

APPENDIX I3 – GEOTECHNICAL DATA

SADVA 23



LABORATORY TEST REPORT

May 25, 2001

Project No. 2001-124-01

Mr. David Dunlap
Severn Trent Laboratories
450 William Pitt Way
Building, B4
Pittsburgh, PA 15238

RE: Soils Testing - Parsons 736741

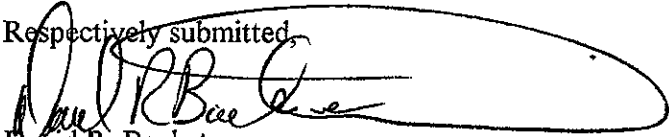
Transmitted herein are the results of the soils testing performed for the above referenced project verified on the Project Verification Form, submitted May 14, 2001. The testing was performed in general accordance with the ASTM methods listed on the enclosed data sheets. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

Disclaimer

The test results are believed to be representative of the samples submitted but are indicative only of the specimens which were evaluated. Geotechnics has no direct knowledge of the origin of the samples, implies no position with regard to the disposition of the test results, i.e. pass/fail, and makes no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization of the Client and Geotechnics. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please do not hesitate to contact our office.

Respectively submitted,

David R. Backstrom
Laboratory Director

C1E100127

SADVA23

INTER-COMPANY LOG

COMMENTS:

Project Manager: Dave Dunlap
 Project: 736741 Parsons, Schenectady De
 Report Type: C2 CLP - CD & Hardcopy

Date Received: 2001-05-10
 Analytical Due Date: 2001-05-29
 Report Due Date: 2001-06-06

WORK LOCATION: 94 Geotechnics

SMP#: 3 CLIENT ID: AOC3MW7 24-30' DATE SAMPLED: 20010508 MATRIX: A SOLID

SAMPLE COMMENTS:

METHOD: Z0 NONE NONE SOLID,Geotechnics,Grain Size sieve&hydro METAL: XX
EXTRACTION: 88 NO SAMPLE PREPARATION PERFORMED / QC TYPE: 01 STANDARD TEST SET
WORKORDER EC4931AA

SMP#: 5 CLIENT ID: AOC3MW5 12-16' DATE SAMPLED: 20010509 MATRIX: A SOLID

SAMPLE COMMENTS:

METHOD: Z0 NONE NONE SOLID,Geotechnics,Grain Size sieve&hydro METAL: XX
EXTRACTION: 88 NO SAMPLE PREPARATION PERFORMED / QC TYPE: 01 STANDARD TEST SET
WORKORDER EC5AC1AA

SMP#: 7 CLIENT ID: AOC3MW6 12-16' DATE SAMPLED: 20010509 MATRIX: A SOLID

SAMPLE COMMENTS:

METHOD: Z0 NONE NONE SOLID,Geotechnics,Grain Size sieve&hydro METAL: XX
EXTRACTION: 88 NO SAMPLE PREPARATION PERFORMED / QC TYPE: 01 STANDARD TEST SET
WORKORDER EC5A11AA

The sample(s) listed on this form are being sent to your location for the specified analysis. If you have any questions, please contact the Project Manager listed above. PLEASE RETURN THE ORIGINAL SIGNED FORM WITH THE REPORT AT THE COMPLETION OF ANALYSIS.

Thank You

STL- Pittsburgh
 Sample Receiving

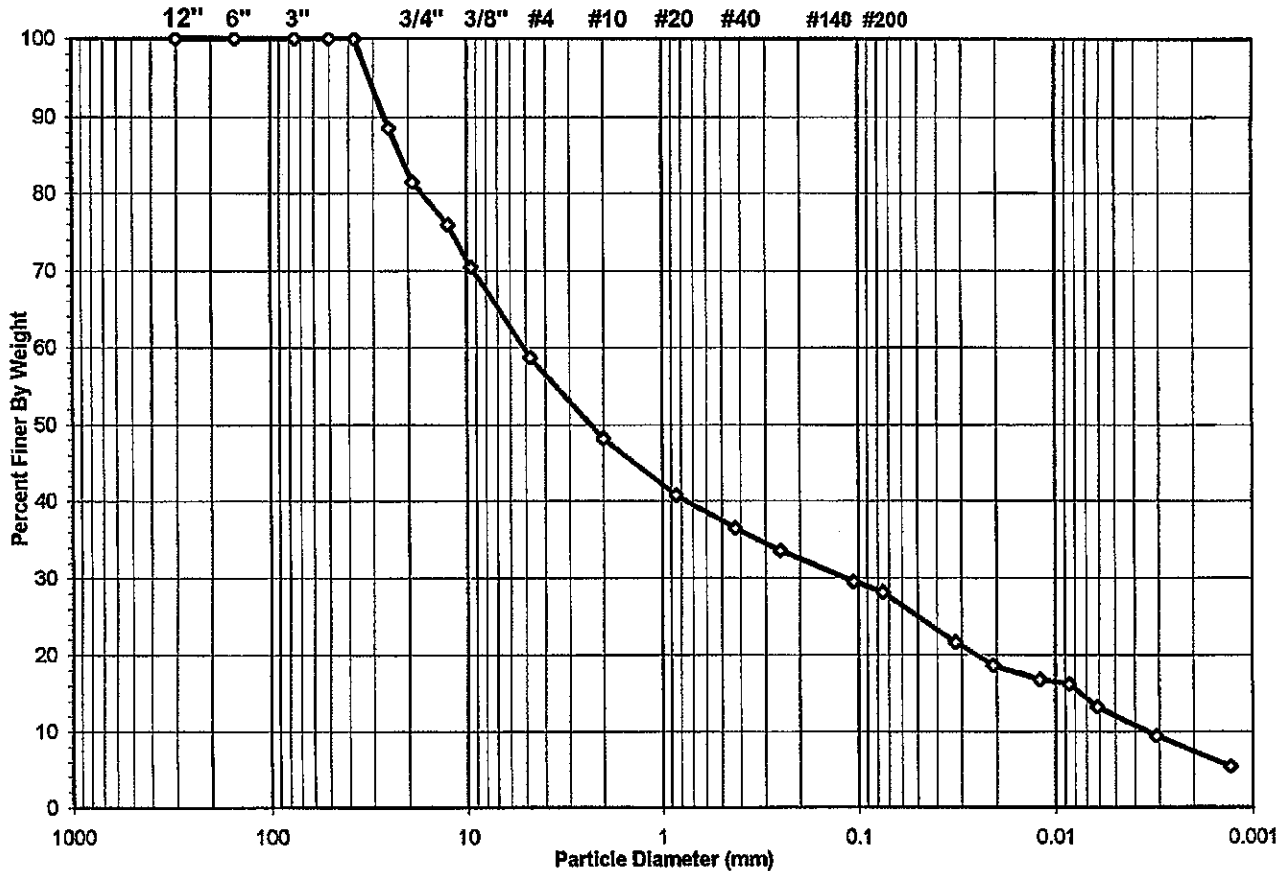
RELINQUISHED BY: *Dunlap* DATE: 5-10-01 1700
 RECEIVED FOR LAB BY: *Kel* DATE: 5-14-01



