GCS Geoscience

Report Professional Geologist Site Reconnaissance and Review
Proposed Snowbasin Yurt Village
South Side of Maples Parking Lot, Snowbasin Resort
Huntsville, Weber County, Utah

For:

Snowbasin Resort
3925 East Snowbasin Road
Huntsville, Utah
84317

By:

GCS Geoscience
554 South 7700 East Street
Huntsville, Utah 84317

September 14, 2021
GCS File No: 2021.49

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Snowbasin Resort
3925 East Snowbasin Road
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Attention: Ms. Libby Watson

Subject: **Report**
Professional Geologist Site Reconnaissance and Review
Proposed Snowbasin Yurt Village
South Side of Maples Parking Lot, Snowbasin Resort
Huntsville, Weber County, Utah

INTRODUCTION

In response to your request, GCS Geoscience (GCS) has prepared this Professional Geologist site reconnaissance review report for the above referenced site. The site for the proposed improvements consists of an approximately 500-foot north-south by 225-foot east-west area located on the Snowbasin Resort property (Parcel #:20-043-0005) in Weber County, Utah, as shown on attached Figure 1, Vicinity Map. Figure 2, Aerial Coverage provides aerial coverage of the site and detail of the current (2018) layout of the site vicinity, and the location of the proposed Yurt Village improvements.

The site for the proposed improvements is located on the south side of the existing Maples Parking Lot, and to the west of the existing Snowbasin Earl's Lodge and Mountain Operations buildings, as shown on Figure 2. The proposed improvements are to include five canvas yurt structures supported upon wood-frame decking, with open deck areas. The yurts will be 20- to 30-feet in circumference. A "temporary bathroom trailer" (WC) to support the yurt guests is also planned for the improvements. A gravel roadway accessing the individual yurts from the Maples Parking Lot is also included in the plan. Projected site grading is anticipated to consist primarily of some cutting into the existing ground, with very little fill projected for the improvements.

The Snowbasin Resort property parcel is zoned by Weber County as Recreation Resort Zone DRR-1 land-use zone. According to the Weber County Code of Ordinances the purpose of the DRR-1 land-use zone…*is to provide flexible development standards to resorts that are dedicated to preserving open space and creating extraordinary recreational resort experiences while promoting the goals and objectives of the Ogden Valley general plan…Resorts within an approved destination and recreation resort zone shall, by and large, enhance and diversify quality public recreational opportunities,* *contribute to the surrounding community's well-being and overall, instill a sense of stewardship for the land.*

Because the proposed Yurt Village site appears to be located in part on a hillslope area in the vicinity of mapped landslide hazards, marginal soils, Quaternary faults and/or FEMA floodplain areas, Weber County is requesting that a geological site reconnaissance be performed to assess whether all or parts of the site 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.

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.

The objectives and scope of this study were discussed and presented to Ms. Libby Watson of Snowbasin Resort, in our (GCS) Proposal-Agreement dated August 27, 2021, and the Proposal-Agreement was signed by Mr. Eric Ahern (**Client**), Director of Base Operations of Snowbasin Resort, that same day.

LITERATURE AND RESOURCE REVIEW

To evaluate the potential exposure of sites to geological hazards that 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, Engineering Problems; 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 applicable for site specific usage and planning. When hazard layer data on the Geo-Gizmo are found to interact with Permit Applicant site improvement locations, Weber County Engineers and Planners will request that the Permit Applicant have a Professional Geologist Site Reconnaissance Review, such as presented herein, conducted for the site.

In addition to the Geo-Gizmo site screening, the Weber County Engineers and Planners rely on recently published UGS geological mapping (Coogan and King, 2016), that includes much of Weber County for determining if a site is located upon a potentially hazardous geological mapping unit, thus requiring a geological reconnaissance. This interactive "Weber County Geologic Map" may be viewed on-line at:

> https://weber.maps.arcgis.com/apps/webappviewer/index.html?id=bd557ebafc0e4ed58471342bb03fdac5

Our preliminary review of the Geo-Gizmo indicated that the proposed Yurt Village site (Site) was shown within "*landslide*" hazard units according the UGS landslide database (Elliott and Harty, 2010), however the location did not show exposure to any of the other aforementioned hazard layer areas, Including; *Quaternary Faults* (USGS and UGS, 2006), and *FEMA Flood Zone* (FEMA, 2015).

The Weber County Geologic Map shows the site is underlain by Holocene *younger landslide and slump deposits* (**Qmsy**), and Holocene and Pleistocene alluvium and colluvium (**Qac**), both geologic units that has been determined by Weber County as requiring hazard studies.

