

APPENDIX C

LABORATORY TEST RESULTS

This appendix includes results of geotechnical laboratory tests from our borings drilled along the subject levee.

LIST OF ATTACHMENTS

Results of Geotechnical Laboratory Tests

Plate C-1	ASTM D1140, Material Finer Than a 0.75-mm (No. 200) Sieve
Plates C-2 through C-5	ASTM D422, Sieve Analysis
Plate C-6	ASTM D4318, Atterberg Limits
Plate C-7	ASTM D854, Specific Gravity
Plate C-8	ASTM D2974, Organic Content Of Soil
Plate C-9	ASTM D2216, Water (Moisture) Content Of Soil
Plate C-10	ASTM D2216 and D2937, Determination Of Water (Moisture) Content And Unit Weight Of Soil
Plate C-11 through C-12	ASTM D2166, Unconfined Compression Test
Plate C-13	Plot Of Atterberg Limits Test Results
Plate C-14	ASTM D2573, Field Vane Shear Test Results Plot



Project Name: SJAFCA - Dad's Point
Project Number: 92459.G11

ASTM D1140, MATERIAL FINER THAN A .075-MM (NO. 200) SIEVE

Sample Location	Percent Passing	Sample Description
B1-6-1	87.0	Silty Lean Clay w/ Sand
B1-12-1	82.9	Silty Lean Clay w/ Sand
B2-10-1	93.7	Fat Clay
B3-3-1	96.3	Fat Clay w/ Sand
B3-9-1	84.7	Fat Clay w/ Sand
WR0828_001B S09A_022_025P	34.2	Silt
WR0828_001B S35A_087_090P	41.1	Silty Sand
WR0828_002B S03A_007_010P	63.9	Sandy Silt
WR0828_002B S12A_030_032S	46.7	Sandy Silt
WR0828_002B S20A_050_052S	58.2	Sandy Lean Clay
WR0828_002B S25A_062_065P	31.7	Silty Sand
WR0828_002B S28A_070_072S	8.1	Poorly Graded Sand w/ Silt

Reviewed By: _____
L. Christine Erickson
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PLATE C-1



Project Name: DWR - RD 828
Task: K04-6CSC
Project Number: 96348
Date Sampled: March 25, 2009
Date Tested: August 5, 2009
Boring No.: WR0828_001B
Sample Location.: S13A_032_035P

ASTM D 422 SIEVE ANALYSIS

Sieve Size	Percent Passing By Weight
#10/(2.00mm)	100

Particle Size, mm	Percent in Suspension
0.028	40.0
0.018	37.0
0.011	33.0
0.008	29.0
0.006	26.0
0.003	21.0
0.001	16.0

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Notes: Assumed Specific Gravity of 2.65 was used.

PLATE C-2



Project Name: DWR - RD 828
Task: K04-6CSC
Project Number: 96348
Sample Date: February 25, 2009
Boring No.: WR0828_001B
Sample Location: S24A_060_062S

ASTM D422, PARTICLE SIZE ANALYSIS

Sieve Size	Percent Passing By Weight
#20/850µm	100
#40/425µm	88
#60/250µm	53
#140/106µm	13
#200/75µm	9.1

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PLATE C-3



Project Name: DWR - RD 828
Task: K04-6CSC
Project Number: 96348
Sample Date: February 25, 2009
Boring No.: WR0828_001B
Sample Location: S26A_065_067S

ASTM D422, PARTICLE SIZE ANALYSIS

Sieve Size	Percent Passing By Weight
#10/2.00mm	100
#20/850µm	93
#40/425µm	62
#60/250µm	24
#140/106µm	6
#200/75µm	4.9

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PLATE C-4



Project Name: DWR - RD 828
Task: K04-6CSC
Project Number: 96348
Sample Date: February 25, 2009
Boring No.: WR0828_001B
Sample Location: S28A_070_072S

ASTM D422, PARTICLE SIZE ANALYSIS

Sieve Size	Percent Passing By Weight
#10/2.00mm	100
#20/850µm	93
#40/425µm	38
#60/250µm	19
#140/106µm	13
#200/75µm	11.9

