

AGEC

Applied GeoTech

April 26, 2016

Big Canyon Homes, Inc.
1925 SW Hoytsville Road
Wanship, UT 84017

Attention: Paul Berman
EMAIL: paul@bigcanyonhomesinc.com

Subject: Work Plan
Proposed Residence
Lot 35, The Legends at Hawkins Creek
6512 East Chaparral Road
Weber County, Utah
Proposal No. 1160292

Gentlemen:

Applied Geotechnical Engineering Consultants, Inc. (AGEC) was requested to develop a work plan for geologic hazard and geotechnical studies for the proposed residence to be constructed at 6512 East Chaparral Road in Weber County. The property is Lot 35 of The Legends at Hawkins Creek subdivision.

SITE CONDITIONS

The building lot is currently undeveloped. There has been some cut and fill placed along the west side of the property to form a relatively flat area at the proposed residence. This area slopes gently down toward the north. The ground surface in most of the remaining portion of the property generally slopes down toward the east at approximately 5 horizontal to 1 vertical. Vegetation at the site consists of grass, shrubs and some trees.

Chaparral Road borders the north and west portions of the property and consists of a two-lane, asphalt-paved road in good condition. There is undeveloped land to the south and east of the property and north and west of the road.

POTENTIAL GEOLOGIC HAZARDS

Geologic hazards associated with the building lot were determined by a review of aerial photographs and geologic literature and a site visit. Aerial photographs used in the review were downloaded from the Utah Geological Survey website and have Photograph Nos. AAJ-2B-28 and 29 and a date of August 10, 1946. Geologic maps reviewed for the study are by

King and others (2008), Coogan and King (2000), Elliott and Harty (2010) and the Utah fault and fold database available at the Utah Geological Survey website.

The geologic maps by Coogan and King (2000) and King and others (2008) show the site to be underlain by Norwood Tuff with colluvium and landslide deposits in the southeast portion of the property. A portion of the King and others (2008) overlain on a Google Earth image of the site and vicinity is presented on Figure 1.

The Elliott and Harty (2010) landslide map shows landslide deposits east of the site and potentially extending into the southeast portion of the property.

The Utah fault and fold database shows no active faults extending near through the site. The closest mapped fault trace to the site is the Ogden Valley Southwest margin fault located approximately 1 ¼ miles to the west. The Wasatch fault is the closest fault zone considered active and is approximately 7 miles to the west.

Review of the aerial photographs indicate similar potential landslide deposits as mapped by King and others (2008) with the potential landslide deposits extending into the southeast portion of the property and suggesting that movement of this landslide mass was to the northeast.

Conditions observed during the site visit indicate similar geologic conditions to those described by geologic maps of the area. There was no evidence of active landslides on the property.

Mapped landslide deposits and Norwood Tuff and the relatively steep slopes at the site indicate that slope stability may be a concern at the site. Thus, the geologic and geotechnical studies will be used to evaluate slope stability at the site. Fault rupture, rockfall, debris flow, tectonic subsidence, liquefaction and flooding are not considered hazards at this site.

GEOTECHNICAL STUDY

The geotechnical study will include slope stability analysis along with a study to address typical geotechnical items for residential development, which are generally described in IBC 2012. The geotechnical study will include drilling two borings at the site with one located in the eastern portion of the area proposed for the building and the other towards the lower portion of the site. The upper boring is planned to be drilled to a depth of approximately 30 feet and lower boring to a depth of approximately 20 feet. The locations of the proposed borings are presented on Figure 2. The borings are planned to be sampled at approximately 2 ½-foot intervals and piped to allow for measurement of water levels in the borings.

The topographic information from the site survey along with field survey will be used to produce a profile for the slope stability analysis. Subsurface conditions determined from the borings will be used to develop a subsurface profile for the slope stability analysis.

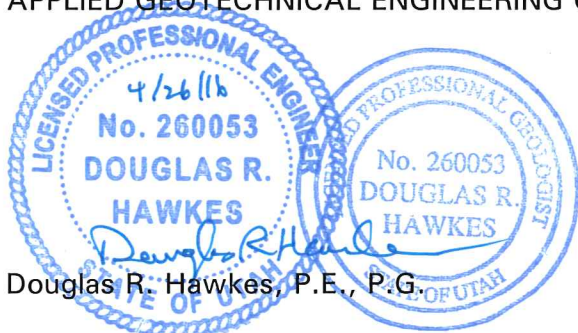
Big Canyon Homes
April 26, 2016
Page 3

Laboratory testing along with reported strength values in the literature will be used in assigning strength parameters for the soil and possible bedrock units with the engineering analysis generally following the Draper City standards for slope stability analyses. Recommendations will be provided with respect to geologic hazards, geotechnical concerns and typical geotechnical analysis for residential development as generally described in IBC 2012.

If you have questions or if we can be of further service, please call.

