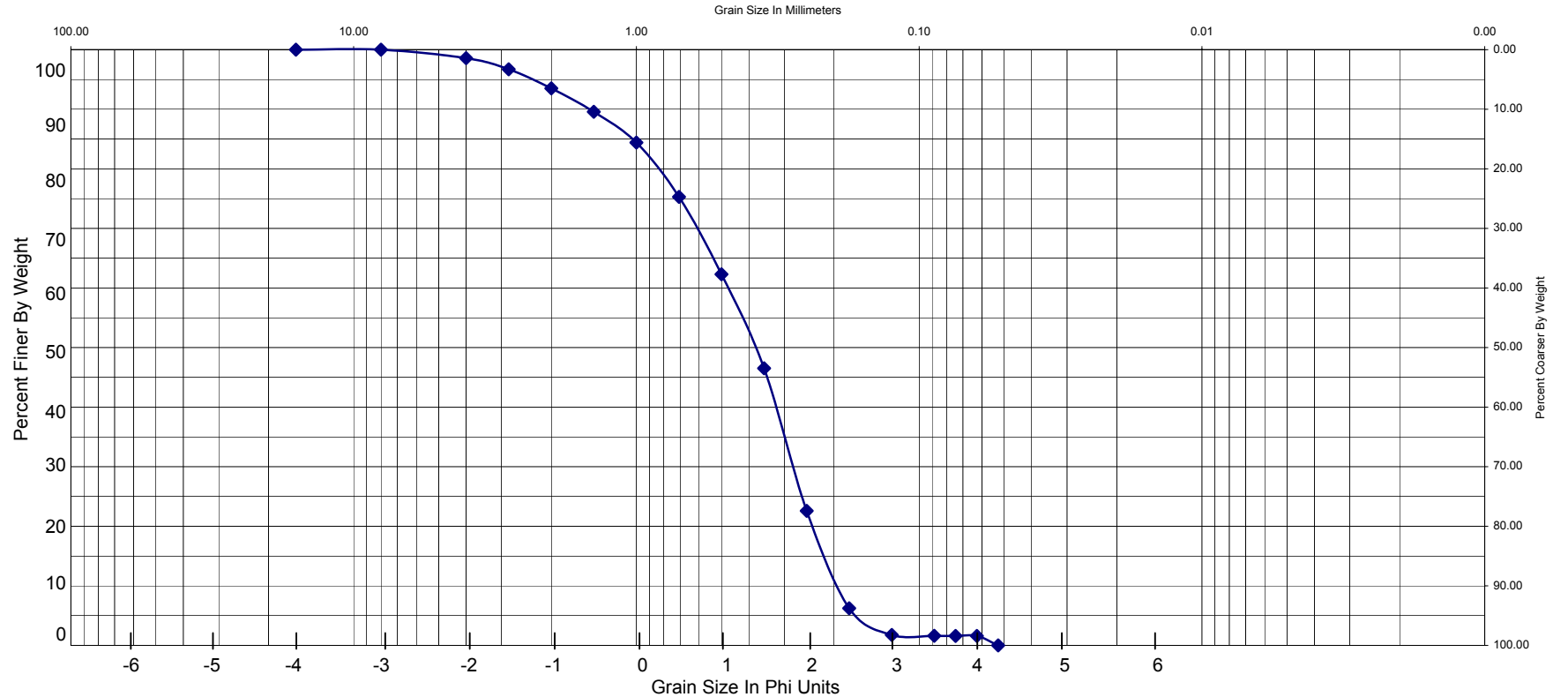
Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-29#2	4.0		SW	1.13	0.31	0.37	-0.53	1.86	1.18	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID



COASTAL PLANNING & ENGINEERING, INC.
2481 N. W. BOCA RATON BLVD.
BOCA RATON, FLORIDA 33431

Easting (X):	547616.59 Feet
Northing (Y):	769431.52 Feet
Sample Elevation:	-37.7 NGVD 29
Coord. System:	State Plane 1983 FLA West

