Appendix B

URS Corporation 2002 Geotechnical Laboratory Test Results

Selected soil samples obtained from the exploratory borings were tested in URS' Pleasant Hill geotechnical laboratory to evaluate their engineering properties. The following laboratory tests were performed on the soil samples:

- Grain size analyses (ASTM D422)
- Water content determination (ASTM D2216)
- Atterberg limits determination (ASTM D4318)

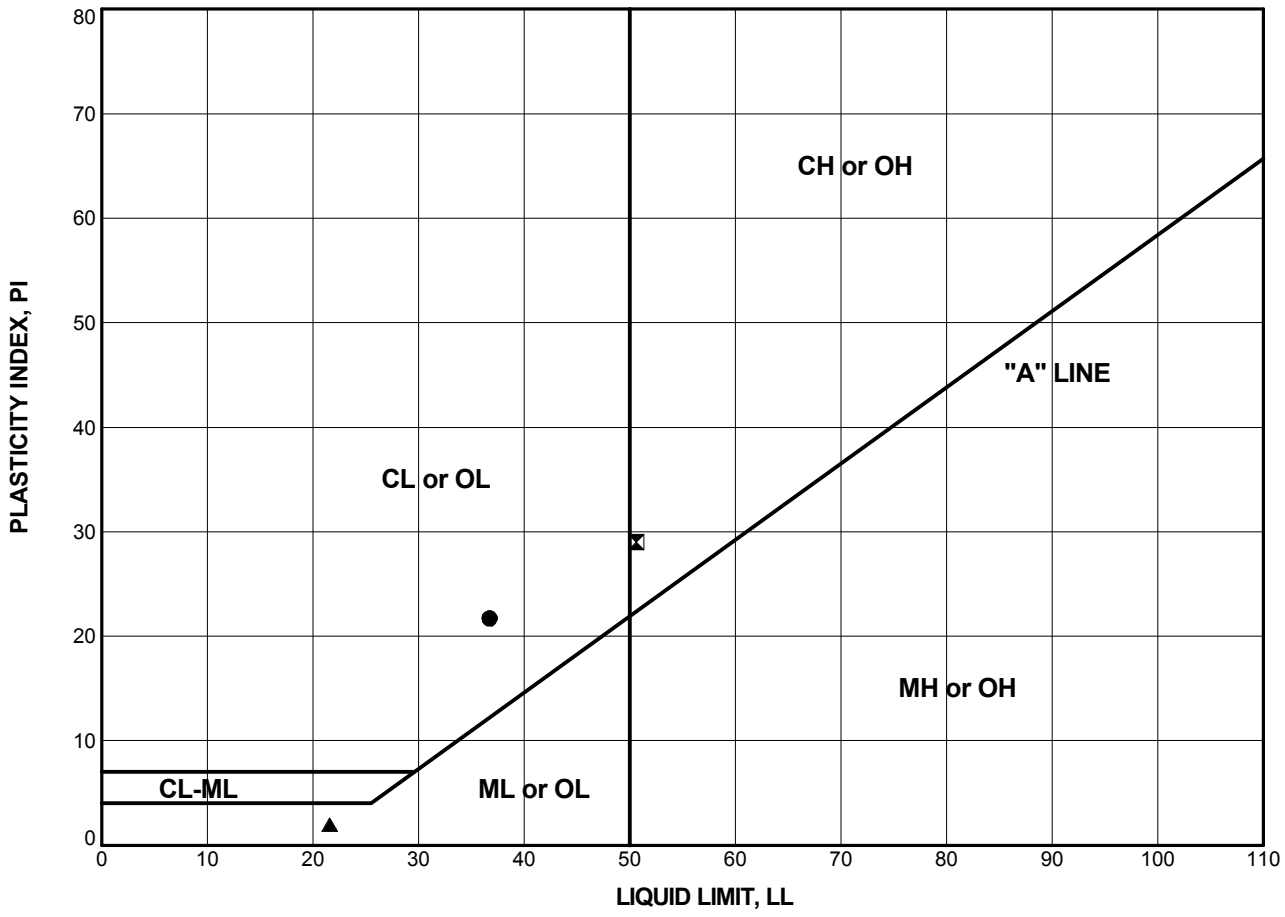
The results of the geotechnical laboratory testing are summarized ion Table B-1. The Plasticity Chart is shown in Figure B-1 and Particle Size Distribution Curves are presented in Figures B-2 and B-3 for Bacon Island and in Figures B-4 and B-5 for Webb Tract.

