



## WEBER COUNTY PLANNING DIVISION

### Administrative Review Meeting Agenda

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**November 21, 2018**

**4:00 - 5:00 p.m.**

- 1. AAE 2018-09: Consideration and action on an alternative access application to extend the driveway in order to reduce its's slope. This will result in accessing the subject parcel (all of lot 23 in the Ogden Canyon Wildwood Estates Subdivision (FR-1) Zone. (Rick & Dylan Kearl, Applicant) Tammy Aydelotte, Presenter**
- 2. AAE 2018-10: Consideration and action on a two lot subdivision located at 4186 N 3175 W in Ogden, in the Agricultural (A-1) Zone. (Kevin Schildhauer, Applicant) Tammy Aydelotte, Presenter**
- 3. AAE 2018-10: Consideration and action on an alternative access application for a private access easement to provide access to four lots in a future subdivision located at 1075 N 7800 E in Huntsville, in the Agricultural Valley (AV-3) Zone. (Jeff Shepherd, Applicant) Steve Burton, Presenter**
- 4. UVH052218: Consideration and action on a request for approval of Hammons Ranch, a one lot subdivision, located at 2771 N Shaw Drive in Liberty, in the Agricultural Valley 3 (AV-3) Zone. (Jesse Hammons, Owner) Felix Lleverino, Presenter**
- 5. Adjournment**

*The meeting will be held in the Weber County, Breakout Room, in the Weber Center, 1st Floor, 2380 Washington Blvd., Ogden, Utah unless otherwise posted*



*In compliance with the American with Disabilities Act, persons needing auxiliary services for these meetings should call the Weber County Planning Commission at 801-399-8791*



# Staff Report for Administrative Approval

Weber County Planning Division

## Synopsis

### Application Information

**Application Request:** Consideration and action on an alternative access request to extend the driveway in order to reduce its slope. This will result in accessing the subject parcel (all of lot 23 in the Ogden Canyon Wildwood Estates subdivision) through the adjacent, front parcel (lot 15 of the same subdivision).

**Agenda Date:** Wednesday, November 21, 2018

**Applicant:** Rick & Dylan Kearn

**File Number:** AAE 2018-09

### Property Information

**Approximate Address:** 699 Ogden Canyon, Ogden, UT, 84401

**Project Area:** 4.66 Acres

**Zoning:** Forest Residential Zone (FR-1)

**Existing Land Use:** Vacant

**Proposed Land Use:** Residential

**Parcel ID:** 20-048-0009

**Township, Range, Section:** T6N, R1E, Section 17 SW

### Adjacent Land Use

<b>North:</b>	Residential	<b>South:</b>	Vacant
<b>East:</b>	Residential	<b>West:</b>	Residential

### Staff Information

**Report Presenter:** Tammy Aydelotte  
[taydelotte@co.weber.ut.us](mailto:taydelotte@co.weber.ut.us)  
801-399-8794

**Report Reviewer:** RG

## Applicable Land Use Codes

- Title 101 General Provisions, Section 7, Definitions
- Title 106, Subdivisions, Chapter 1-8 as applicable
- Title 104 (Zones) Chapter 13 (Forest Residential FR-1 Zone)
- Title 108 (Standards) Chapter 7 (Supplementary and Qualifying Regulations) Section 29 Flag lot access strip, private right-of-way, and access easement standards
- Title 108 (Standards) Chapter 7 (Supplementary and Qualifying Regulations) Section 31 Access to a lot/parcel using a private right-of-way or access easement

## Background

The planning Division recommends approval of an alternative access request to extend the driveway at 699 Ogden Canyon, Ogden. The purpose of this request is to reduce the slope of the driveway, by access the lot through the adjacent, front lot (parcel # 20-048-0001). The lot will have access from lot 15 of the same subdivision. An access easement will be recorded on lot 23. The proposal meets the criteria for consideration of access by a private right of way, and the lot has adequate width, area, and setbacks, as required in the Uniform Land Use Code of Weber County (LUC). The request for an alternative access has been thoroughly vetted and has received comments and/or approvals from all the applicable review agencies.

Alternative access applications such as this are reviewed and approved administratively by the Weber County Planning Director. It is essential to note that this request is an administrative application and is not a variance or an exception to the standards and criteria outlined in the Uniform Land Use Code of Weber County (LUC). The request conceptually meets the standards as outline in LUC §108-7-29 and meets the criteria for the request as required in LUC §108-7-31.

Alternative access applications should be approved as long as the design standards can be implemented during the development process. The application meets the criteria in LUC §108-7-31(1)(b) which states:

*“Based on substantial evidence, it shall be shown that it is unfeasible or impractical to extend a street to serve such lot/parcel. Financial adversity shall not be considered; however, circumstances that may support an approval of a private right-of-way/access easement as access to a lot/parcel may include but not be limited to unusual soil, topographic, or property boundary conditions.”*

## Analysis

**General Plan:** The General Plan for Ogden Valley is intended to preserve private property rights while also preserving the rural characteristics of the area. This proposal conforms to the Ogden Valley General Plan.

**Zoning:** The subject property is located in the Forest Residential Zone more particularly described as the FR-1 zone. The purpose and intent of the FR-1 zone is identified in the LUC §104-13-1 as:

*“The purpose of the forest residential zone is to provide area for residential development in a forest setting at a low density, as well as to protect as much as possible the naturalistic environment of the development.”*

The application has been forwarded to the applicable review agencies and based on the limited criteria and conditions that govern alternative access application and after a thorough review of the applicant’s proposal, staff feels that the applicant has provided adequate evidence to show that it is unfeasible or impractical to extend a street to serve such parcel due to topographic, or property boundary conditions. This determination is based on the review and analysis of the information provided by the applicant.

Prior to any further development considerations on this site, the applicant will have to provide a complete application that adheres to all Federal, State and County ordinances.

**Review Agencies:** *To date, the proposed alternative access has been approved by the Weber Fire District. The Weber County Engineer has made the request for a site plan with additional information, such as the dimensions of the proposed access. All review agency requirements must be addressed and completed prior to this alternative access being approved.*

**Tax Clearance:** *The 2017 property taxes have been paid in full. The 2018 taxes are will be due in full November 30, 2018.*

**Public Notice:** *A notice has been mailed not less than seven calendar days before final approval to all property owners of record within 500 feet of the subject property regarding the proposed small subdivision per noticing requirements outlined in LUC §106-1-6.*

## Staff Recommendation

Staff recommends final approval of an alternative access request to extend the driveway at 699 Ogden Canyon, Ogden. The purpose of this request is to reduce the slope of the driveway. This recommendation for approval is subject to all review agency requirements and the following conditions:

1. An access easement must be recorded on the adjacent, front lot (lot 15 of the Ogden Canyon Wildwood Estates, parcel # 20-048-0009).
2. The County Engineer has required that a hillside review be performed prior to further development on the subject lot.
3. The flag lot access strip, private right-of-way, or access easement shall be designed and built to a standard approved by the county engineer. The improved road surface does not require hard-surface paving, i.e., concrete or asphalt, but the improvements shall meet the standards in 108-7-29.

This recommendation is based on the following findings:

1. Based on substantial evidence, it has been found that it is unfeasible or impractical to extend a street to serve such lot/parcel at this time, based on topographic, and property boundary conditions which limits typical access requirements in a unique way.

## Administrative Approval

Administrative final approval of the Kearn Alternative Access, a proposal with the intent of lengthening the access through the adjacent, front lot in order to reduce the slope of the driveway.

Date of Administrative Approval: \_\_\_\_\_

\_\_\_\_\_  
Rick Grover  
Weber County Planning Director

## Exhibits

- A. Map of Location and Current Parcel Arrangement
- B. Site Plan
- C. Alternative Access Application and Narrative
- D. Recorded Access Easement

