Anaheim Office
May 3, 2021
Report 21-112-0025

Zanker Landscape Materials
675 Los Esteros Road
San Jose, CA 95134

Attn: Marin

RE: Screened Soil

Background

The sample processed on April 22, 2021 was identified as screened topsoil for landscape use. The sample was analyzed for horticultural suitability, fertility, and physical characteristics. Fertilizer and amendment recommendations were requested. The results of the analyses are attached.

Analytical Results and Comments

The reaction is moderately alkaline at 7.8 on the pH scale, which is above the range preferred for most plants. Free lime is moderate indicating that the pH is buffered in the alkaline range. Soil sulfur is recommended to potentially decrease the soil pH closer to neutral. Soil sulfur works slowly and most efficiently only to the depth incorporated.

Salinity (ECe), sodium and boron are safely low. The SAR value shows soluble sodium is adequately balanced by calcium and magnesium.

According to the USDA Soil Classification, the less than 2mm fraction of this sample is classified as sandy clay loam. The over 15% gravel present classifies the material as 'gravelly'. Organic content is moderate at 1.75% dry weight. Based on this information, the estimated infiltration rate is a moderately slow 0.19 inch per hour. Infiltration rates may vary due to differences in compaction across the site.

In terms of fertility, nitrogen is slightly below optimum and potassium is moderately low. Phosphorus, calcium and magnesium are sufficient. In the minor element category, copper and zinc are sufficient while manganese and iron are low.

Recommendations

Once the material has been laid to final grade, the following materials should then be evenly spread and thoroughly blended with the top 6 inches of soil to form a homogenous layer:

Amount per 1000 Square Feet	
4 cubic yards	Organic Amendment*
5 pounds	Ammonium Sulfate (21-0-0)
5 pounds	Potassium Sulfate (0-0-50)
18 pounds	Soil Sulfur

* The rate may change based on the analysis of the chosen organic amendment. This rate is based on 270 lbs. of dry weight of organic matter per cubic yard of amendment.

Or prepare the material immediately prior to installation:

4 parts	Screened Soil
1 part	Organic Amendment*

Uniformly blended with:

Amount per Cubic Yard	
1/4 pound	Ammonium Sulfate (21-0-0)
1/4 pound	Potassium Sulfate (0-0-50)
1 pound	Soil Sulfur

Maintenance

Maintenance fertilization may rely primarily on a nitrogen-only program supplemented with a complete fertilizer in the fall and spring. You may begin applying Ammonium Sulfate (21-0-0) at a rate of 5 pounds per 1000 square feet 45-60 days after planting with refertilization every 45-60 days. Or, slow release Sulfur-coated Urea (43-0-0) may be applied at a 5 pound rate with refertilization scheduled at 3 month intervals. Once the landscape has become well established the frequency of fertilization should be decreased depending on color and rate of growth desired. In the spring and fall substitute a complete fertilizer such as 15-15-15 to help ensure continuing adequate supplies of phosphorus and potassium.

Alternatively, Blood Meal (12-0-0) provides available nitrogen fairly rapidly while materials such as Feather Meal (12-0-0), Soybean or Cotton Seed Meal (7-1-1) are slower to provide available nitrogen, but they extend the length of time they make this contribution. In order to provide a good supply of nitrogen for a 3-4 month time frame a good combination would be 6 pounds Blood Meal and 14 pounds Feather Meal per 1000 square feet. The long term maintenance program should consider spring and fall applications of an organic fertilizer blend such as 5-5-5 that would also supplement phosphorus and potassium nutrition to a greater extent.

If we can be of any further assistance, please feel free to contact us.

Joe Kiefer, CCA

jkiefer@waypointanalytical.com

Emailed 3 pages: marin@zankerrecycling.com

Zanker Landscape Materials
675 Los Esteros Road

San Jose CA 95134

Waypoint ANALYTICAL

4741 East Hunter Ave. Suite A
Anaheim, CA 92807
Main 714-282-8777 ° Fax 714-282-8575
www.waypointanalytical.com

Project : Screened Soil

COMPREHENSIVE SOIL ANALYSIS

Report No : **21-112-0025**
Purchase Order :
Date Recd : 04/22/2021
Date Printed : 04/27/2021