SIEVE AND HYDROMETER ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	STL	Boring No.	AOC3MW7
Client Reference	PARSONS 736741	Depth (ft)	24-30
Project No.	2001-124-01	Sample No.	3
Lab ID	2001-124-01-01	Soil Color	BROWN

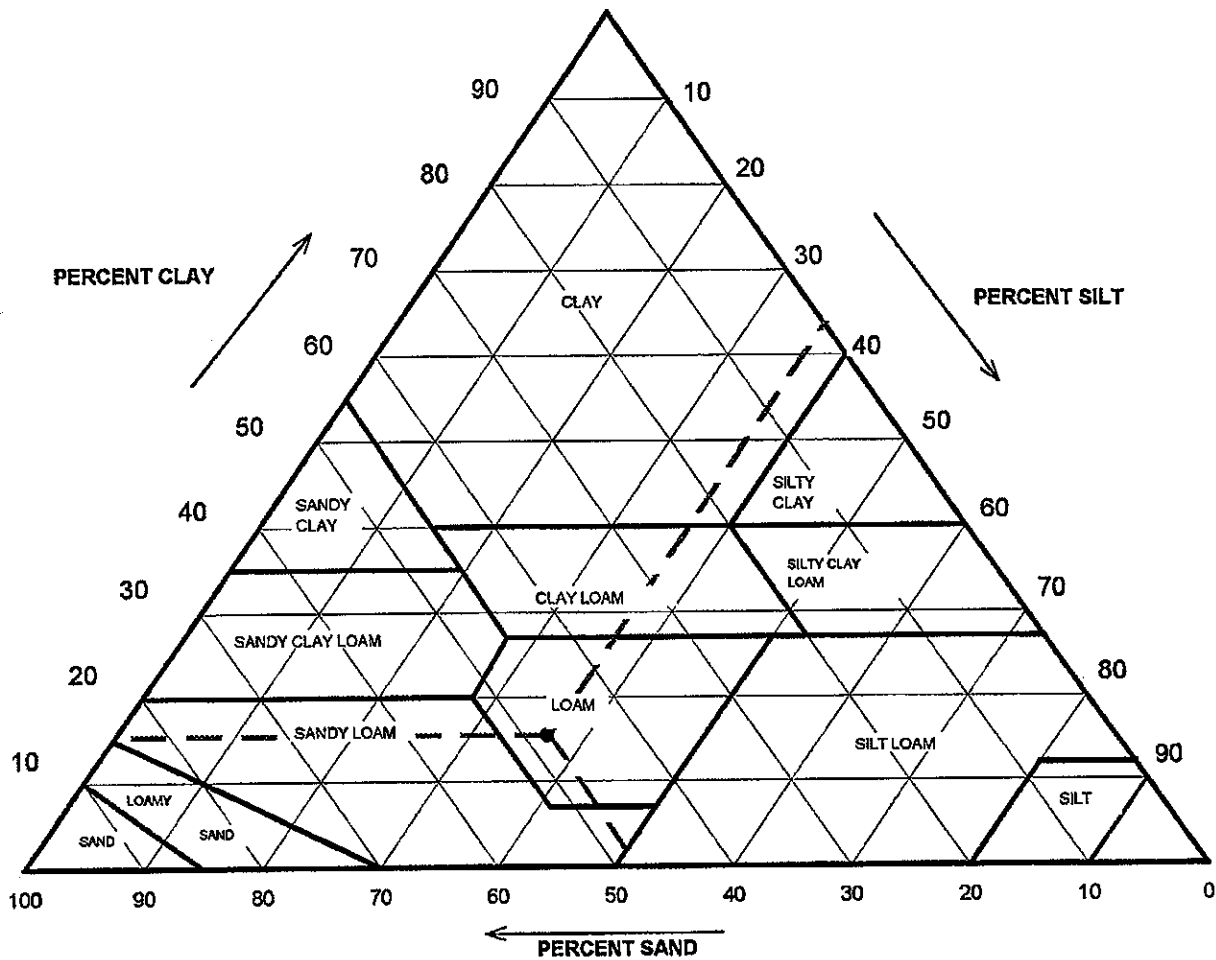
USCS	SIEVE ANALYSIS			HYDROMETER	
	cobbles	gravel	sand	silt and clay fraction	
USDA	cobbles	gravel	sand	silt	clay