Sincerely,

APPLIED GEOTECHNICAL ENGINEERING CONSULTANTS, INC.



Douglas R. Hawkes, P.E., P.G.

Reviewed by JRM, P.E.
DRH/rs
Enclosures

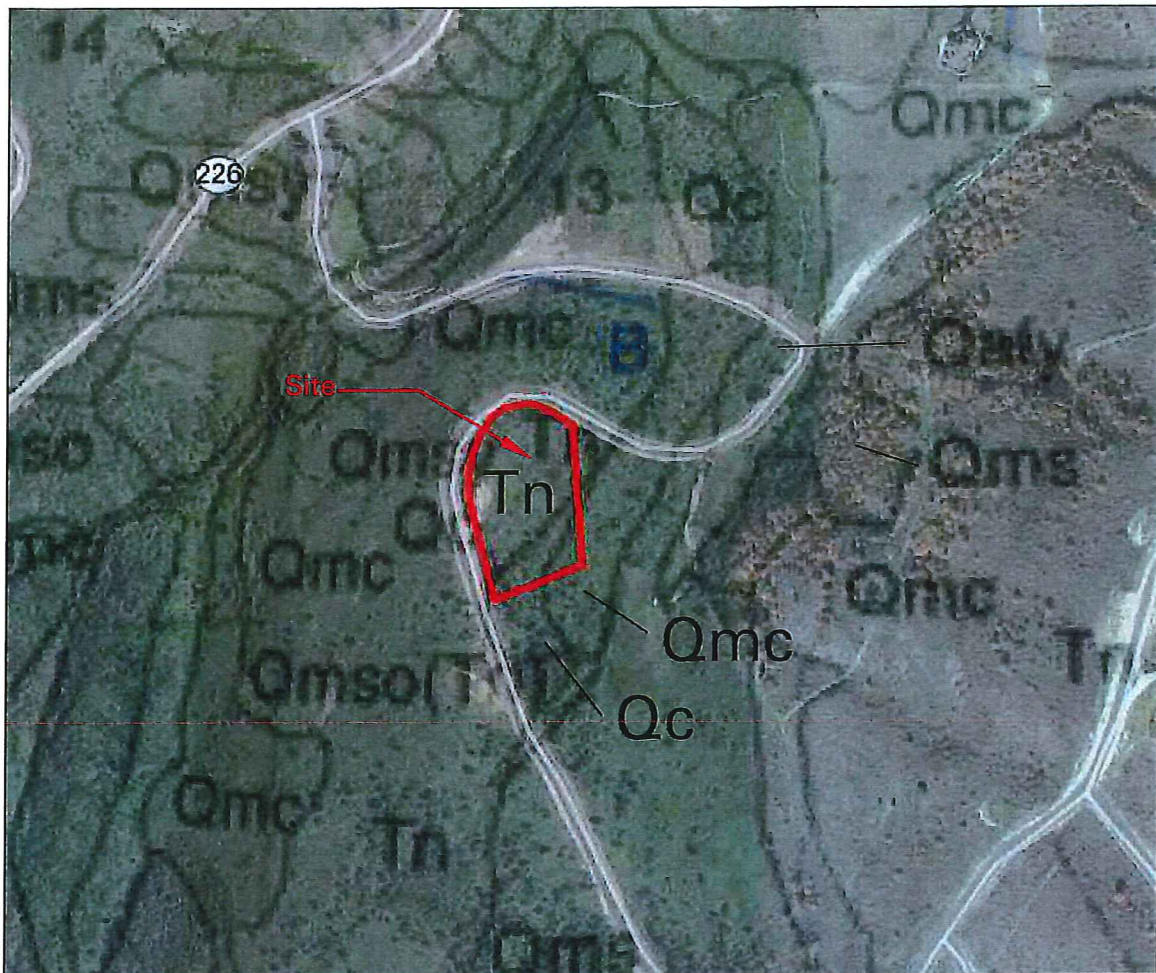
References:

Coogan, J.C. and King, J.K., 2000; Progress report geologic map of the Ogden 30' X 60' quadrangle, Utah and Wyoming, Utah Geological Survey Open-file Map 380.

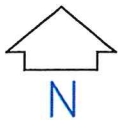
Elliott, A.H. and Harty, K.M., 2010; Landslide maps of Utah, Ogden 30' X 60' quadrangle, Utah Geological Survey Map 246DM, Plate 6.

King, J.K., Yonkee, W.A and Coogan, J.C., 2008; Interim geologic map of the Snow Basin quadrangle and part of the Huntsville quadrangle, Davis, Morgan and Weber Counties, Utah; Utah Geological Survey Open-file Report 536.

Utah fault and fold database accessed on April 25, 2016 at geology.utah.gov/resources/data-databases/qfaults/.



