



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

**** PHYSICAL ANALYSIS REPORT ****

Dragon Ridge C.C.
Henderson, NV

File Number: 47746

Date Received/Started : 10/12/2022
Date Completed/Reported: 10/20/2022
Date Issued: 10/20/2022

Submitted By: Soil and Water Consulting

Lab Number	2363
Sample Description	WCS&G STRAIGHT SAND
Sample Condition	<u>XX</u> Normal ___ Other (see comments)

Method References

ASTM D5550
ASTM F1632
ASTM F1647 - Method A
ASTM F1815

D Values

** D10: 0.20
** D60: 0.57
** Coefficient of Uniformity: 2.91

*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

Dragon Ridge C.C.
Henderson, NV

File Number : 47746
** Date of Analysis **
Start Date : 10/12/2022
Completed : 10/20/2022

Submitted By: Soil and Water Consulting Reviewed by:

Lab Number 2363
Sample Description WCS&G
STRAIGHT SAND

Particle Size Analysis

Clay	<.002mm	%	0.7
Silt	.002mm - .05mm	%	0.9
Sand	.05mm - 2.00mm	%	98.1
Gravel	> 2.0mm	%	0.3

Org Mat 360 deg C (LOI) < 0.10

Sand Fractions

Sieve Size		% Retained
#	mm	
10 -	2.0	Fine Gravel 0.3
18 -	1.0	Very Coarse Sand 7.5
35 -	.500	Coarse Sand 37.7
60 -	.250	Medium Sand 38.7
100 -	.150	Fine Sand 10.9
140 -	.106	Very Fine Sand 2.4
270 -	.053	Very Fine Sand 0.9

