

## Combined Geotechnical, Geological and Retaining Wall Review

Project: Nobs Hillside Review  
User: Alan Taylor  
Department: Taylor Geotechnical  
Created: 2015-09-08 16:35:46  
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### Notes

#### RETAINING WALL REVIEW

Based on the revised grading plan dated July 15, 2015, a seven foot tall rock retaining wall is proposed for the the south side of the driveway. Therefore, a retaining wall design by a professional engineer should be submitted for review. To date, no rock wall design has been submitted to Weber County for review.

#### GEOTECHNICAL REVIEW

Geologic review needs to be completed prior to completion of geotechnical review.

#### GEOLOGIC REVIEW

Please see attached review by Simon Associates dated August 28, 2015.

Comments and recommendations in this review are based on data presented in the subject reports and provided to aid Weber County in reducing risks from geotechnical hazards and to protect public health and safety. This review does not forego other items of concern that may come to the Weber County Engineering Department's attention during additional reviews or during construction of improvements. If you have any comments or questions concerning this review, feel free to contact Alan Taylor with Taylor Geotechnical at 801-400-9784 or Dana Shuler with Weber County.

### Files

Name	Size	Date Uploaded	Actions
Second Geo Review LTR Lot 15 Ski Lakes SA 8-28-15.pdf	2.25 MB	2015-09-08 16:37:20	<input type="button" value="Rename"/> <input type="button" value="Delete"/>

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August 28, 2015

Ms. Dana Shuler, P.E.  
Weber County Engineering Department  
2380 Washington Boulevard, Suite 240  
Ogden, Utah 84401

Subject: Second Geologic Review  
Lot 15 Ski Lakes Estates No. 3  
6640 East 1100 South Street  
Huntsville, Utah  
SA Project No: 15-142

Report: Engineering Geology Assessment-Addendum I, Lot 15, Ski Lake Estates No. 3,  
6640 East 1100 South, Huntsville, Utah (Job No, 145150), dated August 14, 2015:  
prepared for Mr. Marlin Nobs, 50 River Bluff Road, Elgin, IL 60120.

*Geologic Submittal Status:* **INCOMPLETE SUBMITTAL**

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Dear Ms. Shuler,

At your request, Simon Associates, LLC (SA) reviewed the above referenced August 14, 2015, Earthtec Engineering Inc. (EEI) addendum. The August 14, 2015, EEI addendum was submitted in response to:

SA Geologic Review, Lot 15 Ski Lakes Estates No. 3, 6640 East 1100 South Street, Huntsville, Utah (SA Project No: 15-142), dated August 6, 2015: prepared for Ms. Dana Shuler, P.E., Weber County Engineering Department, 2380 Washington Boulevard, Suite 240, Ogden, Utah 84401.

The August 6, 2015, SA review letter was submitted in response to:

Earthtec Engineering Inc. Report - Engineering Geology Assessment, Lot 15, Ski Lake Estates No.3, 6640 East 1100 South, Huntsville, Utah (EEI Job No, 145150), dated July 13, 2015, prepared for Mr. Marlin Nobs, 50 River Bluff Road, Elgin, IL 60120.

The July 13, 2015, EEI report was submitted in response to a May 29, 2015, SA project memorandum, written in response to a request from Weber County Engineering Department to evaluate whether or not the site is located in a geologically sensitive area. The May 29, 2015, SA memorandum was based on review of the following EEI report:

Report - Geotechnical Study, Lot 15 Ski Lake Estates No.3, 6640 East 1100 South, Huntsville, Utah, prepared by Earthtec Engineering Inc. (project no. 145150G), dated June 23, 2014, prepared for Mr. Martin Nabs, 50 River Bluff Road, Elgin, IL 60120.

The purpose of SA's review is to evaluate whether or not the EEI documents adequately address geologic conditions at the site, consistent with concerns for public health, safety, and welfare; reasonable professional standards-of-care, and; Weber County Hillside Development Review Procedures and Standards.

### **SA Conclusions and Recommendations**

Based on concerns for public health, safety, and welfare; reasonable professional standards-of-care, and; Weber County Hillside Development Review Procedures and Standards, SA recommends Weber County not consider the August 14, 2015, EEI addendum complete from a geologic perspective until the following are adequately addressed:

1. 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<sup>1</sup>.

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

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<sup>1</sup> 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 58, Chapter 76).