USCS Summary		
Sieve Sizes (mm)		Percentage
Greater Than #4	Gravel	41.30
#4 To #200	Sand	30.51
Finer Than #200	Silt & Clay	28.19
USCS Symbol	gc, ASSUMED	
USCS Classification	CLAYEY GRAVEL WITH SAND	

USDA CLASSIFICATION CHART

Client	STL	Boring No.	AOC3MW7
Client Reference	PARSONS 736741	Depth (ft)	24-30
Project No.	2001-124-01	Sample No.	3
Lab ID	2001-124-01-01	Soil Color	BROWN



Particle Size (mm)	Percent Finer	USDA SUMMARY	Actual Percentage	Corrected % of Minus 2.0 mm material for USDA Classificat.
		<i>Gravel</i>	51.85	0.00
2	48.15	<i>Sand</i>	23.10	47.98
0.05	25.04	<i>Silt</i>	17.60	36.56
0.002	7.44	<i>Clay</i>	7.44	15.46
USDA Classification		LOAM		



WASH SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	STL	Boring No.	AOC3MW7
Client Reference	PARSONS 736741	Depth (ft)	24-30
Project No.	2001-124-01	Sample No.	3
Lab ID	2001-124-01-01	Soil Color	BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1303	Tare No.	NA
Wgt. Tare + Wet Specimen (gm)	767.00	Wgt. Tare + Wet Specimen (gm)	NA
Wgt. Tare + Dry Specimen (gm)	642.40	Wgt. Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	102.75	Weight of Tare (gm)	NA
Weight of Water (gm)	124.60	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	539.65	Weight of Dry Soil (gm)	NA
Moisture Content (%)	23.1	Moisture Content (%)	NA

Wet Weight - 3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	539.65
Dry Weight - 3/4" Sample (gm)	287.30	Weight of minus #200 material (gm)	152.13
Wet Weight + 3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	387.52
Dry Weight + 3/4" Sample (gm)	100.22		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	0.00	0.00	0.00	100.00	100.00
2"	50	0.00	0.00	0.00	100.00	100.00
1 1/2"	37.5	0.00	0.00	0.00	100.00	100.00
1"	25.0	61.71	11.44	11.44	88.56	88.56
3/4"	19.0	38.51	7.14	18.57	81.43	81.43
1/2"	12.5	29.69	5.50	24.07	75.93	75.93
3/8"	9.50	29.71	5.51	29.58	70.42	70.42
#4	4.75	63.23	11.72	41.30	58.70	58.70
#10	2.00	56.97	10.56	51.85	48.15	48.15
#20	0.85	39.87	7.39	59.24	40.76	40.76
#40	0.425	23.23	4.30	63.54	36.46	36.46
#60	0.250	15.33	2.84	66.39	33.61	33.61
#140	0.106	22.19	4.11	70.50	29.50	29.50
#200	0.075	7.08	1.31	71.81	28.19	28.19
Pan	-	152.13	28.19	100.00	-	-

Tested By **JP** Date **5/21/01** Checked By **JMO** Date **5/25/01**



HYDROMETER ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	STL	Boring No.	AOC3MW7
Client Reference	PARSONS 736741	Depth (ft)	24-30
Project No.	2001-124-01	Sample No.	3
Lab ID	2001-124-01-01	Soil Color	BROWN

Elapsed Time (min)	R Measured	Temp. (°C)	Composite Correction	R Corrected	N (%)	K Factor	Diameter (mm)	N' (%)
0	NA	NA	NA	NA	NA	NA	NA	NA
2	26.0	22.3	7.92	18.1	76.6	0.01308	0.0321	21.6
5	23.5	22.3	7.92	15.6	66.0	0.01308	0.0206	18.6
15	22.0	22.3	7.92	14.1	59.7	0.01308	0.0120	16.8
30	21.5	22.3	7.92	13.6	57.6	0.01308	0.0085	16.2
60	19.0	22.2	7.94	11.1	46.9	0.01310	0.0061	13.2
250	16.0	21.7	8.08	7.9	33.6	0.01317	0.0031	9.5
1440	12.5	22.2	7.94	4.6	19.3	0.01310	0.0013	5.4

Soil Specimen Data		Other Corrections	
Tare No.	1681		
Tare + Dry Material (gm)	131.26	a - Factor	0.99
Weight of Tare (gm)	102.9		
Weight of Deflocculant (gm)	5.0	Percent Finer than # 200	28.19
Weight of Dry Material (gm)	23.36		
		Specific Gravity	2.7 Assumed

Note: Hydrometer test is performed on - # 200 sieve material.