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 Sorensen and Crittenden (1979), Mulvey (1992), USGS and UGS (2016), Elliott and Harty (2010), King and others (2008), and Coogan and King (2016).

2. An analysis of vertical and stereoscopic aerial photography for the site including a 1947 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® GIS platform to geoprocess and analyze 2020 0.5-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® platform Geospatial Data Abstraction Library (GDAL, 2013) Contour; the GRASS® (Geographic Resources Analysis Support System, 2013) r.slope and r.shaded.relief modules.

For the best scale site-specific documentation for this review, we relied on geologic mapping by King and others (2008), which provided the most detailed rendering of geological mapping for the site location. Mapping by Coogan and King (2016) was also used to support this review. Upon our analysis and site reconnaissance the mapping by

King and others (2008) was modified herein based on our site-specific interpretation and observations. The geological mapping for this review is provided on Figure 3, Geologic Mapping. 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 near the eastern crest of Mount Ogden, which western flank comprises the Wasatch Front. The surficial geology of the site vicinity is the result of the uplift and exposure of older pre-Cambrian rocks which forms the crest of Mount Ogden east of the site. This exposure was the result of movement along high-angle faults during late Tertiary and Quaternary age (Bryant, 1988). Bounding the east foothill flank of Mount Ogden are mid Tertiary units of the Wasatch Formation and the Norwood Formation that ramp along the transition of the mountains to the foothills on the east. The Wasatch Front is marked by the Wasatch fault, which is 3.3 miles west of the site, and provides the basis of division between the Middle Rocky Mountain province on the east and the Basin and Range province on the west.

The Basin and Range province is characterized by approximately north-south trending valleys and mountain ranges that have been formed by extensional tectonics and displacement along normal faults, and extends from the Wasatch Range on the east to the Sierra Nevada Range on the west (Hunt, 1967). The Middle Rocky Mountain province is an assemblage of sedimentary, igneous, and metamorphic rocks that have been folded, faulted, and uplifted. Mountain building (tectonic) activity commenced about 30 million years ago (Oligocene epoch) and continues to the present. The province is characterized by mountainous terrain with deep canyons and broad intervening basins, with temperate semi-arid to mesic climatic conditions (Hunt, 1967).

The Snowbasin Resort area is located upon older Precambrian and Paleozoic rocks that were thrusted from west to east during the Cretaceous Period roughly 80 million of years ago (Coogan and King, 2016). The thrusted rocks were locally covered approximately 20 to 30 million years ago by Tertiary sedimentary deposits of the Wasatch Formation, and Tertiary volcanic deposits locally known as the Norwood Formation. Since the deposition of the Norwood Formation, orogenic mountain building processes have been occurring, resulting in the erosion and deposition of Quaternary age soils on the surface vicinity during the past 1.6 million years. More recently, between 30,000 BP to 12,000 BP, glacial ice accumulated upon the higher elevation peaks along the Wasatch Range, and subjected the terrain to glacial erosion and deposition, leaving eroded cirque valleys and depositional moraine features (Madsen and Currey, 1979). Since the recession of the ancient ice, stream erosion and incision of the mountain slopes has modified the glacial terrain features in the vicinity of the site.

Site Geology

Figure 3 shows the location of the site relative to geologic mapping overlays modified from mapping prepared by King and others (2008). A summary of the geological mapping of the site vicinity is provided as follows:

Qh - Human disturbance (Historical) - Obscures original deposits by cover or removal; mostly fill along railroad and highway grades, and some large gravel pits...

Qac - Alluvium and colluvium (Holocene and Pleistocene) - Includes stream and fan alluvium, colluvium, and locally mass-movement deposits...

Qafy - Younger alluvial-fan deposits (Holocene and uppermost Pleistocene) - Mostly sand, silt, and gravel that is poorly bedded and poorly sorted; includes debris flows, particularly in drainages and at drainage mouths...are active, and impinge on present-day drainages...

Qaf - Alluvial-fan deposits (Holocene and Pleistocene) – Mostly sand, silt, and gravel that is poorly bedded and poorly...variably consolidated; includes debris flows, particularly in drainages and at drainage mouths (fan heads)...

Qmsy - Younger landslide and slump deposits (Holocene) - Poorly sorted clay- to boulder-sized material…

Qms - Landslide and slump deposits (Holocene and Pleistocene) - Poorly sorted clay- to boulder-sized material…

Qmg - Mass-movement and glacial deposits, undivided (Holocene and Pleistocene) – Unsorted and unstratified clay, silt, sand, and gravel; mapped where glacial deposits lack typical moraine morphology…

Qg - Glacial deposits (Holocene and upper and middle? Pleistocene) -Poorly to moderately sorted clay, silt, sand, gravel to boulder size material...

