



EAGLE MOUNTAIN PLANNING COMMISSION MEETING

January 12, 2021, 5:30 PM

Eagle Mountain City Council Chambers

1650 East Stagecoach Run, Eagle Mountain, Utah 84005

5:30 P.M. Work Session - Electronic Meeting via Lifesize

Public meetings will be held electronically in accordance with Executive Order 2020-1 Suspending the Enforcement of Provisions of Utah Code 52-4-202 and 52-4-207 due to Infectious Disease COVID-19 Novel Coronavirus issued by Governor Herbert on March 18, 2020.

The public may monitor or listen to open portions of the meeting electronically by following the instructions below.

Lifesize electronic meeting through Granicus at <https://eaglemountaincity.com/city-recorder/city-meetings-portal/#meetingdocs>. Click the link to view the live stream and meeting documents.

1. Discussion Items

1.A DISCUSSION - Planning Commission Guidelines

An overview of Planning Commission role, duties, and responsibilities for the benefit of the new Commissioner and refresher for current Commissioners. References include EMMC 17.15.030 and 17.15.040 as well as Utah State Code 10-9a-302.

[Planning Commission Rules of Order and Procedure](#)

6:30 P.M. Policy Session - Electronic Meeting via Lifesize

2. Pledge of Allegiance

3. Declaration of Conflicts of Interest

4. Approval of Meeting Minutes

4.A November 24, 2020, Planning Commission Minutes

[PC Minutes 11.24.2020 - DRAFT](#)

4.B December 8, 2020, Planning Commission Minutes

[PC Minutes 12.08.2020 - DRAFT](#)

5. Status Report

6. Action and Advisory Items

6.A Election of a Chair and Vice Chair for the Planning Commission

6.B [PUBLIC HEARING - Hidden Hollow Phase C \(Preliminary Plat & Site Plan\)](#)

A request for a preliminary plat and master site plan for the Hidden Hollow Phase C project, including 134 lots/units (48 single-family lots and 86 townhomes), located along the extension of Hidden Valley Parkway, southeast of the Hidden Hollow Phase B project. This is the third and final planning area of the original Hidden Valley North preliminary plat.

[2006 Approved Hidden Valley North Preliminary Plat](#)

[Hidden Hollow Ph C Preliminary Plat & Site Plan](#)

[Hidden Hollow Ph C Parks & Amenities](#)

[Hidden Hollow Ph C Building Elevations](#)

[Hidden Hollow Ph C Slope Analysis](#)

6.C [PUBLIC HEARING - Brylee North \(Rezone & General Plan Amendment\)](#)

This is a request to rezone for about 22 acres of land as well as a general plan map amendment. The property is located on the west side of Eagle Mountain Boulevard and north of the Brylee Estates development. The request is to rezone the property to a mix of Commercial Regional (10.63 acres) directly along Eagle Mountain Boulevard and the remainder as MF2 (11.4 acres). The request for a general plan amendment would change the current land use designations of Employment Center/Campus (about 14.3 acres) and Neighborhood Residential Two (about 7.7 acres) to Regional Commercial (10.63 acres) and Neighborhood Residential Three (11.4 acres).

[General Plan Map Amendment Exhibit](#)

[Rezone Exhibit](#)

[Existing Conditions](#)

[Compatibility Statement](#)

[Development Opportunities](#)

[Multifamily Concepts](#)

6.D [PUBLIC HEARING - Ault Farms \(Master Development Plan, Rezone, General Plan Amendment\)](#)

This is a request for a master development plan approval for the development of 750 acres of land on the east side of Pony Express Parkway and 3000 N, referred to as Ault Farms. The proposed project would include: single-family residential, multifamily (patio homes, townhomes, condos, and apartments), commercial, tech/light industry uses, and open spaces. The request includes rezoning and an amendment to the General Plan Future Land Use Map.

[Master Plan](#)

[Master Plan Utilities](#)

[Master Development Plan Requirement Waiver Request](#)

[Traffic Impact Study Executive Summary \(July 2020\)](#)

Traffic Generation Study (January 2021)
Environmental Impact Report
Geotechnical Study

6.E PUBLIC HEARING - Scarlet Ridge Estates (Master Development Plan, Preliminary Plat, Rezone, and General Plan Amendment)

This is a request for a master development plan (MDP) for the development of about 160 acres of land east of N Lake Mountain Road and south of the future Tiffany Lane extension. The project, referred to as Scarlet Ridge Estates, is proposed as a residential subdivision of 35 one-acre and 179 half-acre lots along with associated infrastructure and open space improvements. The MDP request also includes a rezoning and General Plan amendment request as well as an application for preliminary plat approval.