TABLE B-1
SUMMARY OF SOIL LABORATORY DATA

Sample Information				USCS Group Symbol	In Situ Water Content, %	Sieve			Atterberg Limits		
Boring Number	Sample Number	Depth, feet	Elevation, feet MSL			Gravel, %	Sand, %	<#200, %	LL	PL	PI
B-1	1-2	12.5-14	NA	CL	40.0	0	40	60			
B-1	1-3	15-16.5	NA	CL	29.9	0	26	74	37	15	22
B-2	2-2	15-16.5	NA	SM	23.4	0	70	30			
B-3	3-1	5-6.5	NA	ML	26.8	0	39	61			
B-3	3-2	10-11.5	NA	SM	37.7	0	53	47			
B-4	4-1	15-16.5	NA	SM	24.1	0	70	30			
B-5	5-2	12.5-14	NA	SM	19.9	0	65	35			
B-6	6-1	10-11.5	NA	SM	22.8	0	82	18			
B-9	9-1	10-11.5	NA	CH	38.8	0	46	54	51	22	29
B-9	9-2	12.5-14	NA	SM	27.7	0	70	30			
W-2	2-1	15-16.5	NA	SM	22.4	0	66	34			
W-3	3-1	15-16.5	NA	SM	21.1	0	62	38	22	20	2
W-3	3-2	17.5-19	NA	SP-SM	20.1	0	89	11			
W-5	5-1	10-11.5	NA	SM	20.6	0	88	12			
W-6	6-2	12.5-14	NA	SM	23.1	0	68	32			
W-7	7-1	15-16.5	NA	SP-SM	18.3	0	91	9			
W-8	8-1	5-6.5	NA	SP-SM	3.0	0	93	7			
W-8	8-2	10-11.5	NA	SP	4.1	0	95	5			
W-10	10-2	12.5-14	NA	SM	20.9	0	80	20			

NOTE: The laboratory tests were performed in general accordance with the following ASTM standards:

Water Content - ASTM Test Method D2216
Particle Size Distribution Analysis by Mechanical Sieving - ASTM Test Method D422
Atterberg Limits - ASTM Test Method D4318



Boring Number	Sample Number	Depth (feet)	Test Symbol	Water Content (%)	LL	PL	PI	Classification
B-1	1-3	15-16.5	●	30	37	15	22	Silty Clay with Sand (CL)
B-9	9-1	10-11.5	⊠	39	51	22	29	Sandy Silty Clay (CH)
W-3	3-1	15-16.5	▲	21	22	20	2	Silty Sand (SM)

