February 24, 2016
Job No. 1675-02N-15

Mr. David Orchard
2248 Oneida Street
Salt Lake City, Utah 84109

Mr. Orchard:

Re: Letter
Supplemental Work Plan
Proposed Single Lot KEO Homestead Subdivision
Approximately 5600 East Highway 39
(Part of Section 14, Township 6 North, Range 1 East, Salt Lake base and meridian)
Weber County, Utah

To assist in defining the subsurface soil and groundwater conditions at the subject property, GSH Geotechnical, Inc. (GSH) intends to provide geotechnical drilling at the site of the KEO Homestead Subdivision in Weber County, Utah. The proposed investigative approach for the supplemental scope of work is discussed below.

Scope of Work

In order to provide additional information for the subject property, an additional subsurface investigation is proposed for the site. The field investigations completed to date for the geotechnical and geological evaluations for the subject property utilized relatively shallow test pits and trenches excavated across the site to depths of about 10.0 to 15.0 feet below existing grades. Supplemental information related to the subsurface soils will be gathered through geotechnical soil borings at 3 locations across the site (see Figure 1, attached). The depth of soil borings are proposed to extend to about 50 feet (or auger refusal). The proposed depth of the soil borings is based on preliminary slope stability modeling for the site which projects a potential critical failure surfaces extending to about 50 feet below grade (see Figures 2 and 3, attached).

The soil borings will be drilled with a truck-mounted geotechnical drill rig equipped with hollow stem augers. A 3.25-inch outside diameter, 2.42-inch inside diameter drive sampler (Dames & Moore), a 3.0-inch outside diameter, 2.42-inch inside diameter drive sampler (Dames & Moore), and a 2.0-inch outside diameter, 1.38-inch inside diameter drive sampler (SPT) will be utilized for subsurface sampling at select locations. Samples will be gathered at intervals of 2.5 feet. Following completion of drilling operations, one and one-quarter-inch diameter slotted PVC pipe will be installed in borings in order to provide a means of monitoring potential groundwater fluctuations. The borings will be backfilled with auger cuttings.

Following the field investigation, a laboratory testing program will be performed to determine parameters necessary for our engineering analyses. Laboratory tests may include, but are not limited to, moisture content, density, partial and full gradation, direct shear, residual direct shear, ring shear, and vane shear tests.

The information gathered from the field and laboratory testing will be utilized for our geotechnical engineering and geological analyses for the site. Geotechnical study and geological study reports will be issued at the completion of the project summarizing our findings.

Closure

If you have any questions or would like to discuss these items further, please feel free to contact us at (801) 393-2012.

Respectfully submitted,

GSH Geotechnical, Inc.

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

Reviewed by:

Greg Schlenker PhD, P.G.
State of Utah No. 5224720
Senior Geologist

AMH/GS:mmh

Enclosures: Figure 1 Exploration Plan
Figures 2 and 3 Stability Results

Addressee (email)

CC: Ms. Dana Shuler
Mr. Alan Taylor
Mr. David Simon

KEO Homestead Subdivision
Job No. 1675-02N-15

N

Tn
Qlf/Tn
Qac
Qc
Tn
B-1
B-2
B-3
Trench 1
Trench 2
5000
5200
5210
5230
5250

Explanation

- Proposed Trench Locations
- Proposed Geotechnical Boring Location
- Homesite Area
- Property
- SGID10_CADASTRE_Parcels_Weber
- Index Contour

Proposed Improvements

- House
- Detached Garage
- Septic Tank
- Drain Field
- Well Protection Radius (100 ft)
- Water Well Boring (In Progress)

Geological Classification
(This study modified from King, et al., 2008)

- Qac - Alluvium and colluvium - Includes stream and fan alluvium, colluvium...
- Qc - Colluvium - Includes materials moved by slopewash and soil creep.
- Qlf/Tn - Lake Bonneville fine-grained deposits / Norwood Formation - Typically light-gray to lightbrown, altered tuff.
- Tn - Norwood Formation - Typically light-gray to lightbrown, altered tuff.