Concept Plan, Rezone Exhibit, and General Plan Amendment Exhibit

Preliminary Plat

Open Space & Amenities

Economic Analysis, Compatibility Statement, and Environmental Impact Report

Slope Analysis

Traffic Study

Preliminary Storm Drainage Report

Geotechnical Study

6.F PUBLIC HEARING - Development Code Amendment to Add EMMC 17.49 Wildlife Corridor Overlay Zone

This is a code amendment to establish the Wildlife Corridor Overlay Zone with the purpose to preserve and protect the natural habitat that serves as a migration corridor and habitat for wildlife in the region.

17.49 Wildlife Corridor Overlay Zone - PROPOSED

7. **Discussion Items**

8. **Next scheduled meeting**

9. **Adjournment**

THE PUBLIC IS INVITED TO PARTICIPATE IN PUBLIC MEETINGS FOR ALL AGENDAS.

In accordance with the Americans with Disabilities Act, Eagle Mountain City will make reasonable accommodation for participation in all Public Meetings and Work Sessions. Please call the City Recorder's Office at least 3 working days prior to the meeting at 801-789-6610. This meeting may be held telephonically to allow a member of the public body to participate. This agenda is subject to change with a minimum 24-hour notice.

CERTIFICATE OF POSTING

The undersigned, duly appointed City Recorder, does hereby certify that the above agenda notice was posted on this 12th day of January, 2021, on the Eagle Mountain City bulletin boards, the Eagle Mountain City website www.emcity.org, posted to the Utah State public notice website <http://www.utah.gov/pmn/index.html>, and was emailed to at least one newspaper of general circulation within the jurisdiction of the public body.

Fionnuala B. Kofoed, MMC, City Recorder

Eagle Mountain City Planning Commission
Rules of Order and Procedure

I. ORGANIZATION

- A. Appointment of Chair and Vice Chair: The Commission, at its first regular meeting in January of each year, shall elect a Chair and Vice Chair.
- B. The Chair presides at Commission meetings: The Chair shall preside at all meetings of the Commission and shall provide general direction for the meetings.
- C. Duties of the Chair:
 - 1. To conduct the meeting according to Appendix A of this document "Order of Procedures for Meetings".
 - 2. To call the Commission to order on the day and hour scheduled and proceed with the order of business.
 - 3. To announce the business before the Commission in the order in which it is to be acted upon.
 - 4. To receive and submit in the proper manner all motions presented by the members of the Commission.
 - 5. To put to vote all questions which are properly moved, or necessarily arise in the course of proceedings and to announce the results of motions.
 - 6. To inform the Commission, when necessary, on any point of order or practice. In the course of discharge of this duty, the Chair shall have the right to call upon legal counsel for advice.
 - 7. To authenticate by signature, when necessary, or when directed by the Commission, all of the acts, findings and orders, and proceedings of the Commission.
 - 8. To maintain order at the meetings of the Commission.
 - 9. To move the agenda along, hold down redundancy by limiting time allowed for comments if necessary, set guidelines for public input, and reference handouts and procedures during meetings.
 - 10. Recognize speakers and Commissioners prior to receiving comments and presentations.
 - 11. Oversee the training of the Commissioners.
 - a) Oversee routine training on Eagle Mountain City Code.
 - b) Oversee routine training on Utah State Land Use Code.
 - c) Coordinate opportunities for all Commissioners to attend

- training conferences regionally with the Planning Director
- d) Coordinate State mandated training annually(Utah State Code 52-4-104).

D. Duties of the Vice Chair:

1. The Vice Chair, during the absence of the Chair, shall perform all the duties and functions of the Chair.

E. Temporary Chair: In the event of the absence or disability of both the Chair and Vice Chair, the Chair or Vice Chair shall designate another planning commission member to serve as Temporary Chair. In such event, the Temporary Chair shall preside at the specific meeting to which they were designated.