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PLASTICITY CHART

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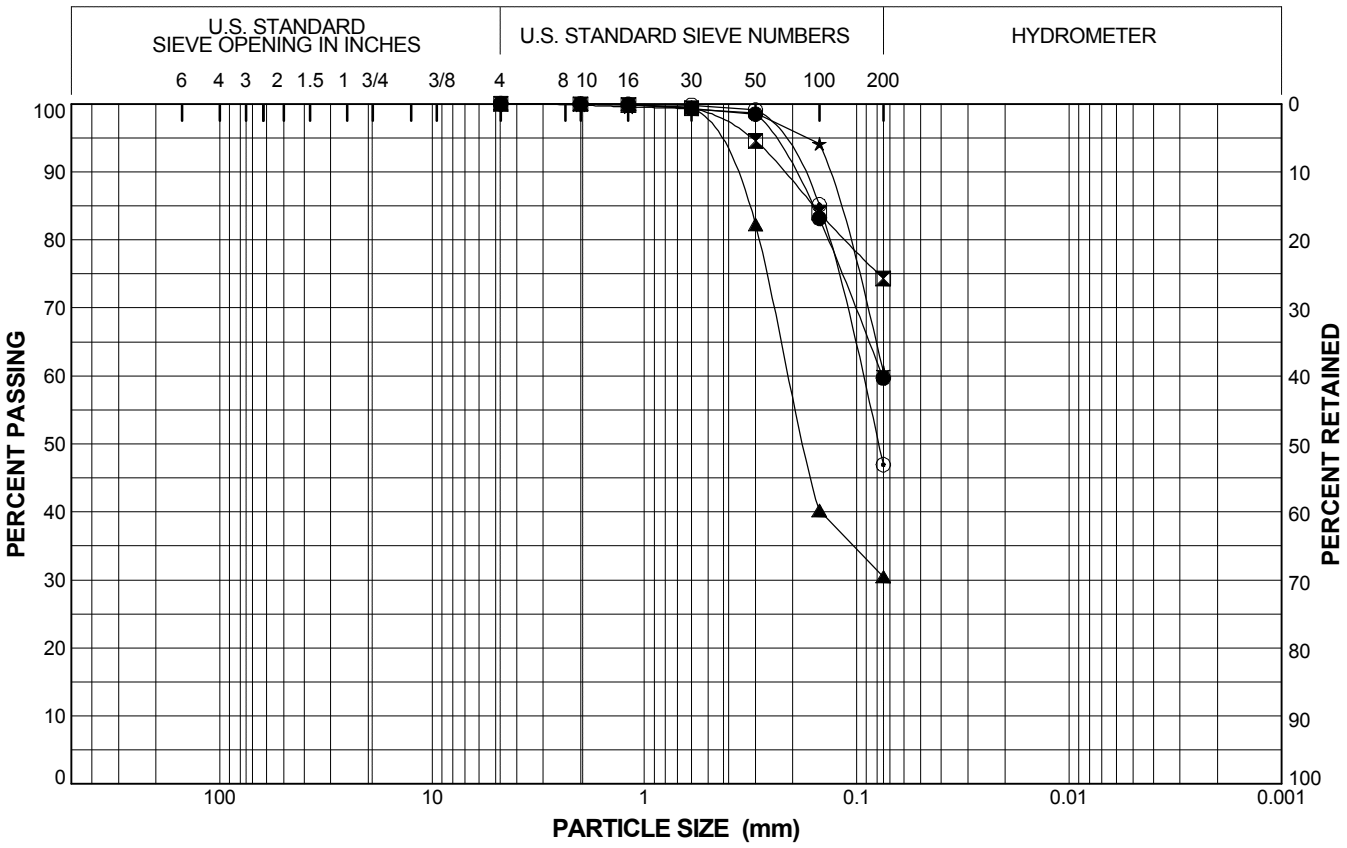
Figure B-1

Report: ATTERBERG_PLOT_12 PTS; File: DWRBACON.GPJ; 1/3/2003 W-03

COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	



Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Classification
B-1	1-2	12.5-14	●			Sandy Silty Clay (CL)
B-1	1-3	15-16.5	⧗	37	22	Silty Clay with Sand (CL)
B-2	2-2	15-16.5	▲			Silty Sand (SM)
B-3	3-1	5-6.5	★			Sandy Silt (ML)
B-3	3-2	10-11.5	⊙			Silty Sand (SM)

Report: SIEVE_5_CURVES_OAK; File: DWRBACON.GPJ; 1/3/2003 B-03

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PARTICLE SIZE DISTRIBUTION CURVES