Soil Moisture Measurements

Saturated Conductivity in/hr 38.4

Soil Density

Bulk Density	g/cc	1.55
Particle Density	g/cc	2.66

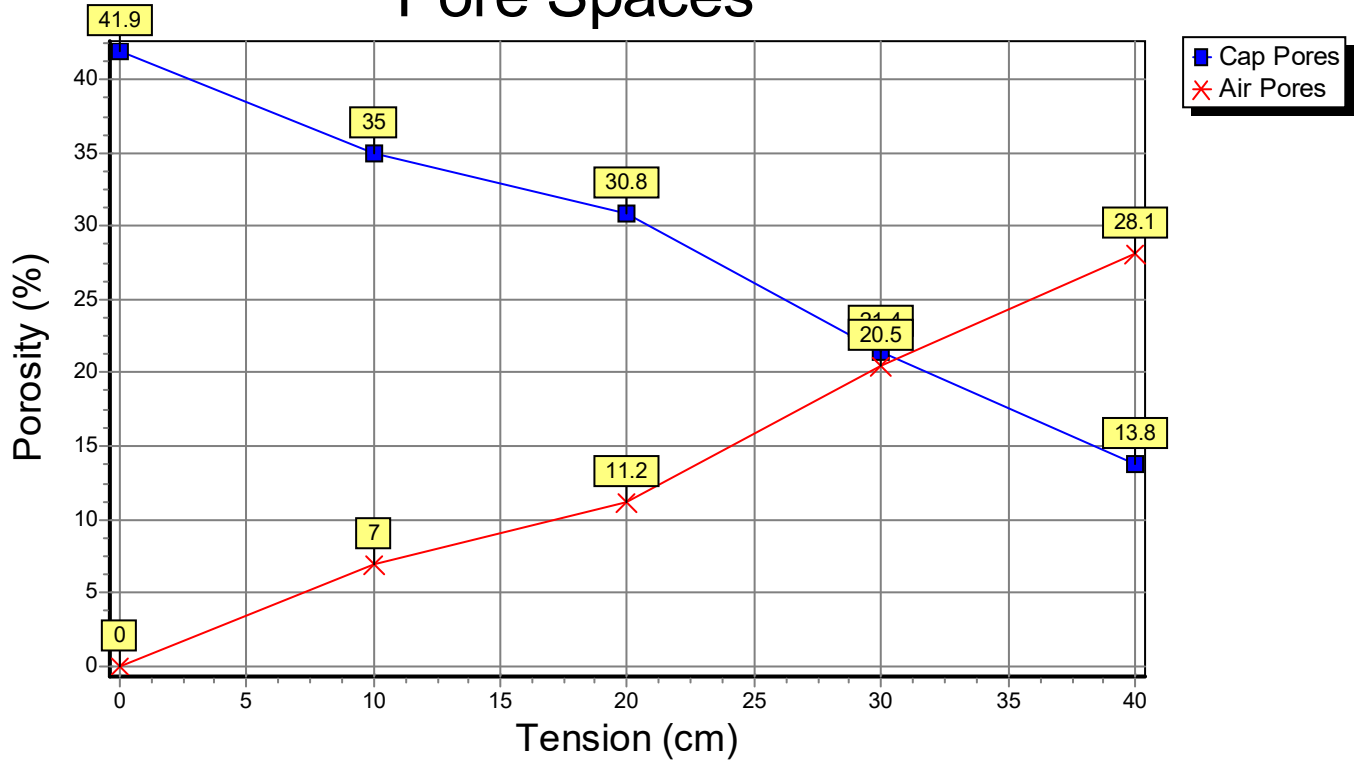
MOISTURE RETENTION %**PORE SPACE %**

		TOTAL	CAPILLARY	AIR FILLED
SATURATION	23.2	41.9	41.9	0.0
10 CM	22.6	41.9	35.0	7.0
20 CM	19.9	41.9	30.8	11.2
30 CM	13.9	41.9	21.4	20.5
40 CM	8.9	41.9	13.8	28.1

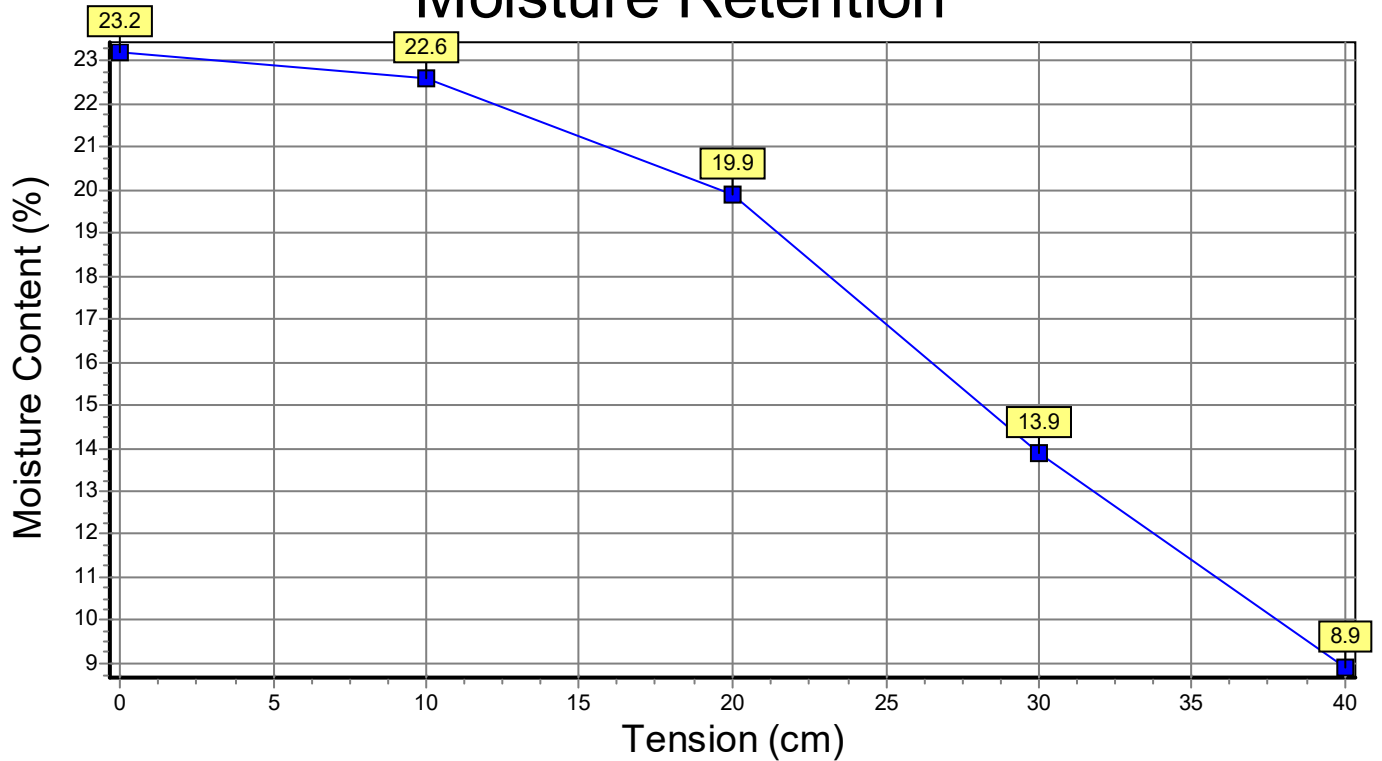
File Number: 47746
 Client Name: Dragon Ridge C.C.
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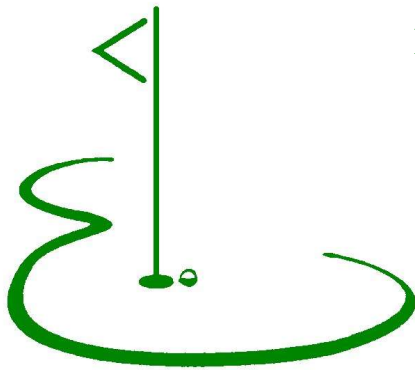
Lab Number: 2363
 Sample Description: WCS&G
 STRAIGHT SAND