F. Secretary: The duties of the secretary of the Planning Commission will be carried by city staff.

G. Secretary's Duties:

1. To post public notices of regular and special Planning Commission meetings, consisting of a Quorum, 24 hours prior to the meeting.
2. To attend every session of the Commission, to record roll, to receive and bring to the attention of the Commission all messages and other communications from the public or applicant.
3. To keep the minutes of the proceedings of the Commission and to record them.
4. To keep and maintain a permanent record file of all documents and papers pertaining to the work of the Commission.
5. To ensure Commissioners receive materials pertinent to regularly scheduled Commission meetings the Friday prior to the regularly scheduled Planning Commission meetings.
6. To perform such other duties as may be necessary

II. RIGHTS AND DUTIES OF MEMBERS

A. Meeting Attendance:

1. Every member of the Commission shall attend the sessions of the Commission unless:
 - a) Duly excused.
 - b) Unable to attend because of extenuating circumstances.
2. Any member desiring to be excused shall notify the Chair at least 72 hours in advance of the meeting.
3. The Chair shall inform the Commission Members of excused absences for the record.

B. Conflict of Interest:

Initials Chair

Initials Vice Chair

1. A Planning Commission Member must declare a conflict of interest on a specific matter on the agenda when required to do so by applicable law, as defined by the Utah State Code 10-3-13 and Eagle Mountain City Code 2.15.080.

C. Explaining the Vote:

1. After the vote is taken any member of the Commission desiring to explain his/her vote shall be allowed an opportunity to do so.

D. Voting when absent:

1. No member of the Commission shall be permitted to vote on any question unless the member shall be present in person or via phone or teleconference, when the vote on any question is taken and when the result is announced.
2. No member shall give his/her proxy to any other person.

E. Location of Meeting:

1. All meetings of the Commission shall be held at such place as the Commission designates.
 - a) A meeting having been convened at the place designated, may be adjourned by the Commission to any other place within the Eagle Mountain City for the sole purpose of investigating some particular matter of business which may be more conveniently investigated at such other place, or may be adjourned to any other room more convenient for conducting the business of the Commission, so long as proper notice of the meeting location is posted for the general public.

F. Regular Meetings:

1. Time for Notice: Regular meetings of the Commission shall be held on the second and fourth Tuesday of the month at 6:30 p.m. for the regular policy session.
2. Work sessions will be held prior to the policy session at 5:30pm
 - a) Field Trips- When this occurs the Chair will instruct the Secretary to notice and identify the time and place of the field trip on the agenda.

G. Special Meetings:

1. The Secretary shall give public notice of the time and purpose of every special meeting of the Commission at least 24 hours prior to such meeting.

H. Meetings Matters to be Considered:

1. Other business items pertaining to the affairs of the Eagle Mountain City Planning Commission and within the authority and jurisdiction

of the Commission may be considered and acted upon at any regular meeting of the Commission.

I. What constitutes a Quorum:

1. Three members of the Commission shall constitute a quorum for the transaction of business.
2. Any member disqualified because of a conflict of interest shall not be considered when determining whether a quorum is constituted.
3. Members abstaining from a vote, however, shall count toward consideration of a quorum.
4. Except as otherwise specifically provided in these rules, a majority vote of the Commission members present at a meeting shall be required and shall be sufficient to transact any business before the Commission.

J. Ratification of Actions Due to lack of Quorum:

1. All actions taken in the absence of a quorum will require ratification of a quorum later in the meeting or at the next meeting attended by a quorum.

III. PROCEDURE - ORDER OF BUSINESS

A. Rules:

1. Meetings will follow the attached Order of Procedure for Meetings (Appendix A)

B. Order of business

1. Work Session.
 - a) Training
 - b) Review of Code requested by commission
 - c) Review of General Plan (Specified by members of the commission or staff)
 - d) Planning Staff items for consideration
2. Field trips:
 - a) On occasions when site inspections are deemed advisable, field trips shall be held prior to the Planning Commission meetings
 - b) The time of the field trips to be posted on the agenda.
 - c) The public shall be allowed at the sites of the field trip but are encouraged to present their case at the Planning Commission meeting, not during the field trip.
 - d) Field trips shall be for the purpose of gathering information, asking questions, not for discussing decisions.