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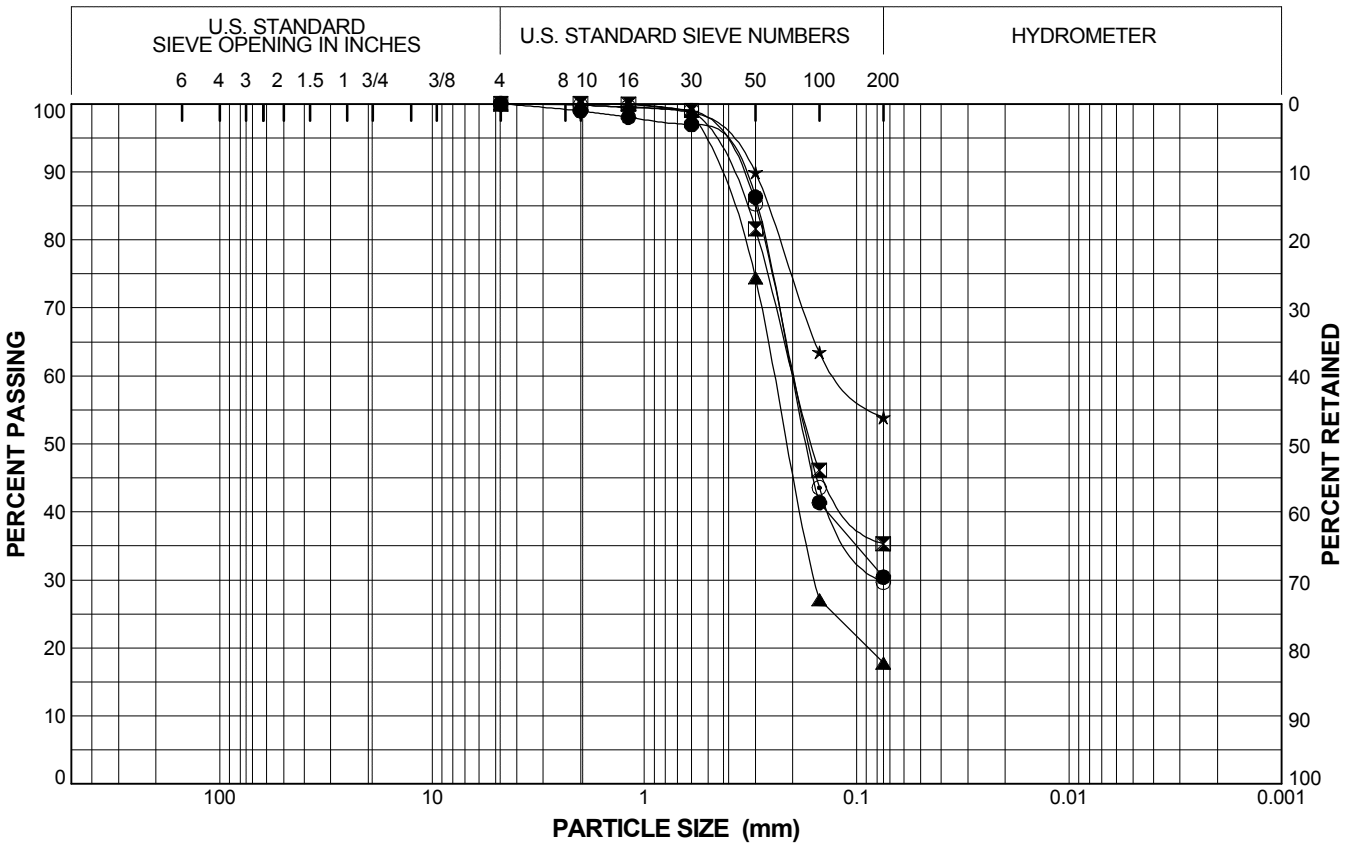
Figure B-2

COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	



Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Classification
B-4	4-1	15-16.5	●			Silty Sand (SM)
B-5	5-2	12.5-14	⧗			Silty Sand (SM)
B-6	6-1	10-11.5	▲			Silty Sand (SM)
B-9	9-1	10-11.5	★	51	29	Sandy Silty Clay (CH)
B-9	9-2	12.5-14	⊙			Silty Sand (SM)

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PARTICLE SIZE DISTRIBUTION CURVES