Base: 2012 5.0 inch Color HRO Orthoimagery, from Utah AGRC; http://gis.utah.gov/
Elevation: 2006 2.0m Geoprocessed LiDARfrom Utah AGRC; http://gis.utah.gov/
Geology: Modified from King, J.K., Yonkee, W.A., and Coogan, J.C., 2008, Interim geologic map of the Snow Basin and part of the Huntsville quadrangle, Davis, Morgan, and Weber Counties, Utah: Utah Geological Survey Open-File Report 536, scale 1:24,000

0 60 120 180 ft

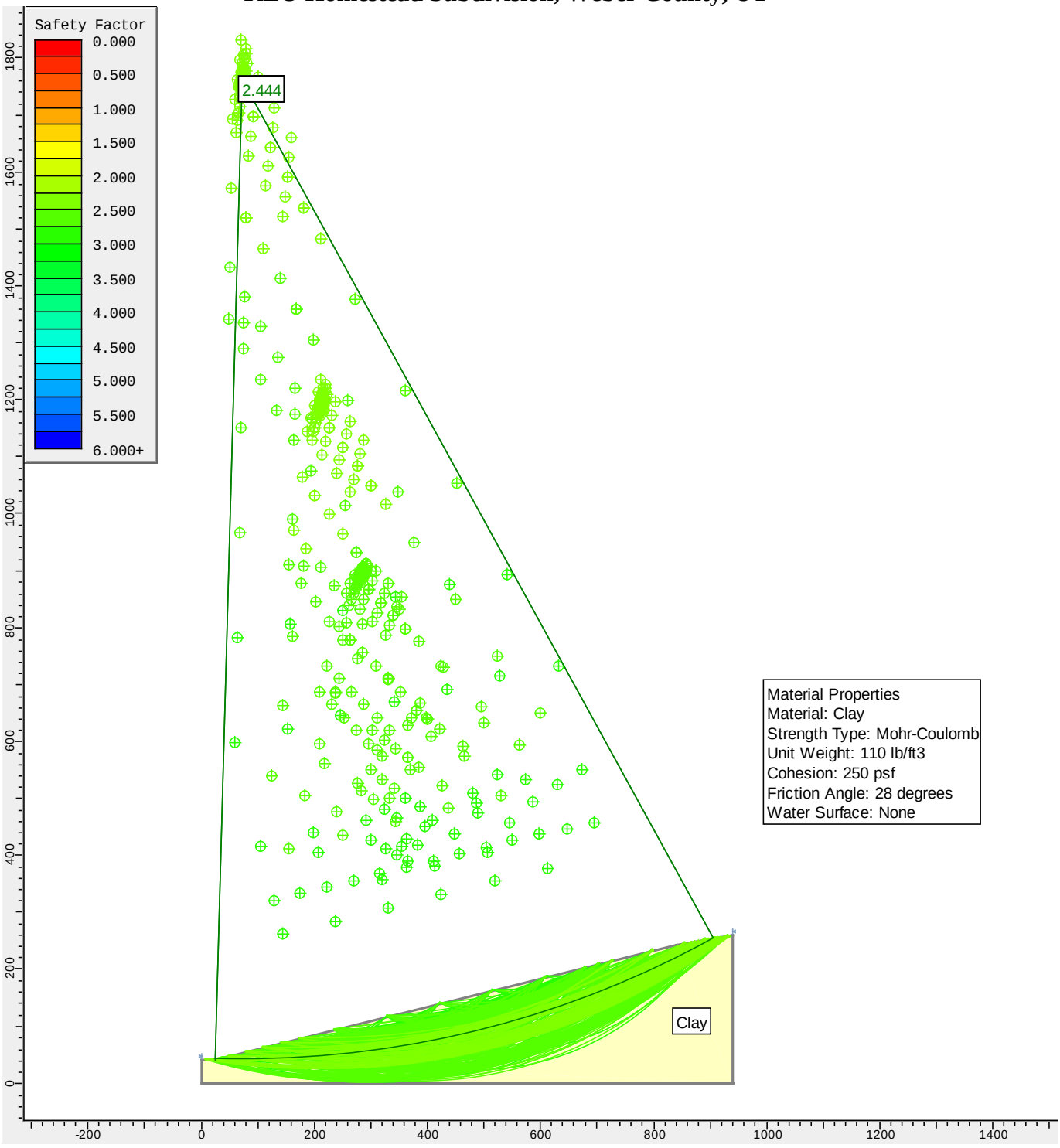
1:720

FIGURE 1
SUPPLEMENTAL BORING LOCATIONS

GSH

STABILITY RESULTS

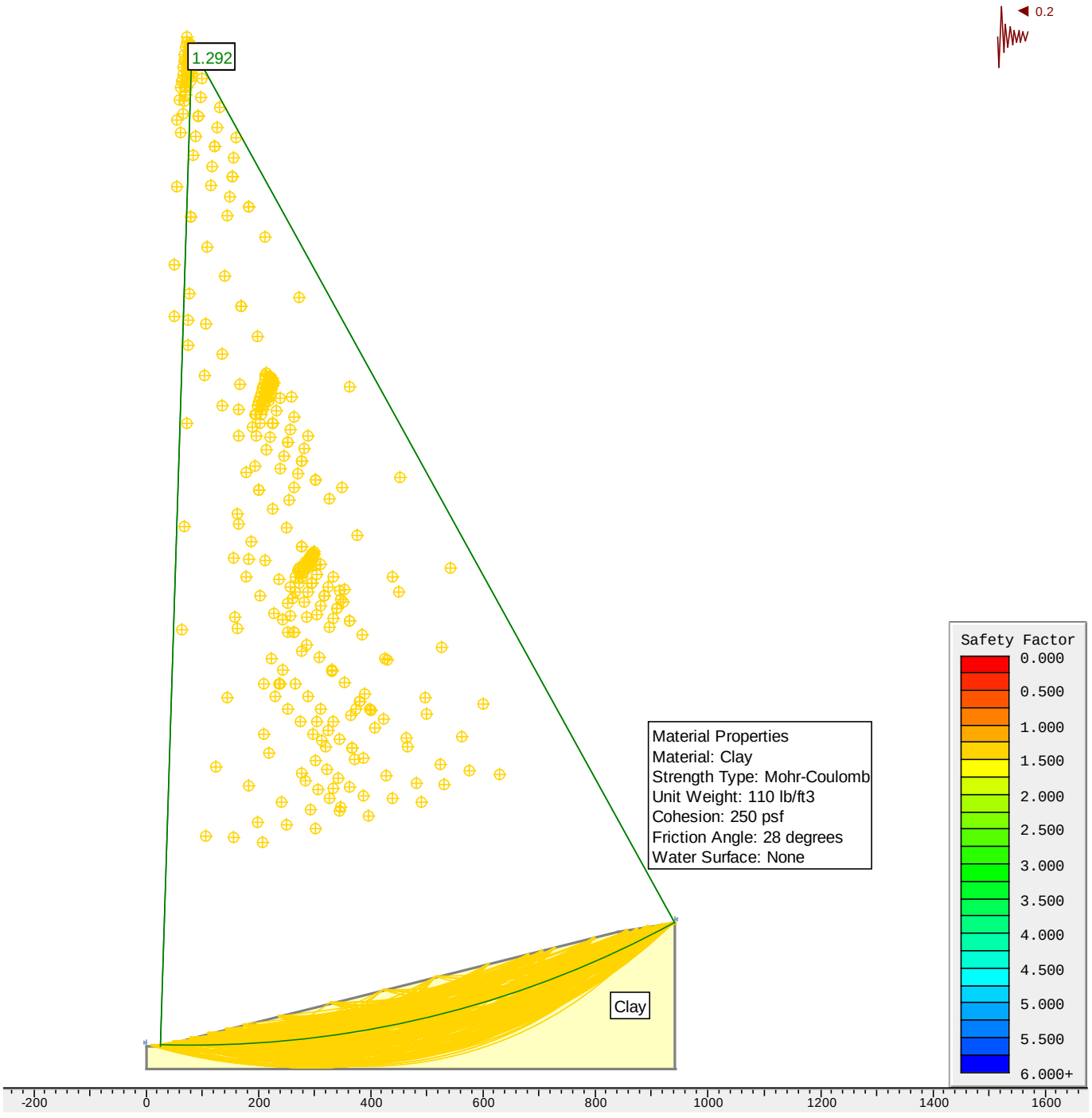
KEO Homestead Subdivision, Weber County, UT



PROJECT NO.: 1675-01N-14	GSH	**FIGURE NO.:** 2

STABILITY RESULTS

KEO Homestead Subdivision, Weber County, UT



PROJECT NO.: 1675-01N-14	GSH	**FIGURE NO.:** 3