3. Policy Session: The order of business shall be as follows for policy session:
 - a) Pledge of Allegiance.
 - b) Declaration of conflicts of interest.
 - c) Approval of minutes.
 - d) Planning Department report. This report shall contain the following information:
 - (1) Updated status of any previously requested help with Planning Commission business.
 - (2) Update of City Council decisions on Planning Commission recommendations.
 - e) Agenda items (Public Hearing items Schedule First).
 - f) General Discussion/Questions/Announcements.
 - g) Adjournment.

C. Agenda for Meetings:

1. The Chair presides in the preparation of the agenda for the Planning Commission meeting.
2. The Chair, with the assistance of the Planning Director (EMMC 17.15.020(D)), will prepare the agenda items including:
 - a) Site Plan review (EMMC 17.100).
 - b) Rezone requests with all application requirements (EMMC 17.90).
 - c) Variances. (EMMC 17.15.040(G), UC 10-9a-702).
 - d) All Conditional Use Permits. (EMMC 17.95).
 - e) Petitions for exceptions to the standards in EMMC 17.65.050 requiring Planning Commission approval before the license may be issued or renewed.
 - f) Any home business currently in operation that constitutes a nuisance may also be required to go before the Planning Commission for continued use of the license and operation of the business. (EMMC 17.65.050).
 - g) Appeals of aggrieved applicants for home businesses
 - (1) Applicants may appeal the decision of the license official, or designee to the Planning Commission within 10 days of the announced decision. (EMMC 17.165.100).
 - h) Accessory Apartment Approval. (EMMC 17.70).
 - i) Development or operation of group day care or preschool center approval. (EMMC 17.75.050).

- j) Review Temporary Commercial Uses (EMMC 17.75.100).
 - (1) As part of approval of temporary commercial, the Planning Commission may review length of time requested for the use to be conducted, proposed hours of operation, anticipated parking needs, traffic circulation or impacts on surrounding streets and neighborhoods, or any other regulation or condition necessary for the preservation of the public health, safety, and welfare.
- k) Review of ancillary structures whose height is proposed to extend more than 10 feet above the primary structure. (EMMC 17.25.110(F)).
- l) Code amendment recommendations (EMMC 17.05.120).
- m) General plan or comprehensive general plan amendments (UC 10-9a-403(1)).

D. Agenda Deadline: Requests for Planning Commission consideration must be properly presented by meeting the following criteria:

- 1. Paying fees.
- 2. Applications and petitions filed to the Planning Department in the time period as required by the Development Code.
- 3. A complete application consists of all elements of EMMC 16.20.040, 17.60.050, 17.100.70, 17.95.040(where applicable).
- 4. Corrections or amendments for submitted applications must be delivered to the Planning Department on the Wednesday prior to the next regularly scheduled Planning Commission meeting by noon.

E. Staff Report: All issues presented to the Planning Commission for their consideration shall be accompanied by a staff report detailing:

- 1. Overview of Application.
- 2. Background, if any, of previous applications and vested rights.
- 3. Analysis of compliance with all applicable code.
- 4. Staff recommendations based on applicable code and General plan
 - a) Shall address the applicant's compliance with the standards and requirements of the Development Code, City's Construction Specifications and General plan.
- 5. Recommended motion which shall include findings of fact and conditions for approval that mitigate any code violations.
- 6. How the application fits within the guidelines of the applicable master development plan and/or master development agreement, where applicable.

7. Staff reports shall be as concise as possible while allowing for adequate coverage of the subject matter and shall be made available to anyone requesting a copy of the staff report.
 8. Copies of staff reports and other pertinent materials including applicable Master Development Agreements and Master Development Plans shall be made available to the Planning Commission members the Friday prior to regularly scheduled Planning Commission meetings.
- F. Notification of Public Hearings:
1. Notices of all items scheduled for Planning Commission informal hearings shall be mailed to the appropriate parties as required by the Development Code.
 2. Anyone wishing to receive notice of Planning Commission meeting agendas may go to the public meeting notice website www.utah.gov/pmn.
 3. Persons who wish to have copies of minutes and/or staff reports may request them by contacting the Secretary.