Figure B-3

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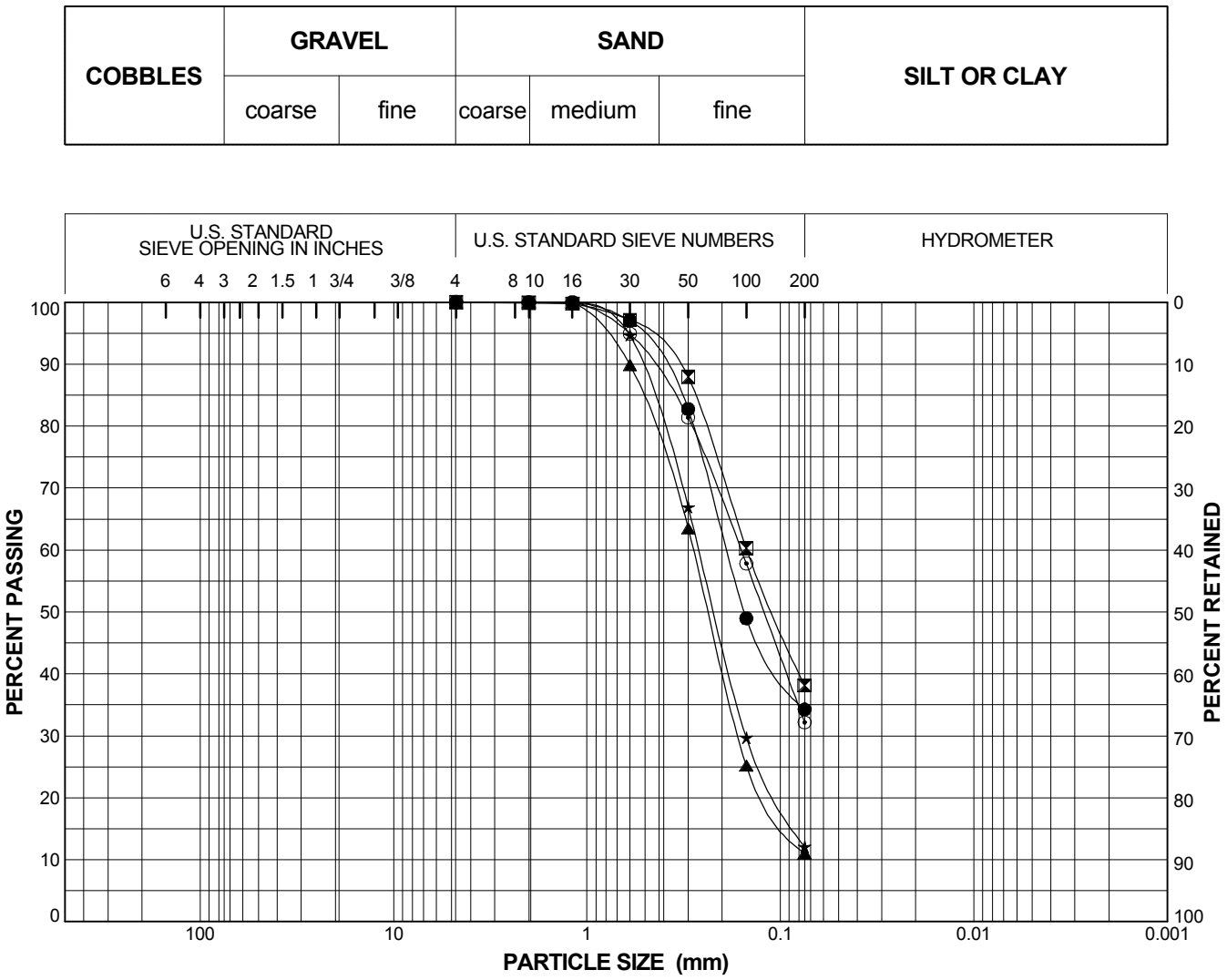

Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Classification
W-2	2-1	15-16.5	●			Silty Sand (SM)
W-3	3-1	15-16.5	⧗	22	2	Silty Sand (SM)
W-3	3-2	17.5-19	▲			Poorly Graded Sand with Silt (SP-SM)
W-5	5-1	10-11.5	★			Silty Sand (SM)
W-6	6-2	12.5-14	⊙			Silty Sand (SM)

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PARTICLE SIZE DISTRIBUTION CURVES

