ALPINE CITY COUNCIL MEETING AGENDA
June 23, 2020

NOTICE is hereby given that the **CITY COUNCIL** of Alpine City, Utah will hold a Public Meeting on **Tuesday, June 23, 2020 at 7:00 pm** hosted at **Mountainville Academy**, 195 South Main Street, Alpine, Utah as follows:

I. CALL MEETING TO ORDER
- **A. Roll Call** — **Mayor Troy Stout**
- **B. Prayer** — **Lon Lott**

II. CONSENT CALENDAR

- **A. Approve City Council Minutes of June 9, 2020**

III. PUBLIC COMMENT

IV. REPORTS AND PRESENTATIONS

V. ACTION/DISCUSSION ITEMS

- **A. Plat Amendment Summit Point, proposal to amend the recorded Summit Point Subdivision Plat located at the end of Lakeview Drive**
- **B. Public Hearing: Alpine City Final Budget FY2020-21**
- **C. Ordinance No. 2020-10, Adopting the Final Budget FY2020-21**
- **D. Resolution No. R2020-07, Adopting the Certified Tax Rate FY2020-21**
- **E. Public Hearing: Amend the Alpine City Budget FY2019-20**
- **F. Ordinance 2020-11, Amending the Alpine City Budget FY2019-20: The City Council will approve the amended budget for FY2019-20**
- **H. CARES Act Funding Agreement: The City Council will consider adopting the CARES ACT funding agreement with Utah County**

VI. STAFF REPORTS

VII. COUNCIL COMMUNICATION

VIII. EXECUTIVE SESSION: Discuss litigation, property acquisition, or the professional character, conduct or competency of personnel.

Mayor Troy Stout
June 19, 2020

THE PUBLIC IS INVITED TO PARTICIPATE IN ALL CITY COUNCIL MEETINGS. If you need a special accommodation to participate, please call the City Recorder's Office at (801) 756-6347 x 4.
CERTIFICATE OF POSTING. The undersigned duly appointed recorder does hereby certify that the above agenda notice was on the bulletin board located inside City Hall at 20 North Main and sent by e-mail to The Daily Herald located in Provo, UT, a local newspaper circulated in Alpine, UT. This agenda is also available on our web site at www.alpinecity.org and on the Utah Public Meeting Notices website at www.utah.gov/pmn/index.html

PUBLIC MEETING AND PUBLIC HEARING ETIQUETTE

Please remember all public meetings and public hearings are now recorded.

- All comments **must** be recognized by the Chairperson and addressed through the microphone.
- When speaking to the Planning Commission/City Council, please stand, speak slowly and clearly into the microphone, and state your name and address for the recorded record.
- Be respectful to others and refrain from disruptions during the meeting. Please refrain from conversation with others in the audience as the microphones are very sensitive and can pick up whispers in the back of the room.
- Keep comments constructive and not disruptive.
- Avoid verbal approval or dissatisfaction of the ongoing discussion (i.e., booing or applauding).
- Exhibits (photos, petitions, etc.) given to the City become the property of the City.
- Please silence all cellular phones, beepers, pagers or other noise making devices.
- Be considerate of others who wish to speak by limiting your comments to a reasonable length, and avoiding repetition of what has already been said. Individuals may be limited to two minutes and group representatives may be limited to five minutes.
- Refrain from congregating near the doors or in the lobby area outside the council room to talk as it can be very noisy and disruptive. If you must carry on conversation in this area, please be as quiet as possible. (The doors must remain open during a public meeting/hearing.)

Public Hearing vs. Public Meeting

If the meeting is a **public hearing**, the public may participate during that time and may present opinions and evidence for the issue for which the hearing is being held. In a public hearing there may be some restrictions on participation such as time limits.

Anyone can observe a **public meeting**, but there is no right to speak or be heard there - the public participates in presenting opinions and evidence at the pleasure of the body conducting the meeting.

ALPINE CITY COUNCIL ELECTRONIC MEETING
Alpine City Hall, 20 N. Main, Alpine, UT
June 9, 2020

I. CALL MEETING TO ORDER: The meeting was called to order at 7:00pm by Mayor Troy Stout.

A. Roll Call: The following were present and constituted a quorum:

Mayor Troy Stout
Council Members: Lon Lott, Carla Merrill, Greg Gordon, Jason Thelin, Jessica Smuin
Staff: Shane Sorensen, Bonnie Cooper, Austin Roy, David Church, Chief Brian Gwilliam, Chief Reed Thompson
Others: Will Jones, Griff Johnson

B. Prayer: Jessica Smuin

II. CONSENT CALENDAR

A. Approve City Council Minutes of May 12, 2020
B. Bond Release No. 2 – Montdella $3,805.20
C. Bond Release No. 6 – The Ridge at Alpine Phase 1 $19,500.00
D. Bond Release No. 7 – The Ridge at Alpine Phase 2 $73,370.88
E. Bond Release No. 1 – The Ridge at Alpine Phase 3 $599,000.80
F. Pay Request No. 1 – Pioneer Road Project $136,533.53
G. Pay Request No. 2 – 800 S. Waterline Project $118,703.07
H. Final Pay Request – Healey Parking Lot $77,0004.95
I. Pay Request No. 2 – Moyle Drive Improvements $51,183.00
J. Final Pay Request – Moyle Drive Improvements $4,048.25
K. Declaration of Surplus Equipment: 2013 Kubota RTV1100
L. Firework Restriction Map 2020
M. Bond Release No. 7 – Alpine View Estates $64,166.42

Motion: Lon Lott moved to approve the Consent Calendar with the following changes on the minutes of May 12, 2020 on Page two line one with regards to what Jason Thelin said. The City Recorder corrected the minutes according the recorded meeting. Jessica Smuin seconded the motion. The 5 Ayes and 0 Nays (recorded below). The motion passed unanimously.

Ayes	Nays
Jason Thelin	
Greg Gordon	
Carla Merrill	
Jessica Smuin	
Lon Lott	

III. PUBLIC COMMENT

Austin Roy said at the Public hearing last week that Planning Commission received several public comments. Austin Roy read the following public comments into the record:

Bill Brady, Allegheny Way:

Dear Mayor and City Council,

I understand that tonight you discussed potential zoning changes that would pave the way for high-density housing on the Bangerter and Burgess properties off Alpine Highway.

PLEASE, PLEASE DON'T DO THIS!

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Please keep Alpine Alpine!

My wife and I relocated to Alpine from South Jordan three years ago and bought a home on Allegheny Way. We left South Jordan because it had become so dense on the west side. High-density housing destroyed our neighborhood. Crime skyrocketed and the peaceful, out-of-the-city feeling we sought was replaced with so much traffic that every drive through our neighborhood evoked tension and resentment. We sold our home and left as a result.

We specifically chose Alpine because of the city's trend away from high-density housing. Please don't change course on us and destroy the Alpine neighborhood we have come to love so much. Please!

Despite our love for Alpine, we will immediately put our home up for sale if the city decides to make zoning changes that will change the character and personality of a place that people love because it feels a little slower, more peaceful and more family friendly.

Respectfully,
William Brady

Lon Lott said rumors have been going around that there was going to be a high-rise in the aforementioned area. He explained that the City would still have to go by ordinances that were in place for height and size. He said a high-rise would not be built in Alpine.

Ashley Carter, Matterhorn Drive:

Dear City Council,

Alpine's Planning Commission approved Blue Bison's latest proposal for Summit Point last week, and it will probably come before this Council on June 23rd.

I know you have all put much time and energy into listening to Alpine citizens and studying this issue. I am very grateful for your hard work and know that your service to the city is indeed a sacrifice. I thank you, and hope that you know I appreciate all you have done as I now ask two more things of you before you vote on this critical issue: (1) Consult with an expert land use attorney, and (2) Consult with a city planning/design consultant.

The way this proposal is handled will determine whether or not within five years Alpine residential roads and Main Street become thoroughfares for traffic between Utah County and Draper. On the Draper side, Blue Bison recently submitted an updated proposal for its Draper property proposing 285 homes, and the proposed road on the Draper side connects directly into the Alpine road WITHOUT a cul de sac or means of turn-around. Alpine must ensure that no matter what Draper City decides, the road is blocked on Alpine's side so excess traffic cannot flow through our neighborhood streets.

Alpine citizens are adamant that we do not want this road, or a gate that is only a temporary solution. Our Facebook group dedicated to this issue is up to 759 members and growing daily. In a recent poll of 102 people in the group, only one was in favor of the current proposal. 67 asked that you seek expert legal counsel before making a decision, and 34 people believed you should deny the proposal and fight it out in court even at the risk of losing.

Regarding meeting with a land use attorney: The Planning Commission denied a free-flowing road between Summit Point and the Draper property last year because such a road would violate our general plan which allows for only three gateways into the city. Utah law forbids approval of a development that is at odds with our general plan. Is a gated fire-access road a "gateway" into the city? Should the proposal be denied based on a conflict with the general plan? What if the gated fire-access road is approved and the gate comes down--will you have violated the general plan subjecting the city to liability? If you choose to approve the proposal, what legal structures can

you put in place to make sure the gate is a permanent solution? If you choose to deny the proposal and the developer sues, what are your chances in court? These are complex questions only an expert can answer.

Please take the time and tax dollars to consult with an expert attorney on these issues. I will support any decision you make if it is based on expert legal advice from an attorney who deals regularly in these issues. If after obtaining legal advice you feel the gated fire-road is the best option for Alpine, please do everything in your power to make sure the gate can never come down.

Do not assume that the developer will ensure the gate is permanent. Permanence is not his problem. It is up to YOU to protect Alpine, and to make sure no future city council can open the road. So, my second request is, if you are inclined to approve the proposal, please consult with a city planning and design professional to learn how to design this road so that it stays gated forever. Put legal and physical requirements in writing before the proposal is approved to ensure the road will NEVER become free flowing. I am including names and contact info of some recommended consultants you can reach out to in case that is helpful.

Thank you,
Ashley Carter

Elliott Jacobson:

Thank you for your recordings and posting the meetings online (on YouTube). Thank you for your thoughtful discussions. I am especially grateful that we considering the look and feel of Main Street, and that there was the suggestion of a discussion looking at our signage ordinance. Large marquis signs with bright and flashing lights might feel at home in Orem or Lehi, but it is disappointing to see them in Alpine. Let's look at best practices of signage design codes in town of similar character and how their signage codes support the special look, brand, and feel of these towns.

Elliott Jacobsen

Penney Lindford, Bald Mountain Drive:

Dear Troy and Greg,

We live on Bald Mountain Dr. and we noticed that a great number of trees along the Alpine trail are dying. We are wondering if this is related to the fact that all the water has been diverted away from the creek south of the new parking lot in Lambert Park. Is there a way to bring the water back occasionally? We love to see it on our walks along the Alpine trail. Also, if all those trees die, they will be a fire hazard. Please bring this up in the City Council and see if anything can be done.

Penney Linford

Shane Sorensen said if there was excess water, the City could run some water down to the area noted by Ms. Linford. However, this could not be done year-round. Staff would need to assess the situation more closely, including looking at the health of the trees running along the ditch.

Carolyn Baumgartner, **Matterhorn Drive:**

Carolyn Baumgartner agreed with Ashley Carter regarding Blue Bison's latest proposal.

Mayor Troy Stout said the City Council wanted to get back to live meetings as soon as possible. He also said staff was looking for an area to have a meeting to accommodate social distancing at the next public hearing to enable more public comments. He acknowledged for the record that COVID-19 had made electronic meetings not ideal for hearing from the public.

IV. REPORTS AND PRESENTATIONS

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A. Financial Report

Shane Sorensen stated that there were three weeks left in this year's budget, and so far, everything looked good. There would be a few adjustments to be made at the next public hearing scheduled on June 23, 2020, at the City Council Meeting. At that same meeting, next year's budget will be adopted.

B. Results of CUP Project Bid

Shane Sorensen explained that the results of this bid were included in the Council packet. The lowest bid was submitted by Cobb Construction for a little over $3 million. A third of this amount would be attributed to the pump station, and the City was responsible for half of that amount. The City had planned for approximately $500,000 for that project, and they were still close to the amount for which they had planned. A preconstruction meeting would be held next week.

C. Results of PI Bond Bid

Shane Sorensen said the PI Bond would be through Chase Bank at 1.33%. The closing on this bond would take place tomorrow: June 10, 2020.

V. ACTION/DISCUSSION ITEMS

A. Plat Amendment – Alpine View Estates Plat B

Austin Roy presented the staff report as well as an aerial map of the subject property. He explained this subdivision had been previously recorded, but the developer was seeking to adjust the boundary between Lot 11 of Alpine View Estates and some adjacent public open space. The adjustment would allow for the trail alignment recommended by the Trail Committee through the public open space. The land swap was an equal square foot exchange. Austin Roy said at the Planning Commission Meeting there was a public hearing and no public comments were made. There was further review and discussion of the line adjustments that would be made as part of the land swap and plat recordation.

Carla Merrill asked if the Council needed to grant an exception as part of this item, as the City had an ordinance in place requiring five sides or less. Austin Roy said this was correct. Carla Merrill asked if they were granting an exception at the same time as approving the Plat Amendment. Austin Roy clarified that the front did not count against the five sides.

Motion: Jason Thelin moved to approve the Plat Amendment to Alpine View Estates Plat B as proposed. Carla Merrill seconded the motion. There were 5 Ayes and 0 Nays (recorded below). The motion passed unanimously.

Ayes	Nays
Jason Thelin	
Greg Gordon	
Carla Merrill	
Jessica Smuin	
Lon Lott	

C. Review – Three Falls Ranch Plat G Corrections

Austin Roy explained that this item was approved with conditions by the City Council on April 28, 2020. Conditions included:

1. The developer addressed the redlines on the plat, including showing the trails.
2. The 20-foot access easement to the water tank be designated as a public access easement in favor of Alpine City.
3. Anywhere the trails were currently located in private open space would be designated as public open space.

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4. Items 2 through 5, which dealt with adjusting building envelopes and lots line on specific lots, be accepted as approved by staff.

The Plat had since been corrected. The item was now returning to the City Council to verify that the plat had been corrected per the conditions outlined above, and that it met the Council's expectations. Will Jones was on the Zoom meeting to let the group know that the work had been done and that access had been granted to Alpine City to trails with two, 20-foot public access easements in favor of Alpine City. There was further review of the aerial map included with this presentation. The Council needed to say "public" on the northern easement in favor of Alpine City.

Will Jones, developer, identified the trails on an aerial map and explained where the trails connected to the easements. Mayor Troy Stout asked Will Jones how the signage would look, to which he said that he and Shane Sorensen would install three or four signs. Will Jones noted that Draper had some signs that he would like to copy and put at the trailheads. Will Jones explained that he would work with Shane Sorensen and staff on the signage for the trails. He had given the City a little over six acres of land for public open space.

Will Jones asked if the City Council could have the area between 47 and 48, which was private open space. He would subsequently give that space to the owner of 48, so that 47 and 48 would become one lot (47). Will Jones also said a biking club would put up signs indicating that riders should not ride the trail while muddy. The club was also willing to put up any additional signs needed by the City.

Motion: Jason Thelin moved to approve and verify that the corrections and conditions on Three Falls Ranch Plat G have been met, with the following changes: the northern easement to the water tank language needs to say " public" access easement in favor of Alpine City. Additionally, he moved to allow Will Jones, Developer, to work with the City in finding the proper line to the north so as to connect the open space behind Lots 47 and 48, which are owned by the same person. Lon Lott seconded the motion. There were 5 Ayes and 0 Nays (recorded below). The motion passed unanimously.

Ayes	Nays
Jason Thelin	
Greg Gordon	
Carla Merrill	
Jessica Smuin	
Lon Lott	

D. Ordinance 2020-12: Trail Committee and Trail Ordinance

Austin Roy explained that the Development Code needed to be updated. There were a few spots in the Trail Ordinance where the code still referred to the Parks, Recreation, and Open Space (PRO) Committee. However, this committee no longer existed, and responsibilities referred to in the code were now handled by the Trail Committee. The proposed update replaced all references to the PRO Committee with the Trail Committee.

Lon Lott asked about the language on Page 2 Section 4B, where it states that "an additional bond may be posted and be held until repairs are approved by the City Administrator." Further, he noted that it stated that "the amount of the bond is to be determined by the City Engineer." He wanted to know if there was a reason why everything could not just be approved by the City Engineer. Shane Sorenson said he did not have a problem with this change.

Motion: Lon Lott moved to approve Ordinance 2020-12: Trail Committee and Trail Ordinance, with the following change on Page 2 Section 4b: Before Occupancy Permits are Issued 3.17.110, changed to read on line 3 from "approved by the City Administrator" to "approved by the City Engineer." Carla Merrill seconded the motion.

There was further discussion on the item and motion. Greg Gordon wanted more information about the Trail Committee: when the group met and what its official duties and responsibilities were on behalf of the City. Will Jones explained that the Trail Committee met either once per month, depending on projects in

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progress, or as needed. These meetings were typically held on Tuesday or Thursday evenings. The City Recorder would begin recording these meetings and posting the minutes for the public. There were currently four active members on the Trail Committee, and they would love to have more members.

Mayor Troy Stout requested a formal presentation from the Trail Committee the City Council every three to four months. Jessica Smuin asked if a Council Member needed to be appointed to the Committee, to which David Church said that while the Council could appoint someone to the Committee, there was nothing that mandated this.

A vote on the motion was made. There were 5 Ayes and 0 Nays (recorded below). The motion passed unanimously.

Ayes	Nays
Jason Thelin	
Greg Gordon	
Carla Merrill	
Jessica Smuin	
Lon Lott	

E. Verizon Location

Shane Sorensen explained that several months ago, the City Council voted to allow a cellular tower to be located on the City Hall block. The areas presented tonight were two different tower locations between City Hall and the fire station. The west location had more conflicts than the east location. There were other open areas on the block that could be considered. Staff suggested to the City Council to place the cellular tower in the eastern most area between City Hall and the fire station. Verizon would move plans forward; the location needed to be finalized. Once a location was approved, Verizon would complete plans and submit the package for approval. Shane Sorensen explained that the east option would not affect the fire station driveway.

Greg Gordon and Mayor Troy Stout both recollected from previous City Council meetings having voted on the water tower design. Mayor Troy Stout named several locations where the water tower designs were located throughout the valley. Mayor Troy Stout and Lon Lott both expressed that they liked the eastern area.

Motion: Greg Gordon moved to approve the eastern proposed location as depicted on the map for the construction of the Verizon cellular tower with the water tower design, making any adjustments needed to preserve the trees in that area. Lon Lott seconded the motion. There were 5 Ayes and 0 Nays (recorded below). The motion passed unanimously.

Ayes	Nays
Jason Thelin	
Greg Gordon	
Carla Merrill	
Jessica Smuin	
Lon Lott	

F. Resolution No. R2020-06: Appointment to Animal Shelter Board

Shane Sorensen said that Lieutenant Dave Boerner had served for the last few years on the North Utah Valley Animal Sheltered Board as the representative from Alpine City. Due to his recent retirement, a new appointee was needed. Lieutenant Jamey Brooks was promoted to fill the position left by Lieutenant Boerner's retirement. Staff recommended that Lieutenant Brooks be appointed to the board as Alpine City's representative.

Motion: Lon Lott moved to approved Resolution No. R2020-06: Appointment of Lieutenant Jamey Brooks to the North Utah Animal Shelter Board. Carla Merrill seconded the motion. There were 5 Ayes and 0 Nays (recorded below). The motion passed unanimously.

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Ayes	Nays
Jason Thelin	
Greg Gordon	
Carla Merrill	
Jessica Smuin	
Lon Lott	

G. Ordinance 2020-09: Flood Plain Ordinance Update

Shane Sorensen said in February, the Planning Commission and City Council approved updates to the Flood Plain Ordinance that referenced the new Flood Insurance Rate Map (FIRM). After review, FEMA was now asking that additional changes be made to the language to follow the National Flood Insurance Program (NFIP). If not approved, Alpine City residents would not be able to obtain flood insurance.

Motion: Lon Lott moved to approve the updated Ordinance 2020-09: Flood Plain Ordinance, as proposed. Jason Thelin seconded. There were 5 Ayes and 0 Nays (recorded below). The motion passed unanimously.

Ayes	Nays
Jason Thelin	
Greg Gordon	
Carla Merrill	
Jessica Smuin	
Lon Lott	

H. Fraud Risk Assessment

Shane Sorensen explained this was a new assessment with the State of Utah, and that the City would need to undergo this process annually. Currently, Alpine City scored in the moderate range. Shane Sorensen said that by the next City Council meeting everything should be in place to have a higher score so that Alpine could be in the low range. He stated that one item the City Council and Mayor could do was complete the State Auditor Online Training, which needed to be done once every four years. The training certificates would be kept on file at City Hall and would be reviewed as part of future audits.

Greg Gordon commented that the City would gain an additional 20 points by having everyone complete this training. Shane Sorensen said the citizens of Alpine could use the State Auditor Hotline to report any fraudulent or abusive behaviors. David Church would prepare a document for all employees of the City to sign saying that they would make a commitment of ethical behavior and/or declare any potential conflicts of interest. Additionally, the City Council could need create a fraud and abuse committee. The City did not have a CPA on staff, but it did staff someone with a master's degree in accounting, for which the City would receive extra points as well. There was discussion regarding best practices for mitigating circumstances such as two signatures being required on items and having two employees go over cash deposits.

I. Discussion about COVID-19 issues

1) City Hall modifications

Shane Sorensen said the City was still not planning on opening City Hall until the modifications had been made to change the entrance to the south door. This would not be an expensive modification: there would be a receptionist area with plexiglass. Lon Lott said most people coming to City Hall primarily used the side door. Mayor Troy Stout said a more inviting front door was needed at City Hall.

Greg Gordon voiced concerns of where the public would be parking at City Hall. Carla Merrill asked if these modifications needed to be made if they were just for short-term purposes. Shane Sorensen said this was something staff had been considering since the police left, which was well before COVID-19. Shane Sorensen agreed with Lon Lott that most people coming to City Hall went through that side door anyway.

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If City Hall were asked to open its doors, the west entrance would not be an option because there was not enough room. It was noted that staff would prepare plans and obtain cost estimates for modifying City Hall and would present this information to the City Council at the next Meeting.

2) CARES Act Funds

Mayor Troy Stout explained that the restrictions on how cities could spend these funds had been relaxed. Utah County received $111 million, and all mayors in Utah County agreed to allocated 35% of the funds to go towards businesses. Alpine City would receive $740,000 from that fund. The funds would need to be spent by Nov 1, 2020; if unused, they would be returned. The number of COVID-19 cases were going up about 300 per day.

Shane Sorensen said Alpine City's biggest expenses due to Covid-19 were for Lone Peak Police and Fire at about $35,000. Therefore, they would be using the CARES Act Funds to pay for these costs. He added that the City purchased laptops for employees to work from home, along with the following items: Cleaning supplies, hiring a temporary Parks employee to clean restrooms and park tables. The City would also like to purchase cleaning equipment for high-use areas. Staff would also use funds to expand playground equipment to disperse children playing at the parks, including pickleball courts. The funds could also be used to compensate for any costs incurred due to canceling Alpine Days.

3) Future City Council Meetings

Shane Sorensen stated that the Governor's order would expire at the end of the month, and he asked how the Council wanted to proceed with future meetings. He noted having spoken with David Church, City Attorney, who said the ordinances could be amended for modified City Council Meetings. He explained that in order to maintain a six-foot distance between everyone, they would need to have six spots for the Councilmembers, as well as spots for four staff members. This would only allow eight spots for members of the public. He stated that any members of the public that could possibly be turned away could get angry.

Mayor Troy Stout said although the State had moved to the yellow phase, it still seemed like things were moving a little too fast. He personally did not think the State would move into a green phase anytime soon with the COVID-19 cases continuing to spike. Mayor Troy Stout said that they needed to find a way to make Council meetings public, with social distancing practices in place. He suggested they find a different venue where they could accomplish this while also maintaining public safety.

Shane Sorensen said the City needed to come up with a better way to record and post meetings. Lon Lott suggested broadcasting the meetings from City Hall with a camera in the Council room. Carla Merrill suggested holding hybrid meetings. Shane Sorensen was concerned that hybrid meetings would require more staff on duty in order to direct the public. Lon Lott suggested a meeting at the City Park with folding chairs. Shane Sorensen said the City would also need to have hand sanitizer and masks available for the public, as everyone in attendance would be required to wear them.

Mayor Troy Stout asked Shane Sorensen how many public hearings would be held, to which Shane Sorensen said as of now just one this month regarding the budget. Mayor Troy Stout said they needed to get creative for how the City could let the public participate in the City Council meetings. He then stressed that the relief funds needed to be spent by November. Lon Lott said as a City Council, they should be cautious of how to spend these funds and should involve the public in those financial decisions; therefore, they needed to find an appropriate venue that could accommodate a public hearing.

Greg Gordon voiced concern that over the last month, the cases of COVID-19 had risen 138% in Highland, Cedar Hills, and Alpine. The City need to carefully follow social distancing guidelines as well as determine the best use of relief funds.

V. STAFF REPORTS

Chief Brian Gwilliam said he would be meeting with Congressman Brady Brammer and his wife Nicki, along with Highland City Mayor Rod Mann, Mayor Troy Stout, and Highland Resident Ronell Hugh, regarding the civil unrest in the Nation and throughout local communities. This meeting would take place

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tomorrow, June 10, 2020, at 7:00 pm, and would be broadcast live via Facebook and Highland City's YouTube channel. Ronell Hugh would be sharing his experiences throughout his life with racism and his dealing with the Lone Peak Police Department. During the broadcast, there would be discussion on the use of chokeholds and new police training. The group would also be discussing areas where the citizens of Alpine and Highland could help as a community, as well as the changes that would be taking place within the police force.

Chief Reed Thompson said he was pleased that the City Council passed the firework map. He said the fire department would be putting up firework signs prior to the sales of fireworks, which would begin June 24, 2020. He said they had their crews go out to Nevada on a wildland deployment training. The fire department had also completed wildland and triage training. The station was still closed due to COVID-19, but they were doing business inspections and were now playing catchup. He noted that the Forest Service was taking a proactive approach this year by producing a red and green map; red areas would be heavily monitored by the Forest Service. With this aid in place, Chief Thompson believed the fire department would be able to have quicker response times.

David Church noted that he was ready to retire and he urged the City to hire a new attorney. Mayor Troy Stout and Shane Sorensen stated that they would set a target date to begin the interview process.

Austin Roy thanked the public for their comments at the last Planning Commission Meeting. Many of the Action/Discussion Items discussed by the Planning Commission would be on the next few City Council meeting agendas. Austin Roy addressed the issue of holding hybrid meetings due to COVID-19 and stated that the City may need to amend the City ordinances to allow for those to happen. David Church said the Council did have options to hold meetings from a provisionary anchor location where the public could be present. The Council could amend the City's ordinance to indicate other items such as a quorum meeting remotely, whereas some Councilmembers could be at City Hall or at home offices. There needed to be at least one person at the public location to welcome attendees, as well as to pass and/or hold the microphone for speakers. Mayor Troy Stout suggested that by next week staff know if the City would have secured an alternative location.

Shane Sorensen said TSSD (Timpanogos Special Service District) green waste was closing on June 27, 2020. Shane Sorensen said he would obtain pricing from ACE for green waste cans and see how many Alpine citizens were currently utilizing the recycle program to gauge interest in utilizing the green waste program. He also reported that at the City parks new slack lines would be posted to help save the trees. Lastly, he reported that the City was in the process of interviewing a new public works employee. The budget also allowed for a new parks position.

VII. COUNCIL COMMUNICATION

Lon Lott asked Mayor Troy Stout about the meeting he had with John Curtis and the Forest Service. Mayor Troy Stout said that he and staff met with Mr. Curtis and toured the site. During that meeting, Mr. Curtis informed them that he used to design shooting ranges, and that in his opinion the area was not safe for shooting. There were a couple of issues that Mr. Curtis would address, the first of those issues being the Bonneville Shoreline Trail and where local authorities would like it to go, because there were a few different routes to where it could go. Mayor Troy Stout reviewed those potential areas and the pros and cons of each. Secondly, Mr. Curtis communicated that he would working with the Forest Service's proactivity in helping the City control the shooting taking place in the area, as well as property conditions. Mayor Troy Stout stated that it was time for him to follow up on these items with Mr. Curtis.

Jason Thelin commented about the Pack property, noting that the last time they discussed this item it was decided that the trail needed to be completed. He asked if staff or the Trail Committee could verify that this took place. Shane Sorensen said the trail was currently in progress, but he would have staff look at it, along with the pump station, to make sure those items were completed before recording the plat with the County.

Carla Merrill asked what the rest of the timeline looked like on the fencing on Lambert Park. Shane Sorensen stated that staff met the contractor today and they were working on a schedule; the projected date was still not known. Jessica Smuin asked staff if fencing would be added along Moyle Drive, as it was

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becoming more used as thru-street. Shane Sorensen said rocks, line painting, and signs had been added to that area to designate where people should and should not be. If the Council wanted fencing to be added, staff could further investigate the matter.

Jessica Smuin said she would like to discuss having more committees through which the community could become involved. Shane Sorensen said staff could look into the matter and relay information to the Council in a future meeting. His only concern was the amount of staff time required for helping those committees properly function. Jessica Smuin suggested that committee meetings be held during regular business hours. Shane Sorensen acknowledged that the Trail Committee, in particular, helped with trail projects that staff would not otherwise have the time to address. Therefore, he saw the value that committees could have to the City. Jessica Smuin asked if a staff member had to be present at committee meetings, to which David Church said no. However, someone did need to be present to record the meetings and minutes were required.

Mayor Troy Stout said he would talk to Will Jones about cleaning up the City's trails and determining a date for inviting the community's help on the matter.

VIII. EXECUTIVE SESSION:

Motion: Lon Lott moved to recess the City Council meeting to convene in a Closed Session to discuss pending or reasonable imminent litigation, and the purchase, exchange or lease of real property, as provided by Utah Code Annotated §52-4-205. Jason Thelin seconded the motion. There were 5 Ayes and 0 Nays (recorded below). The motion passed unanimously.

Ayes	Nays
Lon Lott	
Jason Thelin	
Jessica Smuin	
Carla Merrill	
Greg Gordon	

The Council went into a Closed Session at 9:32 pm. The Council returned to the Open Session at 9:59 pm and adjourned at 10:00 pm.

DRAFT

ALPINE CITY COUNCIL AGENDA

SUBJECT: Plat Amendment – Summit Pointe Amended Plat B

FOR CONSIDERATION ON: 23 June 2020

PETITIONER: Jake Satterfield of Blue Bison LLC

ACTION REQUESTED BY PETITIONER: Review plat amendment
BACKGROUND INFORMATION:

Developer is seeking to amend plat to allow for 8-lots on approximately 32.94 acres. Proposed plat amendment would dedicate approximately 3.69 acres to the City for storm water detention and debris field storage. See staff report to Planning Commission for full details.

STAFF RECOMMENDATION:
Review and discuss the proposed plat amendment and make a motion to approve or table/deny the proposal.

14425 South Center Point Way Bluffdale, Utah 84065
Phone (801) 501-0583 | Fax (801) 501-0584

Geologic Hazards Screening Assessment
Summit Pointe Subdivision
Alpine, Utah

GeoStrata Job No. 1312-005

October 17, 2018

Prepared for:

Six Blue Bison, LLC
c/o Jacob Satterfield
12543 Andreas Street
Riverton, Utah 84096
801-755-0452
jake@bluebisondev.com

Learn More

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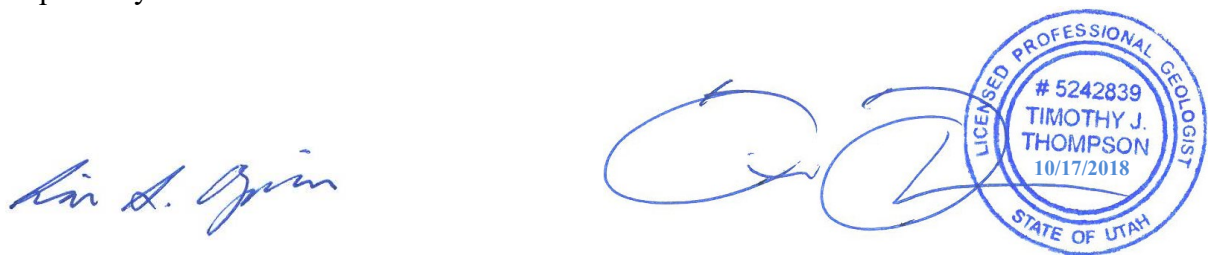
Geologic Hazards Screening Assessment
Summit Pointe Subdivision
Alpine, Utah
Parcel # 23-029-0047

GeoStrata Job No. 1312-005

Prepared by:



Sofia Agopian
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14425 South Center Point Way
Bluffdale, UT 84065
(801) 501-0583

October 17, 2018

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APPENDICES

Appendix

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1.0 EXECUTIVE SUMMARY

The purpose of this investigation and report is to assess the approximately 30.34 acres parcel located on a native hillside north of Hog Hollow Road in Alpine, Utah for the presence of geologic hazards that may impact the planned development of the site. The geologic hazards considered for this site are presented in Table 2 of this report. The work performed for this report was performed in accordance with our proposal, dated August 29, 2018.

The subject site is located north of Hog Hollow Road on a native hillside in Alpine, Utah at an elevation ranging from approximately 5,228 to 5,370 feet above sea level. We understand that the project site is an approximately 30.34 acres undeveloped parcel with hiking trails and unpaved access roads. It is our understanding that the proposed development, as currently planned, will consist of 8 single-family residential structures as well as associated driveways, utilities and landscape areas.

The earthquake ground shaking hazard that would potentially impact the subject site was assessed as part of our study. Given our office investigations, it is the opinion of GeoStrata that the earthquake ground shaking hazard within the subject site should not preclude development at the subject site. The seismic data provide above should be used by the project geotechnical and structural engineers for proper site and structural design.

The surface fault rupture hazard that would potentially impact the subject site was assessed as part of our study. No active faults are located near the subject site. Given our field and office investigations, the surface fault rupture hazard within the subject site is considered low and it is considered unlikely that surface fault rupture will impact the proposed development. It is the opinion of GeoStrata that surface fault rupture hazard should not preclude development at the subject lot.

The tectonic deformation hazard that would potentially impact the site was assessed as part of our study. No active faults are reported or mapped within or adjacent to the subject site. It is the opinion of GeoStrata that the tectonic deformation hazard within the subject site is considered low and it is considered unlikely that tectonic deformation will impact the proposed development. It is the opinion of GeoStrata that the tectonic deformation hazard should not preclude development at the subject site.

The liquefaction hazard that would potentially impact the site was assessed as part of our study. The site is located in an area currently designated as having a "Very Low" liquefaction potential. The near-surface soils are not considered to be susceptible to liquefaction. It is the opinion of GeoStrata that liquefaction hazard should not preclude development at the subject site.

The rockfall hazards within the subject site were assessed as part of our study. No rockfall or talus deposits are located within or immediately adjacent to the subject lot. Our field investigation revealed no indications that the subject lot has been subjected to previous rockfall. Therefore, the rockfall hazard within the subject site is considered low and it is considered unlikely that rockfall will impact the proposed development. It is the opinion of GeoStrata that rockfall hazard should not preclude development at the subject site.

The landslide, slump and creep hazards that would potentially impact the site were assessed as part of this study. No landslide deposits are mapped within or adjacent to the subject site. During our field investigation, no landslide features such as hummocky topography, slumps or scarps were identified within or adjacent to the subject site. If planned mass grading for the development includes cut and fill sections of five feet or greater in height or if cut and fill slopes steeper than 3 horizontal: 1 vertical are planned as part of the development of the subject site, then we recommend that a site-specific slope stability assessment be conducted as part of a geotechnical investigation of the subject site to assess slope stability hazards within the site. GeoStrata is concurrently completing a geotechnical study for the proposed development which includes a site-specific slope stability assessment. It is the opinion of GeoStrata that the landslide, slump and creep hazard should not preclude development at the subject site as long as the recommendations stated above and presented in the geotechnical investigation being conducted for the site are followed.

Slope stability of the subject site was not assessed as part of this geological hazard assessment. The subject site was observed to be gently sloping to the south toward Alpine City and moderately sloping toward local drainages. The possibility that development of the site could negatively affect slope stability within the subject site is increased if development is planned for areas of the site with slopes steeper than approximately 3horizontal: 1 vertical. It should be noted that grading or development adjacent to the subject site could potentially impact the stability of the area within the subject site and assessment of that hazard is out of the scope of this assessment.

The snow avalanche hazard that would potentially impact the site was assessed as part of this study. No evidence of prior snow avalanche was observed within the subject site. It is the opinion of GeoStrata that the snow avalanche hazard within the subject site is considered low and it is considered unlikely that this hazard will impact the proposed development. It is the opinion of GeoStrata that snow avalanche hazard should not preclude development at the subject site.

The alluvial-fan flooding hazard that would potentially impact the site was assessed as part of this study. Holocene age alluvial fan deposits are mapped immediately south of the subject site. During our field investigation, we observed two minor drainages that trend through the central portion of the subject site. We observed these two drainages to be relatively small. It is our opinion that these two minor drainages have a low to moderate debris flow potential and the debris flow potential in these two minor drainages could be mitigated through proper site grading and drainage plans developed by a professional engineer as part of the development of the subject site.

As previously stated, a road cut was graded from Lakeview Drive west into the subject site and crosses the more developed drainage that trends north-south along the eastern property boundary. No culvert was observed beneath the fill where the road crosses the drainage. Based on our understanding of the project, a detention basin will be located within the upstream side of the roadway that will cross the eastern drainage and a culvert pipe will be installed beneath the roadway embankment fill to allow water drainage to be released downstream of the roadway. Given the size of the eastern drainage basin and the young alluvial fan deposit mapped at the base of this drainage, GeoStrata recommends that the potential debris flow volume associated with this drainage basin be evaluated and that the potential debris flow volume associated with this drainage be included in the design volume of the proposed detention basin and sizing and design of the proposed culvert.

It is the opinion of GeoStrata that the alluvial fan flooding hazard within subject site is considered low to moderate. It is considered unlikely that debris flows will impact the proposed development as long as potential stormwater flow volume of the two minor drainages within the subject site be included and mitigated in the grading and drainage plans engineered for the site by the project civil engineer and the potential debris flow volume associated with the larger eastern drainage be included in the design volume of the proposed detention basin and sizing and design of the proposed culvert. It is the opinion of GeoStrata that alluvial fan flooding hazard should not preclude development at the subject lot as long as the recommendations presented above are followed.

Shallow groundwater assessment is out of the scope of this study. Seasonal fluctuations in precipitation, rapid snowmelt, surface runoff from adjacent properties, or other on or offsite sources may increase moisture conditions; groundwater conditions can be expected to rise several feet seasonally depending on the time of year. Shallow groundwater is to be addressed in the GeoStrata geotechnical investigation report for the subject site which is being completed concurrently with this report.

The stream flooding hazard that would potentially impact the site was assessed as part of this study. Pine Creek is located approximately 95 feet south of the subject site. Given our field and office investigations, the stream flooding hazard within the subject lot is considered low across most of the subject site, however stream flooding hazard within the three drainages observed in the central and eastern portions of the subject site and previously discussed in this report is considered moderate to high. Stream flooding could impact the proposed development within the three noted drainages. It is the opinion of GeoStrata that stream flooding hazard should not preclude development at the subject site as long as proper site grading, drainage, and erosion control plans are engineered and designed for the subject site as a part of the civil engineering design for the site to mitigate the potential for stream flooding to impact and damage planned structures or other planned associated infrastructure.

The canal flooding hazard that would potentially impact the site was assessed as part of this study. No canals were observed or are mapped within or adjacent to the subject site. Given our field and office investigations, the canal flooding hazard within the subject lot is considered low and it is considered unlikely that canal flooding will impact the proposed development. It is the opinion of GeoStrata that canal flooding hazard should not preclude development at the subject lot.

The dam failure hazard that would potentially impact the site was assessed as part of this study. No dams or reservoirs are located up-gradient of the subject site. Given our field and office investigations, the dam failure hazard within the subject lot is considered low and it is considered unlikely that dam failure will impact the proposed development. It is the opinion of GeoStrata that dam failure hazard should not preclude development at the subject lot.

The problem soils hazard is out of the scope of this study. Based on our review of published geologic maps and our field observations, the subject site is underlain by gravel and cobbles in a matrix of silt and sand. No laboratory testing was performed on these soils as part of this study and therefore this hazard was not assessed as part of this study. A geotechnical study is being

completed by GeoStrata for the subject site concurrently with this report to assess soil properties for use in the design of footing, foundation elements and grading.

The radon gas hazard is out of the scope of this study. No published data that covers the area of the subject sites currently exists. Indoor testing following construction is recommended for determining radon gas levels and mitigation methods needed.

The karst and sink holes hazards is out of the scope of this study. The karst and sink holes hazards within the subject site are considered low and it is unlikely that karst and sink holes hazards will impact the proposed development.

NOTICE: The scope of services provided within this report are limited to the assessment of the subsurface conditions for the proposed development. This executive summary is not intended to replace the report of which it is part and should not be used separately from the report. The executive summary is provided solely for purposes of overview. The executive summary omits a number of details, any one of which could be crucial to the proper application of this report.

2.0 INTRODUCTION

2.1 PURPOSE AND SCOPE OF WORK

The purpose of this investigation and report is to assess the approximately 30.34 acres parcel located on a native hillside north of Hog Hollow Road in Alpine, Utah for the presence of geologic hazards that may impact the planned development of the site. The geologic hazards considered for this site are presented in Table 2 of this report. The work performed for this report was performed in accordance with our proposal, dated August 29, 2018. Our scope of services included the following:

- Review of available references and maps of the area.
- Aerial photographs covering the site area.
- Review of 2013-2014 0.5-meter LiDAR
- Geologic reconnaissance and field mapping of the site by an engineering geologist to observe and document pertinent surface features indicative of geologic hazards.
- Evaluation of our observations combined with existing information and preparation of this written report with conclusions and recommendations regarding geologic hazards observed to affect the site.

The recommendations contained in this report are subject to the limitations presented in the Limitations section of this report.

2.2 PROJECT DESCRIPTION

The subject site is located north of Hog Hollow Road on a native hillside in Alpine, Utah at an elevation ranging from approximately 5,228 to 5,370 feet above sea level. We understand that the project site is an approximately 30.34 acres undeveloped parcel with hiking trails and unpaved access roads. It is our understanding that the proposed development, as currently planned, will consist of 8 single-family residential structures as well as associated driveways, utilities and landscape areas. The hillside in the area of the subject site is moderately to steeply sloping generally to the south. The subject site remains in a relatively native condition. The parcels to the east and south are established residential neighborhoods. The parcels to the west and north are undeveloped hillsides. The location and approximate boundaries of the subject site are shown on the Site Vicinity Map and the Topographic Map included in the Appendix of this report (Plate 1; Plate 2).

3.0 METHODS OF STUDY

3.1 OFFICE INVESTIGATION

To prepare for the investigation, GeoStrata reviewed pertinent literature and maps listed in the references section of this report, which provided background information on the local geologic history of the area and the locations of suspected or known geologic hazards (Elliot and Harty, 2010; Black and others, 2016; Biek, 2005; Constenius and others, 2011; Machette, 1992). A stereographic aerial photograph interpretation was performed for the subject site using two sets of stereo aerial photographs (Table 1) obtained from the Utah Geological Survey Aerial Imagery Collection database.

Source	Photo Number	Date	Scale
USBR	SLA_1-6_A	August 10, 1938	1:20,000
USBR	SLA_1-7_A	August 10, 1938	1:20,000

Table 1: Aerial Stereosets.

GeoStrata also conducted a review of hillshades derived from 2013-2014 0.5-meter LiDAR digital elevation data obtained from the State of Utah AGRC to assess the subject site for visible alluvial fan deposits, landslide geomorphology, lineations related to stream flooding hazards, surface fault rupture related geomorphology and all other geomorphology related to geologic hazards (Plate 3 Hillshade Map).

3.2 FIELD INVESTIGATION

An engineering geologist investigated the geologic conditions within the general site area. A field geologic reconnaissance was conducted to observe existing geologic conditions and to assess existing geomorphology for surficial evidence of geologic hazards. During our fieldwork we conducted site observations to assess geologic hazards that might impact the subject site. We used our field observations to confirm the observations made during our office research and to observe any evidence of geologic hazards that were not evident in our office research, but which could be observed in the field.

4.0 GEOLOGIC CONDITIONS

4.1 GEOLOGIC SETTING

The site is located in Utah Valley on a south facing slope between Hog Hollow and Fort Canyon in Alpine, Utah. The subject site is located within the foothills of the Traverse Mountains, a structural salient denoting the boundary between Salt Lake Valley and Utah Valley and the southern terminus of the Salt Lake City Segment and the northern terminus of the Provo Segment of the Wasatch Fault Zone. Tertiary volcanic rocks and Tertiary alluvial fan deposits dominate the East Traverse Mountains and late Paleozoic shallow marine bedrock constitute the west Traverse Mountains. The Utah Valley is a northwest trending deep, lacustrine sediment-filled structural basin of Cenozoic age bounded on the northeast and southwest by two normal faults that dip towards the center of the valley. Utah Valley is a fault graben flanked by two uplifted blocks, the Wasatch Range to the east and the Lake Mountains to the west. The Wasatch Range is the easternmost expression of pronounced Basin and Range extension in north-central Utah (Stokes, 1986).

The near-surface geology of the Utah Valley is dominated by sediments, which were deposited within the last 30,000 years by Lake Bonneville (Scott and others, 1983; Hintze, 1993; Machette, 1992; Constenius and others, 2011). The lacustrine sediments near the mountain front consist mostly of gravel and sand. As the lake receded, streams began to incise large deltas formed at the mouths of major canyons along the Wasatch Range, and the eroded material was deposited in shallow lakes and marshes in the basin and in a series of recessional deltas and alluvial fans. Sediments toward the center of the valley are predominately deep-water deposits of clay, silt, and fine sand. However, these deep-water deposits are in places covered by a thin post-Bonneville alluvial cover. Most surficial deposits along the Wasatch fault zone were deposited during the final cycle of the Bonneville Lake Cycle between approximately 32 to 10 ka (thousands of years ago) and in the Holocene (< 10 ka).

4.2 SITE GEOLOGY

The geology within the subject site and in the surrounding area is shown on Plate 4a Site Vicinity Geologic Map and Plate 5 Site Vicinity 30x60 Geologic Map. On Plate 4a, the geology within the subject site is mapped as Tertiary alluvial fan (Taf) with three Quaternary alluvial fan deposits (Qaf_1) mapped at the base of the slope and overlying Lake Bonneville lacustrine gravel

and sand (Qlbg). The Tertiary alluvial fan deposits are described as unconsolidated pebble to boulder sized subangular to subrounded orthoquartzite and calcareous sandstone clasts with minor volcanic clasts. The Quaternary alluvial fan deposits are modern alluvial fans that are primarily debris flows that formed at the mouths of active drainages. Lastly, the lacustrine gravel and sand deposits are described as locally partially cemented, well-rounded, pebble to cobble gravel and pebbly sand that was deposited at and below the highest Bonneville shoreline, but above the Provo shoreline.

5.0 GENERALIZED SITE CONDITIONS

5.1 SURFACE CONDITIONS

As stated previously, the project site is located along a south facing slope between Hog Hollow and Fort Canyon in Alpine, Utah. The subject site is located on a gently to moderately sloping native hillside vegetated with grasses, sagebrush and scrub oak mainly growing in the drainages. The hillside slopes between approximately 5 degrees to the south toward Alpine and locally 14 degrees along the drainages. At the time of our site visit, a roadcut for an unpaved road was graded from Lakeview Road west into the subject site. Exposure along the eastern portion of the roadcut consisted of a clast supported deposit containing poorly sorted well-rounded quartzite, sandstone and Alta Stock granodiorite gravel and cobbles. This exposure was observed to contain moderate bedding in places. Exposure along the western portion of the roadcut consisted of a red-brown matrix supported deposit containing subangular to rounded quartzite clasts. The site remains in a relatively natural state, apart from minor grading for access roads and hiking trails. The site is vegetated with grasses, weeds, sage brush and scrub oak predominantly in the drainages. The parcels east and south of the subject site are established single-family residences. The parcels west and north of the subject site are undeveloped native hillsides.

6.0 GEOLOGIC HAZARDS

Geologic hazards can be defined as naturally occurring geologic conditions or processes that could present a danger to human life and property. These hazards must be considered before development of the site. There are several hazards that if present at the site should be considered in the design of habitable structures and other critical infrastructure. The hazards considered for this site are presented on Table 2 and discussed in the following sections of this report.

Hazard	Hazard Rating*					Further Study Recommended
	Not Applicable	Not Assessed	Low	Moderate	High	
Ground Shaking			X			
Surface Fault Rupture			X			
Tectonic Deformation			X			
Liquefaction			X			
Rock Fall and Topple			X			
Landslide			X			
Slump			X			
Creep			X			
Avalanche			X			
Debris Flow			X	X		G
Hyperconcentrated Flow			X			
Stream Flow			X			
Shallow Groundwater		X				E
Stream Flooding			X			
Canal Flooding	X					
Dam Failure	X					
Problem Soils		X				E
Radon		X				
Karst and Sink Hole		X				

Table 2: Summary of Geologic Hazards.

Table 2 shows the summary of the geologic hazards assessed and not assessed at the study area. The hazard rating as shown on Table 2 is intended to assess the probability that the hazard could have an impact on the site and not the severity of the hazard. A hazard rating of "Not Assessed" are hazards this report does not consider and no inference is made as to the presence or absence of the hazard at the site. A hazard rating of "Low" indicates that no evidence was found to indicate that the hazard is present and has a low probability of impacting the site, hazard not known or suspect to be present. A hazard rating of "Moderate" indicates that the hazard has a moderate probability of impacting the site, but the evidence is equivocal, based only on theoretical studies, or was not observed and further study is necessary as noted. A hazard rating of "High" indicates that that evidence is strong and suggests that there is a high probability of impacting the site and mitigation measures should be taken. If a hazard is assessed to potentially impact the site then further studies may be recommended. The following are the recommended studies and the letter designation associated with those studies: "E" – geotechnical/engineering, "H" – hydrologic, "A" – avalanche, "G" – additional detailed geologic hazard study out of the scope of this study.

6.1 EARTHQUAKE GROUND SHAKING HAZARD

During the event of an earthquake, seismic waves radiate outward from the initial point of rupture and dissipate with distance. The ground shakes as the seismic waves displace the ground both vertically and horizontally. Ground shaking can cause significant damage to and potentially collapse structures and can also trigger landslides, avalanches and liquefaction. The type of soil a seismic wave travels through can amplify or dampen the effects of ground shaking.

Seismic hazard maps depicting probabilistic ground motions and spectral response have been developed for the United States by the U.S. Geological Survey as part of NEHRP/NSHMP (Frankel et al, 1996). These maps have been incorporated into both *NEHRP Recommended Provisions for Seismic Regulations for New Buildings and Other Structures* (FEMA, 1997) and the *International Building Code* (IBC) (International Code Council, 2015). Spectral responses for the Maximum Considered Earthquake (MCE_R) are shown in the table below. These values generally correspond to a two percent probability of exceedance in 50 years (2PE50) for a "firm rock" site. To account for site effects, site coefficients which vary with the magnitude of spectral acceleration are used. Based on our field and office investigations, it is our opinion that this location is best described as a Site Class C which represents a "Very Dense Soil and Soft Rock" profile. The spectral accelerations are shown in the table below. The spectral accelerations are calculated based on the site's approximate latitude and longitude of 40.462294° and

-111.792817° respectively and the United States Geological Survey U.S. Seismic Design Maps web-based application. Based on the IBC, the site coefficients are F_a=1.00 and F_v= 1.34. From this procedure the peak ground acceleration (PGA) is estimated to be 0.50g.

Site Location: **Latitude = 40.462294 N** **Longitude = -111.792817 W**	**Site Class C Site Coefficients:** **F_a = 1.10** **F_v = 1.34**
Spectral Period (sec)	**Response Spectrum Spectral Acceleration (g)**
0.2	S_{MS}=(F_a*S_s=1.10*0.1.263) = 1.26
1.0	S_{M1}=(F_v*S_1=1.34*0.464) = 0.62
[a] IBC 1613.3.4 recommends scaling the MCE_R values by 2/3 to obtain the design spectral response acceleration values; values reported in the table above have not been reduced.	

Table 3: MCE_R Seismic Response Spectrum Spectral Acceleration Values for IBC Site Class C[a].

Based on the above information, it is the opinion of GeoStrata that the earthquake ground shaking hazard within the subject site should not preclude development at the subject site. The seismic data provide above should be used by the project geotechnical and structural engineers for proper site and structural design.

6.2 SURFACE FAULT RUPTURE HAZARD

Movement along faults within the crustal rocks beneath the ground surface generates earthquakes. During large magnitude earthquakes (Richter magnitude 6.5 or greater) along the normal faults in the intermountain region, fault ruptures can propagate to the ground surface resulting in a surface fault rupture (Smith and Arabasz, 1991). The fault scarp formed during a surface fault rupture event along a normal fault is generally nearly vertical. A surface rupture fault may be comprised of a larger single surface rupture or several smaller surface ruptures across a fault zone. For all structures designed for human occupancy, a surface rupturing fault is considered active if it has experienced movement in approximately the past 10,000 years (Christenson and others, 2003).

Based on review of published geologic maps, our stereographic aerial photograph interpretation, our review of the hillshades derived from 2013-2014 0.5-meter LiDAR and our field observations, no active faults are located near the subject site (Plate 6 UGS Quaternary Fault

Map). The nearest fault is the Provo Section of the Wasatch Fault Zone which is less than 15,000 years old. The Provo section has a reported reoccurrence interval between 1,200 years (minimum) and 3,200 years (maximum) and a slip rate of 1.5 and 5.0 mm/yr (Black and others, 2003). This fault is located approximately 1.6 miles northeast of the subject site. Given our field and office investigations, the surface fault rupture hazard within the subject site is considered low and it is considered unlikely that surface fault rupture will impact the proposed development. It is the opinion of GeoStrata that surface fault rupture hazard should not preclude development at the subject lot.

6.3 TECTONIC DEFORMATION

Subsidence is a hazard associated with warping, lowering and tilting of a valley floor accompanying surface ruptures on normal faults (Robinson, 1993). Inundation along the shores of lakes and reservoirs and the rise of groundwater levels are the main hazards associated with subsidence. Structures that require gentle gradients or horizontal floors such as waste water treatment plants and sewer lines may be adversely affected by tectonic subsidence. Because subsidence may occur over very large areas, it is not generally practical to avoid the use of potentially affected land except in narrow areas of hazard due to lakeshore inundation (Keaton, 1987; Robison, 1993). According to Gary Christenson (UGS, personal communication 2001), tectonic subsidence is not typically assessed for subdivision development unless the development is located within an area of potential lake flooding.

Based on published geological maps, no active faults are reported or mapped within or adjacent to the subject site. It is the opinion of GeoStrata that the tectonic deformation hazard within the subject site is considered low and it is considered unlikely that tectonic deformation will impact the proposed development. It is the opinion of GeoStrata that the tectonic deformation hazard should not preclude development at the subject site.

6.4 LIQUEFACTION

Certain areas within the intermountain region possess a potential for liquefaction during seismic events. Liquefaction is a phenomenon whereby loose, saturated, granular soil deposits 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. The primary factors affecting

liquefaction potential of a soil deposit are: (1) level and duration of seismic ground motions; (2) soil type and consistency; and (3) depth to groundwater.