IV. PROCEDURE - ORDER AND DECORUM

- A. Order of Consideration of Items: The following procedure will normally be observed, however, it may be rearranged by the Chair for individual items if necessary for the expeditious conduct of business:
1. Item introduction by the Chair.
 2. Staff presentation and recommendation.
 3. Developer/Applicant presentation of proposal (10 min. max.).
 4. Opening of the public portion of hearings.
 5. Public Comment:
 - a) Timed by Secretary or a staff member assigned by the Chair.
 - b) 3 min. max. per person.
 - c) 5 min. max. for individuals representing a group.
 6. Public hearing closed.
 7. Developer response to public questions by invitation of the Chair.
 8. Planning Commission discussion.
 9. Motions entertained:
 - a) A motion is presented by a member of the Commission and can be:
 - (1) Have no action taken.
 - (2) Postponed Indefinitely by another member of the

Commission (See Order of Procedure for meetings basic element 2).

(3) Seconded by another member of the Commission.

10. Motion discussion.

11. Vote.

a) The discussion is closed to staff, the petitioner and public unless the Planning Commission requests additional information of any of these individuals.

(1) If additional information is required of the public, the public portion of the meetings may be reopened by a majority vote.

(2) If a member would like to ask further questions of the petitioner, the Chair may invite the applicant back to the lectern.

(3) Any questions of staff during this time may be done by requesting the time from the Chair.

b) Chair may outline possible actions:

(1) Approval.

(2) Denial.

(3) Continuation (Table).

(4) Approval with conditions.

V. PROCEDURE - MOTIONS

A. Making motions:

1. Motions to follow the Order of Procedure for Meetings (Appendix A).
2. The motion may refer to the staff report for recommended conditions.

VI. PROCEDURES DEBATE

A. Interruptions and Questions: No member of the Commission shall interrupt or question another member in debate without obtaining the Commissioner's consent, and to obtain such consent, shall first address the Chair.

VII. PROCEDURES - VOTING

A. Changing a vote:

1. No member shall be permitted to change their vote after the decision is announced by the Chair.

B. Conflict of Interest/Disqualification (Utah State Code 10-3-13 and Eagle Mountain City Code ~~2-15-080~~ **1.15.020, 1.15.040**):

1. Any member declaring a conflict of interest shall be disqualified and shall leave the room and not participate in the discussion and vote pertaining to that particular matter.
2. Member that has declared a conflict of interest is not present nor votes.

C. Abstention:

1. Any member abstaining from a vote may remain seated at the table and participate in the discussion.
2. Reasons for abstention must be stated at the time of the abstention and such reason shall not be considered a conflict of interest.

VIII. PROCEDURES - SUSPENSION OF RULES

A. Suspension or alteration of rules:

1. No standing rules of the commission shall be altered, amended, suspended or rescinded without the vote of a majority of all members of the Commission.

B. Amendment of Rules of Procedure: These rules of procedure may be amended at any meeting of the Planning Commission where:

1. A motion has been made by a member of the planning commission
2. The motion has been seconded
3. A majority vote of all planning commissioners is required for the motion to pass

IX. RECORDING OF RULES

A. These rules, bylaws, policies and all subsequent amendments shall be

1. Recorded by the Secretary.
2. Included in the Planning Commission's Handbook.
3. Copies shall be furnished to each member of the Commission.

Signature of Chair

Eagle Mountain Planning Commission

Signature of Vice Chair

Eagle Mountain Planning Commission

APPENDIX A

Initials Chair

Initials Vice Chair

Order of Procedure for Meetings

Here are the basic elements of the procedure to be used in planning commission meetings:

1. **Motion:** To introduce a new piece of business or propose a decision or action, a motion must be made by a group member ("I move that.....") A second motion must then also be made (raise your hand and say, "I second it.") After limited discussion the group then votes on the motion. A majority vote is required for the motion to pass (or quorum as specified in your bylaws.)
2. **Postpone Indefinitely:** This tactic is used to kill a motion. When passed, the motion cannot be reintroduced at that meeting. It may be brought up again at a later date. This is made as a motion ("I move to postpone indefinitely..."). A second is required. A majority vote is required to postpone the motion under consideration.
3. **Amend:** This is the process used to change a motion under consideration. Perhaps you like the idea proposed but not exactly as offered. Raise your hand and make the following motion: "I move to amend the motion on the floor." This also requires a second. After the motion to amend is seconded, a majority vote is needed to decide whether the amendment is accepted. Then a vote is taken on the amended motion. In some organizations, a "friendly amendment" is made. If the person who made the original motion agrees with the suggested changes, the amended motion may be voted on without a separate vote to approve the amendment.
4. **Commit:** This is used to place a motion in committee. It requires a second. A majority vote must rule to carry it. At the next meeting the committee is required to prepare a report on the motion committed. If an appropriate committee exists, the motion goes to that committee. If not, a new committee is established.
5. **Question:** To end a debate immediately, the question is called (say "I call the question") and needs a second. A vote is held immediately (no further discussion is allowed). A two-thirds vote is required for passage. If it is passed, the motion on the floor is voted on immediately.
6. **Table:** To table a discussion is to lay aside the business at hand in such a manner that it will be considered later in the meeting or at another time ("I make a motion to table this discussion until the next meeting. In the meantime, we will get more information so we can better discuss the issue.") A second is needed and a majority vote required to table the item being discussed.
7. **Adjourn:** A motion is made to end the meeting. A second motion is required. A majority vote is then required for the meeting to be adjourned (ended).

Note: If more than one motion is proposed, the most recent takes precedence over the ones preceding it. For example if #6, a motion to table the discussion, is proposed, it must be voted on before #3, a motion to amend, can be decided.

In a smaller meeting, like a committee or board meeting, often only four motions are used:

- To introduce (motion.)
- To change a motion (amend.)
- To adopt (accept a report without discussion.)
- To adjourn (end the meeting.)

Remember, these processes are designed to ensure that everyone has a chance to participate and to share ideas in an orderly manner. Order of Procedure should not be used to prevent discussion of important issues.

Tips in Order of Procedure

The following summary will help you determine when to use the actions described in Order of Procedure

- **A main motion must be moved, seconded, and stated by the chair before it can be discussed.**
- **If you want to move, second, or speak to a motion,** address the chair.
- **If you approve the motion as is,** vote for it.
- **If you disapprove of the motion,** vote against it.
- **If you approve of the idea of the motion but want to change it,** amend it or submit a substitute for it.
- **If you want advice or information to help you make your decision,** move to refer the motion to an appropriate quorum or committee with instructions to report back.
- **If you feel that the pending question(s) should be delayed so more urgent business can be considered,** move to lay the motion on the table.
- **If you want time to think the motion over,** move that consideration be deferred to a certain time.
- **If you think that further discussion is unnecessary,** move the previous question.
- **If you do not agree with a decision rendered by the chair,** appeal the decision to the commission.
- **If you think that a matter introduced is not germane to the matter at hand,** a point of order may be raised.
- **If you think that too much time is being consumed by speakers,** you can move a time limit on such speeches.
- **If a motion has several parts, and you wish to vote differently on these parts,** move to divide the motion.

Order of Procedure at a glance

TO DO THIS	YOU SAY THIS	MAY YOU INTERRUPT SPEAKER	MUST YOU BE SECONDED	IS MOTION DEBATABLE	WHAT VOTE REQUIRED
Adjourn meeting•	I move that we adjourn	No	Yes	No	Majority
Recess meeting	I move that we recess until ...	No	Yes	No	Majority
Complain about noise, room temperature etc. •	Point of privilege	Yes	No	No	No vote
Suspend further consideration of something•	I move we table it	No	Yes	No	Majority
End debate	I move the previous question	No	Yes	No	Majority
Postpone consideration of something	I move we postpone this matter until...	No	Yes	Yes	Majority
Have something studied further	I move we refer this matter to committee	No	Yes	Yes	Majority
Amend a motion	I move this motion be amended by...	No	Yes	Yes	Majority
Introduce business (a primary motion)	I move that...	No	Yes	Yes	Majority
Object to procedure or personal affront	Point of order	Yes	No	No	No vote, Chair decides
Request information	Point of information	Yes	No	No	No vote
Take up a matter previously tabled	I move to take from the table	No	Yes	No	Majority
Reconsider something already disposed of•	I move we reconsider our action relative to...	Yes	Yes	Yes	Majority
Consider something already out of its schedule*	I move we suspend the rules and consider...	No	Yes	No	Majority
Vote on a ruling by the Chair	I appeal the Chair's decision	Yes	Yes	Yes	Majority

*Not amendable

Initials Chair

Initials Vice Chair

IN THE MEETING

TO INTRODUCE A MOTION:

Wait when no one else has the floor.

