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October 27, 2015

Mr. Martin Nobs 50 River Bluff Road Elgin, IL 60120

Re: Engineering Geology Assessment-Addendum II Lot 15, Ski Lake Estates No. 3 6640 East 1100 South Huntsville, Utah Job No. 145150

Mr. Nobs:

This letter is the second addendum to the engineering geology assessment letter for the subject lot located in Huntsville, Weber County, Utah. Earthtec Engineering previously completed a geotechnical engineering study¹ and an addendum letter² to the geotechnical report for the subject lot. An engineering geology assessment letter³ was also prepared by Earthtec Engineering. Addendum I was provided for the Geologic Review⁴ dated August 6, 2015. A Second Geologic Review⁵ was submitted on August 28, 2015.

Purpose

The purpose of this letter is to respond to the second geology review comments⁵ provided by Simon Associates, LLC, third-party consultant, hired by Weber County to review the referenced geology assessment letter.

The review comments related to the geology assessment and our responses are presented below. The review comments are italicized and our responses are presented in plain text.

Review Comment 1 states: "The July 13, 2015, addendum was submitted by Mr. Mark Larson, P.G., whose qualifications to practice as an engineering geologist were known to Weber County. At the project scoping meeting on June 15, 2015, Mr. Larson was designated as the professional geologist in "responsible charge"" of the project^{1.}".

The August 14, 2015 EEI Addendum was signed and sealed by Frank F. Namdar, P.G. Apparently the geologist responsible charge of the project has changed. Chapter 27 of the Weber County Hillside Development Review Procedures and Standards defines engineering

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Professional Engineering Services ~ Geotechnical Engineering ~ Geologic Studies ~ Code Inspections ~ Special Inspection / Testing ~ Non-Destructive Examination ~ Failure Analysis

¹ Responsible charge means the independent control and direction by use of initiative, skill, and independent judgment of geological work or the supervision of the work (section 58-76-102, Utah Professional Geologist Licensing Act, Title 5, Chapter 76)

¹ Geotechnical Study, Lot 15 Ski Lake Estates No. 3, 6640 East 1100 South, Huntsville, Utah; Earthtec Engineering, Project No. 145150G, June 23, 2014.

² Addendum I to the Geotechnical Report, Lot 15 Ski Lake Estates No. 3, 6640 East 1100 South, Huntsville, Utah, Project No.: 145150G, July 13, 2015.

³ Engineering Geology Assessment, Lot 15, Ski Lake Estates No. 3, 6640 East 1100 South, Huntsville, Utah, Job No. 145150, July 13, 2015.

⁴Geologic Review, Lot 125 Ski Lakes Estates No. 3, 6640 East 1100 South Street, Huntsville, Utah, SA Project No: <u>1</u>5-142, August 6, 2015.

⁵Geologic Review, Lot 125 Ski Lakes Estates No. 3, 6640 East 1100 South Street, Huntsville, Utah, SA Project No: 15-142, August 6, 2015.

geologist as: "Engineering geologist means a geologist who, through education, training and experience, is able to assure that geologic factors affection engineering works are recognized, adequately interpreted and presented for use in engineering practice and for the protection of the public. This person shall have at least a four year degree in geology, engineering geology, or a related field from an accredited university and at least three full tears of experience in a responsible position in the field of engineering geology." SA recommends Weber County request EEI provide:

a. Mr. Namdar's engineering geologic qualifications (with complete references), particularly documentation of at least three full years of experience in a responsible position in the field of engineering geology.

b. An outline of Mr. Namdar's knowledge of the subject site and project parameters such that he qualifies to assume responsible charge of the project."

Mr. Namdar has over 26 years of combined experience in the field of geological, geotechnical and environmental engineering and construction inspection. He has specific experience in the field of engineering geology as indicated in the attached resume. Mr. Namdar has reviewed the project reports, figures, correspondents and photographs, and has become familiar with the project and its parameters to be able to provide sound determination of the issues related to this project.

Review Comment 2 states: "EEI repeatedly refers to the various geologic hazards as 'relatively low ', SA recommends Weber County request EEI define the term 'relatively'.