Based on our review of the *Liquefaction Special Study Areas, Wasatch Front and Nearby Areas, Utah* compiled by Christenson and others, 2008, the site is located in an area currently designated as having a "Very Low" liquefaction potential. "Very Low" liquefaction potential indicates that there is less than a 5 percent probability of having an earthquake within a 100-year period that will be strong enough to cause liquefaction. The surface soils we observed during our field investigation are not considered to be susceptible to liquefaction. A liquefaction analysis was beyond the scope of this geologic hazards assessment; however, if the owner wishes to have greater understanding of the liquefaction potential of the soils at greater depths, a liquefaction analysis should be completed at the site. It is the opinion of GeoStrata that liquefaction hazard should not preclude development at the subject site.

6.5 ROCKFALL AND TOPPLE

Rockfalls are the fastest moving mass movement that predominantly occurs in mountains where a rock source exists along steep slopes and cliffs greater than 35 degrees. Rockfalls are a result of a loss of support from beneath the rock mass that can be caused by freeze/thaw action, rainfall, weathering and erosion, and/or strong ground shaking resulting from seismic activity. Rockfalls result in the collection of rock fall material, referred to as talus, at the base of the slope. The presence of talus indicates that a rockfall hazard has occurred and may still be present at the site.

Based on review of published geologic maps, our stereographic aerial photograph interpretation and our field observations, no rockfall or talus deposits are located within or immediately adjacent to the subject lot. Furthermore, no rockfall sources such as talus deposits or bedrock outcroppings were observed upslope from the subject site. Our field investigation revealed no indications that the subject lot has been subjected to previous rockfall. Therefore, the rockfall hazard within the subject site is considered low and it is considered unlikely that rockfall will impact the proposed development. It is the opinion of GeoStrata that rock fall hazard should not preclude development at the subject site.

6.6 LANDSLIDE, SLUMP, CREEP

There are several types of landslides that should be considered when evaluating geologic hazards at a site with moderately to steeply sloping terrain. These include shallow debris slides, deep-

seated earth or rock slumps and earth flows. Landslides, slumps, creep and other mass movements can develop on moderate to steep slopes where the slope has been altered or disturbed. Movement can occur at the top of a slope that has been loaded by fill placement, at the base of a slope that has been undercut, or where local groundwater rises resulting in increased pore pressures within the slope. Slopes that exhibit prior failures and large landslide deposits are particularly susceptible to instability and reactivation.

Based on review of published geologic maps, our stereographic aerial photograph interpretation and hillshades derived from 2013-2014 0.5-meter LiDAR, no landslide deposits are mapped within or adjacent to the subject site (Plate 4a Site Vicinity Geologic Map; Plate 5 Site Vicinity 30x60 Geologic Map). During our field investigation, no landslide features such as hummocky topography, slumps or scarps were identified within or adjacent to the subject site. If planned mass grading for the development includes cut and fill sections of five feet or greater in height or if cut and fill slopes steeper than 3 horizontal: 1 vertical are planned as part of the development of the subject site, then we recommend that a site-specific slope stability assessment be conducted as part of a geotechnical investigation of the subject site to assess slope stability hazards within the site. GeoStrata is concurrently completing a geotechnical study for the proposed development which includes a site-specific slope stability assessment. It is the opinion of GeoStrata that the landslide, slump and creep hazard should not preclude development at the subject site as long as the recommendations stated above and presented in the geotechnical investigation being conducted for the site are followed.

Slope stability of the subject site was not assessed as part of this geological hazard assessment. The subject site was observed to be gently sloping to the south toward Alpine City and moderately sloping toward local drainages (Plate 2 Topographic Map). The possibility that development of the site could negatively affect slope stability within the subject site is increased if development is planned for areas of the site with slopes steeper than approximately 3horizontal: 1 vertical. It should be noted that grading or development adjacent to the subject site could potentially impact the stability of the area within the subject site and assessment of that hazard is out of the scope of this assessment.

6.7 AVALANCHE

An avalanche is a rapid flow of snow down a hill or mountainside. A snow avalanche can be a hazard in high alpine settings with slopes generally between 35 degrees and 45 degrees that accumulate appreciable amounts of snow. There are three types of avalanches: slough, dry slab

and wet slab. Sloughs typically occur right after a heavy snowfall event. This type of slide occurs from a single point and accumulates snow as it moves downslope. Dry slabs are the most common type of avalanche and are the result of a fracture that occurs along a weak layer within the snowpack. Dry slabs can travel upwards of 80 mph removing trees and structures in its path. Wet slabs are triggered when percolating water dissolves bonds and decreases the strength of the weak snow layer. This type of slab can travel up to 20 mph. Several factors that influence a snow avalanche include weather, temperature, slope steepness, slope orientation, wind direction and wind loading, terrain, vegetation, and snowpack conditions. Snow avalanche hazard could affect access and snow removal on roads as well as the safety of habitable structures and critical facilities.

Based on review of our field observations, review of avalanche data and review of historical aerial imagery, no evidence of prior snow avalanche was observed within the subject site. It is the opinion of GeoStrata that the avalanche hazard within the subject site is low and it is considered unlikely that a snow avalanche will impact the proposed developed. It is the opinion of GeoStrata that snow avalanche hazards should not preclude development within the subject lot.

6.8 ALLUVIAL FAN FLOODING

Alluvial fan flooding is a potential hazard that may exist in areas containing Holocene alluvial fan deposits. This type of flooding typically occurs as a stream flows, hyperconcentrated flows and debris flows consisting of a mixture of water, soil, organic material, and rock debris with variations in sediment-water concentrations transported by fast-moving water flows. Stream flows contains approximately less than 20% sediment by volume and involves sediment transport by entrained and suspended sediment load (Bowman and Lund, 2016). Unconfined stream flows are referred to as sheetfloods which are spread over and occur in the distal areas of the alluvial fan. Hyperconcentrated flows are alluvial fan flows with 20 to 60% sediment by volume whereas debris flows contain greater than 60% sediment by volume.

Alluvial fan flooding can be a hazard on or below alluvial fans or in stream channels above alluvial fans. Precipitation (rainfall and snowmelt) is generally viewed as an alluvial fan flood “trigger”, but this represents only one of the many factors that contribute to alluvial fan flooding hazard. Vegetation, root depth, soil gradation, antecedent moisture conditions and long-term climatic cycles all contribute to the generation of debris and initiation of alluvial fan flooding. Events of relatively short duration, such as a fire, can significantly alter a basin’s absorption of storm water and snowmelt runoff and natural resistance to sediment mobilization for an extended

period of time. These factors are difficult to quantify or predict and vary not only between different watersheds, but also within each sub-area of a drainage basin. In general, there are two methods by which alluvial fan flooding can be mobilized: 1) when shallow landslides from channel side-slopes are conveyed in existing channels when mixed with water and 2) channel scour where debris is initially mobilized by moving water in a channel and then the mobilized debris continues to assemble and transport downstream sediments.

Based on review of published geologic maps, Holocene age alluvial fan deposits are mapped immediately south of the subject site (Plate 4 Site Vicinity Geologic Map; Plate 5 Site Vicinity 30' X 60' Geologic Map). The alluvial fan deposits are characterized as debris flows located at the mouth of the drainages mapped trending north-south through the subject site (Plate 2 Topographic Map; Plate 8 Hydrology Map). During our field investigation, we observed two minor drainages that trend through the central portion of the subject site. We observed these two drainages to be relatively small. It is our opinion that these two minor drainages have a low to moderate debris flow potential and the debris flow potential in these two minor drainages could be mitigated through proper site grading and drainage plans developed by a professional engineer as part of the development of the subject site.

As previously stated, a road cut was graded from Lakeview Drive west into the subject site and crosses the more developed drainage that trends north-south along the eastern property boundary. No culvert was observed beneath the fill where the road crosses the drainage. Based on our understanding of the project, a detention basin will be located within the upstream side of the roadway that will cross the eastern drainage and a culvert pipe will be installed beneath the roadway embankment fill to allow water drainage to be released downstream of the roadway. Given the size of the eastern drainage basin and the young alluvial fan deposit mapped at the base of this drainage, GeoStrata recommends that the potential debris flow volume associated with this drainage basin be evaluated and that the potential debris flow volume associated with this drainage be included in the design volume of the proposed detention basin and sizing and design of the proposed culvert.

It is the opinion of GeoStrata that the alluvial fan flooding hazard within subject site is considered low to moderate. It is considered unlikely that debris flows will impact the proposed development as long as potential stormwater flow volume of the two minor drainages within the subject site be included and mitigated in the grading and drainage plans engineered for the site by the project civil engineer and the potential debris flow volume associated with the larger eastern drainage be included in the design volume of the proposed detention basin and sizing and design

of the proposed culvert. It is the opinion of GeoStrata that alluvial fan flooding hazard should not preclude development at the subject lot as long as the recommendations presented above are followed.

6.9 SHALLOW GROUNDWATER

Shallow groundwater flooding is a hazard that can cause the flooding of excavated areas where the depth of excavation exceeds the depth of the local water table. Shallow groundwater flooding should be considered when designing habitable structures that require excavation that may exceed the depth to the shallow groundwater.

Shallow groundwater assessment is out of the scope of this study. Seasonal fluctuations in precipitation, rapid snowmelt, surface runoff from adjacent properties, or other on or offsite sources may increase moisture conditions; groundwater conditions can be expected to rise several feet seasonally depending on the time of year. Shallow groundwater is to be addressed in the GeoStrata geotechnical investigation report for the subject site which is being completed concurrently with this report.

6.10 STREAM FLOODING

Stream flooding can be caused by precipitation, snowmelt or a combination of both. Throughout most of Utah floods are most common in spring during the snowmelt. High flows in drainages can last for a few hours to several weeks. Factors that affect the potential for flooding at a site include surface water drainage patterns and hydrology, site grading and drainage design, and seasonal runoff.

Based on review of our review of the hillshades derived from 2013-2014 0.5-meter LiDAR and our field observations, Pine Creek is located approximately 95 feet south of the subject site (Plate 8 Hydrology Map). Given our field and office investigations, the stream flooding hazard within the subject lot is considered low across most of the subject site, however stream flooding hazard within the three drainages observed in the central and eastern portions of the subject site and previously discussed in this report is considered moderate to high. Stream flooding could impact the proposed development within the three noted drainages. It is the opinion of GeoStrata that stream flooding hazard should not preclude development at the subject site as long as proper site grading, drainage, and erosion control plans are engineered and designed for the subject site as a

part of the civil engineering design for the site to mitigate the potential for stream flooding to impact and damage planned structures or other planned associated infrastructure.

6.11 CANAL FLOODING

High runoff in a short period of time can lead to canal water breaching their banks and flooding the surrounding area. Failure of the canal embankments or a blockage in the canal could also lead to flooding surrounding the canal.

Based on review of published topographic maps, our review of the hillshades derived from 2013-2014 0.5-meter LiDAR and our field observations, no canals were observed or are mapped within or adjacent to the subject site. Given our field and office investigations, the canal flooding hazard within the subject lot is considered low and it is considered unlikely that canal flooding will impact the proposed development. It is the opinion of GeoStrata that canal flooding hazard should not preclude development at the subject lot.

6.12 DAM FAILURE

Dams are structures that store water and diverge and impound water upstream. Most dams have a spillway where water flow from the reservoir is controlled and hydroelectric power is produced. Failure in dams can occur from a collapse or a breach in the structure most commonly due to extended periods of high runoff.

Based on our review of the Lehi topographic quadrangle and our field investigation, no dams or reservoirs are located up-gradient of the subject site (Plate 1 Site Vicinity Map; Plate 2 Topographic Map). Given our field and office investigations, the dam failure hazard within the subject lot is considered low and it is considered unlikely that dam failure will impact the proposed development. It is the opinion of GeoStrata that dam failure hazard should not preclude development at the subject lot.

6.13 PROBLEM SOILS

Problem soils include collapsible soils and expansive soils. Collapsible soils are low density and typically dry soils that decrease in volume when exposed to water. This type of problem soil typically occurs in alluvial fan flooding deposits, dry loess or eolian deposits or unconsolidated colluvium deposits (Owens and Rollins, 1990). Expansive soils are soils that undergo an increase in volume upon wetting and typically include fine grained soils such as clay.

The problem soils hazard is out of the scope of this study. Based on our review of published geologic maps and our field observations, the subject site is underlain by gravel and cobbles in a matrix of silt and sand. No laboratory testing was performed on these soils as part of this study and therefore this hazard was not assessed as part of this study. A geotechnical study is being completed by GeoStrata for the subject site concurrently with this report to assess soil properties for use in the design of footing, foundation elements and grading.

6.14 RADON

Radon is a naturally occurring odorless, tasteless and colorless gas that is released during the breakdown of uranium in well drained permeable soils and uranium rich rocks which include granite, metamorphic rocks, black shales, and some volcanic rocks (Sprinkel and Solomon, 1990). Radon gas moves freely in the air and can also dissolve in water which can potentially migrate through cracks and open spaces in rock, soils, and foundations as well as utility pipes.

The radon gas hazard is out of the scope of this study. No published data that covers the area of the subject sites currently exists. Indoor testing following construction is recommended for determining radon gas levels and mitigation methods needed.

6.15 KARST AND SINK HOLES

A karst is a type of underground drainage terrain that is the result of dissolution of soluble bedrock such as limestone, carbonate rock, salt beds or other types of rocks that are easily dissolved by groundwater circulating through them. The most common type of hazard that forms within a karst terrain is subsidence or collapse of soils, these are referred to as sink holes. Sink holes can be a few feet to hundreds of acres wide and 1 to 100 feet deep and can form slowly or collapse suddenly.

Based on our review of published geologic maps, the karst and sink holes hazards within the subject sites are considered low and it is unlikely that karst and sink holes hazards will impact the proposed development. It is the opinion of GeoStrata that karst and sink hole hazards should not preclude development at the subject sites.

7.0 GEOLOGIC HAZARDS SUMMARY AND CONCLUSIONS

It is the opinion of GeoStrata that the geologic hazards that we assessed in this study that could impact the subject site or that have not been assessed as a part of this study, but which could impact the subject site include: alluvial fan flooding, shallow groundwater, problem soils and radon gas. Below is a summary of each geologic hazard and GeoStrata's recommendation for mitigation:

- Alluvial fan flooding hazard within the subject site was assessed as part of this study. It is the opinion of GeoStrata that the alluvial fan flooding hazard within subject site is considered low to moderate. It is considered unlikely that debris flows will impact the proposed development as long as potential stormwater flow volume of the two minor drainages within the subject site be included and mitigated in the grading and drainage plans engineered for the site by the project civil engineer and the potential debris flow volume associated with the larger eastern drainage be included in the design volume of the proposed detention basin and sizing and design of the proposed culvert.

- Shallow groundwater assessment is out of the scope of this study. Seasonal fluctuations in precipitation, rapid snowmelt, surface runoff from adjacent properties, or other on or offsite sources may increase moisture conditions; groundwater conditions can be expected to rise several feet seasonally depending on the time of year. Shallow groundwater was not assessed as part of this study; however, a separate geotechnical study including subsurface exploration is being completed by GeoStrata concurrently with this report to assess this hazard.

- Stream flooding hazard within the subject site was assessed as part of this study. The stream flooding hazard within the subject lot is considered low across most of the subject site, however stream flooding hazard within the three drainages observed in the central and eastern portions of the subject site and previously discussed in this report is considered moderate to high. Stream flooding could impact the proposed development within the three noted drainages. It is the opinion of GeoStrata that stream flooding hazard should not preclude development at the subject site as long as proper site grading, drainage, and erosion control plans are engineered and designed for the subject site as a part of the civil engineering design for the site to mitigate the potential for stream flooding to impact and damage planned structures or other planned associated infrastructure.

- Problem soils hazard within the subject site was not assessed as part of this study. Based on our review of published geologic maps and our field observations, the subject site is underlain by gravel and cobbles in a matrix of silt and sand. No laboratory testing was performed on these soils as part of this study and therefore this hazard was not assessed as part of this study. A geotechnical study is being completed by GeoStrata for the subject site concurrently with this report in order to assess soil properties for use in the design of footing, foundation elements and grading.

- The radon gas hazard is out of the scope of this study. No published data that covers the area of the subject sites currently exists. Indoor testing following construction is recommended for determining radon gas levels and mitigation methods needed.

It is the opinion of GeoStrata that these hazards should not preclude the development of the subject site, assuming that these recommendations given above will be followed.

8.0 CLOSURE

8.1 LIMITATIONS

The conclusions and recommendations contained in this report, which include professional opinions and judgments, are based on the information available to us at the time of our evaluation, the results of our field observations and our understanding of the proposed site development. If any conditions are encountered at this site that are different from those described in this report, our firm should be immediately notified so that we may make any necessary revisions to recommendations contained in this report. In addition, if the scope of the proposed development changes from that described in this report, our firm should also be notified.

All services were completed in accordance with the current standard of care and generally accepted standard of practice at the time and in the place our services were completed. No other warranty, expressed or implied, is made. Development of property in the immediate vicinity of geologic hazards involves a certain level of inherent risk. It is impossible to predict where geologic hazards will occur. New geologic hazards may develop, and existing geologic hazards may expand beyond their current limits.

All services were performed for the exclusive use and benefit of the above addressee. No other person is entitled to rely on GeoStrata's services or use the information contained in this letter without the express written consent of GeoStrata. We are not responsible for the technical interpretations by others of the information described or documented in this report. The use of information contained in this report for bidding purposes should be done at the Contractor's option and risk.

9.0 REFERENCES CITED

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Legend

Approximate Site Boundary

Feet
0 625 1,250 2,500 3,750 5,000

1 inch = 2,000 feet

Basemap:
2012 12.5 cm HRO aerial imagery provided by the State of Utah.
Hillshades derived from 5 Meter Auto-Correlated DEM from 1m GSD
Orthophotography (NAIP2006) provided by the
State of Utah AGRC.

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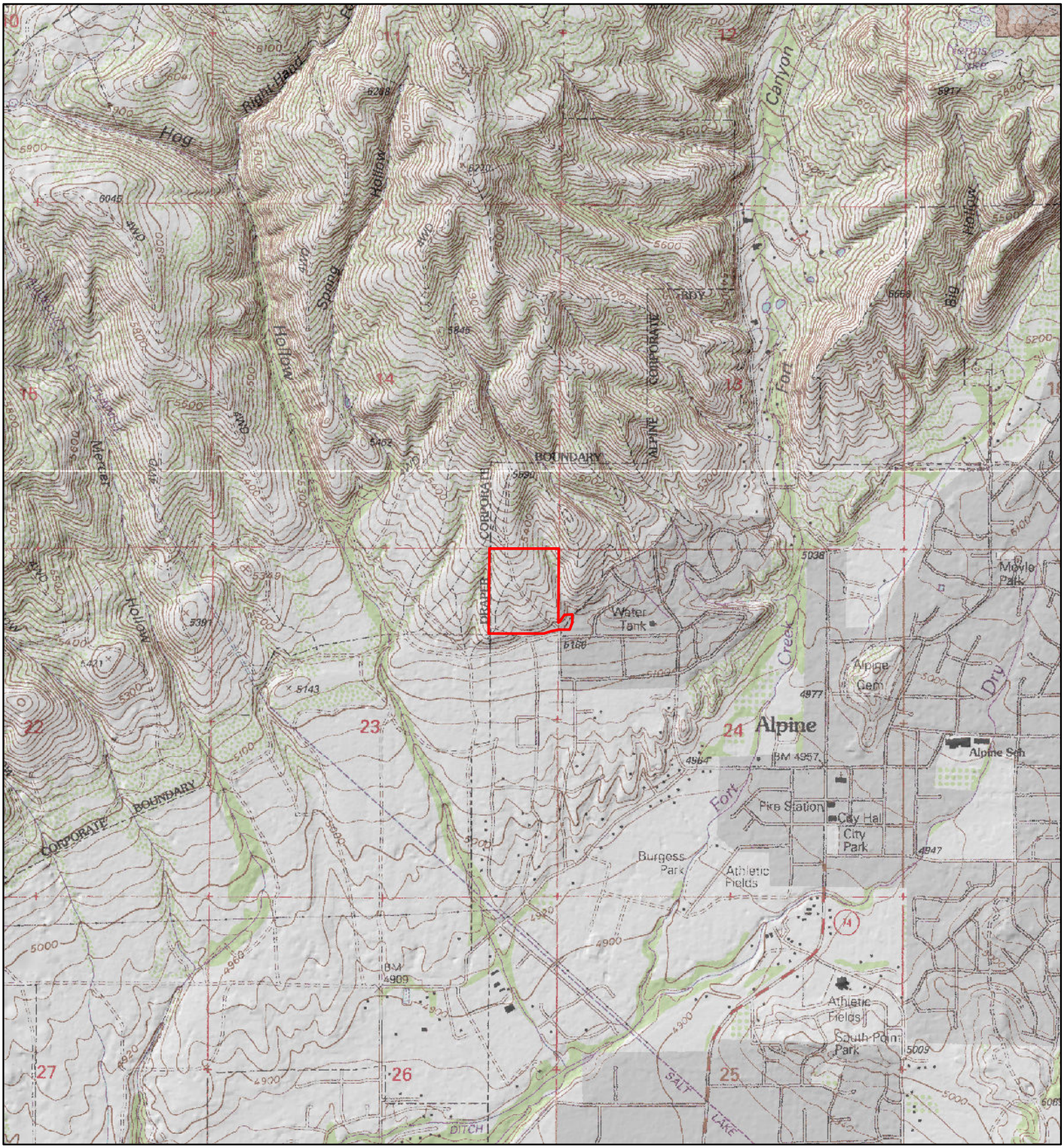
Geologic Hazards Assessment
Summit Pointe Subdivsion
Alpine, Utah
Project Number: 1312-005

Site Vicinity Map

Plate 1



Legend

Approximate Site Boundary

0 625 1,250 2,500 3,750 5,000 Feet

1 inch = 2,000 feet

Basemap:
Lehi Quadrangle, Utah, 7.5-Minute Series (Topographic), USGS 1998 and hillshades derived from 5 Meter Auto-Correlated DEM from 1m GSD Orthophotography (NAIP2006) provided by the State of Utah AGRC.

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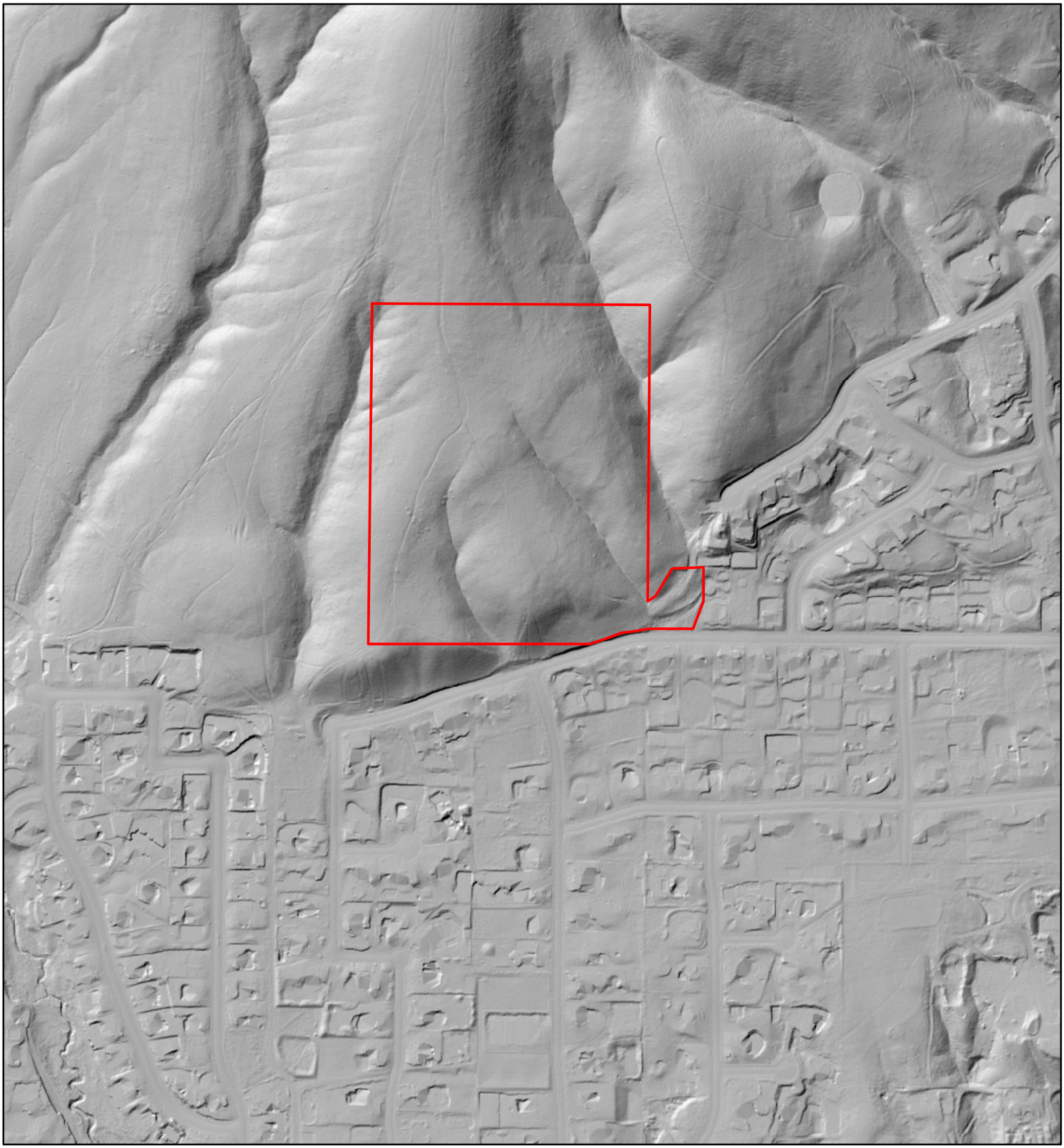
Alpine, Utah
Project Number: 1312-005

Site Topographic Map

Plate 2



Legend

Approximate Site Boundary

0 155 310 620 930 1,240 Feet

1 inch = 500 feet

Basemap:
Hillshades derived from 2013-2014 0.5 meter LiDAR provided by the State of Utah AGRC.

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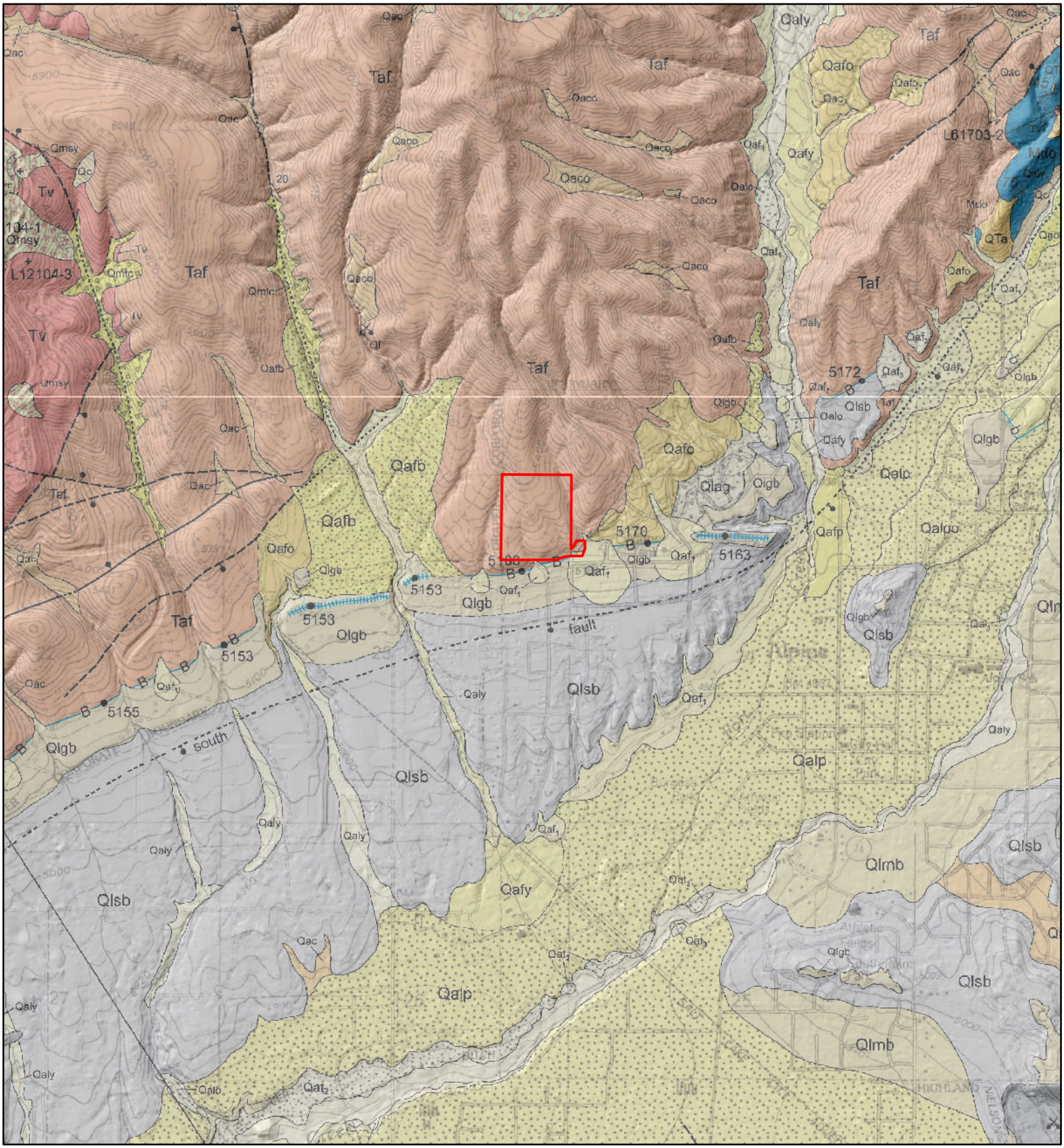
Summit Pointe Subdivsion
Alpine, Utah
Project Number: 1312-005

Hillshade Map

Plate 3



Legend

Approximate Site Boundary

0 625 1,250 2,500 3,750 5,000 Feet

1 inch = 2,000 feet

Basemap:
Geologic Map of the Lehi Quadrangle and Part of the Timpanogos Cave Quadrangle, Salt Lake and Utah Counties, Utah, Biek, 2005.
Hillshades derived from 2013-2014 0.5 meter LiDAR provided by the State of Utah AGRC.

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Summit Pointe Subdivsion
Alpine, Utah
Project Number: 1312-005

Site Vicinity Geologic Map

Plate 4

Qaf$_1$ Modern alluvial-fan deposits (Holocene) – *Poorly to moderately sorted, non-stratified, clay- to boulder-size sediment deposited principally by debris flows at the mouths of active drainages; upper parts typically characterized by abundant boulders and debris-flow levees that radiate away from the apex of the fan; equivalent to the younger part of Qafy, but differentiated because they form smaller, isolated fans; generally less than 30 feet (9 m) thick.*

Qafo Older alluvial-fan deposits (Upper Pleistocene) – *Similar to younger undifferentiated alluvial-fan deposits (Qafy), but forms deeply dissected alluvial apron truncated by, and thus predating, the Bonneville shoreline; upper parts of fans locally receive sediment from minor washes; thickness unknown, but likely up to several tens of feet.*

Qafb Alluvial-fan deposits related to the Bonneville phase of the Bonneville lake cycle (Upper Pleistocene) – *Poorly to moderately sorted, clay- to cobble-size sediment deposited principally by debris flows; incised by younger alluvial and alluvial-fan deposits; deposited by streams associated with the Bonneville (transgressive) phase of Lake Bonneville; probably less than about 40 feet (12 m) thick.*

Qafo Older alluvial-fan deposits (Upper Pleistocene) – *Similar to younger undifferentiated alluvial-fan deposits (Qafy), but forms deeply dissected alluvial apron truncated by, and thus predating, the Bonneville shoreline; upper parts of fans locally receive sediment from minor washes; thickness unknown, but likely up to several tens of feet.*

Qlgp
Qlgb Lacustrine gravel and sand (Upper Pleistocene) – *Moderately to well-sorted, moderately to well-rounded, clast-supported, pebble to cobble gravel and pebbly sand; thin to thick bedded; typically interbedded with or laterally gradational to sand and silt facies; gastropods locally common in sandy lenses; locally partly cemented with calcium carbonate; typically forms well-developed wave-cut or wave-built benches, bars, and spits; intermediate shorelines are locally well developed on Provo-level deposits; Qlgb deposited at and below highest Bonneville shoreline but above the Provo shoreline, and Qlgp deposited at and below the Provo shoreline; exposed thickness from 0 to about 150 feet (0-45 m).*

Taf Alluvial-fan deposits (Miocene[?] to Oligocene[?]) – *Unconsolidated, pebble- to boulder-size, subangular to subrounded orthoquartzite and calcareous sandstone clasts and, especially near the base and top of the deposits, minor volcanic clasts; limestone clasts are rare and appear to be restricted to the upper part of the deposits; clasts of monzogranite or granodiorite of the Little Cottonwood stock are conspicuously absent, probably because the intrusion had not yet been unroofed when these sediments were being deposited; includes 300-foot-long (100 m) block of brecciated orthquartzite near the center of section 11, T. 4 S., R. 1 E. that I interpret to be a slide block derived from former nearby mountain front; a single good exposure of the lower part of the deposits in Hog Hollow that dips 20° east reveals subangular to subrounded, pebble- to cobble-size clasts with fewer boulders, medium to thick beds, and clasts that are about 60% sandstone and orthoquartzite and about 40% grussified volcanic clasts of the east Traverse Mountains; appears to lack tuffaceous sediments and so is likely older than the Salt Lake Formation; may correlate with the Tibbie Formation (late Eocene to Oligocene), and if so the deposits in the east Traverse Mountains probably have undergone about 4 miles (7 km) of southwestward tectonic transport along the Deer Creek detachment fault (see Constenius and others, 2003), with orthoquartzite clasts derived principally from footwall exposures of the Weber Sandstone; first mapped as undifferentiated Oquirrh Group by Bullock (1958) and later reinterpreted as Neogene-age alluvial-fan deposits by Machette (1992); mapped south of the Fort Canyon fault at the east end of the Traverse Mountains where it unconformably overlies volcanic rocks of the east Traverse Mountains (Tv); age poorly constrained between middle Oligocene(?) and Miocene(?); lineaments visible on aerial photographs suggest that these deposits may be cut by additional, unmapped normal or oblique-slip faults that are difficult to identify due to poor exposures and lack of marker beds; similarly, aerial photo interpretation indicates that additional landslide deposits may be present on this unit, but subdued features and poor exposures make positive identification impossible without detailed geotechnical investigations; thickness uncertain but likely in excess of 1000 feet (330 m).*

Geologic Map of the Lehi Quadrangle and Part of the Timpanogos Cave Quadrangle, Salt Lake and Utah Counties, Utah.

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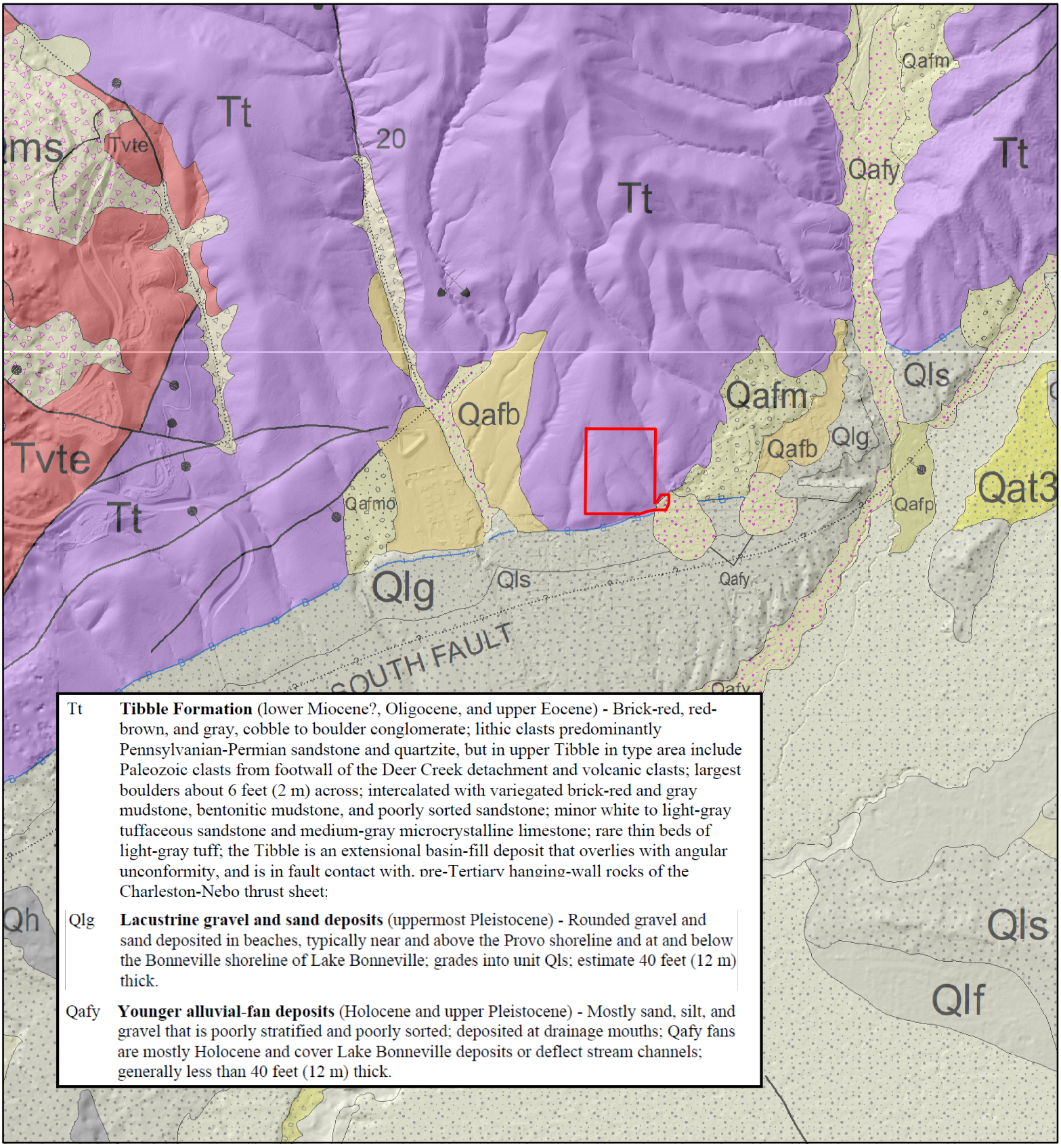
Geologic Map Descriptions

Plate 4b



Tt **Tibble Formation** (lower Miocene?, Oligocene, and upper Eocene) - Brick-red, red-brown, and gray, cobble to boulder conglomerate; lithic clasts predominantly Pennsylvanian-Permian sandstone and quartzite, but in upper Tibble in type area include Paleozoic clasts from footwall of the Deer Creek detachment and volcanic clasts; largest boulders about 6 feet (2 m) across; intercalated with variegated brick-red and gray mudstone, bentonitic mudstone, and poorly sorted sandstone; minor white to light-gray tuffaceous sandstone and medium-gray microcrystalline limestone; rare thin beds of light-gray tuff; the Tibble is an extensional basin-fill deposit that overlies with angular unconformity, and is in fault contact with, pre-Tertiary hanging-wall rocks of the Charleston-Nebo thrust sheet;

Qlg **Lacustrine gravel and sand deposits** (uppermost Pleistocene) - Rounded gravel and sand deposited in beaches, typically near and above the Provo shoreline and at and below the Bonneville shoreline of Lake Bonneville; grades into unit Qls; estimate 40 feet (12 m) thick.

Qafy **Younger alluvial-fan deposits** (Holocene and upper Pleistocene) - Mostly sand, silt, and gravel that is poorly stratified and poorly sorted; deposited at drainage mouths; Qafy fans are mostly Holocene and cover Lake Bonneville deposits or deflect stream channels; generally less than 40 feet (12 m) thick.

Legend

Approximate Site Boundary

0 625 1,250 2,500 3,750 5,000 Feet

1 inch = 2,000 feet

Basemap:
Interim Geologic Map of the Provo 30' X 60' Quadrangle, Utah, Wasatch, and Salt Lake Counties, Utah. Hillshades derived from 2013-2014 0.5 meter LiDAR provided by the State of Utah AGRC.

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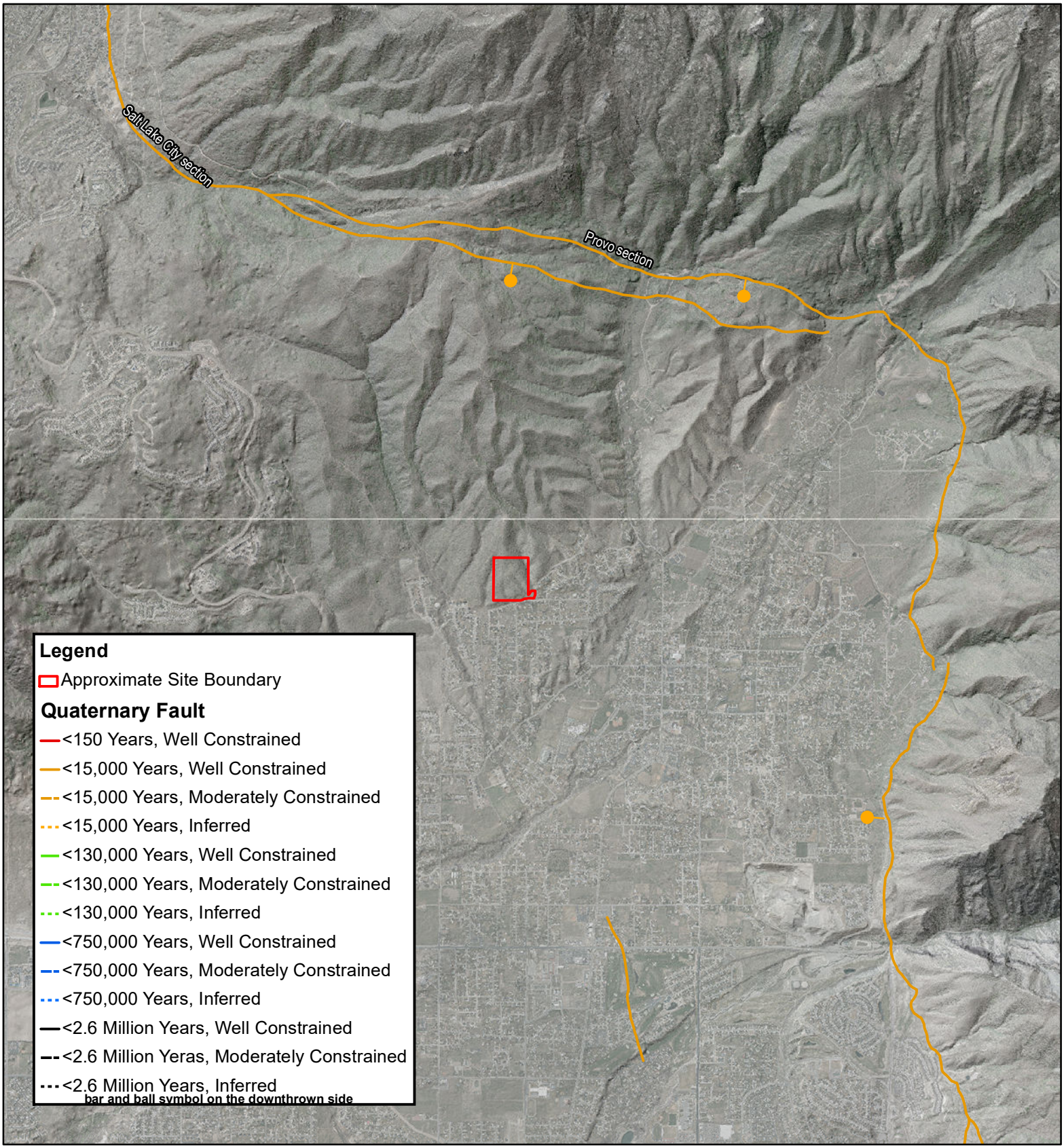
Alpine, Utah
Project Number: 1312-005

Site Vicinity 30x60 Geologic Map

Plate 5



Legend

Approximate Site Boundary

Quaternary Fault

- <150 Years, Well Constrained
- <15,000 Years, Well Constrained
- <15,000 Years, Moderately Constrained
- <15,000 Years, Inferred
- <130,000 Years, Well Constrained
- <130,000 Years, Moderately Constrained
- <130,000 Years, Inferred
- <750,000 Years, Well Constrained
- <750,000 Years, Moderately Constrained
- <750,000 Years, Inferred
- <2.6 Million Years, Well Constrained
- <2.6 Million Yeras, Moderately Constrained
- <2.6 Million Years, Inferred

bar and ball symbol on the downthrown side

0 1,250 2,500 5,000 7,500 10,000 Feet

1 inch = 4,000 feet

Basemap:
Utah Geological Survey Fold and Fault Database. 2012 12.5cm HRO aerial imagery and hillshades derived from 2013-2014 0.5 meter LiDAR provided by the State of Utah AGRC.

N

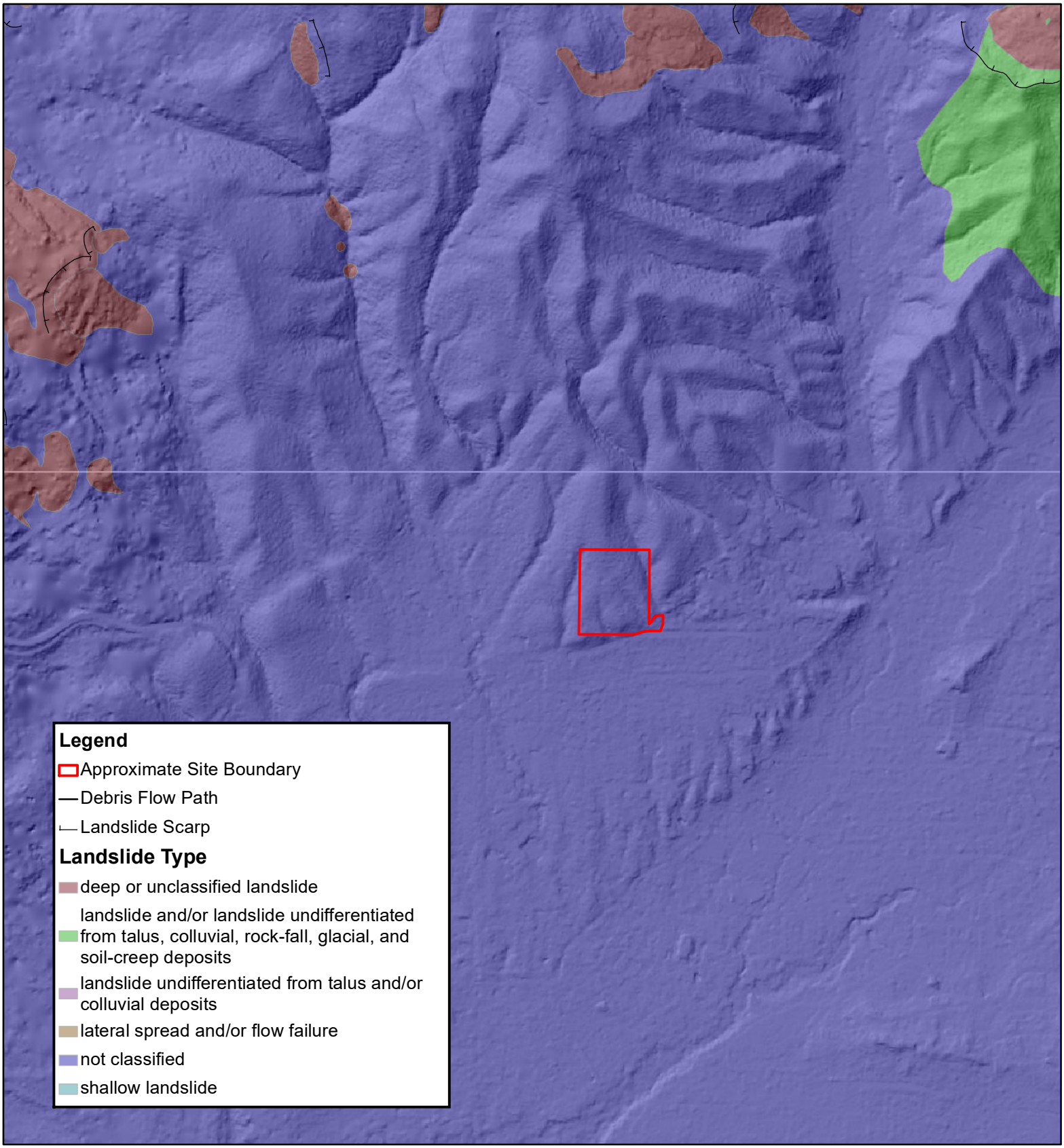
GeoStrata

Copyright GeoStrata 2018

Geologic Hazards Assessment
Summit Pointe Subdivsion
Alpine, Utah
Project Number: 1312-005

Quaternary Fault Map

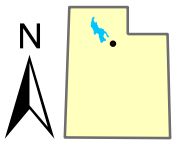
Plate 6



Feet
0 625 1,250 2,500 3,750 5,000

1 inch = 2,000 feet

Basemap:
Landslide Maps of Utah, Elliot and Harty, 2010. Hillshades derived from 5 Meter Auto-Correlated DEM from 1m GSD Orthophotography (NAIP2006) provided by the State of Utah AGRC.



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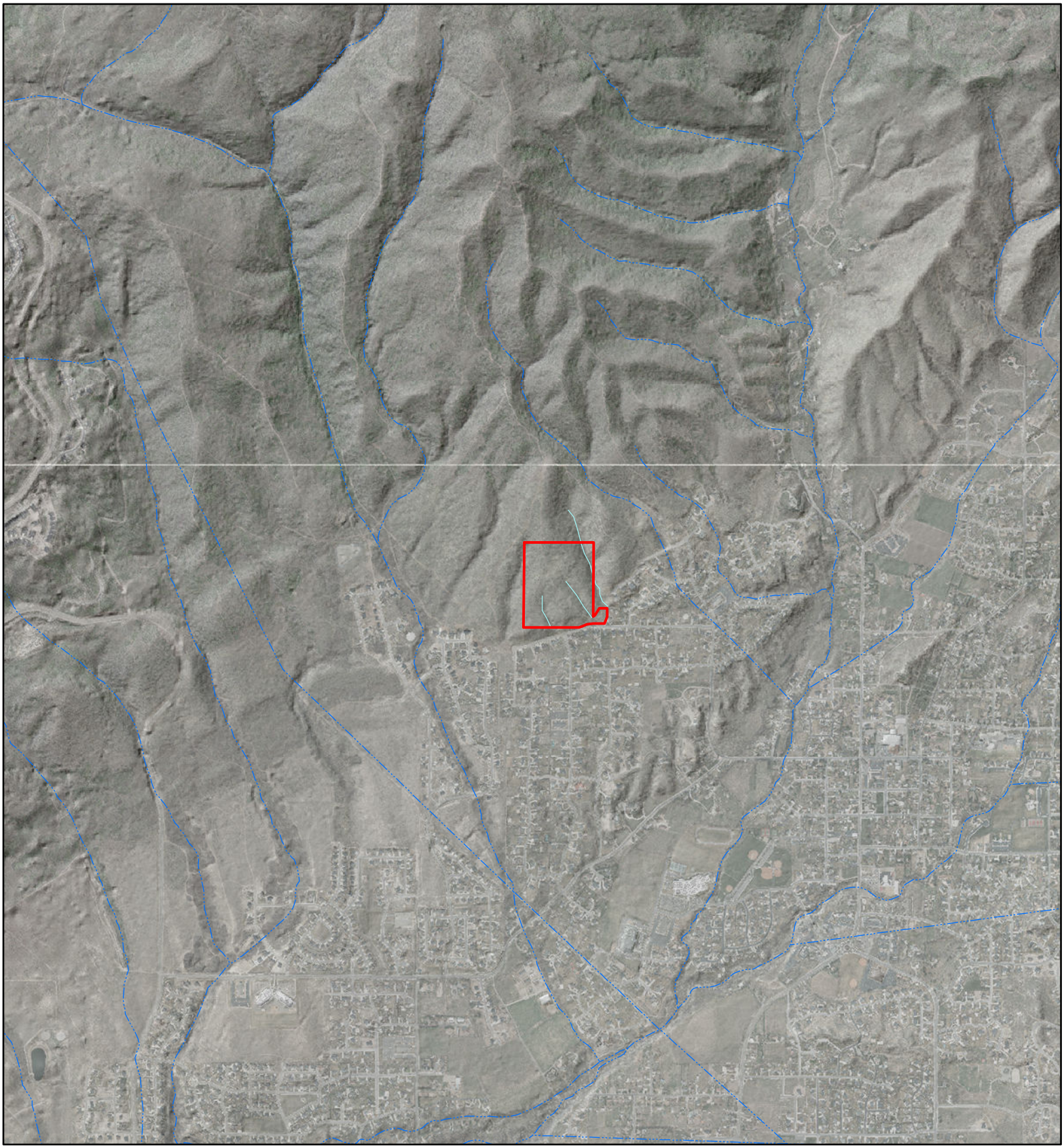
Geologic Hazards Assessment
Summit Pointe Subdivsion
Alpine, Utah
Project Number: 1312-005

Landslide Hazard Map

Plate 7



Legend

- Approximate Site Boundary
- Seasonal Drainages (GeoStrata)
- Streams (National Hydrology Dataset)

0 625 1,250 2,500 3,750 5,000 Feet

1 inch = 2,000 feet

Basemap:
Landslide Maps of Utah, Elliot and Harty, 2010.
Hillshades derived from 5 Meter Auto-Correlated DEM from 1m GSD Orthophotography (NAIP2006) provided by the State of Utah AGRC.