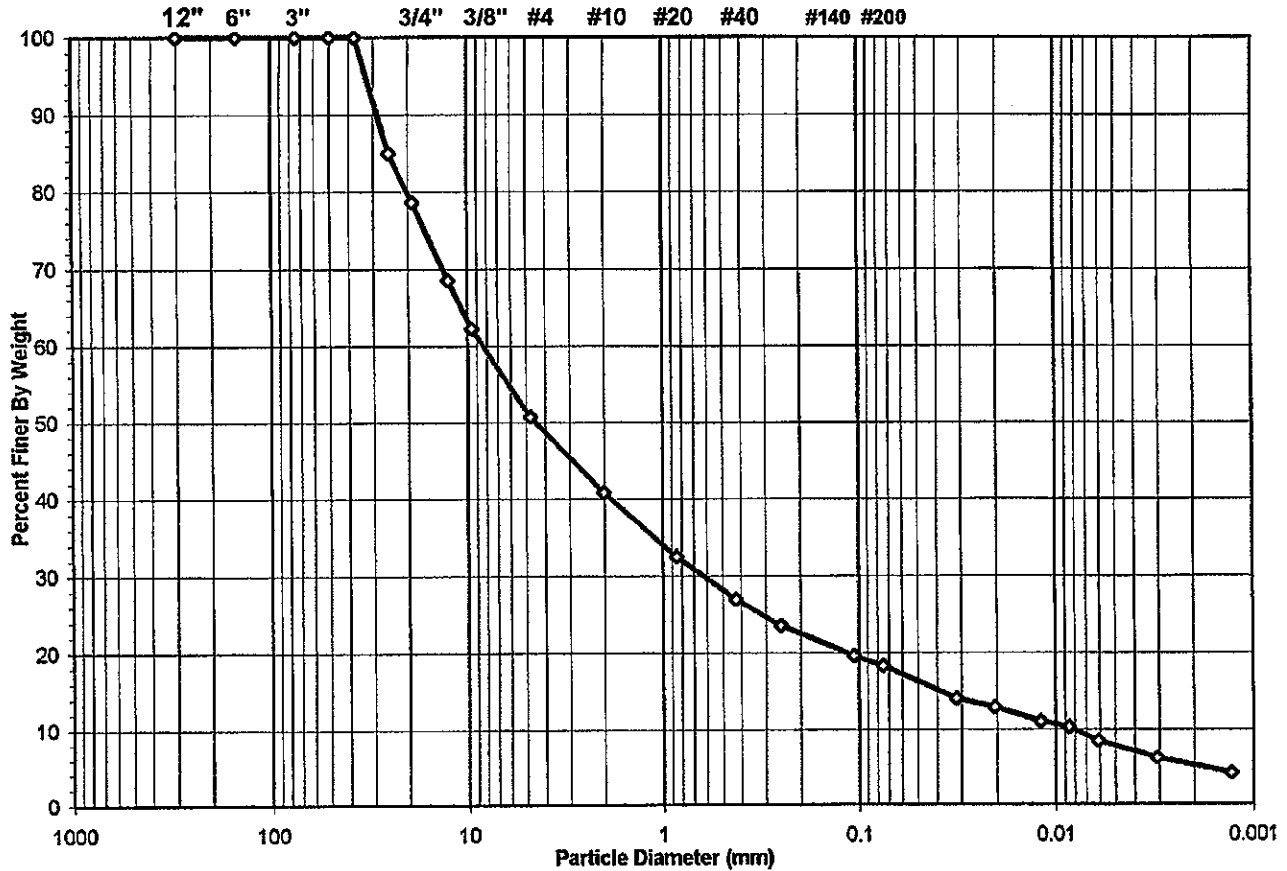
Tested By TM Date 5/22/01 Checked By JMO Date 5/25/01



SIEVE AND HYDROMETER ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	STL	Boring No.	AOC3MW5
Client Reference	PARSONS 736741	Depth (ft)	12-16
Project No.	2001-124-01	Sample No.	5
Lab ID	2001-124-01-02	Soil Color	BROWN