Qgmo - Older glacial till and outwash (upper and middle? Pleistocene) – Poorly to moderately sorted clay, silt, sand, gravel to boulder size material...

QTaf/Ts – QTaf - High-level alluvial-fan deposits (lower Pleistocene and/or Pliocene) – Gravel, sand, silt, and clay above other stream-terrace and alluvial-fan deposits / over **Ts** Tertiary strata, undivided including Tw Wasatch Formation and/or Tn Norwood Formation...

QTaf/Tw – QTaf - High-level alluvial-fan deposits (lower Pleistocene and/or Pliocene) – Gravel, sand, silt, and clay above other stream-terrace and alluvial-fan deposits / over **Tw** Wasatch Formation...

Tw - Wasatch Formation (Eocene and upper Paleocene) – Typically red to brownish-red sandstone, siltstone, mudstone, and conglomerate with minor gray limestone and marlstone locally; conglomerate clasts mainly rounded Neoproterozic and Paleozoic sedimentary rocks, typically Neoproterozoic and Cambrian quartzite…

Csn - St. Charles and Nounan Formations, undivided (Ordovician and Cambrian) - Light- to medium-gray, cliff and ledge-forming dolomite with lower part calcareous sandstone and sandy dolomite that forms slopes...

Cbo- Bloomington Formation (Cambrian) -Brown-weathering, slope-forming gray to olive-gray, silty argillite interlayered with gray- to yellowish- and orangish-gray-weathering, thin- to medium-bedded, silty limestone, flat-pebble conglomerate, nodular limestone, and wavy-bedded (ribbon) limestone...

Cm - Maxfield Limestone (Middle Cambrian) –From top down includes dolomite, limestone, argillaceous to silty limestone and calcareous siltstone and argillite, and basal limestone with argillaceous interval...

The Site is shown on Figure 3 to be located upon **Qac** - alluvium and colluvium (Holocene and Pleistocene), which includes stream and fan alluvium, colluvium, and locally mass-movement deposits.

Geologic/Natural Hazards

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:** The nearest active landslide units are mapped as **Qmsy** deposits, and as shown are located approximately 160 feet to the southwest of the Site as shown on Figure 3. This is a smaller feature and as located should not potentially impact the proposed site improvements.

2. **Alluvial fan debris flow processes** including flash flooding and debris flow hazard: The nearest potential debris flow process deposits to the site are alluvial fan deposits mapped as **Qafy**, and occur approximately 95 feet west of the site as shown on Figure 3. These deposits that occur along the Wheeler Creek drainageway, and under present conditions do not appear to be a potential impact to the proposed site improvements.

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 segment of the Wasatch fault zone (UT2351E) which is located 3.3 miles west of the Site, thus fault rupture hazards are not considered present on the Site (Black and others, 2004). The Ogden Valley southwestern margin faults (UT2375) are located much closer to the site, approximately 1600 feet to the northeast (not shown on Figure 3), however the most recent movement along this fault is estimated to be pre-Holocene (>15,000 ybp), and presently is not considered an active risk (Black and others, 1999).

   Strong earthquake ground motion: Strong ground motion originating from the Wasatch fault or other near-by seismic sources is capable of impacting the region as well as the site location. 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 (Petersen and others, 2014) 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 0.18*g,* and for a two-percent probability of exceedance in 50 years is as high as 0.45*g* for the site.

The a ten-percent probability of exceedance in 50 years event has a return period of 475 years, and the 0.18*g* 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 0.45*g* acceleration for this event corresponds "very strong" perceived shaking with "moderate" 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 Snowbasin area, as has occurred in other parts of northern Utah (Anderson and others, 1994). Liquefaction commonly occurs in saturated non-cohesive soils such as fine grained alluvium, which is not believed present on the Site, consequently the conditions susceptible to liquefaction do not appear to be present at the site.

4. **Rockfall and avalanche hazards**: The Site is over a half-mile from steep slope and outcrop areas where such hazards may originate.

5. **Flooding:** Because no significant water ways pass in the vicinity of the Site, flood insurance rate mapping by Federal Emergency Management Agency for

the site vicinity has not been assessed for this area at this time (FEMA, 2015). The local streams in the vicinity of the site, include Wheeler Creek located 280 feet west of the Site, and Chicken Spring Creek located 150 feet east of the Site, as shown on Figure 2 and Figure 4. These streams appear to be uncontrolled in the vicinity of the site, and over-bank sheet-flow may potentially occur from these streams during extreme storm or run-off events.