Address the Chair by the proper title.

Wait until the chair recognizes you.

- Now that you have the floor and can proceed with your motion say "I move that...", state your motion clearly.
- Another member may second your motion. A second merely implies that the seconder agrees that the motion should come before the commission and not that he/she is in favor of the motion.
- If there is no second, the Chair says, "The motion is not before you at this time." The motion is not lost, as there has been no vote taken.
- If there is a second, the Chair states the question by saying "It has been moved and seconded that ... (state the motion). . . , is there any discussion?"

DEBATE OR DISCUSSING THE MOTION:

- The member who made the motion is entitled to speak first.
- Every member has the right to speak in debate.
- The Chair should alternate between those "for" the motion and those "against" the motion.
- The discussion should be related to the pending motion.
- Avoid using a person's name in debate.
- All questions should be directed to the Chair.
- Unless there is a special rule providing otherwise, a member is limited to speak once to a motion.
- Asking a question or a brief suggestion is not counted in debate.
- A person may speak a second time in debate with the commission's permission.

VOTING ON A MOTION:

- Before a vote is taken, the Chair puts the question by saying "Those in favor of the motion that ... (repeat the motion)... say "Aye." Those opposed say "No." Wait, then say "The motion is carried," or "The motion is lost."
- If a member is in doubt about the vote, he may call out "division." A division is a demand for a standing vote.
- A majority vote is more than half of the votes cast by persons legally entitled to vote.
- A tie vote is a lost vote, since it is not a majority.



EAGLE MOUNTAIN Planning Commission MEETING MINUTES

November 24, 2020, 5:30 p.m.
Eagle Mountain City Council Chambers
1650 East Stagecoach Run, Eagle Mountain, Utah 84005

5:30 PM Work Session – Electronic Meeting via Lifesize

COMMISSION MEMBERS PRESENT: Matthew Everett, Erin Wells, Rich Wood, and Brett Wright. Commissioner Christopher Pengra was excused.

CITY STAFF PRESENT: Steve Mumford, Assistant City Administrator/Community Development Director; Pete Kane, Long-Range Planning Manager; and Elizabeth Fewkes, Recording Secretary.

Commissioner Wood called the meeting to order at 5:30 p.m.

1. Discussion Items

1.A. DISCUSSION – Creation of the Wildlife Corridor Overlay Zone (Code Amendment)

Long-Range Planning Manager Pete Kane presented the item. The creation of the Wildlife Corridor Overlay Zone supports the objectives of the General Plan and the recently-adopted Parks, Trails, and Open Space Plan. The proposed amendment creates a zoning overlay that provides support for and methods by which to preserve wildlife migration routes and habitat in and through Eagle Mountain City and provides a means to reduce the continuing loss and fragmentation of habitat and migration routes for native and migrating species while simultaneously accommodating development. He presented the mule deer migration routes throughout the City and explained after the ordinance is implemented, any impacted property owners would need to agree with the rezoning of the applicable portions of their property. The Utah Division of Wildlife Resources, Utah Open Land, and the Eagle Mountain Wildlife Alliance (EMWA) reviewed the proposed standards.

Commissioner Wells joined the meeting at 5:34 p.m.

Mr. Kane explained the presented map had been provided by the EMWA. The recommendation of a 330-foot wide corridor may need to be modified to accommodate property owner vested rights. The corresponding Municipal Code chapter identifies methods of preservation such as a conservation easement and mechanisms to compensate property owners for the easement based upon appraisal values. Multiple avenues of funding could be utilized to purchase easement land and the management of the land will likely be held by another entity serving as steward.

Mr. Kane stated that generally fencing would be used to encourage wildlife utilization of the corridor; however, some areas of the wash may not be suitable for fencing installation and other

solutions are under consideration. EMWA has engaged in discussions with several of the owners of property along the migration corridor and has generally received a positive response.

Commissioner Everett suggested the inclusion of language in the standards that allows for a width of under 330 feet where the full width is unattainable; however, he expressed concern that permitting a reduced width would encourage landowners to request widths below the preferred dimensions. Although he is in favor of a conservation development, he inquired if language regarding a conservation development should be included in the proposed standards, because conservation developments are not included in the General Plan.