"Engineering geologist means a geologist who, through education, training and experience, is able to assure that geologic factors affecting 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 years 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.
2. Item 1 of the August 6, 2015, SA review letter stated: "EEI repeatedly refers to the various geologic hazards as 'relatively low,' SA recommends Weber County request EEI defines 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<sup>2</sup> defines the adverb "relatively" as "in comparison or relation to something else; not absolutely;" synonyms include comparatively, rather, somewhat, to some extent, and in or by comparison.

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<sup>2</sup> <http://www.collinsdictionary.com/dictionary/english>

If such is a "...typical term used by geologists 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," "moderate," or "high."

3. Item 2 of the August 6, 2015, SA review letter stated: "EEI uses terms such as 'appears' and 'may be.' 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 'may be.'"

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[s] 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 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.

4. 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 6-22-15. The photographs submitted with the August 14, 2015, EEI addendum were not annotated. SA recommends Weber County request annotated photographs of TP-5 and the extension of TP-3 excavated on 6-22-15.

## Closure

Comments and recommendations in this review are based on data presented in the referenced Consultant's report. SA accordingly provides no warranty that the data in the Consultant's report or any other referenced reports are correct or accurate. SA has not performed an independent site evaluation. Comments and recommendations presented herein are provided to aid Weber County in reducing risks from geologic hazards and to protect public health, safety, and welfare. There is no other warranty, either express or implied.

All services performed by SA for this review were provided for the exclusive use and benefit of Weber County; no other person or entity may or is entitled to use or rely upon any of the information or reports generated by SA as a result of this review. SA would be pleased to meet with Weber County and/or the Consultant, at a mutually convenient time, to discuss any of the issues presented herein.

This is the second review letter written for the project. In order to expedite the approval process and to clarify remaining issues, SA recommends Weber County consider a project meeting with the consultant and applicant to discuss the remaining issues prior to EEI submitting a response. In the meantime, should you have any questions, please feel free to contact the undersigned. The opportunity to be of service to Weber County is appreciated.

Very truly yours,

**SA**



David B. Simon, P.G.  
Principal Geologist



Dist: 1/addressee

## Engineering Review 3

Project: Nobs Hillside Review  
 User: Dana Shuler  
 Department: Weber County Engineering Division  
 Created: 2015-08-27 12:02:56  
 Modified: 2015-08-31 16:16:43

### Notes

The following review is a compilation of review comments and email correspondence. The format is:

#### 1. Engineering Review 2 comments

##### 1. Karl's response email (8/10/15)

1. My email response to Karl (8/17/15)
2. My response to current information (as of 8/27/15)

#### 1. Structural design and calculations must be provided for retaining walls 4' high and greater (per bldg code, height is measured from bottom of footing to top of wall).

1. Any retaining walls that are required to be taller than 4' will be staggered so that we are not exceeding 4' in height for any walls. As far as I can tell there is only one area at the South West of the driveway that may have possibly have 2 staggered retaining walls.

1. Tiered walls behave the same as a single wall so the same structural design requirements apply (Alan Taylor can correct me if I'm wrong). If you want to call out on the plans that the backyard wall is only 3' of exposed wall (with 1 foot to be keyed in), that will suffice, but design and calcs are required on the other walls. (Walls are measured from the bottom of the footings, that means the bottom of the keyed in rock.)
2. Sheet C1, detail 1: "Site Existing & Proposed Grade" (submitted on 08/19/2015) significantly differs from the grading plan prepared by Gardner Engineering (submitted on 07/20/2015). It appears notes were added to the grading plan dated 05/25/2015, which was deemed unacceptable per Engineering Review 1. Please reconcile drawings and provide retaining wall calculations where required.

#### 2. Recommend adding to building plans areas where sprinklers are not permitted, as per the Geotech Report.

1. There will be no sprinklers on this site period. But I can add a note to the site.

1. That would be great.
2. While the note was added, it was added to an unacceptable grading plan (see 1.1.2).

#### 3. The geotechnical report, addendum, and geology assessment will need to be recorded on the subject parcel.

1. How is this done and can it be done today?

1. Yes, just come by the Recorder's office, although, let's look to see exactly what pages need to be recorded and try to minimize that, as the cost of recording documents is on a per page basis.
2. I'd still like discuss what should be recorded.

#### 4. A landscaping plan is required to be submitted.

1. This site will have no landscaping so is a plan still required? It would basically be a site plan stating "The native vegetation will remain as undisturbed as possible". This house will sit much of the year and the owners want nothing to maintain in their absence.

1. I recommend adding the note. In addition, the site will need to be stabilized post-construction (a requirement of the SWPPP), recommend hydromulching/seeding with native seed mix or such.
2. Same as 2.1.2.

If you have any questions, please don't hesitate to contact me.

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