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Date: 6/2/2023
Client Name: Dragon Ridge C.C.
File Number: 47746
Consultant: Soil and Water Consulting

Greensmix : Lab #1345 WCS&G 90/10 QC #3
Gravel: Lab #1300 LMSC 1.9 GRAVEL ACC

GREENSMIX/GRAVEL COMPATIBILITY

Rootzone Sieve Analysis	Particle Diameter (%)							
	2.0 mm	1.0 mm	0.5 mm	0.25 mm	0.15 mm	0.106 mm	0.053 mm	Silt/Clay
% Retained	0.1	7.3	45.5	33.8	8.1	1.7	0.5	3.0

Gravel Sieve Analysis	Particle Diameter (%)							
	12.5 mm	9.5 mm	6.35 mm	4.75 mm	2.36 mm	2.0 mm	1.0 mm	< 1.0 mm
% Retained	0.0	0.9	62.1	29.8	2.9	0.2	0.5	3.6

1. **For Bridging to Occur.** D15(gravel) <= 8 x D85(rootzone)

   D15(gravel) = 5.16
   D85(rootzone) = 0.92

   5.16 mm <= 7.36 mm

   These Results show that the D15(gravel) at 5.16mm **IS** less than or equal to (<=) 8 x D85(rootzone), which was 8 x 0.92mm = 7.36mm. Therefore, bridging of the coarsest 15% rootzone particles **SHOULD** occur with the finest 15% of gravel particles. This gravel **IS** compatable with sand.

2. **For Adequate Permeability.** D15(gravel) >= 5 x D15(rootzone)

   D15(gravel) = 5.16
   D15(rootzone) = 0.26

   5.16 mm >= 1.30 mm

   These Results show that the D15(gravel) at 5.16mm **IS** >= 5 x D15(rootzone), which was 5 x 0.26mm = 1.30mm. Therefore, adequate permeability **SHOULD** occur with this gravel and rootzone sand.

3. **Uniformity Coefficient of Gravel** D90(gravel)/D15(gravel) <= 3.0

   D90(gravel) = 9.04
   D15(gravel) = 5.16

   1.75 mm <= 3.00mm

   These Results show that the D90(gravel)/D15(gravel) is 1.75mm which **IS** less than or equal to 3.0. Therefore, the Uniformity Coefficient of gravel **PASSES** this criterion.

Furthermore, the gravel should have 100% particles < 12mm, <= 10% particles < 2mm, and <= 5% particles < 1mm.

Reviewed by: _____