Sample Description - Sample ID	Half Sat %	pH	ECe dS/m	NO_3-N ppm	NH_4-N ppm	PO_4-P ppm	K ppm	Ca ppm	Mg ppm	Cu ppm	Zn ppm	Mn ppm	Fe ppm	Organic % dry wt.	Lab No.
	TEC	Qual Lime		Sufficiency Factors											
Screen Soil	16	7.8	1.4	18	3	17	49	776	205	0.8	2.3	1	7	1.75	24395
	53	Medium		0.7		0.9	0.5	0.9	1.7	1.2	0.9	0.2	0.3		

Saturation Extract Values						SAR	Gravel %		Percent of Sample Passing 2 mm Screen					USDA Soil Classification	Lab No.
									Sand						
Ca meq/L	Mg meq/L	Na meq/L	K meq/L	B ppm	SO_4 meq/L		Coarse 5 - 12	Fine 2 - 5	Very Coarse 1 - 2	Coarse 0.5 - 1	Med. to Very Fine 0.05 - 0.5	Silt .002-.05	Clay 0-.002		
9.1	5.6	4.0	0.2	0.22	8.2	1.5	1.5	19.3	18.6	12.4	28.7	15.4	24.8	Gravelly Sandy Clay Loam	24395

Sufficiency factor (1.0=sufficient for average crop) below each nutrient value. N factor based on 200 ppm constant feed. SAR = Sodium adsorption ratio. Half Saturation %=approx field moisture capacity. Nitrogen(N), Potassium(K), Calcium(Ca) and Magnesium(Mg) by sodium chloride extraction. Phosphorus(P) by sodium bicarbonate extraction. Copper(Cu), Zinc(Zn), Manganese(Mn) & Iron(Fe) by DTPA extraction. Sat. ext. method for salinity (ECe as dS/m),Boron (B), Sulfate(SO_4), Sodium(Na). Gravel fraction expressed as percent by weight of oven-dried sample passing a 12mm(1/2 inch) sieve. Particle sizes in millimeters. Organic percentage determined by Walkley-Black or Loss on Ignition.

* LOW , SUFFICIENT , HIGH

Zanker Landscape Materials
675 Los Esteros Road

San Jose CA 95134

4741 East Hunter Ave. Suite A
Anaheim, CA 92807
Main 714-282-8777 º Fax 714-282-8575
www.waypointanalytical.com

Project : Screened Soil

COMPREHENSIVE SOIL ANALYSIS

Report No : **21-112-0025**
Purchase Order :
Date Recd : 04/22/2021
Date Printed : 04/27/2021

Sample Description - Sample ID	Half Sat %	pH	ECe dS/m	NO_3-N ppm	NH_4-N ppm	PO_4-P ppm	K ppm	Ca ppm	Mg ppm	Cu ppm	Zn ppm	Mn ppm	Fe ppm	Organic % dry wt.	Lab No.
	TEC	Qual Lime		Sufficiency Factors											
Screen Soil	16	7.8	1.4	18	3	17	49	776	205	0.8	2.3	1	7	1.75	24395
	53	Medium		0.7		0.9	0.5	0.9	1.7	1.2	0.9	0.2	0.3		

Saturation Extract Values						SAR	Gravel %		Percent of Sample Passing 2 mm Screen					USDA Soil Classification	Lab No.
									Sand						
Ca meq/L	Mg meq/L	Na meq/L	K meq/L	B ppm	SO_4 meq/L		Coarse 5 - 12	Fine 2 - 5	Very Coarse 1 - 2	Coarse 0.5 - 1	Med. to Very Fine 0.05 - 0.5	Silt .002-.05	Clay 0-.002		
9.1	5.6	4.0	0.2	0.22	8.2	1.5	1.5	19.3	18.6	12.4	28.7	15.4	24.8	Gravelly Sandy Clay Loam	24395

Sufficiency factor (1.0=sufficient for average crop) below each nutrient value. N factor based on 200 ppm constant feed. SAR = Sodium adsorption ratio. Half Saturation %=approx field moisture capacity. Nitrogen(N), Potassium(K), Calcium(Ca) and Magnesium(Mg) by sodium chloride extraction. Phosphorus(P) by sodium bicarbonate extraction. Copper(Cu), Zinc(Zn), Manganese(Mn) & Iron(Fe) by DTPA extraction. Sat. ext. method for salinity (ECe as dS/m),Boron (B), Sulfate(SO_4), Sodium(Na). Gravel fraction expressed as percent by weight of oven-dried sample passing a 12mm(1/2 inch) sieve. Particle sizes in millimeters. Organic percentage determined by Walkley-Black or Loss on Ignition.

* LOW , SUFFICIENT , HIGH