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PLATE C-5



Project Name: SJAFCA - Dad's Point
Task: G11
Project Number: 92459.G11

***ASTM D4318, Standard Test Methods for Liquid Limit,
Plastic Limit and Plasticity Index of Soils***

Sample Location	Liquid Limit	Plasticity Index
B1-6-1	47	27
B1-12-1	40	21
B2-10-1	60	37
B2-19-1	55	33
B3-3-1	65	38
B3-9-1	55	33
B3-11.5-1	55	34
WR0828_001B S03A_007_010P	50	27
WR0828_001B S08A_020_022T	31	6
WR0828_001B S10A_025_027S	31	10
WR0828_001B S12A_030_032S	32	15
WR0828_001B S20A_050_052S	47	28
WR0828_001B S30A_075_077S	31	11
WR0828_001B S38A_095_097S	34	15
WR0828_002B S02A_005_007S	54	29
WR0828_002B S04A_010_012S	53	31
WR0828_002B S06A_015_017S	80	43
WR0828_002B S10A_025_027S	29	6
WR0828_002B S20A_050_052S	31	10

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PLATE C-6



Project Name: DWR - RD828
Task: K04-6CSC
Project Number: 96348
Boring No.: WR0828_001B and WR0828_002B

ASTM D 854, STANDARD TEST METHODS for SPECIFIC GRAVITY of SOIL SOLIDS by WATER PYCNOMETER

Sample Location	Specific Gravity at 20°C
WR0828_001B S08A_020_022T	2.709
WR0828_001B S13A_032_035P	2.744
WR0828_002B S18A_045_047S	2.713

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PLATE C-7



Project Name: SJAFCA - Dad's Point
Project Number: 92459.G11

**ASTM D2974, Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils,
Method A and C**

Sample Location	*Water Content, %	Organic Matter, %
B1-15-1	33	2.8
B1-20-1	39	2.6
B2-15-1	32	2.7
B2-19-1	33	3.3
B3-11.5-1	40	3.8
WR0828_001B S06A_015_017T	34	3.1
WR0828_002B S07A_017_020P	52	6.9

*Moisture content based on oven-dried mass

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PLATE C-8



Project Name: SJAFCA - Dad's Point
Project Number: 92459.G11

ASTM D 2216, LABORATORY DETERMINATION OF WATER (MOISTURE) CONTENT

Sample Location	Water Content, %	Sample Description
B1-6-1	29.5	Silty Lean Clay w/ Sand
B1-12-1	30.1	Silty Lean Clay w/ Sand
B2-10-1	33.0	Fat Clay
B3-3-1	49.7	Fat Clay w/ Sand
B3-9-1	41.6	Fat Clay w/ Sand
WR0828_001B S04A_010_012T	32.6	Fat Clay
WR0828_001B S08A_020_022T	34.4	Silt
WR0828_001B S02A_005_007S	25.4	Lean Clay
WR0828_001B S03A_007_010P	29.3	Fat Clay
WR0828_001B S05A_012_015P	22.2	Sandy Silt
WR0828_001B S10A_025_027S	31.1	Lean Clay w/ Sand
WR0828_001B S14A_035_037S	27.0	Lean Clay w/ Sand
WR0828_001B S16A_040_042S	25.2	Sandy Silt
WR0828_001B S20A_050_052S	27.4	Lean Clay
WR0828_001B S30A_075_077S	35.6	Lean Clay
WR0828_002B S04A_010_012S	27.7	Fat Clay
WR0828_002B S06A_015_017S	39.8	Organic Silt
WR0828_002B S10A_025_027S	32.4	Silt w/ Sand
WR0828_002B S15A_037_040P	23.8	Silty Sand
WR0828_002B S20A_050_052S	31.9	Sandy Lean Clay
WR0828_002B S25A_062_065P	12.2	Silty Sand

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PLATE C-9



Project Name: SJAFCA - Dad's Point
Project Number: 92459.G11
Sample Date: December 22, 2009
Laboratory Test Number: 0912042