### Exhibit A-Location map and Current Parcel Arrangement

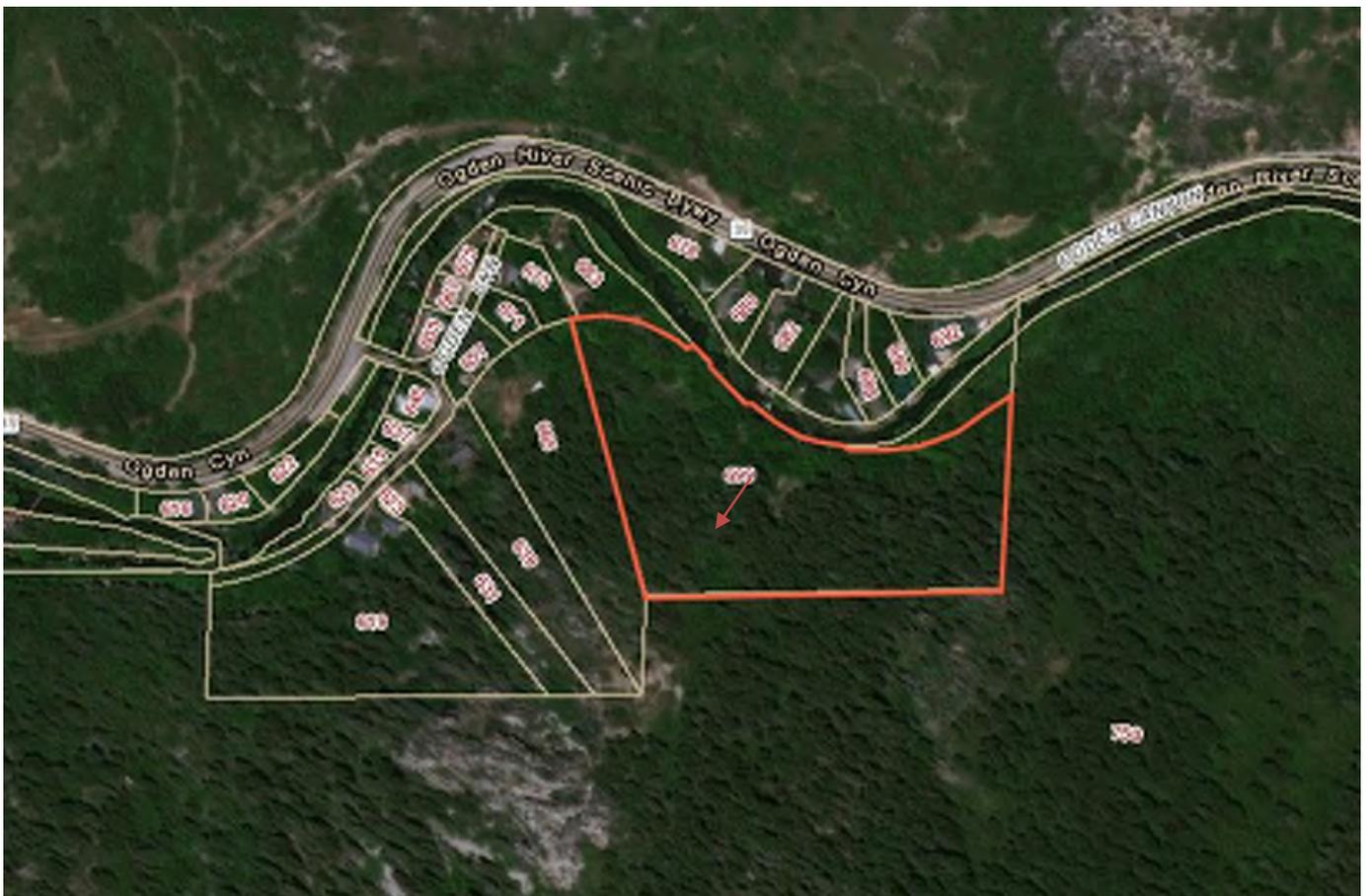
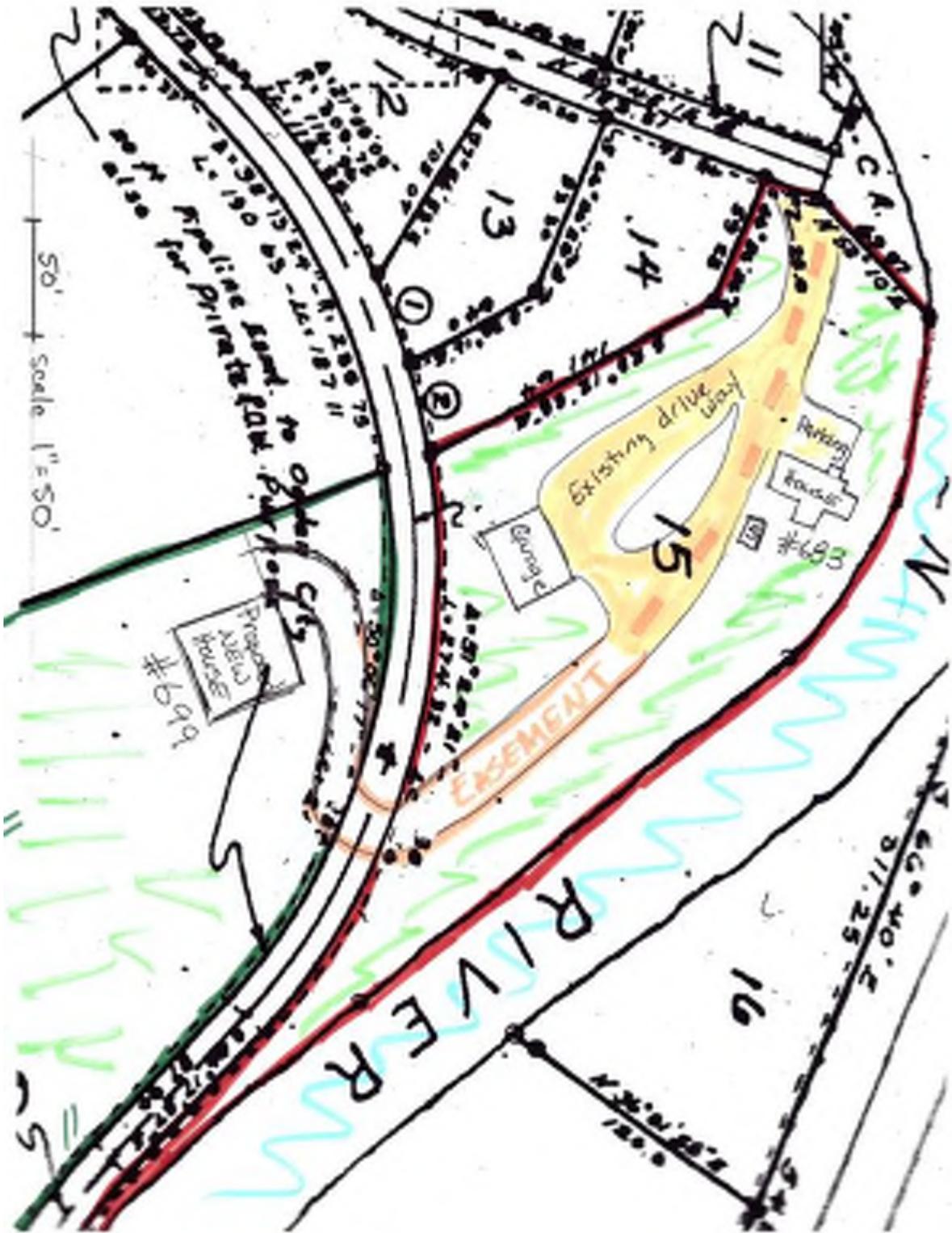


Exhibit B - Site Plan



**Exhibit C - Alternative Access Application**

<b>Weber County Alternative Access Application</b>			
Application submissions will be accepted by appointment only. (801) 399-8791, 2330 Washington Blvd. Suite 240, Ogden, UT 84401			
Date Submitted /Completed 10-1-2018	Application Fee: <b>\$350.00</b>	Receipt Number (Office Use)	File Number (Office Use)
<b>Application Type</b>			
<input type="checkbox"/> Flag lot access strip <input checked="" type="checkbox"/> Access by Private Right of Way <input type="checkbox"/> Access at a location other than across the front lot line			
<b>Property Owner Contact Information</b>			
Name of Property Owner(s) Rick + Dylan Keard		Mailing Address of Property Owner(s) 699 Ogden Canyon Ogden, UT 84401	
Phone 801-628-8201	Fax N/A		
Email Address (required) rick@ospreyutah.com		Preferred Method of Written Correspondence <input checked="" type="checkbox"/> Email <input type="checkbox"/> Fax <input type="checkbox"/> Mail	
<b>Authorized Representative Contact Information</b>			
Name of Person Authorized to Represent the Property Owner(s) N/A		Mailing Address of Authorized Person	
Phone	Fax		
Email Address (required)		Preferred Method of Written Correspondence <input type="checkbox"/> Email <input type="checkbox"/> Fax <input type="checkbox"/> Mail	
<b>Property Information</b>			
Project Name Keard Alternative Access	Total Acreage 4.66	Current Zoning FR-1	
Approximate Address 699 Ogden Canyon	Land Serial Number(s) 20-048-0009		
Proposed Use Single Family Home			
Project Narrative (assessor) to grant to Rick + Dylan Keard an easement for egress and ingress to parcel # 20-048-0009 aka 699 Ogden Canyon, Ogden. Topography of current frontage makes access impractical and unsafe. Alternative access allows for a lesser slope and wider turning <del>width</del> radius. The slope reduces from over 10% to under 7%. The turn reduces from 180° to 90° with a wider turning radius.			

**Basis for Issuance of Access to a lot/parcel at a location other than across the front lot line**

Access to lots/parcels at a location other than across the front lot line may be approved as the primary access, subject to the following criteria:

Sec. 208-7.02 - Access to a lot/parcel at a location other than across the front lot line.

- (1) The applicant demonstrates that special or unique boundary, topographic, or other physical conditions exist which would cause an undesirable or dangerous condition to be created for property access across the front lot line.
- (2) It shall be demonstrated that appropriate and legal access exists due to historic use, court decree, or the execution of an easement, right-of-way, or other instrument capable of conveying or granting such right.

Please provide the following information to support your request for Access to a lot/parcel at a location other than across the front lot line:

- Attach proof that appropriate and legal access exists due to historic use, court decree, or the execution of an easement, right-of-way, or other instrument capable of conveying or granting such right.
- The landowner of record or authorized representative agrees to pay a proportionate amount of the costs associated with developing a street if, at any time in the future, the County deems it necessary to have the landowner replace the private right-of-way/easement with a street that would serve as a required access to additional lots. The agreement shall be in the form considered appropriate and acceptable to the office of the Weber County Recorder and shall recite and explain all matters of fact, including a lot/parcel boundary description, which are necessary to make the agreement intelligible and show its successive nature.

**Property Owner Affidavit**

I (We) Richard & Dyan Karch, depose and say that I (we) am (are) the owner(s) of the property identified in this application and that the statements herein contained, the information provided in the attached plans and other exhibits are in all respects true and correct to the best of my (our) knowledge. I (We) understand that an approval of an alternative access application does not grant a legal right to access property that I (we) currently do not own.

[Signature] Property Owner [Signature] Property Owner

Subscribed and sworn to me this 1st day of October, 2011

[Signature] Notary

**Authorized Representative Affidavit**

I (We) \_\_\_\_\_, the owner(s) of the real property described in the attached application, do authorize as my (our) representative(s), \_\_\_\_\_, to represent me (us) regarding the attached application and to appear on my (our) behalf before any administrative or legislative body in the County considering this application and to act in all respects as our agent in matters pertaining to the attached application.

\_\_\_\_\_  
Property Owner \_\_\_\_\_ Property Owner

Dated this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, personally appeared before me \_\_\_\_\_, the signer(s) of the Representative Authorization Affidavit who duly acknowledged to me that they executed the same.

\_\_\_\_\_  
Notary



topographic, or property boundary conditions. This determination is based on the review and analysis of the information provided by the applicant.

Prior to any further development considerations on this site, the applicant will have to provide a complete application that adheres to all Federal, State and County ordinances.

*Review Agencies: To date, the proposed subdivision has been approved by the Weber County Engineer, Weber-Morgan Health Department, Weber County Surveyor, as well as the Weber Fire District. All review agency requirements must be addressed and completed prior to this subdivision being recorded.*

*Tax Clearance: The 2017 property taxes have been paid in full. The 2018 taxes are will be due in full November 30, 2018.*

*Public Notice: A notice has been mailed not less than seven calendar days before final approval to all property owners of record within 500 feet of the subject property regarding the proposed small subdivision per noticing requirements outlined in LUC §106-1-6.*

## Staff Recommendation

Staff recommends approval of the Schildhauer Subdivision, a two lot subdivision, consisting of 2.58 acres. This recommendation is subject to all review agency requirements, and based on the following findings:

1. The proposed subdivision conforms to the Ogden Valley General Plan.
2. With the recommended conditions, the proposed subdivision complies with all previous approvals and the applicable County ordinances.

## Administrative Approval

Administrative final approval of an alternative access as the primary access for parcel # 23-007-0003 is hereby granted based upon its compliance with the Weber County Land Use Code. This approval is subject to the requirements of applicable review agencies and the conditions of approval listed in this staff report.