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GeoStrata

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Geologic Hazards Assessment
Summit Pointe Subdivsion
Alpine, Utah
Project Number: 1312-005

Hydrology Map

Plate 8

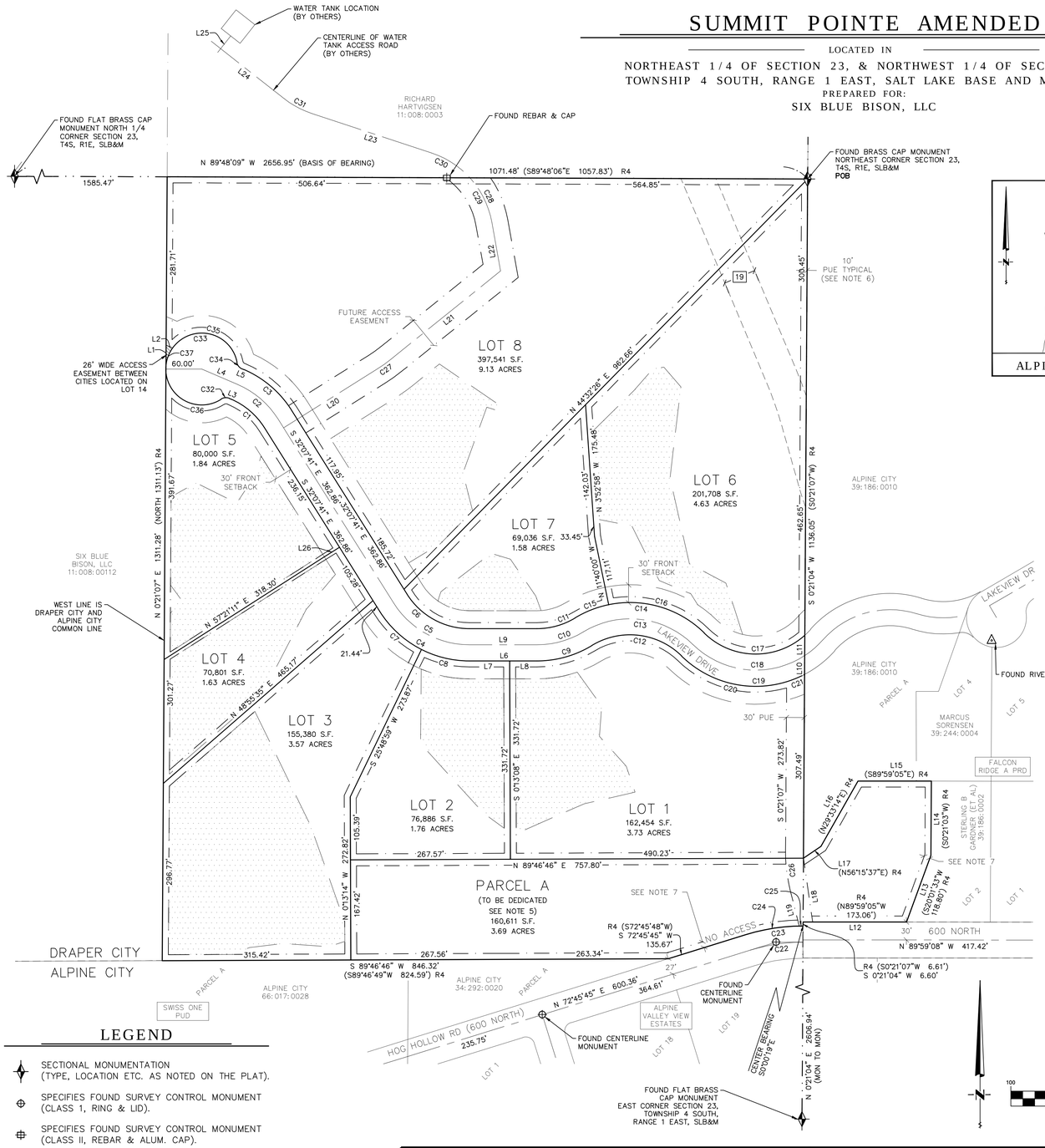
SUMMIT POINTE AMENDED

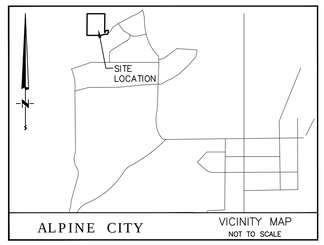
LOCATED IN

NORTHEAST 1/4 OF SECTION 23, & NORTHWEST 1/4 OF SECTION 24,
TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN

PREPARED FOR:

SIX BLUE BISON, LLC





LOT	BUILDABLE SF	AVG SLOPE	FRONTAGE @ 30' SETBACK
1	35,556	9%	526.02
2	26,024	12%	164.10
3	83,550	8%	129.10
4	37,033	8%	110.00
5	45,204	17%	397.18
6	41,340	13%	372.09
7	10,633	8%	293.26
8	49,182	5%	184.29

PARCEL LINE TABLE		
LINE #	DIRECTION	LENGTH
L1	N0° 21' 07"E	39.85
L2	N66° 43' 43"W	12.06
L3	S66° 43' 43"E	3.11
L4	S66° 43' 43"E	65.25
L5	S66° 43' 43"E	3.11
L6	N90° 00' 00"E	113.05
L7	N90° 00' 00"E	67.28
L8	N90° 00' 00"E	45.77
L9	N90° 00' 00"E	113.05
L10	N0° 25' 46"E	31.38
L11	N0° 16' 44"E	34.07
L12	N89° 58' 57"W	173.05
L13	S20° 01' 30"W	118.81
L14	S0° 21' 00"W	124.12
L15	S89° 59' 08"E	122.64
L16	N29° 33' 11"E	125.60
L17	N56° 15' 34"E	35.18
L18	S8° 10' 47"E	108.02
L19	N14° 13' 16"W	60.91
L20	N57° 52' 19"E	184.14
L21	S51° 08' 52"W	235.23
L22	N10° 13' 04"W	82.74
L23	N71° 44' 16"W	211.67
L24	N51° 46' 06"W	155.10
L25	N38° 13' 54"E	35.00
L26	S57° 52' 19"W	30.00

PARCEL CURVE DATA				
SEGMENT	LENGTH	RADIUS	DELTA	TANGENT
C1	74.28	123.00	34°36'02"	38.31
C2	90.58	150.00	34°36'02"	46.72
C3	106.89	177.00	34°36'04"	55.13
C4	178.78	177.00	57°52'19"	97.85
C5	151.51	150.00	57°52'19"	82.93
C6	124.24	123.00	57°52'19"	68.00
C7	95.59	177.00	30°56'39"	48.99
C8	83.19	177.00	26°55'40"	42.38
C9	96.58	177.00	31°15'44"	49.52
C10	81.84	150.00	31°15'44"	41.97
C11	67.11	123.00	31°15'44"	34.41
C12	162.58	123.00	75°44'00"	95.64
C13	198.27	150.00	75°44'00"	116.63
C14	233.96	177.00	75°44'00"	137.63
C15	60.54	177.00	19°35'44"	30.57
C16	173.42	177.00	56°08'16"	94.39
C17	185.44	123.00	86°22'47"	115.46
C18	203.12	150.00	77°35'10"	120.57
C19	222.36	177.00	71°58'51"	128.55
C20	189.83	177.00	61°26'56"	105.20
C21	32.54	177.00	10°31'55"	16.31
C22	89.16	297.00	17°11'59"	44.92
C23	97.45	324.00	17°13'56"	49.09
C24	91.13	324.00	16°06'57"	45.87
C25	6.31	324.00	1°06'58"	3.16
C26	66.13	260.00	14°34'23"	33.24
C27	29.34	250.00	6°43'27"	14.69
C28	161.06	150.00	61°31'12"	89.28
C29	83.84	150.00	32°01'22"	43.04
C30	77.22	150.00	29°29'49"	39.49
C31	52.28	150.00	19°58'10"	26.41
C32	14.65	15.00	55°56'39"	7.97
C33	305.66	60.00	291°53'18"	40.56
C34	14.65	15.00	55°56'39"	7.97
C35	139.73	60.00	133°25'51"	139.42
C36	128.83	60.00	123°01'29"	110.56
C37	37.11	60.00	35°25'58"	19.17

ADDRESS TABLE	
LOT	ADDRESS
1	823 W LAKEVIEW DR
2	891 W LAKEVIEW DR
3	915 W LAKEVIEW DR
4	931 W LAKEVIEW DR
5	957 W LAKEVIEW DR
6	812 W LAKEVIEW DR
7	872 W LAKEVIEW DR
8	929 W LAKEVIEW DR
PARCEL A	754 W 600 N

LEGEND

- SECTIONAL MONUMENTATION (TYPE, LOCATION ETC. AS NOTED ON THE PLAT).
- SPECIFIES FOUND SURVEY CONTROL MONUMENT (CLASS 1, RING & LID).
- SPECIFIES FOUND SURVEY CONTROL MONUMENT (CLASS II, REBAR & ALUM. CAP).
- SET 5/8" REBAR AND PLASTIC CAP (STAMPED CSI) UNLESS OTHERWISE NOTED ON THE PLAT.
- SPECIFIES FOUND SURVEY CONTROL MONUMENT (RIVET).
- BUILDABLE AREA

GRAPHIC SCALE

100 0 50 100 200

(IN FEET)
1 inch = 100 ft.

CivilScience
Engineers | Surveyors | Solutions
3160 WEST CLUBHOUSE DRIVE
LEHI, UT 84043
801.768.7200

DATE: 5-21-2020
FILE: 19050.23

SHEET 1 OF 1

PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____, A.D. 20___, BY THE ALPINE CITY PLANNING COMMISSION.

DIRECTOR – SECRETARY

CHAIRMAN, PLANNING COMMISSION

APPROVAL AS TO FORM

APPROVED AS TO FORM THIS _____ DAY OF _____, A.D. 20___.

CITY ATTORNEY

ACCEPTANCE BY LEGISLATIVE BODY

THE _____ OF _____, COUNTY OF UTAH, APPROVES THIS SUBDIVISION AND HEREBY ACCEPTS THE DEDICATION OF _____ ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR PUBLIC PURPOSES FOR THE PERPETUAL USE OF THE PUBLIC THIS _____ DAY _____, A.D. 20___

APPROVED
ENGINEER (SEE SEAL BELOW)

ATTEST
CLERK – RECORDER (SEE SEAL BELOW)

OWNER'S DEDICATION

KNOW ALL MEN BY THESE PRESENTS THAT THE UNDERSIGNED OWNERS OF ALL OF THE ABOVE DESCRIBED TRACT OF LAND, HAVING CAUSED THE SAME TO BE SUBDIVIDED INTO FOURTEEN (14) LOTS, 3 PARCELS AND STREETS TO BE HEREAFTER KNOWN AS THE SUMMIT POINTE AMENDED PLAT "B", AND DO HEREBY DEDICATED FOR PERPETUAL USE ALL STREETS AND OTHER PUBLIC AREAS AS INDICATED HEREON AS INTENDED FOR PUBLIC USE.

IN WITNESS WHEREOF _____ HAVE HEREUNTO SET _____ THIS _____ DAY OF _____ A.D., 20___.

BY:

ACKNOWLEDGMENT

STATE OF _____ }
COUNTY OF _____ } S.S.

ON THE ___ DAY OF _____ 20___, PERSONALLY APPEARED BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC IN AND FOR SAID STATE AND COUNTY, _____ WHO BEING BY ME DULY SWORN, DID SAY THAT HE IS THE _____ OF ___ _____, AND THAT HE EXECUTED THE FOREGOING OWNER'S DEDICATION IN BEHALF OF SAID _____ BEING AUTHORIZED AND EMPOWERED TO DO SO BY THE OPERATING AGREEMENT OF SAID COMPANY, AND HE DID DULY ACKNOWLEDGE TO ME THAT SUCH COMPANY EXECUTED THE SAME FOR THE USES AND PURPOSES STATED THEREIN.

MY COMMISSION EXPIRES:

NOTARY PUBLIC
RESIDES IN:

SURVEYOR'S CERTIFICATE

I, DAVID T MORTENSEN, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR, AND THAT I HOLD LICENSE NO. 6436557 AS PRESCRIBED UNDER THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNER, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, HEREAFTER TO BE KNOWN AS THE SUMMIT POINTE AMENDED AND THAT THE SAME HAS BEEN CORRECTLY SURVEYED AND STAKED ON THE GROUND AS SHOWN ON THIS PLAT.

5-28-20
DATE:
CIVIL SCIENCE, INC.

DAVID T MORTENSEN
REGISTERED LAND SURVEYOR
UTAH LICENSE NUMBER 6436557

BOUNDARY DESCRIPTION

LOTS 1, 2, 3 AND 4, PLAT "A" SUMMIT POINTE, INCLUDING A VACATION OF LOT 3 OF FALCON RIDGE SUBDIVISION PLAT "A", ACCORDING TO THE OFFICIAL PLAT THEREOF, AS RECORDED IN OFFICE OF THE COUNTY RECORDER, UTAH COUNTY, STATE OF UTAH; BEING A PART OF THE NORTHEAST 1/4 OF SECTION 23 AND THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN; MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID SECTION 23, SAID POINT ALSO BEING THE NORTHEAST CORNER OF SAID PLAT "A" SUMMIT POINTE; THENCE S0°21'04"W ALONG THE EAST LINE OF SAID PLAT "A" SUMMIT POINT 1136.05 FEET TO THE NORTH LINE OF LOT 3 OF FALCON RIDGE SUBDIVISION PLAT "A"; THENCE ALONG THE BOUNDARY OF SAID LOT 3 THE FOLLOWING FIVE (5) COURSES: (1) N56°15'34"E 35.18 FEET, (2) N29°33'11"E 125.60 FEET, (3) S89°59'08"E 122.64 FEET, (4) S0°21'00"W 124.12 FEET, AND (5) S20°01'30"W 118.81 FEET, TO THE NORTH LINE OF 600 NORTH; THENCE ALONG SAID NORTH LINE THE FOLLOWING FOUR (4) COURSES: (1) N89°58'57"W 173.05 FEET, (2) S0°21'04"W 6.60 FEET, TO THE BEGINNING OF A NON-TANGENT CURVE, WITH A RADIUS OF 324.00 FEET AND A CENTER BEARING OF S0°00'19"E, (3) WESTERLY 97.45 FEET, THROUGH A CENTRAL ANGLE OF 17°13'56", AND (4) S72°45'45"W 135.67 FEET, TO THE NORTH LINE OF PARCEL A, ALPINE VALLEY VIEW ESTATES, OFFICIAL RECORDS; THENCE S89°46'46"W ALONG SAID LINE AND THE NORTH LINE OF PARCEL A, SWISS ONE PUD, OFFICIAL RECORDS 846.32 FEET, THE THE WEST LINE OF ALPINE CITY; THENCE N0°21'07"E ALONG SAID LINE 1311.28 FEET, TO THE NORTH LINE OF SAID NORTHEAST QUARTER OF SECTION 23; THENCE S89°48'09"E ALONG SECTION LINE 1071.48 FEET TO THE POINT OF BEGINNING.

CONTAINS 1,434,724 SQ FT OR 32.94 ACRES AND 8 LOTS

NOTES

1. NO ATTEMPT HAS BEEN MADE AS A PART OF THIS PRELIMINARY PLAT TO OBTAIN OR SHOW DATA CONCERNING EXISTENCE, SIZE, DEPTH, CONDITION, CAPACITY, OR LOCATION OF ANY UTILITY OR MUNICIPAL/PUBLIC SERVICE FACILITY. FOR INFORMATION REGARDING THESE UTILITIES OR FACILITIES, PLEASE CONTACT THE APPROPRIATE AGENCIES OR OTHER.

2. SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP, TITLE EVIDENCE, OR ANY OTHER FACTS WHICH AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.

3. ALL COURSES SHOWN IN PARENTHESIS ARE RECORD INFORMATION TAKEN FROM DEED DESCRIPTION OR OFFICIAL MAPS OR PLATS OF RECORD. ALL OTHER COURSES ARE THE RESULT OF ACTUAL FIELD MEASUREMENTS.

4. ALL CURVES ARE TANGENT CURVES UNLESS OTHERWISE STATED. IF NEEDED A CENTER BEARING WILL BE SHOWN.

5. PARCEL A IS TO BE DEDICATED TO ALPINE CITY FOR STORM-WATER DETENTION AND DEBRIS FIELD STORAGE.

6. 10 FOOT PUE, FRONT, REAR, AND SIDE YARDS ON ALL LOTS.

7. PUE IN PARCEL A ALONG HOG HOLLOW ROAD, ALONG WITH EAST AND NORTH PUE IN PARCEL A ALSO BEING RESERVED FOR A POTENTIAL TRAIL EASEMENT PER ALPINE CITY MASTER PLAN.

NARRATIVE

THE PURPOSE OF THIS SURVEY IS TO COMBINE FOUR EXISTING PARCELS TO CREATE A 8 LOT AND A PARCEL "A" RESIDENTIAL DEVELOPMENT. THE SURVEY WAS PERFORMED AT THE REQUEST OF OUR CLIENT. THE BASIS OF BEARING FOR THIS SURVEY IS N 89°48'09" E ALONG THE NORTH LINE OF THE NORTHEAST QUARTER OF SECTION 23, TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE & MERIDIAN; BETWEEN TWO SECTIONAL MONUMENTS, TYPE AND LOCATIONS OF WHICH ARE SHOWN ON THIS PLAT.

THE FOLLOWING DOCUMENTS OF RECORD WERE REVIEWED AND CONSIDERED AS A PART OF THIS SURVEY. THERE MAY BE OTHER DOCUMENTS EITHER PRIVATE OR OF RECORD THAT WOULD AFFECT THIS SURVEY. ANY NEW EVIDENCE CONTRADICTORY TO THIS SURVEY SHOULD BE PRESENTED TO CIVIL SCIENCE FOR REVIEW AND CONSIDERATION.

R1. ALPINE VALLEY VIEW ESTATES SUBDIVISION, MAP FILING # 8128, RECORDED JULY 01, 1999.

R2. FALCON RIDGE A PRD SUBDIVISIONS, MAP FILING # 10623, RECORDED AUGUST 10, 2004.

R3. LONE PEAK ESTATES, MAP FILING # 5609, RECORDED JULY 11, 1994.

R4. SUMMIT POINTE INCLUDING A VACATION OF LOT 3 OF FALCON RIDGE SUBDIVISION PLAT "A", MAP FILING # 15620, RECORDED JULY 13, 2017.

R5. SUNRISE POINT SUBDIVISION PHASE II, MAP FILING # 6580, RECORDED MAY 7, 1996.

R6. SWISS ONE PLANNED RESIDENTIAL DEVELOPMENT PHASE 3, MAP FILING # 10399, RECORDED MARCH 23, 2004.

EASEMENT NOTES

18 ANY AND ALL MATTERS DISCLOSED ON THE OFFICIAL RECORDED PLAT OF SAID SUBDIVISION, INCLUDING, BUT NOT LIMITED TO, PUBLIC UTILITIES AND DRAINAGE EASEMENTS, SEWER EASEMENTS, BUILDING SET-BACK LINES AND/OR BUILDABLE AREA LIMIT LINES, NOTES AND RECITALS, PRIVATE DRIVEWAY, CROSS ACCESS AND UTILITY EASEMENT, SEWER EASEMENT, AND THE TERMS AND CONDITIONS THEREOF, RECORDED: JULY 10, 2017, ENTRY NO.: 67625:2017. **(TO BE VACATED UPON RECORDATION OF THIS PLAT)**

19 EASEMENT, AND THE TERMS AND CONDITIONS GRANTEE: ALPINE CITY FOR THE PURPOSE OF A PERMANENT EASEMENT FOR THE LOCATION, CONSTRUCTION AND MAINTENANCE OF A PUBLIC ROAD RIGHT OF WAY AND RELATED FACILITIES RECORDED: JULY 10, 2017 ENTRY NO.: 66480:2017 **(AS SHOWN)**

20 EASEMENT, AND THE TERMS AND CONDITIONS THEREOF: GRANTEE: RICHARD HARTVIGSEN PURPOSE: ACCESS RECORDED: JULY 28, 2017, ENTRY NO.: 72701:2017 **(TO BE VACATED UPON RECORDATION OF THIS PLAT)**

PLAT VACATION NOTICE

THE CITY OF ALPINE IS SATISFIED THAT NEITHER THE PUBLIC NOR ANY PERSON WILL BE MATERIALLY INJURED BY THE VACATION OF SUMMIT POINTE, PLAT "A" AND THAT THERE IS GOOD CAUSE FOR THE VACATION. SUMMIT POINTE, PLAT "A" IS HEREBY VACATED.

PLAT "B"

SUMMIT POINTE AMENDED

INCLUDING A VACATION OF SUMMIT POINTE, PLAT "A"

LOCATED IN

NORTHEAST 1/4 OF SECTION 23,
NORTHWEST 1/4 OF SECTION 24,
TOWNSHIP 4 SOUTH, RANGE 1 EAST,
SALT LAKE BASE AND MERIDIAN

PREPARED FOR:

SIX BLUE BISON, LLC

SHEET 1 OF 1

SURVEYOR'S SEAL	NOTARY PUBLIC SEAL	CITY ENGINEERS SEAL	CLERK-RECORDER SEAL

Drainage Study
for the
Summit Pointe Subdivision
Alpine City, Utah

Prepared for:

Jacob Satterfield
Blue Bison Development

Prepared by:

Paul Feser, P.E.
P.O. Box 2412
Salt Lake City, UT 84110
Ph: 801-433-2498

5/22/2020

I. GENERAL LOCATION AND DESCRIPTION

Location

The proposed project is a 33 acre project in Alpine City and on the corner of Draper and Highland. The site is bound by undeveloped property to the north and west and residential to the south and east.

Description of Property

The subject property presently consists of undeveloped ground. The existing topography generally slopes to the south and varies from 2-20% depending on the location.

Adjacent to the south east corner of subject property is a public roadway in which there is a storm drain outfall within roughly 200'. This particular storm drain in Hog Hollow Rd is the outfall for the steady release and the overflow for the detention pond.

The property is not located in a floodplain.

II. DRAINAGE BASINS AND SUB-BASINS

Site Conditions

The site is located in the Great Salt Lake Drainage Basin. The site affects approximately 7 acres.

Drainage

The drainage area for the basin consists of the roadway itself and then roughly 30' of area on the uphill side along the right of way. This resulted in roughly 2.3 acres

incorporated into the basin. It is assumed that the residences in this area will retain their own runoff in a manner acceptable to the city standards.

The site is sized for a 100-year storm with a release rate of 0.07 cfs/acre. A weighted c value was calculated for the over developed property. The storm runoff surface drains into a surface detention basins. The following show the rational detention, orifice, and pipe flow calculations:

Rational Method of Storm Detention Calculation by Rainfall Precipitation

Project: Summit Pointe Subdivision
Date: 5/22/20
By: PSF

DRAINAGE AREA				
Developed Conditions				
	Area ft2	C	Land Use %	
Roadway	85,000	0.90	56.7%	
Lots	65,000	0.30	43.3%	(within 100' of right of way)
Total site	150,000			

Total (ac.):	3.44
C average:	0.64
Storm Data:	NOAA
Frequency:	100
City Rel. (cfs/acre)	0.07
Rel. Rate (cfs):	0.24

DETENTION CALCULATIONS

Time	Precipitation	Intensity	Acc.Vol	Rel.Vol.	Req. Stor.	Peak Flow
min	in	in/hr	ft3	ft3	ft3	cfs
5	0.58	6.96	4602	72	4529	15.3
10	0.88	5.28	6982	145	6837	11.6
15	1.09	4.36	8648	217	8431	9.6
30	1.47	2.94	11663	434	11229	6.5
60	1.82	1.82	14440	868	13572	4.0
120	2.05	1.03	16264	1736	14529	2.3
180	2.14	0.71	16979	2603	14375	1.6
360	2.44	0.41	19359	5207	14152	0.9
720	3.08	0.26	24436	10413	14023	0.6
1440	3.40	0.14	26975	20826	6149	0.3

Basin Size		Peak Flow	
Max. Stor. Req. (cf):	14,529	Flow (cfs):	0.24

Basin Size		Orifice Size	
% of Total Site Area:	100.0%	% of Total Site Release	100.0%
Resulting Storage Req. (cf):	14,529	Resulting Flow through orifice (cfs):	0.24
Surface Stor. Provided (cf):	100,000	Head from middle of basin to middle of orifice (h):	1.5
Available Storage for Debris Flow / Runoff (cf):	85,471	Orifice Coefficient Cd (0.62 for square corners):	0.62
		Calc. Area of Orifice (in^2):	5.7
		Calc. Dia. Of orifice (in):	**2.7**

III. DEBRIS FLOW CONDUIT BYPASSING LAKEVIEW DR

The culvert under Lakeview Dr and in line with the debris flow was sized to accommodate a certain amount of flow determined by the geotechnical engineer. The capacity of the culvert is roughly 300 cfs.

Pipe Flow Calculator

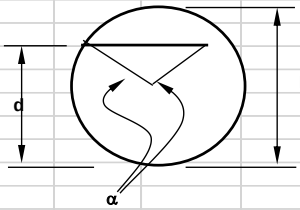
Description: Given three of the following parameters, this model will calculate the fourth: Slope, Diameter, Flow Depth and Volume

Two Equations are used to develop the solution:

Manning's Equation:

$$V = \frac{1.486}{\eta} S^{1/2} R^{2/3}$$

Geometric Relationship of Circular Flow Section:



$$\alpha = 2 \sin^{-1}\left[\frac{2\sqrt{d(D-d)}}{D}\right]$$

$$R = \frac{D}{4}\left[1 - \frac{\sin\alpha}{\alpha}\right]$$

$$A = (\alpha - \sin\alpha)\frac{D^2}{8}$$

Where:

V =	Velocity, feet per second (calculated)	
η =	Manning's Coefficient (selected, default = 0.013)	
S =	Slope of Pipe, feet per foot	
R =	Hydraulic Radius, feet (calculated as Area/Wetted Perimeter)	Manning's No.: 0.01
D =	Diameter of pipe (selected, converted to feet)	
d =	Depth of flow (calculated as percent of D)	
A =	Area (sq. ft.)	
Q =	Flow (c.f.s.)	

INPUT:	**Diameter**	36	(inches)	3.00	**RESULT:**	**Diameter**	3.00	(feet)	36.0 (inches)
	% Full	92	%	0.92		**% Full**	92.0	%	
	Slope	0.1027	ft/ft			**Slope**	0.1027	ft/ft	
	Flow		cfs			**Flow**	298.221	cfs	
						Area	6.804	sq. ft.	
						Velocity	43.832	ft/sec	

IV. RIPRAP SIZING

The size if the riprap in the above debris flow was based on estimated runoff. In the technical memo dated August 13, 2018 it was determined that 15" riprap would be sufficient however in the plans we have specified 24" as a conservative measure. See the attached memo.

V. ENVIRONMENTAL PROTECTION CRITERIA

Construction Activities Storm Water Quality Control

Silt fences will be used along the edges of the site that abut adjacent property owners on the downhill side of the project. Inlet protection, consisting of gravel filters and straw bale barriers will be used for all inlets until disturbed areas are either paved or landscaping is established. The contractor is required to use vehicle-tracking control where vehicles enter and exit the site from public right-of-way. The detention facilities and outlet structures will serve as sediment basins during construction. Any disturbed areas left un-worked for more

the 21 days must be seeded and mulched with 1 ton per acre of tacked hay within 14 days of last being worked.

During the construction process the above protection methods will be used to limit runoff sediment transport. Tacked hay mulch will control wind erosion over all exposed areas until permanent vegetation has been established. Surface roughening will be applied to side slopes greater than or equal to 3 horizontal to 1 vertical. This will aid in seedbed preparation and establishment of vegetation. It will also reduce runoff velocity, increase infiltration, reduce wind erosion and provide for sediment trapping. Maintenance of the on site controls will be the responsibility of the general contractor during construction operations and the developer and any subsequent tenants once build out has occurred.

Permanent Stabilization and Storm Water Quality Enhancement

Permanent measures used to achieve final stabilization and to control pollutants in storm water discharge after construction operations have been completed include site paving, landscaping, and full sedimentation-filtration systems within the on-site detention facility. The Urban Storm Drainage Criteria Manual was used to implement measures that provide water quality.

VI. CONCLUSIONS

In summary, the proposed commercial development is in conformance with city guidelines. 100-year runoff is captured and detained with release rates not exceeding city guidelines. The detention basin is sized to accommodate a 100-year storm. The emergency or excess of 100-year runoff is concentrated with predetermined flow paths and eventually flows to the east or north into the public right of way. No adverse impacts are anticipated to downstream properties due to the development of this property.

se science

Spinnaker Engineering Science, LLC

TECHNICAL MEMORANDUM

Date: August 13, 2018

To: Alpine City

CC: Project folder

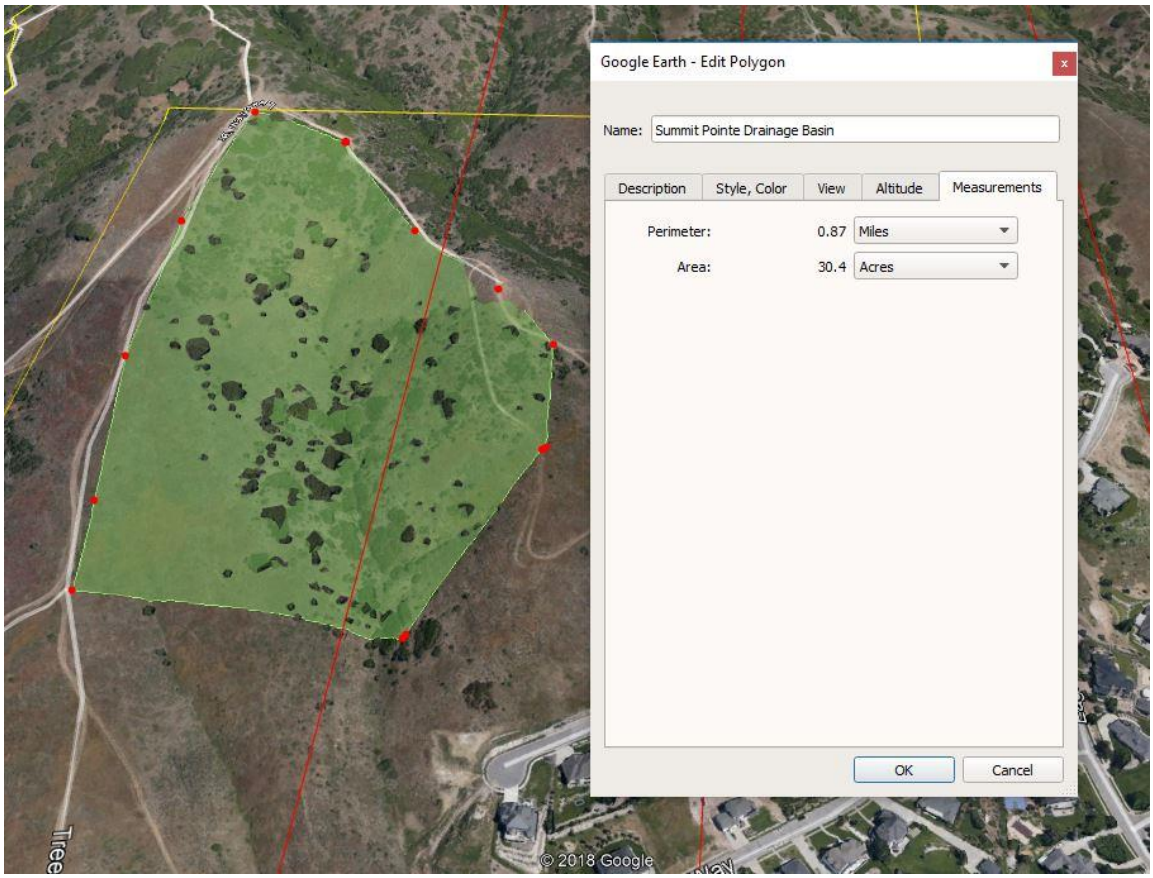
From: Paul Feser, P.E.

Subject: Summit Pointe Hillside Drainage Analysis / Riprap Sizing

S.E. Science was hired to analyze the drainage of the hillside adjacent to the Summit Pointe Subdivision in order to size riprap and a culvert under the proposed public roadway.

It was generally observed that the subject hillside does not act as a typical creek in the area where the Lakeview Drive will cross, as there is no flow except in theory in an extreme storm event. It is therefore assumed that the sizing of the culvert will not have a base flow.

The drainage area is generously approximated to be 30 acres. The length of the runoff is roughly 1800 l.f. at a slope of 10%.



Time of Concentration - The time of concentration is calculated to be 14 minutes and then rounded to be 15 minutes:

TR-55 Worksheet
Time of Concentration Calculator

Main Menu

Calcs Explanations

Job Number:	se1811a
Project Name:	Summit Pointe Subdivision
Location:	Alpine
Client:	
Date:	8/6/2018
By:	Paul Feser

Segment 1: Sheet Flow

Sub-Basin:	100 Year Riprap Calculation
Surface Description:	Native Sage and Scrub Oak

Manning's roughness coeff. (n)	n=	0.13	1	Help
Flow Length, (total L <= 300 ft.)	L=	200 ft	2	
Two Year 24-hr Rainfall (P2)	P2=	3.40 in	3	
Land Slope (s)	s=	0.1000 ft/ft	4	
Travel Time	Tt =	**7.75 min.**	5	

Segment 2: Shallow Concentrated Flow

Surface Description:	Wash

Flow Length, (L)	L=	600 ft	6	
Watercourse Slope (s)	s=	0.1000 ft/ft	7	
Velocity factor	k=	8	8	Help
Average Velocity (v)	v=	2.53 fps	9	
Travel Time	Tt =	**3.95 min.**	10	

Segment 3: Open Channel Flow

Surface Description:	Wash

Flow Length, (L)	L=	1050 ft	11	
Watercourse Slope (s)	s=	0.1000 ft/ft	12	
Velocity factor	k=	25	13	Help
Average Velocity (v)	v=	7.91 fps	14	
Travel Time	Tt =	**2.21 min.**	15	

Total Time of Concentration:	**13.92 min.**	16

Note: See included TR-55 Explanation for details concerning the calculations in this worksheet.

Flow Rate - A rational approach was used to simplify the calculation which is a conservative approach as the rational method tends to overestimate in situations over 20 acres. The required runoff is roughly 20 cfs.

Rational Method of Storm Runoff Calculation by Rainfall Precipitation

Project: Summit Pointe Subdivision
Date: 8/8/18
By: PSF

DRAINAGE AREA			
Developed Conditions			
	Area ft2	C	Land Use %
Hillside	1,324,224	0.15	100.0%
Total site	1,324,224		

Total (ac.):	30.40
C average:	0.15
Storm Data:	NOAA
Frequency:	100

RUNOFF CALCULATIONS			
Time	Precipitation	Intensity	Peak Flow
15	1.09	4.36	19.9

Culvert Sizing - An 18-inch pipe at 7.8% slope can pass roughly 40 cfs:

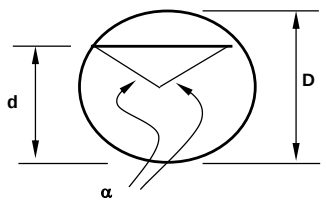
Pipe Flow Calculator

Description: Given three of the following parameters, this model will calculate the fourth: Slope, Diameter, Flow Depth and Volume
Two Equations are used to develop the solution:

Manning's Equation:

$$V = \frac{1.486}{\eta} S^{1/2} R^{2/3}$$

Geometric Relationship of Circular Flow Section:



$$\alpha = 2 \sin^{-1}\left[\frac{2\sqrt{d(D-d)}}{D}\right]$$

$$R = \frac{D}{4}\left[1 - \frac{\sin\alpha}{\alpha}\right]$$

$$A = (\alpha - \sin\alpha)\frac{D^2}{8}$$

Where:
V = Velocity, feet per second (calculated)
η = Manning's Coefficient (selected, default = 0.013)
S = Slope of Pipe, feet per foot
R = Hydraulic Radius, feet (calculated as Area/Wetted Perimeter)
D = Diameter of pipe (selected, converted to feet)
d = Depth of flow (calculated as percent of D)
A = Area (sq. ft.)
Q = Flow (c.f.s.)

Manning's No.: 0.01

INPUT:					RESULT:			
Diameter	18	(inches)	1.50		**Diameter**	1.50	(feet)	18.0 (inches)
% Full	90	%	0.9		**% Full**	90.0	%	
Slope	0.078	ft/ft			**Slope**	0.0780	ft/ft	
Flow		cfs			**Flow**	40.637	cfs	
					Area	1.675	sq. ft.	
					Velocity	24.258	ft/sec	

Riprap - The greatest outfall slope and greatest potential for erosion and failure is immediately adjacent to the inlet and outfall of the culvert. The required size of the riprap is estimated as follows.

Riprap Rock Sizing Calculator

Compute stable rock size. River channel erosion control, scour prevention. Isbash equation

Riprap is used for erosion control, to prevent scour, and to minimize sediment transport in rivers and streams. A stable riprap rock size is desired.

$$D = \frac{V^2}{2gC^2(s-1)}$$

Where:		INPUT
	Q max (cfs)	19.88
	Area of weir (s.f.)	2
	V = Water Velocity (ft/s)	9.94
	C = Isbash constant (0.86 typ.)	0.86
	C=0.86 for highly turbulent conditions or C=1.2 for low	
	S = Rock specific gravity	2.65
	2.56 to 2.92 depending on the rock	
	g = Acceleration due to gravity (32.2 ft/s)	
		RESULTS
	D = Rock Diameter (ft)	1.3
	D = Rock Diameter D50(in)	15.1

In conclusion the 24" riprap specified on the plans should be adequate for the project.

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Phone (801) 501-0583 | Fax (801) 501-0584

Debris Flow Hazard Assessment
Summit Pointe Development
Alpine, Utah

GeoStrata Job No. 1312-006

August 21, 2019

Prepared for:

Blue Bison Development
c/o Jake Satterfield
12543b Andreas Street
Riverton, Utah 84096
801-755-0452
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Learn More

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Debris Flow Hazard Assessment
Summit Pointe Development
Alpine, Utah

GeoStrata Job No. 1312-006

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August 21, 2019

TABLE OF CONTENTS

APPENDICES

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1.0 EXECUTIVE SUMMARY

The purpose of this investigation and supplemental report is to investigate the alluvial fan flooding and debris flow hazard of an unnamed drainage that trends generally north-south in the eastern portion of the subject site and is crossed by a proposed roadway within the Summit Pointe development located in the foothills east of Lakeview Drive and North of Hog Hollow Road in Alpine, Utah.

The subject site is located north of Hog Hollow Road on a native hillside in Alpine, Utah at an elevation ranging from approximately 5,228 to 5,370 feet above sea level. We understand that the project site is an approximately 30.34 acres undeveloped parcel with hiking trails and unpaved access roads. It is our understanding that the proposed development, as currently planned, will consist of 8 single-family residential structures as well as associated driveways, utilities and landscape areas. The hillside in the area of the subject site is moderately to steeply sloping generally to the south. The subject site remains in a relatively native condition.

It is the opinion of GeoStrata that the alluvial fan flooding hazard is considered moderate and it is considered unlikely that alluvial fan flooding will impact the proposed development as long as a detention basin is designed by a professional engineer to handle the debris flow volumes as presented in Tables 2, 3, and 4 and all recommendations in this report are followed. The intent of this investigation was to provide recommendations and design parameters to store potential debris flow volumes sourced by the unnamed drainage and to reduce the impacts of the alluvial fan flooding hazard on established single family residences located south of the unnamed drainage.

NOTICE: The scope of services provided within this report are limited to the assessment of the subsurface conditions for the proposed development. This executive summary is not intended to replace the report of which it is part and should not be used separately from the report. The executive summary is provided solely for purposes of overview. The executive summary omits a number of details, any one of which could be crucial to the proper application of this report.

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2.0 INTRODUCTION

2.1 PURPOSE AND SCOPE OF WORK

The purpose of this investigation and supplemental report is to investigate the alluvial fan flooding and debris flow hazard of an unnamed drainage that trends generally north-south in the eastern portion of the subject site and is crossed by a proposed roadway within the Summit Pointe development located in the foothills east of Lakeview Drive and North of Hog Hollow Road in Alpine, Utah. The location of the site and the drainage that will be assessed in this report are shown on Plate A-1 Site Vicinity Map. The subject site will consist of multi-level single family residences. The work performed for this report was performed in accordance with our proposal, dated June 17, 2019. Our scope of services included the following:

- Review of available references and maps of the area.
- Stereographic aerial photograph interpretation of aerial photographs covering the site area.
- Review of the sub-meter Wasatch Front lidar elevation data (2013 to 2014) obtained from the State of Utah AGRC.
- Geologic reconnaissance of the site by an engineering geologist to observe and document pertinent surface features indicative of possible debris flow hazards and to collect cross-sections of drainage; and
- Evaluation of our observations combined with existing information to assess the potential debris flow hazard and prepare this written report with conclusions and recommendations for assessed debris flow volumes of the unnamed drainage.

The recommendations contained in this report are subject to the limitations presented in the Limitations section of this report.

2.2 PROJECT DESCRIPTION

The subject site is located north of Hog Hollow Road on a native hillside in Alpine, Utah at an elevation ranging from approximately 5,228 to 5,370 feet above sea level. We understand that the project site is an approximately 30.34 acres undeveloped parcel with hiking trails and unpaved access roads. It is our understanding that the proposed development, as currently planned, will consist of 8 single-family residential structures as well as associated driveways, utilities and landscape areas. The hillside in the area of the subject site is moderately to steeply sloping generally to the south. The subject site remains in a relatively native condition. The

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parcels to the east and south are established residential neighborhoods. The parcels to the west and north are undeveloped hillsides. The location and approximate boundaries of the subject site are shown on the Site Vicinity Map and the Topographic Map included in the Appendix of this report (Plate A-1; Plate A-2).

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3.0 METHODS OF STUDY

3.1 OFFICE INVESTIGATION

To prepare for the investigation, GeoStrata reviewed pertinent literature and maps listed in the references section of this report, which provided background information on the local geologic history of the area and the locations of suspected or known geologic hazards (Elliot and Harty, 2010; Black and others, 2016; Biek, 2005; Constenius and others, 2011; Machette, 1992). A stereographic aerial photograph interpretation was performed for the subject site using two sets of stereo aerial photographs (Table 1) obtained from the Utah Geological Survey Aerial Imagery Collection database.

Source	Photo Number	Date	Scale
USBR	SLA_1-6_A	August 10, 1938	1:20,000
USBR	SLA_1-7_A	August 10, 1938	1:20,000

Table 1: Aerial Stereosets.

GeoStrata also conducted a review of hillshades derived from 2013-2014 0.5-meter lidar digital elevation data obtained from the State of Utah AGRC to assess the subject site for visible alluvial fan deposits and to observe general drainage characteristics (Plate A-3 Hillshade Map).

3.2 FIELD INVESTIGATION

An engineering geologist investigated the geologic conditions within the general site area. A field geologic reconnaissance was conducted to observe existing geologic conditions and to assess existing surficial evidence of alluvial fan flooding and debris flow. GeoStrata also collected cross sectional data of the unnamed drainage to further assess the alluvial fan flooding and debris flow hazard at the site.

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4.0 GEOLOGIC CONDITIONS

4.1 GEOLOGIC SETTING

The site is located in Utah Valley on a south facing slope between Hog Hollow and Fort Canyon in Alpine, Utah. The subject site is located within the foothills of the Traverse Mountains, a structural salient denoting the boundary between Salt Lake Valley and Utah Valley and the southern terminus of the Salt Lake City Segment and the northern terminus of the Provo Segment of the Wasatch Fault Zone. Tertiary volcanic rocks and Tertiary alluvial fan deposits dominate the East Traverse Mountains and late Paleozoic shallow marine bedrock constitutes the west Traverse Mountains. The Utah Valley is a northwest trending deep, lacustrine sediment-filled structural basin of Cenozoic age bounded on the northeast and southwest by two normal faults that dip towards the center of the valley. Utah Valley is a fault graben flanked by two uplifted blocks, the Wasatch Range to the east and the Lake Mountains to the west. The Wasatch Range is the easternmost expression of pronounced Basin and Range extension in north-central Utah (Stokes, 1986).

The near-surface geology of the Utah Valley is dominated by sediments, which were deposited within the last 30,000 years by Lake Bonneville (Scott and others, 1983; Hintze, 1993; Machette, 1992; Constenius and others, 2011). The lacustrine sediments near the mountain front consist mostly of gravel and sand. As the lake receded, streams began to incise large deltas formed at the mouths of major canyons along the Wasatch Range, and the eroded material was deposited in shallow lakes and marshes in the basin and in a series of recessional deltas and alluvial fans. Sediments toward the center of the valley are predominately deep-water deposits of clay, silt, and fine sand. However, these deep-water deposits are in places covered by a thin post-Bonneville alluvial cover. Most surficial deposits along the Wasatch fault zone were deposited during the final cycle of the Bonneville Lake Cycle between approximately 32 to 10 ka (thousands of years ago) and in the Holocene (< 10 ka).

4.2 SITE GEOLOGY

The geology within the subject site and in the surrounding area is shown on Plate A-4a Site Vicinity Geologic Map and Plate A-5 Site Vicinity 30x60 Geologic Map. On Plate A-4a, the geology within the subject site is mapped as Tertiary alluvial fan (Taf) with Quaternary alluvial fan deposits (Qaf_1) mapped at the base of the slope and overlying Lake Bonneville lacustrine gravel and sand (Qlbg) along the southern property boundary of the site. The Tertiary alluvial fan

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deposits are described as unconsolidated pebble to boulder sized subangular to subrounded orthoquartzite and calcareous sandstone clasts with minor volcanic clasts. The Quaternary alluvial fan deposits are Holocene alluvial fans that are primarily debris flows that formed at the mouths of active drainages. Lastly, the lacustrine gravel and sand deposits are described as locally partially cemented, well-rounded, pebble to cobble gravel and pebbly sand that was deposited at and below the highest Bonneville shoreline, but above the Provo shoreline.

4.3 TECTONIC SETTING

The Fort Canyon fault is located approximately 1.5 miles northeast of the subject site. The Fort Canyon fault is 8 km long and connects the Salt Lake and Provo segments of the Wasatch fault zone (WFZ) (Biek, 2005; Machette, 1992; Hecker, 1993). Pleistocene glacial outwash is displaced by 3-6 m along the Fort Canyon fault near Dry Creek in Alpine, Utah (Machette, 1992). The Provo segment of the WFZ is located approximately 3 miles east of the subject site. The Provo segment is 70 km long and is one of the longest segments of the WFZ. Late Pleistocene scarp heights along the Provo segment are reported to be as much as 50 meters high. Surface offsets resulting from post-Bonneville faulting events are reported to have produced scarps up to 26 meters high along the Provo segment (Black and others, 2003, Machette, 1992). The Traverse Mountains mark the northern extent of the Provo segment and form a structural boundary between the Salt Lake City and Provo segments of the WFZ.

Analysis of the ground shaking hazard along the Wasatch Front suggests that the WFZ is the single greatest contributor to the seismic hazard in the Salt Lake City region. The Fort Canyon fault and Provo segment of the WFZ shows evidence of Holocene-aged movement and are therefore considered active.

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5.0 GENERALIZED SITE CONDITIONS

5.1 SURFACE CONDITIONS

As stated previously, the project site is located along a south facing slope between Hog Hollow and Fort Canyon in Alpine, Utah (Plate A-2 Topographic Quadrangle). The subject site is located on a gently to moderately sloping native hillside vegetated with grasses, sagebrush and scrub oak mainly growing in the drainages. The hillside slopes between approximately 5 degrees to the south toward Alpine and locally 14 degrees along the drainages. At the time of our site visit, a roadcut for an unpaved road was graded from Lakeview Road west into the subject site. Exposure along the eastern portion of the roadcut consisted of a clast supported deposit containing poorly sorted well-rounded quartzite, sandstone and Alta Stock granodiorite gravel and cobbles. This exposure was observed to contain moderate bedding in places. Exposure along the western portion of the roadcut consisted of a red-brown matrix supported deposit containing subangular to rounded quartzite clasts. The site remains in a relatively natural state, apart from minor grading for access roads and hiking trails. The site is vegetated with grasses, weeds, sage brush throughout the site and scrub oak predominantly in the drainages. The parcels east and south of the subject site are established single-family residences. The parcels west and north of the subject site are undeveloped native hillsides.

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6.0 METHOD OF STUDY

6.1 FIELD INVESTIGATION

Field investigations and observations used to assess the debris flow potential, probability and magnitude can be categorized into two areas of study (Giraud, 2005):

1. Channel Investigation – Studies of debris flows indicate that the majority of material/debris transported onto the alluvial fan comes from existing deposits within the defined drainage channel. The unit volume technique is commonly used to assign applicable debris yield rates (unit volume along distinct reaches of the channel) in order to approximate the potential debris volume.

2. Alluvial Fan Investigation – the thickness of debris deposits measured on the alluvial fan contribute to an understanding of past debris flow magnitude and potential run-out distance.

GeoStrata completed a site reconnaissance of the unnamed drainage on July 3, 2019. The site reconnaissance included observations of the surficial deposits in the drainage and collection of six cross-sections of the drainage. Along with GeoStrata's field observations, geologic mapping of the subject site (Plate A-4 Site Vicinity Geologic Map; Plate A-5 Site Vicinity 30'x60' Geologic Map) was reviewed by GeoStrata as part of this investigation. The drainage basins for the unnamed drainage and profile cross section locations are shown on Plate A-6 Cross-Section Location Map.

The cross-sectional geometry of the channels within the unnamed drainage is variable and ranged from a narrow channel bottom to a shallow and broad channel bottom. It was our objective to produce cross-sections that would be representative of the various geometries that exist in the main channel of the unnamed drainage. Evidence suggests that water is present during periods of high runoff, however, no water was observed in the drainage at the time of our site reconnaissance. Two minor tributary channels between approximately 200 to 300 feet in length and within the unnamed drainage were observed. Due to the relatively small size and poorly developed channel bottoms within these two minor tributaries, these two tributary channels and characteristics of these channels, it is the opinion of GeoStrata that the stored debris potential within these channels would be negligible and therefore they were not used to calculate debris flow volumes of the unnamed. The unnamed drainage is predominantly vegetated with grass and cluster of dense scrub oak. The following sections present results of our field investigations in the unnamed drainage basin.

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6.2 UNNAMED DRAINAGE

The unnamed drainage basin is approximately 37 acres (0.15 square kilometers) in size with a total "defined" channel length of approximately 1,755 feet. The properties of the main drainage channel are variable with some areas containing low to moderate amounts of stored debris yield rates calculated to be between approximately 17 ft^3/ft to 5 ft^3/ft. In order to estimate potential debris discharge volumes from the unnamed drainage, GeoStrata produced cross-sections in 6 different locations within the drainage channel to more accurately estimate the amount of debris currently available for transport. The approximate locations of profile cross-sections are shown on the Cross-Section Location Map (Plate A-6).

The unnamed drainage contains a perennial channel incised into the southern flank of the Traverse Mountains. No subsurface investigation was performed in the unnamed drainage channel or on the associated alluvial fan and therefore the types of historical debris flows from the drainage could not be determined. Approximately 45 percent of the channel contains thick, healthy vegetation, predominantly scrub oaks, while approximately 55 percent of the channel is vegetated by grasses and brush. Six cross-sections along the length of the channel are shown on Plates B-1 to B-6.

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7.0 GEOLOGIC HAZARDS

Geologic hazards can be defined as naturally occurring geologic conditions or processes that could present a danger to human life and property. These hazards must be considered before development of the site. There are several hazards that if present at the site should be considered in the design of habitable structures and other critical infrastructure. A report titled "*Geologic Hazards Screening Assessment Summit Pointe Subdivision"* and dated October 17, 2018 was compiled by GeoStrata for this development. As previously stated, this is a supplemental report that will assess the debris flow hazard of the unnamed drainage that is located trending generally north-south through the eastern portion of the site as shown on Plate A-1, Plate A-2, and Plate A-3.

7.1 ALLUVIAL FAN FLOODING

Alluvial fan flooding is a potential hazard that may exist in areas containing Holocene alluvial fan deposits. This type of flooding typically occurs as stream flows, hyperconcentrated flows or debris flows consisting of a mixture of water, soil, organic material, and rock debris with variations in sediment-water concentrations transported by fast-moving water flows. Stream flows contain approximately less than 20% sediment by volume and involve sediment transport by entrained and suspended sediment load (Bowman and Lund, 2016). Unconfined stream flows are referred to as sheetfloods which are spread over and occur in the distal areas of the alluvial fan or within unchanneled, broad, relatively flat-bottomed portions of drainages. Hyperconcentrated flows are alluvial fan flows with approximately between 20 to 60% sediment by volume whereas debris flows contain approximately 60% to 85% sediment by volume.

Alluvial fan flooding can be a hazard on or below alluvial fans or in stream channels above alluvial fans. Precipitation (rainfall and snowmelt) is generally viewed as an alluvial fan flood "trigger", but this represents only one of the many factors that contribute to alluvial fan flooding hazard. Vegetation, root depth, soil gradation, antecedent moisture conditions and long-term climatic cycles all contribute to the generation of debris and initiation of alluvial fan flooding. Events of relatively short duration, such as a fire, can significantly alter a basin's absorption of storm water and snowmelt runoff and natural resistance to sediment mobilization for an extended period of time. These factors are difficult to quantify or predict and vary not only between different watersheds, but also within each sub-area of a drainage basin. In general, there are two methods by which alluvial fan flooding can be mobilized: 1) when shallow landslides from channel side-slopes are conveyed in existing channels when mixed with water and 2) channel

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scour where debris is initially mobilized by moving water in a channel and then the mobilized debris continues to assemble and transport downstream sediments.

Based on review of published geologic maps, our stereographic aerial photograph interpretation, our review of the hillshades derived from the 0.5-meter lidar elevation data (2013-2014) and our field observations, a Holocene-aged alluvial fan deposit is mapped at the mouth of the unnamed drainage (Plate A-4 Site Vicinity Geologic Map; Plate A-5 Site Vicinity 30x60 Geologic Map). The geometry of the channel within the unnamed drainage was observed to vary. In some areas of the drainage the channel was observed to be at most approximately 1 foot wide and 1 foot deep while other areas did not have a defined channel. No water was observed to be flowing in the unnamed drainage at the time of our site visit in the beginning of July of 2019. No subsurface exploration to evaluate the types of debris flow deposits sourced by the unnamed drainage was conducted as part of this investigation. Based on our review of published geologic maps, our aerial photograph interpretation, our review of hillshades derived from 0.5-meter lidar and our field observations, the alluvial fan flooding hazard is considered moderate and our more in-depth assessment of this hazard is addressed in subsequent paragraphs.

7.1.1 Estimates of Debris Volume and Peak Flow

The prediction of total debris and peak debris-flow volumes is complex and dependent on several factors which include but are not limited to precipitation and vegetation as previously mentioned. While methods of initiation differ, our observations of the drainage basins and channels lead us to assume that under existing conditions the majority of debris currently available for transport in the unnamed drainage would be mobilized from existing deposits within their developed channels beds and likely only in a post fire condition.

Since GeoStrata did not conduct a subsurface investigation to classify the type of alluvial fan flooding (stream flow, hyperconcentrated flow and debris flow), it is the opinion of GeoStrata that the alluvial fan flooding hazard sourced by the unnamed drainage could potentially impact the area delineated as Qaf_1 on Plate A-7 Extent of Alluvial Fan.

There are several methods available for predicting peak discharge rates and total debris flow volumes associated with debris-flows. The methods used in our analysis for this investigation are discussed below. Results of each of the methods of analysis are presented below.

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Debris Flow Bulking with Hydrology

Analysis of the hydrology of the unnamed drainage was performed by ESI Engineering to provide peak flow and total volume of rainfall runoff in order to calculate potential peak and total volume debris flow rates (Appendix C). Stream flow is considered to be a debris flow when the concentration by volume of sediment is greater than 60% (Bowman and Lund, 2016). In order to calculate debris flow volumes, we assumed a 50% bulking rate, meaning that of the total rainstorm runoff from a 100-year storm, a volume of sediment equal to the volume of water may be mobilized; therefore, the debris flow volume would equal to 2 times the volume of water. The table below presents stormwater and debris flow volumes and peak flow rates considering a 100-year storm with a duration of 24 hours.

Total Volume of Water from 100-year storm (ac-ft)	1.15
Total Volume of Water from 100-year storm with 6 cfs release rate (ac-ft)	0.29
Total Volume of Debris Flow from 100-year storm (ac-ft)*	2.30
Total Volume of Debris Flow from 100-year storm with 6 cfs release rate (ac-ft)*	1.44
Peak Flow Rate of Stormwater from 100-year storm (cfs)	17.7
Peak Flow Rate of Debris Flow from 100-year storm (cfs)	35.4

*debris flow volume equals volume of water and sediment combined

Table 2: Debris Flow Volumes from Bulking

The total volume of sediment calculated using this method far exceeds the estimated erodible sediment stored within the channel as calculated using the Unit Volume Analysis method as described below; therefore, it is our opinion that there is a low probability that volumes of debris flow as high as these will occur. However, from this we can conclude that most of the available erodible sediment stored in the channel may be mobilized in a 100-year rainstorm event.