**ASTM D2216 AND 2937, LABORATORY DETERMINATION OF WATER (MOISTURE) CONTENT
AND UNIT WEIGHT OF SOIL**

Sample Location	Water Content, %	Dry Density, pcf	Sample Description
B1-20-1	37.8	84.3	Sandy Silt

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PLATE C-10

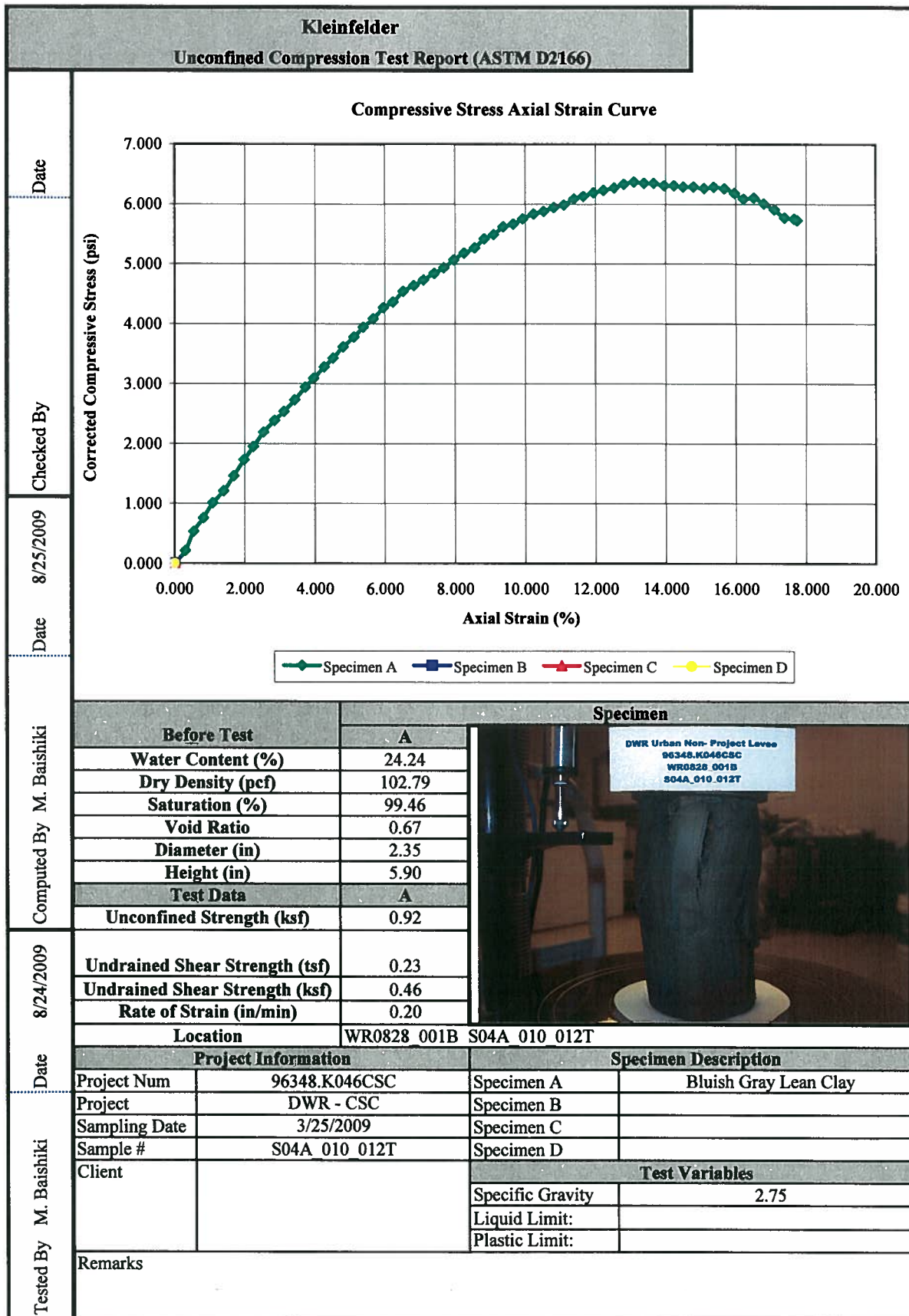


PLATE C-11

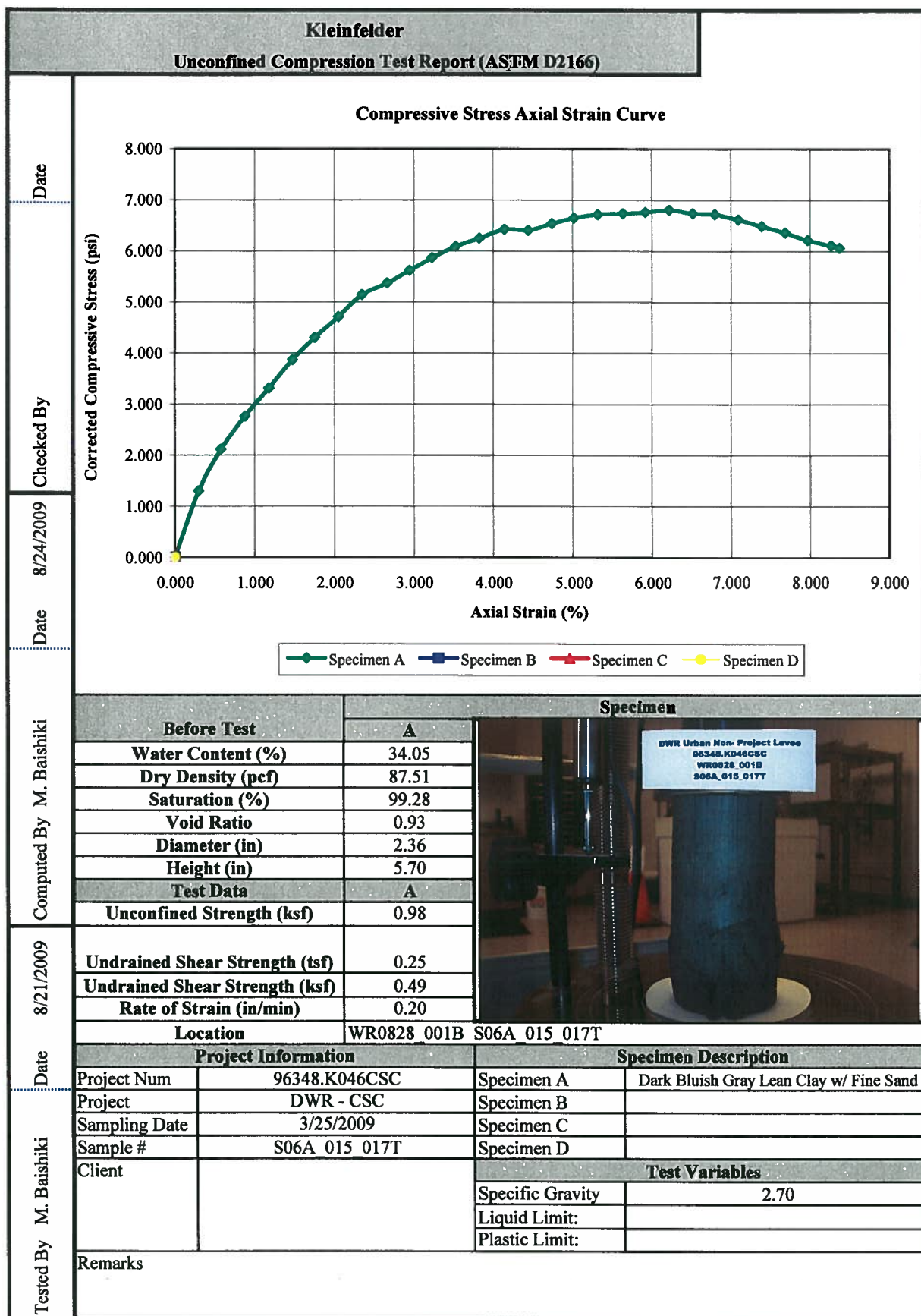
