



November 15, 2016
Job No. 1041-04N-16

Mr. Carson Young
Solitude Builders
2068 East 5950 North
Eden, Utah 84310

Mr. Young:

Re: Summary Letter
Foundation Mass Excavation Observation
Lot 44 Big Sky Estates
4075 Bluebell Drive
Near Liberty, Weber County, Utah

As requested by Mr. Carson Young of Solitude Builders, a representative of GSH Geotechnical, Inc. (GSH) visited the above-referenced site during the afternoon of November 11, 2016. The purpose of the site visit was to observe the footing excavation subgrade conditions for the above-referenced residence under construction Near Liberty in Weber County, Utah. A geotechnical study dated July 7, 2016¹ was previously prepared for the site by GSH.

Observations

At the time of our site visit, the foundation mass excavation for the home was about 85 percent complete and consisted of 4 levels extending approximately 5.0 to 13.0 feet below the adjacent ground surface. The crawlspace area along the north side of the home remained to be excavated. Topsoil and disturbed soils were observed within the upper 1.5 to 2.0 feet of the excavation sidewalls. Natural soils were observed underlying the topsoil and disturbed soils within the sidewalls and throughout the base of the excavation. The natural soils consisted of silty clay and silty to clayey fine to coarse sand with fine and coarse gravel. The natural clay soils visually were medium stiff to stiff, moist, and brown to gray in color. The natural sand soils visually were loose to medium dense, moist, and light brown to brown in color. Groundwater was not observed within the excavation at the time of our visit to the site; however, an area of saturated soil was observed at the northeast corner of the excavation, indicating recent seepage from the excavation sidewall in this area.

¹ "Report, Geotechnical Study, Lot 44 Big Sky Estates, Near Liberty, Weber County, Utah," GSH Job No. 1041-04N-16.

Summary

Based on our observations, the completed footing excavations have been extended to natural soils. The remaining crawlspace excavation along the north side of the home must be completed to similar suitable natural soils. Accordingly, the observed natural soils are suitable and it is our opinion the excavation is ready for structural fill placement and/or subsequent footing construction.

A column of soil that included up to 2.5 feet of topsoil and disturbed soils extended up to the original grade below the floor slab area. Unless these soils are completely removed from beneath the floor slabs, the slabs could experience some settlement under the slab loading.

An area of saturated soil was observed at the northeast corner of the home. These soils must be removed in their entirety and replaced with structural fill.

We understand that 1.0- to 1.5-inch minus clean, angular gravel will be utilized as replacement structural fill. Clean gravel should be compacted in lifts not exceeding 12 inches in loose thickness. Clean gravel must be compacted to a firm, non-yielding condition by passing moderate-sized compaction equipment over each lift a minimum of 2 times.

As indicated in the referenced geotechnical study, a foundation drain around the home and cut-off drain upslope of the home are required. The foundation drain and cut-off drain must be designed and installed per the recommendations of the referenced geotechnical study.


All other recommendations provided in the referenced report should be followed.

Closure

If you have any questions or would like to discuss these items further, please feel free to contact us at 801.685.9190.


Respectfully submitted,

GSH Geotechnical, Inc.


Andrew M. Harris, P.E.
State of Utah No. 7420456
Senior Geotechnical Engineer



Reviewed by:


Bryan N. Roberts, P.E.
State of Utah No. 276476
Senior Geotechnical Engineer

AMH/BNR;jlh

Addressee (email)