Date of Administrative Approval: Wednesday, November 21, 2018

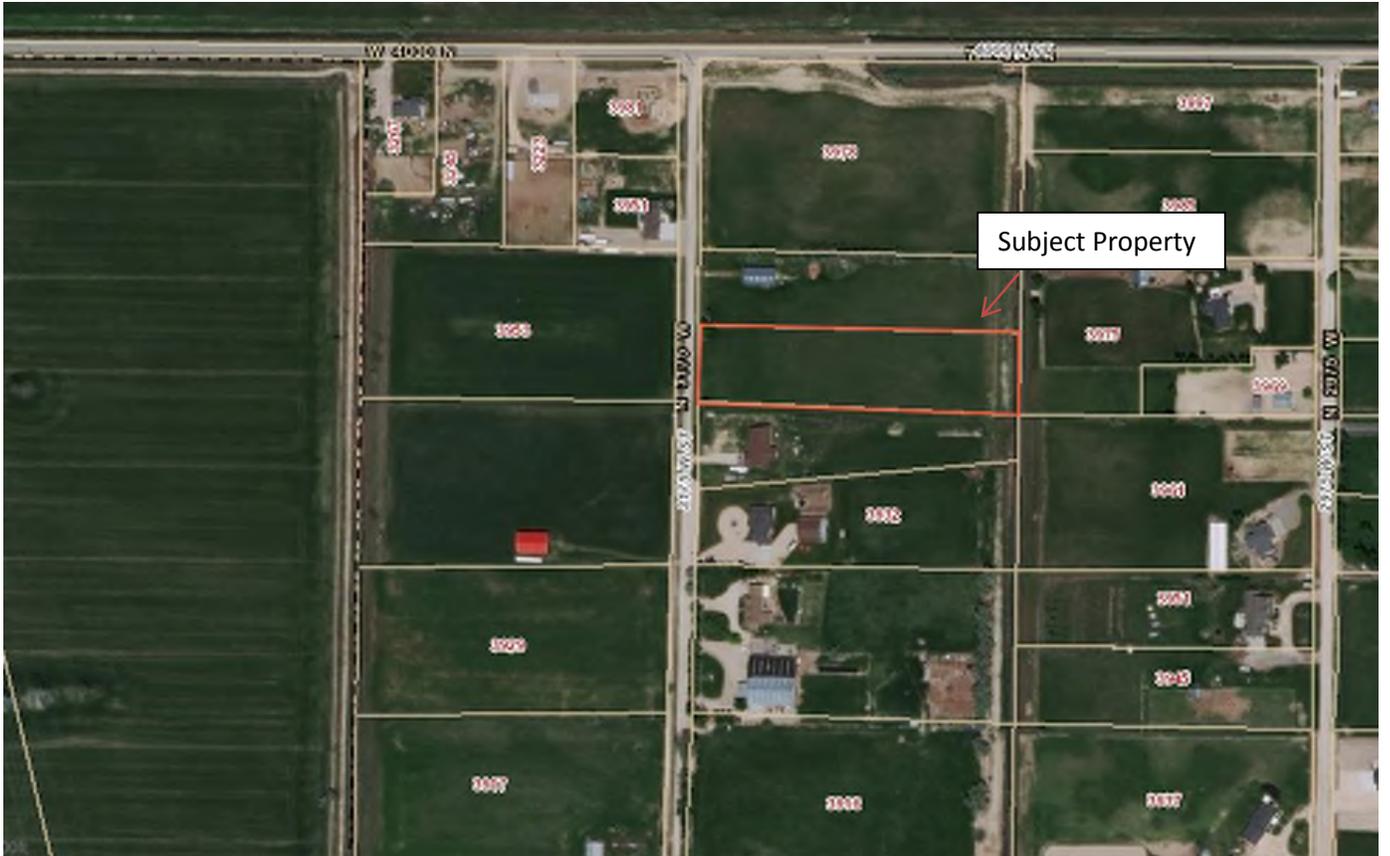
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Rick Grover  
Weber County Principal Planner

## Exhibits

- A. Map of Location
- B. Application and Narrative
- C. Proposed Plat

Exhibit A-Location map



**Exhibit B-Application & Narrative**

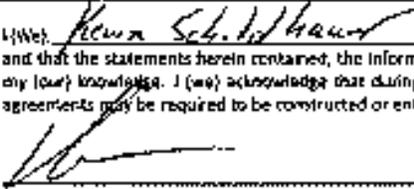
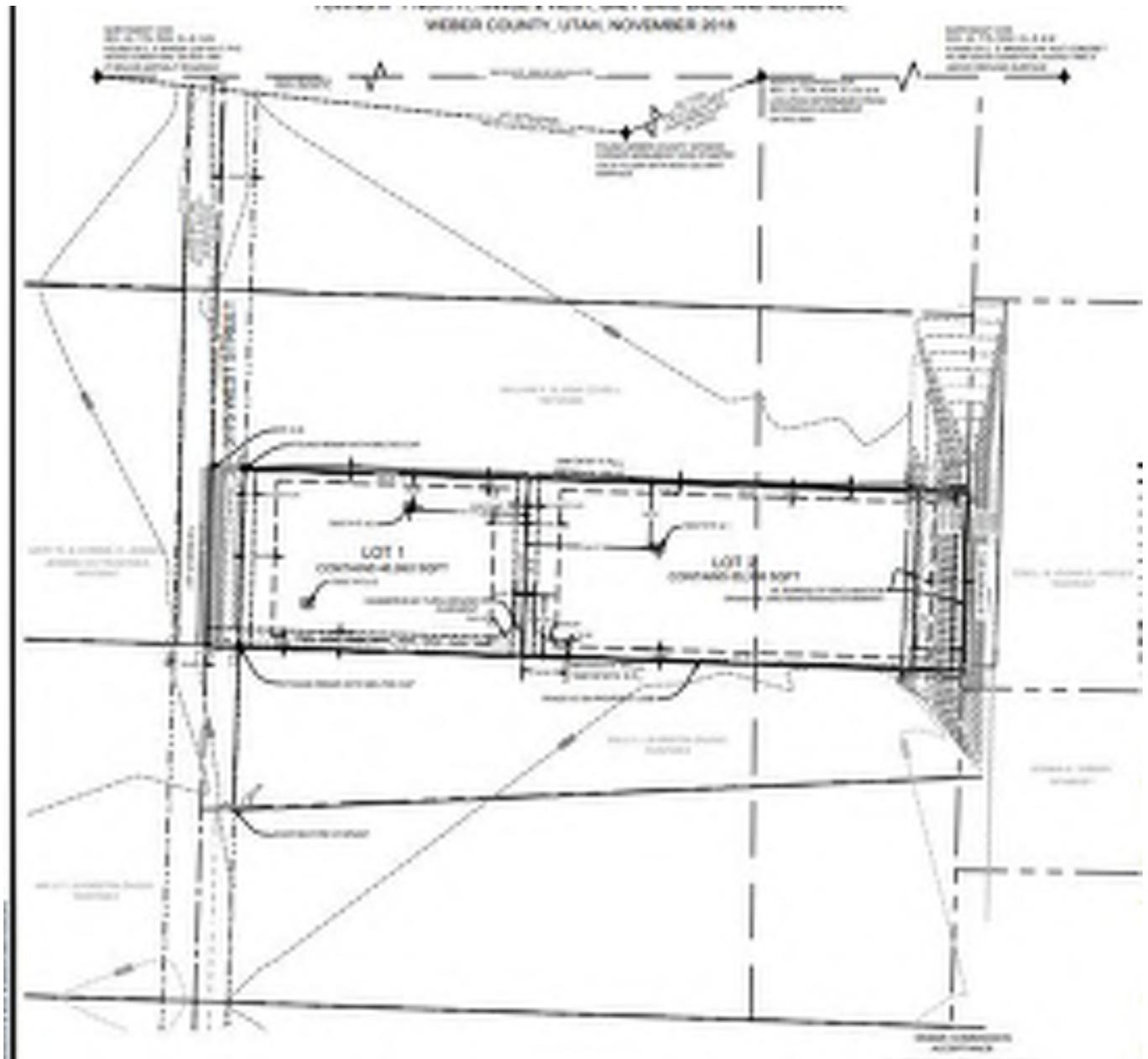
<b>Weber County Subdivision Application</b>			
All subdivisions submittals will be accepted by appointment only. (801) 399-8791. 2380 Washington Blvd. Suite 240, Ogden, UT 84407			
Date Submitted / Completed	Fees (Office Use)	Receipt Number (Office Use)	File Number (Office Use)
<b>Subdivision and Property Information</b>			
Subdivision Name <b>Schildhauer Subdivision</b>			Number of Lots <b>2</b>
Approval Address <b>4186 N 3175W</b>		Land Serial Number(s) <b>EXIDEA LOT 84424 190100086</b>	
Current Zoning <b>A1</b>	Total Acreage <b>2.58</b>		
Primary Water Provider <b>Bona Vista</b>	Secondary Water Provider	Wastewater Treatment <b>Septic</b>	
<b>Property Owner Contact Information</b>			
Name of Property Owner(s) <b>Kevin Schildhauer</b>		Mailing Address of Property Owner(s)	
Phone <b>208-286-8974</b>	Fax		
Email Address <b>K.Schildhauer@yachoo.com</b>		Preferred Method of Written Correspondence <input checked="" type="checkbox"/> Email <input type="checkbox"/> Fax <input type="checkbox"/> Mail	
<b>Authorized Representative Contact Information</b>			
Name of Person Authorized to Represent the Property Owner(s)		Mailing Address of Authorized Person	
Phone	Fax		
Email Address		Preferred Method of Written Correspondence <input type="checkbox"/> Email <input type="checkbox"/> Fax <input type="checkbox"/> Mail	
<b>Surveyor/Engineer Contact Information</b>			
Name or Company of Surveyor/Engineer <b>Klint Whitney / Gardner Engineering</b>		Mailing Address of Surveyor/Engineer <b>5150 S. 375 E Washington Terrace UT 84405</b>	
Phone <b>801 474-0202</b>	Fax		
Email Address <b>Klint@geclivt.com</b>		Preferred Method of Written Correspondence <input checked="" type="checkbox"/> Email <input type="checkbox"/> Fax <input type="checkbox"/> Mail	
<b>Property Owner Affidavit</b>			
<p>I (we) <u>Kevin Schildhauer</u> do hereby depose and say that I (we) am (are) the owner(s) of the property identified in this application and that the statements herein contained, the information provided in the attached plans and other exhibits are in all respects true and correct to the best of my (our) knowledge. I (we) acknowledge that during the subdivision review process, it may be determined that additional requirements, covenants and/or agreements may be required to be constructed or entered into.</p>			
 _____ (Property Owner)		_____ (Property Owner)	
Subscribed and sworn to me this _____ day of _____ 20____			
			[Notary]

Exhibit C-Proposed Plat





# Staff Report for Administrative Approval

Weber County Planning Division

## Synopsis

### Application Information

**Application Request:** Consideration and action on an alternative access application for a private access easement to provide access to four lots in a future subdivision.

**Agenda Date:** Wednesday, November 21, 2018

**Applicant:** Jeff Shepherd

**File Number:** AAE 2018-10

### Property Information

**Approximate Address:** 1075 N 7800 E, Huntsville

**Project Area:** 28 acres

**Zoning:** Agricultural Valley (AV-3) Zone

**Existing Land Use:** Agriculture

**Proposed Land Use:** Residential/Agriculture

**Parcel ID:** 21-006-0011, 21-006-0013, 21-006-0030, 21-006-0031, 21-006-0032

**Township, Range, Section:** T6N, R2E, Section 7

### Adjacent Land Use

<b>North:</b> Residential	<b>South:</b> Agricultural/Residential
<b>East:</b> Agricultural/Residential	<b>West:</b> Agricultural/Residential

### Staff Information

**Report Presenter:** Steve Burton  
sburton@co.weber.ut.us  
801-399-8766

**Report Reviewer:** RG

## Applicable Land Use Codes

- Title 104 (Zones) Chapter 6 (Agricultural Valley Zone)
- Title 108 (Standards) Chapter 7 (Supplementary and Qualifying Regulations) Section 31 (Access to a lot/parcel using a private right-of-way or access easement)

## Background

The applicant is requesting approval for a private access easement to access four lots in a future subdivision. The applicant has cited unusual soil conditions as reasons why it is unfeasible and impractical to extend a fully improved road to serve the future lots. The applicant is proposing to dedicate and improve a road that goes west as a future connection to 7100 East. The proposed access easement would extend to the north, off of the new public road, to provide access to the four lots. The following is staff's analysis of the proposal.