Pore Spaces



Moisture Retention





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Submitted By: Soil and Water Consulting

Lab Number	2364
Sample Description	WCS&G 90/10 GREENS-MIX
Sample Condition	<u>XX</u> Normal ___ Other (see comments)

Method References

ASTM D5550
ASTM F1632
ASTM F1647 - Method A
ASTM F1815

D Values

** D10: 0.20
** D60: 0.62
** Coefficient of Uniformity: 3.11

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CAPPING CHARACTERISTICS

Dragon Ridge C.C.
Henderson, NV

File Number : 47746
** Date of Analysis **
Start Date : 10/12/2022
Completed : 10/20/2022

Submitted By: Soil and Water Consulting Reviewed by:

Lab Number 2364
Sample Description WCS&G
90/10
GREENS-MIX

Particle Size Analysis

Clay	<.002mm	%	0.7
Silt	.002mm - .05mm	%	1.7
Sand	.05mm - 2.00mm	%	97.1
Gravel	> 2.0mm	%	0.5

Org Mat 360 deg C (LOI) 0.49

Sand Fractions

Sieve Size		% Retained
#	mm	
10 -	2.0	Fine Gravel 0.5
18 -	1.0	Very Coarse Sand 9.6
35 -	.500	Coarse Sand 39.2
60 -	.250	Medium Sand 36.0
100 -	.150	Fine Sand 9.2
140 -	.106	Very Fine Sand 2.3
270 -	.053	Very Fine Sand 0.8