Slope wash, and seasonally perched soil water typical of sloping areas should also be anticipated for the site, and site improvements.

6. **Sloping surfaces:** The site vicinity slopes developed from our LiDAR analysis range from level to well over 50-percent as shown on Figure 4, LiDAR Analysis. As shown on Figure 4, the ground surrounding the Site slopes moderately downward to the northeast and average slopes of 14.1 percent are calculated for the ground surrounding the Site.

   The threshold gradient for slope development considerations and hillside review according to the Weber County Section 108-14-3 includes slopes greater than 25-percent (Weber County Code, 2021).

SITE RECONNAISSANCE

The Site was reconnoitered on August 29, 2021. The Site was accessed from the Maples Parking area to the north of the Site. Rough grading for the expansion of the Maples Parking was observed on the south side of the Site. The locations for the individual yurt structures were observed to be in a densely wooded area, covered with aspen, maple, scrub oak and fir trees, with the location of the proposed gravel access road on the east margin of the woods. The area for the gravel access road was open and covered with grass, weeds and brush. Soils exposed by the rough grading and Site surface appeared to consist of silty sandy gravels with sub-rounded to sub-angular cobbles and some boulder sized particles. The channel for Wheeler Creek was observed to be 6.0 to 8.0 feet entrenched with the surrounding surface, whereas the channel for Chicken Spring Creek was observed to be 2.0 to 3.0 feet entrenched with the surrounding surface.

During the reconnaissance no conditions of imminent geologic hazards were observed at the Site.

CONCLUSIONS

Based upon the findings of this review we believe that the Proposed Yurt Village Site is not adversely exposed to the geological hazards specified in the Section 108-22 Natural Hazard Areas of the Weber County Code (2021).

With this finding we point out that Wheeler Creek and Chicken Spring Creek are uncontrolled in the vicinity of the site, and over-bank sheet-flow may potentially occur from these streams during extreme storm or run-off events. It is unlikely that such an event will present a hazardous condition for the proposed improvements, however we advise that future development on this part of the resort consider the locations of these two streams for stormwater design integration.

We expect the wood-frame decking construction for the yurt structures will impose relatively light loads on the site soils, however because groundwater and subsurface soils conditions for the site are presently unevaluated, we suggest (not require) that the project design team consider a site-specific geotechnical engineering soils and groundwater study for deck foundation design and construction, and for the proposed gravel access road grading plans.

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 as "potential hazards" in Section 108-22 Natural Hazard Areas of the Weber County Code (2021). The reporting provided here is not based upon any subsurface observations, and should in no way 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 with 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) 458-0207.