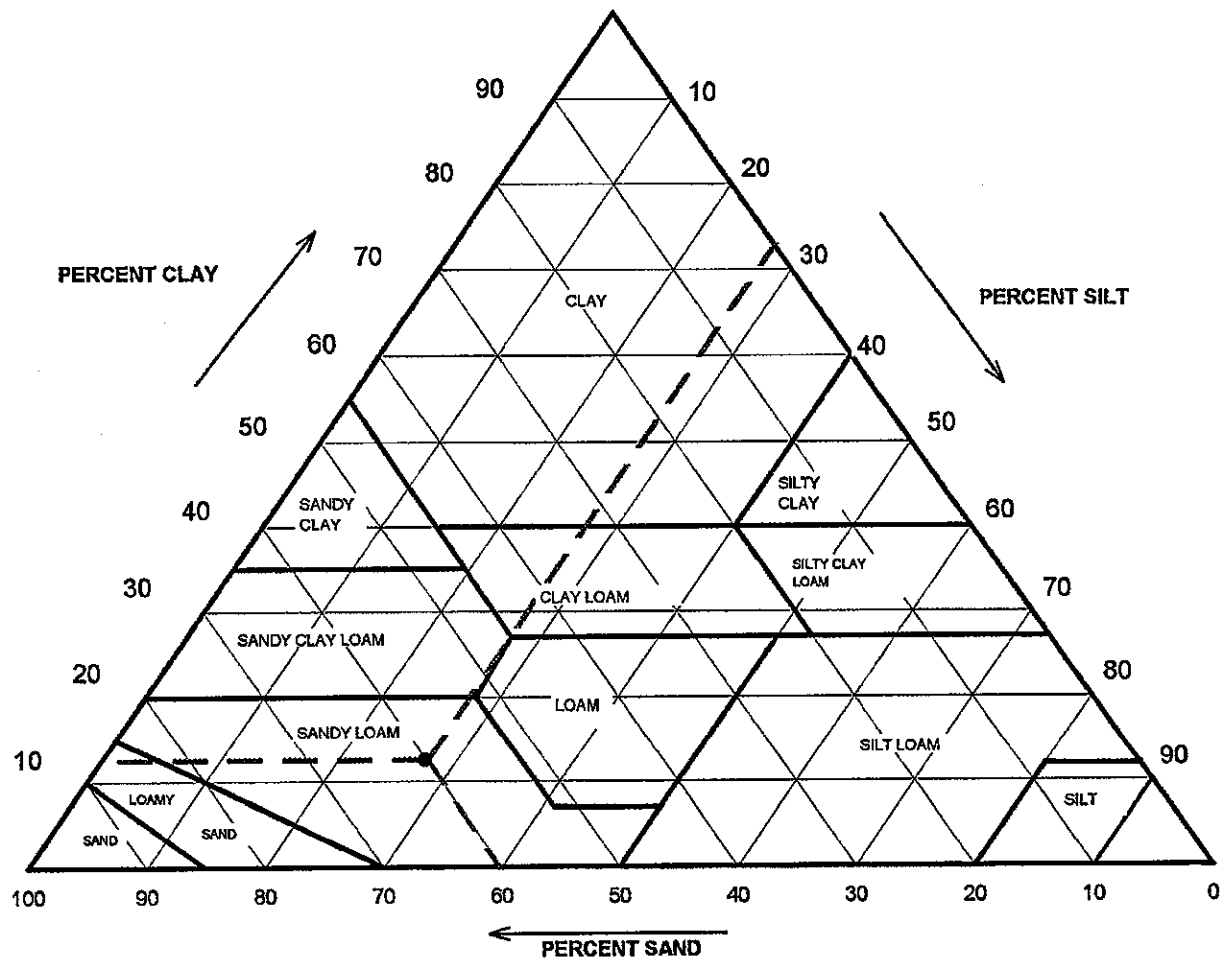
USCS USDA	SIEVE ANALYSIS			HYDROMETER	
	cobbles	gravel	sand	silt and clay fraction	
	cobbles	gravel	sand	silt	clay



USCS Summary		
Sieve Sizes (mm)		Percentage
Greater Than #4	Gravel	49.29
#4 To #200	Sand	32.38
Finer Than #200	Silt & Clay	18.33
USCS Symbol	gc, ASSUMED	
USCS Classification	CLAYEY GRAVEL WITH SAND	

USDA CLASSIFICATION CHART

Client	STL	Boring No.	AOC3MW5
Client Reference	PARSONS 736741	Depth (ft)	12-16
Project No.	2001-124-01	Sample No.	5
Lab ID	2001-124-01-02	Soil Color	BROWN



Particle Size (mm)	Percent Finer	USDA SUMMARY	Actual Percentage	Corrected % of Minus 2.0 mm material for USDA Classificat.
		<i>Gravel</i>	59.18	0.00
2	40.82	<i>Sand</i>	24.53	60.10
0.05	16.29	<i>Silt</i>	11.15	27.31
0.002	5.14	<i>Clay</i>	5.14	12.59
USDA Classification		SANDY LOAM		



WASH SIEVE ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	STL	Boring No.	AOC3MW5
Client Reference	PARSONS 736741	Depth (ft)	12-16
Project No.	2001-124-01	Sample No.	5
Lab ID	2001-124-01-02	Soil Color	BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1139	Tare No.	NA
Wgt. Tare + Wet Specimen (gm)	901.50	Wgt. Tare + Wet Specimen (gm)	NA
Wgt. Tare + Dry Specimen (gm)	879.20	Wgt. Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	101.71	Weight of Tare (gm)	NA
Weight of Water (gm)	22.30	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	777.49	Weight of Dry Soil (gm)	NA
Moisture Content (%)	2.9	Moisture Content (%)	NA

Wet Weight - 3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	777.49
Dry Weight - 3/4" Sample (gm)	468.56	Weight of minus #200 material (gm)	142.50
Wet Weight + 3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	634.99
Dry Weight + 3/4" Sample (gm)	166.43		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	0.00	0.00	0.00	100.00	100.00
2"	50	0.00	0.00	0.00	100.00	100.00
1 1/2"	37.5	0.00	0.00	0.00	100.00	100.00
1"	25.0	116.71	15.01	15.01	84.99	84.99
3/4"	19.0	49.72	6.39	21.41	78.59	78.59
1/2"	12.5	78.12	10.05	31.45	68.55	68.55
3/8"	9.50	49.00	6.30	37.76	62.24	62.24
#4	4.75	89.65	11.53	49.29	50.71	50.71
#10	2.00	76.94	9.90	59.18	40.82	40.82
#20	0.85	64.48	8.29	67.48	32.52	32.52
#40	0.425	43.39	5.58	73.06	26.94	26.94
#60	0.250	26.16	3.36	76.42	23.58	23.58
#140	0.106	31.07	4.00	80.42	19.58	19.58
#200	0.075	9.75	1.25	81.67	18.33	18.33
Pan	-	142.50	18.33	100.00	-	-