Soil Moisture Measurements

Saturated Conductivity in/hr 6.9

Soil Density

Bulk Density	g/cc	1.55
Particle Density	g/cc	2.65

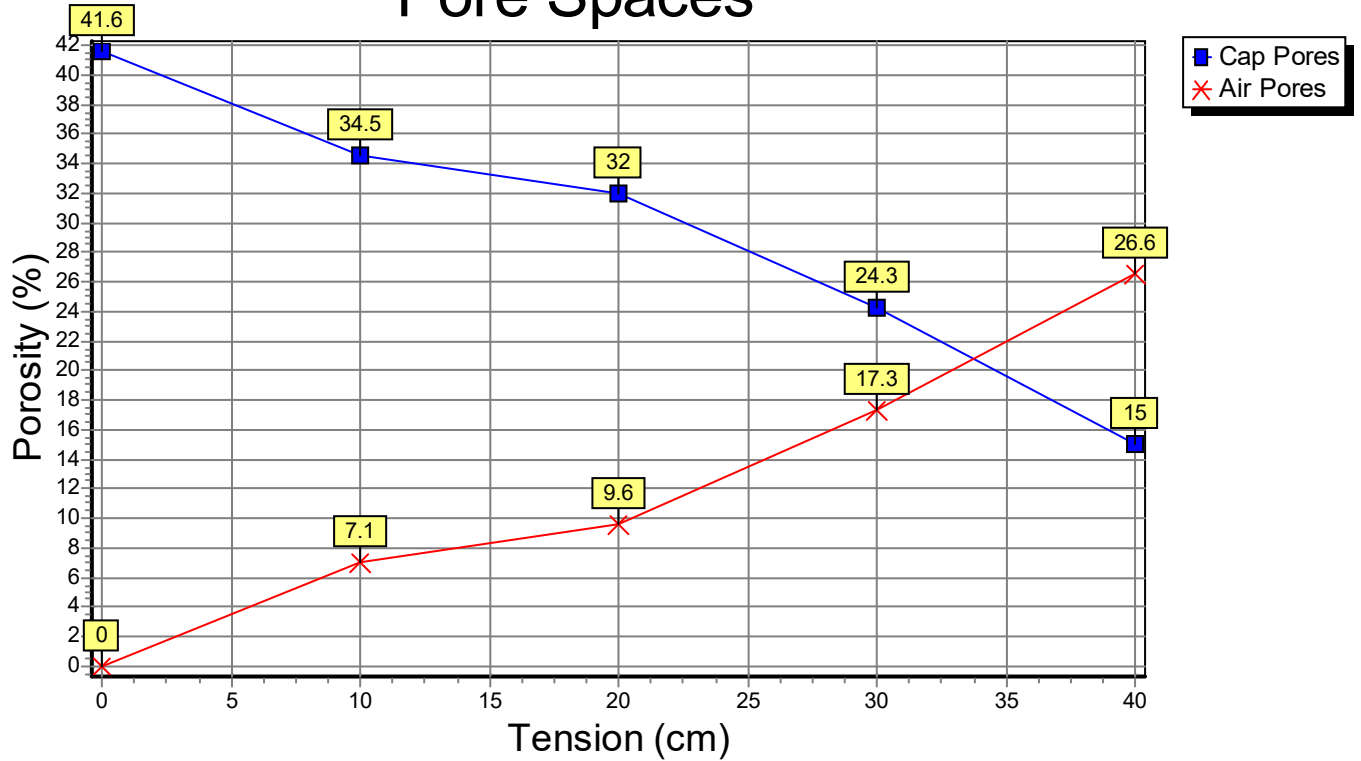
MOISTURE RETENTION %**PORE SPACE %**

		TOTAL	CAPILLARY	AIR FILLED
SATURATION	23.0	41.6	41.6	0.0
10 CM	22.3	41.6	34.5	7.1
20 CM	20.7	41.6	32.0	9.6
30 CM	15.7	41.6	24.3	17.3
40 CM	9.7	41.6	15.0	26.6