Respectfully submitted,

GCS Geoscience

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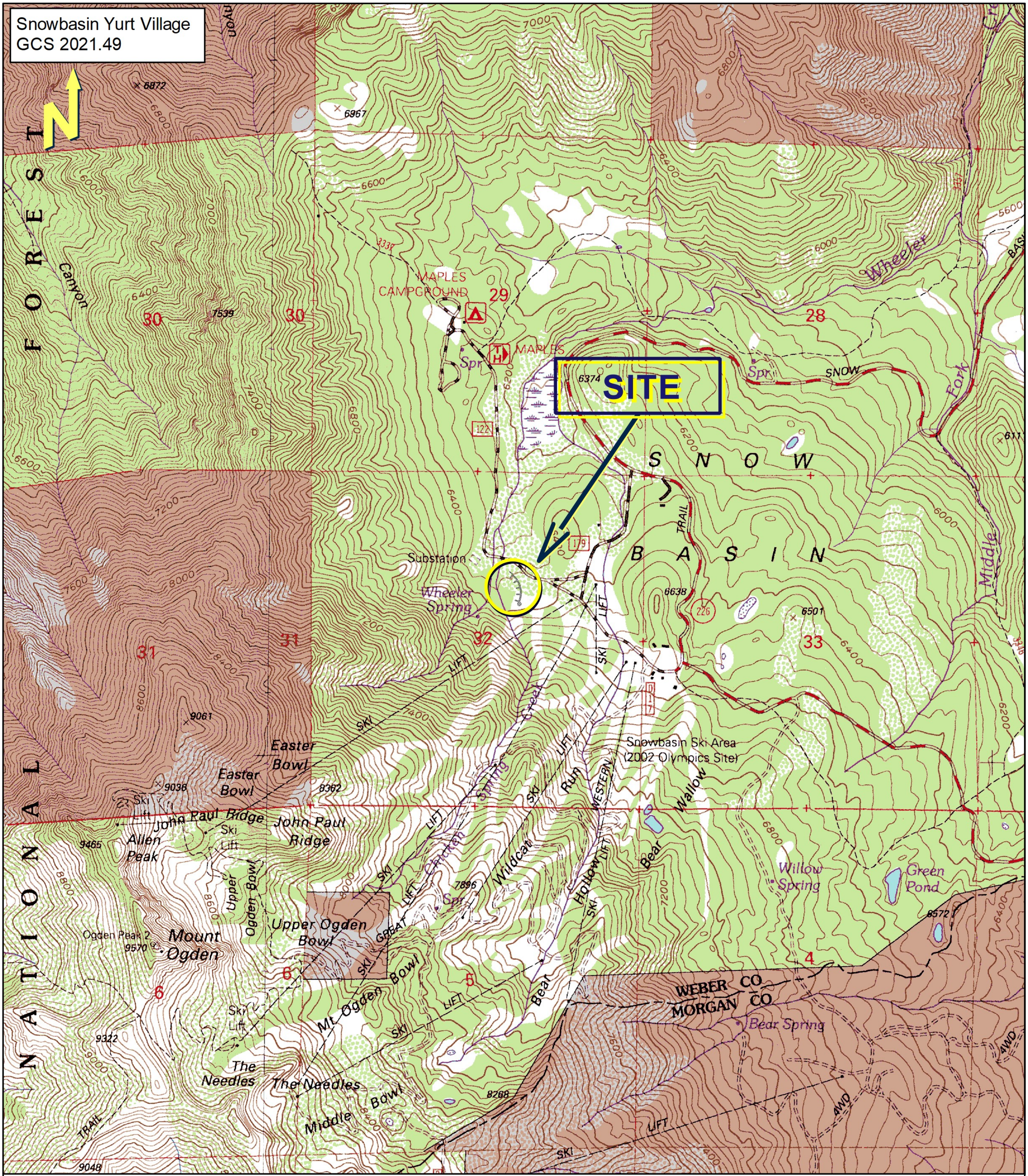
Encl. Figure 1, Site Vicinity Map
Figure 2, Aerial Coverage
Figure 3, Geologic Mapping
Figure 4, LiDAR Analysis



Base:
1998 7.5 Minute USGS Toporgraphic Maps
Titled Snowbasin, Utah, and Ogden, Utah,
from Utah UGRC; http://gis.utah.gov/