Figure B-4

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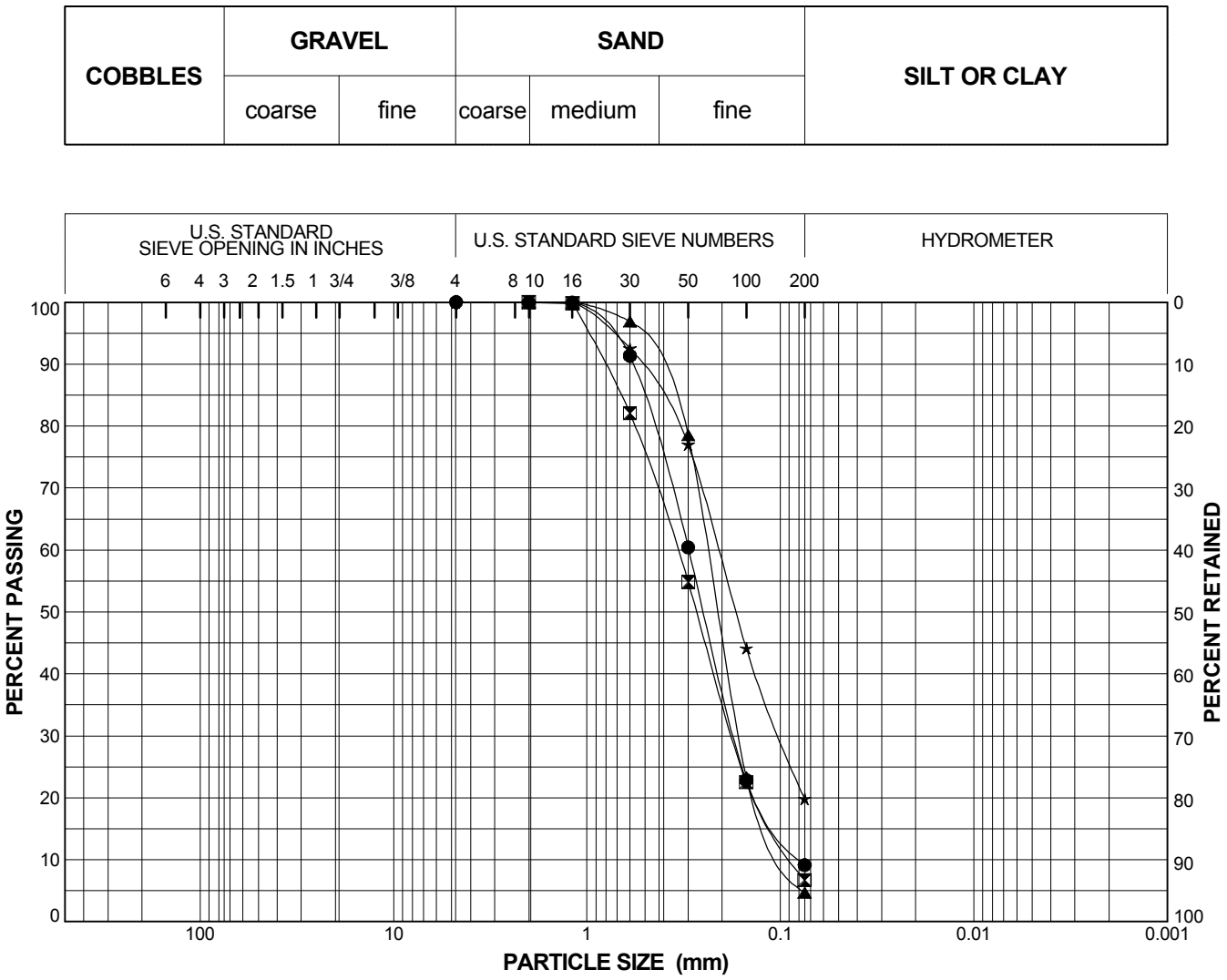

Boring Number	Sample Number	Depth (feet)	Symbol	LL	PI	Classification
W-7	7-1	15-16.5	●			Poorly Graded Sand with Silt (SP-SM)
W-8	8-1	5-6.5	⧗			Poorly Graded Sand with Silt (SP-SM)
W-8	8-2	10-11.5	▲			Poorly Graded Sand (SP)
W-10	10-2	12.5-14	★			Silty Sand (SM)

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PARTICLE SIZE DISTRIBUTION CURVES

Figure B-5

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Report: SIEVE_5_CURVES_OAK; File: DWRBACON.GPJ; 1/3/2003 W-10