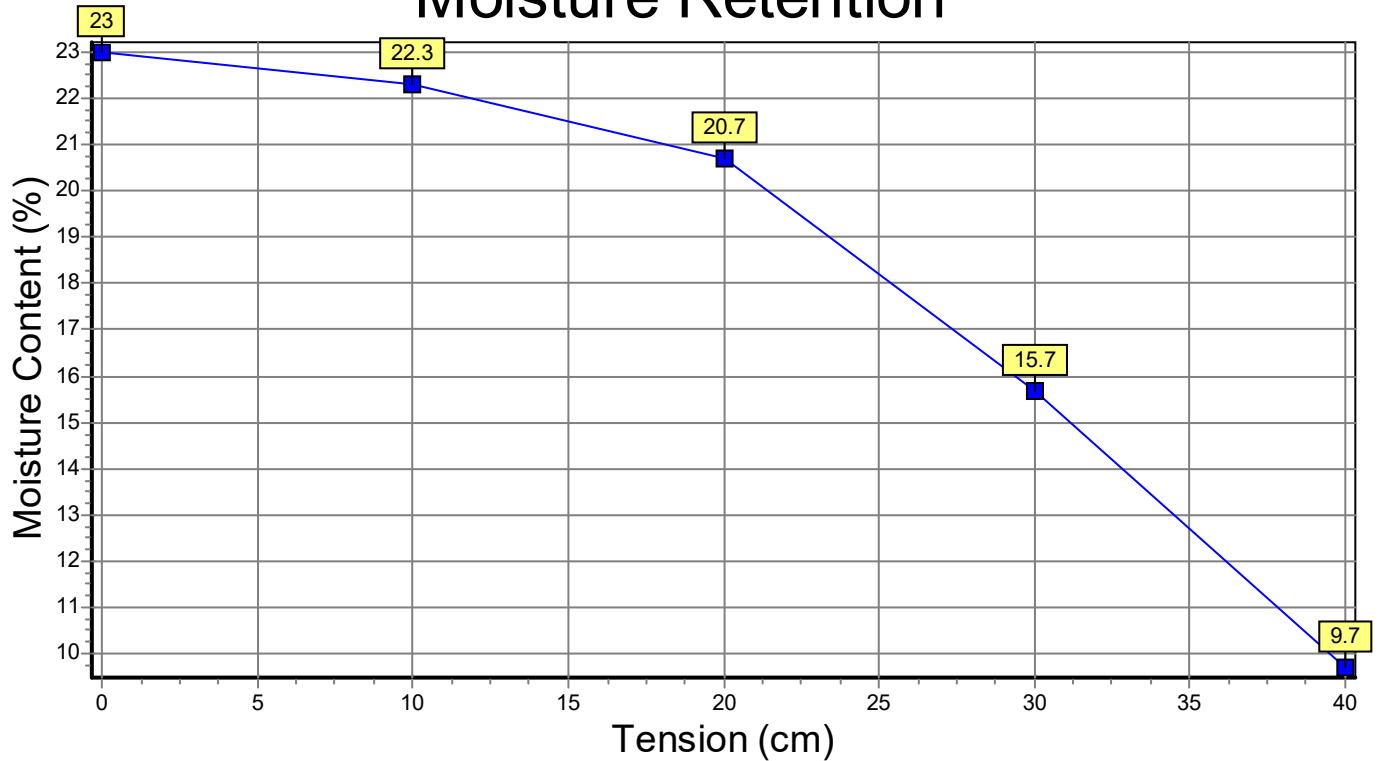
File Number: 47746
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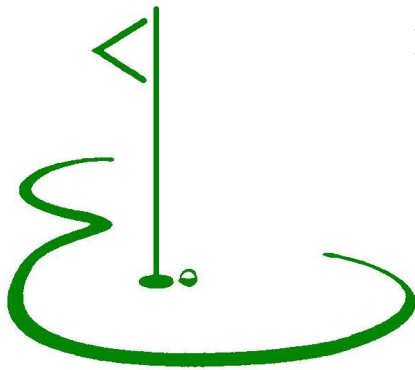
Lab Number: 2364
 Sample Description: WCS&G
 90/10
 GREENS-MIX

Pore Spaces



Moisture Retention





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Submitted By: Soil and Water Consulting

Lab Number	2365
Sample Description	WCS&G 80/20 LAB MIX
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: 0.56
** Coefficient of Uniformity: 3.07

*Reported values are an average of duplicated analysis
*Lab Mix

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Dragon Ridge C.C.
Henderson, NV

File Number : 47746
** Date of Analysis **
Start Date : 10/12/2022
Completed : 10/20/2022

Submitted By: Soil and Water Consulting Reviewed by:

Lab Number 2365
Sample Description WCS&G
80/20
LAB MIX

Particle Size Analysis

Clay	<.002mm	%	0.7
Silt	.002mm - .05mm	%	2.2
Sand	.05mm - 2.00mm	%	95.4
Gravel	> 2.0mm	%	1.7

Org Mat 360 deg C (LOI) 3.96

Sand Fractions

Sieve Size		% Retained
#	mm	
10 -	2.0	Fine Gravel 1.7
18 -	1.0	Very Coarse Sand 7.6
35 -	.500	Coarse Sand 34.7
60 -	.250	Medium Sand 38.2
100 -	.150	Fine Sand 11.4
140 -	.106	Very Fine Sand 2.5
270 -	.053	Very Fine Sand 1.0

Soil Moisture Measurements

Saturated Conductivity in/hr 7.3

Soil Density

Bulk Density	g/cc	1.36
Particle Density	g/cc	2.55

MOISTURE RETENTION %**PORE SPACE %**

		TOTAL	CAPILLARY	AIR FILLED
SATURATION	36.3	46.9	46.9	0.0
10 CM	34.4	46.9	46.5	0.3
20 CM	33.6	46.9	45.5	1.4
30 CM	29.2	46.9	39.6	7.3
40 CM	25.0	46.9	33.8	13.0

File Number: 47746
 Client Name: Dragon Ridge C.C.
 Submitted By: Soil and Water Consulting
 Start Date: 10/12/2022
 Completed: 10/20/2022

Lab Number: 2365
 Sample Description: WCS&G
 80/20
 LAB MIX