0 2000 4000 ft

1:24,000

FIGURE 1
VICINITY MAP

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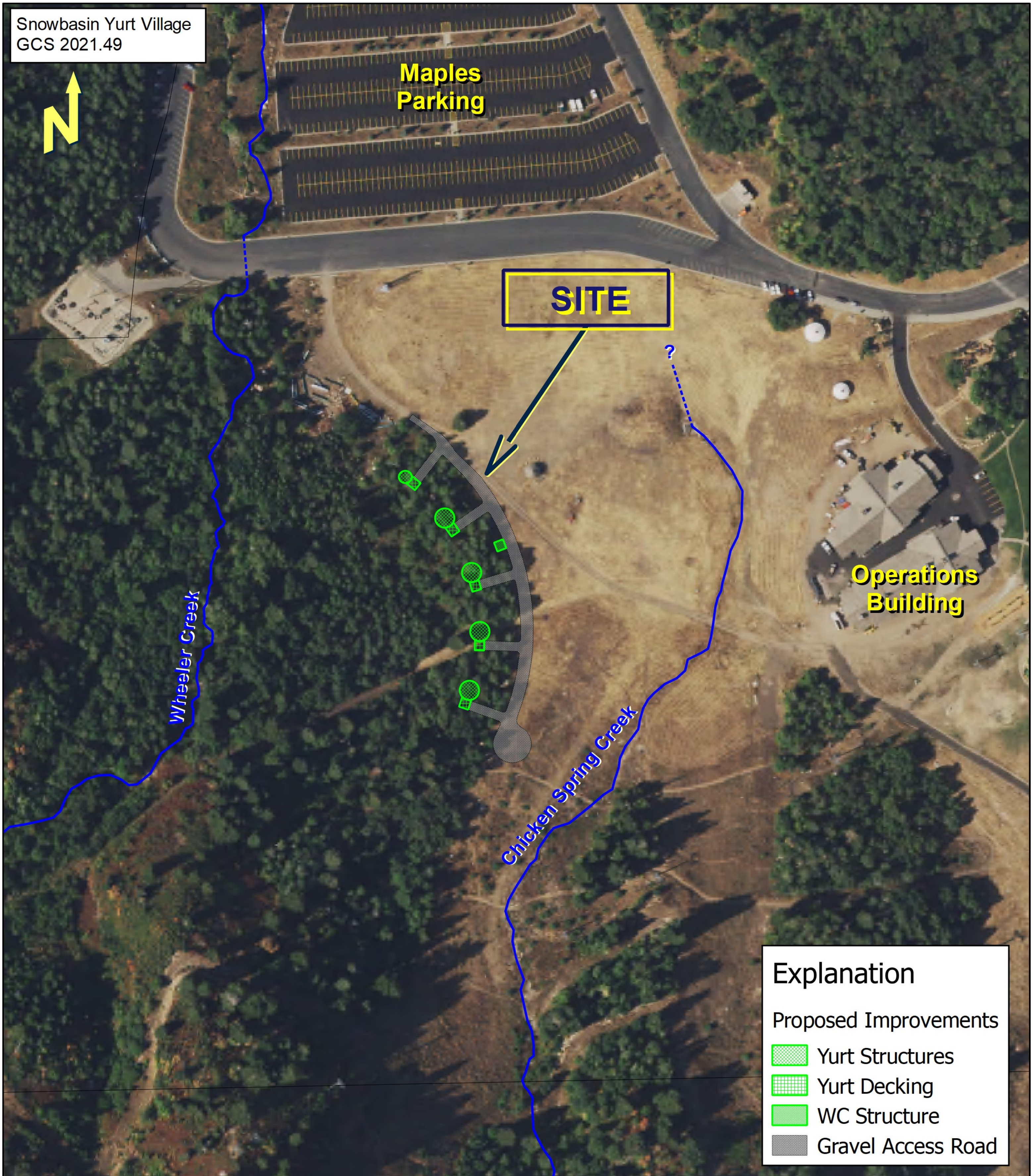

Base:
2018 0.6m Color NAIP Orthoimagery,
from Utah UGRC; http://gis.utah.gov/

0 200 400 ft

1:2,400

FIGURE 2
AERIAL COVERAGE

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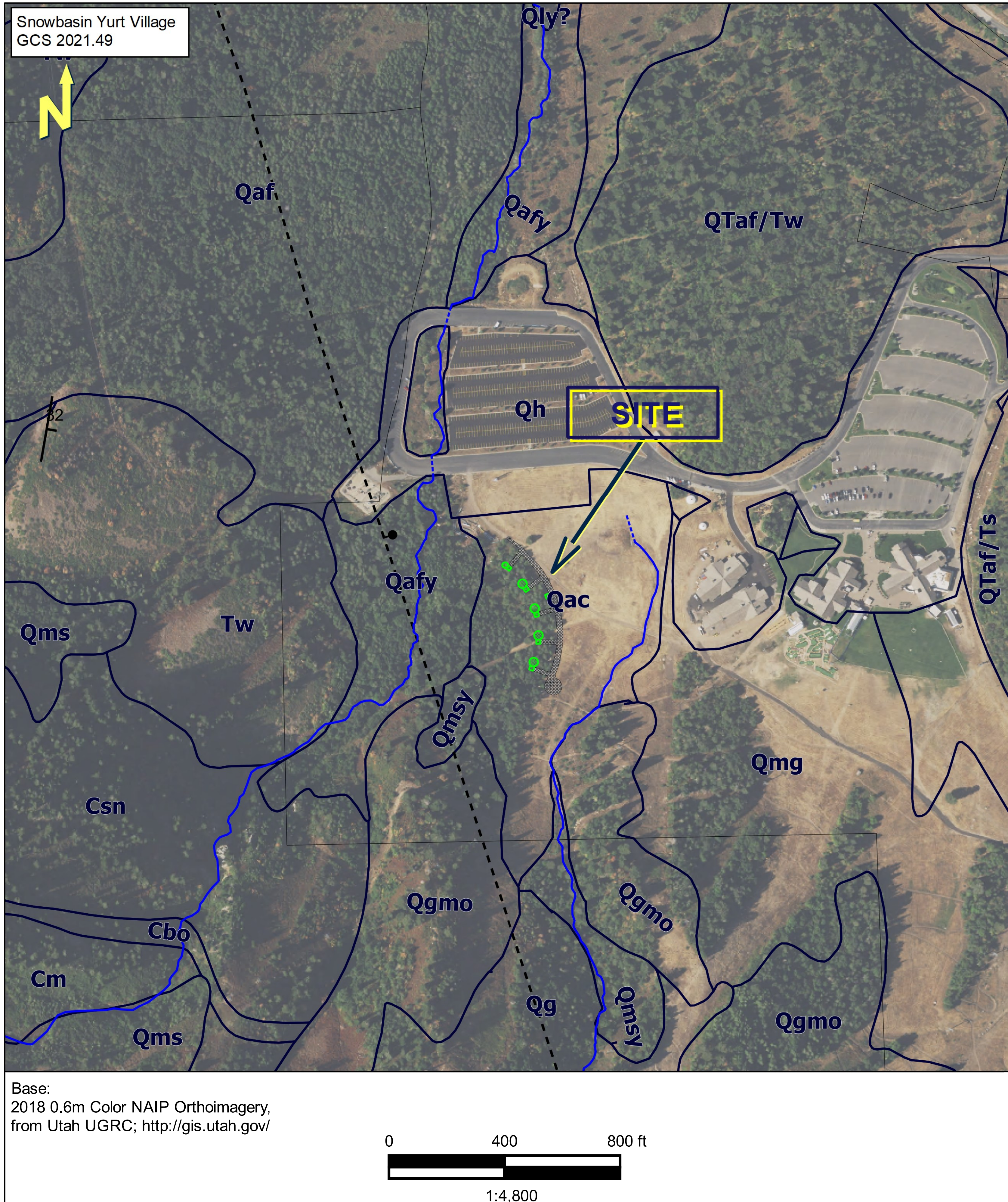