Unit-Volume Analysis

The unit-volume analysis method involves measuring and estimating the stored erodible sediment in the channel. Cross-sections are taken at various points along a channel and the geometry of the channel is used to estimate the sediment stored in the bottom of the channel (Giraud, 2005). Estimating channel sediment volume available for bulking is critical because study of historical debris flows indicates that 80% to 90% of the debris flow volume comes from bulking of sediment from the bottom of the channel (Bowman and Lund, 2016).

All of the streambed cross sections used in our analysis were collected during our site reconnaissance. Available debris was estimated from field observations and the calculated height

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of the water in the channel during peak flow at each cross section during a 100-year storm event using the velocity of debris flow equation (Prochaska and others, 2008). Debris yield at these cross sections were calculated as volume per linear foot of channel and this yield was then extrapolated beyond the investigation locations along the length of the channel in order to approximate the potential total debris yield for the unnamed drainage as presented in Table 3 below. Utilizing this method, we estimate the volume of sediment stored in the channel that could be mobilized during an alluvial fan flooding event to be approximately one third the volume of sediment that we assessed using the debris flow bulking with hydrology method.

Erodible Sediment in Reach 1 (ac-ft)	0.11
Erodible Sediment in Reach 2 (ac-ft)	0.03
Erodible Sediment in Reach 3 (ac-ft)	0.03
Erodible Sediment in Reach 4 (ac-ft)	0.06
Erodible Sediment in Reach 5 (ac-ft)	0.06
Erodible Sediment in Reach 6 (ac-ft)	0.06
Total Erodible Sediment in Channel (ac-ft)	0.35
Total Debris Flow Volume (ac-ft)	0.70

Table 3: Volume of Sediment in Stream Channel

Post-fire Condition Assessment

The Western U.S. regression model was also used to estimate fire-related debris flow volumes (Gartner and others, 2008; Giraud and Castleton, 2009; Cannon and others 2010). The model estimates debris flow volumes as:

$$\ln V = 7.2 + 0.6(\ln A) + 0.7(B)^{1/2} + 0.2(T)^{1/2} + 0.3$$

where:

V = volume (cubic meters)

A = basin area with slopes greater than or equal to 30% (square kilometers)

B = basin area burned at moderate and high severity (square kilometers)

T = total storm rainfall (millimeters)

Based on the elevation data available, 97% of the total area of the unnamed drainage basin are slopes equal to or greater than 30%. We assumed that the entirety of the unnamed drainage basin was moderately to severely burned. Cannon and others (2010) recommend evaluation of debris

flow events in response to low recurrence (<2-10 years), low-duration (<1 hr) rainstorms. Total storm rainfall was taken from the NOAA Atlas 14, Volume 1, Version 5 Point Precipitation Frequency Estimates for rainstorm events with 60-minute durations with a recurrence interval of 10 years.

Basin Area with Slopes Greater than 30% (sq-km)	0.146
Basin Area Burned at Moderate to High Severity (sq-km)	0.150
Total Storm Rainfall (mm)	23.2
Western U.S. Regression Model Debris Flow Volume (m^3)	1957.6
Western U.S. Regression Model Debris Flow Volume (ac-ft)	1.6

Table 4: Volume of Sediment in Stream Channel

Utilizing this method, we estimate the total volume of a potential post fire debris flow to be approximately two thirds the volume of total debris flow volume that we assessed using the debris flow bulking with hydrology method. The total debris flow volumes predicted using this method also assess the total debris flow volume for the unnamed drainage to be approximately two times the total debris flow volume when compared to the estimated erodible sediment within the channels utilizing the unit-volume analysis.

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8.0 GEOLOGIC HAZARDS SUMMARY AND CONCLUSIONS

It is the opinion of GeoStrata that the geologic hazards that we assessed in this study that could impact the subject site include alluvial fan flooding. Below is a summary of the alluvial fan flooding hazard and GeoStrata's recommendation for mitigation:

- Based on our understanding of the project, debris flow hazard for the proposed development is likely only to impact Lot 1 as shown on the provided site plan. The debris flow hazard may be mitigated for Lot 1 by placing a detention basin on the uphill side of the proposed roadway where it crosses the drainage; however, Utah Dam Safety regulations may require a much more in-depth analysis of the proposed roadway embankment due to the potential classification of a high hazard dam. Alternatively, Lot 1 may be dedicated to the City as open space for construction of a debris basin and city park, and the density associated with Lot 1 may be moved to another portion of the development. The culvert to be constructed below the roadway embankment should be sized to allow the peak debris flow to pass through as assessed using the debris flow bulking with hydrology method (35.4 cfs). Consideration may then also be given to sizing a debris basin on Lot 1 to handle stormwater for the entire development as well as stormwater and debris flow volumes from the unnamed drainage of 1.44 ac-ft if a discharge rate of 6 cfs can be accommodated. The detention basin and all modifications to stream channels should be designed in consideration of flow velocities and superelevations as calculated using the methods and procedures outlined in Prochaska et. al, 2008.

  A hazard rating of "Low" indicates that no evidence was found to indicate that the hazard is present and has a low probability of impacting the site, hazard not known or suspect to be present. A hazard rating of "Moderate" indicates that the hazard has a moderate probability of impacting the site, but the evidence is equivocal, based only on theoretical studies, or was not observed and further study is necessary as noted. A hazard rating of "High" indicates that that evidence is strong and suggests that there is a high probability of impacting the site and mitigation measures should be taken. It is the opinion of GeoStrata that the alluvial fan flooding hazard is considered moderate and it is considered unlikely that alluvial fan flooding will impact the proposed development with the exception of Lot 1. If it is desired that Lot 1 be used for placement of a residential structure then a detention basin will need to be designed by a professional engineer to

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handle the debris flow volumes as presented in Table 2 which in our opinion is the most conservative assessment method of potential alluvial fan flooding total volume for this site. All recommendations in this report should be followed. The intent of this investigation was to provide recommendations and design parameters to store potential debris flow volumes sourced by the unnamed drainage and to reduce the impacts of the alluvial fan flooding hazard on established single family residences located south of the unnamed drainage.

It is the opinion of GeoStrata that these hazards should not preclude the development of the subject site, assuming that these recommendations given above will be followed.

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9.0 CLOSURE

9.1 LIMITATIONS

The conclusions and recommendations contained in this report, which include professional opinions and judgments, are based on the information available to us at the time of our evaluation, the results of our field observations and our understanding of the proposed site development. If any conditions are encountered at this site that are different from those described in this report, our firm should be immediately notified so that we may make any necessary revisions to recommendations contained in this report. In addition, if the scope of the proposed development changes from that described in this report, our firm should also be notified.

All services were completed in accordance with the current standard of care and generally accepted standard of practice at the time and in the place our services were completed. No other warranty, expressed or implied, is made. Development of property in the immediate vicinity of geologic hazards involves a certain level of inherent risk. It is impossible to predict where geologic hazards will occur. New geologic hazards may develop, and existing geologic hazards may expand beyond their current limits.

All services were performed for the exclusive use and benefit of the above addressee. No other person is entitled to rely on GeoStrata's services or use the information contained in this letter without the express written consent of GeoStrata. We are not responsible for the technical interpretations by others of the information described or documented in this report. The use of information contained in this report for bidding purposes should be done at the Contractor's option and risk.

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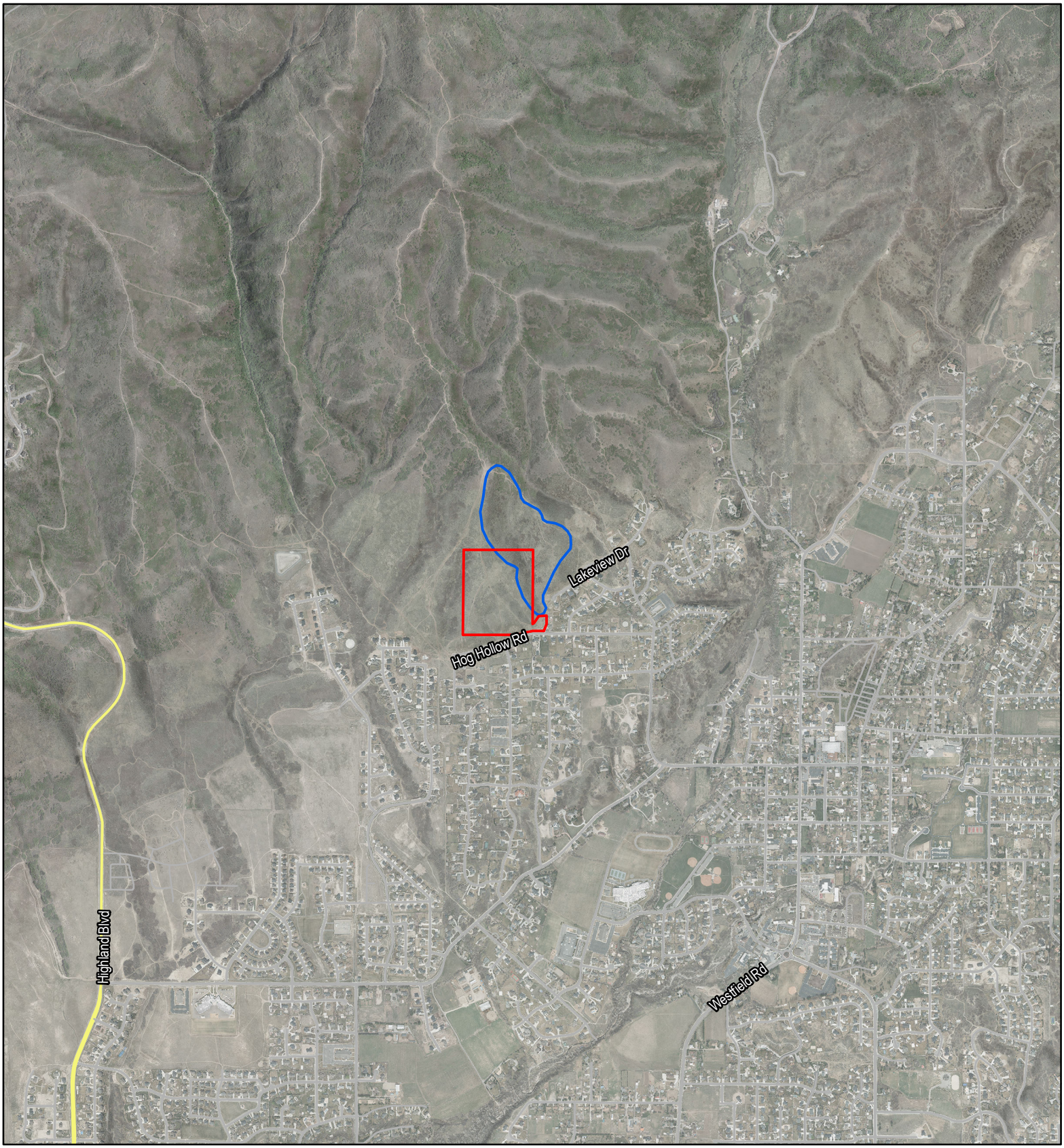
Appendix A



Legend

- Approximate Site Boundary
- Unnamed Drainage Basin

0 625 1,250 2,500 3,750 5,000 Feet

1 inch = 2,000 feet

Basemap:
2012 HRO 12.5cm aerial imagery and hillshades derived from DEMs provided by the State of Utah AGRC.

N

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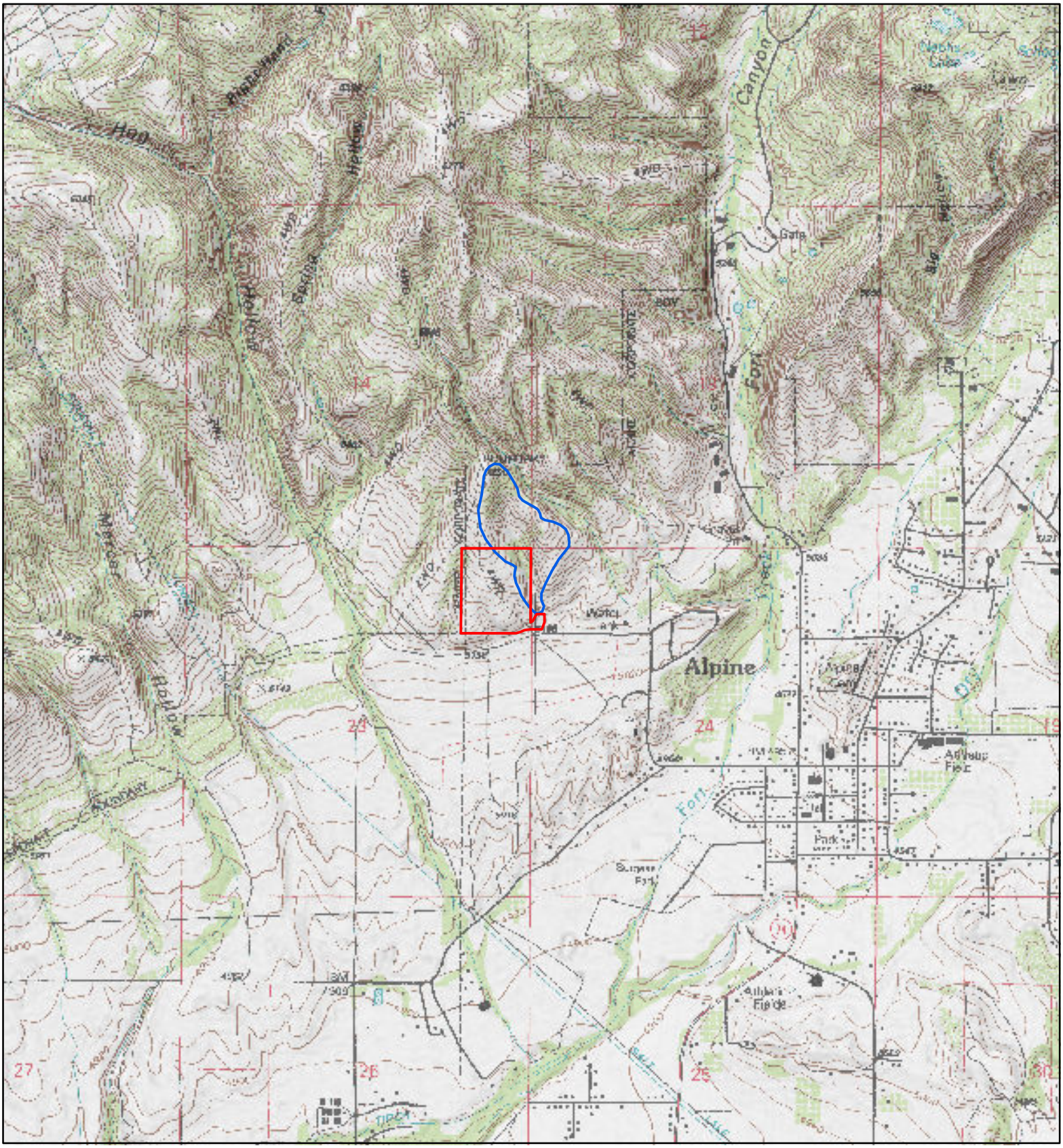
Debris Flow Assessment
Summit Pointe Subdivsion
Alpine, Utah
Project Number: 1312-006

Site Vicinity Map

Plate A-1



Legend

Approximate Site Boundary

0 625 1,250 2,500 3,750 5,000 Feet

1 inch = 2,000 feet

Basemap:
Lehi Quadrangle, Utah, 7.5-Minute Series (Topographic), USGS, 1998 and hillshades derived from DEMs provided by the State of Utah AGRC.

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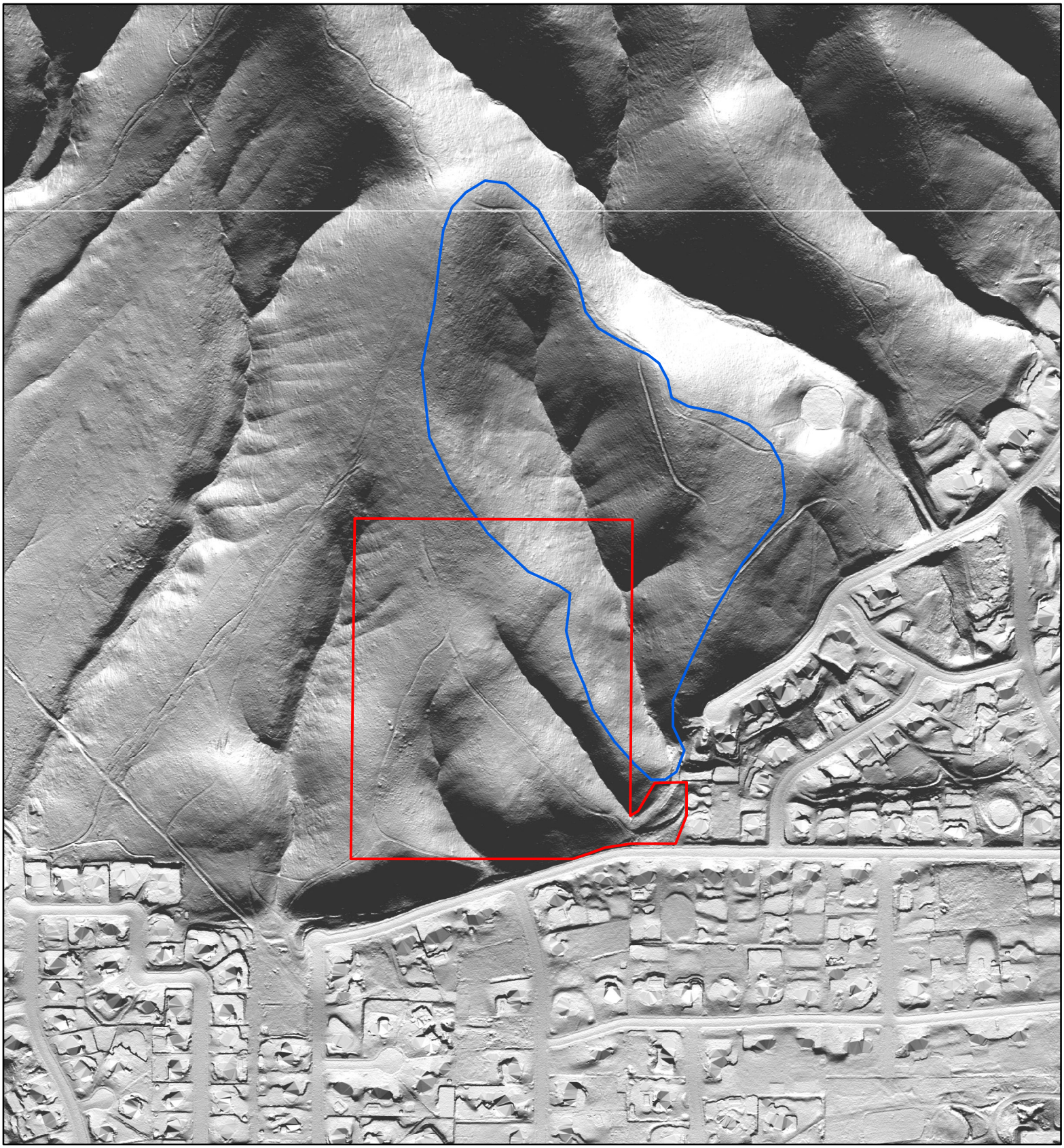
Debris Flow Assessment
Summit Pointe Subdivsion
Alpine, Utah
Project Number: 1312-006

Topographic Quadrangle

Plate A-2



Legend

- Approximate Site Boundary
- Unnamed Drainage Basin

0 155 310 620 930 1,240 Feet

1 inch = 500 feet

Basemap:
Hillshades derived from 2012-2013 0.5m lidar provided by the State of Utah AGRC.

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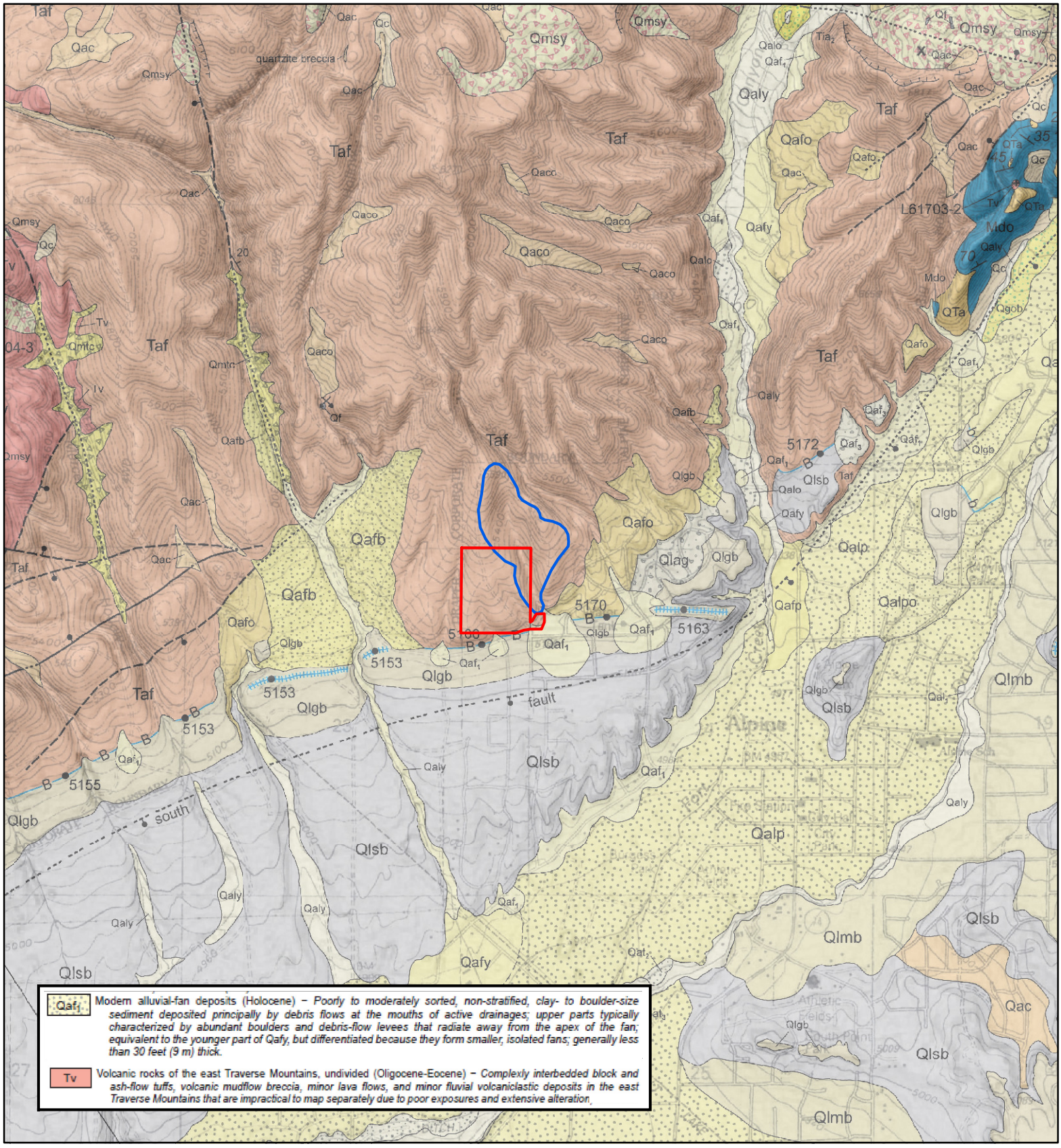
Debris Flow Assessment
Summit Pointe Subdivsion
Alpine, Utah
Project Number: 1312-006

Hillshade

Plate A-3



Legend

Approximate Site Boundary

0 625 1,250 2,500 3,750 5,000 Feet

1 inch = 2,000 feet

Basemap:
Geologic Map of the Lehi Quadrangle and Part of the Timpanogos Cave Quadrangle, Salt Lake and Utah Counties, Utah. Hillshades derived from DEMs provided by the State of Utah AGRC.

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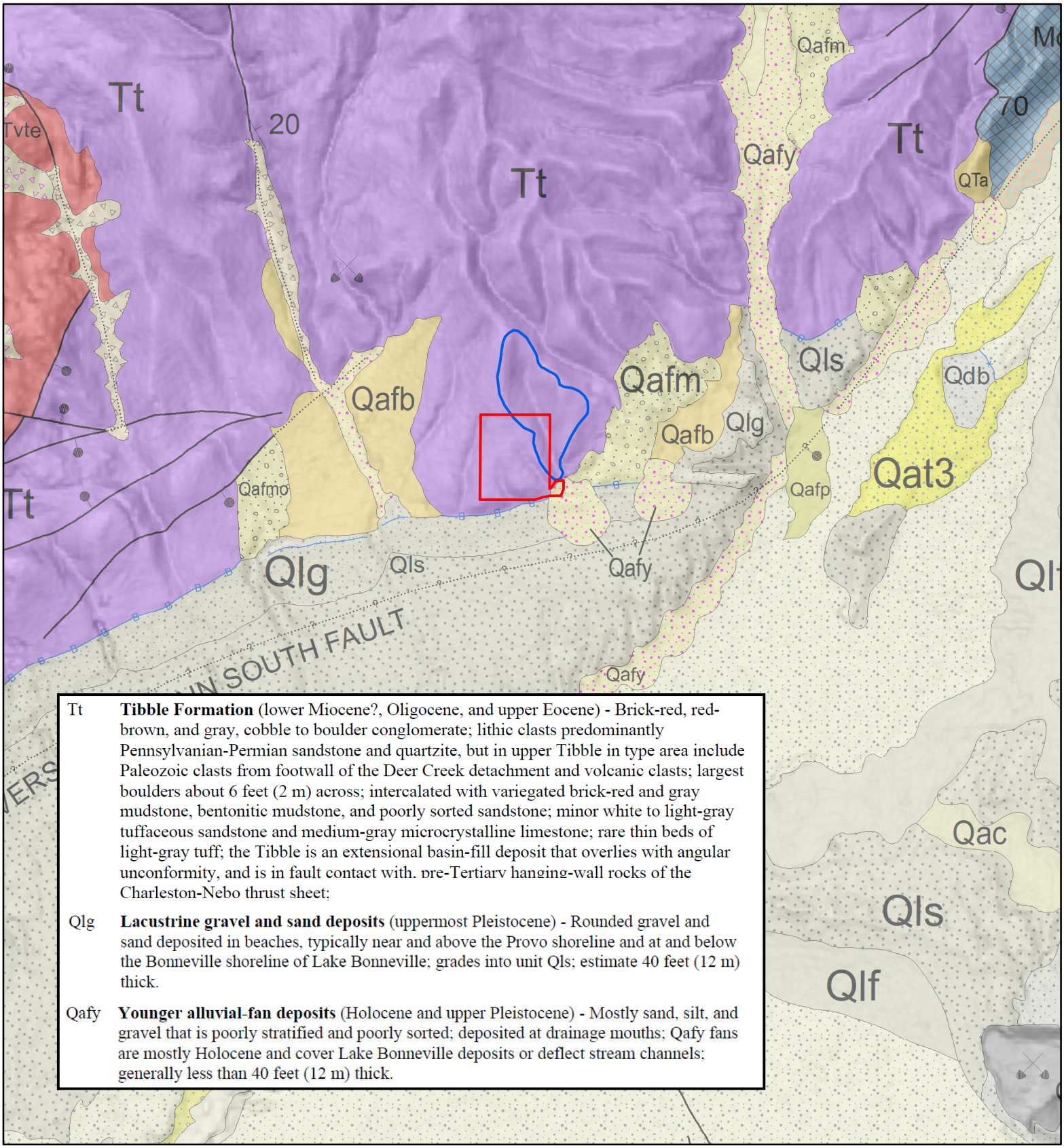
Debris Flow Assessment
Summit Pointe Subdivsion
Alpine, Utah
Project Number: 1312-006

Site Vicinity Geologic Map

Plate A-4



Tt	**Tibble Formation** (lower Miocene?, Oligocene, and upper Eocene) - Brick-red, red-brown, and gray, cobble to boulder conglomerate; lithic clasts predominantly Pennsylvanian-Permian sandstone and quartzite, but in upper Tibble in type area include Paleozoic clasts from footwall of the Deer Creek detachment and volcanic clasts; largest boulders about 6 feet (2 m) across; intercalated with variegated brick-red and gray mudstone, bentonitic mudstone, and poorly sorted sandstone; minor white to light-gray tuffaceous sandstone and medium-gray microcrystalline limestone; rare thin beds of light-gray tuff; the Tibble is an extensional basin-fill deposit that overlies with angular unconformity, and is in fault contact with, pre-Tertiary hanging-wall rocks of the Charleston-Nebo thrust sheet;
Qlg	**Lacustrine gravel and sand deposits** (uppermost Pleistocene) - Rounded gravel and sand deposited in beaches, typically near and above the Provo shoreline and at and below the Bonneville shoreline of Lake Bonneville; grades into unit Qls; estimate 40 feet (12 m) thick.
Qafy	**Younger alluvial-fan deposits** (Holocene and upper Pleistocene) - Mostly sand, silt, and gravel that is poorly stratified and poorly sorted; deposited at drainage mouths; Qafy fans are mostly Holocene and cover Lake Bonneville deposits or deflect stream channels; generally less than 40 feet (12 m) thick.

Legend

- Approximate Site Boundary
- Unnamed Drainage Basin

0 625 1,250 2,500 3,750 5,000 Feet

1 inch = 2,000 feet

Basemap:
Interim Geologic Map of the Provo 30' X 60' Quadrangle, Utah, Wasatch, and Salt Lake Counties, Utah. Hillshades derived from DEMs provided by the State of Utah AGRC.

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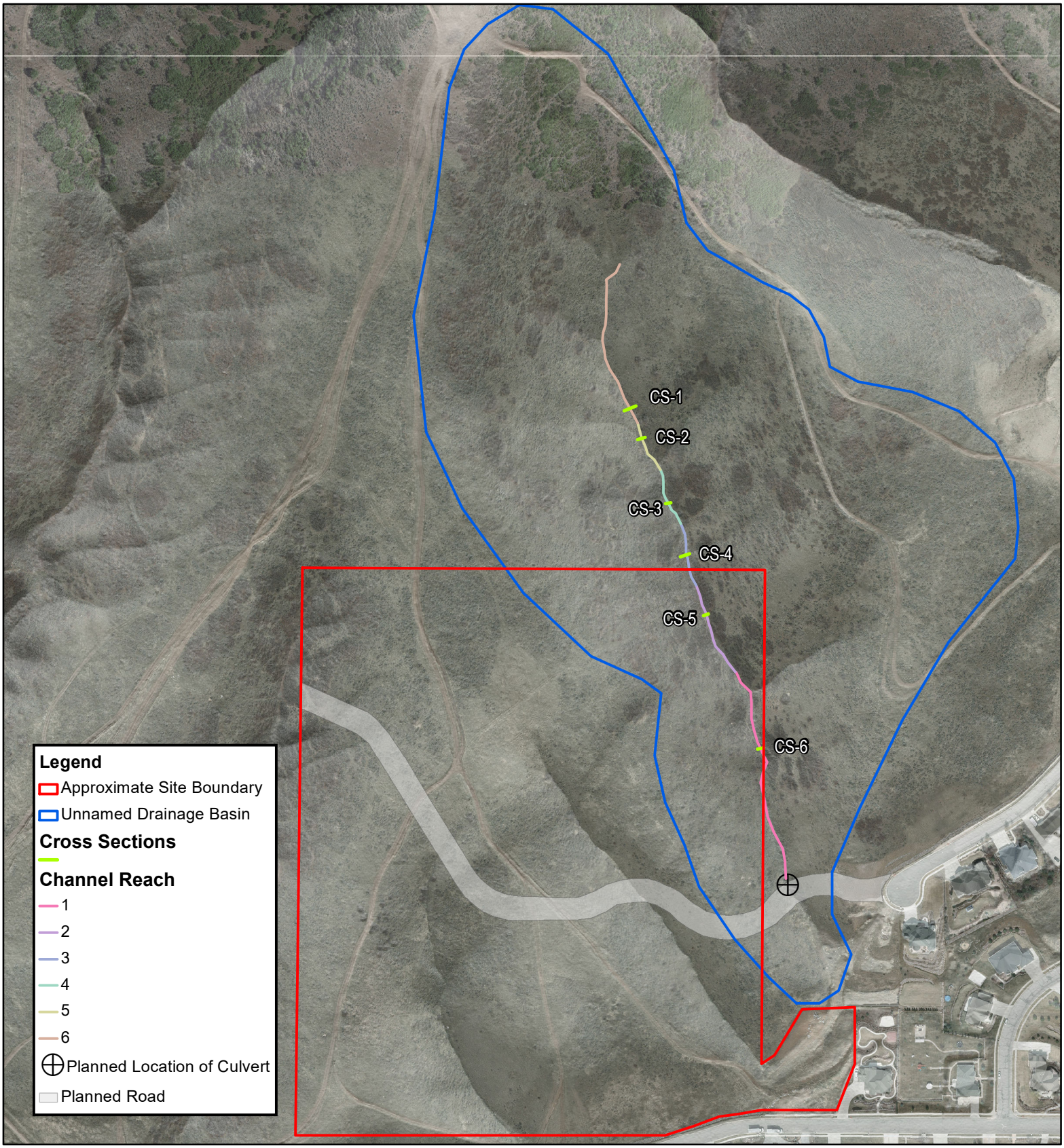
Debris Flow Assessment
Summit Pointe Subdivsion
Alpine, Utah
Project Number: 1312-006

Site Vicinity 30x60 Geologic Map

Plate A-5



0 95 190 380 570 760 Feet

1 inch = 300 feet

Basemap:
2012 12.5cm aerial imagery and hillshades derived from 2012-2013
0.5m lidar provided by the State of Utah AGRC.

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Debris Flow Assessment
Summit Pointe Subdivsion
Alpine, Utah
Project Number: 1312-006

Cross Sections & Channel Reaches

Plate A-6

0 125 250 500 750 1,000 Feet

1 inch = 400 feet

Basemap:
2012 12.5cm aerial imagery and hillshades derived from 2012-2013
0.5m lidar provided by the State of Utah AGRC.

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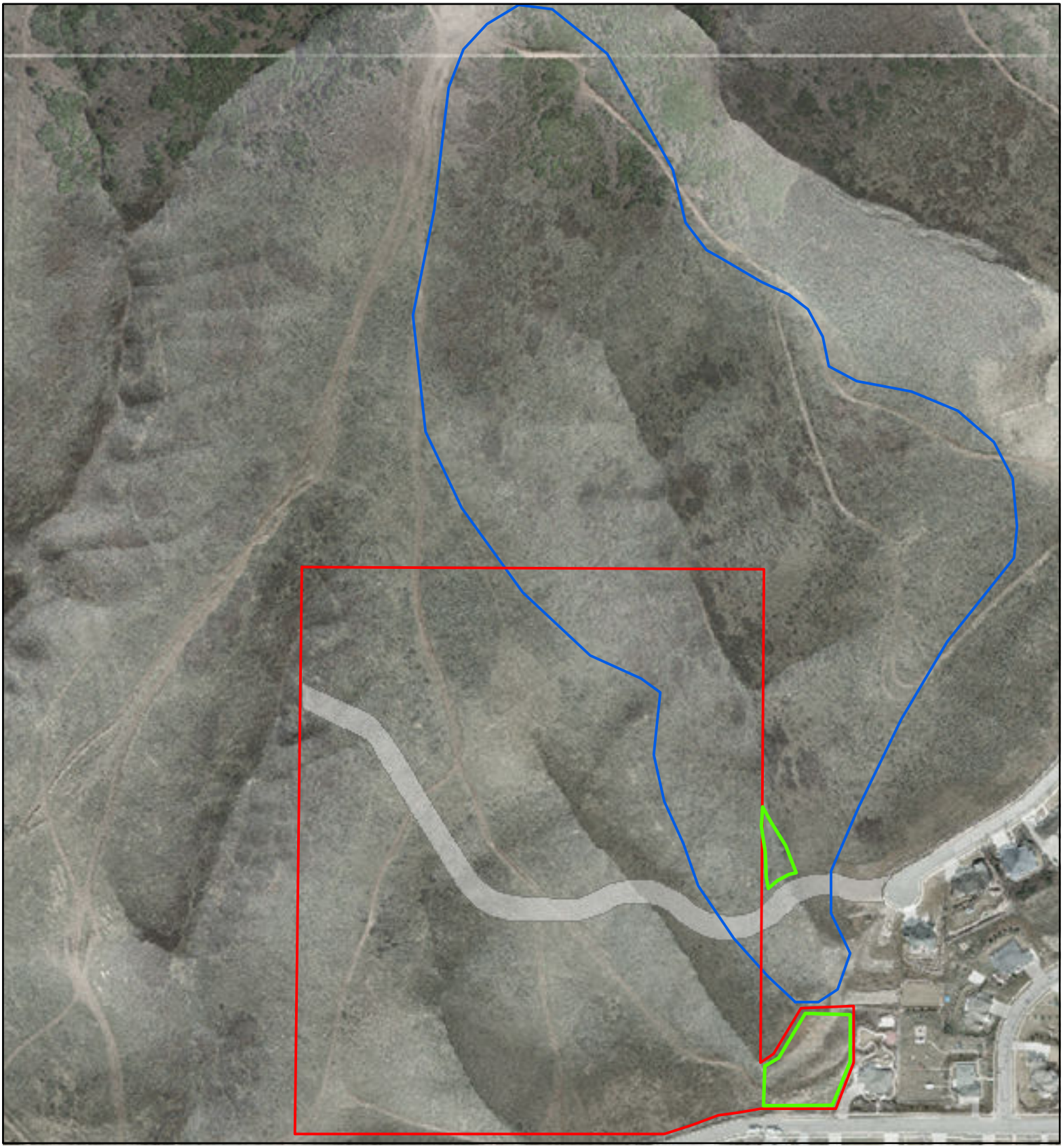
Debris Flow Assessment
Summit Pointe Subdivsion
Alpine, Utah
Project Number: 1312-006

Extent of Alluvial Fan

Plate A-7



Legend

- Approximate Site Boundary
- Unnamed Drainage Basin
- Planned Road
- Potential Debris Basins

0 625 1,250 2,500 3,750 5,000 Feet

1 inch = 2,000 feet

Basemap:
2012 12.5cm aerial imagery and hillshades derived from 2012-2013 0.5m lidar provided by the State of Utah AGRC.

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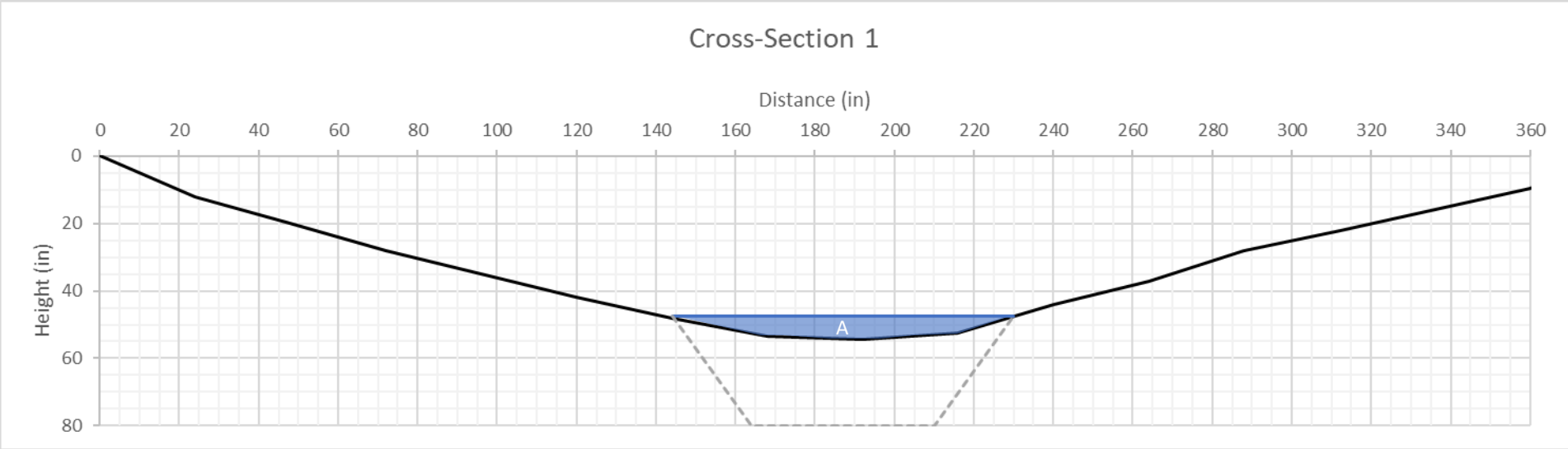
Debris Flow Assessment
Summit Pointe Subdivsion
Alpine, Utah
Project Number: 1312-006

Potential Debris Basin Location Map

Plate A-8

Appendix B



Area A (in²)	Area A (ft²)
432	3
Area of Trapazoid (in²)	**Area of Trapazoid (ft²)**
2194	15
Area of Erodible Sediment (in²)	**Area of Erodible Sediment (ft²)**
1762	12

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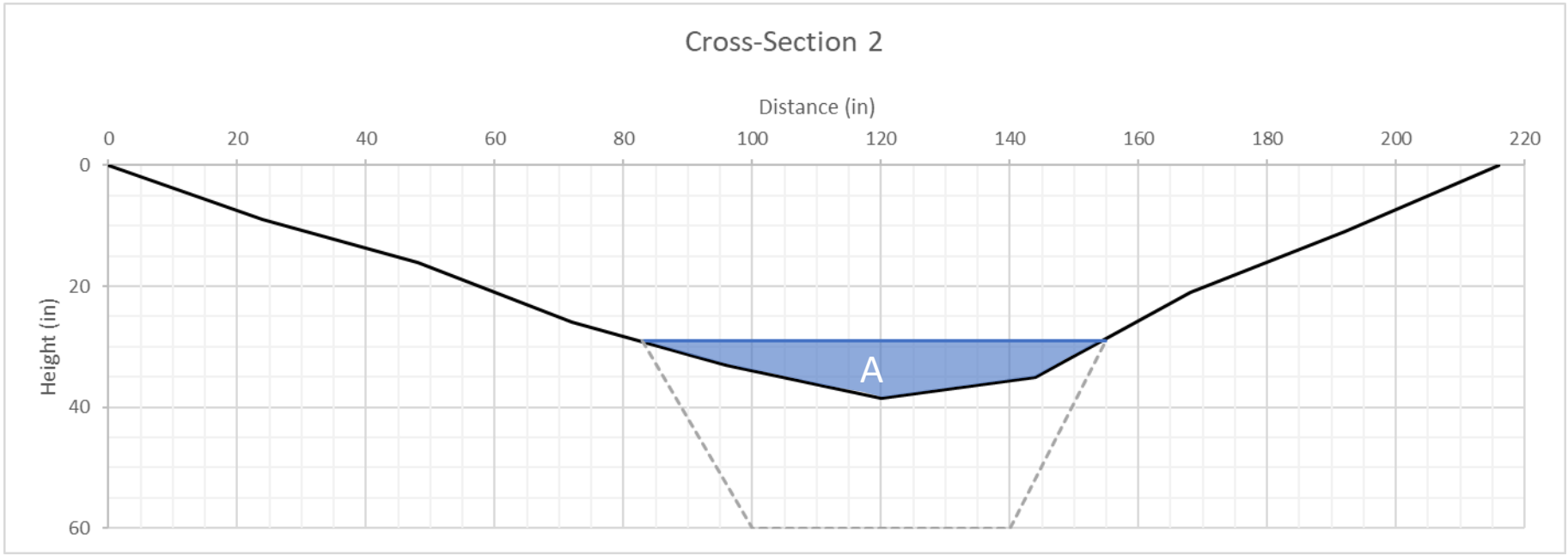

Area A (in^2)	Area A (ft^2)
432	3
Area of Trapazoid (in^2)	**Area of Trapazoid (ft^2)**
1763	12
Area of Erodible Sediment (in^2)	**Area of Erodible Sediment (ft^2)**
1331	9

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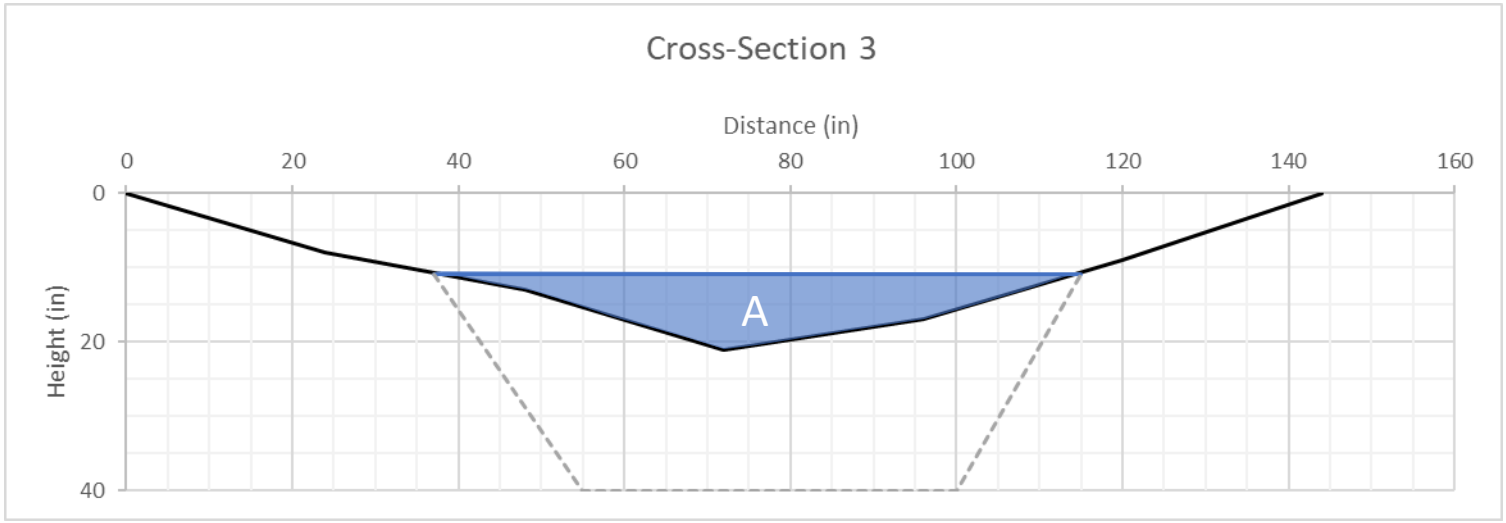

Area A (in^2)	Area A (ft^2)
432	3
Area of Trapazoid (in^2)	**Area of Trapazoid (ft^2)**
1838	13
Area of Erodible Sediment (in^2)	**Area of Erodible Sediment (ft^2)**
1406	10

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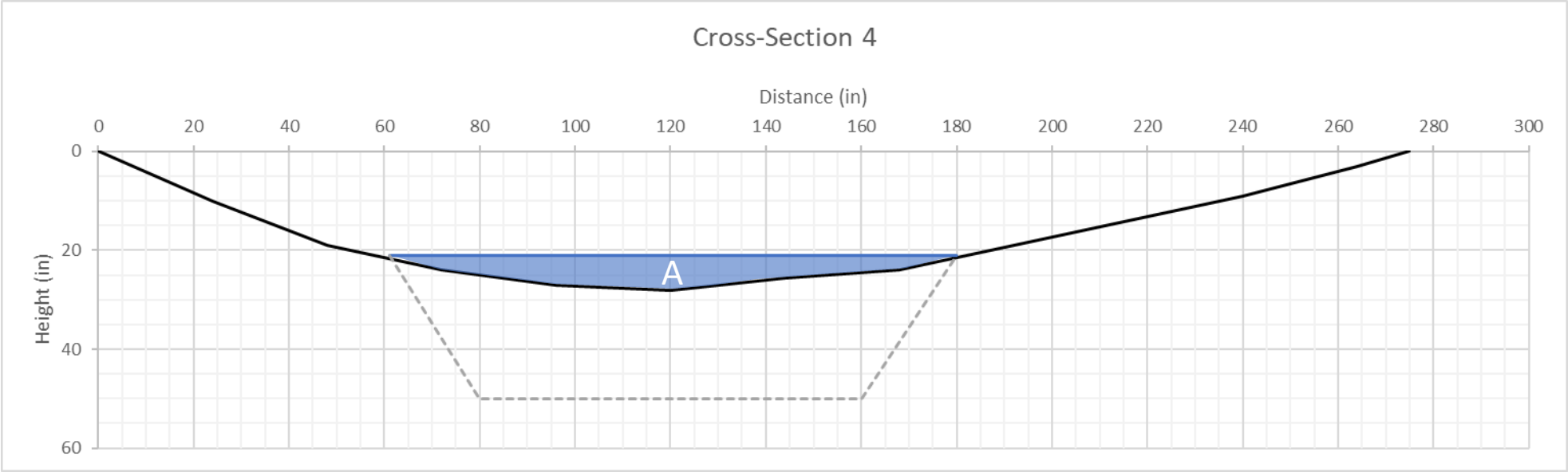

Area A (in^2)	Area A (ft^2)
432	3
Area of Trapazoid (in^2)	**Area of Trapazoid (ft^2)**
2925	20
Area of Erodible Sediment (in^2)	**Area of Erodible Sediment (ft^2)**
2493	17

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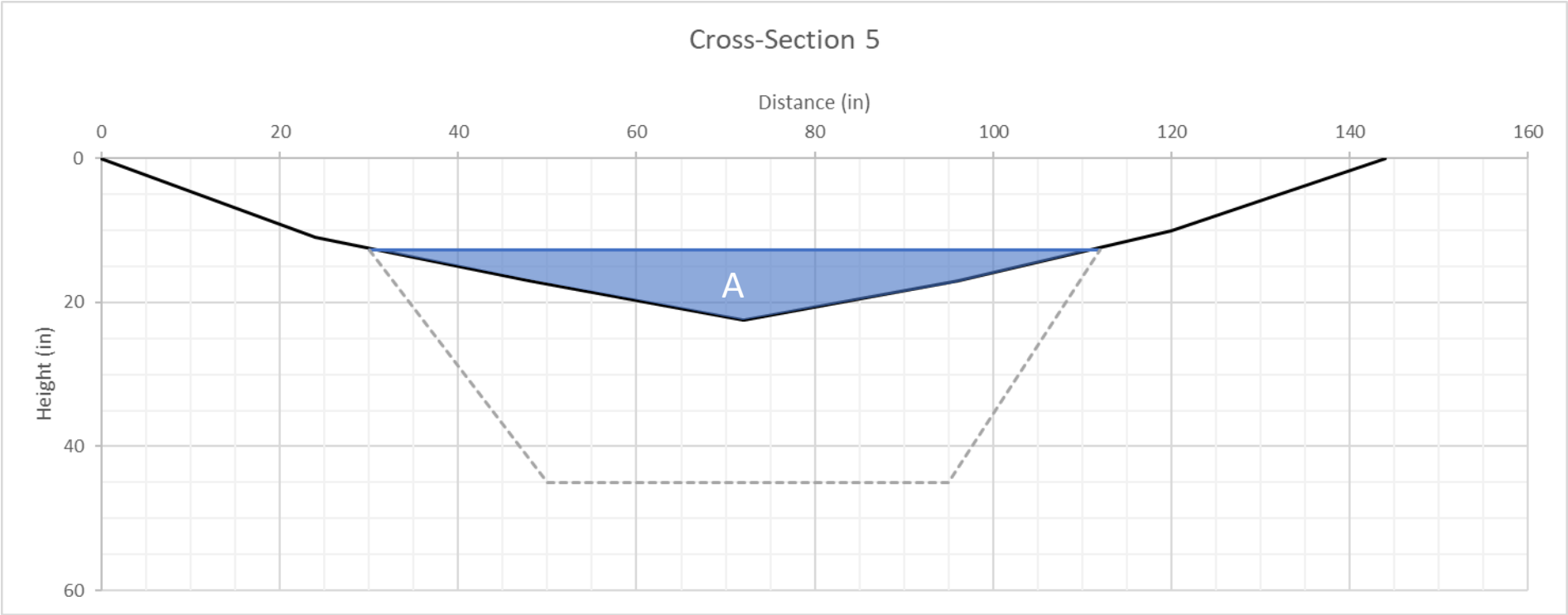

Area A (in^2)	Area A (ft^2)
432	3
Area of Trapazoid (in^2)	**Area of Trapazoid (ft^2)**
2031	14
Area of Erodible Sediment (in^2)	**Area of Erodible Sediment (ft^2)**
1599	11

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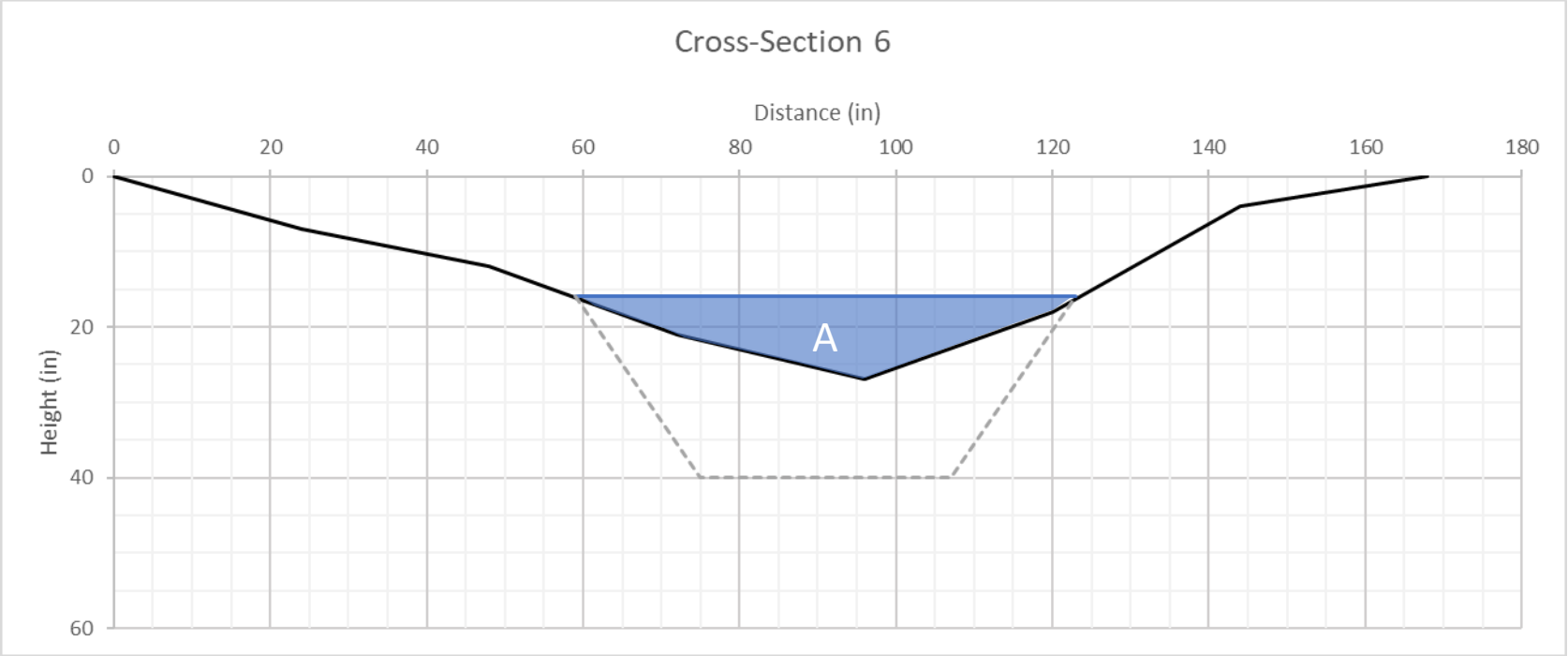

Area A (in^2)	Area A (ft^2)
432	3
Area of Trapazoid (in^2)	**Area of Trapazoid (ft^2)**
1188	8
Area of Erodible Sediment (in^2)	**Area of Erodible Sediment (ft^2)**
756	5

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Appendix C

Hydrology Study
Summit Pointe Subdivision
Alpine, UT
07/02/2019
Prepared by: Brian F. Campbell, P.E.