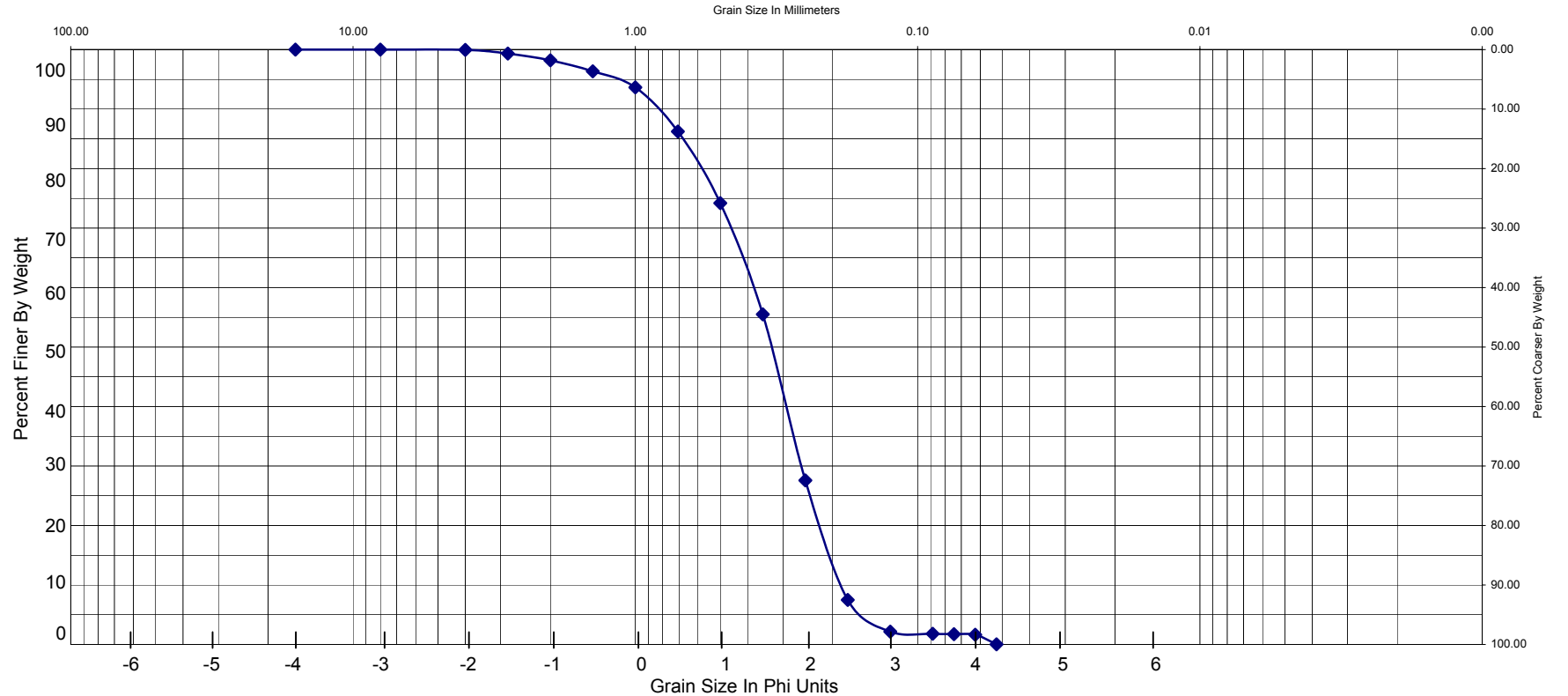


Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-29#3	6.0		SW	1.58	0.38	0.48	-0.48	1.76	1.37	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
													Easting (X): 547616.59 Feet
													Northing (Y): 769431.52 Feet
													Sample Elevation: -39.7 NGVD 29
													Coord. System: State Plane 1983 FLA West




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2481 N. W. BOCA RATON BLVD.
BOCA RATON, FLORIDA 33431