Tested By JP Date 5/21/01 Checked By *Jm* Date 5-25-01



HYDROMETER ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	STL	Boring No.	AOC3MW5
Client Reference	PARSONS 736741	Depth (ft)	12-16
Project No.	2001-124-01	Sample No.	5
Lab ID	2001-124-01-02	Soil Color	BROWN

Elapsed Time (min)	R Measured	Temp. (° C)	Composite Correction	R Corrected	N (%)	K Factor	Diameter (mm)	N' (%)
0	NA	NA	NA	NA	NA	NA	NA	NA
2	27.5	27.0	7.92	19.1	76.5	0.01308	0.0319	14.0
5		25.5	7.92	17.6	70.5	0.01308	0.0204	12.9
15		23.0	7.92	15.1	60.5	0.01308	0.0120	11.1
30		22.0	7.92	14.1	56.4	0.01308	0.0085	10.3
60		19.5	7.92	11.6	46.4	0.01308	0.0061	8.5
250		16.5	8.08	8.4	33.7	0.01317	0.0031	6.2
1440		13.5	7.94	5.6	22.3	0.01310	0.0013	4.1

Soil Specimen Data		Other Corrections	
Tare No.	2862		
Tare + Dry Material (gm)	136.85	a - Factor	0.99
Weight of Tare (gm)	107.15		
Weight of Deflocculant (gm)	5.0	Percent Finer than # 200	18.33
Weight of Dry Material (gm)	24.7		
		Specific Gravity	2.7 Assumed

Note: Hydrometer test is performed on - # 200 sieve material.

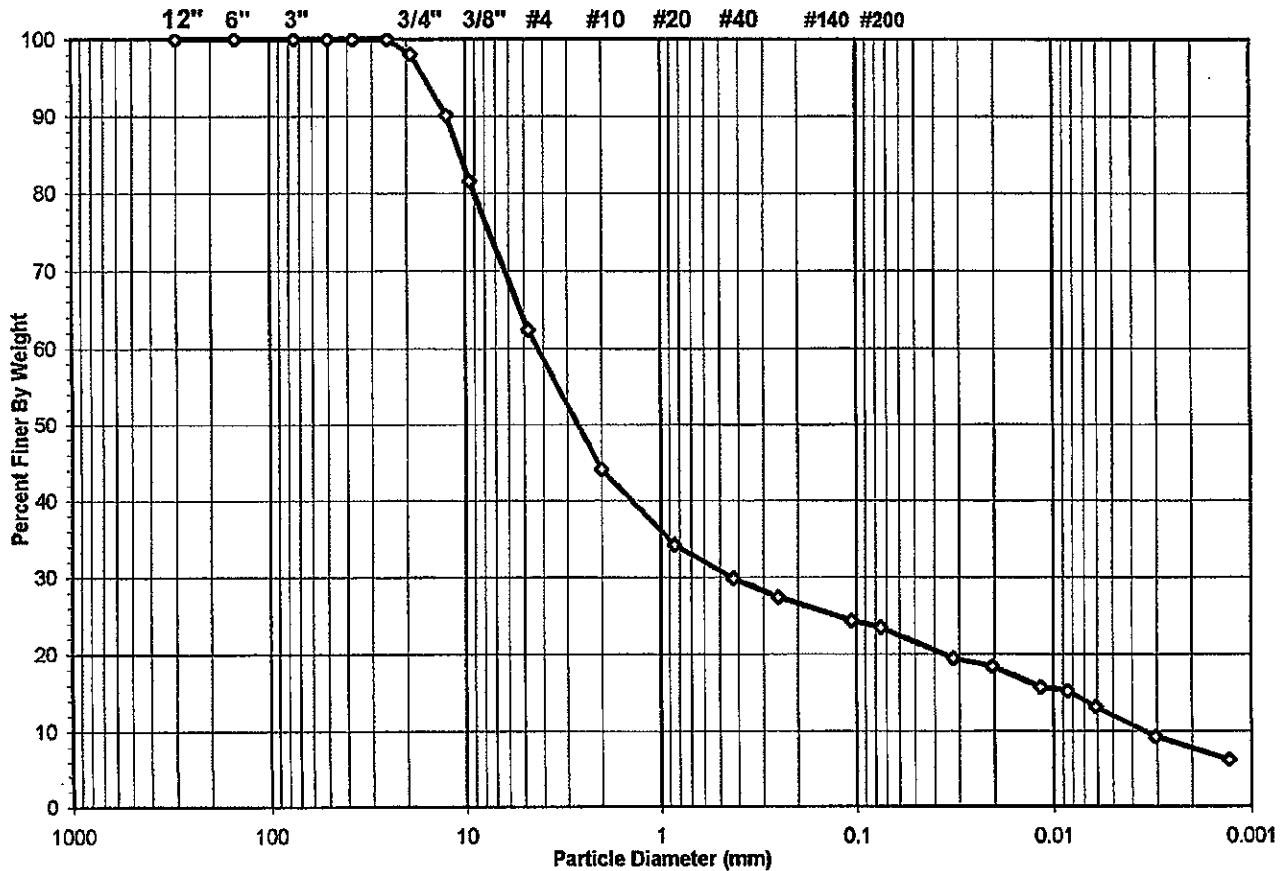
Tested By TM Date 5/22/01 Checked By Jem Date 5-25-01
page 4 of 4 DCN: CT-S3A DATE:02/06/01 REVISION: 4 C:\MSOffice\Excel\PRINTQ\H546.xls\Sheet1