## Analysis

LUC §108-7-31 outlines the following criteria that must be met for an alternative access approval:

*Based on substantial evidence, it shall be shown that it is unfeasible or impractical to extend a street to serve such lot/parcel. Financial adversity shall not be considered; however, circumstances that may support an approval of a private right-of-way/access easement as access to a lot/parcel may include but not be limited to unusual soil, topographic, or property boundary conditions.*

The applicant has included a narrative (Exhibit A) explaining how the property meets the described criteria. The narrative describes soil conditions such as a high water table on the south 10 acres of the property that prohibits septic systems in that area, requiring the applicant to have the building lots located to the north. Due to the described conditions and lot configurations, staff considers the requirement to extend a road to serve the four lots to be unfeasible at this time.

Although the applicant has proposed approval of the access easement to access four lots, it is recommended that approval only be granted for two lots. This is because lots 4 and 5 (north end) both have adequate frontage along 1075 N Street.

LUC §108-7-31 outlines the following condition that must be met as part of alternative access approval:

*The landowner of record or authorized representative shall agree to pay a proportionate amount of the costs associated with developing a street if, at any time in the future, the county deems it necessary to have the landowner replace the private right-of-way/easement with a street that would serve as a required access to additional lots. The agreement shall be in the form considered appropriate and acceptable to the office of the Weber County Recorder and shall recite and explain all matters of fact, including a lot/parcel boundary description, which are necessary to make the agreement intelligible and show its successive nature.*

The access easement must meet the design standards outlined LUC §108-7-29(1), (2), and (3) prior to issuance of a certificate of occupancy on any home that will gain access from the access easement.

Review Agencies: The applicant will be required to comply with all review agency requirements prior to issuance of a certificate of occupancy on any home that will gain access from the access easement. To date the Weber Fire District has approved of the proposal. The requirements of the Engineering Division must also be met, as a condition of approval.

**Staff Recommendation**

Staff recommends approval of AAE 2018-10, to provide access by private access easement to lots 2 and 3 in a future subdivision, as shown on the concept plan included as exhibit B. The recommendation for approval is subject to review agency requirements and the following conditions:

1. The access easement shall comply with the design, safety, and parcel/lot standards, as outlined in LUC §108-7-29.
2. The applicant shall agree to file the required alternative access covenant, as outlined in LUC §108-7-31, prior to the recording of the future subdivision.

Approval is based on the following findings:

1. The applicant has demonstrated that extending a fully improved road to serve two lots is not feasible or practical due to soil conditions.

**Administrative Approval**

Administrative approval of Shepherd Alternative Access (AAE 2018-10) is hereby granted based upon the conditions and findings listed in this staff report.

Date of Administrative Approval: \_\_\_\_\_

\_\_\_\_\_  
Rick Grover  
Planning Director

**Exhibits**

- A. Narrative
- B. Concept Plan



10/19/18

To Whom It May Concern:

We have recently purchased a 28.33 acre piece of property in the Middle Fork area of Ogden Valley and hope to subdivide it into four 5.25 + acre building lots for our personal residence as well as the homes of three of our children, and a final parcel that is not approved for building due to a high ground water table. We are hoping to create a somewhat private community with large acreage lots with an easement that will only access our properties (will not be a through road).

We completed water table monitoring, percolation and soil testing and geothermal testing over last winter/spring and it was determined at that time that we have a high water table on roughly the south 10 acres that prohibits septic systems in that area. The remaining 18 acres gradually slopes up with the water table going deeper the further north you go on the property. The further North the four homes can be built on the property the lower the risks of having issues with ground water both for the homes themselves and the septic systems that will need to be put in.

We originally submitted a proposed layout with a different road design that was requesting approval for 7 smaller lots, but with the ground water issues we have since decided we would like to keep the number of homes to a minimum and keep the density low thus maintaining the open country feel of the area and avoid the high ground water area. This required the access layout that we are currently proposing.

By using an alternative access road verses a private or public road, we will be able to move both the homes and the septic systems further to the north away from the high water table on the south end. If we have to dedicate property for a private or public road, it will push the two south lots further south. Plus the setbacks for the homes on a private or public road with a turnabout would again push the homes/septic systems even further into the wet zone.

Our access to the property is at the far south end thus requiring a fairly long road through the wet south end to access the buildable portion of the property. Again, we hope to use a smaller road through that area with fire department approved turn arounds and bump outs to have minimal impact through that high water table area and property.

We greatly appreciate your consideration of our request and look forward to hearing back from you soon.

Thank you.





# Staff Report to the Weber County Planning Division

Weber County Planning Division

## Synopsis

### Application Information

**Application Request:** Consideration and action on a request for approval of Hammons Ranch, a one lot subdivision.

**Agenda Date:** Wednesday, November 21, 2018

**Applicant:** Jesse Hammons, owner

**File Number:** UVH 052218

### Property Information

**Approximate Address:** 2771 N Shaw Drive

**Project Area:** 14 Acres

**Zoning:** Agricultural Valley 3 (AV-3)

**Existing Land Use:** Vacant

**Proposed Land Use:** Residential

**Parcel ID:** 22-004-126, 22-004-0123

**Township, Range, Section:** T7N, R1E, Section 7

### Adjacent Land Use

<b>North:</b> Forest	<b>South:</b> Residential/Forest
<b>East:</b> Forest	<b>West:</b> Residential/Forest

### Staff Information

**Report Presenter:** Felix Lleverino  
flleverino@co.weber.ut.us  
801-399-8767

**Report Reviewer:** SB

## Applicable Land Use Codes

- Title 101 (General Provisions) Chapter 1 (Definitions)
- Title 104 (Zones) Chapter 6 (Agricultural Valley Zone, AV-3)
- Title 104 (Zones) Chapter 28 (Ogden Valley Sensitive Lands Overlay District)
- Title 106 (Subdivisions) Chapter 1 (General Provisions) Section 8 (Final Plat Requirements)
- Title 108 (Standards) Chapter 22 (Natural Hazard Areas)

## Background and Summary

The applicant is requesting approval of a one lot subdivision that fronts directly on Shaw Drive. This 14-acre lot is currently vacant with a mix of grassland and forest land on which the owner plans to build a home on the southeast corner of the property. There is an area along Shaw Drive that will be dedicated to the county following the administrative approval meeting. The property is located in the Agricultural Valley AV-3 Zone at approximately 2771 N Shaw Drive, Liberty.

As part of the approval process, the proposal has been reviewed against the current Weber County Land Use Code (LUC), and the standards of the FV-3 zone found in LUC §104-14. The following section is a brief analysis of this project against current land use regulations.

## Analysis

**General Plan:** This proposal is in conformity with Ogden Valley General Plan (OVGP) by encouraging low-density development that preserves open space (see page 21 of the OVGP).

**Zoning:** The property is located in the AV-3 Zone. The purpose of this zone is stated in the LUC §104-6-1.

*"The purpose of the AV-3 Zone is to designate farm areas, which are likely to undergo a more intensive urban development, to set up guidelines to continue agricultural pursuits, including the keeping of farm animals, and to direct orderly low-density residential development in a continuing rural environment."*

**Small Subdivision:** "The planning Director is delegated administrative authority to approve small subdivisions if in his discretion there are no conditions which warrant its submittal to the planning commission LUC §106-1-8 (f)." This proposal qualifies as a small subdivision consisting of three or fewer lots for which no new streets are being created or realigned.

**Natural Hazards:** A Geologic Reconnaissance has been prepared by GCS Geoscience dated November 28, 2017, File No. 2017.44. The County Interactive geologic map indicates the presence of the Ogden Valley North Fork fault on the west side of the lot. Page 6 of the geologic reconnaissance states that this is not considered an active fault due to the fact that "movement on this fault has not displaced overlying Pleistocene age deposits." Page 9 of the investigation states that "During our reconnaissance no conditions of active geologic hazards or ongoing processes we observed on the site." The report also stated that "parts of the western side of the site, include steep slope areas, greater than 25 percent, that should be avoided for the placement of dwelling structures. Cuts and fills for access roadways on the sloping areas should be designed conservatively to minimize erosion and oversteepened slopes. It is our opinion that the proposed home site location is shown in Figure 2 and Figure 4 is suitable for the proposed development." Page 9 of the geologic reconnaissance recommends that; 1) A site-specific geotechnical engineering and groundwater study be considered for the home-site design and construction and 2) minimally we recommend that a licensed geotechnical Engineer observe the foundation excavations prior to setting the footings of the proposed structure" because of the presence of groundwater and subsurface soils conditions. The recommendations of the geologic hazard report are included as a condition of approval.

**Flood Zone:** This parcel is within an area of minimal flood hazard and determined to be outside the 500-year flood level.

**Culinary Water:** Liberty Pipeline Company has provided the applicant with a letter stating the availability of culinary water to serve Hammons Ranch Subdivision.

**Sanitary System:** Weber-Morgan Health Department has provided a feasibility letter stating that the site and soils evaluation has been completed and the property has been found suitable for the placement of an onsite waste-water disposal system.

**Review Agencies:** The Weber County Fire District has posted a required fire suppression measure that includes the placement of a fire hydrant. Weber County Engineering has required that a drainage easement is shown on the plat and that if the owner plans to build a driveway across the drainage, an engineered crossing with a culvert is constructed. Weber County Planning Division has posted reviews that will be addressed by a revised plat.

**Public Notice:** Noticing was provided to all property owners of record within 500 feet of the subject property.

## Staff Recommendation

Staff recommends final plat approval of Hammons Ranch Subdivision, consisting of 1 lot. This recommendation is based on the following conditions:

1. Prior to recording the final Mylar, all applicable Weber County reviewing agency requirements shall be met.
2. The County Commission will approve of the road dedication and sign the Mylar prior to recording.
3. All recommendation of the geologic hazard report must be followed.
4. A deferral for curb, gutter, and sidewalk shall be entered into by the owner.

This recommendation is based on the following findings:

1. The proposed subdivision conforms to the Ogden Valley General Plan.
2. The proposed subdivision complies with the applicable County codes.

## Administrative Approval

Administrative final approval of Hammons Ranch Subdivision, consisting of 1 lot, is hereby granted based upon its compliance with the Weber County Land Use Code. This approval is subject to the requirements of applicable review agencies and the conditions of approval listed in this staff report.