Geologic Classification

(after Coogan and King, 2016

Qh - Human disturbance (Historical) - Obscures original deposits by cover or removal; mostly fill along railroad and highway grades, and some large gravel pits...

Qac - Alluvium and colluvium (Holocene and Pleistocene) - Includes stream and fan alluvium, colluvium, and locally mass-movement deposits...

Qafy - Younger alluvial-fan deposits (Holocene and uppermost Pleistocene) - Mostly sand, silt, and gravel that is poorly bedded and poorly sorted; includes debris flows, particularly in drainages and at drainage mouths...are active, and impinge on present-day drainages...

Qaf - Alluvial-fan deposits (Holocene and Pleistocene) – Mostly sand, silt, and gravel that is poorly bedded and poorly...variably consolidated; includes debris flows, particularly in drainages and at drainage mouths (fan heads) ...

Qmsy - Younger landslide and slump deposits (Holocene) - Poorly sorted clay- to boulder-sized material…

Qms - Landslide and slump deposits (Holocene and Pleistocene) - Poorly sorted clay- to boulder-sized material…

Qmg - Mass-movement and glacial deposits, undivided (Holocene and Pleistocene) – Unsorted and unstratified clay, silt, sand, and gravel; mapped where glacial deposits lack typical moraine morphology…

Qg - Glacial deposits (Holocene and upper and middle? Pleistocene) -Poorly to moderately sorted clay, silt, sand, gravel to boulder size material...

Qgmo - Older glacial till and outwash (upper and middle? Pleistocene) – Poorly to moderately sorted clay, silt, sand, gravel to boulder size material...

QTaf/Ts – QTaf - High-level alluvial-fan deposits (lower Pleistocene and/or Pliocene) – Gravel, sand, silt, and clay above other stream-terrace and alluvial-fan deposits / over **Ts Tertiary strata,** undivided including **Tw Wasatch Formation** and/or **Tn Norwood Formation...**

QTaf/Tw – QTaf - High-level alluvial-fan deposits (lower Pleistocene and/or Pliocene) – Gravel, sand, silt, and clay above other stream-terrace and alluvial-fan deposits / over **Tw Wasatch Formation...**

Tw - Wasatch Formation (Eocene and upper Paleocene) – Typically red to brownish-red sandstone, siltstone, mudstone, and conglomerate with minor gray limestone and marlstone locally; conglomerate clasts mainly rounded Neoproterozic and Paleozoic sedimentary rocks, typically Neoproterozoic and Cambrian quartzite…

Csn -St. Charles and Nounan Formations, undivided (Ordovician and Cambrian) -Light- to medium-gray, cliff and ledge-forming dolomite with lower part calcareous sandstone and sandy dolomite that forms slopes...

Cbo- Bloomington Formation (Cambrian) -Brown-weathering, slope-forming gray to olive-gray, silty argillite interlayered with gray- to yellowish- and orangish-gray-weathering, thin- to medium-bedded, silty limestone, flat-pebble conglomerate, nodular limestone, and wavy-bedded (ribbon) limestone...

