

November 7, 2021

Mr. Chris Shaw Shaw Construction P.O. Box 281 Bates City, MO 64011

> Re: Soil Inspection – 1519 SW Blackstone Place, Lee's Summit, MO Lot 133 Napa Valley 3rd Plat

Mr. Shaw,

At your request, I have inspected the soil conditions at the above referenced site. The inspection took place on November 4 and concentrated on the area of the perimeter footings and the interior spread footings. A 4' long soil probe and visual inspection were used to evaluate the soil conditions.

The building pad is situated on what appears to be a previously undeveloped site and has been excavated to subgrade for the basement. The upper part of the excavation appears to be fill material. The rear wall has been excavated approximately 6 feet deeper to what appears to be virgin soil. Probe resistance was moderate at the upper excavation. At the rear wall, probe resistance was light to moderate. At the upper level, I would estimate that a safe bearing pressure is 1500 psf which would mean perimeter footings 24" wide with 3 #4 continuous. At the interior footings, a safe bearing pressure is 1500 psf which means that footing sizes would need to be 1.33 times the area of what would have been designed for 2000 psf. As an example, a 36" square pad called out on the drawing would need to be 42" square with 5 #4 each way and a 48" square pad called out on the drawing would need to be 60" square with 7 #4 each way. At the rear wall, I would estimate that a safe bearing pressure is 1000 psf which would mean perimeter footings 32" wide with 4 #4 continuous.

If there are any questions, please let me know.

Yours truly,

Albert Hermans, P.E.