Date of Administrative Approval: \_\_\_\_\_

\_\_\_\_\_  
Rick Grover  
Weber County Planning Director

## Exhibits

- A. Hammons Ranch Subdivision Plat
- B. Current Recorders Plat
- C. Health Department feasibility letters
- D. Culinary water will-serve letter from Liberty Pipeline
- E. Geologic Reconnaissance







BRIAN W. BENNION, M.P.A., I.F.H.S.  
Health Officer/Executive Director

May 16, 2018



Weber County Planning Commission  
2380 Washington Blvd.  
Ogden, UT 84401

RE: Jesse Hammons  
2750 W. Shaw Drive  
Parcel #22-004-0126  
Soil log #14365

Gentlemen:

An evaluation of the site and soils at the above-referenced address was completed by staff of this office on May 26, 2016. The exploration pit (s) is located at the referenced GPS coordinate and datum. The soil texture and structure, as classified using the USDA system, are as follows:

Exploration Pit #1 (UTM Zone 12T, Nad 83, 426219N 4578721E)	
0-31"	loam, granular structure, 10% gravel
31-62"	silt loam, weak granular structure, 5% gravel
62-130"	gravely silt loam, massive structure, 45% gravel

Exploration pits should be backfilled immediately upon completion to prevent a hazardous environment that may cause death or injury to people or animals.

#### DESIGN REQUIREMENTS

Culinary water will be provided by Cole Canyon Water Improvement District, an extension of an existing approved non-community water system. **A letter from the water supplier is required prior to issuance of a permit.**

Anticipated ground water tables not to exceed 48 inches, fall within the range of acceptability for the utilization of a Conventional Wastewater Disposal System as a means of wastewater disposal. Maximum trench depth is limited to 24 inches. The absorption system is to be designed using a maximum loading rate of 0.45 gal/sq. ft. /day as required for the silt loam, granular structure soil horizon.

Plans for the construction of any wastewater disposal system are to be prepared by a Utah State certified individual and submitted to this office for review prior to the issuance of a Wastewater Disposal permit.

All subdivision plats submitted for review are to show the location of exploration pits and percolation tests as well as the documented soil horizons and percolation rates. Mylars submitted for signature without this information will be returned.

Each on-site individual wastewater disposal system must be installed in accordance with R317-4, Utah Administrative Code, Individual Wastewater Disposal Systems and Weber-Morgan District Health Department Rules. Final approval will be given only after an on-site inspection of the completed project and prior to the accomplishment of any backfilling.

Please be advised that the conditions of this letter are valid for a period of 18 months. At that time the site will be re-evaluated in relation to rules in effect at that time.

Sincerely,

Brett Bunderson, LEHS  
Environmental Health Division  
801-399-7160

EDUCATE | ENGAGE | EMPOWER

phone: 801-399-7160 | fax: 801-399-7110 | 477 23rd Street, Ogden, UT 84401 | [www.webermorganhealth.org](http://www.webermorganhealth.org)



**Liberty Pipeline Company**  
**PO Box 1200, Eden Ut 84310**  
**801-745-2088**  
**Jodi@LibertyPipelineCompany.com**  
**www.LibertyPipelineCompany.com**

June 14, 2018

Weber Planning Commission  
2380 Washington Blvd.  
Ogden Utah 84401

RE: Will serve

To whom it may concern;

This letter is to act as verification that culinary water is available from Liberty Pipeline Company for Parcel ID 22-004-0126 owned by Jesse Hammons.

There is a Liberty Pipeline monthly usage base fee of \$30.00 and a onetime meter fee of \$430.00.

If further information or verification is needed, please call Jodi Davis at 801-745-2088.

Thank you,

A handwritten signature in black ink, appearing to read 'Jodi Davis', with a horizontal line extending to the right.

Jodi Davis  
Secretary/Treasurer

## **GCS Geoscience**

**Report Professional Geologist Site  
Reconnaissance and Review  
Hammons Subdivision Project  
7.003 Acre Parcel #22-004-0126 and  
7.002 Acre Parcel #22-004-0123  
Includes Parts of Sec. 7, T 7 N., R 1 E., SLBM  
Liberty, Weber County, Utah**

For:

Mr. Jesse Hammons  
6422 North Fork Road  
Liberty, Utah  
84310

By:

GCS Geoscience  
554 South 7700 East Street  
Huntsville, Utah 84317

November 28, 2017  
GCS File No: 2017.44

## GCS Geoscience

554 South 7700 East Street  
Huntsville, Utah 84317  
d) 801 745 0262  
m) 801 458 0207

November 28, 2017  
File No: 2017.44

Mr. Jesse Hammons  
6422 North Fork Road  
Liberty, Utah  
84310

Attn: Mr. Hammons

**Subject: Report**  
**Professional Geologist Site Reconnaissance and Review**  
**Hammons Subdivision Project**  
**7.003 Acre Parcel #22-004-0126 and**  
**7.002 Acre Parcel #22-004-0123**  
**Includes Parts of Sec. 7, T 7 N., R 1 E., SLBM**  
**Liberty, Weber County, Utah**

In response to your request, GCS Geoscience (GCS) has prepared this Professional Geologist site reconnaissance review report for the above referenced site. The subject parcels consist of an approximately 14.005 acre property located in the Liberty Area in Weber County, Utah, as shown on attached Figure 1, Vicinity Map. Figure 2 provides aerial coverage of the site and detail of the current (2014) layout of the site vicinity. The subject parcels consist of two adjoining properties, 7.003 acres and 7.002 acres in area. The two properties are a presently undeveloped, and are being used for agricultural purposes. The subject parcels and surrounding properties are currently zoned by Weber County as either Agricultural Valley AV-3 or as Forest Valley Zone FV-3. The entirety of Parcel #22-004-0126 lies within the AV-3 Zone, and Parcel #22-004-0123 lies within both AV-3 and FV-3 zones. According to the Weber County Code of Ordinances *the purpose of the AV-3 Zone is to designate farm areas, which are likely to undergo a more intensive urban development, to set up guidelines to continue agricultural pursuits, including the keeping of farm animals, and to direct orderly lowdensity residential development in a continuing rural environment. The purpose of the Forest Valley Zone, FV-3 is to provide area for residential development in a forest setting at a low density, as well as to protect as much as possible the naturalistic environment of the development.* Excluding cluster provisions, the minimum lot size for the two zoning classifications is 3.0 acres.

It is our understanding you intend to subdivide both parcels into single-lot subdivision parcels for, single family residential development lots. At this time we understand that you intend to construct a residential structure (dwelling) on the south parcel (#22-004-123), within an approximately 0.44 acre area shown as "Proposed Homesite Location" on Figure 2. We expect that the residential construction will be typical and consist of a

single-family residence structure, likely to be constructed with a basement level and supported on conventional spread and strip footings. Above grade levels will consist of wood frame construction one to three levels in height. Projected site grading is anticipated to consist primarily of cutting into the existing ground to construct the residence, with very little fill projected for the site.

Because the proposed site appears to be located on a hillside area in the vicinity of mapped landslide hazards, marginal soils, and FEMA floodplain areas, Weber County is requesting that a geological site reconnaissance be performed to assess whether all or parts of the parcel are exposed to the hazards that are included in the Weber County Code, Section 108-22 Natural Hazard Areas. These hazards include, but are not limited to: Surface-Fault Ruptures, Landslide, Tectonic Subsidence, Rock Fall, Debris Flows, Liquefaction Areas, Flood, or other Hazardous Areas (Weber County Code, 2017).

The purpose of this **Professional Geologist Site Reconnaissance Review** is to evaluate if the proposed development is outside or within areas identified as Natural Hazards Overlay District, and if within a hazard area, to recommend appropriate additional studies that comply with the purpose and intent of the Weber County Natural Hazards Area guidelines and standards in order to be "cleared" for building permit issuance by the county, as outlined by the Weber County Development Process packet as provided by the Weber County Building Inspection Department (Weber County Inspection, 2017).

#### **Literature and Resource Review**

To evaluate the potential exposure of building sites to geological hazards that may impact sites or site improvements, Weber County has compiled a series of Geographic Information Systems (GIS) data mapping layers of geological hazard related information. These data may be queried on-line using the Weber County Geo-Gizmo web server application at <http://www.co.weber.ut.us/gis/maps/gizmo/>. Using the Geo-Gizmo application, under the Engineering Layers category is listed geological hazard related layers that may be toggled on and off to determine potential hazards exposure to sites in the county. These mapping layers include the following categories; *Quake Epicenters, FEMA Flood Zone Line, FEMA Base Flood Elevation, Wasatch Faults, Landslide Scarps, Geologic Faults, Faults, Quaternary Faults, FEMA Flood Zone, FEMA LOMR, Liquefaction Potential, Landslide, FEMA Letters of Map Change, and FEMA Flood Zones*. These layers have been compiled from the respective agencies including the Federal Emergency Management Agency (FEMA), the Utah Geological Survey (UGS), and the U.S. Geological Survey (USGS). These mapping layers consist of regional compilation hazards data, but are not compiled at scales that are necessarily relevant for site specific usage. When hazard layer data on the Geo-Gizmo are found to interact with Applicant site improvement locations, Weber County Engineers and Planners will request that the Applicant have a Professional Geologist Site Reconnaissance Review, such as presented herein, conducted for the site.

Our preliminary review of the Geo-Gizmo indicated that the site is located nearby "Landslide undifferentiated" classification on the *Landslide* layer, and also nearby "Zones A and AE" on the FEMA Flood Zone 2105 layer. The site specific exposure of these preliminary conditions will be discussed in the following sections of this report.

Our site specific review consisted of a GIS data integration effort that included:

1. Reviews of previous mapping and literature pertaining to site and regional geology including and Crittenden and Sorensen (1985), USGS and UGS (2016), Elliott and Harty (2010), and Coogan and King (2016).
2. An analysis of vertical and stereoscopic aerial photography for the site including a 1946 1:20,000 stereoscopic sequence, 2012 5.0 inch digital HRO coverage, and 2014 1.0 meter digital NAIP coverage of the site.
3. A GIS analysis using the QGIS<sup>®</sup> GIS platform to geoprocess and analyze 2011 1.0 meter LiDAR digital elevation data made available for the site by the Utah Automated Geographic Reference Center (AGRC). The GIS analysis included using the QGIS<sup>®</sup> platform Geospatial Data Abstraction Library (GDAL, 2013) Contour; the GRASS<sup>®</sup> (Geographic Resources Analysis Support System, 2013) *r.slope* and *r.shaded.relief* modules.

For the best site specific documentation for this review we relied on geologic mapping by Coogan and King (2016), which provides the most up-to-date rendering of geological mapping for the site location. Supporting documentation by Crittenden and Sorensen (1985) was also used to conduct this review. The geological mapping for this review is provided on Figure 3, Geologic and Flood Hazard Map. Topographic, slope, and elevation data for this review was supported through the aforementioned LiDAR analysis which is presented on Figure 4, LiDAR Analysis.