1. INTRODUCTION

Geostrata has asked ESI Engineering to analyze the hydrology for an area above the Summit Pointe subdivision. The study area is a small canyon where storm water collects and has potential for storm runoff. There is not a natural flowing stream with constant flow in the drainage area but there is evidence that storm water has collected and flowed through this area in past storm events. This study area is approximately 30 acres of typical soils, grasses and sagebrush commonly found in the foothills of the Wasatch Front. This study provides the Peak Flow and Peak Time as generated by WinTR-55 which is the information requested by Geostrata to perform their debris flow analysis.

WinTR-55 is a single event rainfall-runoff small watershed model. It was developed by the United States Department of Agriculture and the Natural Resources Conservation Service. The model applies to both urban and agricultural areas generating hydrographs from land areas and at selected points along the stream system. WinTR-55 was selected as the program to model this area because it is specifically used for small watershed modeling and is efficient in producing the requested information for this size of drainage area.

2. LAND USE DETAILS

2.1 Introduction

The WinTR-55 computer program uses the NRCS National Engineering Handbook Chapters 8 & 9 for ground cover descriptions and soil conditions based on the SCS definitions in the Land Use Summary Table. Land Use Categories are chosen. Hydrologic Soil Groups are chosen and acreage of each type of soil group is provided. The land use category chosen for this area was Urban. The cover description was chosen for arid and semiarid rangelands and classified as oak, aspen and grasses.

2.2 Initial Losses

Initial losses are highly dependent on soil condition. Initial losses are defined as the combination of interception, depression storage, and initial infiltration losses. Initial infiltration losses are losses resulting from infiltration rates in dry soils having greater values at the beginning of rainfall and eventually declining to saturated hydraulic conductivity values. Initial losses for pervious areas can be quite high under natural conditions when the soil is dry.

2.3 Soil Classifications

According to the SCS classification for soils this area was classified as a soil type B. Soil Group B is classified as moderately fine to moderately coarse texture soils with moderate infiltration rates.

2.4 Weighted Curve Number (CN)

Given the soils type, the acreage of each soil type, and the Land Use, a weighted curve number (CN) values is generated. The CN value for this area is 66.

3. TIME OF CONCENTRATION

3.1 Introduction

The Time of Concentration Details window is used to compute the Time of Concentration for the sub-areas within the watershed. Time of Concentration is the time it takes water to exit the watershed or drainage area.
Shallow concentrated flow travel time is determined using Manning's equation in a relationship where average velocity is a function of watercourse slope and estimated values for the type of channel, paved or unpaved.
This area was classified as Shallow Concentrated flow. Most of the flow from the drainage area is concentrated into a shallow channel located in the bottom of the draw. The slope of this channel is 12% unpaved surface. The length of the channel is 1530 linear feet. WinTR-55 calculated a time of concentration for this area of 0.076 hours. This number is too small and was replaced with a time of concentration of 0.1 hours for calculations. The velocity of this flow is 5.6 feet per second.

4. PRECIPITATION

4.1 Storm Characteristics

Utah County experiences flood-producing rainfall during the May through September cloudburst (severe thunderstorms) season. Most cloudbursts are produced by solar convective heating of moist air masses originating from the Gulf of Mexico. The largest cloudbursts are caused by the interaction of cold fronts approaching from the northwest and tropical moist air masses from the south. The duration of flood runoff producing high-intensity rain is typically 30 to 40 minutes, with total storm duration less than 3 hours. A very rare prolonged (up to 3 days), high-intensity, general rainstorm is caused by slow-moving tropical remnants of hurricanes from the Pacific interacting with approaching frontal systems or troughs. This longer storm provides design runoff volumes for durations greater than 3 hours.

The largest cloudbursts have historically occurred on the Lake Bonneville benches, between Interstate 15 and the 5,000-foot elevation contour to the east. This area of the largest cloudbursts appears to be caused by the orographic convergence of moist air masses, from the south, against the Wasatch foothills. Cloudbursts in the Wasatch foothills and mountains above 5,000 foot are more frequent, but less intense, than bench events, since there is less low-level moisture available for their growth.

4.2 Design Storms

Simulated precipitation is applied to a drainage area to obtain a design runoff hydrograph. The variability of precipitation depth and the temporal and areal distribution occurring in nature require that a statistical approach, a design storm, be used to represent this precipitation. Design storms are a distribution of rainfall depths or intensities over a time increment for a given storm duration

and frequency. The following are elements of a design storm:

- Precipitation depth: the amount of precipitation occurring during a specified storm duration. The depths of rainfall are statistical depths obtained by studying historical precipitation data to find the depth for each duration for a particular frequency. Precipitation depth is usually expressed in inches.
- Duration: the specified length of storm time under study. Duration of a design storm event should be at least four times the response time of the basin. The response time is the time required for the flow peak to reach the point of interest, such as a structure, outlet or spillway. Duration may be expressed in any time unit such as minutes, hours, or days.
- Frequency: the frequency of occurrence of events with the specified precipitation depth and duration. This is expressed in terms of the return period. In order to provide a reasonable level of flood protection, the statistical concept of return period or recurrence interval is utilized to assist in assigning a probabilistic meaning to a precipitation event.

4.3 Depth-Duration-Frequency Analysis

Given a long history of maximum rainfall intensities for varying durations, a reasonable statistical interpretation can be made of the data to determine estimates of rainfall intensities or depths as a function of storm duration and of return frequency. Design storms for this report were based on Depth-Duration-Frequency (DDF) statistics from the NOAA Atlas 14 Volume 1 Version 5 at this specific location and the canyons elevation. See attached table.

4.4 Constructing a Design Storm

WinTR-55 can generate design storms for 1-, 2-, 5-, 10-, 25-, 50-, and 100-year recurrence intervals for durations of and hour storm once the storm information is input into the program. A 24 hour storm was selected for this model with the 100-year recurrence.

5 RESULTS AND FINDINGS

5.1 Unit Hydrograph

With the information noted above added to WinTR-55 the program is now able to compute the unit hydrograph. Below is the hydrograph for the Summit Pointe Area for the 100-yr Storm.

From the hydrograph we see that the peak flow is 17.71 cfs and occurs at hour 12.02 of the storm.

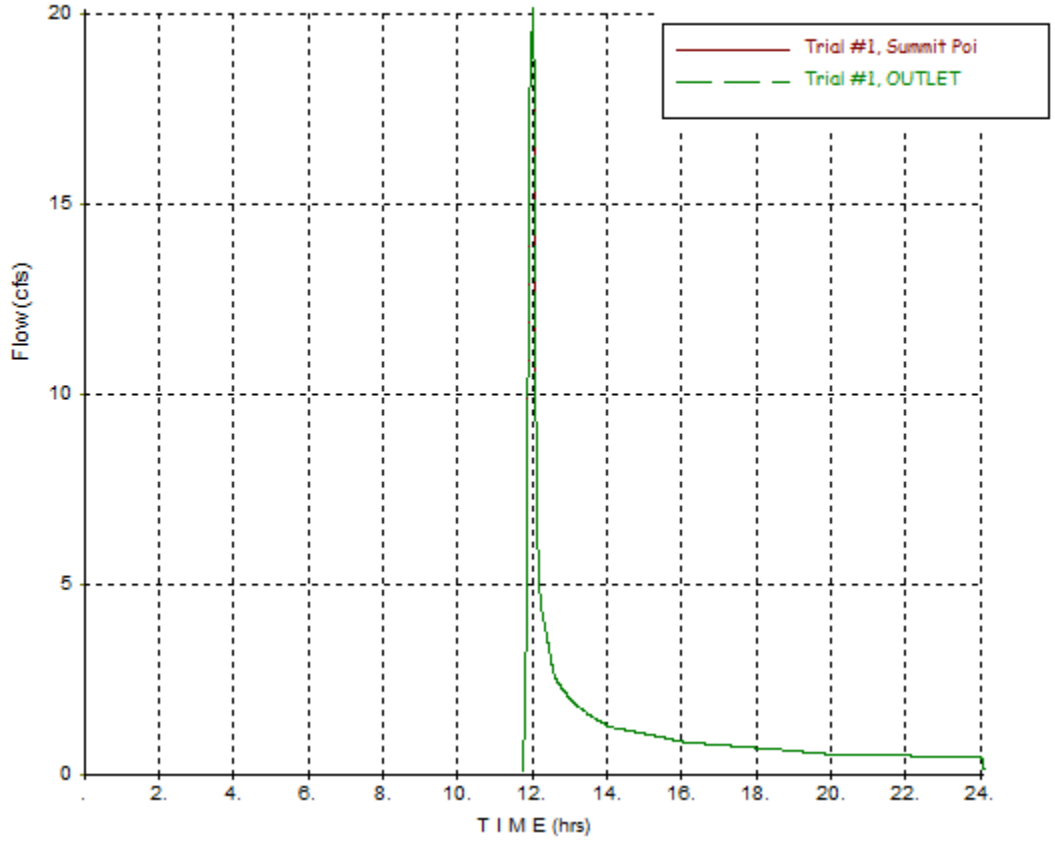
WinTR-55 Output Hydrograph

Project: Summit Pointe

7/15/2019

Subareas: (Summit Poi, Outlet) Storm: 100-Yr

J:\19-081\Documents\Summit Pointe - 2.w55



BFC **Summit Pointe**

Salt Lake County, Utah

Hydrograph Peak/Peak Time Table

Sub-Area or Reach Identifier	Peak Flow and Peak Time (hr) by Rainfall Return Period ANALYSIS: (cfs) (hr)
SUBAREAS	
Summit Poi	17.71
	12.02
REACHES	
OUTLET	17.71

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Geotechnical Investigation
Summit Pointe Subdivision
Alpine, Utah

GeoStrata Job No. 1312-003

October 8, 2018

Prepared for:

Six Blue Bison, LLC
12543 Andreas Street
Riverton, UT

Attention: Mr. Jake Satterfield

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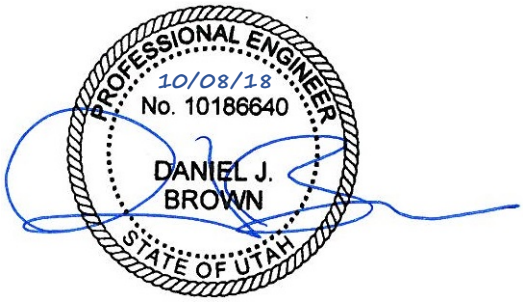
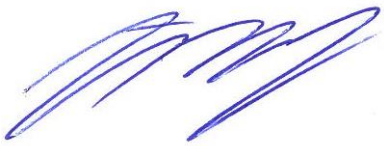


Daniel Brown, P.E.
Senior Geotechnical Engineer



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October 8, 2018

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APPENDICES

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1.0 EXECUTIVE SUMMARY

This report presents the results of a geotechnical investigation conducted for the proposed Summit Pointe Subdivision to be located at approximately 812 W Lakeview Drive in Alpine, Utah. A previous geotechnical investigation had been completed for the subject property by Earthtec Testing and Engineering in a report titled "Geotechnical Study, Summit Hills Development & Lakeview Drive Extension, Alpine, Utah" and dated August 18, 2005 (Earthtec Job No. 051709). Based on information provided from the client as well as in the plans for the proposed development titled "Summit Pointe Amended Subdivision" prepared by S.E. Science, LLC and dated August 8, 2018. Due to modifications in the planned layout of the subdivision, and the fact that the locations of test pits and boreholes completed in the Earthtec geotechnical report do not provide full coverage of the site, an updated geotechnical investigation was performed for the proposed development. The purposes of this investigation were to assess the nature and engineering properties of the subsurface soils at the proposed site and to provide recommendations for general site grading and the design and construction of foundations and slabs-on-grade, and exterior concrete flatwork.

Based on the results of our analysis, it is our opinion that the site is suitable for the proposed development provided that the recommendations contained in this report are incorporated into the design and construction of the project.

Subsurface conditions were investigated through the excavation of 4 test pits to depths ranging from 10 to 11 feet below the existing site grade. Based on our observations and geologic literature review, the subject area is overlain by approximately 1 foot of topsoil comprised of silt, sand, clay and gravel. Underlying the topsoil, we encountered Tertiary-age Alluvial Fan Deposits and Pleistocene-aged Alluvial Fan Deposits. These deposits persisted to the full depth of our test pit excavations. Groundwater was not encountered at the site grade as it existed at the time of our investigation.

The foundations for the proposed structure may consist of conventional strip and/or spread footings founded on undisturbed native soil. Foundation elements founded in such a manner may be proportioned for a maximum net allowable bearing capacity of **1,500 psf**. We recommend that GeoStrata observe all foundation soils in footing excavations prior to placing reinforcing steel or concrete.

NOTE: This executive summary is not intended to replace the report of which it is part and should not be used separately from the report. The executive summary omits a number of details, any one of which could be crucial to the proper application of this report.

2.0 INTRODUCTION

2.1 PURPOSE AND SCOPE OF WORK

This report presents the results of a preliminary geotechnical investigation conducted for the proposed Summit Pointe Subdivision to be located at approximately 812 West Lakeview Drive in Alpine, Utah. The purposes of this investigation were to assess the nature and engineering properties of the subsurface soils at the proposed site. A previous geotechnical investigation had been completed for the subject property by Earthtec Testing and Engineering in a report titled "Geotechnical Study, Summit Hills Development & Lakeview Drive Extension, Alpine, Utah" and dated August 18, 2005 (Earthtec Job No. 051709). Pertinent information from that report has been incorporated into our investigation. Our understanding of the project is based on information provided by the client, as well as in the plans for the proposed development titled "Summit Pointe Amended Subdivision" prepared by S.E. Science, LLC and dated August 8, 2018. Due to modifications in the planned layout of the subdivision, and the fact that the locations of test pits and boreholes completed in the Earthtec geotechnical report do not provide full coverage of the site, an updated geotechnical investigation was performed for the proposed development. Structures are anticipated to consist of one- to two-story wood-framed structures with basements founded on conventional spread or strip footings. We anticipate footing loads on the order of 3 kips per lineal foot. Our investigation for the development will be used to provide geotechnical design parameters for construction of buildings, pavements, and associated infrastructure and to assess proposed cuts and fills for construction of the proposed roadway.

The scope of work completed for this study included a site reconnaissance, subsurface exploration, soil sampling, laboratory testing, engineering analyses, and preparation of this report. Our services were performed in accordance with our proposal and signed authorization, dated August 29, 2018. GeoStrata is concurrently completing a geologic hazards assessment for the subject lot, the results of which may be found in a separate report.

The recommendations contained in this report are subject to the limitations presented in the "Limitations" section of this report.

2.2 PROJECT DESCRIPTION

The Summit Pointe Subdivision is located in Alpine, Utah between Hog Hollow and Fort Canyon on the south flank of the Traverse Mountains in Alpine, Utah (see *Site Vicinity Map* Plate A-1). We understand that the proposed subdivision will consist of 8 residential lots with associated roadways and utilities located on approximately 30 acres.

3.0 METHOD OF STUDY

3.1 SUBSURFACE INVESTIGATION

As part of this investigation, subsurface soil conditions were explored by excavating 4 exploratory test pits to depths ranging from 10 to 11 feet below the site grade as it existed at the time of our investigation. The approximate locations of the explorations are shown on the Exploration Location Map, Plate A-2 in Appendix A. Exploration points were selected to provide a representative cross section of the subsurface soil conditions in the anticipated vicinity of the proposed structures. Subsurface soil conditions as encountered in the explorations were logged at the time of our investigation by a qualified field geologist and are presented on the enclosed Test Pit Logs, Plates B-1 through B-4 in Appendix B. A Key to USCS Soil Symbols and Terminology is presented on Plate B-5.

The test pits were advanced using a trackhoe. Both relatively undisturbed and bulk soil samples were obtained in each of the test pit explorations. Bulk soil samples were obtained in each of the explorations and placed in bags and buckets. Undisturbed soil samples were collected where feasible as block samples. All samples were transported to our laboratory for testing to evaluate engineering properties of the various earth materials observed. The soils were classified according to the *Unified Soil Classification System* (USCS) by the field personnel. Classifications for the individual soil units are shown on the attached Test Pit Logs.

3.2 LABORATORY INVESTIGATION

Geotechnical laboratory tests were conducted on samples obtained during our field investigation. The laboratory testing program was designed to evaluate the engineering characteristics of onsite earth materials. Laboratory tests conducted during this investigation include:

- Percent of Fines by Washing (ASTM D1140)
- Grain-Size Distribution Test (ASTM D6913)
- Atterberg Limits Test (ASTM D4318)
- Direct Shear Test (ASTM D3080)

The results of laboratory tests are presented on the Test Pit Logs in Appendix B (Plates B-1 to B-4), the Laboratory Summary Table and the test result plates presented in Appendix C (Plates C-1 to C-6).

3.3 ENGINEERING ANALYSIS

Engineering analyses were performed using soil data obtained from the laboratory test results and empirical correlations from material density, depositional characteristics and classification. Appropriate factors of safety were applied to the results consistent with industry standards and the accepted standard of care.

3.4 REVIEW OF PREVIOUS INVESTIGATION

As part of our study we completed a review of a previously completed geotechnical investigation performed for the subject property. The report was prepared by Earthtec Testing & Engineering, P.C. and is titled “Geotechnical Study, Summit Hills Development & Lakeview Drive Extension, Alpine, Utah” dated August 18, 2005 (Earthtec Job No.: 051709).

4.0 GENERALIZED SITE CONDITIONS

4.1 SURFACE CONDITIONS

The Summit Pointe Subdivision is located in Alpine, Utah is located between Hog Hollow and Fort Canyon on the south flank of the Traverse Mountains in Alpine, Utah as shown on the Site Vicinity Map (Plate A-1). The study site is vegetated with scrub oak and sagebrush and is located at an elevation ranging from 5,380 to 5,200 feet above mean sea level (MSL). Hog Hollow and Fort Canyon are generally north-south trending canyons with small ephemeral streams at the base. The Hog Hollow fault trends along the bottom of Hog Hollow (Machette, 1992; Biek, 2005).

4.2 SUBSURFACE CONDITIONS

As mentioned previously, the subsurface soil conditions were explored at the site by excavating 4 test pits at the subject site to depths ranging from 10 to 11 feet below the existing grade. The soils encountered in the test pit explorations were visually classified and logged during our field investigation and are included on the Test Pit Logs in Appendix B (Plates B-1 to B-4). The subsurface conditions encountered during our investigation are discussed below.

4.2.1 Soils

Based on our observations and geologic literature review, the subject property is overlain by approximately 1 foot of topsoil comprised of silt, sand, clay and gravel. Underlying the topsoil, we encountered Tertiary-age Alluvial Fan Deposits and Pleistocene-aged Alluvial Fan Deposits.

Topsoil: Where observed these soils consisted of medium to dark brown, dense, moist Silty SAND (SM) with gravel. These soils contained an organic appearance. It is considered likely that topsoil will be encountered across the majority of the site.

Tertiary-age Alluvial Fan Deposits (Taf): Where observed, these soils consisted of dense, tannish brown, moist, Silty GRAVEL (GM) with sand and cobbles, dense, red brown, moist Poorly Graded GRAVEL (GP) and Poorly Graded SAND (SP) with subrounded to subangular cobbles up to 6 inches in diameter and lastly, dense, whitish brown to reddish tan, moist Silty SAND (SM) with varying amounts of gravel and cobbles.

Pleistocene-age Alluvial and Alluvial Fan Deposits (Qafb, Qaly): Where observed, these soils consisted of stiff to hard, moist, dark red-brown Lean CLAY (CL) with varying amounts of sand.

The stratification lines shown on the enclosed test pit logs represent the approximate boundary between soil types. The actual in-situ transition may be gradual. Due to the nature and depositional characteristics of the native soils, care should be taken in interpolating subsurface conditions between and beyond the exploration locations.

4.2.2 Groundwater Conditions

Groundwater was not encountered in any of the explorations completed for this investigation and is not expected to impact the development. Due to the season of our investigation (late summer), we anticipate groundwater levels to be near their seasonal average. It is our experience that during snowmelt, runoff, irrigation on the property and surrounding properties, high precipitation events, and other activities, the groundwater level can rise several feet. Fluctuations in the groundwater level should be expected over time.

5.0 GEOLOGIC CONDITIONS

5.1 GEOLOGIC SETTING

As mentioned previously, GeoStrata is concurrently completing a geologic hazards potential assessment of the subject property. Information concerning the geologic nature of the subject property may be found in that report.

5.2 SEISMICITY AND FAULTING

The site lies within the north-south trending belt of seismicity known as the Intermountain Seismic Belt (ISB) (Hecker, 1993). The ISB extends from northwestern Montana through southwestern Utah. An active fault is defined as a fault that has had activity within the Holocene (<11ka). No active faults are mapped through or immediately adjacent to the site (Black et. al, 2003, Hecker, 1993). The site is located approximately 2 miles west of the nearest mapped section of the Provo segment of the Wasatch Fault Zone, which is mapped along the western flank of the Wasatch Mountains. The Provo segment is one of the longest sections of the Wasatch Fault Zone (Hecker, 1993) and is estimated to be approximately 43 miles long with a reported rupture length of 37 miles and a maximum potential to produce earthquakes up to magnitude (Ms) 7.5 to 7.7 (Black et al, 2003). The site is also located approximately 9 miles northeast of the nearest mapped portion of the Utah Lake Faults and Folds (ULFF). The ULFF consists of several northeast to northwest trending faults and folds located beneath Utah Lake and are reported to have been active in the past 15 ka (Black et al, 2003). However, since the ULFF is at the bottom of a large lake these faults are poorly understood – as such, the USGS does not include ULFF in their fault database for seismic hazard analysis. Finally, the site is located approximately 26 miles east of the nearest mapped segment of the Southern Oquirrh Mountains fault zone. The Oquirrh Fault Zone consists of a normal fault located along the western base of the Oquirrh Mountains in the eastern Tooele Valley. This fault was reportedly last active approximately 4,300 and 6,900 years ago and appears to be seismically independent of the Wasatch Fault Zone (Black and others, 2004). Analysis of the ground shaking hazard along the Wasatch Front suggests that the Wasatch Fault Zone is the single greatest contributor to the seismic hazard in the Utah Valley region. Each of the faults listed above show evidence of Holocene-aged movement and are therefore considered active.

Seismic hazard maps depicting probabilistic ground motions and spectral response have been developed for the United States by the U.S. Geological Survey as part of NEHRP/NSHMP (Frankel et al, 1996). These maps have been incorporated into both *NEHRP Recommended Provisions for Seismic Regulations for New Buildings and Other Structures* (FEMA, 1997) and the *International Building Code* (IBC) (International Code Council, 2015). Spectral responses for the Maximum Considered Earthquake (MCE_R) are shown in the table below. These values generally correspond to a two percent probability of exceedance in 50 years (2PE50) for a "firm rock" site. To account for site effects, site coefficients which vary with the magnitude of spectral acceleration are used. Based on our field and office investigations, it is our opinion that this location is best described as a Site Class C for a "very dense soil and soft rock" site. The spectral accelerations are shown in the table below. The spectral accelerations are calculated based on the site's approximate latitude and longitude of 40.4611° and -111.7931° respectively and the USGS U.S. Seismic Design Maps web-based tool. Based on the 2015 IBC, the site coefficients are F_a=1.00 and F_v=1.34. From this procedure the peak ground acceleration (PGA) is estimated to be 0.51g.

MCE_R Seismic Response Spectrum Spectral Acceleration Values for IBC Site Class C[a]

Site Location: **Latitude = 40.4611 N** **Longitude = -111.7931 W**	**Site Class C Site Coefficients:** **Fa = 1.00** **Fv = 1.34**
Spectral Period (sec)	**Response Spectrum Spectral Acceleration (g)**
0.2	$\mathbf{S_{MS}}=(F_a*S_s=1.00*1.26) = 1.26$
1.0	$\mathbf{S_{M1}}=(F_v*S_1=1.34*0.46) = 0.62$

[a] IBC 1613.3.4 recommends scaling the MCE_R values by 2/3 to obtain the design spectral response acceleration values; values reported in the table above have not been reduced.

6.0 CONCLUSIONS & RECOMMENDATIONS

6.1 GENERAL CONCLUSIONS

Supporting data upon which the following recommendations are based have been presented in the previous sections of this report. The recommendations presented herein are governed by the physical properties of the earth materials encountered and tested as part of our subsurface exploration and the anticipated design data discussed in the **PROJECT DESCRIPTION** section. If subsurface conditions other than those described herein are encountered in conjunction with construction, and/or if design and layout changes are initiated, GeoStrata must be informed so that our recommendations can be reviewed and revised as changes or conditions may require.

6.2 EARTHWORK

Prior to the placement of foundations, concrete flatwork, and pavements, general site grading is recommended to provide proper support for foundations, exterior concrete flatwork, concrete slabs-on-grade, and pavements. Site grading is also recommended to provide proper drainage and moisture control on the subject property and to aid in preventing differential settlement of foundations as a result of variations in subgrade moisture conditions.

6.2.1 General Site Preparation and Grading

Within areas to be graded (below proposed structures, fill sections, concrete flatwork, or pavement sections), all vegetation, topsoil, potentially expansive soils, debris, and undocumented fill (if encountered) should be removed. Any existing utilities should be re-routed or protected in place. Tree roots are anticipated and should be grubbed-out and replaced with engineered fill. Any soft, loose, disturbed or undocumented fill soils should also be removed. Following the removal of vegetation, unsuitable soils, and loose or disturbed soils, as described above, site grading may be conducted to bring the site to design elevations.

6.2.2 Excavations

Unsuitable soils that include loose or expansive soils, undocumented fill or otherwise deleterious soils beneath foundations should be removed and replaced with structural fill. If over-excavation is required, the excavation should extend a minimum of one foot laterally for every foot of depth

of over-excavation. Excavations should extend laterally at least two feet beyond flatwork, pavements, and slabs-on-grade. If materials are encountered that are not represented in the test pit logs or may present a concern, GeoStrata should be notified so observations and further recommendations as required can be made.

6.2.3 Excavation Stability

Based on Occupational Safety and Health Administration (OSHA) guidelines for excavation safety, trenches with vertical walls up to 4 feet in depth may be occupied, however, the presence of fill soils, loose soils, or wet soils may require that the walls be flattened to maintain safe working conditions. When the trench is deeper than 4 feet, we recommend a trench-shield or shoring be used as a protective system to workers in the trench. Based on our soil observations, laboratory testing, and OSHA guidelines, native soils at the site classify as Type C soils. Deeper excavations, if required, should be constructed with side slopes no steeper than one and one-half horizontal to one vertical (1.5H:1V). If wet conditions are encountered, side slopes should be further flattened to maintain slope stability. Alternatively shoring or trench boxes may be used to improve safe work conditions in trenches. The contractor is ultimately responsible for trench and site safety. Pertinent OSHA requirements should be met to provide a safe work environment. If site specific conditions arise that require engineering analysis in accordance with OSHA regulations, GeoStrata can respond and provide recommendations as needed.

We recommend that a GeoStrata representative be on-site during all excavations to assess the exposed foundation soils. We also recommend that the Geotechnical Engineer be allowed to review the grading plans when they are prepared in order to evaluate their compatibility with these recommendations.

6.2.4 Structural Fill and Compaction

All fill placed for the support of structures, concrete flatwork or pavements should consist of structural fill. Structural fill may consist of excavated onsite sandy or gravel soils, or an imported granular soil. Onsite clayey soils should not be used as structural fill due to concerns related to potential slope instability. Structural fill should be free of vegetation, debris, or frozen material. Alternatively, an imported fill structural fill meeting the specifications below may be used. If imported structural fill is needed, it should be a relatively well graded granular soil with a maximum of 50 percent passing the No. 4 mesh sieve and a maximum fines content (minus No.200 mesh sieve) of 25 percent. Soils not meeting the aforementioned criteria may be suitable

for use as structural fill. These soils should be evaluated on a case-by-case basis and should be approved by the Geotechnical Engineer prior to use. The contractor should have confidence that the anticipated method of compaction will be suitable for the type of structural fill used, and should anticipate testing all soils used as structural fill frequently to assess the maximum dry density, fines content, and moisture content, etc.

All structural fill should be placed in maximum 6-inch loose lifts if compacted by small hand-operated compaction equipment, maximum 8-inch loose lifts if compacted by light-duty rollers, and maximum 10-inch loose lifts if compacted by heavy duty compaction equipment that is capable of efficiently compacting the entire thickness of the lift. We recommend that all structural fill be compacted on a horizontal plane, unless otherwise approved by the geotechnical engineer. Structural fill should be compacted to at least 95% of the maximum dry density (MDD), as determined by ASTM D1557. The moisture content should be at or slightly above the optimum moisture content (OMC) at the time of placement and compaction. Also, prior to placing any fill, the excavations should be observed by the geotechnical engineer to observe that any unsuitable materials or loose soils have been removed. In addition, proper grading should precede placement of fill, as described in the **General Site Preparation and Grading** subsection of this report (Section 6.2.1).

For fill section with a total thickness of less than 5-feet, fill soils placed for subgrade below exterior flat work and pavements, should be within 3% of the OMC when placed and compacted to at least 95% of the MDD as determined by ASTM D1557. For structural fill sections with a total thickness of 5-feet or more, structural fill should be compacted to at least 98% of the MDD as determined by ASTM D1557. All utility trenches backfilled below the proposed structure, pavements, and flatwork concrete, should be backfilled with structural fill that is within 3% of the OMC when placed and compacted to at least 95% of the MDD as determined by ASTM D1557. All other trenches, in landscape areas, should be backfilled and compacted to at least 90% of the MDD (ASTM D1557).

The gradation, placement, moisture, and compaction recommendations contained in this section meet our minimum requirements, but may not meet the requirements of other governing agencies such as city, county, or state entities. If their requirements exceed our recommendations, their specifications should override those presented in this report.

6.3 FOUNDATIONS

The foundations for the proposed structures may consist of conventional strip and/or spread footings. Strip and spread footings should be a minimum of 20 and 36 inches wide, respectively, and exterior shallow footings should be embedded at least 36 inches below final grade for frost protection and confinement. Interior shallow footings not susceptible to frost conditions should be embedded at least 18 inches for confinement.

6.3.1 Installation and Bearing Material

Footings may be placed entirely on undisturbed, native, non-moisture sensitive soils or on structural fill which is bearing on undisturbed native soils. Foundation elements should not be founded on undocumented fill soils, and if these soils are encountered they should be over-excavated until suitable, native soils are exposed. The site may then be brought back up to design grade using properly placed and compacted structural fill. Structural fill should meet material recommendations and be placed and compacted as recommended in Section 6.2.4.

6.3.2 Bearing Pressure

Conventional strip and spread footings founded as described above may be proportioned for a maximum net allowable bearing capacity of **1,500 pounds per square foot (psf).** The recommended net allowable bearing pressure refers to the total dead load and can be increased by 1/3 to include the sum of all loads including wind and seismic.

6.3.3 Settlement

Settlements of properly designed and constructed conventional footings, founded as described above, are anticipated to be less than 1 inch. Differential settlements should be on the order of half the total settlement over 30 feet.

6.3.4 Frost Depth

All exterior footings are to be constructed at least 36 inches below the ground surface for frost protection and confinement. This includes walk-out areas and may require fill to be placed around buildings. Interior footings not susceptible to frost conditions should be embedded at least 18 inches for confinement. If foundations are constructed through the winter months, all soils on which footings will bear shall be protected from freezing.

6.3.5 Construction Observation

A geotechnical engineer shall periodically monitor excavations prior to installation of footings. Inspection of soil before placement of structural fill or concrete is required to detect any field conditions not encountered in the investigation which would alter the recommendations of this report. All structural fill material shall be tested under the direction of a geotechnical engineer for material and compaction requirements. Lot specific collapse testing should be completed at the time of the foundation excavation in order to observe whether collapsible soils underlie the proposed residences.

6.3.6 Foundation Drainage

Groundwater was not encountered in the test pits excavated for this investigation. Soils encountered in the subsurface explorations at elevations of proposed foundations consisted of silty gravel, silty sand, clayey gravel, and clay.

GeoStrata recommends footings and foundations be designed according to the International Residential Code (IRC 2015). Soils with medium to poor drainage characteristics require that a foundation drain be installed to allow water to drain away from the foundation and to reduce the risk of flooding of enclosed interior subgrade spaces. The clay and clayey gravel soils encountered in the test pits excavated for this investigation are considered to have poor drainage characteristics. The silty sand and silty gravel soils encountered in the test pits excavated for this investigation are considered to have medium to good drainage characteristics. If a basement is incorporated into the design of the proposed structures, a foundation drain is recommended in the clay and clayey gravel soil types based on the IRC. If basement foundations are founded on the silty sand and silty gravel soils, a foundation drain is not required according to the IRC. Each foundation excavation will need to be inspected on a lot by lot basis by the Geotechnical Engineer to assess if a foundation drain is warranted as a result of soil or moisture conditions.

6.4 EARTH PRESSURES AND LATERAL RESISTANCE

Lateral forces imposed upon conventional foundations due to wind or seismic forces may be resisted by the development of passive earth pressures and friction between the base of the footing and the supporting subgrade. In determining the frictional resistance, a coefficient of friction of 0.36 should be used for structural fill, drain gravel, or sandy native soils against concrete or 0.29 for native fine-grained soils.

Ultimate lateral earth pressures from *granular* backfill acting against buried walls and structures may be computed from the lateral pressure coefficients or equivalent fluid densities presented in the following table:

Condition	Lateral Pressure Coefficient	Equivalent Fluid Density (pounds per cubic foot)
Active*	0.30	36
At-rest**	0.50	60
Passive*	6.11	733
Seismic Active***	0.22	26
Seismic Passive***	-1.31	-157

* Based on Coulomb's equation

** Based on Jaky

*** Based on Mononobe-Okabe Equation

Ultimate lateral earth pressures from *fine-grained* backfill acting against buried walls and structures may be computed from the lateral pressure coefficients or equivalent fluid densities presented in the following table:

Condition	Lateral Pressure Coefficient	Equivalent Fluid Density (pounds per cubic foot)
Active*	0.38	45
At-rest**	0.59	71
Passive*	3.79	455
Seismic Active***	0.26	31
Seismic Passive***	-0.92	-110

* Based on Coulomb's equation

** Based on Jaky

*** Based on Mononobe-Okabe Equation

These coefficients and densities assume level, granular backfill with no buildup of hydrostatic pressures. The force of the water should be added to the presented values if hydrostatic pressures are anticipated. If sloping backfill is present, we recommend the geotechnical engineer be consulted to provide more accurate lateral pressure parameters once the design geometry is established.

Walls and structures allowed to rotate slightly should use the active condition. If the element is constrained against rotation, the at-rest condition should be used. These values should be used with an appropriate factor of safety against overturning and sliding. A value of 1.5 is typically used. Additionally, if passive resistance is calculated in conjunction with frictional resistance, the passive resistance should be reduced by ½.

For seismic analyses, the *active* and *passive* earth pressure coefficient provided in the table is based on the Mononobe-Okabe pseudo-static approach and only accounts for the dynamic horizontal thrust produced by ground motion. Hence, the resulting dynamic thrust pressure *should be added* to the static pressure to determine the total pressure on the wall. The pressure distribution of the dynamic horizontal thrust may be closely approximated as an inverted triangle with stress decreasing with depth and the resultant acting at a distance approximately 0.6 times the loaded height of the structure, measured upward from the bottom of the structure.

The coefficients shown assume a vertical wall face. Hydrostatic and surcharge loadings, if any, should be added. Over-compaction behind walls should be avoided. Resisting passive earth pressure from soils subject to frost or heave, or otherwise above prescribed minimum depths of embedment, should usually be neglected in design.

6.5 CONCRETE SLAB-ON-GRADE CONSTRUCTION

As a minimum, concrete slabs-on-grade should be constructed over at least 4 inches of compacted gravel overlying native soils or a zone of structural fill that is at least 12 inches thick. Disturbed native soils should be compacted to at least 95% of the MDD as determined by ASTM D1557 (modified proctor) prior to placement of gravel. The gravel should consist of road base or clean drain rock with a ¾-inch maximum particle size and no more than 12 percent fines passing the No. 200 mesh sieve. The gravel layer should be compacted to at least 95 percent of the MDD of modified proctor or until tight and relatively unyielding if the material is non-proctorable. All concrete slabs should be designed to minimize cracking as a result of shrinkage. Consideration should be given to reinforcing the slab with welded wire, re-bar, or fiber mesh. Loading on any concrete slabs should not exceed 300 psf.

6.6 MOISTURE PROTECTION AND SURFACE DRAINAGE

Moisture should not be allowed to infiltrate the soils in the vicinity of the foundations. We recommend the following mitigation measures be implemented at the building location.

- The ground surface within 10 feet of the entire perimeter of the building should slope a minimum of five percent away from the structure. Alternatively, a slope of 2% is acceptable if the water is conveyed to a concrete ditch that will convey the water to a point of discharge that is at least 10 feet from the structures.
- Roof runoff devices (rain gutters) should be installed to direct all runoff a minimum of 10 feet away from the structure and preferably day-lighted to the curb where it can be transferred to the storm drain system. Rain gutters discharging roof runoff adjacent to or within the near vicinity of the structure may result in excessive differential settlement.
- We do not recommend storm drain collection sumps be used as part of this development. However, if necessary, sumps should not be located adjacent to foundations or within roadway pavements due to the presence of potentially collapsible soils.
- We recommend irrigation around foundations be minimized by selective landscaping and that irrigation valves be constructed at least 5 feet away from foundations.
- Jetting (injecting water beneath the surface) to compact backfill against foundation soils may result in excessive settlement beneath the building and is not allowed.
- Backfill against foundations walls should consist of on-site native fine-grained soils and should be placed in lifts and compacted to 90% modified proctor to create a moisture barrier.

Failure to comply with these recommendations could result in excessive total and differential settlements causing structural damage.

6.7 SLOPE STABILITY

Slope stability analysis was performed on three (3) slope profiles of the proposed construction. The analysis included both static and pseudo-static (seismic) analyses. The stability analyses were completed using the geometric conditions and soil strengths as described below and the subsurface conditions as observed in the test pits advanced for this investigation and the test pits and boreholes advanced for the 2005 Earthtec geotechnical investigation. The location of the profiles used in our stability analyses are shown on the attached Exploration Location Map (Plate A-2).

Stability of the slope was assessed using Slide, a computer program which incorporates, among others, the Bishop's Simplified Method of slices. Calculations for stability were developed by

searching for the minimum factor of safety for a circular-type failure. Homogeneous earth materials were assumed.

Groundwater was not observed in our test pits or in the test pits and boreholes advanced for the 2005 Earthtec geotechnical investigation; therefore, groundwater was not incorporated in our slope stability analysis as it is not anticipated that groundwater will impact the proposed development.

Slope profiles of the existing slope were made using the existing topography for the site from the 2013-2014 0.5-meter Wasatch Front LiDAR data. Cross sections of the proposed cuts and fills from the August 8, 2018 S.E. Science, LLC construction drawings titled "Summit Pointe Amended Subdivision" were used to model the proposed final slope profiles. A cross-section of the subsurface soils was developed from review of available geologic maps, the results of our subsurface investigation, and review of the 2005 Earthtec geotechnical investigation.

Soil strength parameters used in our analysis were determined from laboratory testing on samples collected from the test pits excavated for this investigation. Two (2) direct shear tests were performed on samples of the sand and clay soils observed in the test pits.

Results of our slope stability analysis are presented in Appendix D and summarized in the table below. In general, the proposed modifications to the slope meet minimum acceptable factors of safety. Factors of safety of 1.5 and 1.0 were considered acceptable for static and pseudo static conditions, respectively.

Slope Profile	Static	Pseudo Static
Profile-A	1.894	1.130
Profile-B	1.583	1.019
Profile-C	1.687	1.011

Slope stability for individual lots was outside of the scope of this investigation. Once grading plans for individual lots are completed, including the size and location of proposed homes and any proposed cuts, fills, or retaining walls, lot specific slope stability analysis should be performed.

6.8 PAVEMENT SECTION

For pavement design, an assumed CBR value for the near surface subgrade soils of 4 was used in our analysis. No traffic information was available at the time this report was prepared; therefore, GeoStrata has assumed traffic counts for the roadway accounting for future development of the adjacent proposed 110-acre Sequoias development. We assumed that vehicle traffic along the roadway will consist of approximately 1,200 passenger car trips per day, 2 small trucks per day, and 2 large trucks per day with a 20-year design life. Based on these assumptions, our analysis uses 41,300 ESAL's for the traffic over the life of the pavement. Asphalt has been assumed to be a high stability plant mix and base course material (road base) composed of crushed stone with a minimum CBR of 70. We have further assumed that the traffic will be relatively consistent over the design life of the pavement sections. Therefore, no growth factor was applied in calculation of loading for each pavement sections' design life. The table below presents equivalent recommended pavement sections based on the above assumptions. Either pavement option may be selected based on economic considerations.

Flexible Pavement Section

Asphalt Concrete (in)	Untreated Base Course (in)	Granular Subbase (in)
3	12	---
3	6	8

If traffic conditions vary significantly from our stated assumptions, GeoStrata should be contacted so we can modify our pavement design parameters accordingly. Specifically, if the traffic counts are significantly higher or lower, we should be contacted to review the pavement sections as necessary. The pavement sections thicknesses above assumes that the majority of construction traffic including cement trucks, cranes, loaded haulers, etc. has ceased. If a significant volume of construction traffic occurs after the pavement section has been constructed, the owner should anticipate maintenance or a decrease in the design life of the pavement area.

7.0 CLOSURE

7.1 LIMITATIONS

The recommendations contained in this report are based on our limited field exploration, laboratory testing, and understanding of the proposed construction. The subsurface data used in the preparation of this report were obtained from the explorations made for this investigation. It is possible that variations in the soil and groundwater conditions could exist between and beyond the points explored. The nature and extent of variations may not be evident until construction occurs. If any conditions are encountered at this site that are different from those described in this report, GeoStrata should be immediately notified so that we may make any necessary revisions to recommendations contained in this report. In addition, if the scope of the proposed construction changes from that described in this report, GeoStrata should be notified.

This report was prepared in accordance with the generally accepted standard of practice at the time the report was written. No warranty, expressed or implied, is made.

It is the Client's responsibility to see that all parties to the project including the Designer, Contractor, Subcontractors, etc. are made aware of this report in its entirety. The use of information contained in this report for bidding purposes should be done at the Contractor's option and risk.

7.2 ADDITIONAL SERVICES

The recommendations made in this report are based on the assumption that an adequate program of tests and observations will be made during construction. GeoStrata staff should be on site to verify compliance with these recommendations. These tests and observations should include, but not necessarily be limited to, the following:

- Observations and testing during site preparation, earthwork and structural fill placement.
- Observation of foundation soils to assess their suitability for footing placement.
- Observation of soft/loose soils over-excavation.
- Observation of temporary excavations and shoring.
- Consultation as may be required during construction.
- Quality control and observation of concrete placement.

We also recommend that project plans and specifications be reviewed by GeoStrata to verify compatibility with our conclusions and recommendations. Additional information concerning the scope and cost of these services can be obtained from our office.

We appreciate the opportunity to be of service on this project. Should you have any questions regarding the report or wish to discuss additional services, please do not hesitate to contact us at your convenience at (801) 501-0583.

8.0 REFERENCES CITED

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Black, B.D., Hecker, S., Hylland, M.D., Christenson, G.E., and McDonald G.N., 2003, Quaternary Fault and Fold Database and Map of Utah: Utah geological Survey Map 193DM.

Earthtec Testing and Engineeirng, P.C., 2005, Geotechnical Study Summit Hills Development & Lakeview Drive Extension, Alpine, Utah; Earthtec Job No. 051709, unpublished consultant's report.

Hintze, L. F., 1980, Geologic Map of Utah: Utah Geological and Mineral Survey Map-A-1, scale 1:500,000.

International Building Code [IBC], 2015, International Code Council, Inc.

Machette, M.N., 1992, Surficial geologic map of Wasatch fault zone, eastern part of the Utah Valley, Utah County and parts of Salt Lake and Juab Counties, Utah: U.S. Geological Survey Miscellaneous Investigations Series Map I-2095, scale 1:50,000.

Appendix A

400 0 400 800 1200 1600 ft

1:10,000

GeoStrata

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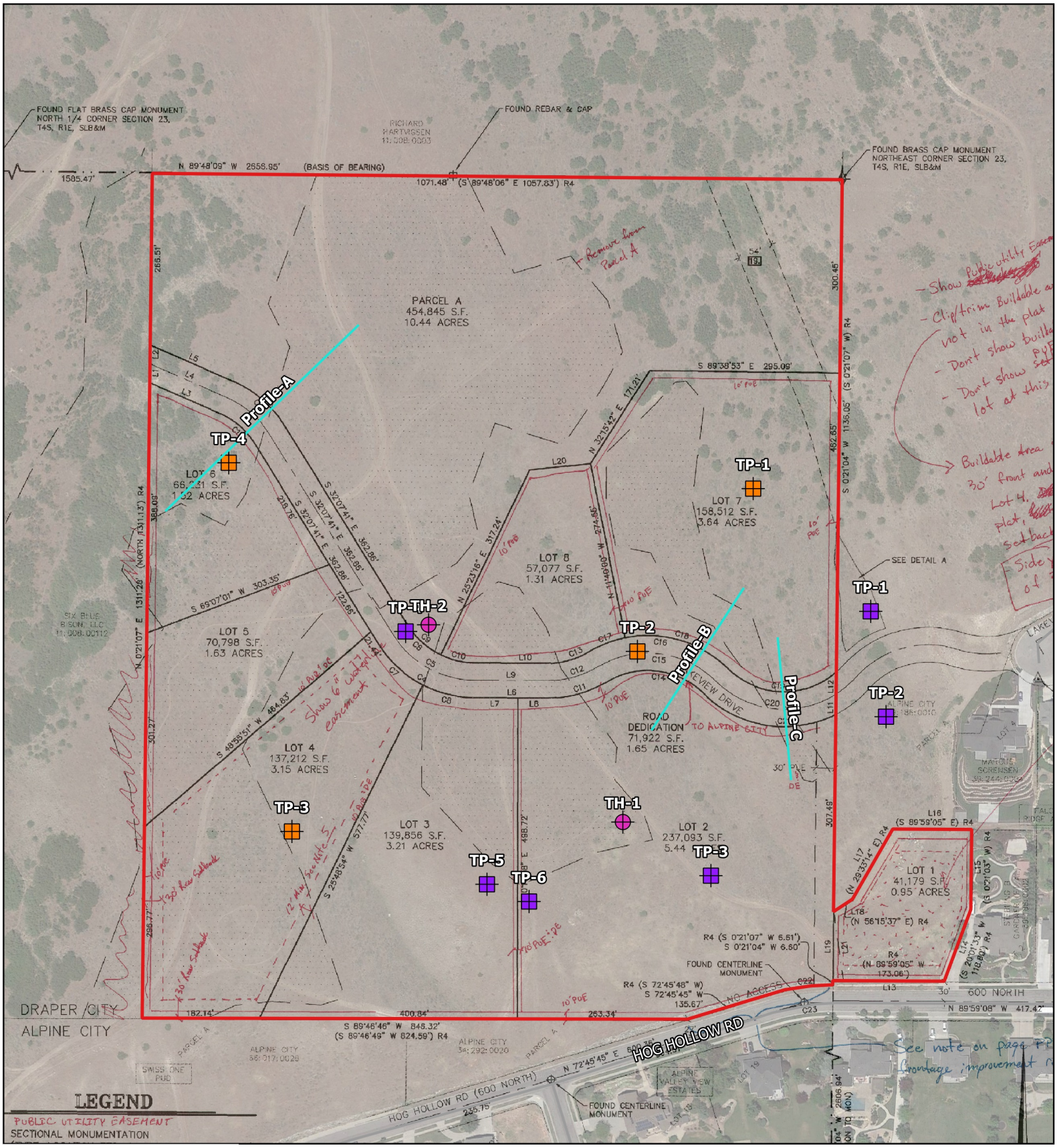
Legend

Approximate Site Boundary

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, UT
Project Number: 1312-003

Site Vicinity Map

Plate A-1



Legend

- Slope Profile
- Approximate Site Boundary
- GeoStrata Test Pits
- Earthtec Borings
- Earthtec Test Pits

100 0 100 200 300 400 ft

1:2,400

GeoStrata

Copyright, 2018

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, UT
Project Number: 1312-003

Exploration Location Map

Plate A-2

Appendix B

DATE
STARTED: 9/13/18
COMPLETED: 9/13/18
BACKFILLED: 9/13/18

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, Utah
Project Number 1312-003

GeoStrata Rep: A. Peay
Rig Type: PC 200 Trackhoe
Boring Type: Test Pit

BORING NO: TP-1
Sheet 1 of 1

LOCATION
STATION OFFSET ELEVATION

DEPTH METERS	DEPTH FEET	SAMPLES	WATER LEVEL	GRAPHICAL LOG	UNIFIED SOIL CLASSIFICATION	MATERIAL DESCRIPTION	N	N*	SPT BLOW COUNT 10 20 30 40 50 60 70 80 90	Dry Density (pcf)	Moisture Content %	Percent minus 200	Liquid Limit	Plasticity Index	Moisture Content and Atterberg Limits: Plastic Limit / Moisture Content / Liquid Limit 10 20 30 40 50 60 70 80 90
0	0					TOPSOIL; Silty SAND with gravel - dark brown, moist, organics throughout									
					GM	Silty GRAVEL with sand, cobbles and boulders - dense, tannish brown, moist, clasts are subrounded to subangular up to 1.5 feet in diameter									
1															
	5														
2											5.4	18.3	NP	NP	
3	10					Bottom of Boring @ 10 Feet									

N - OBSERVED UNCORRECTED BLOW COUNT

N* - CORRECTED N1(60) EQUIVALENT SPT BLOW COUNT

LOG OF BORING - PLATE (B) EXPLORATION LOGS.GPJ GEOSTRATA.GDT 9/24/18

GeoStrata

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SAMPLE TYPE
- 2" O.D./1.38" I.D. Split Spoon Sampler
- 2.5" O.D./2" I.D. California Split Spoon Sampler
- 3" O.D. Thin-Walled Shelby Sampler
- Grab Sample
- 2" O.D./1.625" I.D. Liner Sampler

NOTES:

WATER LEVEL
▼ - MEASURED ▽ - ESTIMATED

Plate
B - 1

DATE
STARTED: 9/13/18
COMPLETED: 9/13/18
BACKFILLED: 9/13/18

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, Utah
Project Number 1312-003

GeoStrata Rep: A. Peay
Rig Type: PC 200 Trackhoe
Boring Type: Test Pit

BORING NO: TP-2
Sheet 1 of 1

LOCATION
STATION OFFSET ELEVATION

DEPTH METERS	DEPTH FEET	SAMPLES	WATER LEVEL	GRAPHICAL LOG	UNIFIED SOIL CLASSIFICATION	MATERIAL DESCRIPTION	N	N*	SPT BLOW COUNT 10 20 30 40 50 60 70 80 90	Dry Density (pcf)	Moisture Content %	Percent minus 200	Liquid Limit	Plasticity Index	Moisture Content and Atterberg Limits: Plastic Limit / Moisture Content / Liquid Limit 10 20 30 40 50 60 70 80 90
0	0					TOPSOIL; Silty Clayey SAND with gravel - dark brown, moist, organics throughout									
					CL	Lean CLAY with sand - stiff, reddish brown, moist					18.6	76.4	40	22	
1															
2	5														
3	10					Bottom of Boring @ 11 Feet									

N - OBSERVED UNCORRECTED BLOW COUNT

N* - CORRECTED N1(60) EQUIVALENT SPT BLOW COUNT

GeoStrata

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SAMPLE TYPE
- 2" O.D./1.38" I.D. Split Spoon Sampler
- 2.5" O.D./2" I.D. California Split Spoon Sampler
- 3" O.D. Thin-Walled Shelby Sampler
- Grab Sample
- 2" O.D./1.625" I.D. Liner Sampler

NOTES:

WATER LEVEL
▼ - MEASURED ▽ - ESTIMATED

Plate
B - 2

LOG OF BORING - PLATE (B) EXPLORATION LOGS.GPJ GEOSTRATA.GDT 9/24/18

DATE
STARTED: 9/13/18
COMPLETED: 9/13/18
BACKFILLED: 9/13/18

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, Utah
Project Number 1312-003

GeoStrata Rep: A. Peay
Rig Type: PC 200 Trackhoe
Boring Type: Test Pit

BORING NO: TP-3
Sheet 1 of 1

LOCATION
STATION OFFSET ELEVATION

DEPTH METERS	DEPTH FEET	SAMPLES	WATER LEVEL	GRAPHICAL LOG	UNIFIED SOIL CLASSIFICATION	MATERIAL DESCRIPTION	N	N*	SPT BLOW COUNT 10 20 30 40 50 60 70 80 90	Dry Density (pcf)	Moisture Content %	Percent minus 200	Liquid Limit	Plasticity Index	Moisture Content and Atterberg Limits: Plastic Limit / Moisture Content / Liquid Limit 10 20 30 40 50 60 70 80 90
0	0					TOPSOIL; Silty SAND with gravel - dark brown, moist, organics throughout									
					GP	Poorly Graded GRAVEL with cobbles - dense, red brown, moist, clasts are subrounded to subangular up to 6 inches in diameter									
1										96.7	9.2	4.2	41	20	
					SM	Silty SAND - dense, whitish brown, moist, clasts are subrounded to subangular up to 6 inches in diameter, average clast size between 3 and 4 inches									
	5														
2															
3	10					Bottom of Boring @ 10 Feet									

N - OBSERVED UNCORRECTED BLOW COUNT

N* - CORRECTED N1(60) EQUIVALENT SPT BLOW COUNT

GeoStrata

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SAMPLE TYPE
- 2" O.D./1.38" I.D. Split Spoon Sampler
- 2.5" O.D./2" I.D. California Split Spoon Sampler
- 3" O.D. Thin-Walled Shelby Sampler
- Grab Sample
- 2" O.D./1.625" I.D. Liner Sampler

NOTES:

WATER LEVEL
▼ - MEASURED ▽ - ESTIMATED

Plate
B - 3

LOG OF BORING - PLATE (B) EXPLORATION LOGS.GPJ GEOSTRATA.GDT 9/24/18

DATE
STARTED: 9/13/18
COMPLETED: 9/13/18
BACKFILLED: 9/13/18

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, Utah
Project Number 1312-003

GeoStrata Rep: A. Peay
Rig Type: PC 200 Trackhoe
Boring Type: Test Pit

BORING NO: TP-4
Sheet 1 of 1

LOCATION
STATION OFFSET ELEVATION

DEPTH METERS	DEPTH FEET	SAMPLES	WATER LEVEL	GRAPHICAL LOG	UNIFIED SOIL CLASSIFICATION	MATERIAL DESCRIPTION	N	N*	SPT BLOW COUNT 10 20 30 40 50 60 70 80 90	Dry Density (pcf)	Moisture Content %	Percent minus 200	Liquid Limit	Plasticity Index	Moisture Content and Atterberg Limits: Plastic Limit / Moisture Content / Liquid Limit 10 20 30 40 50 60 70 80 90
0	0					TOPSOIL; Silty SAND with gravel - dark brown, moist, organics throughout									
					SP	Poorly Graded SAND with silt, gravel and cobbles - dense, red brown, moist, clasts are subrounded to subangular up to 6 inches in diameter									
					GP-GC	Poorly Graded GRAVEL with clay and sand - dense, whitish brown, moist, pinhole structures throughout									
1															
	5														
										93.8	10.8	9.4	28	7	● H
2															
					SM	Silty SAND with gravel - dense, reddish tan, moist, clasts are subrounded to subangular up to 6 inches in diameter, average clast size between 3 and 4 inches									
3	10					Bottom of Boring @ 10 Feet									

N - OBSERVED UNCORRECTED BLOW COUNT

N* - CORRECTED N1(60) EQUIVALENT SPT BLOW COUNT

GeoStrata

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SAMPLE TYPE
- 2" O.D./1.38" I.D. Split Spoon Sampler
- 2.5" O.D./2" I.D. California Split Spoon Sampler
- 3" O.D. Thin-Walled Shelby Sampler
- Grab Sample
- 2" O.D./1.625" I.D. Liner Sampler

NOTES:

WATER LEVEL
▼ - MEASURED ▽ - ESTIMATED

Plate
B - 4

LOG OF BORING - PLATE (B) EXPLORATION LOGS.GPJ GEOSTRATA.GDT 9/24/18

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			USCS SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS (More than half of material is larger than the #200 sieve)	GRAVELS (More than half of coarse fraction is larger than the #4 sieve)	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE OR NO FINES
			GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES WITH LITTLE OR NO FINES
		GRAVELS WITH OVER 12% FINES	GM	SILTY GRAVELS, GRAVEL-SILT-SAND MIXTURES
			GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SANDS (More than half of coarse fraction is smaller than the #4 sieve)	CLEAN SANDS WITH LITTLE OR NO FINES	SW	WELL-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE OR NO FINES
			SP	POORLY-GRADED SANDS, SAND-GRAVEL MIXTURES WITH LITTLE OR NO FINES
		SANDS WITH OVER 12% FINES	SM	SILTY SANDS, SAND-GRAVEL-SILT MIXTURES
			SC	CLAYEY SANDS SAND-GRAVEL-CLAY MIXTURES
FINE GRAINED SOILS (More than half of material is smaller than the #200 sieve)	SILTS AND CLAYS (Liquid limit less than 50)		ML	INORGANIC SILTS & VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC SILTS & ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS (Liquid limit greater than 50)		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILT
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS & ORGANIC SILTS OF MEDIUM-TO-HIGH PLASTICITY
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

LOG KEY SYMBOLS

- BORING SAMPLE LOCATION
- TEST-PIT SAMPLE LOCATION
- WATER LEVEL (level after completion)
- WATER LEVEL (level where first encountered)

CEMENTATION

DESCRIPTION	DESCRIPTION
WEAKELY	CRUMBLES OR BREAKS WITH HANDLING OR SLIGHT FINGER PRESSURE
MODERATELY	CRUMBLES OR BREAKS WITH CONSIDERABLE FINGER PRESSURE
STRONGLY	WILL NOT CRUMBLE OR BREAK WITH FINGER PRESSURE

OTHER TESTS KEY

C	CONSOLIDATION	SA	SIEVE ANALYSIS
AL	ATTERBERG LIMITS	DS	DIRECT SHEAR
UC	UNCONFINED COMPRESSION	T	TRIAXIAL
S	SOLUBILITY	R	RESISTIVITY
O	ORGANIC CONTENT	RV	R-VALUE
CBR	CALIFORNIA BEARING RATIO	SU	SOLUBLE SULFATES
COMP	MOISTURE/DENSITY RELATIONSHIP	PM	PERMEABILITY
CI	CALIFORNIA IMPACT	-200	% FINER THAN #200
COL	COLLAPSE POTENTIAL	Gs	SPECIFIC GRAVITY
SS	SHRINK SWELL	SL	SWELL LOAD

MODIFIERS

DESCRIPTION	%
TRACE	<5
SOME	5 - 12
WITH	>12

MOISTURE CONTENT

DESCRIPTION	FIELD TEST
DRY	ABSENCE OF MOISTURE, DUSTY, DRY TO THE TOUCH
MOIST	DAMP BUT NO VISIBLE WATER
WET	VISIBLE FREE WATER, USUALLY SOIL BELOW WATER TABLE

STRATIFICATION

DESCRIPTION	THICKNESS	DESCRIPTION	THICKNESS
SEAM	1/16 - 1/2"	OCCASIONAL	ONE OR LESS PER FOOT OF THICKNESS
LAYER	1/2 - 12"	FREQUENT	MORE THAN ONE PER FOOT OF THICKNESS

GENERAL NOTES

1. Lines separating strata on the logs represent approximate boundaries only. Actual transitions may be gradual.
2. No warranty is provided as to the continuity of soil conditions between individual sample locations.
3. Logs represent general soil conditions observed at the point of exploration on the date indicated.
4. In general, Unified Soil Classification designations presented on the logs were evaluated by visual methods only. Therefore, actual designations (based on laboratory tests) may vary.