EEI's response follows: "This is a typical term used by geologists and engineers practicing in this geographic region. The investigation performed outlines the conditions, and presence of evidence for potential hazards, or lack thereof. The potential hazards described in the "Geologic Hazards" section provides Earthtec's opinion for the site in relation, or relative to properties in the general area of the site. Such areas are indicated to have been mapped as landslides (Map Units Qmsy and Qms), located approximately 200 to 360 feet to the east of the site."

"The English Dictionary defines the adverb "relatively", synonyms included comparatively, rather, somewhat, to some extent and in or by comparison."

If such is "...typical term used by geologist and engineers practicing in this geographic region," the term is used when there remains uncertainty with the conclusions of the particular investigation. SA recommends Weber County not consider EEI's response adequate until EEI has obtained sufficient data such that EEI can state, without qualification (i.e., uncertainty). That the various geologic hazards are either "low", "high", or "moderate".

There are no uncertainties related to the data collected and the findings to determine the existing conditions related to the potential recent movement of the near surface earth strata beneath the project site. The report has been revised to reflect such conditions.

Review Comment 3 states: "Item 2 of the August 6, 2015, SA review letter stated: "EEI uses terms such as "appears" and "maybe." Are these terms being used to denote a conclusion based on conjecture rather than a conclusion based on sufficient data, particularly subsurface data? Is EEI suggesting that additional data be obtained? SA recommends EEI clarify their use of the word "appears" and "maybe."

Earthtec Engineering

EEI's response follows: "This is a typical term used by geologists and engineers practicing in this geographic region. The words are used to form a conclusion based on the data that was obtained in the field investigation and no additional testing is needed."

Such terms indicate conjecture and uncertainty. If such are "...typical term used by geologists and engineers practicing in this geographic region", the terms are used when there remains uncertainty and/or conjecture with the conclusions of the particular investigation, SA recommends Weber County not to consider EEi's response adequate until EEI has obtained sufficient data such that EEI can present their conclusions in a definitive manor, without the use of qualifying verbs indicating uncertainty and/or conjecture.""

There are no uncertainties related to the data collected and the findings to determine the existing conditions related to the potential recent movement of the near surface earth strata beneath the project site. The report has been revised to reflect such conditions.

Review Comment 4 states: "Item 3 of the August 6, 2015, SA review letter recommended Weber County request annotated photographs of TP-5 and the extension of TP-3 excavated on 6-22-2015. The photographs submitted with the August 14, 2015, EEI addendum were not annotated. SA recommends Weber County request annotated photographs of TP-5 and extension of TP-3 excavated on 6-22-15.

Test pit TP-3 and its extension was photographed as shown in Exhibit 1 through 3, Appendix A. Photographs of TP-5 were not taken, and this test pit was backfilled.

Engineering Geology Assessment-Addendum I Lot 15, Ski Lake Estates No. 3 6640 East 1100 South Huntsville, Utah Job No. 145150

General Conditions

The information presented in this letter is intended to provide supplementary geologic design recommendations for the subject property. This letter should be considered as Addendum I to the Engineering Geology Assessment. All other recommendations in the above referenced report and letter should be followed. The General Conditions section of the geotechnical report applies to this letter.

The engineering geology assessment as presented in this letter report was conducted within the limits prescribed by our client, with the usual thoroughness and competence of the engineering geology profession in the area. No warranty or representation, either expressed or implied, is intended in our proposals, contracts, reports, or letters.

Closure

We appreciate the opportunity of providing our services on this project. If we can answer questions or be of further service, please call.

Respectfully; EARTHTEC ENGINEERING



Frank F. Namdar, P.G. Professional Geologist

Attachments: Appendix A

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Engineering Geology Assessment-Addendum I Lot 15, Ski Lake Estates No. 3 6640 East 1100 South Huntsville, Utah Job No. 145150

APPENDIX A



Test Pit 3- West side, middle of the trench.

PROJECT NO.: 145150G



PHOTO EXHIBIT 1



Extension of Test Pit 3- West side of sidewall.

PROJECT NO.: 145150G



PHOTO EXHIBIT 2



PROJECT NO.: 145150G



PHOTO EXHIBIT 3