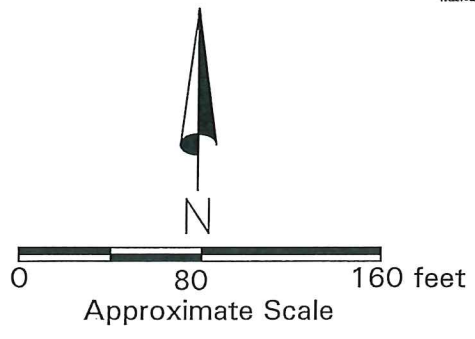
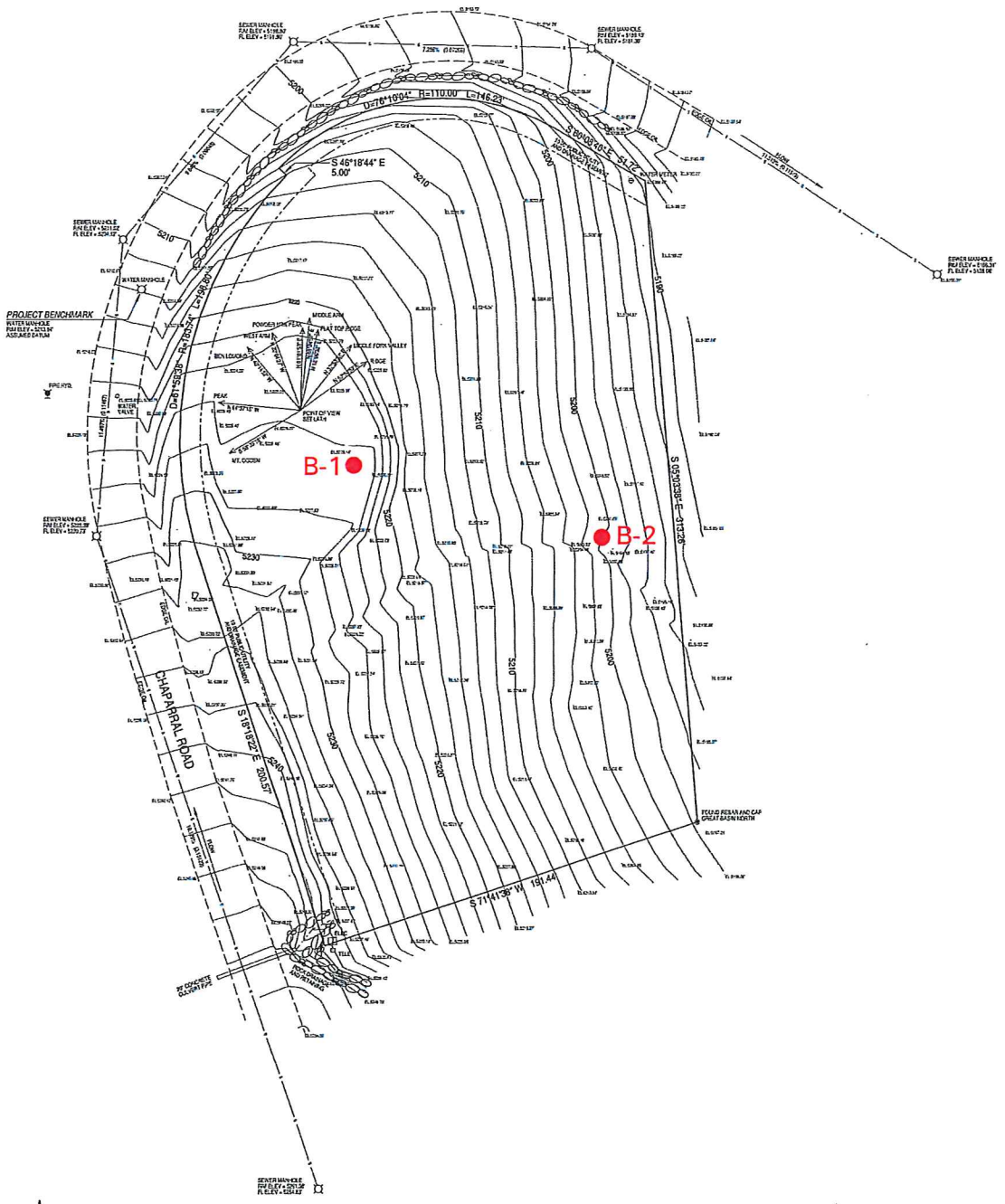
Approximate Scale 1" = 300'



DESCRIPTION OF GEOLOGIC UNITS AND SYMBOLS

- Qafy - Younger alluvial-fan deposits (Holocene to uppermost Pleistocene)
- Qc - Colluvium (Holocene and Pleistocene)
- Qmc - Landslide, slump and alluvial deposits (Holocene and Pleistocene)
- Tn - Norwood Tuff (Tertiary)
- Contact between geologic units, dashed where approximate

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