SIEVE AND HYDROMETER ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	STL	Boring No.	AOC3MW6
Client Reference	PARSONS 736741	Depth (ft)	12-16
Project No.	2001-124-01	Sample No.	7
Lab ID	2001-124-01-03	Soil Color	BROWN

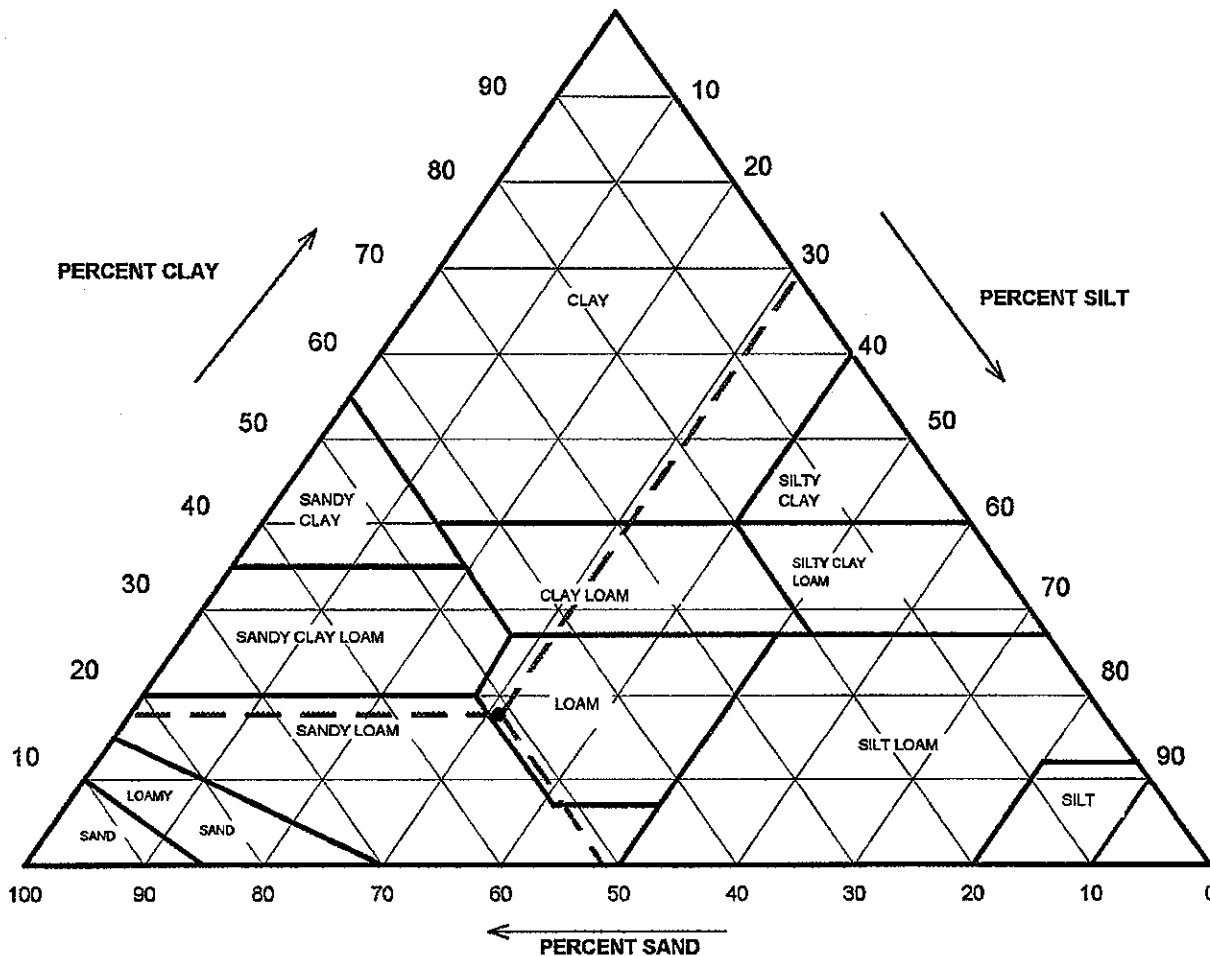
USCS USDA	SIEVE ANALYSIS			HYDROMETER	
	cobbles	gravel	sand	silt and clay fraction	
	cobbles	gravel	sand	silt	clay



USCS Summary		
Sieve Sizes (mm)		Percentage
Greater Than #4	Gravel	37.60
#4 To #200	Sand	38.90
Finer Than #200	Silt & Clay	23.50
USCS Symbol	sc, ASSUMED	
USCS Classification	CLAYEY SAND WITH GRAVEL	