APPARENT / RELATIVE DENSITY - COARSE-GRAINED SOIL

APPARENT DENSITY	SPT (blows/ft)	MODIFIED CA. SAMPLER (blows/ft)	CALIFORNIA SAMPLER (blows/ft)	RELATIVE DENSITY (%)	FIELD TEST
VERY LOOSE	<4	<4	<5	0 - 15	EASILY PENETRATED WITH 1/2-INCH REINFORCING ROD PUSHED BY HAND
LOOSE	4 - 10	5 - 12	5 - 15	15 - 35	DIFFICULT TO PENETRATE WITH 1/2-INCH REINFORCING ROD PUSHED BY HAND
MEDIUM DENSE	10 - 30	12 - 35	15 - 40	35 - 65	EASILY PENETRATED A FOOT WITH 1/2-INCH REINFORCING ROD DRIVEN WITH 5-LB HAMMER
DENSE	30 - 50	35 - 60	40 - 70	65 - 85	DIFFICULT TO PENETRATED A FOOT WITH 1/2-INCH REINFORCING ROD DRIVEN WITH 5-LB HAMMER
VERY DENSE	>50	>60	>70	85 - 100	PENETRATED ONLY A FEW INCHES WITH 1/2-INCH REINFORCING ROD DRIVEN WITH 5-LB HAMMER

CONSISTENCY - FINE-GRAINED SOIL		TORVANE	POCKET PENETROMETER	FIELD TEST
CONSISTENCY	SPT (blows/ft)	UNTRAINED SHEAR STRENGTH (tsf)	UNCONFINED COMPRESSIVE STRENGTH (tsf)	
VERY SOFT	<2	<0.125	<0.25	EASILY PENETRATED SEVERAL INCHES BY THUMB. EXUDES BETWEEN THUMB AND FINGERS WHEN SQUEEZED BY HAND.
SOFT	2 - 4	0.125 - 0.25	0.25 - 0.5	EASILY PENETRATED ONE INCH BY THUMB. MOLDED BY LIGHT FINGER PRESSURE.
MEDIUM STIFF	4 - 8	0.25 - 0.5	0.5 - 1.0	PENETRATED OVER 1/2 INCH BY THUMB WITH MODERATE EFFORT. MOLDED BY STRONG FINGER PRESSURE.
STIFF	8 - 15	0.5 - 1.0	1.0 - 2.0	INDENTED ABOUT 1/2 INCH BY THUMB BUT PENETRATED ONLY WITH GREAT EFFORT.
VERY STIFF	15 - 30	1.0 - 2.0	2.0 - 4.0	READILY INDENTED BY THUMBNAIL.
HARD	>30	>2.0	>4.0	INDENTED WITH DIFFICULTY BY THUMBNAIL.

GeoStrata

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Soil Symbols Description Key

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, Utah
Project Number: 1312-003

Plate B-5

Appendix C

Test Pit No.	Sample Depth (feet)	USCS Soil Classification	Natural Moisture Content (%)	Natural Dry Density (pcf)	Gradation			Atterberg		Consolidation			Direct Shear	
					Gravel (%)	Sand (%)	Fines (%)	LL	PI	Cc	Cr	OCR	Internal Friction Angle (°)	Apparent Cohesion (psf)
TP-1	7	GM	5.4		57.4	24.3	18.3	NP	NP					
TP-2	5	CL	18.6	91.8	23.6		76.4	40	22	0.123	0.023	3	26	140
TP-3	3	GP	9.2	96.7	81.6	14.2	4.2	41	20					
TP-4	6	GP-GC	10.8	93.8	75.3	15.3	9.4	28	7				30	110

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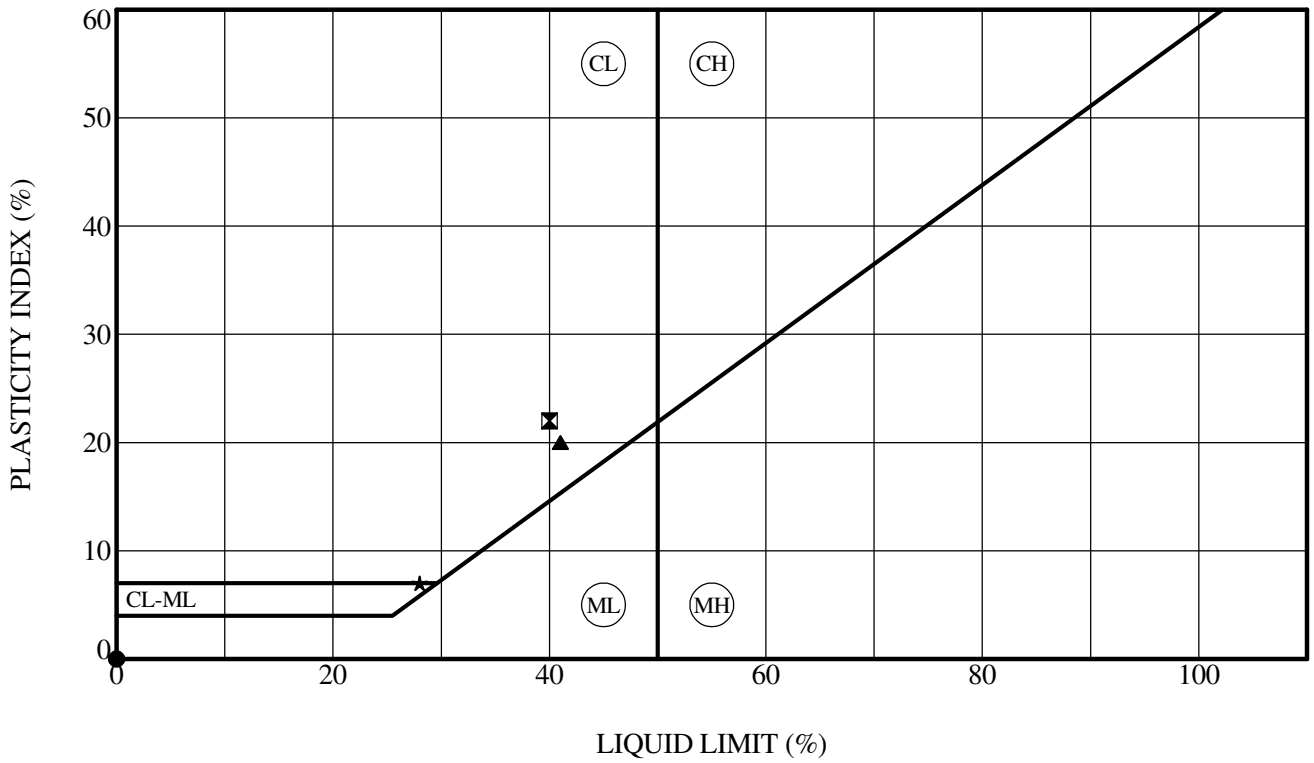
Lab Summary Report

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, Utah
Project Number: 1312-003

Plate C - 1



Sample Location		Depth (ft)	LL (%)	PL (%)	PI (%)	Fines (%)	Classification
●	**TP-1**	**7.0**	**NP**	**NP**	**NP**	**18.3**	**Silty GRAVEL with sand**
⊠	**TP-2**	**5.0**	**40**	**18**	**22**	**76.4**	**Lean CLAY with sand**
▲	**TP-3**	**3.0**	**41**	**21**	**20**	**4.2**	**Poorly Graded GRAVEL**
★	**TP-4**	**6.0**	**28**	**21**	**7**	**9.4**	**Poorly Graded GRAVEL with clay and sand**

ATTERBERG LIMITS' RESULTS - ASTM D 4318

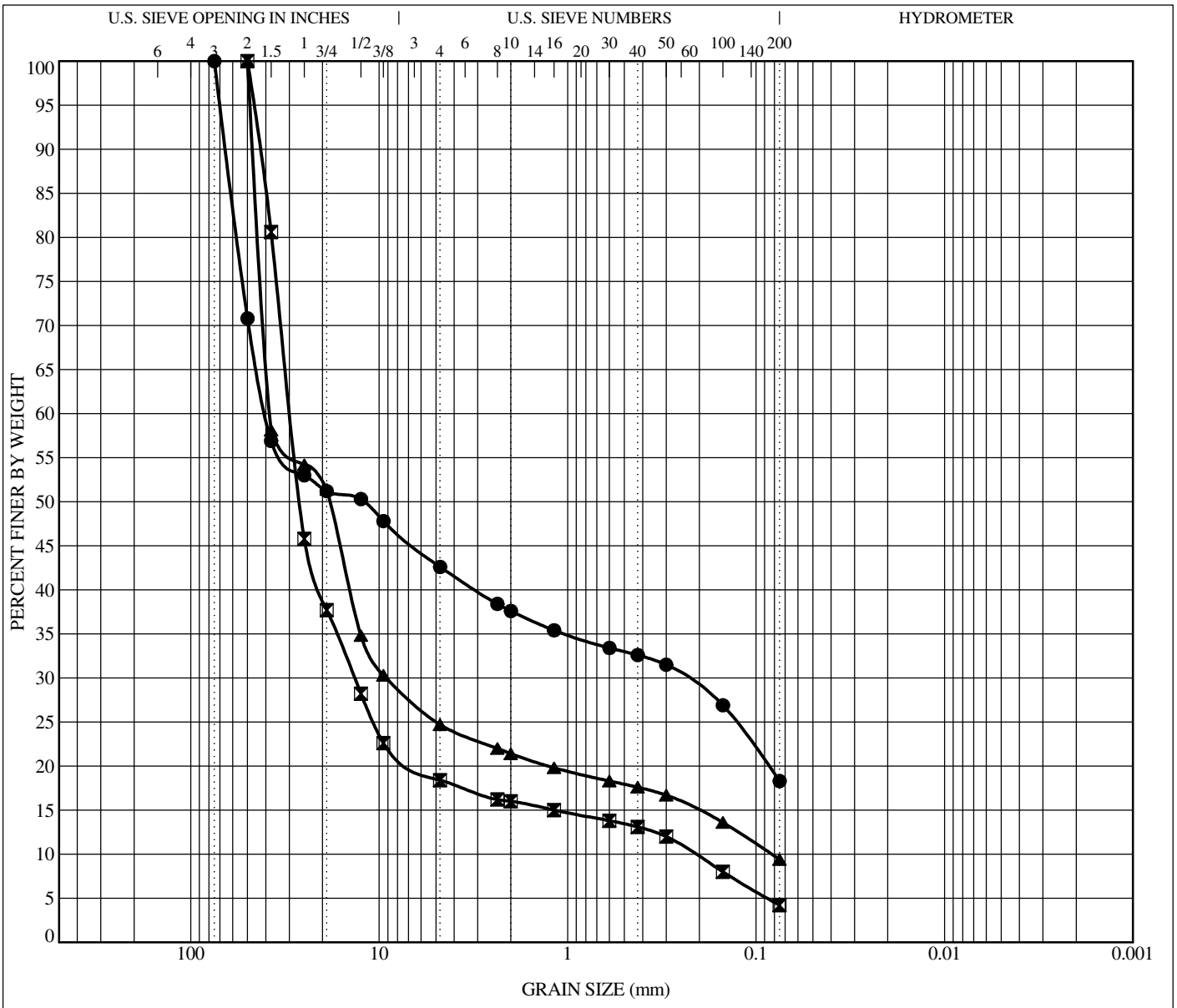
GeoStrata

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, Utah
Project Number: 1312-003

Plate

C - 2

C_ATTERBERG EXPLORATION LOGS.GPJ GEOSTRATA.GDT 9/24/18



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

	Sample Location	Depth	Classification	LL	PL	PI	Cc	Cu
●	**TP-1**	**7.0**	**Silty GRAVEL with sand**	**NP**	**NP**	**NP**		
⊠	**TP-3**	**3.0**	**Poorly Graded GRAVEL**	**41**	**21**	**20**	**29.26**	**139.06**
▲	**TP-4**	**6.0**	**Poorly Graded GRAVEL with clay and sand**	**28**	**21**	**7**	**26.63**	**458.81**

	Sample Loctaion	Depth	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
●	**TP-1**	**7.0**	**75**	**39.985**	**0.239**		**57.4**	**24.3**	**18.3**	
⊠	**TP-3**	**3.0**	**50**	**29.498**	**13.532**	**0.212**	**81.6**	**14.2**	**4.2**	
▲	**TP-4**	**6.0**	**50**	**37.992**	**9.154**	**0.083**	**75.3**	**15.3**	**9.4**	

GeoStrata

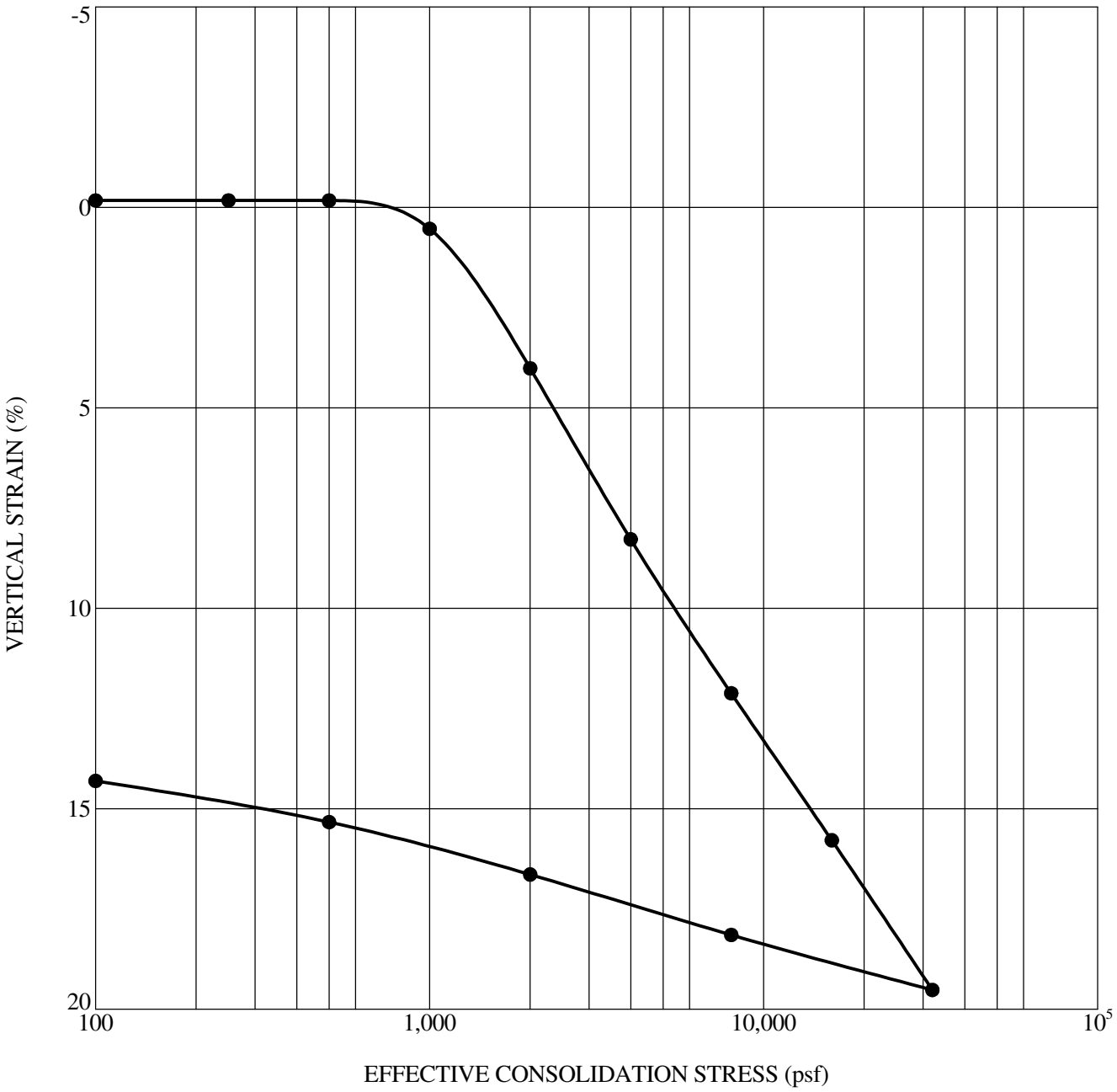
GRAIN SIZE DISTRIBUTION - ASTM D422

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, Utah
Project Number: 1312-003

Plate

C - 3

C_GSD EXPLORATION LOGS.GPJ GEOSTRATA.GDT 9/24/18



Sample Location	Depth (ft)	Classification	γ_d (pcf)	MC (%)	C'_c	C'_r	OCR
● **TP-2**	**5.0**	**Lean CLAY with sand**	**91.8**	**20.0**	**0.123**	**0.023**	**3.0**

1-D CONSOLIDATION TEST - ASTM D 2435

GeoStrata

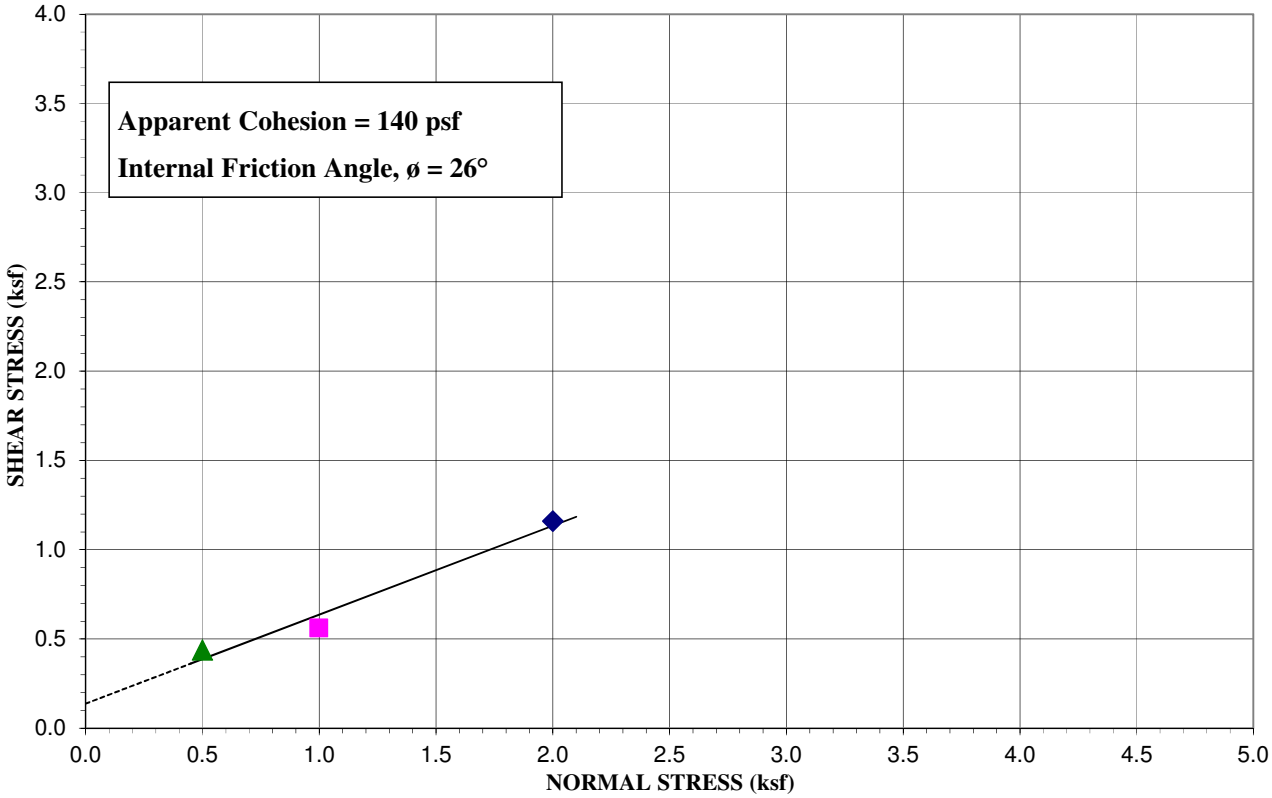
Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, Utah
Project Number: 1312-003

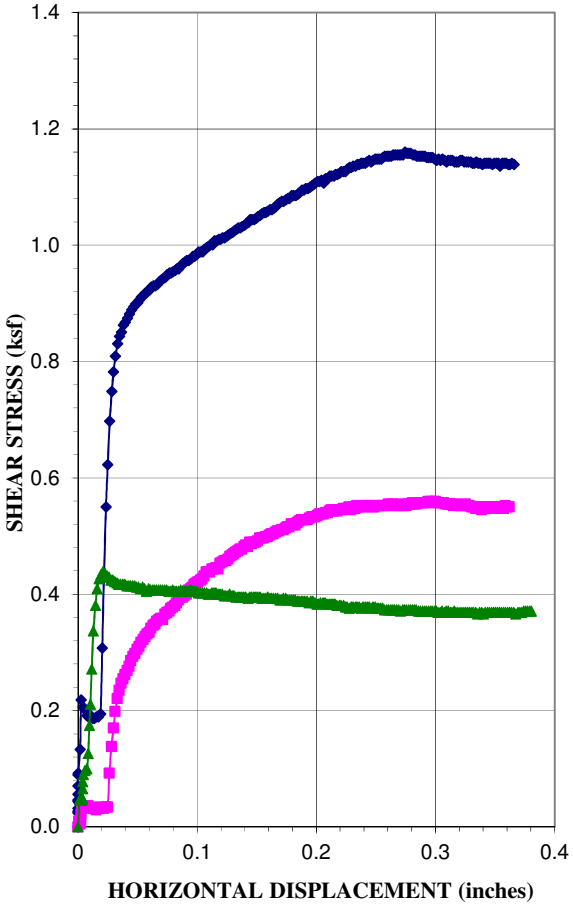
Plate

C - 4

C_CONSOL EXPLORATION LOGS.GPJ GEOSTRATA.GDT 10/8/18

DIRECT SHEAR TEST





Sample Location:	TP-2 @ 5
Type of Test:	Consolidated Drained/Saturated

Test No. (Symbol)	**1 (◆)**	**2 (■)**	**3 (▲)**
Sample Type	Remolded		
Initial Height, in.	0.936	0.997	0.959
Diameter, in.	2.5	2.5	2.5
Dry Density Before, pcf	103.5	97.3	101.1
Dry Density After, pcf	105.3	99.0	102.8
Moisture % Before	14.0	15.2	14.6
Moisture % After	24.2	25.8	25.0
Saturation, % Before	61.8	57.7	60.8
Saturation, % After	112.3	101.8	109.2
Normal Load, ksf	2.0	1.0	0.5
Shear Stress, ksf	1.16	0.56	0.44
Strain Rate	0.003333 IN/MIN		

Sample Properties	
Cohesion, psf	140
Friction Angle, ϕ	26
Liquid Limit, %	40
Plasticity Index, %	22
Percent Gravel	23.6
Percent Sand	
Percent Passing No. 200 sieve	76.4
Classification	CL

PROJECT: Summit Pointe

PROJECT NO.: 1312-003

GeoStrata

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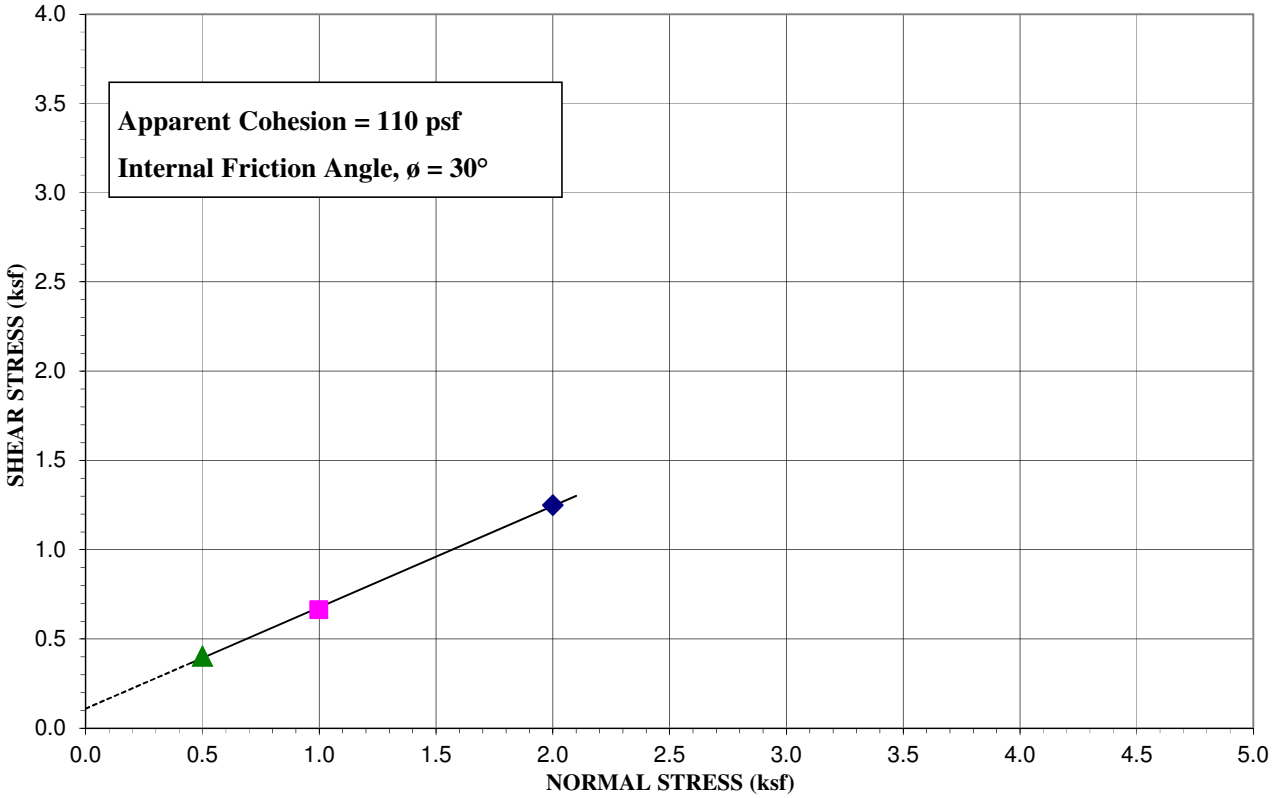
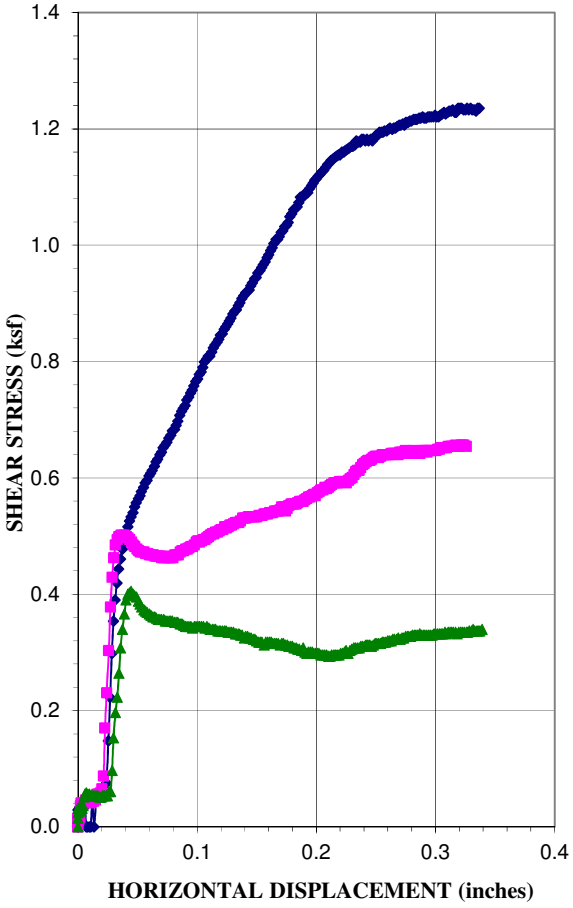
Plate C-5

DIRECT SHEAR TEST





Sample Location:	TP-4 @ 6
Type of Test:	Consolidated Drained/Saturated

Test No. (Symbol)	**1 (◆)**	**2 (■)**	**3 (▲)**
Sample Type	Remolded		
Initial Height, in.	0.947	0.937	0.945
Diameter, in.	2.5	2.5	2.5
Dry Density Before, pcf	98.9	99.4	98.8
Dry Density After, pcf	100.7	101.2	100.6
Moisture % Before	10.3	10.7	9.7
Moisture % After	25.0	25.8	26.8
Saturation, % Before	40.7	42.7	38.1
Saturation, % After	102.9	107.7	110.2
Normal Load, ksf	2.0	1.0	0.5
Shear Stress, ksf	1.25	0.66	0.40
Strain Rate	0.003008 IN/MIN		

Sample Properties	
Cohesion, psf	110
Friction Angle, ϕ	30
Liquid Limit, %	28
Plasticity Index, %	7
Percent Gravel	75.3
Percent Sand	15.3
Percent Passing No. 200 sieve	9.4
Classification	GP-GC

PROJECT: Summit Pointe

PROJECT NO.: 1312-003

GeoStrata

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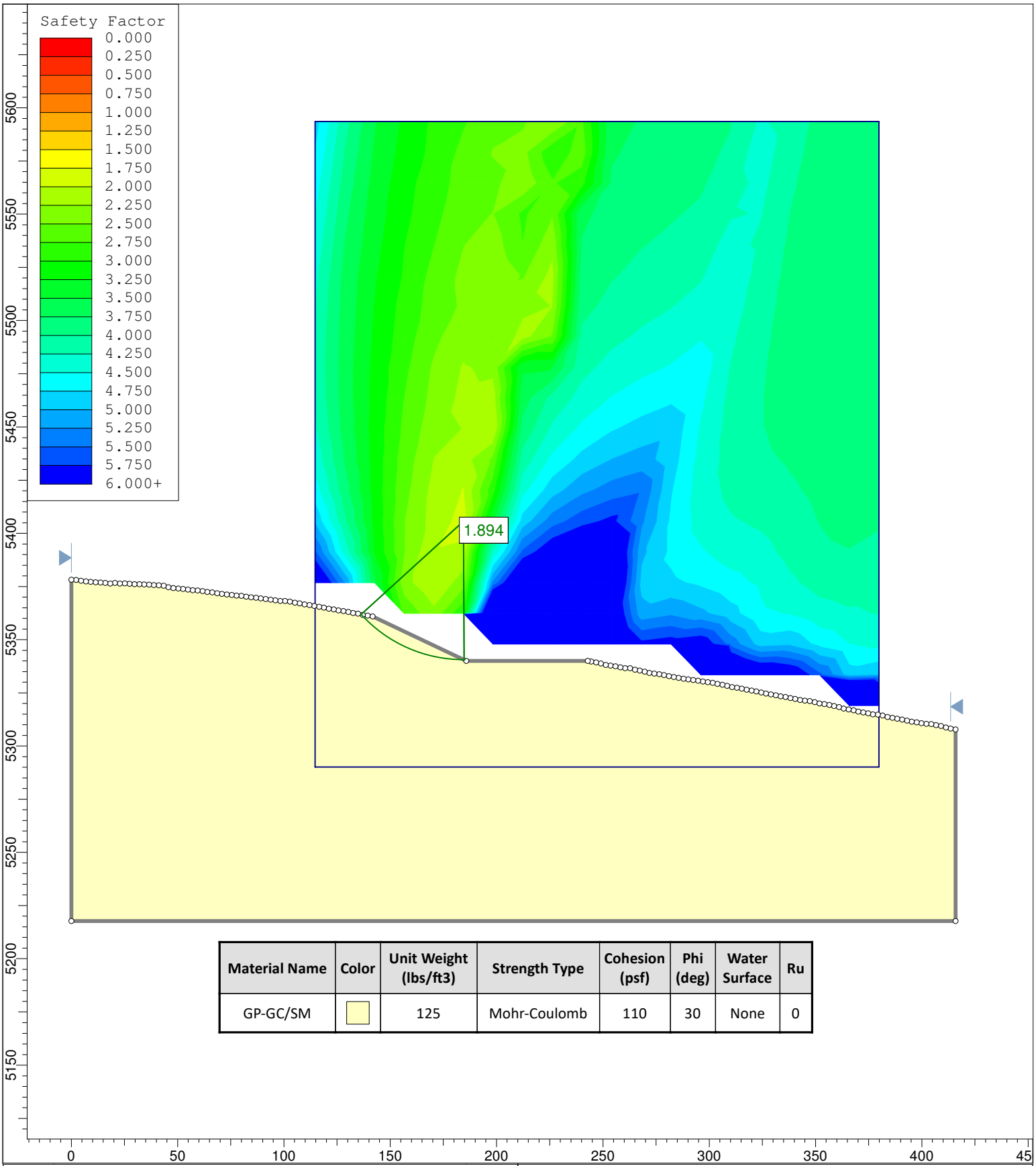
Plate C-6

Appendix D



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
GP-GC/SM		125	Mohr-Coulomb	110	30	None	0

GeoStrata

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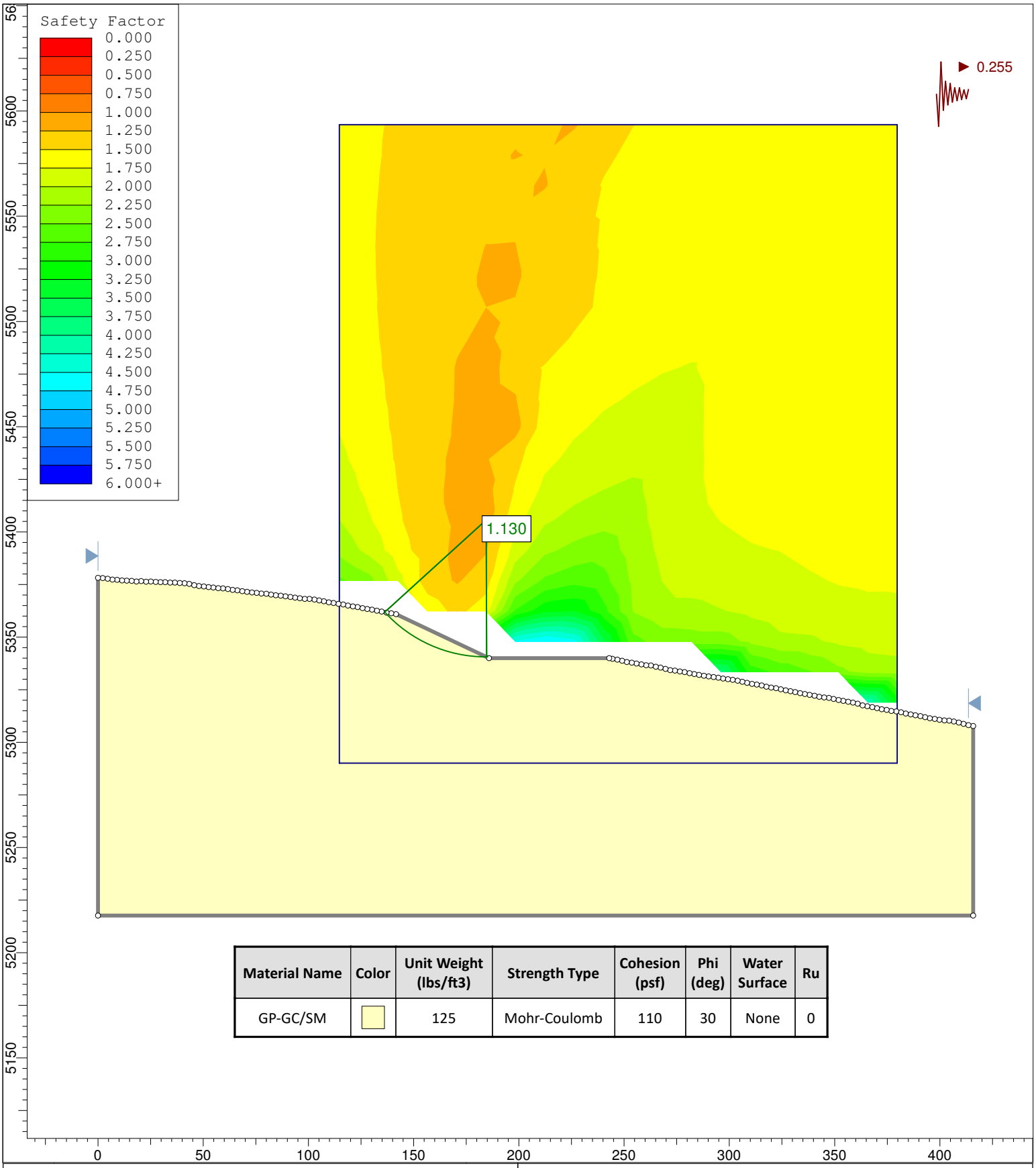
Profile-A Static

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, UT
Project Number: 1312-003

Plate D-1



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
GP-GC/SM		125	Mohr-Coulomb	110	30	None	0

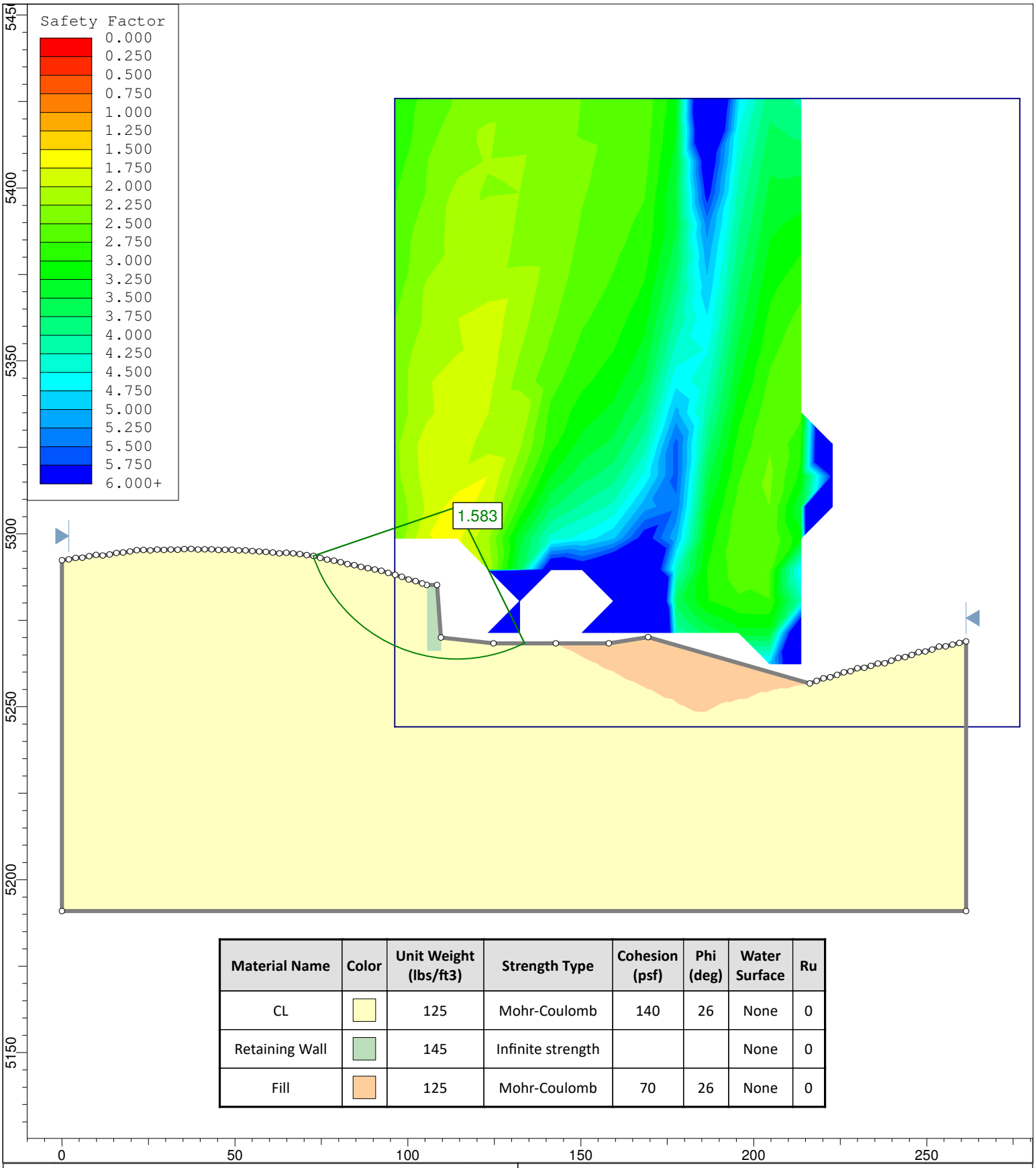
GeoStrata

Copyright, 2018

Profile-A Pseudo Static

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, UT
Project Number: 1312-003

Plate D-2



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
CL		125	Mohr-Coulomb	140	26	None	0
Retaining Wall		145	Infinite strength			None	0
Fill		125	Mohr-Coulomb	70	26	None	0

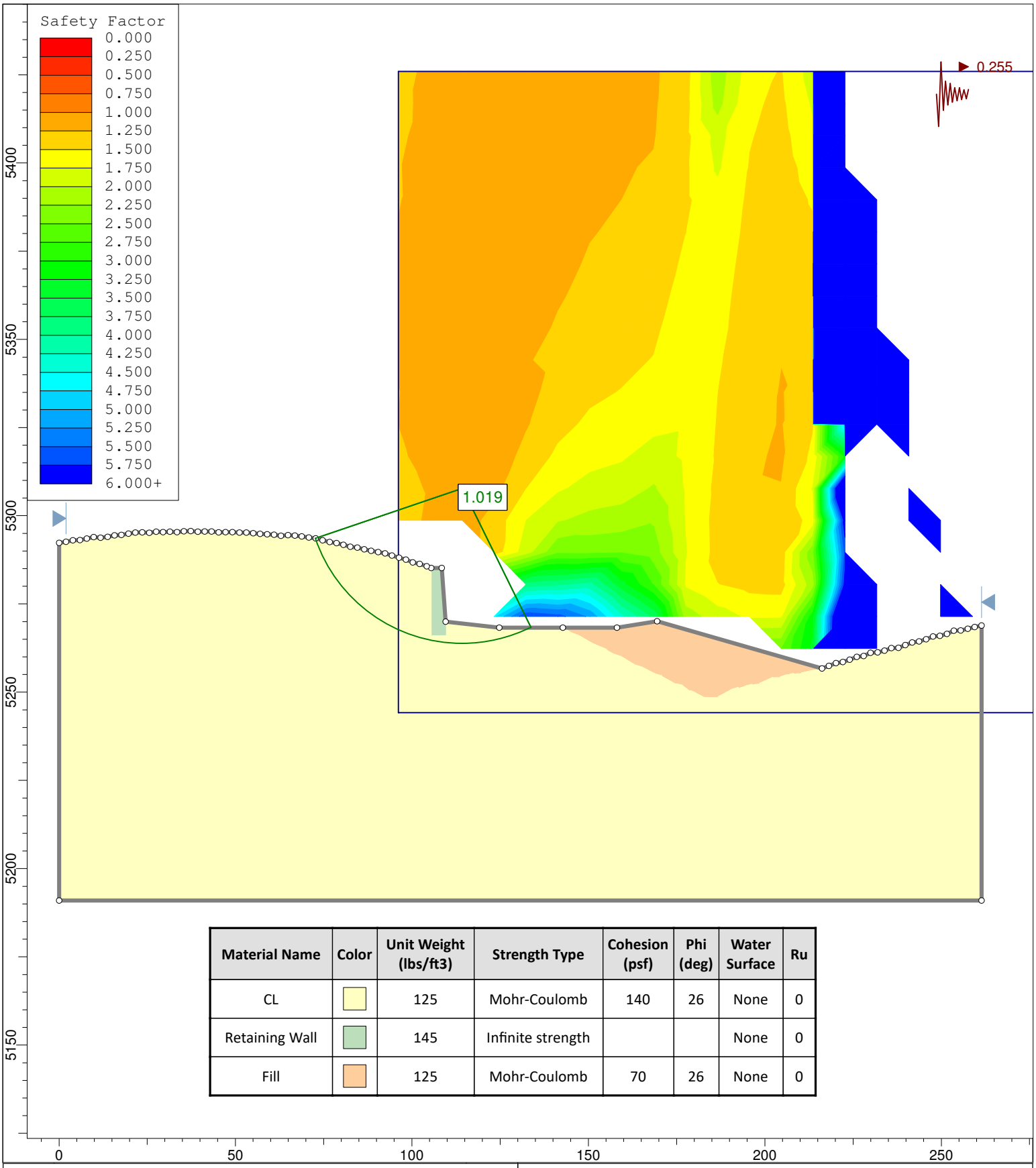
GeoStrata

Copyright, 2018

Profile-B Static

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, UT
Project Number: 1312-003

Plate D-3



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
CL		125	Mohr-Coulomb	140	26	None	0
Retaining Wall		145	Infinite strength			None	0
Fill		125	Mohr-Coulomb	70	26	None	0

GeoStrata

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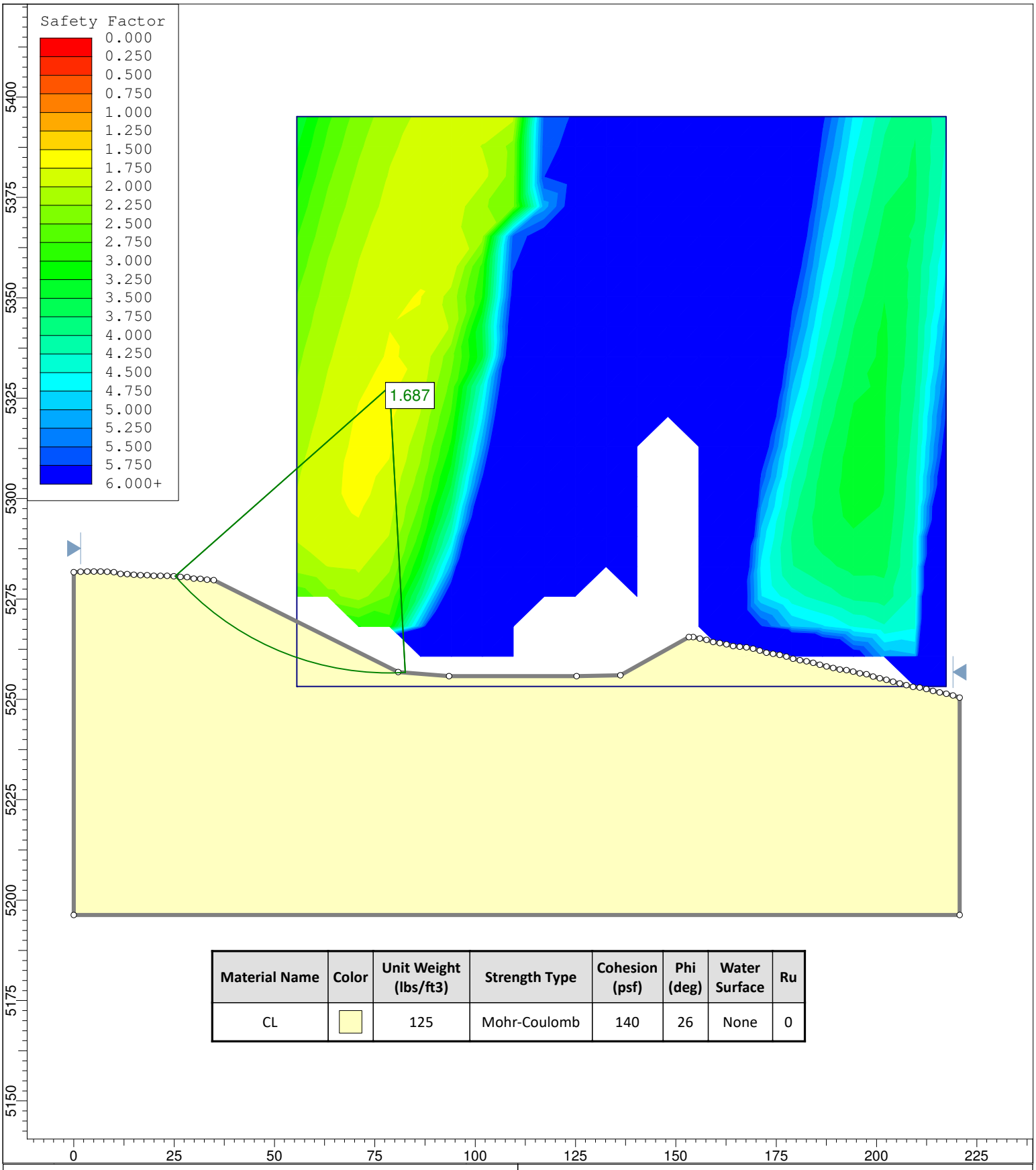
Profile-B Pseudo Static

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, UT
Project Number: 1312-003

Plate D-4



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
CL		125	Mohr-Coulomb	140	26	None	0

GeoStrata

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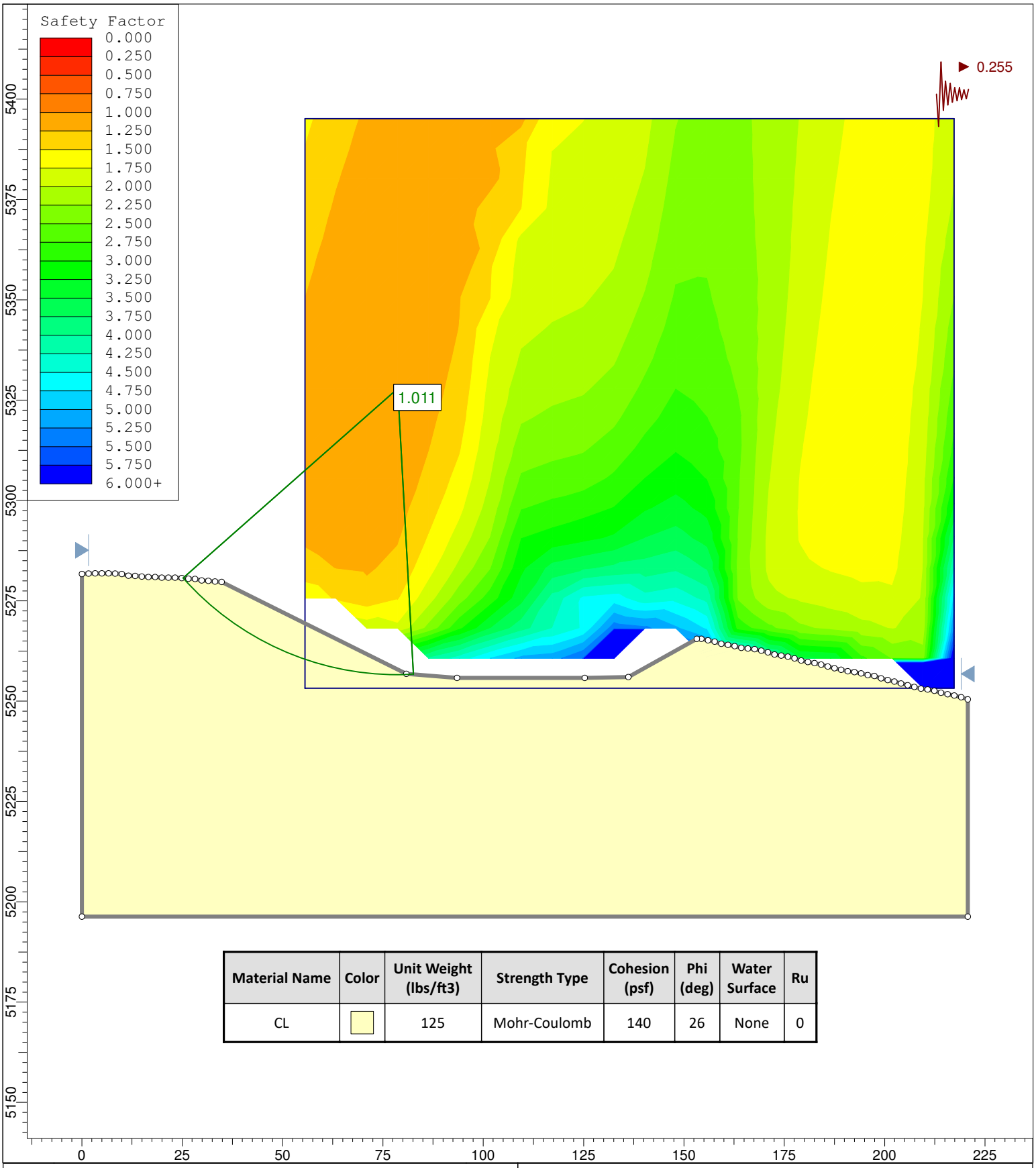
Profile-C Static

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, UT
Project Number: 1312-003

Plate D-5



Material Name	Color	Unit Weight (lbs/ft3)	Strength Type	Cohesion (psf)	Phi (deg)	Water Surface	Ru
CL		125	Mohr-Coulomb	140	26	None	0

GeoStrata

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Profile-C Pseudo Static

Six Blue Bison, LLC
Summit Pointe Subdivision
Alpine, UT
Project Number: 1312-003

Plate D-6

LONE PEAK FIRE DISTRICT
5582 Parkway West Drive
Highland, Utah 84003
(801) 763-5365
www.lonepeakfire.com

Reed M. Thompson, Fire Chief

MEMORANDUM

Date: 13 April 2020

To: Jed Muhlestein, City Engineer, Alpine City
Cc: Austin Roy, City Planner, Alpine City

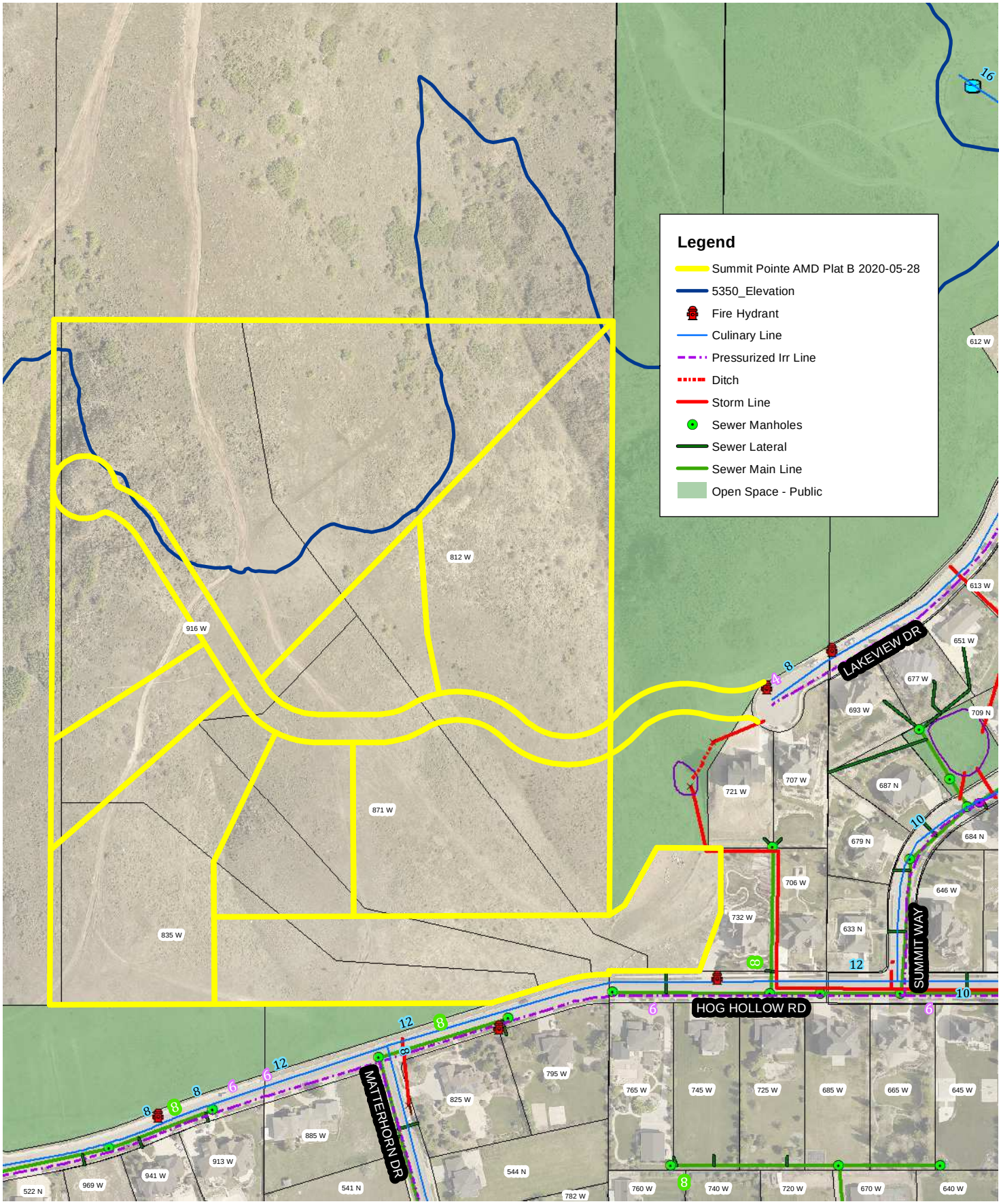
From: Reed M. Thompson, Fire Chief

Subject: SUMMIT POINTE SUBDIVISION PLANS AND PLAT B SUMMIT POINTE AMENDED

In review of the proposed site development construction drawings for "Summit Pointe Amended Subdivision", dated 27 March 2019, and "Plat B Summit Pointe Amended", dated 27 March 2020, please note:

- The date listed on the plans references 2019, but is actually 2020.
- The proposed westerly cul-de-sac on the plans will make a fire access connection to a road in Draper City. In order to approve these lots, this connection is required due to the length of the road with relationship to the existing length of Lakeview Drive. Any gate and/or associated access road needs to meet structural standards established in the currently approved International Fire Code.
- In the cover page or construction notes on Sheet C000 language needs to identify that this project is within the Wildland Urban Interface Boundary and as such is subject to compliance with the Alpine City Sensitive Land Ordinance.