### **Review Findings**

The site is located in the North Fork area of Liberty in Ogden Valley on the eastern flank of Ben Lomond Peak. Ogden Valley is a northwest trending fault bounded graben structure, with the Wasatch Range comprising the western flank of the valley and the Bear River Range the eastern flank (Avery, 1995). Older Precambrian rocks underlie the area at depth, and are parts of eastward thrust plates including the Willard thrust sheet, which is believed to have moved onto the vicinity during the Cretaceous Sevier orogeny, occurring approximately 140 million years ago. The older Precambrian rocks have since been exposed on adjacent mountain slopes by uplift along the valley bounding faults that has been occurring over the past 10 million years.

During the most recent stage of geologic time, the Quaternary Period, which includes the past 1.6 million years, permanent (year-round) ice and glaciers have periodically occupied the higher elevation summits surrounding the site, and the waters of Lake

Bonneville have risen almost to the elevation of the site, occurring as recently as 15,000 years ago (Currey and Oviatt, 1985).

Topographically the site is located on valley margin slopes positioned between Ben Lomond Peak on the west and floodplains of the North Fork of the Ogden River on the east. Ben Lomond Peak is located approximately 4.0 miles west of the site, and stands 9712 feet in elevation. The floodplain areas of the North Fork of the Ogden River are located approximately 500 feet east of the site, and are approximately 5230 feet in elevation in the vicinity of the site. The elevation of the site is slightly elevated from the floodplain areas at roughly 5290 feet, with elevations on the two parcels ranging between approximately 5270 feet on the east side of the site, and 5350 feet on the west side of the site as shown on Figure 4.

**Geological Mapping:** Figure 3 shows the location of the site relative to GIS overlays including geological mapping drawn from Coogan and King (2016). A summary of the geological mapping of the site vicinity, as paraphrased from Coogan and King (2016), is provided as follows:

**Qal** - Stream alluvium and flood-plain deposits (Holocene and uppermost Pleistocene) – Sand, silt, clay, and gravel in channels, flood plains, and terraces...

**Qafy** - Younger alluvial-fan deposits (Holocene and uppermost Pleistocene) – Mostly sand, silt, and gravel that is poorly bedded and poorly sorted...

**Qac** - Alluvium and colluvium (Holocene and Pleistocene) – Unsorted to variably sorted gravel, sand, silt, and clay in variable proportions; includes stream and fan alluvium, colluvium, and, locally, mass-movement deposits...

**Qab - Qab? - Qap?** - Lake Bonneville-age alluvium (upper Pleistocene) – Related to shorelines of Lake Bonneville, unconsolidated to weakly consolidated alluvium...

**Qafb?** - Lake Bonneville-age alluvial-fan deposits (upper Pleistocene) — Related to shorelines of Lake Bonneville, Mostly sand, silt, and gravel that is poorly bedded and poorly sorted...

**Qalp?** - Lake Bonneville regression-age stream alluvium (upper Pleistocene?) – Pebble and cobble gravel, gravelly sand and silty sand, with minor clay in channel incised into Lake Bonneville deltaic and lacustrine deposits...

**Qms** - Landslide deposits (Holocene and upper and middle? Pleistocene) – Poorly sorted clay- to boulder sized material; includes slides, slumps, and locally flows and floods...

**Qms?(QTms)** - Block landslide and possible block landslide deposits (Holocene and upper and middle? Pleistocene) – Mapped where nearly intact block is visible in landslide (mostly block slide) with stratal strikes and dips that are different from nearby in-place bedrock...comprised of Quaternary and/or Tertiary mega-landslide (Pleistocene and/or Pliocene) – Jumbled mass of formation of Perry Canyon (ZYp) with blocks of rock from North Ogden divide.

**QTms(ZYp)** - Quaternary and/or Tertiary mega-landslide (Pleistocene and/or Pliocene) – Jumbled mass of formation of Perry Canyon (ZYp) with blocks of rock from North Ogden divide...

In summary, the west side of the site is located upon geological units classified as younger Pleistocene age (**Qms?**) landslide deposits composed of older Quaternary/Tertiary age block failure movement (**QTms**) of much older Neoproterozoic rocks of the Formation of Perry Canyon (**ZYp**) rocks (Coogan and King, 2016), and the east side of the site is covered with alluvial deposits (**Qab?** and **Qap?**) that were laid down to grade when Lake Bonneville inundated parts Ogden Valley during the late Pleistocene approximately 15,000 years ago (Currey and Oviatt, 1985). The alluvial deposits (**Qab?** and **Qap?**) appear to buttress, and morphostratigraphically superimpose, the landslide (**Qms?[QTms]**) on the west. Because the landslide deposits (**Qms?[QTms]**) on the west side of the site do not appear to have disturbed or deformed the surfaces of the Lake Bonneville age alluvial deposits (**Qab?** and **Qap?**) on the east side of the site, we interpret the landslide deposit movement to be inactive since at least Lake Bonneville time, approximately 15,000 years ago (Currey and Oviatt, 1985).

A concealed normal fault, identified as Ogden Valley North Fork fault (Black and Hecker, 1999), is shown on Figure 3 as crossing the site on a northwest strike, however its location is concealed by overlying Quaternary age deposits.

**Hazards Review:** In addition to the review and location query we searched for nearby or proximal classifications or conditions that could possibly present hazardous conditions to the site. A summary of this search is provided as follows:

1. **Landsliding:** On the basis of mapping by Coogan and King (2016), the nearest landslide units are mapped as **Qms?(QTms)** deposits that are located west side of the site. These units are described by Coogan and King (2016) as "block landslide deposits... comprised of Quaternary and/or Tertiary mega-landslide (Pleistocene and/or Pliocene)..."

The slope and apparent movement of the **Qms?(QTms)** unit is from the west to the east, and involves much older Neoproterozoic rocks of the Formation of

Perry Canyon (ZYp). This unit (Qms?(QTms)) appears to have moved downslope during the past in response to inherent weakened rock structures affiliated with Willard Thrust sheet, and steep slope conditions in this area, and has complex "jumbled" morphology (Coogan and King, 2016). Based upon our observation and analysis of the slopes on the west side of the site, we believe that movement of the Qms?(QTms) unit is presently inactive, as evidenced by the morphostratigraphic conformity of the adjacent Lake Bonneville age alluvial deposits (Qab? and Qap?) on the east side of the site. Although, considered presently stable, the Qms?(QTms) unit on the west side of the site has undergone movement during the past (Pleistocene and/or Pliocene), and the structure of this unit has been disturbed, such that the deposits in this area are possibly near threshold slope stability conditions, insomuch that site development on steeper slope areas on this unit, specifically slopes steeper than 25 percent on Figure 4, should be avoided for dwelling structures.

2. **Alluvial fan debris flow processes** including flash flooding and debris flow hazard: The nearest potential debris flow process deposits to the site are mapped as Qafy by Coogan and King (2016), and occur just to the north of the site. These deposits are associated with Thimbleberry Creek which passes approximately 400 feet north of the site, and debris flow processes associated with these deposits do not appear to be a risk to the site, or the proposed homesite location.
3. **Surface fault rupture hazards, strong earthquake ground motion, tectonic Subsidence and liquefaction:**

**Surface fault rupture hazards:** The nearest active (Holocene) earthquake fault to the site is the Weber section of the Wasatch fault zone (UT2351E) which is located 3.2 miles southwest of the site, thus active fault rupture hazards are not considered present on the site (Black and others, 2004). The Ogden Valley North Fork fault (UT2376) is shown on Figure 3 to as crossing the site on a northwest strike. This fault is mapped on the site as concealed by Coogan and King (2016) because movement on this fault has not displaced overlying Pleistocene age deposits. The most recent movement along this fault is estimated by the USGS and UGS compilers (Black and Hecker, 1999) to be pre-Holocene and likely pre-Quaternary age (<2.6 million years in age), and is not considered an active risk to the site. Active earthquake faults are generally considered to be faults which have disrupted the ground surface within the past 11,000 years of earth history (the Holocene epoch). Implied with this definition is that such faults are likely to disrupt the ground surface in the relatively near future (Lund and others, 2016).

**Strong earthquake ground motion** originating from the Wasatch fault or other near-by seismic sources is capable of impacting the property. The Wasatch fault zone is considered active and capable of generating earthquakes as large as magnitude 7.3 (Arabasz and others, 1992). Based on probabilistic estimates

(Peterson, and others, 2008) queried for the site, the expected peak horizontal ground acceleration on rock from a large earthquake with a ten-percent probability of exceedance in 50 years is as high as 0.18g, and for a two-percent probability of exceedance in 50 years is as high as 0.43g for the site.

The a ten-percent probability of exceedance in 50 years event has a return period of 475 years, and the 0.18g acceleration for this event corresponds "strong" perceived shaking with "light" potential damage based on instrument intensity correlations. The two-percent probability of exceedance in 50 years event has a return period of 2475 years, and the 0.43g acceleration for this event corresponds "severe" perceived shaking with "moderate to heavy" potential damage based on instrument intensity correlations (Wald and others, 1999).

Future ground accelerations greater than these are possible but will have a lower probability of occurrence.

**Tectonic Subsidence** is surface tilting subsidence that occurs along the boundaries of normal faults in response to surface-faulting earthquakes (Keaton, 1986). Because the site is not located in near proximity to active earthquake faults, tectonic subsidence hazards are not considered a risk to the site.

**Liquefaction potential hazards:** In conjunction with strong earthquake ground motion potential of large magnitude seismic events as discussed previously, certain soil units may also possess a potential for liquefaction during a large magnitude event. Liquefaction is a phenomenon whereby loose, saturated, granular soil units lose a significant portion of their shear strength due to excess pore water pressure buildup resulting from dynamic loading, such as that caused by an earthquake. Among other effects, liquefaction can result in densification of such deposits causing settlements of overlying layers after an earthquake as excess pore water pressures are dissipated. Horizontally continuous liquefied layers may also have a potential to spread laterally where sufficient slope or free-face conditions exist. The primary factors affecting liquefaction potential of a soil deposit are: (1) magnitude and duration of seismic ground motions; (2) soil type and consistency; and (3) occurrence and depth to groundwater.

Liquefaction potential hazards have not been studied or mapped for the Ogden Valley area, as has occurred in other parts of northern Utah (Anderson and others, 1994). Liquefaction commonly occurs in combined saturated and non-cohesive soils such as groundwater saturated alluvium (i.e. floodplain areas adjacent to the North Fork of the Ogden River), which conditions are not found on the property, consequently the conditions susceptible to liquefaction do not appear to be present at the site.

4. **Rockfall and avalanche hazards:** The site is not in close proximity to steep slope areas where such hazards may originate.

5. **Flooding:** No significant water ways pass in close proximity of the site and flood insurance rate mapping by Federal Emergency Management Agency for the site vicinity shown on Figure 3 indicates that the site is outside the 100-year Flood Zone (FEMA, 2015). Local sheet flow, slope wash, and seasonally perched soil water typical of sloping areas should be anticipated for the site, and site improvements.
6. **Sloping surfaces:** The site vicinity slope gradients developed from our LiDAR analysis range from level to well over 50-percent as shown on Figure 4. Within the property area slope gradients vary from relatively gentle to moderately steep on the west side of the site. The calculated average slope for overall property is 9.9 percent. For the 0.44 acre area shown as "Proposed Homesite Location" the average slope is calculated to be 15.2 percent.

