



BROOKSIDE LABORATORIES, INC.
GEOTECHNICAL DIVISION
200 WHITE MOUNTAIN DRIVE
NEW BREMEN, OH 45869

**** PHYSICAL ANALYSIS REPORT ****

Tucson Country Club
2950 N. Camino Principal
Tucson, AZ 85715

File Number: 34998

Date Received/Started : 7/7/2022
Date Completed/Reported: 7/13/2022
Date Issued: 7/13/2022

Submitted By: Soil and Water Consulting

Lab Number	1491
Sample Description	WCS&G PHX 90/10
Sample Condition	<u>XX</u> Normal ___ Other (see comments)

Method References

ASTM D5550
ASTM F1632
ASTM F1647 - Method A
ASTM F1815

D Values

** D10: 0.19
** D60: 0.54
** Coefficient of Uniformity: 2.87

*Reported values are an average of duplicated analysis

** NON A2LA ACCREDITED
* *This report may only be reproduced in its entirety.*
* *These results represent the sample submitted only.*



Geotechnical
(Putting Green Materials)
Certificate Number: 736.01

CAPPING CHARACTERISTICS

Tucson Country Club
 2950 N. Camino Principal
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File Number : 34998
 ** Date of Analysis **
 Start Date : 7/7/2022
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Submitted By: Soil and Water Consulting Reviewed by:

Jackie Brackman

Lab Number 1491
 Sample Description WCS&G PHX
 90/10

Particle Size Analysis

Clay	<.002mm	%	0.3
Silt	.002mm - .05mm	%	2.5
Sand	.05mm - 2.00mm	%	97.1
Gravel	> 2.0mm	%	0.1

Org Mat 360 deg C (LOI) 1.03

Sand Fractions

Sieve Size		% Retained
#	mm	
10 -	2.0	Fine Gravel 0.1
18 -	1.0	Very Coarse Sand 6.6
35 -	.500	Coarse Sand 36.4
60 -	.250	Medium Sand 40.6
100 -	.150	Fine Sand 10.3
140 -	.106	Very Fine Sand 2.4
270 -	.053	Very Fine Sand 0.8

Soil Moisture Measurements

Saturated Conductivity in/hr 9.3

Soil Density

Bulk Density	g/cc	1.58
Particle Density	g/cc	2.66

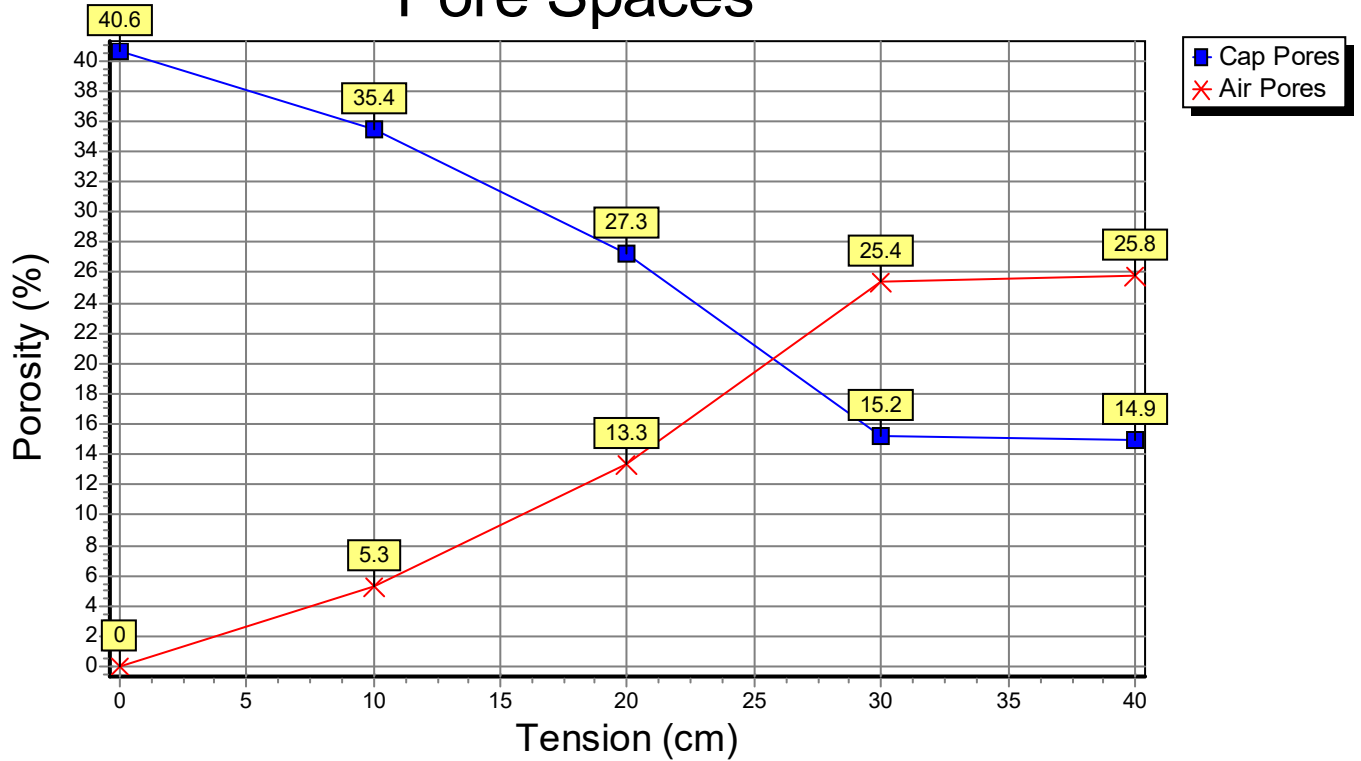
MOISTURE RETENTION %**PORE SPACE %**

		TOTAL	CAPILLARY	AIR FILLED
SATURATION	23.0	40.6	40.6	0.0
10 CM	22.4	40.6	35.4	5.3
20 CM	17.3	40.6	27.3	13.3
30 CM	9.6	40.6	15.2	25.4
40 CM	9.4	40.6	14.9	25.8