If you have further questions regarding this information, please contact me directly.



Property Boundaries and Utilities are shown for reference only. Though shown generally close, a survey and Blue Stake should be done to locate both accurately.

SUMMIT POINT AMENDED PROPOSAL MAY 2020

0 75 150 300 450 600 Feet

ALPINE CITY ESTABLISHED 1850

N

ALPINE CITY
STAFF REPORT
May 29, 2020

To: Alpine City Council & Planning Commission

From: Staff

Prepared By: Austin Roy, City Planner
Planning & Zoning Department

Jed Muhlestein, City Engineer
Engineering & Public Works Department

Re: **Summit Pointe Amended Plat B**

Applicant:	Jake Satterfield, representing Six Blue Bison, LLC
Project Location:	West end of Lakeview Drive
Zoning:	CR-40,000 Zone
Acreage:	8-Lots on Approximately 32.94 Acres
Lot Size:	Lots range from 0.95 acres to 5.44 acres
Request:	Recommend approval of the plat amendment

SUMMARY

Developer, Six Blue Bison LLC, is seeking to amend the recorded plat for the Summit Pointe Subdivision. The existing recorded plat is a 4-lot subdivision with lots ranging in size from 3.96 acres to 12.73 acres. The proposed plat amendment is for an 8-lot subdivision with lots ranging in size from 1.25 acres to 9.13 acres. Access to the existing lots on the recorded plat is through an approved private shared driveway. The plat amendment seeks to do away with the private shared driveway and proposes access to the 8-lots via public street through an extension of Lakeview Drive (west end of Lakeview Drive).

BACKGROUND

In late 2017 the Summit Pointe Subdivision changed ownership, with the developer, Six Blue Bison LLC acquiring the land. The land acquired included a recorded 4-lot subdivision with a shared private driveway, and frontage off Hog Hollow Road.

In February of 2018, the developer presented a proposed plat amendment for the Summit Pointe Subdivision which showed 15 lots and a road extending Lakeview Drive and stubbing into

Draper City. Some of the lots included in this plan were above the elevation of 5350, which could not be serviced by the City's water system. These plans were not approved.

In January 2019, the developer returned with a revised plat amendment but did not take plans to City Council for final approval. The developer has since reworked plans and is now returning with the latest draft of the plat amendment.

ANALYSIS

General Plan
Previous drafts of this plan showed a free-flowing access into Draper City. The plat amendment now proposes a cul-de-sac with a fire access connection, which meets the City's General Plan.

Location
Summit Pointe is located within the CR-40,000 zone. The Development Code requires all lots within this zone to be at least 40,000 sq. ft. in size. The smallest lot on the proposed plat amendment is 1.25 acres (54,498 sq. ft.), which meets the minimum requirement for the zone.

Frontage
Each lot meets the City's frontage requirements, plat does not show any lot with less than 110 feet of frontage on a public street.

Use
Single-unit detached dwellings, which is the proposed use for lots as shown on the plat amendment, are a permitted use in the zone. The developer has not proposed any other uses.

Sensitive Lands (Wildland Urban Interface)
The Summit Pointe Subdivision is located within the Wildland Urban Interface, which is part of the sensitive lands. Being located in the wildland interface, all lots in the proposed amendment would be required to meet the standards required by code, which includes: fire-sprinklers throughout the home for all homes, appropriate roof coverings, and minimum vegetative clearance around the homes.

All developments in the wildland interface require more than one point of access (point of ingress and egress) for emergencies. Both ends of the proposed road would need to be a working access to meet this requirement. See attached Memo from Lone Peak Fire Department for more details.

Parcel A
The developer is proposing to dedicate approximately 3.69 acres (Parcel A) to the City for storm water detention and debris field storage.

Trails

The trail master plan shows a trail running through the Summit Pointe property. The plat amendment has reserved a PUE in Parcel A for a potential trail easement that could be used to connect Alpine City open space.

REVIEWS

PLANNING AND ZONING DEPARTMENT REVIEW
The analysis section in the body of this report serves as the Planning and Zoning Department review.

ENGINEERING AND PUBLIC WORKS DEPARTMENT REVIEW
Streets
In terms of streets, Summit Pointe Amended proposes to extent Lakeview Drive and replace an approved (yet not existing) shared driveway system to four lots with a public right of way system that gives access to eight lots. Proposed at the end of Lakeview Drive is a gated secondary access which leads to a roadway system in Draper City. **The specific style, type, and operation of the gate, as well as the secondary access roadway design, must be reviewed and approved by the Fire Chief prior to installation.** At this time, to plans do not show what the secondary access roadway surface will be built from. The plat and plans show only a 26 feet wide easement for this access. Per City Standard details, this easement should be a minimum of 54 feet wide. This requirement is redlined on the plat and plans and included in the sample motion as being part of the redlines that need corrected.

In 2019 the applicant submitted a Traffic Impact Study (TIS) for an alternative version of this development with a more intensive traffic pattern scenario. At that time, the proposal was to have Lakeview Drive extend into Draper City and allow traffic to flow freely between the two cities. That proposal was not well received, and the plan has been updated with more of a "dead end" scenario where the secondary access is gated. No public access exits between the two cities (secondary access only). There is no need to update or submit a new TIS for four more lots above what is already approved. With the road open to both cities and free flowing (which this plan does NOT propose), the results showed traffic volumes on all studied Alpine City streets to be currently operating at a Level of Service A and would continue to operate at a Level of Service A in the future. The report can be provided if requested.

As with any development, frontage improvements are required. The property has frontage along 600 North that currently is not improved with sidewalk. The plans show completion of frontage improvements (a five-foot wide sidewalk) to be built at this location. The plans also show frontage improvements from where connection is shown on Lakeview Drive, to the development, and through the development.

In all but one location grading of roads appears to follow ordinance which limits grading to 50 feet from the right-of-way. The distance between the right-of-way and 50-foot grading limit is called the "50' CLEAR ZONE," as can be found in the cities adopted Construction Standard Specifications. The grading for the cul-de-sac is 63 feet beyond the right-of-way, which is 13 feet greater than that allowed by city specifications. The only option around this would be to add

a retaining wall, which for 13 feet of extra grading, is not worth the future maintenance of a retaining wall which the City would inherit. **Staff would recommend an exception to the 50 Clear Zone rule in this instance**. Retaining walls are shown to help keep the other areas of roadway grading within the 50-Foot Clear Zone. All walls appear to meet ordinance which limits the exposed height of any single wall to 9 feet. **Redirock retaining walls are proposed and will require a separate building permit prior to construction.** Landscaping between tiers of walls would most likely be required on the downhill facing retaining walls, viewable from 600 North. This will be evaluated at the building permit level.

Road grades and curvature also appear to meet ordinance except in the cul-de-sac where the final running slope of the bubble is 1% greater than allowed. This has been redlined for the Developer to correct.

Alpine City specifications require escrow funds for a roadway preservation coat (See Alpine City Construction Standard Specifications 300.030 & 600.020). The amount for this requirement will be calculated based on current preservation coat costs at the time of recording. **The escrow funds for this roadway preservation coat will be required of the Developer prior to recording.**

Culinary and Pressurized Irrigation

Plans were provided for the new roadway and infrastructure which show new culinary and secondary water services to each new lot. The culinary system shows connection of a new 14" main to the existing 12" main in Lakeview Drive. A small portion of existing 8" main would need removed for this connection to take place. The buildable areas of each lot are below the 5350-foot elevation line (lot 8's is redlined on the plat for this), the elevation at which the current system can provide the minimum pressures and adequate fire flows. New culinary services are shown for each lot.

The currently recorded subdivision (Summit Pointe Plat A) has a 1-acre watering restriction for each lot. **Engineering recommends the same water restriction of 1-acre of irrigable area be included with this plat amendment. Engineering also recommends that only xeriscape or drip irrigation be allowed above the elevation of 5350** due to the water systems not being able to provide adequate pressure for any other type of outdoor water usage above that elevation. It needs to be clear that drip irrigation areas count as part of the irrigable area calculations. These items are redlined on the plans.

The pressurized irrigation system shows a new 6" main connecting to an existing 4" main in Lakeview Drive. We know from previous modeling for the property that these line sizes are adequate to provide the minimum pressures required by ordinance. Having said that, the pressurized irrigation lines would remain dry until offsite system improvements are made to the high zone to help with current pressure problems occurring in the high zone. New pressurized irrigation services are shown for each lot.

Sewer and Storm Drain

The sewer main is shown to connect to the existing system in 600 North/Hog Hollow providing gravity sewer flow to the development. New 4-inch sewer services are shown for each lot.

The storm drain system collects water near the east side of the development and will convey it to a detention pond on the south east side, near Hog Hollow. It will drain into the existing system on Hog Hollow where a connection to the existing system would be made.

Hazard Studies
The property is situated within the Wildland/Urban Interface and includes areas, classified by city hazard maps, to be evaluated for several things including rockfall, slide, and debris flow. A geotechnical report and hazards report have been turned in with the application. Worth mentioning is debris flows.

Debris flow events are common shortly after fires, as the City has experienced in the past. The report recommends that flows from such an event should be accounted for in the storm drain calculations for the proposed culvert that passes water under Lakeview Drive and the detention basin below. The Developer has chosen to use an area that was previously shown as a buildable lot for the location of the debris flow and storm drain basin. This lot was in the direct path of a potential debris flow event. Because of this, the plans show building a debris flow basin/storm drain basin at this location and dedicate the land to Alpine City.

Other
A bond would be required for the proposed infrastructure. **The developer needs to submit a cost estimate for the proposed public improvements** so one can be created.

The water policy would need to be met for the development. The water requirement can be either provided with Alpine Irrigation Co. shares, by purchasing water credits that people have with the City, or cash can be paid in lieu of water rights if City Council approval is obtained. The water policy was previously met for the Summit Pointe Plat A, there would be credit given for what was already turned in.

A Land Disturbance Permit would be required prior to construction which ensures a Storm Water Pollution Prevention Plan (SWPPP) is followed. All disturbed areas of the site are required to be revegetated after construction.

There are several redlines for both the plat and plans that would need corrected prior to construction and recordation of the plat.

The majority of the buildable area for Lot 6 resides over 200 feet uphill from the road. Similar to Lot 3, **Staff recommends the Developer provide a driveway design and a fire hydrant near the buildable area of Lot 6 that would meet fire code requirements.**

LONE PEAK FIRE DEPARTMENT REVIEW
See attached Lone Peak Fire Department Review of the proposed plat amendment.

NOTICING
Notice has been properly issued in the manner outlined in City and State Code

STAFF RECOMMENDATION

Review staff report and findings and make a recommendation to City Council to either approve or deny the proposed plat amendment. Findings are outlined below.

Findings for a Positive Motion:

A. With redlines corrected, the plans meet ordinance.
B. The Developer has provided a geotechnical report, geologic hazard report, debris flow analysis, and storm drain design report which show the area is safe to build on and that the design follows city standards.
C. The plan follows the City's General Plan by NOT showing a free-flowing access into Draper City.
D. Frontage improvements are shown throughout the development and beyond where it connects to Lakeview Drive.

Findings for Negative Motion:

A. The plan requires an exception to the 50-foot clear zone rule.
B. No details for the gate or secondary access road were provided.
C. Roadway grades do not follow ordinance in the cul-de-sac.
D. Plans do not show adequate easement area for the secondary access road.

MODEL MOTIONS

SAMPLE MOTION TO APPROVE

I motion to recommend approval of Summit Pointe Amended Plat "B" with the following conditions:

- **An exception be granted for the excess grading beyond the 50-foot clear zone;**
- **The Developer work with the Fire Chief for approval on the gate design, secondary access road, and Lot 6 driveway/fire protection improvements;**
- **The Developer obtain a retaining wall permit prior to construction;**
- **The Developer place a note on the plat regarding the 1-acre irrigable area watering restriction and that only Xeriscape or drip irrigation be allowed above the 5350 elevation;**
- **The Developer provide a cost estimate and escrow funds for roadway preservation;**
- **The Developer address redlines on the plat and plans;**
- **The Developer meet the water policy.**

SAMPLE MOTION TO DENY

I motion to recommend that the plat amendment Summit Pointe Amended Plat "B" be denied based on the following:

- ***Insert Findings***

FY2021 Final Budget Document

July 1, 2020 – June 30, 2021

June 19, 2020

Budget Message

As per Utah Code, Alpine City has prepared the following tentative budget for fiscal year 2021, beginning July 1, 2020 and ending June 30, 2021. Th proposed budget is balanced, meaning that operating expenditures do not exceed operating revenues. In some cases, funds are being pulled from reserves for capital projects.

Following are some budget highlights:

- Revenues: Due to the COVID-19 pandemic partially shutting down the economy, we anticipate a reduction in sales tax revenue and potentially lower collections rates of property taxes. Every city in the state is faced with how to forecast this reduction in revenue. The two month lag in when we receive sales tax revenue makes forecasting future revenue difficult. The tentative budget anticipates full collection of property taxes and a $280K reduction (20%) in sales tax revenue below what we would have budgeted for the coming year. We anticipate a reduction in Class C road fund and mass transit funds as well. The proposed budget reflects what we would anticipate collecting on a normal year. We have reserves in these funds that will make up any shortfall in revenues for planned projects. We believe this is planning for the worst case, but adjustments will need to be made as revenues come in through the end of the current fiscal year. General fund projects that are included in the budget will be temporarily put on hold until we evaluate our revenues part way through the budget year.
- Merit Increase: The current budget includes a 2% merit increase, however we are recommending that we not implement this until revenues are evaluated in the fall. We are proposing that if and when it is determined to move forward with the increase, that it be made retroactive to July 1.
- Benefits: Medical and dental insurance rates will increase 5.8% and 1.9%, respectively.
- Capital Projects: Several general fund capital projects have been postponed for the FY2020 budget year. These projects have been included in the FY2021 budget, however projects that can wait will be put off until later in the new budget year. There are several projects that will be funded by Class C road funds (restricted funds) and some enterprise fund projects that we plan to move ahead on.
- Equipment Replacement: This budget anticipates the purchase of one new pickup that was put on hold in the FY2020 budget year. In addition, several equipment lease payments are included.
- Personnel: The proposed budget includes two part-time positions that would take portions of responsibilities from the previously included events coordinator position, including HR and trails/open space/recreation responsibilities. We propose to put a hold on filling these positions until later in the budget year after revenues are solidified.
- Solid Waste: The proposed budget includes a 3.1% COLA for ACE Disposal. We will evaluate this increase during the budget year to determine if a garbage rate increase

will be necessary. Since Timpanogas Special Service District will be eliminating the green waste program, there could be an upswing in green waste going in garbage cans which would in turn increase tonnage and tipping fees. We are looking at options for green waste that will be brought before the City Council at a later date.

- Pressurized Irrigation: The City recently refinanced the remaining balance of our PI bond and added an additional $1M to fund the construction of a pump station that will allow the City to use its allocation of CUP water and some other capital projects that will be required to put this water to use. In addition, we are in the process of a rate study that should be complete sometime this year.
- Lone Peak Public Safety District: Overall, the City's public safety district budgeted cost is down approximately $30,000. The way benefits and some other items have been budgeted were re-evaluated in this budget, which led to some savings. The Lone Peak Public Safety District Board voted to purchase a new ambulance with surplus funds from the FY2020 budget year. The LPPSD budget includes a 2% merit increase for employees, subject to the same terms proposed for city employees.
- CARES Act Funding: The City will be receiving an allocation of the CARES Act funds from Utah County. This revenue has not been included in the proposed budget. Once we get the details of the funding and determine how the funds will be spent, we will present a budget amendment to the City Council for approval.

We do not anticipate a property tax increase for this budget. If you have any questions regarding the budget, please contact Shane L. Sorensen, P.E., City Administrator, at ssorensen@alpinecity.org or 801-756-6347.

FY2021 Final Budget

Alpine City - General Fund
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Taxes			
Property taxes	$ 1,248,538	$ 1,773,635	$ 1,800,000
Redemption taxes	121,940	145,000	145,000
Sales tax	1,388,545	1,300,000	1,120,000
Motor vehicle taxes	105,355	110,000	110,000
Franchise fees	627,050	660,000	675,000
Penalties & interest on delinquent	4,395	4,000	4,000
Total Taxes	**$ 3,495,823**	**$ 3,992,635**	**$ 3,854,000**
License and Permits			
Business licensed & fees	$ 24,030	$ 25,000	$ 25,000
Plan check fees	165,492	175,000	175,000
Building permits	287,261	350,000	350,000
Building permit assessment	2,798	2,800	3,000
Total License and Permits	**$ 479,581**	**$ 552,800**	**$ 553,000**
Intergovernmental Revenue			
Municipal recreation grant	$ 5,298	$ 5,400	$ -
Total Intergovernmental	**$ 5,298**	**$ 5,400**	**$ -**
Charges For Service			
Zoning & subdivision fees	$ 27,293	$ 20,000	**$ 30,000**
Annexation applications	-	500	500
Sale of maps and publications	60	250	250
Public safety district rental	67,403	38,516	**42,500**
Waste collections sales	593,273	550,000	600,000
Youth council	651	-	-
Sale of cemetery lots	6,649	5,000	7,500
Burial fees	42,775	45,000	50,000
Total Charges for Service	**$ 738,104**	**$ 659,266**	**$ 730,750**
Fines and Forfeitures			
Fines	$ 29,492	$ 45,000	$ 25,000
Other fines	39,059	32,500	40,000
Traffic school	8,743	5,000	7,500
Total Fines and Forfeitures	**$ 77,294**	**$ 82,500**	**$ 72,500**
Rents & Other Revenues			
Recycling	$ -	$ -	$ -
Rents & concessions	59,611	65,000	65,000
Sale of City land	-	-	-
Total Rents & Other Revenues	**$ 59,611**	**$ 65,000**	**$ 65,000**

Alpine City - General Fund-Continued
FY 2020/2021 Budget

Revenues-continued	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Interest & Misc Revenues			
Interest earnings	$ 47,122	$ 80,000	$ 100,000
Alpine Days revenue	98,393	75,000	**85,000**
Rodeo revenue	27,049	20,000	20,000
Bicentennial books	360	500	500
Donations	-	-	-
Sundry revenues	56,426	30,000	45,000
Total Miscellaneous Revenues	**$ 229,350**	**$ 205,500**	**$ 250,500**
Transfers & Contributions			
Fund balance appropriation	$ -	$ 61,050	$ -
Admin Fees Water Fund	-	-	-
Contribution for paramedic	31,671	30,000	35,000
General sales & use tax	1,000,000	-	-
Admin Fees Sewer Fund	-	-	-
Total Contributions & Transfers	**$ 1,031,671**	**$ 91,050**	**$ 35,000**
Total General Fund Revenues	**$ 6,116,732**	**$ 5,654,151**	**$ 5,560,750**

Alpine City - General Fund-Continued
FY 2020/2021 Budget

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Administration	$ 439,453	$ 425,150	$ 454,290
Court	99,206	95,200	95,200
Treasurer	39,812	43,250	46,550
Elections	-	13,500	500
Government Buildings	55,989	98,000	209,000
Emergency Services	1,980,171	2,408,806	2,383,630
Building Inspection	152,039	165,150	166,600
Planning & Zoning	215,365	214,050	226,650
Streets	433,784	605,350	597,700
Parks & Recreation	399,552	445,250	473,120
Cemetery	136,263	154,700	158,570
Garbage	558,515	494,200	539,600
Miscellaneous	1,080,435	491,545	209,340
Total General Fund Expenditures	**$ 5,590,584**	**$ 5,654,151**	**$ 5,560,750**
Surplus/(Deficit)	**$ 526,148**	**$ -**	**$ -**

CLASS C ROADS
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Interest earnings	$ 24,699	$ 18,000	$ 18,000
Mass transit tax	2,055	-	107,000
Class "B&C" Road allotment	483,869	425,000	430,000
Appropriation of fund balance	-	227,000	165,000
Total Revenues	**$ 510,623**	**$ 670,000**	**$ 720,000**

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Miscellaneous	$ -	$ -	$ -
Mass transit projects	-	-	107,000
Class "B&C" road projects	309,615	670,000	613,000
Reserves	-	-	-
Total Capital Expenditures	**$ 309,615**	**$ 670,000**	**$ 720,000**
Surplus/(Deficit)	**$ 201,008**	**$ -**	**$ -**

Recreation Impact Fee Funds
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020		Proposed Budget FY 2021
Recreation facility fees	$ 88,704	$ 115,000	# $	200,000
Interest earnings	20,512	15,000		15,000
Appropriation of fund balance	-	70,000		-
Total Revenues	**$ 109,216**	**$ 200,000**	**$**	**215,000**

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Timp Spec Serv Dist Impact Fee	$ -	$ -	$ -
Park system	50,556	200,000	215,000
Miscellaneous	-	-	-
Total Capital Expenditures	**$ 50,556**	**$ 200,000**	**$ 215,000**
Surplus/(Deficit)	**$ 58,660**	**$ -**	**$ -**

Impact Fee Funds Streets
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Streets & transportation fees	$ 55,826	$ 105,000	# $ 75,000
Timpanogoas Sewer Hook On Fee	-	-	-
Interest earnings	7,873	-	-
Appropriation of fund balance	-	-	-
Total Revenues	**$ 63,699**	**$ 105,000**	**$ 75,000**

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Streets & transport	$ -	$ 105,000	$ 75,000
Reserves	-	-	-
Total Capital Expenditures	**$ -**	**$ 105,000**	**$ 75,000**
Surplus/(Deficit)	**$ 63,699**	**$ -**	**$ -**

Alpine City - Capital Projects Fund
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Interest revenue	$ 94,104	$ 15,000	$ 18,000
Transfer from General Fund	200,000	-	-
Contributions from builders	9,793	-	-
Miscellaneous	891	-	-
Fund Balance appropriation	-	389,000	430,900
Total Revenues	**$ 304,788**	**$ 404,000**	**$ 448,900**

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Capital outlay other	$ 92,074	$ 377,500	$ 437,500
Capital outlay buildings	-	-	-
Transfer to GF	1,000,000	-	-
Capital outlay equipment	2,447	26,500	11,400
Total Capital Expenditures	**$ 1,094,521**	**$ 404,000**	**$ 448,900**
Surplus/(Deficit)	**$ (789,733)**	**$ -**	**$ -**

Alpine City - Water Utility
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Operating Revenues			
Metered water sales	$ 715,424	$ 725,000	$ 750,000
Other water revenue	12,091	12,500	20,000
Water connection fee	15,345	17,500	20,000
Penalties	3,525	5,500	5,700
Total Miscellaneous Revenues	**$ 746,385**	**$ 760,500**	**$ 795,700**
Miscellaneous			
Interest earned	$ 66,524	$ 32,500	$ 35,000
Develpers contribution	72,623	-	-
Appropriated fund balance	-	301,275	363,300
Total Utility Revenue	**$ 139,147**	**$ 333,775**	**$ 398,300**
Total Utility Fund Revenues	**$ 885,532**	**$ 1,094,275**	**$ 1,194,000**

Expenses	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Water operating	$ 408,355	$ 416,000	$ 422,600
Depreciation	280,571	255,000	255,000
Capital outlay- Buildings	-	25,000	5,000
Capital outlay- Improvements	-	325,000	500,000
Capital outlay- Equipment	-	10,500	11,400
Total Utility Fund Expenses	**$ 746,258**	**$ 1,031,500**	**$ 1,194,000**
Surplus/(Deficit)	**$ 139,274**	**$ 62,775**	**$ -**

Impact Fee Funds Water Impact Fees
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Water Impact Fees	$ 71,872	$ 75,000	# $ 100,000
Interest earnings	9,251		
Appropriation of fund balance	-	-	-
Total Revenues	**$ 81,123**	**$ 75,000**	**$ 100,000**

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Impact fee projects	$ 0	$ 75,000	$ 100,000
To reserves	-	-	-
Total Capital Expenditures	**$ 0**	**$ 75,000**	**$ 100,000**
Surplus/(Deficit)	**$ 81,123**	**$ -**	**$ -**

Alpine City - Sewer Utility
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Operating Revenues			
Sewer system sales	$ 1,007,356	$ 1,025,000	$ 1,025,000
Other revenue	-	10,000	10,000
Sewer connection fee	5,125	5,000	5,000
Developers Contributions	26,368	-	-
Total Miscellaneous Revenues	**$ 1,038,849**	**$ 1,040,000**	**$ 1,040,000**
Miscellaneous			
Interest earned	$ 61,548	$ 20,000	$ 22,000
Appropriated fund balance	-	36,250	38,850
Total Utility Revenue	**$ 61,548**	**$ 56,250**	**$ 60,850**
Total Utility Fund Revenues	**$ 1,100,397**	**$ 1,096,250**	**$ 1,100,850**

Expenses	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Sewer operating	$ 865,074	$ 890,750	$ 894,450
Depreciation	164,184	130,000	130,000
Capital outlay- Improvements	-	65,000	65,000
Capital outlay- Equipment	-	10,500	11,400
Total Utility Fund Expenses	**$ 1,029,258**	**$ 1,096,250**	**$ 1,100,850**
Surplus/(Deficit)	**$ 71,139**	**$ -**	**$ -**

Alpine City - Sewer Impact Fee Funds
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Sewer Impact Fees	$ 17,735	$ 20,000	# $ 22,000
Interest earnings	1,893	-	-
Appropriation of fund balance	-	-	-
Total Revenues	**$ 19,628**	**$ 20,000**	**$ 22,000**

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Sewer Impact fee projects	$ 0	$ 20,000	$ 22,000
To reserves	-	-	-
Total Capital Expenditures	**$ 0**	**$ 20,000**	**$ 22,000**
Surplus/(Deficit)	**$ 19,628**	**$ -**	**$ -**

Alpine City - PI Fund
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Operating Revenues			
Irrigation water sales	$ 917,867	$ 900,000	$ 925,000
Other revenue	550	1,000	1,000
PI connection fee	25,650	15,000	40,000
PI Grant project	989,081	520,841	-
Developer Contributions	54,812	-	-
Total Miscellaneous Revenues	**$ 1,987,960**	**$ 1,436,841**	**$ 966,000**
Miscellaneous			
Interest earned	$ 45,893	$ 20,000	$ 22,000
Appropriated fund balance	-	374,368	262,804
Total Utility Revenue	**$ 45,893**	**$ 394,368**	**$ 284,804**
Total Utility Fund Revenues	**$ 2,033,853**	**$ 1,831,209**	**$ 1,250,804**

Expenses	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
PI operating	$ 520,655	$ 577,200	$ 583,300
Depreciation	248,448	223,704	223,704
Amortization	26,623	-	-
Capital Outlay	-	150,000	50,000
PI Project	-	-	-
Capital Outlay- Equipment	-	10,500	11,400
Bond costs	4,500	4,500	4,500
Debt Service	97,266	465,305	377,900
Total Utility Fund Expenses	**$ 897,492**	**$ 1,831,209**	**$ 1,250,804**
Surplus/(Deficit)	**$ 1,136,361**	**$ -**	**$ -**

Alpine City - Pressure Irrigation Impact Fee Funds
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
PI Impact Fees	$ 74,006	$ 80,000	# $ 90,000
Interest earnings	3,901	-	-
Appropriation of fund balance	-	-	-
Total Revenues	**$ 77,907**	**$ 80,000**	**$ 90,000**

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
PI Impact fee projects	$ -	$ 80,000	$ 90,000
Debt Service	-	-	-
To reserves	-	-	-
Total Capital Expenditures	**$ -**	**$ 80,000**	**$ 90,000**
Surplus/(Deficit)	**$ 77,907**	**$ -**	**$ -**

Alpine City - Storm Drain Fund
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Operating Revenues			
Storm drain revenue	$ 171,675	$ 175,000	$ 180,000
Other revenue	-	1,000	1,000
SWPP fee	10,200	10,000	14,000
Storm drain impact fee	-	-	-
Total Miscellaneous Revenues	**$ 181,875**	**$ 186,000**	**$ 195,000**
Miscellaneous			
Interest earned	$ 17,340	$ 8,000	$ 10,000
Developer Contributions	135,619	-	-
Appropriated fund balance	-	105,650	88,350
Total Utility Revenue	**$ 152,959**	**$ 113,650**	**$ 98,350**
Total Utility Fund Revenues	**$ 334,834**	**$ 299,650**	**$ 293,350**

Expenses	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
SD operating	$ 100,059	$ 106,150	$ 109,850
Depreciation	123,865	83,500	83,500
Capital outlay	(0)	110,000	100,000
Total Utility Fund Expenses	**$ 223,924**	**$ 299,650**	**$ 293,350**
Surplus/(Deficit)	**$ 110,910**	**$ -**	**$ -**

Alpine City - Storm Drain Impact Fee Funds
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020		Proposed Budget FY 2021
SD Impact Fees	$ 29,200	$ 55,000	# $	45,000
Interest earnings	5,222	-		-
Appropriation of fund balance	-	-		-
Total Revenues	**$ 34,422**	**$ 55,000**	**$**	**45,000**

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
SD Impact fee projects	$ -	$ 55,000	$ 45,000
To reserves	-	-	-
Total Capital Expenditures	**$ -**	**$ 55,000**	**$ 45,000**
Surplus/(Deficit)	**$ 34,422**	**$ -**	**$ -**

Alpine City - Trust & Agency Fund
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Interest revenue	$ 4,963	$ 1,000	$ 1,000
Total Revenues	**$ 4,963**	**$ 1,000**	**$ 1,000**

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Miscellaneous expenses	$ -	$ 1,000	$ 1,000
Total Expenditures	**$ -**	**$ 1,000**	**$ 1,000**
Surplus/(Deficit)	**$ 4,963**	**$ -**	**$ -**

Alpine City - Cemetery Perpetual Fund
FY 2020/2021 Budget

Revenues	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Cemetery lot payments	$ 19,946	$ 13,000	$ 20,000
Upright Monument	1,275	2,500	2,500
Interest revenues	17,233	2,500	3,000
Appropriate fund balance	-	-	-
Total Revenues	**$ 38,454**	**$ 18,000**	**$ 25,500**

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Cemetery expenses	$ 9,850	$ 18,000	$ 25,500
Total Expenses	**$ 9,850**	**$ 18,000**	**$ 25,500**
Surplus/(Deficit)	**$ 28,604**	**$ -**	**$ -**

Budget Detail

Alpine City - General Fund-Continued
Administration
FY 2020/2021 Budget

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Salaries and Wages	$ 209,309	$ 215,000	$ 214,440
Employee Benefits	95,140	93,500	92,850
Overtime Wages	287	1,500	1,500
Books, Subscriptions, & Members	17,268	18,000	18,000
Public Notices	1,754	4,500	4,500
Travel	1,618	2,500	2,500
Office Supplies & Postage	12,638	15,000	15,000
Equipment - Supplies & Mainten	987	1,500	1,500
Telephone	5,815	5,500	5,500
Professional Services	67,190	30,000	60,000
Education	875	150	500
Council Discretionary Fund	11,180	15,000	15,000
Mayor Discretionary Fund	2,970	8,000	8,000
Insurance	8,776	10,500	10,500
Other Services	295	500	500
Other Expenses	3,351	4,000	4,000
Total Administration	**$ 439,453**	**$ 425,150**	**$ 454,290**

Alpine City - General Fund-Continued
Court
FY 2020/2021 Budget

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Office Expense & Postage	$ 34,779	$ 30,000	$ 30,000
Professional Services	37,639	40,000	40,000
Witness Fees	-	200	200
Victim Reparation Assessment	26,788	25,000	25,000
Total Court	**$ 99,206**	**$ 95,200**	**$ 95,200**

Alpine City - General Fund-Continued
FY 2020/2021 Budget

Treasurer

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Salaries and Wages	$ 14,465	$ 14,300	$ 14,500
Employee Benefits	8,944	10,500	10,850
Overtime wages	206	-	500
Books, Subscriptions, & Members	1,089	500	1,000
Travel	1,234	500	750
Office Supplies & Postage	-	750	250
Professional & Technical	3,925	5,200	5,200
Education	149	500	500
Accounting Services/Audit	9,800	11,000	13,000
Total Treasurer	**$ 39,812**	**$ 43,250**	**$ 46,550**

Elections

Alpine City - General Fund-Continued
FY 2020/2021 Budget

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Office Expense, Supplies & Pos	$ -	$ 500	$ 500
Miscellaneous Services	-	13,000	-
Total Elections	**$ -**	**$ 13,500**	**$ 500**

Alpine City - General Fund-Continued
Government Buildings FY 2020/2021 Budget

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Building Supplies	$ 2,767	$ 4,000	$ 7,000
Utilities	15,530	20,000	18,000
Insurance	8,776	9,000	9,000
Other Services	9,367	20,000	15,000
Capital Outlay Buildings	19,549	45,000	160,000
Total Government Buildings	**$ 55,989**	**$ 98,000**	**$ 209,000**

Emergency Services

Alpine City - General Fund-Continued
FY 2020/2021 Budget

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Police	$ 1,105,583	$ 1,192,728	$ 1,208,980
Fire	801,152	1,133,428	1,090,500
Administration	73,436	77,650	79,150
Police - Additional Enforcement	-	5,000	5,000
Total Emergency Services	**$ 1,980,171**	**$ 2,408,806**	**$ 2,383,630**

Alpine City - General Fund-Continued
Building Inspection FY 2020/2021 Budget

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Salaries and Wages	$ 37,685	$ 37,850	$ 38,500
Employee Benefits	17,169	20,800	21,600
Overtime Wages	143	2,000	2,000
Books, Subscriptions, & Members	135	500	500
Office Supplies & Postage	84	500	500
Telephone	684	1,000	1,000
Contract/Building Inspector	84,921	90,000	90,000
Insurance & Surety Bonds	8,776	10,000	10,000
Building Permit Surcharge	2,442	2,500	2,500
Total Building Inspection	**$ 152,039**	**$ 165,150**	**$ 166,600**

Alpine City - General Fund-Continued
FY 2020/2021 Budget

Planning & Zoning

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Salaries and Wages	$ 110,061	$ 115,700	$ 117,800
Employee Benefits	68,657	57,900	60,100
Overtime Wages	2,197	1,000	2,000
Books, Subscriptions, & Members	-	2,200	1,000
Travel	508	1,500	1,500
Office Supplies & Postage	1,064	3,000	1,500
Professional Services	32,626	30,000	40,000
Legal Services For Subdivis	-	2,000	2,000
Education	252	750	750
Total Planning & Zoning	**$ 215,365**	**$ 214,050**	**$ 226,650**

Alpine City - General Fund-Continued
FY 2020/2021 Budget

Streets

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Salaries and Wages	$ 90,431	$ 88,500	$ 89,850
Employee Benefits	66,696	58,000	58,950
Overtime Wages	11,231	11,000	11,000
Travel	362	1,000	1,000
Office Supplies & Postage	-	400	400
Equipment - Supplies & Maintenance	32,378	36,000	42,000
Street Supplies and Maintenance	47,140	70,000	65,000
Utilities	454	500	500
Telephone	1,037	900	900
Power- Street Lights	50,885	50,000	40,000
Insurance	8,776	11,950	10,000
Other Services	7,925	12,000	12,000
Other Expenses	25,517	3,500	3,500
Capital Outlay- Other Than Building	5,220	200,000	200,000
Capital Outlay- Equipment	85,732	61,600	62,600
Total Streets	**$ 433,784**	**$ 605,350**	**$ 597,700**

Alpine City - General Fund-Continued
Parks & Recreation — FY 2020/2021 Budget

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Salaries and Wages	$ 45,097	$ 46,500	$ 46,900
Wages Temporary Employees	26,651	28,500	30,570
Employee Benefits	32,015	30,100	31,500
Overtime Wages	1,253	1,500	1,500
Travel	582	1,000	1,000
Office Supplies & Postage	1,226	1,500	1,500
Equipment - Supplies & Maintenance	23,995	25,000	25,000
Building And Grounds Supplies	32,194	26,500	36,000
Utilities	10,955	10,500	65,000
Telephone	947	1,000	1,000
Insurance & Surety Bonds	8,776	10,500	10,500
Deer Population Control	-	40,000	-
Rodeo	29,447	25,000	25,000
Other Expenses	23,830	19,000	19,000
Alpine Days	119,458	134,450	134,450
Moyle Park	4,910	9,000	9,000
Library	12,514	11,500	11,500
Youth Council	7,795	5,500	5,500
Book Mobile	13,200	13,200	13,200
Trails	4,707	5,000	5,000
Total Parks & Recreation	**$ 399,552**	**$ 445,250**	**$ 473,120**

Alpine City - General Fund-Continued
Cemetery FY 2020/2021 Budget

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Salaries and Wages	$ 46,296	$ 46,500	$ 46,900
Wages Temporary Employees	26,651	28,500	30,570
Employee Benefits	30,914	30,100	31,500
Overtime Wages	1,253	2,000	2,000
Travel	542	500	500
Office Supplies & Postage	-	250	250
Equipment- Supplies & Maintenance	11,617	12,000	12,000
Building and Grounds	9,118	12,000	12,000
Telephone	520	850	850
Insurance & Surety Bonds	8,776	10,000	10,000
Other Services	576	12,000	12,000
Total Cemetery	**$ 136,263**	**$ 154,700**	**$ 158,570**

Alpine City - General Fund-Continued
FY 2020/2021 Budget

Garbage

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Salaries and Wages	$ 56,611	$ 42,500	$ 42,200
Employee Benefits	40,889	26,300	26,400
Overtime wages	7,048	-	500
Office Supplies & Postage	4,222	3,600	3,600
Telephone	358	-	100
Professional & Technical	3,925	4,800	4,800
Technology Update	6,154	5,000	5,000
Tipping Fees	110,453	110,000	110,000
Waste Pickup Contract	326,648	300,000	345,000
Other Expenses	2,207	2,000	2,000
Total Garbage	**$ 558,515**	**$ 494,200**	**$ 539,600**

Alpine City - General Fund-Continued
FY 2020/2021 Budget

Miscellaneous

Expenditures	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Technology Upgrade	$ 10,469	$ 15,000	$ 20,000
Lawsuit	869,726	-	-
Transfer To Capital IMP Fund	200,000	471,545	184,340
Emergency Prep	240	5,000	5,000
Total Miscellaneous	**$ 1,080,435**	**$ 491,545**	**$ 209,340**

Water Fund

Alpine City - Water Utility
FY 2020/2021 Budget

Water Operating Expenses	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Salaries and Wages	$ 128,433	$ 132,000	$ 133,100
Employee Benefits	85,011	82,700	85,100
Overtime Wages	11,384	11,000	11,000
Books, Subscriptions, & Members	996	2,500	2,500
Travel	2,172	3,000	3,000
Office Supplies & Postage	15,316	13,000	15,000
Equipment - Supplies & Mainten	19,500	21,000	21,000
Building and Ground Supplies	41,102	35,000	35,000
Utilities	23,344	25,000	25,000
Telephone	2,131	2,000	2,000
Professional & Technical Services	28,102	18,900	20,000
Education	554	1,000	1,000
Technology Update	9,064	10,000	10,000
Insurance and Surety Bonds	8,763	10,900	10,900
Miscellaneous Services	15,398	33,000	33,000
Other Expenses	17,085	15,000	15,000
General Fund Admin Fees	-	-	-
Total Operating Water Fund Expenses	**$ 408,355**	**$ 416,000**	**$ 422,600**
Depreciation	337,903	255,000	255,000
Capital outlay- Buildings	-	25,000	5,000
Capital outlay- Improvements	-	325,000	500,000
Capital outlay- Equipment	-	10,500	11,400
Total Utility Fund Expenses	**$ 746,258**	**$ 1,031,500**	**$ 1,194,000**
Capital Outlay- Impact Fee	0.32		
	$ 746,258.32		

Sewer Fund

Alpine City - Sewer Utility
FY 2020/2021 Budget

Sewer Operating Expenses	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Salaries and Wages	$ 133,813	$ 132,000	$ 133,100
Employee Benefits	84,779	82,750	85,100
Overtime Wages	11,384	10,500	10,500
Travel	2,224	2,500	2,750
Office Supplies & Postage	11,213	12,000	12,000
Equipment - Supplies & Mainten	8,700	10,000	10,000
Building and Ground Supplies	12,553	12,000	12,000
Utilities	308	500	500
Telephone	1,671	4,250	4,250
Professional & Technical	8,641	8,000	8,000
Technology Update	7,140	6,000	6,000
Timpanogos Special Service District	568,078	598,250	598,250
Other Expenses	14,570	12,000	12,000
General Fund Admin Fees	-	-	-
Total Operating Sewer Fund Expenses	**$ 865,074**	**$ 890,750**	**$ 894,450**
Depreciation	164,184	130,000	130,000
Capital outlay- Improvements	-	65,000	65,000
Capital outlay- Equipment	-	10,500	11,400
Total Utility Fund Expenses	**$ 1,029,258**	**$ 1,096,250**	**$ 1,100,850**
Capital Outlay- Impact Fee	0.19		
	$ 1,029,258.19		

Pressurized Irrigation Fund	Alpine City - PI Fund FY 2020/2021 Budget		
PI Operating Expenses	**Actual FY 2019**	**Budget FY 2020**	**Proposed Budget FY 2021**
Salaries and Wages	$ 79,051	$ 112,500	$ 113,500
Employee Benefits	52,126	72,500	74,600
Overtime Wages	4,489	13,000	13,000
Travel	408	1,200	1,200
Equipment - Supplies & Mainten	31,377	58,000	58,000
Building and Ground Supplies	21,413	12,000	15,000
Utilities	263,716	225,000	225,000
Telephone	1,016	1,500	1,500
Office Supplies & Postage	16,978	12,000	12,000
Professional & Technical Services	1,799	5,000	5,000
Engineer Services	-	10,000	10,000
Technology Update	8,594	7,500	7,500
Annual Audit - Utah Water	-	500	500
Insurance & Surety Bonds	11,080	12,000	12,000
Miscellaneous Services	18,060	33,000	33,000
Other Expenses	10,548	1,500	1,500
Total Operating PI Fund Expenses	**$ 520,655**	**$ 577,200**	**$ 583,300**
Depreciation	248,448	223,704	223,704
Amortization	26,623	-	-
Capital Outlay	-	150,000	50,000
PI Project	-	400,000	-
Capital Outlay- Equipment	-	10,500	11,400
Agents Fees	2,500	2,500	2,500
Trustee Fees	2,000	2,000	2,000
Bond Principal #0352418	-	375,000	342,000
Bond Interest #0352418	97,266	90,305	35,900
Total Utility Fund Expenses	**$ 897,492**	**$ 1,831,209**	**$ 1,250,804**

Storm Drain Fund

Alpine City - Storm Drain Fund
FY 2020/2021 Budget

SD Operating Expenses	Actual FY 2019	Budget FY 2020	Proposed Budget FY 2021
Salaries and Wages	$ 41,856	$ 43,500	$ 46,000
Employee Benefits	28,050	27,500	28,700
Planning	-	500	500
Books, Subscriptions, & Members	75	2,000	2,000
Travel	408	650	650
Office Supplies & Postage	-	2,500	2,500
Building & Ground Supplies	1,241	4,500	4,500
Storm Drain Utilities	-	-	-
Technology Update	6,670	5,000	5,000
Insurance	8,788	10,000	10,000
Miscellaneous Services	12,971	10,000	10,000
Total Operating SD Fund Expenses	**$ 100,059**	**$ 106,150**	**$ 109,850**
Depreciation	123,865	83,500	83,500
Capital Outlay	(0)	110,000	100,000
Total Utility Fund Expenses	**$ 223,924**	**$ 299,650**	**$ 293,350**

Capital Projects

FY 2021 Budget
Capital Projects

Projects	Engineering	Construction	Construction Management	Total	Funding: Government Buildings	Class C	Streets	Capital Imp.	Water Fund	PI Fund	Sewer Fund	SD Fund	Cemetery	Project Total
Street Maintenance Projects (Overlays, Seal Coats, Chip Seals, Crack Seal, Striping, Sidewalks, X-Walks)	$ -	$ 425,000	$ -	$ 500,000		$ 500,000								$ 500,000
800 South Improvement Project	$ 10,000	$ 400,000	$ 10,000	$ 420,000		$ 220,000	$ 200,000							$ 420,000
Hillside Circle Waterline Replacement	$ 10,000	$ 430,000	$ 10,000	$ 450,000					$ 450,000					$ 450,000
CUP Pump Station (City Share)		$ 600,000				Funded through PI bond, payment already in PI fund budget								$ -
Filters at Healey Pumphouse for CUP Water		$ 300,000				Funded through PI bond, payment already in PI fund budget								$ -
PI System Improvements for CUP to High Zone		$ 300,000				Funded through PI bond, payment already in PI fund budget								$ -
Tree Removal/Trimming		$ 5,000		$ 5,000				$ 5,000						$ 5,000
Misc. Sewer Improvements		$ 65,000		$ 65,000							$ 65,000			$ 65,000
Misc. Storm Drain Improvements		$ 100,000		$ 100,000								$ 100,000		$ 100,000
Pickle Ball Courts (4)		$ 100,000						$ 100,000						
Legacy Park Sprinkler Upgrade		$ 10,000		$ 10,000				$ 10,000						$ 10,000
Cemetery Expansion Project	$ 10,000	$ 200,000	$ 10,000	$ 220,000				$ 100,000					$ 120,000	$ 220,000
City Hall - New Shingles		$ 140,000		$ 140,000	$ 140,000									$ -
Lambert Park Improvements														
Fencing		$ 20,000		$ 20,000				$ 20,000						$ 20,000
Signange		$ 2,500		$ 2,500				$ 2,500						$ 2,500
Kiosk		$ 5,000		$ 5,000				$ 5,000						$ 5,000
Trail Work		$ 15,000		$ 15,000				$ 15,000						$ 15,000
Misc. Trail Improvements		$ 20,000		$ 20,000				$ 20,000						$ 20,000
Fire Station Remodel								$ 150,000						$ 150,000
Three Falls Upper Parking Lot								$ 10,000						$ 10,000
Alpine Cove Emergency Connection/PRV									$ 50,000					
				$ 1,972,500	$ 140,000	$ 720,000	$ 200,000	$ 437,500	$ 500,000	$ -	$ 65,000	$ 100,000	$ 120,000	$ 1,992,500

Equipment Replacement

FY 2021 Equipment Replacement Schedule Funding

		Funding Source				
Item	**Budget**	***Capital Imp. Fund***	***Streets (10-60-74)***	***Water***	***Sewer***	***Pressurized Irrigation***
Street Sweeper	$ 51,149	$ -	$ 51,149	$ -	$ -	$ -
Pickup	$ 35,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000	$ 7,000
Backhoe Lease	$ 11,600		$ 2,900	$ 2,900	$ 2,900	$ 2,900
Mini-Excavator Lease	$ 6,000		$ 1,500	$ 1,500	$ 1,500	$ 1,500
Small Lawn Mower 1	$ 15,000	$ 15,000				
Totals	**$ 118,749**	**$ 22,000**	**$ 62,549**	**$ 11,400**	**$ 11,400**	**$ 11,400**

Alpine City - Equipment Replacement Schedule
FY 2020

Equipment	Vehicle No.	Year	Make	Model	VIN	Driver	Current Age (years)	Life Span (years)	Difference (years)	Year to Replace	18-19	19-20	20-21	21-22	22-23	TOTAL
Bobtail 1	Truck No. 2	1990	International	4900 4x2	1HTSDNGR8LH292908	Cemetery	27	15	-12	2005						$ -
Bobtail 2 (hook lift 2016)	Truck No. 6	2002	International	7400 4x2	1HTWCAAR33J071196	Cal	15	15	0	2017						$ -
Bobtail 3	Truck No. 8	2006	International	7400 4x2		Greg	11	15	4	2021			$ 123,000			**$ 123,000**
Bobtail 4	Truck No. 1	2009	International	7400 SBA 4x2		Jaden/Travis	8	15	7	2024						$ -
Bobtail 5	Truck No. 9	2014	International	7400 4x2		Landon	3	15	12	2029						$ -
Pickup 1 (to be sold)		2000	GMC	1500			17	7	-10	2007						$ -
Pickup 2		2008	GMC	2500		Parks	7	7	7	2015						$ -
Pickup 3		2010	Ford	F150		Jed	7	7	0	2017		$ 27,000				**$ 27,000**
Pickup 4		2011	Ford	F150		Jason	6	7	1	2018						**$ 27,000**
Pickup 5		2013	Ford	F150		Shane	4	5	1	2018	$ 29,000					**$ 29,000**
Pickup 6		2004	GMC			Parks	13									$ -
Pickup 7		2005	GMC			Cal	12									$ -
Pickup 8		2017	Ford	F250		Landon	0	7	7	2024						$ -
Pickup 9			Ford	F150		Greg										
Crew Truck		2008	GMC	3500			9	7	-2	2015						$ -
Street Sweeper	Truck No. 7	2005	Freightliner				12	15	3	2020	$ 51,149	$ 51,149	$ 51,149	$ 51,149		**$ 204,597**
Backhoe (Lease)			CAT	420E			2017				$ 6,500	$ 11,600	$ 6,500	$ 6,500	$ 6,500	**$ 44,100**
Mini-Excavator (Lease)		2016	CAT	303.5E			1				$ 6,000	$ 6,000	$ 6,000	$ 6,000	$ 6,000	**$ 36,000**
Loader		2001	John Deere	444H			16	20	4	2021						$ -
Vac Trailer		2004					13	15	2	2019	$ 35,000					**$ 35,000**
Crack Sealer		2007	Cimline	230 Magma			10	15	5	2022						$ -
Laydown Machine		2009	LeeBoy	1000F			8	20	12	2029						$ -
Tack Spreader		2009	LeeBoy				8	15	7	2024						$ -
Roller		1997	Ingersoll Rand	00-24			20	20	0	2017					$ 37,500	**$ 37,500**
Tractor (large)		2010	Kubota	MV5100			7	15	8	2025						$ -
Tractor (small)		2001	Kubota	B2910			16	20	4	2021			$ 20,000			**$ 20,000**
Park Maintenance Vehicle 1		2016	John Deere	Gator			1	7	6	2023						$ -
Park Maintenance Vehicle 2		2013	Kubota	RTV1100			4	7	3	2020		$ 20,182				**$ 20,182**
John Deere Mower (Stand on)		2013	John Deere				4	10	6	2023					$ 8,000	**$ 8,000**
Small Lawn Mower 1		2006	Grasshopper	722D			11	6	-5	2012						$ -
Small Lawn Mower 2		2007	Grasshopper	722D			10	6	-4	2013						$ -
Small Lawn Mower 3		2008	Grasshopper	722D			9	6	-3	2014						$ -
Small Lawn Mower 4		2010	Grasshopper	725D			7	6	-1	2016						**$ 15,000**
Small Lawn Mower 5		2012	Grasshopper	725D												$ -
Small Lawn Mower 6		2016	John Deere													$ -
Large Lawn Mower 1		2005	Jacobsen	9016			12	12	0	2017						$ -
Large Lawn Mower 2		2010	Jacobsen	9016			7	12	5	2022				$ 85,000		**$ 85,000**
Aerator		2004	Aero-Vator	AE80			13	15	2	2019	$ 10,000					**$ 10,000**
Wood Chipper		2006	Vermeer	13C1000XL			11	15	4	2021						$ -

Air Compressor		1993	Ingersoll Rand	185			24	25	1	2018					$ 25,000	$ 25,000
Brush Mower																$ -
Utility Trailer		2004	Big Bubba				13	10	-3	2014						$ -
GPS		2014	TopCon				3	8	5	2022				$ 28,000		$ 28,000
																$ -
										Totals	$ 137,649	$ 115,931	$ 206,649	$ 176,649	$ 83,000	$ 774,379

Certified Tax Rate

utah.gov | Tax Commission | Property Taxes

CERTIFIED TAX RATES

Tax Rate Summary (693) SSD

Preliminary Data

Data Entry (Auditor)	Auditor's Certified Rate Approved	Data Entry (Entity)	Proposed Rates Entity Approved	Proposed Rates County Approved	Proposed Rates USTC Approved *OK to Print*	Final Tax Rates USTC Approved	Rates Finalized

Proposed Tax Rate Value: $ 2,280,157,637

Budgeted Revenue / Proposed Tax Rate Value = Proposed Tax Rate

(1) Budget Code	(2) Budget Name		(3) Election Date	(4) Voted Rate Limit	(5) Utah Annotated Code	(6) Maximum By Law	(7) Calculated Certified Tax Rate	(8) Auditor's Certified Tax Rate	(9) Auditor's Certified Rate Revenue	(10) Proposed Tax Rate	(11) Budgeted Revenue	(12) Final Tax Rate	(13) Final Budgeted Revenue
10	General Operations				§59-2-908	.00700	0.001715	0.001715	3,910,470	0.000000		0.000000	
190	Discharge of Judgement				§59-2-1328 & 1330	Sufficient	0.000000		0				
	Total Tax Rate						0.001715	0.001715	3,910,470	0.000000		0.000000	

NOTES:

LONE PEAK FIRE DISTRICT
5582 PARKWAY WEST DRIVE
HIGHLAND, UTAH 84003
(801) 763-5365
WWW.LONEPEAKFIRE.COM

REED M. THOMPSON, FIRE CHIEF

MEMORANDUM

DATE: 9 June 2020

TO: Lone Peak Public Safety District Board
City Administrators

CC: File

FROM: Reed M. Thompson, Fire Chief

SUBJECT: AMBULANCE PURCHASE WITH SURPLUS REVENUE AND OTHER EXPENSE FUNDS

Lone Peak Fire District is requesting to fund the replacement of the 2007 Dodge Wheeled Coach ambulance. The ambulance currently has 124,000 miles, with a large portion of these miles being start and stop miles associated with emergency response. In the past two years we have seen a significant amount of repair costs associated with the age and use of the vehicle. This ambulance is 13 years old and has been utilized as a frontline ambulance for 9+ years and is still functions as part of our plan of operations, under the valid paramedic ground ambulance license we possess through Utah Department of Health, Bureau of Emergency Medical Services. The recommended life expectancy of an ambulance of this type is 7-10 years.