The threshold gradient for site slope development considerations and hillside review according to the Weber County Section 108-14-3 includes slopes greater than 25-percent (Weber County Code, 2017). On the basis of these guidelines we believe that the moderately steep slope section on the west side of the site, shown as in excess of 25-percent slopes on Figure 4, should be avoided for placement of dwelling structures.

7. **Radon exposure:** Radon is a naturally occurring radioactive gas that has no smell, taste, or color, and comes from the natural decay of uranium that is found in nearly all rock and soil. Radon and has been found occur in the Ogden Valley area, and can be a hazard in buildings because the gas collects in enclosed spaces. Indoor testing following construction to detect and determine radon hazard exposure should be conducted to determine if radon reduction measures are necessary for new construction. The radon-hazard potential mapping has been prepared for most of Ogden Valley by the Utah Geological Survey (Solomon, 1996), and the property appears to be located in an area mapped as having a "Moderate" to "High" radon potential classification. For new dwelling structures radon-resistant construction techniques as provided by the EPA (2017) should be considered.

### Site Reconnaissance

The site was reconnoitered on November 15, 2017. The access roadway for the site, Shaw Drive, consisted of an improved gravel surface, and electrical and water service connections for the site appeared to be in place along the roadway at the time of our visit. The site was observed to be a mostly rectangular shaped property occupying approximately 900 feet east to west, and 770 feet north to south in plan dimensions. From the east side property frontage on Shaw Drive, the site surface steps up approximately eight feet and becomes nearly level to gently sloping upwards to the west for approximately 670 feet, then the surface becomes moderately steep sloped for the remaining 200 feet to the west boundary of the two parcel site. At the time of our visit, cover on the property consisted of cut pasture grass, with scrub oak and maple

trees occupying the sloping areas on the west side of the site. The surficial soils on the site appeared to consist of gravelly sands with sub-angular cobble and boulder sized clast appearing on the sloping surfaces.

Established single-family estate style homesites were observed on near-by properties, however most of the adjacent properties surrounding the site appear to be undeveloped and being used for agricultural purposes at the time of our reconnaissance.

During our reconnaissance no conditions of active geologic hazards or ongoing processes were observed on the site.

### **Conclusions**

Based upon the findings of this review we believe that the subject 14.005 acre property is not eminently exposed to the geological hazards specified in the Section 108-22 Natural Hazard Areas of the Weber County Code (2017). With this finding we point out that parts of the western side of the site, include steep slope areas, greater than 25 percent slope, that should be avoided for the placement dwelling structures. Cuts and fills for access roadways on the sloping areas should be designed conservatively to minimize erosion and oversteepened slopes.

It is our opinion that the "Proposed Homesite Location" area shown on Figure 2 and Figure 4, is suitable for the proposed development as described in the opening of this report, provided that the steep slope areas on the northeast corner of this area are avoided for the placement of dwelling structures. We recommend that a 15 foot setback from the 25 percent or greater slopes be used to appropriately avoid the steep slope areas for the dwelling structure placement.

Because groundwater and subsurface soils conditions for the site are presently unevaluated, and because the proposed building site is located upon block landslide deposits soils (Qms?[QTms]) we; 1) optionally suggest that site specific geotechnical engineering soils and groundwater study be considered for the homesite design and construction, and 2) minimally we recommend that a licensed Geotechnical Engineer observe the foundation excavations prior to the setting of the footings of the proposed structures, to confirm the suitability of the foundation soils for the proposed homesite construction.

The proposed homesite should be constructed to current established seismic hazards codes to reduce risk and damage from a future strong earthquake ground motion event.

Although not addressed by the Weber County ordinances, we recommend that radon exposure be evaluated to determine if radon reduction measures are necessary for the new homesite construction. It is our understanding that new construction in Ogden Valley area often includes radon remedial measures as part of final design.

## Limitations

Our services were limited to the scope of work discussed in the introduction section of this report. The results provided by this study are limited to geological hazards included in the Weber County Code, Section 108-22 Natural Hazard Areas (Weber County, 2017). The reporting provided here is not based upon any subsurface observations, and should not preclude the results of a geotechnical engineering soils and groundwater studies for foundations, earthwork, and geoseismic design prepared by a professional engineer licensed in the State of Utah.

Although risk can never be eliminated, more detailed and extensive studies yield more information, which may help understand and manage the level of risk. The recommendations contained in this report are based on our site observations, available data, probabilities, and our understanding of the facilities investigated. This report was prepared in accordance with the generally accepted standard of practice at the time the report was written. No warranty, express or implied, is made.

This report may be used only by the client and only for the purposes stated within a reasonable time from its issuance. The regulatory requirements and the "state of practice" can and do change from time to time, and the conclusions presented herein may not remain current. Based on the intended use of the report, or future changes to design, GCS Geoscience may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else, unless specifically agreed to in advance by GCS Geoscience in writing will release GCS Geoscience from any liability resulting from the use of this report by any unauthorized party.

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We appreciate the opportunity to work with you on this project and look forward to assisting you in the future. If you have any questions or need additional information on this or other reporting, please contact the undersigned at (801) 745-0262 or (801) 459-0207.

Respectfully submitted,

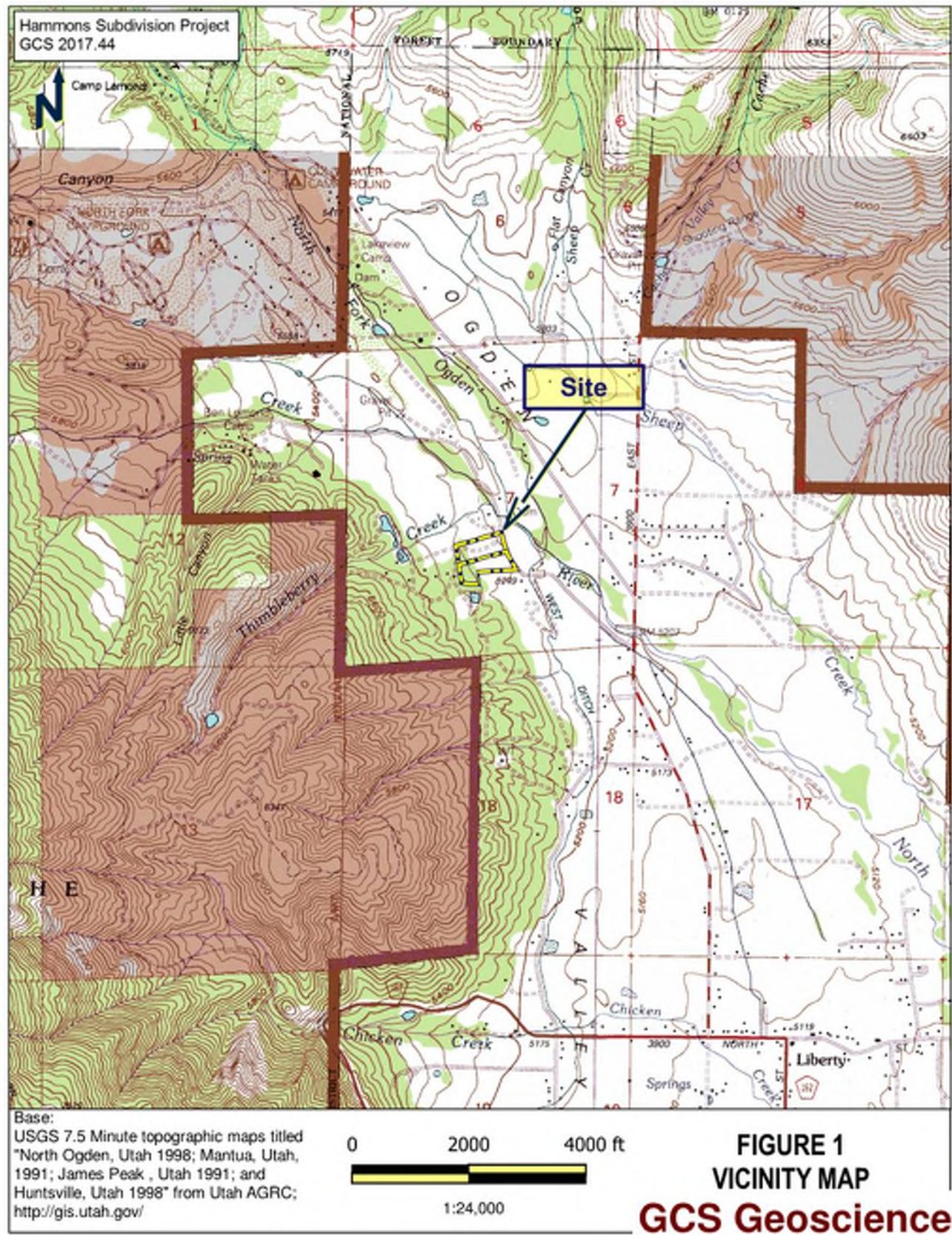
**GCS Geoscience**



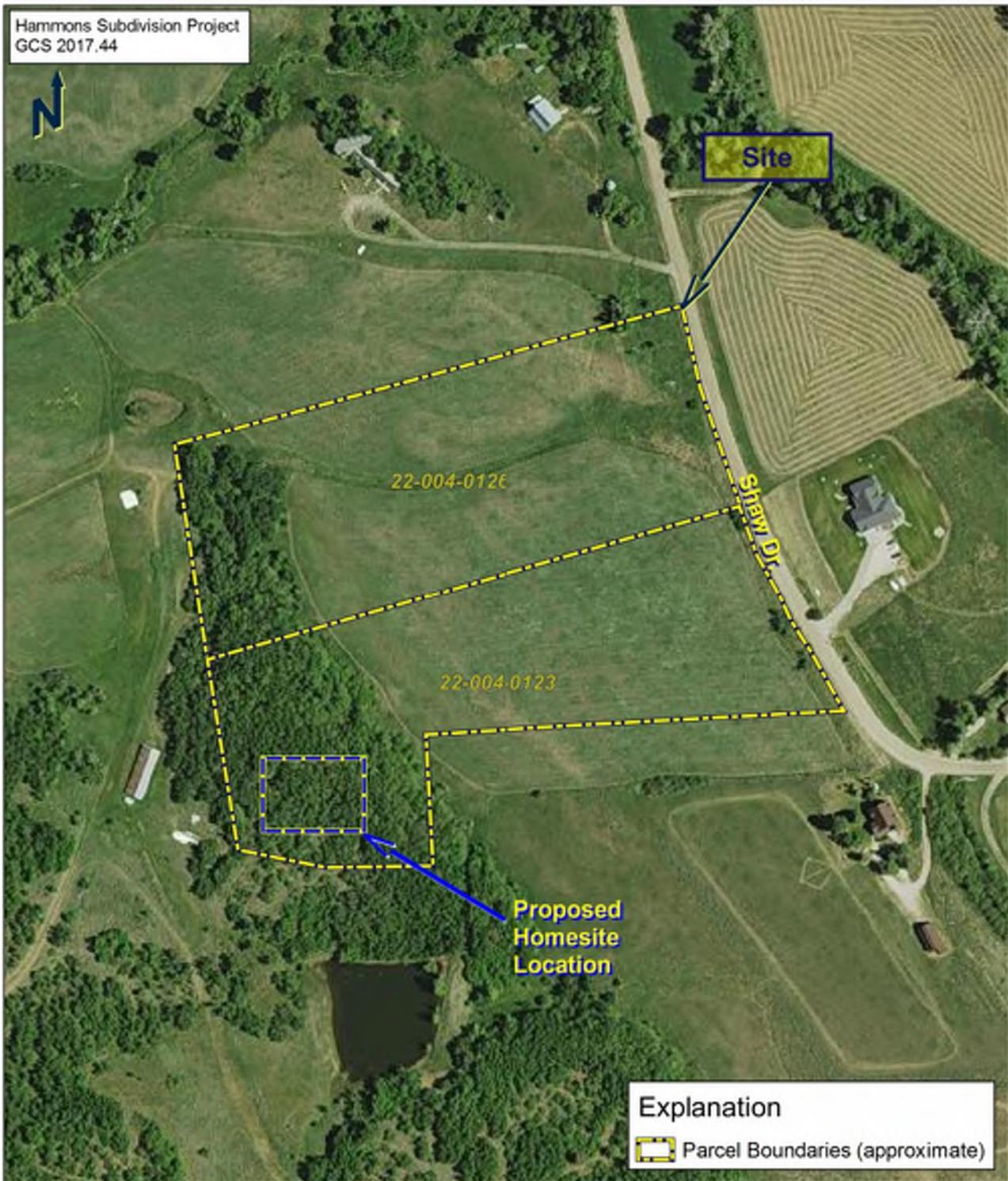
Gregory C. Schlenker, PhD, PG  
State of Utah No. 5224720-2250  
Principal Geologist