USDA CLASSIFICATION CHART

Client	STL	Boring No.	AOC3MW6
Client Reference	PARSONS 736741	Depth (ft)	12-16
Project No.	2001-124-01	Sample No.	7
Lab ID	2001-124-01-03	Soil Color	BROWN



Particle Size (mm)	Percent Finer	USDA SUMMARY	Actual Percentage	Corrected % of Minus 2.0 mm material for USDA Classificat.
		<i>Gravel</i>	55.84	0.00
2	44.16	<i>Sand</i>	22.60	51.18
0.05	21.56	<i>Silt</i>	13.71	31.04
0.002	7.85	<i>Clay</i>	7.85	17.78
USDA Classification		LOAM		



WASH SIEVE ANALYSIS

ASTM D 422-63 (SOP-S3)

Client	STL	Boring No.	AOC3MW6
Client Reference	PARSONS 736741	Depth (ft)	12-16
Project No.	2001-124-01	Sample No.	7
Lab ID	2001-124-01-03	Soil Color	BROWN

Moisture Content of Passing 3/4" Material		Water Content of Retained 3/4" Material	
Tare No.	1024	Tare No.	NA
Wgt. Tare + Wet Specimen (gm)	1502.00	Wgt. Tare + Wet Specimen (gm)	NA
Wgt. Tare + Dry Specimen (gm)	1301.10	Wgt. Tare + Dry Specimen (gm)	NA
Weight of Tare (gm)	96.96	Weight of Tare (gm)	NA
Weight of Water (gm)	200.90	Weight of Water (gm)	NA
Weight of Dry Soil (gm)	1204.14	Weight of Dry Soil (gm)	NA
Moisture Content (%)	16.7	Moisture Content (%)	NA

Wet Weight -3/4" Sample (gm)	NA	Weight of the Dry Specimen (gm)	1204.14
Dry Weight - 3/4" Sample (gm)	897.96	Weight of minus #200 material (gm)	282.95
Wet Weight +3/4" Sample (gm)	NA	Weight of plus #200 material (gm)	921.19
Dry Weight + 3/4" Sample (gm)	23.23		
Total Dry Weight Sample (gm)	NA		

Sieve Size	Sieve Opening (mm)	Wgt. of Soil Retained (gm)	Percent Retained (%)	Accumulated Percent Retained (%)	Percent Finer (%)	Accumulated Percent Finer (%)
12"	300	0.00	0.00	0.00	100.00	100.00
6"	150	0.00	0.00	0.00	100.00	100.00
3"	75	0.00	0.00	0.00	100.00	100.00
2"	50	0.00	0.00	0.00	100.00	100.00
1 1/2"	37.5	0.00	0.00	0.00	100.00	100.00
1"	25.0	0.00	0.00	0.00	100.00	100.00
3/4"	19.0	23.23	1.93	1.93	98.07	98.07
1/2"	12.5	95.56	7.94	9.87	90.13	90.13
3/8"	9.50	103.86	8.63	18.49	81.51	81.51
#4	4.75	230.10	19.11	37.60	62.40	62.40
#10	2.00	219.64	18.24	55.84	44.16	44.16
#20	0.85	119.60	9.93	65.77	34.23	34.23
#40	0.425	52.51	4.36	70.13	29.87	29.87
#60	0.250	29.52	2.45	72.58	27.42	27.42
#140	0.106	36.99	3.07	75.66	24.34	24.34
#200	0.075	10.18	0.85	76.50	23.50	23.50
Pan	-	282.95	23.50	100.00	-	-

Tested By JP Date 5/21/01 Checked By Jem Date 5-25-01



HYDROMETER ANALYSIS
ASTM D 422-63 (SOP-S3)

Client	STL	Boring No.	AOC3MW6
Client Reference	PARSONS 736741	Depth (ft)	12-16
Project No.	2001-124-01	Sample No.	7
Lab ID	2001-124-01-03	Soil Color	BROWN

Elapsed Time (min)	R Measured	Temp. (°C)	Composite Correction	R Corrected	N (%)	K Factor	Diameter (mm)	N' (%)	
0	NA	NA	NA	NA	NA	NA	NA	NA	
2	27.0	26.5	22.3	7.92	18.6	82.8	0.01308	0.0320	19.4
5		25.5	22.3	7.92	17.6	78.2	0.01308	0.0204	18.4
16		23.0	22.3	7.92	15.1	67.1	0.01308	0.0116	15.8
30		22.5	22.3	7.92	14.6	64.9	0.01308	0.0085	15.2
60		20.5	22.2	7.94	12.6	55.8	0.01310	0.0061	13.1
252		17.0	21.7	8.08	8.9	39.7	0.01317	0.0031	9.3
1440		14.0	22.2	7.94	6.1	26.9	0.01310	0.0013	6.3

Soil Specimen Data	Other Corrections	
Tare No.	2325	
Tare + Dry Material (gm)	129.19	
Weight of Tare (gm)	101.93	
Weight of Deflocculant (gm)	5.0	
Weight of Dry Material (gm)	22.26	
	a - Factor	0.99
	Percent Finer than # 200	23.50
	Specific Gravity	2.7 Assumed

Note: Hydrometer test is performed on - # 200 sieve material.

Tested By TM Date 5/22/01 Checked By Jem Date 5-25-01