Cm - Maxfield Limestone (Middle Cambrian) –From top down includes dolomite, limestone, argillaceous to silty limestone and calcareous siltstone and argillite, and basal limestone with argillaceous interval...

Normal Fault - Concealed

Strike and Dip of Beds

FIGURE 3
GEOLOGIC MAPPING

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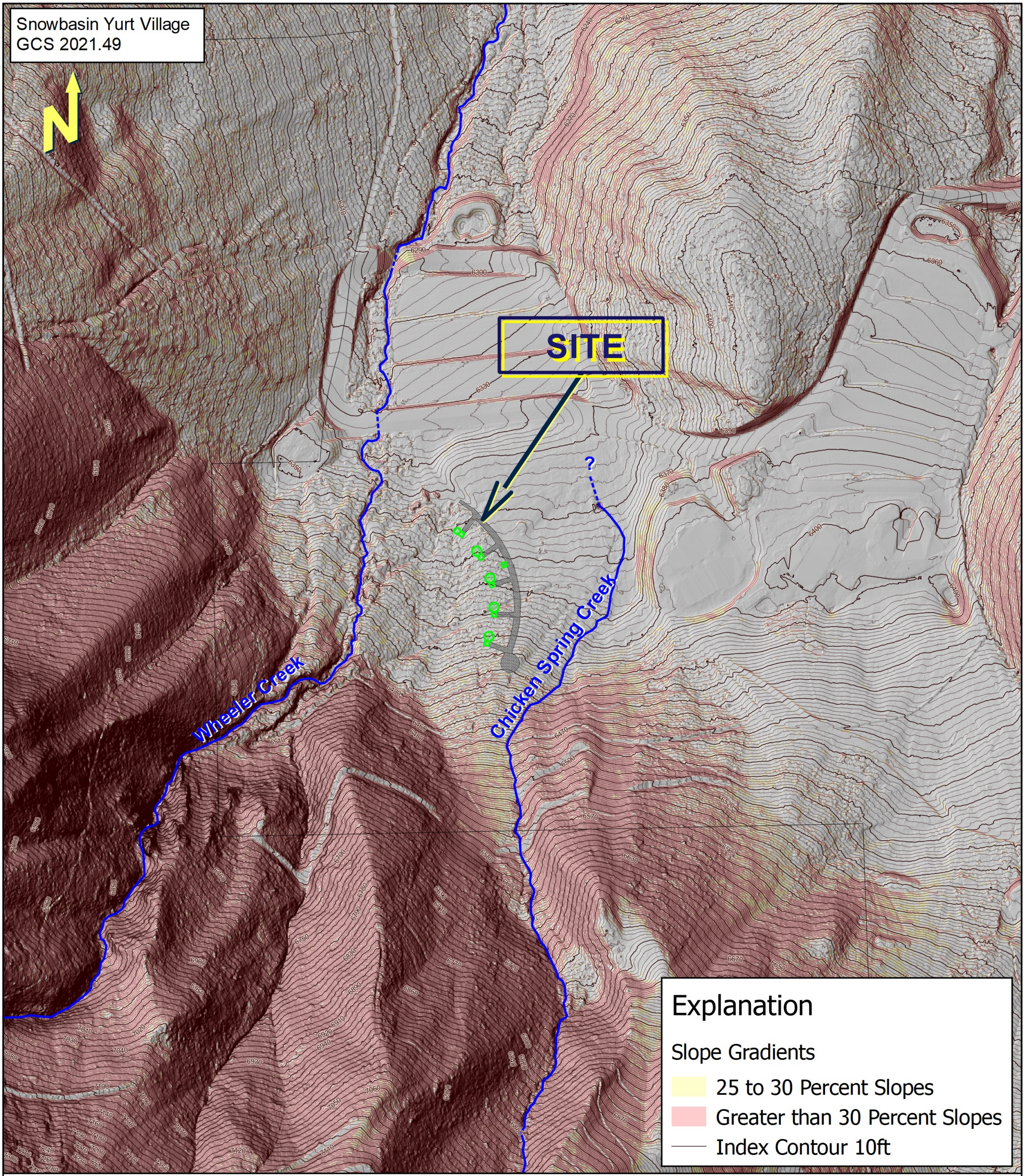

Base:
2020 0.5m LiDAR Imagery
from Utah UGRC; http://gis.utah.gov/

FIGURE 4
LiDAR ANALYSIS

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