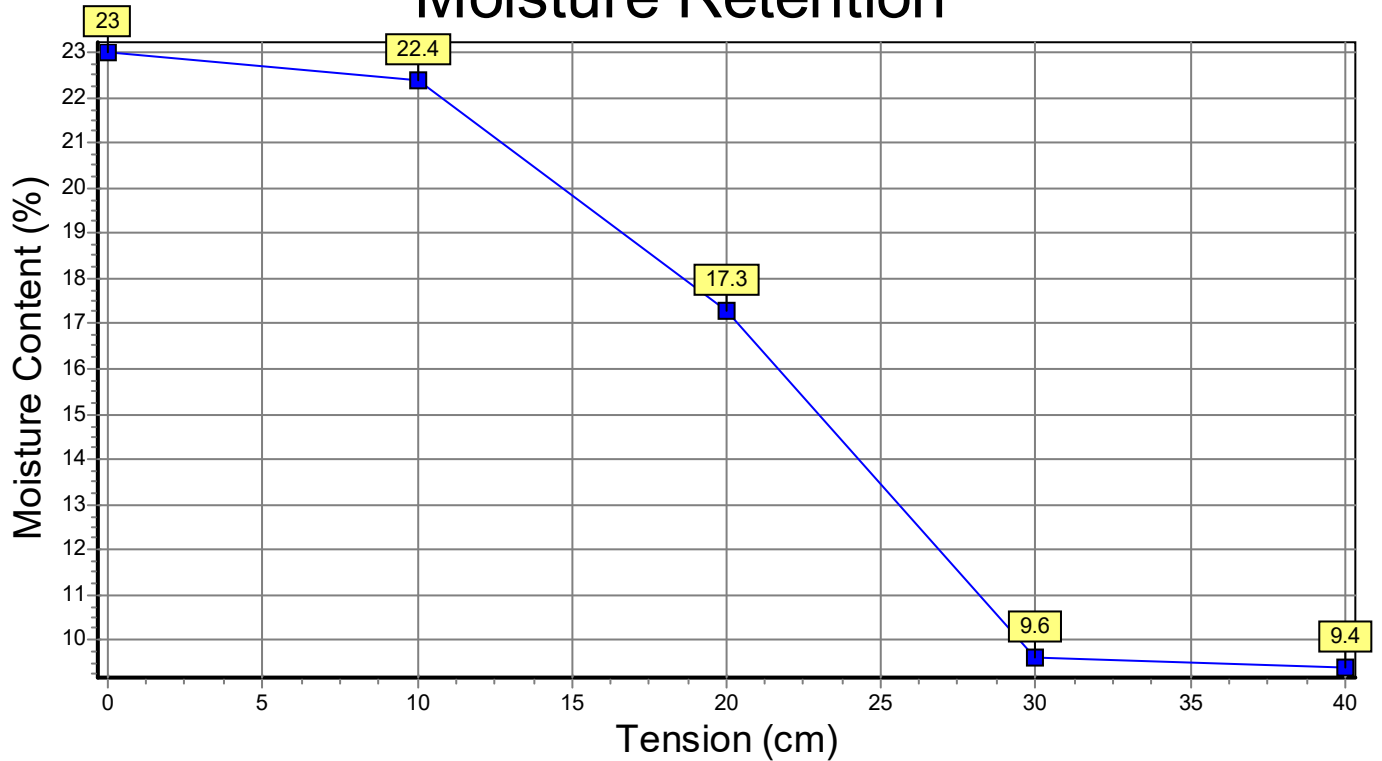
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Pore Spaces



Moisture Retention





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Lab Number	1492
Sample Description	WCS&G PHX 80/20 SAND/DAK
Sample Condition	<u>XX</u> Normal ___ Other (see comments)

Method References

ASTM D5550
ASTM F1632
ASTM F1647 - Method A
ASTM F1815

D Values

** D10: 0.18
** D60: 0.59
** Coefficient of Uniformity: 3.29

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Jackie Brackman

Lab Number 1492
 Sample Description WCS&G PHX
 80/20
 SAND/DAK

Particle Size Analysis

Clay	<.002mm	%	0.9
Silt	.002mm - .05mm	%	3.7
Sand	.05mm - 2.00mm	%	94.3
Gravel	> 2.0mm	%	1.1

Org Mat 360 deg C (LOI) 2.43

Sand Fractions

Sieve Size		% Retained
#	mm	
10 -	2.0	Fine Gravel 1.1
18 -	1.0	Very Coarse Sand 8.3
35 -	.500	Coarse Sand 37.6
60 -	.250	Medium Sand 37.0
100 -	.150	Fine Sand 8.6
140 -	.106	Very Fine Sand 2.3
270 -	.053	Very Fine Sand 0.5

Soil Moisture Measurements

Saturated Conductivity in/hr 5.2

Soil Density

Bulk Density	g/cc	1.52
Particle Density	g/cc	2.59

MOISTURE RETENTION %**PORE SPACE %**

		TOTAL	CAPILLARY	AIR FILLED
SATURATION	27.3	41.5	41.5	0.0
10 CM	26.4	41.5	40.0	1.5
20 CM	21.7	41.5	32.9	8.6
30 CM	16.9	41.5	25.6	15.9
40 CM	16.6	41.5	25.1	16.4

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