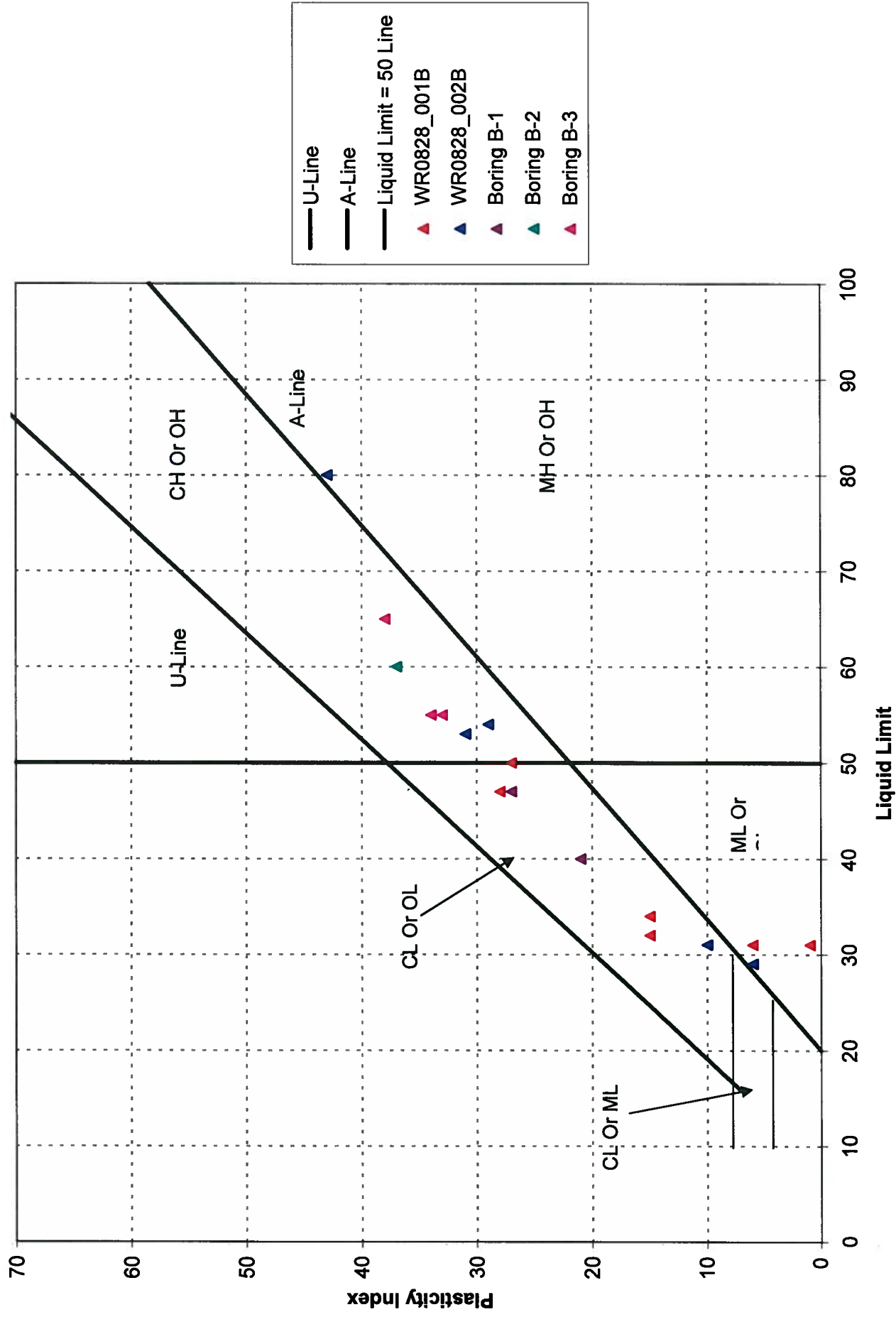
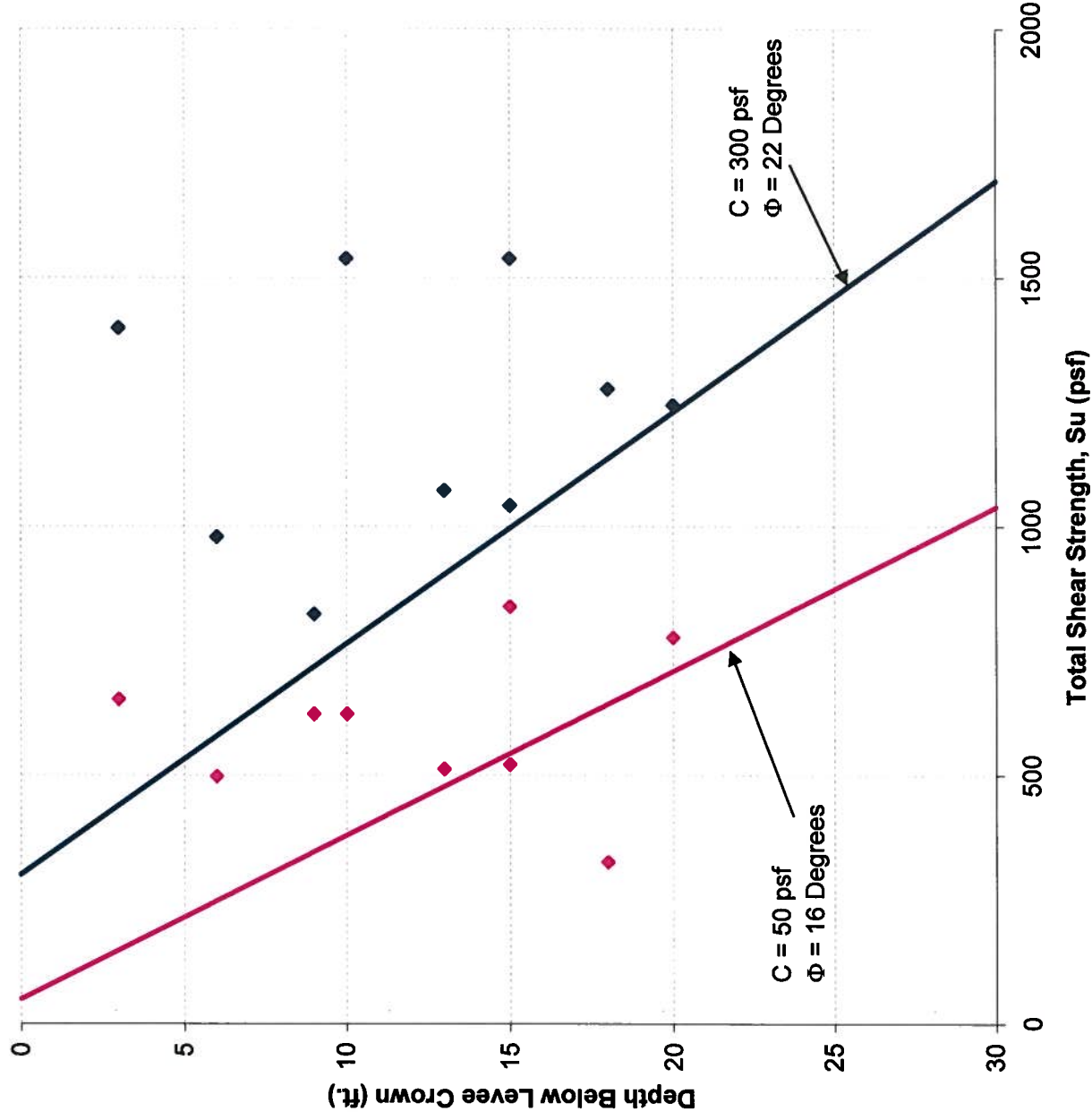


PLATE C-12

Plotted Adderburg Limits From Dad's Point Levee



Field Vane Shear Test Data vs. Depth And Estimated Total Strength Envelope



Note: Estimated total strength envelope is calculated based on assumed strength parameters and a soil unit weight of 115 pcf.