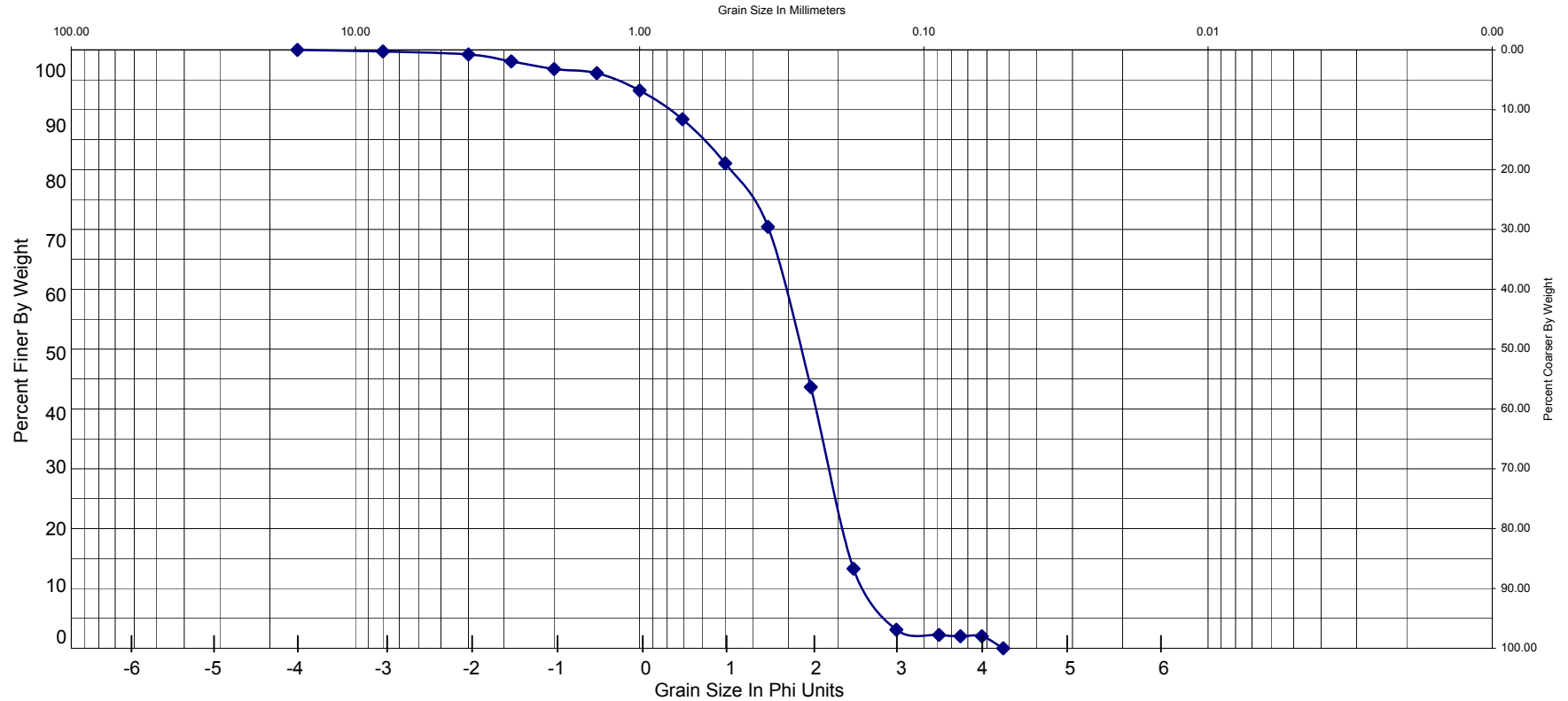
Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-29#4	8.0		SP	1.62	0.33	0.37	-0.33	1.66	1.05	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID




COASTAL PLANNING & ENGINEERING, INC.
2481 N. W. BOCA RATON BLVD.
BOCA RATON, FLORIDA 33431

Easting (X):	547616.59 Feet
Northing (Y):	769431.52 Feet
Sample Elevation:	-41.7 NGVD 29
Coord. System:	State Plane 1983 FLA West



Gravel		Sand			Silt or Clay
Coarse	Fine	Coarse	Medium	Fine	

Sample No.	Depth	Description	USCS	% Silt	Median	Mean	Skew	Kurt	Sort	PL	LL	PI	Sample Information
◆ CIVC-00-29#5	12.0		SW	2.02	0.27	0.33	-0.57	1.94	1.11	NA	NA	NA	Project Name: Captiva Island
													Sample Type: Vibracores
													Collection Date: 1/1/2001
													Analysis By: ID
 <div> COASTAL PLANNING & ENGINEERING, INC. 2481 N. W. BOCA RATON BLVD. BOCA RATON, FLORIDA 33431 </div>													Easting (X): 547616.59 Feet
													Northing (Y): 769431.52 Feet
													Sample Elevation: -45.7 NGVD 29
													Coord. System: State Plane 1983 FLA West