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Huntsville, Utah 84317

Encl. Figure 1, Site Vicinity Map  
Figure 2, Aerial Coverage  
Figure 3, Geologic and Flood Hazard Map  
Figure 4, LIDAR Analysis

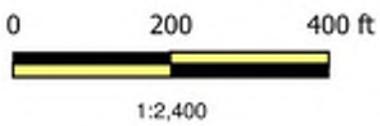


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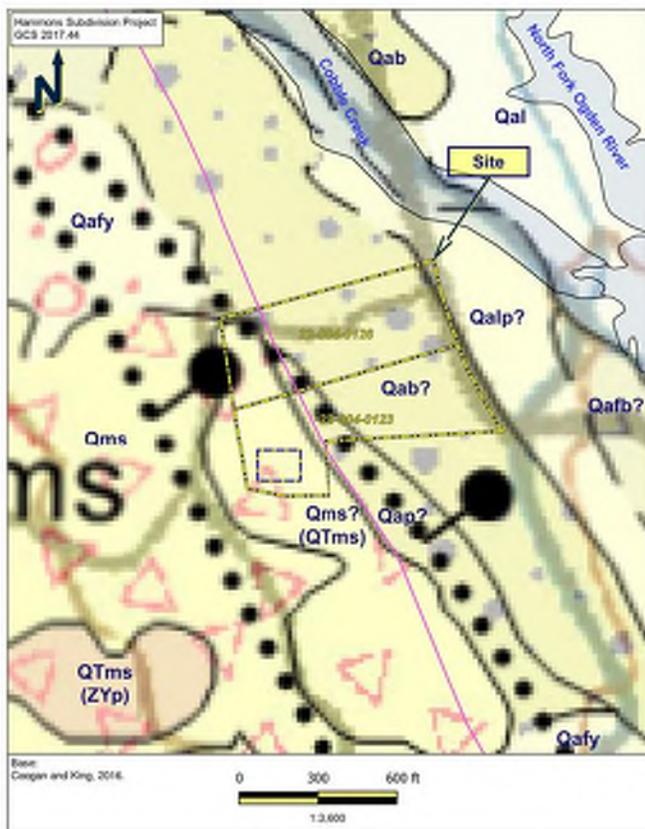


Explanation  
Parcel Boundaries (approximate)

Base:  
2014 1.0m NAIP Color Orthoimagery,  
from Utah AGRC; <http://gis.utah.gov/>



**FIGURE 2**  
**AERIAL COVERAGE**  
**GCS Geoscience**



### Geologic Classification

#### Geology after Coogan and King, 2016

- Qal** - Stream alluvium and flood-plain deposits (Holocene and uppermost Pleistocene) - Sand, silt, clay, and gravel in channels, flood plains, and terraces...
- Qafy** - Younger alluvial-fan deposits (Holocene and uppermost Pleistocene) - Mostly sand, silt, and gravel that is poorly bedded and poorly sorted...
- Qab** - Alluvium and colluvium (Holocene and Pleistocene) - Unsorted to variably sorted gravel, sand, silt, and clay in variable proportions; includes stream and fan alluvium, colluvium, and locally, mass-movement deposits...
- Qab - Qab? - Qap?** - Lake Bonneville-age alluvium (upper Pleistocene) - Related to shorelines of Lake Bonneville, unconsolidated to weakly consolidated alluvium...
- Qabf?** - Lake Bonneville-age alluvial-fan deposits (upper Pleistocene) - Related to shorelines of Lake Bonneville, Mostly sand, silt, and gravel that is poorly bedded and poorly sorted...
- Qalp?** - Lake Bonneville regression-age stream alluvium (upper Pleistocene?) - Pebble and cobble gravel, gravelly sand and silty sand, with minor clay in channel incised into Lake Bonneville deltaic and lacustrine deposits...
- Qms** - Landslide deposits (Holocene and upper and middle? Pleistocene) - Poorly sorted clay- to boulder sized material; includes slides, slumps, and locally flows and floods...
- Qms?(QTms)** - Block landslide and possible block landslide deposits (Holocene and upper and middle? Pleistocene) - Mapped where nearly intact block is visible in landslide (mostly block slide) with stratal strikes and dips that are different from nearby in-place bedrock... comprised of Quaternary and/or Tertiary mega-landslide (Pleistocene and/or Pliocene) - Jumbled mass of formation of Perry Canyon (Zyp) with blocks of rock from North Ogden divide...
- QTms(Zyp)** - Quaternary and/or Tertiary mega-landslide (Pleistocene and/or Pliocene) - Jumbled mass of formation of Perry Canyon (Zyp) with blocks of rock from North Ogden divide...

..... Normal Fault Concealed

#### Quaternary Faults and Folds

— Ogden Valley North Fork Fault (Black and Hecker, 1999)

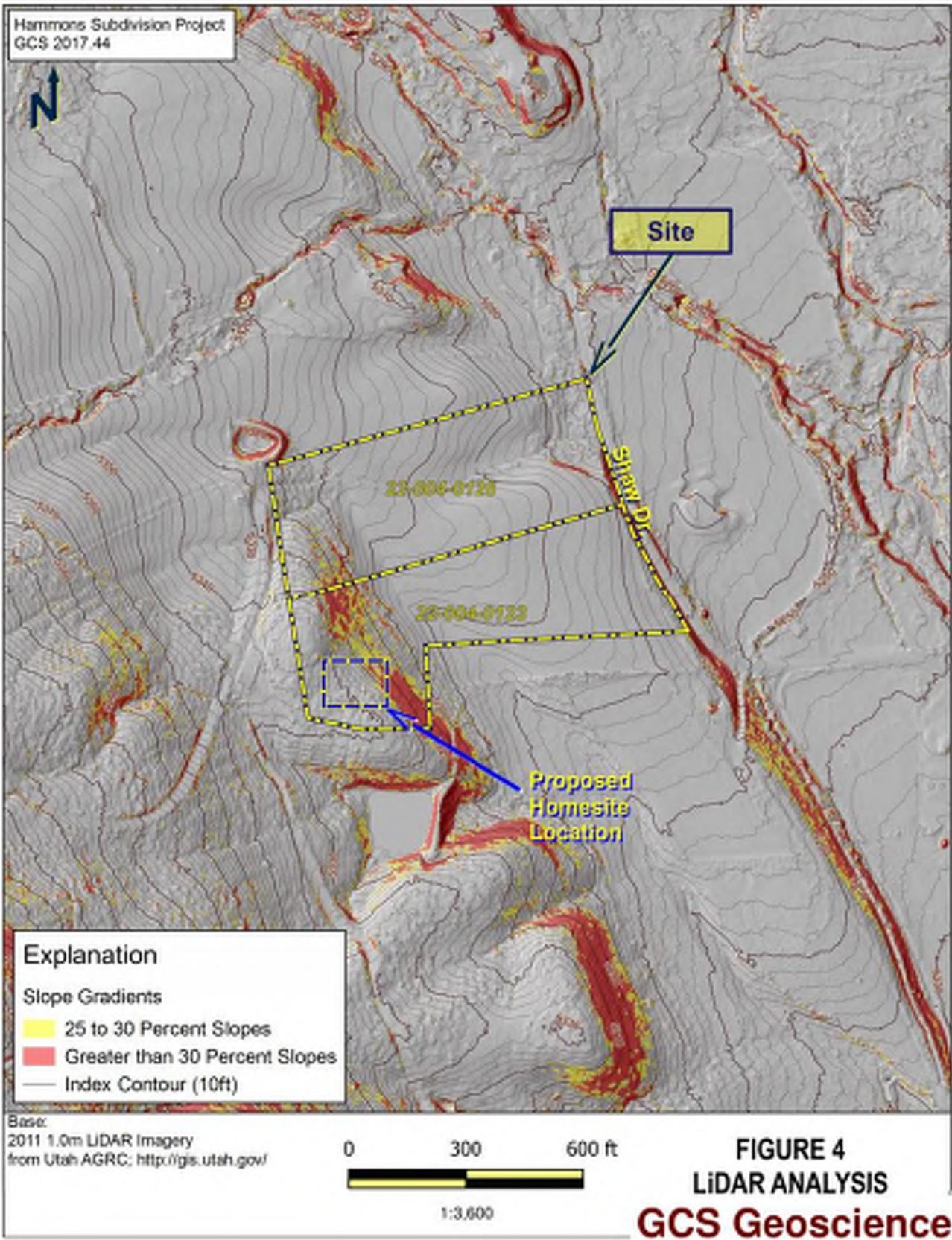
#### Flood Hazards

##### FEMA - Flood Insurance Rating Zones (2015)

□ Zone A and AE - Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.

**FIGURE 3  
GEOLOGIC AND  
FLOOD HAZARD MAP  
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Hammons Subdivision Project  
GCS 2017.44



Site

22-004-0128

22-004-0128

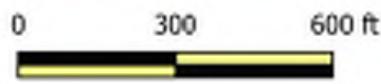
Proposed  
Homesite  
Location

**Explanation**

**Slope Gradients**

-  25 to 30 Percent Slopes
-  Greater than 30 Percent Slopes
-  Index Contour (10ft)

Base:  
2011 1.0m LIDAR Imagery  
from Utah AGRC: <http://gis.utah.gov/>



1:3,600

**FIGURE 4**  
**LIDAR ANALYSIS**  
**GCS Geoscience**