

Soil Permeability Class Rating Report

Lab #: 2021-95030

Name: EKA Associates - Quinn
Thomas Quinn

Date Received: 2021-10-07

Date Reported: 2021-10-13

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Sample ID: Martin SL-1/EKA#844981/Lot5 Block 285 Cranford NJ

Coarse Fragment Content

Total weight of Sample	W.T.	197.3 g
Weight of material retained on #10 sieve	W.C.F	6.4 g
Weight Percent of coarse fragments	(W.C.F./W.T.) x 100	3.2 %

Soil Textural Analysis (Mechanical Analysis)

Oven dry weight	Wt.	50.0 g
Hydrometer calibration	Rc	5.0 g/L
Hydrometer reading, 40seconds	R1	17.0 g/L
Temperature of suspension, 40s	T1	22.6 °C
		72.7 °F
Corrected hydrometer reading, 40s	$R1' = [(T1-68)*0.2] + (R1-Rc)$	12.9 g/L
Hydrometer reading, 2hours	R2	10.0 g/L
Temperature of suspension, 2hours	T2	22.4 °C
		72.3 °F
Corrected hydrometer reading, 2hours	$R2' = [(T2-68)*0.2] + (R2-Rc)$	5.9 g/L
Sand	$((Wt.-R1')/Wt.)*100$	74.1 %
Silt	$((R1'-R2')/Wt.)*100$	14.1 %
Clay	$(R2'/Wt.)*100$	11.7 %

Sieve Analysis

Sand oven-dry weight	a	128.9 g
Fine+Very fine sand fraction weight	b	86.5 g
Percent Fine+Very fine sand	$(b/a)*100$	67.1 %

Estimated K value **2 Estimated permeability= 0.6-2 in/h**

Estimated permeability has been adjusted, if necessary, to consider fine + very fine sand fractions. Soil structure and consistence, as determined during sampling, must also be considered to further adjust estimated permeability.

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JOB 844981-116 GARDEN ST
SHEET NO. _____ OF _____
CALCULATED BY TQ DATE 2/22/22
CHECKED BY _____ DATE _____
SCALE _____

DRYWELL DRAW DOWN CALCULATION

BASED ON RUTGERS SPQR TEST

SOIL K VALUE = K-2

ESTIMATED PERMEABILITY = 0.6-2.0 in/hr

DRYWELL DEPTH = 4.5' = 54"

USE AVERAGE PERMEABILITY RATE OF 1.3 in/hr

DRAW DOWN TIME = $\frac{54 \text{ in}}{1.3 \text{ in/hr}} = \underline{\underline{41.5 \text{ hrs} < 72 \text{ hrs}}}$, ok

SOIL LOG

EL. 100.5

EXISTING GRADE

TOP SOIL

EL. 100.1

SANDY SILT 10YR 4/3
MOIST, BLOCKY
MOTTLED

EL. 99.3

SILTY CLAY LITTLE SAND 2.5Y 3/3
HYDRAULICALLY RESTRICTIVE
MOIST BLOCKY

EL. 98.1

SANDY SILT 5YR 4/4
MOIST, FRIBLE

92.0

END OF TEST PIT

NO SEPTAGE PERCHED WATER ABOVE EL. 99.3