When replaced, the fleet rotation would allow for the 2014 Chevrolet Wheeled Coach ambulance with 67,000 miles currently, to rotate into a reserve status, thus prolonging the life expectancy.

In reviewing the financial standing of the fire portion of the FY2019-2020 budget, we have funding to support a cash purchase of an ambulance with remaining funds outlined below.

With respect to the revenue accounts, we have exceeded projections in revenue budget line **10-37-11 Charges for Services**. This line largely represents ambulance collections for 911 emergency medical services provided. In short, the revenue is up due to the process changing for collections with both our new billing and collections companies. In addition, when the contract was terminated with the prior billing company and collection company, it was discovered that there was uncollected debt from several prior years that is now being captured by an additional debt collection service. It should be noted that a small portion are attributed to remaining caseload in 2019 accounts collected this year. Currently this line has a $119,000 surplus with projections in this line to be $140,000 by end of the fiscal year.

A capital fleet replacement plan has not been formally implemented, but it is considered good business practice to use the revenue for ground ambulance transports to directly support the ongoing costs for

emergency medical fleet replacement, and this surplus funding will provide the mechanism for just over half of the estimated cost to replace the ambulance.

The second funding source for this proposal would come from expense budget lines **10-47-13 Holiday Pay, 10-47-20 Medical Benefits, and 10-47-21 Retirement**. These funds represent areas where we have spent less this budget year in medical and retirement benefits due to staffing vacancies, and an adjustment in the way holiday pay is accounted for. End of year projections indicate there will be a surplus that would cover the remaining balance of the ambulance purchase. The request would be to roll the excess funds into the **10-47-50 Capital Projects** expense account in FY2020-2021.

The third funding source would be from the sale of the 2007 Dodge Wheeled Coach ambulance, with the intent to offset replacement costs. Replacement funds from this source are expected to be minimal.

Estimates place the cost for the ambulance at approximately $265,000. Firm pricing will be obtained through a formalized request for proposal (RFP) process when approved to move forward.

To summarize, we are requesting funds totaling $265,000 from the FY2019-2020 budget to purchase a replacement ambulance from ambulance revenue funds, surplus benefit funds and the sale of the existing ambulance to be allocated to budget line 10-47-50 in the FY2020-2021 fire budget.

Thank you for your consideration. Please let me know if I can provide any additional information.

LPPSD Financial Statement

Actuals for FY16, FY17, FY18, FY19 are for the full year (12 Months)
Actuals for FY20 are for July 2019 to Feb. 2020
Budget for FY20 is for the full year (12 Months)

		FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2019-20	FY 2020-21	Change	
		Prior year 4	Prior year 3	Prior year 2	Prior year	Current year	Current year	Proposed	FY19/20 to 20/21	
ADMINISTRATION REVENUE	**Account Title**	**Actual**	**Actual**	**Actual**	**Actual**	**Actual**	**Budget**	**Budget**	**Budget**	
10-33-01	ALPINE	75,390	67,710	74,160	73,436	71,178	77,650	79,146	1,496.00	
10-33-02	HIGHLAND	140,718	138,214	149,005	143,014	136,276	148,666	155,648.00	6,982.00	
10-33-03	CEDAR HILLS	19,712	21,757	27,170	27,031	0	0	0	0.00	
10-33-15	INTEREST EARNINGS	197	256	494	776	455	450	450	0.00	
10-33-18	MISCELLANEOUS INCOME	(10)	30	0	200	242,162	50	50	0.00	
10-33-20	FICA Refunds	0	0	0	0	0	0		0.00	
10-33-21	IRS Interest on Refund	0	0	0	0	0	0		0.00	
10-33-30	BUDGETED SURPLUS	0	0	0	0	0	0		0.00	
Total ADMINISTRATION REVENUE:		236,007	227,967	250,829	244,457	450,071	226,816	235,294	8,478.00	
POLICE REVENUE										
10-35-01	ALPINE	1,060,403	1,090,214	1,090,214	1,105,583	1,093,333	1,192,728	1,195,053	2,324.72	
10-35-02	HIGHLAND	1,860,812	1,925,948	1,951,206	2,026,780	2,003,928	2,186,103	2,190,366	4,262.74	
10-35-04	ALPINE SCHOOL DISTRICT	75,480	75,080	74,540	71,890	4,800	72,000	72,000	0.00	
10-35-09	COURT REVENUE	1,329	940	696	223	187	500	$500	0.00	
10-35-10	POLICE REPORT CHARGES	3,870	5,271	5,488	5,525	4,405	3,500	$3,500	0.00	
10-35-11	Finger Printing	2,130	2,920	2,505	2,780	1,700	2,000	$2,000	0.00	
10-35-12	Dog License Revenue	525	2,019	(120)	35	50	0		0.00	
10-35-13	Security Services	1,200	1,740	1,920	960	780	0		0.00	
10-35-17	Credit Card Cash Back	0	0	0	0	334	0		0.00	
10-35-18	MISCELLANEOUS INCOME	1,592	2,661	1,330	1,630	20,566	2,000	3,000	1,000.00	
10-35-19	K-9 Donations	200	0	0	0	0	0		0.00	
10-35-20	GRANTS	19,370	13,175	12,227	24,744	22,098	7,000	8,000	1,000.00	
10-35-25	Proceeds From Lease	153,724	0	112,302	0	0	0		0.00	
10-35-30	BUDGETED SURPLUS	0	0	0	0	0	0		0.00	
10-35-40	Proceeds from Sale or Asset	12,582	8,812	1,035	12,191	0	10,000	10,000	0.00	
Total POLICE REVENUE:		3,193,217	3,128,780	3,253,343	3,252,339	3,152,183	3,475,831	3,484,418.46	8,587.46	
FIRE / EMS REVENUE										
10-37-01	ALPINE	671,262	694,812	675,610	801,152	1,038,976	1,133,428	1,080,373.29	-53,054.52	
10-37-02	HIGHLAND	1,059,333	1,122,395	1,107,643	1,316,277	1,697,832	1,852,180	1,784,989.71	-67,190.48	
10-37-03	CEDAR HILLS	654,305	672,228	653,326	756,330	0	0		0.00	
10-37-05	UTAH COUNTY	29,683	11,990	12,380	9,685	3,949	12,000	5,300	-6,700.00	
10-37-11	CHARGES FOR SERVICES	449,070	402,713	387,356	501,919	391,041	272,262	274,000	1,738.00	
10-37-12	Charge offs and misc write-off	0	0	0	0	0	0		0.00	
10-37-14	First Aid Kit Sales	256	43	0	136	0	0		0.00	
10-37-15	Burn Permits	0	0	0	0	920	0		0.00	
10-37-17	Credit Card Cash Back	0	0	0	0	354	0		0.00	
10-37-18	MISCELLANEOUS INCOME	9,033	22,829	15,765	763	8,822	0		0.00	
10-37-19	Trauma Kits for Schools	0	0	0	15,400	7,274	0		0.00	
10-37-20	GRANTS	17,094	20,618	27,453	15,175	6,874	4,800	4,800	0.00	
10-37-25	Proceeds From Lease	0	48,202	97,698	0	0	0		0.00	
10-37-30	Budgeted Surplus	0	0	0	0	0	0		0.00	
10-37-40	Proceeds from Sale or Asset	0	66,576	26,607	25,970	61,031	0		0.00	
10-37-41	Aid Provided to Other Agencies	0	0	0	182,644	154,527	0		0.00	
Total FIRE / EMS REVENUE:		2,890,036	3,062,406	3,003,837	3,625,451	3,371,599	3,274,670	3,149,463.00	-125,207.00	
ADMINISTRATION DEPARTMENT										
10-43-10	WAGES - PERMANENT EMPLOYEES	45,914	27,708	37,676	48,215	37,418	51,000	52,000.00	1,000.00	
10-43-33	PUBLIC INFORMATION	215	168	162	172	231	150	150	0.00	
10-43-36	Membership in UASD	0	0	0	0	0	0	0	0.00	
10-43-38	Build up District Reserves	0	0	0	0	0	18,000	0	-18,000.00	
10-43-39	Emergency Preparation	2,523	3,748	5,029	0	0	0	0	0.00	
10-43-40	POSTAGE - MISC SUPPLIES	1,562	1,177	532	669	418	1,200	1,200	0.00	
10-43-50	FICA Refund	0	0	0	0	0	0	0	0.00	
10-43-61	LEGAL FEES	5,193	28,095	29,543	353	300	5,500	5,500	0.00	
10-43-62	AUDIT FEES	5,000	5,000	5,000	6,375	6,200	6,200	6,200	0.00	
10-43-68	TRAINING	0	0	0	0	0	0	0	0.00	
10-43-69	RENT	0	0	0	0	0	0	0	0.00	
10-43-79	INSURANCE	880	957	1,106	188	135	1,100	200	-900.00	
10-43-80	Alpine Dispatch	46,439	45,953	46,990	39,276	30,673	47,032	54,996.00	7,964.00	Each City pays its Dispatch Fee
10-43-81	Highland Dispatch	102,306	99,627	98,845	81,038	60,283	92,434	110,798.00	18,364.00	
10-43-82	Cedar Hills Dispatch	0	0	0	0	0	0	0	0.00	
10-43-88	Board Expenses	389	577	174	263	251	199	250	51.00	
10-43-89	Employee Relations	0	0	0	0	0	0	0	0.00	Due to Dispatch Fee increase.
10-43-90	MISCELLANEOUS EXPENSE	5,165	15,725	6,150	10,484	8,088	4,000	4000	0.00	Without Dispatch $17,849 decrease.
Total ADMINISTRATION DEPARTMENT:		215,586	228,735	231,207	187,032	143,997	226,815	235,294	8,479.00	
POLICE DEPARTMENT										
10-45-10	WAGES - PERMANENT EMPLOYEES	1,266,184	1,277,764	1,323,951	1,369,244	1,384,180	1,455,478	$1,425,693	-29,784.84	
10-45-11	HOLIDAY PAY	25,598	7,941	8,248	9,189	14,066	50,738	52,260	1,522.00	
10-45-12	OVERTIME	72,212	62,437	71,401	81,166	57,876	67,000	70,000	3,000.00	
10-45-13	WAGES-CROSSING GUARDS	84,837	86,036	99,697	99,141	92,432	94,600	96,000	1,400.00	
10-45-14	WAGES-PART-TIME	42,167	43,053	20,804	22,199	17,023	37,520	30,000	-7,520.00	
10-45-16	CALL PAY - POLICE	16,723	18,920	19,584	20,436	21,135	19,850	20,000	150.00	
10-45-18	Specialty Pay	6,070	5,979	6,017	6,000	5,538	6,000	6,000	0.00	
10-45-20	MEDICAL BENEFITS	280,535	304,933	354,572	377,922	368,736	424,100	434,247	10,146.52	
10-45-21	RETIREMENT	470,907	439,863	434,439	446,912	439,469	466,912	475,306	8,393.78	With Pick up of 2.27% - $11,007
10-45-22	FICA/MEDICARE	22,419	21,658	22,953	23,947	23,855	23,748	24,808	1,060.00	
10-45-23	401K	0	0	0	0	55,814	71,440	71,285	-155.00	
10-45-25	UNIFORM EXPENSE	34,398	34,154	38,651	41,378	34,867	43,090	43,090	0.00	
10-45-31	DUES, SUBSCRIPTIONS, REF MATLS	1,802	1,381	1,520	2,609	1,413	1,750	1,750	0.00	
10-45-33	PUBLIC EDUCATION	3,088	2,299	3,386	298	6,295	3,500	3,500	0.00	
10-45-34	NOVA & School Lunch	1,768	1,343	507	2,084	1,982	2,200	2,200	0.00	

10-45-38	TRAVEL EXPENSE	4,973	4,654	8,219	2,074	7,791	7,400	8,500	1,100.00	
10-45-40	POSTAGE, PRINTING, MISC SUPPL	9,895	13,520	17,265	11,395	9,433	12,500	12,500	0.00	
10-45-50	K-9 Expenses	2,706	2,512	4,631	2,488	3,983	3,000	3,000	0.00	
10-45-52	Utilities Expense	21,197	21,241	24,175	29,326	12,264	27,600	35,800	8,200.00	Change in vendors for phones during current fiscal year
10-45-57	Drug Screens	1,228	1,950	2,093	1,655	1,425	1,800	1,800	0.00	
10-45-58	Professional Services/Contract	67,781	91,351	72,368	99,696	195,275	91,410	95,100	3,690.00	Upgrade to scheduling software that was purcahsed in the current FY
10-45-59	Building Maintenance	19,737	19,556	22,497	19,445	27,098	20,000	20,000	0.00	
10-45-61	Chief's Admin	5,309	6,535	11,021	9,058	10,704	7,500	8,000	500.00	
10-45-63	BILLING AND COLLECTION	0	0	0	0	0	0		0.00	
10-45-68	TRAINING	4,522	9,256	18,841	15,686	9,776	14,550	14,550	0.00	
10-45-69	RENT	132,110	132,110	132,110	132,110	132,110	132,110	132,110	0.00	
10-45-71	FUEL	50,302	39,347	45,655	52,142	44,507	52,000	52,000	0.00	
10-45-72	VEHICLE REPAIRS	0	0	0	0	0	0		0.00	
10-45-73	VEHICLE SUPPLIES/MAINTENANCE	30,782	25,267	65,393	44,436	43,729	34,000	35,000	1,000.00	
10-45-74	VEHICLE LEASE	61,755	157,990	99,555	57,519	118,937	137,980	137,980	0.00	
10-45-76	VEHICLE REPLACEMENT	197,038	0	131,120	0	0	0		0.00	
10-45-77	Equipment Replacement	46,218	118,739	80,224	28,955	57,367	52,000	55,895	3,895.00	Phase two of body camera upgrade
10-45-78	CAPITAL	6,209	4,571	0	9,223	11,231	9,295	9,295	0.00	
10-45-79	INSURANCE	91,315	87,973	79,569	78,918	70,477	90,000	92,000	2,000.00	
10-45-80	Bankcard Fees	1,290	1,410	1,467	1,552	1,086	1,200	1,200	0.00	
10-45-89	Animal Control	2,682	6,496	5,281	3,523	3,475	4,000	4,000	0.00	
10-45-90	POLICE SUPPLIES	10,328	7,057	11,649	4,847	20,905	9,560	9,550	-10.00	
10-45-91	One Time Refund to Cities	0	0	0	0	0	0		0.00	
Total POLICE DEPARTMENT:		3,096,087	3,059,295	3,238,863	3,106,572	3,306,255	3,475,831	3,484,418.46	8,587.46	
FIRE / EMS DEPARTMENT										
10-47-10	WAGES - PERMANENT EMPLOYEES	1,024,067	1,016,136	953,492	1,036,495	1,060,018	1,078,776	1,076,432	-2,344.00	
10-47-11	Overtime Wages/Standby	70,543	71,522	101,800	69,452	101,074	82,674	108,549	25,875.00	
10-47-12	PART TIME EMPLOYEES	407,953	398,350	435,441	501,092	378,847	420,480	420,480	0.00	Budget remains the same. To be monitoried. If additional funds are need budget will be adjsuted.
10-47-13	Holiday Pay	16,692	18,002	18,605	1,950	0	41,912	0	-41,912.00	
10-47-17	Interns	8,711	264	1,683	0	0	0	0	0.00	
10-47-18	Special Payouts	0	110,271	12,000	0	0	0	0	0.00	
10-47-20	MEDICAL BENEFITS	285,504	292,083	226,635	282,967	290,265	383,060	332,760	-50,300.00	
10-47-21	RETIREMENT	335,307	312,234	226,202	238,945	235,958	334,409	292,417	-41,992.00	With Pick up of 2.27% for Tier 2 - $8,730
10-47-22	FICA/MEDICARE	22,884	23,715	21,596	23,484	22,376	25,328	22,158	-3,170.00	
10-47-25	UNIFORM EXPENSE	27,686	30,223	40,243	30,497	21,804	28,500	24,000	-4,500.00	
10-47-29	State Medicaid Fund	7,420	13,532	13,163	19,304	11,370	16,000	17,200	1,200.00	
10-47-30	Charge Offs Ambulance Services	0	0	0	0	0	0	0	0.00	
10-47-31	DUES, SUBSCRIPTIONS, REF MATLS	228	450	608	1,638	3,389	3,821	4,725	904.00	
10-47-32	Equipment Repairs	0	0	0	1,567	1,058	6,500	6,000	-500.00	
10-47-33	PUBLIC EDUCATION	7,972	5,329	2,625	5,392	2,699	5,750	4,250	-1,500.00	
10-47-34	Equipment Maintenance	0	0	0	9,985	8,692	14,840	11,651	-3,189.00	
10-47-35	Station Supplies-Consumable	0	0	0	2,547	2,654	5,000	5,400	400.00	
10-47-36	EMERGENCY PREPARATION	0	2,343	0	0	0	0	0	0.00	
10-47-37	Cell Phones & Devices	0	0	0	7,935	5,119	10,140	10,180	40.00	
10-47-38	TRAVEL EXPENSE	10,195	9,862	2,101	0	0	0	0	0.00	
10-47-39	IT Services & Computers	0	0	0	14,844	9,618	16,100	13,020	-3,080.00	
10-47-40	POSTAGE, PRINTING, MISC SUPPL	901	981	2,787	2,964	3,405	5,015	6,136	1,121.00	
10-47-41	Employee Recognition	0	0	0	0	145	3,700	3,700	0.00	
10-47-42	Professional & Technical Serv	0	0	0	31,726	16,069	35,184	34,768	-416.00	
10-47-43	Medical Equipment	0	0	0	4,904	1,386	12,353	6,950	-5,403.00	
10-47-44	Protective Clothing	0	0	0	27,914	25,878	23,060	29,035	5,975.00	
10-47-45	Food & Beverage	0	0	0	2,685	1,464	5,228	4,607	-621.00	
10-47-46	Grants	0	0	0	15,348	19,919	5,000	0	-5,000.00	
10-47-47	Trauma Kits for Schools	0	0	0	8,288	5,401	0	0	0.00	
10-47-48	PHYSICALS	229	2,500	4,320	370	0	0	0	0.00	
10-47-49	MEDICAL SUPPLIES	35,473	31,613	46,815	35,283	31,296	39,200	37,200	-2,000.00	
10-47-50	Capital Projects	0	0	0	270,818	0	0	32,646	32,646.00	This is the second of a two part process to change out department radios. This is due to a county wide change. The first part was done two years ago.
10-47-52	Utilities	56,294	51,539	51,716	28,670	23,776	25,840	27,413	1,573.00	
10-47-58	Exp Aid Provided Oth. Agencies	0	0	0	85,490	34,250	0	0	0.00	
10-47-59	Building Maintenance	9,284	14,802	16,193	17,580	7,921	12,185	22,030	9,845.00	
10-47-60	RADIO SERVICE	15,503	14,049	18,679	2,261	1,295	1,200	0	-1,200.00	
10-47-63	BILLING AND COLLECTION	38,127	37,717	34,875	31,381	19,376	28,000	24,000	-4,000.00	
10-47-68	TRAINING	3,632	7,744	7,375	11,366	15,182	14,380	15,980	1,600.00	
10-47-69	RENT	185,111	185,111	185,111	185,111	117,231	126,860	126,860	0.00	
10-47-71	FUEL	16,485	14,490	22,597	30,060	20,547	30,000	28,500	-1,500.00	
10-47-73	VEHICLE SUPPLIES/MAINTENANCE	32,720	33,106	57,995	79,166	50,973	33,615	41,130	7,515.00	
10-47-74	VEHICLE LEASE	253,055	253,053	253,062	252,415	295,973	252,415	210,299	-42,116.00	Lease payments are reduced due removal of LeFrance Engine and Water Tender.
10-47-75	EARLY PAY OFF OF LEASE	0	0	0	0	0	0	0	0.00	Fire Chief is requesting to replace an existing ambulance. District has three. A 2015 Chevy, a Transport Engine and a 2007 Dodge that is used as a backup.
10-47-76	CAPITAL EXPENSE	0	0	0	0	0	0	0	0.00	
10-47-78	EQUIPMENT	57,121	81,866	169,526	161,386	45,858	46,250	46,550	300.00	
10-47-79	INSURANCE	81,726	105,142	88,427	94,257	80,991	84,000	90,400	6,400.00	
10-47-90	MISCELLANEOUS EXPENSE	17,686	14,334	12,230	1,653	40,365	5,000	5,000	0.00	
10-47-91	Equipment Lease	21,747	37,749	44,474	12,894	12,894	12,895	6,937	-5,958.00	
Total FIRE / EMS DEPARTMENT:		3,050,254	3,190,111	3,072,377	3,642,082	3,026,508	3,274,670	3,149,363.00	-125,307.00	
GENERAL FUND Revenue Total:		6,319,259	6,419,153	6,508,009	7,122,247	6,973,854	6,977,317	6,869,175.46	-108,141.54	
GENERAL FUND Expenditure Total:		6,361,926	6,478,141	6,542,447	6,935,686	6,476,761	6,977,316	6,869,075.46	-108,240.54	
Net Total GENERAL FUND:		(42,667)	(58,988)	(34,438)	186,561	497,093	1	100.00		

	Proposed FY 20/21 Assessments	Admin	Police	Fire	Total	Percent
	Alpine	$ 79,146.00	$ 1,195,052.72	$ 1,080,373.29	$ 2,354,572.01	36%
	Highland	$ 155,648.00	$ 2,190,365.74	$ 1,784,989.71	$ 4,131,003.45	64%
	Total	$ 234,794.00	$ 3,385,418.46	$ 2,865,363.00	$ 6,485,575.46	
	FY 19/20 Approved Assessments	Admin	Police	Fire	Total	Percent
	Alpine	$ 77,650.00	$ 1,192,728.00	$ 1,133,427.81	$ 2,403,805.81	36%

	Highland	$ 148,666.00	$ 2,186,103.00	$ 1,852,180.19	$ 4,186,949.19	64%		
		$ 226,316.00	$ 3,378,831.00	$ 2,985,608.00	$ 6,590,755.00			
	Historical Assessments	FY15/16	FY16/17	FY17/18	FY18/19	FY19/20	FY20/21	Difference
	Alpine	$ 1,807,055.04	$ 1,852,736.04	$ 898,774.96	$ 1,980,170.88	$ 2,403,805.81	$ 2,354,572.01	$ (49,233.80)
	Cedar Hills	$ 674,017.08	$ 693,985.00	$ 680,496.04	$ 783,360.96	N/A	N/A	N/A
	Highland	$ 3,060,863.04	$ 3,186,557.00	$ 3,207,853.96	$ 3,486,071.04	$ 4,186,949.19	$ 4,131,003.45	$ (55,945.74)
		$ 5,541,935.16	$ 5,733,278.04	$ 4,787,124.96	$ 6,249,602.88	$ 6,590,755.00	$ 6,485,575.46	$ (105,179.54)

ORDINANCE NO. 2020-10

AN ORDINANCE ENACTING AND ADMINISTERING THE ALPINE CITY FISCAL YEAR 2020-21 ANNUAL BUDGET

WHEREAS, it is deemed desirable and in the best interest of the City of Alpine, Utah to adopt the annual budget for the operations, debt amortization, and capital outlay of the City.

NOW, THEREFORE, THE MAYOR AND CITY COUNCIL OF THE CITY OF ALPINE DO ADOPT AND ORDAIN AS FOLLOWS:

ARTICLE 1
DEFINITIONS

SECTION 1. "BUDGET YEAR" means the 2020 -2021 fiscal year for which this budget is made.

SECTION 2. "FISCAL YEAR" means that year which begins on the first day of July, 2020, and ends on the last day of June, 2021.

ARTICLE II
BUDGET ESTABLISHES APPROPRIATIONS

SECTION 1. APPROPRIATIONS.
From the effective date of the budget as outlined in the attached Exhibit "A", the several amounts stated therein as proposed expenditures, shall address the several objects and purposes therein named.

SECTION 2. ANTICIPATED REVENUES.
The amended anticipated revenues shall include revenue from all sources, including grants and loans and shall be classified in accordance with the chart of accounts of the municipality.

SECTION 3. FUND BALANCE.
The fund balance shall be available for emergency appropriation by the City Council.

SECTION 4. ANTICIPATED SURPLUS FROM MUNICIPAL UTILITY OR ENTERPRISE FUNDS.
The anticipated revenue and proposed expenditures of each utility or other public service enterprise owned or operated by the city is stated in a separate section of the budget (See attached Exhibit A); and as to each such utility, an anticipated surplus, if legally available for general purposes and to the extent such surplus is to be used to support budget operation, is stated as an item of revenue in the budget.

ARTICLE III
ADMINISTRATION OF BUDGET, FINANCIAL CONTROL

SECTION 1. APPROVAL OF EXPENDITURES.
The City Administrator shall be the Finances Director and have charge of the administration of the financial affairs of the city and to that end shall supervise and be responsible for the disbursement of all monies and have control over all expenditures to insure that appropriations are not exceeded. He shall exercise financial budgetary control over each office, department and agency and shall cause separate accounts to be kept for the items of appropriation contained in the budget.

ARTICLE IV
SEVERABILITY

If any provision of this ordinance or the application thereof to any person or circumstance is held invalid, the invalidity shall not affect other provisions or application of the ordinance which can be given effect without the invalid provision or applications; and to this end the provisions of the ordinance are severable.

ARTICLE V
ADOPTION & EFFECTIVE DATE

This Ordinance is hereby adopted the 23rd day of June 2020 and shall be effective for the Fiscal Year 2020 -2021.

_____
Troy Stout, Mayor

ATTEST:

_____
Bonnie Cooper
City Recorder

RESOLUTION NO. R2020-07

A RESOLUTION ESTABLISHING THE 2020-2021 TAX RATE FOR ALPINE CITY, UTAH.

NOW THEREFORE, we the members of the Alpine City Council hereby resolve:

The tax rate for Alpine City for fiscal year 2020-2021 shall be set at 0.001424 which is the certified tax rate adopted by the Alpine City Council.

DATED this 23rd day of June 2020.

_____
Troy Stout, Mayor

ATTEST:

_____
Bonnie Cooper, City Recorder

ALPINE CITY

AMENDED BUDGET

FISCAL YEAR 2019-2020

July 1, 2019 – June 30, 2020

June 19, 2020

ALPINE CITY

AMENDED BUDGET

FISCAL YEAR 2019-2020

July 1, 2019 – June 30, 2020

June 19, 2020

Alpine City
Budget Adjustments (End of Year)
6/30/2020

General Fund

Planning & Zoning		Debit	Credit
10-59-31	Professional Services	15,000	
10-39-10	General Fund Surplus		15,000

Professional services costs have exceeded the original budget projection.

Parks and Recreation		Debit	Credit
10-70-27	Utilities	40,000	
10-39-10	General Fund Surplus		40,000

The utility funds charge the General Fund parks for water and sewer per the accounting rules.

Treasurer		Debit	Credit
10-43-34	Accounting Services/Audit	5,000	
10-39-10	General Fund Surplus		5,000

Audit and accounting services have been increased

Administration		Debit	Credit
10-41-11	Salaries & wages	20,000	
10-39-10	General Fund Surplus		20,000

The retirement of the City Recorder and the payment of accrued time.

Miscellaneous		Debit	Credit
10-99-80	Transfer to Capital Projects	500,000	
10-39-10	General Fund Surplus		500,000

The City is going to be over the 25% limitation on the General fund balance so it needs to transfer some money to Capital Project fund

Garbage		Debit	Credit
10-82-61	Tipping Fees	15,000	
10-82-62	Waste Pickup Contract	35,000	
10-39-10	General Fund Surplus		50,000

Waste pickup and tipping fees were higher than anticipated.

Pressurized Irrigation Fund

PI expenses		Debit	Credit
55-40-31	Professional Services	33,600	
55-39-11	Unappropriate fund balance		33,600

Closing cost on refunded bond issuance costs and new money.

ORDINANCE NO. 2020-11

AN ORDINANCE AMENDING AND ADMINISTERING THE ALPINE CITY FISCAL YEAR 2019-220 ANNUAL BUDGET

WHEREAS, it is deemed desirable and in the best interest of the City of Alpine, Utah to adopt the annual budget for the operations, debt amortization, and capital outlay of the City.

NOW, THEREFORE, THE MAYOR AND CITY COUNCIL OF THE CITY OF ALPINE DO ADOPT AND ORDAIN AS FOLLOWS:

ARTICLE 1
DEFINITIONS

SECTION 1. "BUDGET YEAR" means the 2019- 2020 fiscal year for which this budget is made.

SECTION 2. "FISCAL YEAR" means that year which begins on the first day of July, 2019, and ends on the last day of June, 2020.

ARTICLE II
BUDGET ESTABLISHES APPROPRIATIONS

SECTION 1. APPROPRIATIONS.
From the effective date of the budget as outlined in the attached Exhibit "A", the several amounts stated therein as proposed expenditures, shall address the several objects and purposes therein named.

SECTION 2. ANTICIPATED REVENUES.
The amended anticipated revenues shall include revenue from all sources, including grants and loans and shall be classified in accordance with the chart of accounts of the municipality.

SECTION 3. FUND BALANCE.
The fund balance shall be available for emergency appropriation by the City Council.

SECTION 4. ANTICIPATED SURPLUS FROM MUNICIPAL UTILITY OR ENTERPRISE FUNDS.
The anticipated revenue and proposed expenditures of each utility or other public service enterprise owned or operated by the city is stated in a separate section of the budget (See attached Exhibit A); and as to each such utility, an anticipated surplus, if legally available for general purposes and to the extent such surplus is to be used to support budget operation, is stated as an item of revenue in the budget.

ARTICLE III
ADMINISTRATION OF BUDGET, FINANCIAL CONTROL

SECTION 1. APPROVAL OF EXPENDITURES.
The City Administrator shall be the Finances Director and have charge of the administration of the financial affairs of the city and to that end shall supervise and be responsible for the disbursement of all monies and have control over all expenditures to insure that appropriations are not exceeded. He shall exercise financial budgetary control over each office, department and agency and shall cause separate accounts to be kept for the items of appropriation contained in the budget.

ARTICLE IV
SEVERABILITY

If any provision of this ordinance or the application thereof to any person or circumstance is held invalid, the invalidity shall not affect other provisions or application of the ordinance which can be given effect without the invalid provision or applications; and to this end the provisions of the ordinance are severable.

ARTICLE V
ADOPTION & EFFECTIVE DATE

This Ordinance is hereby adopted this 23rd day of June 2020 and shall be effective for the Fiscal Year 2019 -2020.

_____
Troy Stout, Alpine City Mayor

ATTEST:

_____
Bonnie Cooper
City Recorder

ALPINE CITY COUNCIL AGENDA

SUBJECT: CARES Act Funding Agreement with Utah County

FOR CONSIDERATION ON: June 18, 2020

PETITIONEER: City Staff

ACTION REQUESTED BY PETITIONER: Review the agreement with Utah County for the CARES Act Funding.

APPLICABLE STATUTE OR ORDINANCE: N/A

PETITION IN COMPLIANCE WITH ORDINANCE: N/A

INFORMATION:

Including is the agreement that the Utah County Commission recently adopted outlining the requirements for each city to receive a distribution of Utah County's allocation of the CARES Act Funds. The agreement has been reviewed by a group of city attorneys, including David Church on behalf of Alpine City.

RECOMMENDATION: Approve the agreement with Utah County for the CARES Act funding.

Agreement No. 2020-_____

INTERLOCAL COOPERATION AGREEMENT BETWEEN UTAH COUNTY AND LOCAL ENTITY FOR DISBURSEMENT FROM THE CORONAVIRUS RELIEF FUND

THIS IS AN INTERLOCAL COOPERATION AGREEMENT ("Agreement") effective the 15th day of June, 2020 by and between Utah County, a political subdivision of the State of Utah ("County") and _____, a political subdivision of the State of Utah ("Recipient") (collectively "parties").

WITNESSETH:

WHEREAS, pursuant to the provisions of the Interlocal Cooperation Act ("Interlocal Act"), Title 11, Chapter 13, Utah Code Annotated, 1953 as amended, public agencies, including political subdivisions of the State of Utah as therein defined, are authorized to enter into written agreements with one another for joint or cooperative action; and

WHEREAS, pursuant to the Interlocal Act, the parties desire to work together through joint and cooperative action that will benefit the residents of Recipient and County; and

WHEREAS, the parties to this Agreement are public agencies as defined in the Interlocal Act; and

WHEREAS, earlier this year the United States of America began battling a public health emergency known as Coronavirus Disease 2019 ("COVID-19"). On March 27, 2020 and in response to COVID-19, President Trump signed the Coronavirus Aid, Relief and Economic Security Act ("CARES Act"); and

WHEREAS, the Federal Government provided $1.25 billion to Utah state and local governments through the Coronavirus Relief Fund ("CRF") included in section 5001 of the CARES Act. Based on the distribution formula in the CARES Act, $934.8 million was paid to the State of Utah ("State"), $203.6 million was paid directly to Salt Lake County, and $111.6 million was paid directly to Utah County (the "County Allocation"). State and local governments can only use the CRF payments to respond to the COVID-19 pandemic. While the County is not required to distribute a portion of its $111.6 million payment to local entities, the County Commission have elected to share a portion with local entities within Utah County; and

WHEREAS, the CARES Act provides that payments from CRF may only be used to cover costs that: (1) are necessary expenditures incurred due to the public health emergency with respect to COVID–19, (2) were not accounted for in the budget most recently approved as of March 27, 2020 (the date of enactment of the CARES Act) for the State or local government; and (3) were incurred during the period that begins on March 1, 2020, and ends on December 30, 2020; and

NOW, THEREFORE, the parties do mutually agree, pursuant to the terms and provisions of the Interlocal Act, as follows:

Section 1. EFFECTIVE DATE; DURATION

This Agreement shall become effective and shall enter into force, within the meaning of the Interlocal Act, upon the submission of this Agreement to, and the approval and execution thereof by Resolution of the governing bodies of each of the parties to this

Agreement. The term of this Agreement shall be from the effective date hereof through December 31, 2020.

This Agreement shall not become effective until it has been reviewed and approved as to form and compatibility with the laws of the State of Utah by the Utah County Attorney's Office and the attorney for Recipient. Prior to becoming effective, this Agreement shall be filed with the person who keeps the records of each of the parties hereto.

Section 2. ADMINISTRATION OF AGREEMENT

The parties to this Agreement do not contemplate nor intend to establish a separate legal entity under the terms of this Agreement. The parties hereto agree that, pursuant to Section 11-13-207, Utah Code Annotated, 1953 as amended, County, shall act as the administrator responsible for the administration of this Agreement. The parties further agree that this Agreement does not anticipate nor provide for any organizational changes in the parties. The administrator agrees to keep all books and records in such form and manner as the Utah County Clerk/Auditor shall specify and further agrees that said books shall be open for examination by the parties hereto at all reasonable times.

Section 3. PURPOSE

This Agreement has been established and entered into between the County and Recipient to provide CRF funds to the Recipient from the County Allocation to respond to the COVID-19 pandemic.

Section 4. CRF FUNDING AMOUNTS

1. From the County Allocation, $20 million will be set aside for economic support, to be overseen and recommended by a seven-member committee chosen by the Council of Governments ("COG") within Utah County and then allocated by the County in accordance with the recommendation. This $20 million shall be known as "Part 1" of the County Allocation and shall only be expended as authorized by the CARES Act including the costs incurred by County to administer this Part 1. This seven-member committee shall comply with the Utah Open and Public Meetings Act, Utah Code, Title 52, Chapter 4.

2. From the County Allocation, $45,815,170.95 will be set aside for eligible recipients who may receive an allocation up to the maximum amount listed in the Available Funds for Cities and Unincorporated County document attached hereto as Exhibit "A" and incorporated herein by this reference. This $45,815,170.95 shall be known as "Part 2" of the County Allocation. This amount may be subject to revision by the County due to federal mandate or by an order of a court of law. If Recipient places any CRF funds in an interest-bearing account, Recipient must expend the interest earned on CRF funds in accordance with the requirements of the CARES Act or return the interest earned to County. If Recipient received funds to reimburse or otherwise cover the costs of permissible expenditures, as described in Section 5, from any other sources other than the County Allocation, then Recipient shall provide an accounting to County of all such funds from the other sources and repay to County such funds up to an amount equal to the

Recipient's portion of the County's Allocation. Recipient acknowledges that it shall receive no funds from the County outside of those CRF funds in the County Allocation.

3. From the County Allocation, $45,815,170.95 will be set aside for the County. This $45,815,170.95 shall be known as "Part 3" of the County Allocation.

Section 5. PERMISSIBLE USE OF CRF FUNDING

The CARES Act and additional guidance issues by the United States Treasury Department provides that CRF funds may only be used to cover costs that meet the following conditions:

1. are necessary expenditures incurred due to the public health emergency with respect to the Coronavirus Disease 2019 (COVID–19);
    a. The requirement that expenditures be incurred "due to" the public health emergency means that expenditures must be used for actions taken to respond to the public health emergency.
    b. CRF Funds may NOT be used to fill shortfalls in government revenue to cover expenditures that would not otherwise qualify under the statute.
    c. The expenditure is reasonably necessary for its intended use in the reasonable judgment of the government officials responsible for spending the CRF funds.
2. were not accounted for in the budget most recently approved as of March 27, 2020 (the date of enactment of the CARES Act) for the Recipient; and
    a. A cost meets this requirement if either (a) the cost cannot lawfully be funded using a line item, allotment, or allocation within that budget or (b) the cost is for a substantially

different use from any expected use of CRF funds in such a line item, allotment, or allocation.

b. The "most recently approved" budget refers to the enacted budget for the relevant fiscal period for the Recipient, without taking into account subsequent supplemental appropriations enacted or other budgetary adjustments made by the Recipient in response to the COVID-19 public health emergency.

c. A cost is not considered to have been accounted for in a budget merely because it could be met using a budgetary stabilization fund, rainy day fund, or similar reserve account.

3. were incurred during the period that begins on March 1, 2020, and ends on December 30, 2020.

a. A cost is "incurred" when the Recipient has expended funds to cover the cost.

These provisions and guidance are current as of May 26, 2020. The Recipients accepting funds must agree to adhere to any additional current or future Federal or State legislative guidance regarding spending, reporting, or any other matter related to CRF funds. Further, the Recipients shall require that any subgrantee to which it awards CRF funds adhere to the CARES Act and any current or future guidance related to the CRF funds. Federal guidance has been updated regularly and can be found at https://home.treasury.gov/policy-issues/cares/state-and-local-governments.

Section 6. TIME PERIOD

The Recipient has until November 2, 2020 to expend the CRF funds and provide the necessary documentation of the expenditure of the CRF funds to County. CRF funds provided by the County that are not expended on eligible expenditures on or before November 2, 2020, must be returned to the County on or before 5:00 P.M. MST, November 9, 2020, so that the County will have time to reallocate and expend the funds before they expire on December 30, 2020. The

Recipient may petition the County to retain allocated, but unspent CRF funds, after the November 2, 2020 date, with approval from the County. Any requests for exceptions shall be emailed to Peter Brown, Finance Manager COVID Project, in the Utah County Clerk/Auditor's Office, peterb@utahcounty.gov, before 5:00 P.M. MST, November 2, 2020.

Section 7. REPORTING ON USE OF CRF FUNDS

The Recipient shall retain documentation related to any uses of the CRF funds, including but not limited to invoices and/or sales receipts. All payroll expenditures must illustrate compliance with CARES Act by detailed, daily documentation. Any subgrants made by the Recipient shall similarly require, as a term of the grant, that the subgrantee shall retain documentation and shall produce such documentation to the Recipient and the County upon request.

Consistent with County's responsibilities for the management of CARES funds distributed to it and in accordance with being subject to the Federal Single Audit Act, Recipient shall be prepared to submit receipts and HR records if requested in connection with an audit. All receipts should be individually accompanied (either physically or by PO number) by an explanation form that will be provided by the County that will need to explain how the expenses respond to the "reasonably necessary" justification of the CARES Act Coronavirus Relief Fund (CFR). The Recipient is required to report CRF expenditures at the detailed transaction level on a quarterly basis or data uploaded to Transparent Utah if available for use by County and Recipient. CRF Funds will be identified using function codes specified for these CRF funds in the Uniform Chart of Accounts for Local Government of Utah (revised June 2020) and related resources provided by the Office of the State Auditor. The Recipient is also required to provide summary and detailed

documentation supporting the use of CRF Funds upon request of County, state, federal, or independent auditors. The County may request additional reporting if necessary.

Section 8. ACCOUNTABILITY FOR THE USE OF CRF FUNDS

If County, state, or federal audit findings determine that any CRF funds were expended by the Recipient in violation of the requirements of the CARES Act and request repayment of those CRF funds, the Recipient shall provide funds to the County for repayment to the Federal Government as required by the CARES Act. If the County is forced to repay the funds because the Recipient is unwilling or unable to repay the funds, the amount paid by the County will become a past due obligation of the Recipient to the County and may be collected as such.

Section 9. AVAILABILITY OF CRF FUNDS

It is expressly understood and agreed that the obligation of the County to proceed under this Agreement is conditioned upon the availability of CRF funds remaining in the County Allocation. If the CRF funds anticipated for the continuing fulfillment of the Agreement from the County Allocation are, at any time, not forthcoming or insufficient, either through the failure of the Federal government to provide or if CRF funds are not otherwise available to the County, the County shall have the right upon ten (10) working days written notice to the Recipient, to terminate this Agreement without damage, penalty, cost, or expense to the Recipient of any kind whatsoever. The effective date of termination shall be as specified in the notice of termination.

It is also expressly understood and agreed that any disbursement of CRF funds to

Recipient shall be considered an advance payment from County to Recipient subject to repayment of those CRF funds. Recipient shall either submit to County the appropriate justification documents of funds under the CARES Act or repay the CRF funds to the County. If the Recipient is unwilling or unable to repay any portion of the CRF funds which are not expended as required herein, that amount of the CRF funds will become a past due obligation of the Recipient to the County and may be collected as such.

Section 10. METHOD OF TERMINATION

This Agreement will automatically terminate at the end of its term herein, pursuant to the provisions of paragraph one (1) of this Agreement. Prior to the automatic termination at the end of the term of this Agreement, any party to this Agreement may terminate the Agreement sixty (60) days after providing written notice of termination to the other party. The Parties of this Agreement agree to bring current, prior to termination, any financial obligation incurred in the exercise of its rights and obligations set forth herein.

Section 11. INDEMNIFICATION

To the fullest extent permitted by law, Recipient shall indemnify and hold harmless County, its officers, employees, and agents, from and against any and all claims, demands, causes of action, audits, orders, decrees, judgements, losses, risks of loss, damages, expenses, and liabilities arising out of or related to the Agreement. Recipient shall also pay any litigation and appeal expenses that County incurs, including attorney's fees, penalties, and interest arising out of or related to the Agreement. Recipient shall assume sole liability for any injuries or damages caused to a third party as a result of fulfillment of the Agreement. Recipient is not responsible for

other Recipient's or County's misuse of Parts 2 and 3 of the County Allocation. County reserves the right to conduct, control, and direct its own defense for any claims, demands, causes of action, audits, orders, decrees, judgements, losses, damages, expenses, and liabilities arising out of or related to the Agreement. Both Recipient and County agree that the terms of this Agreement are subject to, and not a waiver of, the protections, immunities and liability limits of the Governmental Immunity Act, U.C.A. 63G-1-101, et. seq. Recipient's obligations under this provision shall survive the expiration or other termination of this Agreement.

Section 12. FILING OF INTERLOCAL COOPERATION AGREEMENT

Executed copies of this Agreement shall be placed on file in the office of the County Clerk/Auditor of County and with the official keeper of records of Recipient and shall remain on file for public inspection during the term of this Agreement.

Section 13. ADOPTION REQUIREMENTS

This Agreement shall be (a) approved by Resolution of the governing body of each of the parties, (b) executed by a duly authorized official of each of the parties (c) submitted to and approved by an Authorized Attorney of each of the parties, as required by Section 11-13-202.5, Utah Code Annotated, 1953 as amended, and (d) filed in the official records of each party.

Section 14. AMENDMENTS

This Agreement may not be amended, changed, modified or altered except by an instrument in writing which shall be (a) approved by Resolution of the governing body of each of the parties, (b) executed by a duly authorized official of each of the parties, (c) submitted to and

approved by an Authorized Attorney of each of the parties, as required by Section 11-13-205.5, Utah Code Annotated, 1953 as amended, and (d) filed in the official records of each party.

Section 15. SEVERABILITY

If any term or provision of the Agreement or the application thereof shall to any extent be invalid or unenforceable, the remainder of this Agreement, or the application of such term or provision to circumstances other than those with respect to which it is invalid or unenforceable, shall not be affected thereby, and shall be enforced to the extent permitted by law. To the extent permitted by applicable law, the parties hereby waive any provision of law which would render any of the terms of this Agreement unenforceable.

Section 16. NO PRESUMPTION

Should any provision of this Agreement require judicial interpretation, the Court interpreting or construing the same shall not apply a presumption that the terms hereof shall be more strictly construed against the party, by reason of the rule of construction that a document is to be construed more strictly against the person who himself or through his agents prepared the same, it being acknowledged that each of the parties have participated in the preparation hereof.

Section 17. HEADINGS

Headings herein are for convenience of reference only and shall not be considered any interpretation of the Agreement.

Section 18. BINDING AGREEMENT

This Agreement shall be binding upon the heirs, successors, administrators, and assigns of each of the parties hereto.

Section 19. NOTICES

All notices, demands and other communications required or permitted to be given hereunder shall be in writing and shall be deemed to have been properly given if delivered by hand or by certified mail, return receipt requested, postage paid, to the parties at their addresses first above written, or at such other addresses as may be designated by notice given hereunder.

Section 20. ASSIGNMENT

The parties to this Agreement shall not assign this Agreement, or any part hereof, without the prior written consent of all other parties to this Agreement. No assignment shall relieve the original parties from any liability hereunder.

Section 21. GOVERNING LAW

All questions with respect to the construction of this Agreement, and the rights and liability of the parties hereto, shall be governed by the laws of the State of Utah.

Section 22. COUNTERPARTS AND FACSIMILE SIGNATURES

The Agreement may be executed in counterparts, each of which when executed and delivered shall be deemed to be an original, binding between the executing parties, and all of which together constitute one and the same instrument. Original, facsimile, emailed, texted, electronic, or power of attorney signatures shall be binding upon the executing party.

Section 23. SUB-RECIPIENT REQUIREMENTS

By virtue of terms and conditions of the Single Audit Act (31 U.S.C. §§ 7501-7507) and the related provisions of the Uniform Guidance, 2 C.F.R. § 200.303 regarding internal controls, §§ 200.330 through 200.332 regarding subrecipient monitoring and management, and subpart F regarding audit requirements. CRF funds received through this Agreement make Recipient a sub-recipient of the federal grant.

As Recipient is a Sub-recipient of the grant monies, and as such, shall have no authorization, express or implied, to bind County to any agreements, settlements, liability, or understanding whatsoever, and agrees not to perform any acts as agent for the County, except as herein expressly set forth. Recipient as Sub-recipient shall be responsible for the payment of all income tax and social security amounts due as a result of CRF funds received from the County for these necessary COVID-19 related purchases. Persons employed by the County and acting under the direction of the County shall not be deemed to be employees or agents of Recipient.

a) All Recipient's records with respect to any matters covered by this Agreement shall be made available to the County, State of Utah, and the Comptroller General of the United States or any of their authorized representatives.

b) Failure of Recipient to comply with the above requirements will constitute a violation of this Agreement and may result in the withholding of future payments.

c) Local governments or non-profit organizations that expend $750,000 or more in total federal financial assistance (from all sources) in the Recipient's fiscal year shall have a Single Audit completed.

d) All Sub-recipient's, regardless of Single Audit eligibility, will make all pertinent financial records available for review, monitoring or audit, in a timely manner to appropriate officials of the federal granting agency, State of Utah, County and/or the General Accounting Office.

e) To comply with 2 C.F.R. § 200.331 the County as the pass-through entity is providing the following required information:

Subrecipient Name	[City Name]
Subrecipient DUNS number	[City DUNS]
Federal Award Identification Number	Not Available
Federal Award Date	March 27, 2020
Subaward Period of Performance Start & End Date	March 1, 2020 – December 30, 2020
Amount of Federal Funds Obligated by this action by the County to the Subrecipient	[Award Amount]
Total Amount of Federal Funds Obligated to the Subrecipient by the County including the current obligation	[Award Amount]
Total Amount of the Federal Award committed to the Subrecipient by the County	[Award Amount]
Federal award project description	Project description: Through this subaward, Utah County will provide Covid-19 relief funding for direct support for cities in Utah County, direct support relating to expenditures "reasonably necessary" to help combat the spread of Covid-19.
Name of Federal awarding agency	United States Department of the Treasury
Name of pass-through entity	Utah County Government
Contact information for awarding official of the pass-through entity	Utah County Auditor's Office Attn: Peter Brown, CARES Act Finance Manager 100 East Center Street, Suite 3600 Provo, UT 84606 Phone: 801.851.8222 Email: PeterB@UtahCounty.gov
CFDA Number and Name	21.019
Is the award for Research and Development?	No
Indirect cost rate for the Federal award	None

Nothing contained in this Agreement is intended to, nor shall be construed in any manner, as creating or establishing the relationship of employer/employee between the parties. Recipient as Sub-recipient shall at all times remain an "independent contractor" with respect to the services to be performed under this Agreement. County shall be exempt from payment of all Unemployment Compensation, FICA, retirement, life and/or medical insurance and Workers' Compensation Insurance, as the Sub-recipient is an independent contractor.

UTAH COUNTY

Authorized by Resolution No. 2020-___, authorized and passed on the_____day of

_____, 2020.

BOARD OF COUNTY COMMISSIONERS
UTAH COUNTY, UTAH

By:_____
TANNER AINGE, Chairman

ATTEST: AMELIA POWERS GARDNER

Utah County Clerk/Auditor

By:_____
Deputy

APPROVED AS TO FORM AND COMPATIBILITY
WITH THE LAWS OF THE STATE OF UTAH:
DAVID O. LEAVITT

Utah County Attorney

By:_____
Deputy County Attorney

RECIPIENT

Authorized by Resolution No._____, authorized and passed on the_____day of

_____, 2020.

By:_____
MAYOR

ATTEST: _____

City/Town Recorder

APPROVED AS TO FORM AND COMPATIBILITY
WITH THE LAWS OF THE STATE OF UTAH:

_____

City/Town Attorney