Mr. Kane explained that the 330-foot minimum width was determined based upon United States Department of Agriculture and United States Forest Service studies; however, certain areas may require modification such as locations with topographical impediments. He advocated for the exclusion of a minimum standard to encourage the full recommended width whenever possible. He verified that the General Plan and Municipal Code do not include conservation development standards and clarified the inclusion of the language was to denote appropriate development adjacencies for the overlay and does not authorize the introduction of conservation developments within the City and the inclusion of the conservation development in the standards is as a recommendation, not an allowance.

Commissioner Wood recommended removing the language regarding conservation development due to strenuous objections to the inclusion of conservation developments in the General Plan.

Commissioner Everett and Commissioner Wells expressed support of a future discussion regarding the inclusion of conservation easements in the General Plan.

Commissioner Everett expressed concern regarding the construction period being limited to outside the mule deer migration and nesting seasons and stated he was not in favor of the restriction as he believed it was onerous to development. He suggested discouraging rather than prohibiting construction during those times.

Discussion ensued regarding concerns that the suggested amendment limited construction to six months during the year and excluding the primary construction months.

Mr. Kane noted that the only construction that would occur in the wildlife corridor would be utility work and road or fencing installation. He suggested the inclusion of a clause allowing for an application to permit construction during the prohibited time if the location of the construction would not negatively impact wildlife or reasonable wildlife accommodations could be implemented.

Commissioner Wood expressed concern regarding animal considerations to be misused to stall, delay, or prevent construction and recommended the inclusion of verification standards to evaluate reports of animal disturbances to prevent abuse.

Discussion ensued regarding verification standards and third-party agency options for the objective evaluation of development impact on wildlife.

Commissioner Everett suggested restricting motorized vehicle access to the wildlife corridor.

Mr. Kane stated that the standards allow for uses under certain circumstances. He is unsure if the City desires to restrict access completely.

Discussion ensued regarding the impact of restricting wildlife corridor access to established vehicular trailheads and potentially limiting access for portions of the corridor and permitting the use of other sections.

Mr. Kane clarified that the Wildlife Corridor Overlay Zone is not necessary to gain funding for a conservation easement; however, the designation may assist with obtaining funding and grants. The conservation easement could be established as a private agreement. Where the wildlife corridor transverses the City, legislative action can help to prevent connectivity segmentation.

Commissioner Wright concurred with Commissioner Everett's concerns regarding takings by the City from private landowners.

Mr. Kane noted that time is of the essence to secure land to preserve the wildlife corridor prior to development of the areas. He clarified that the verbiage should be amended to protect both sides of the wash.

Discussion ensued regarding clarifying the appropriate development setbacks from the wash.

Commissioner Wells stated that she believes that residents will be in favor of the overlay and was pleased that property owners had indicated their support as well.

Mr. Kane explained the proposed standards limiting construction of underground utilities to trenches of no more than half the width of the corridor is to minimize wildlife migration obstructions by allowing a path through the area. He explained that it is unlikely that construction activities would require the full permissible width.

Discussion ensued regarding temporary fencing for utility construction.

Mr. Kane stated that amenity points are generally awarded for improved, not natural open space. Potential benefits awarded to developers in exchange for the granting of easements for the wildlife corridor to the City have yet to be determined and should be considered.

Discussion ensued regarding potential benefits to award in exchange for wildlife corridor easements dedicated to the City and nonprofit organization qualifications for conservation stewards.

1.B. DISCUSSION – General Plan Future Land Use Map Changes to Support Transitioning Code

Mr. Kane presented the item. He explained the current General Plan has Neighborhood Residential One and Agricultural/Rural Density Two designations adjacent to Regional Commercial, Employment Center/Campus, and Business Park/Light Industrial areas. Based on the recently adopted Municipal Code zoning transition standards, this would not be compatible.

Discussion ensued regarding existing and desired open space, roadway, multifamily residential, and other buffering and transition options between residential and commercial and industrial areas.

Commissioner Wood noted that areas with significant acreage of a single designation may not be realistic and recommended prioritizing addressing concerns regarding the General Plan Future Land Use and Transportation Map congruence and compliance with Municipal Code zoning requirements.

Mr. Kane requested that the Commissioners consider which areas and uses they desire to reduce in acreage in order to provide appropriate transition and buffering.

Commissioner Wood noted that roadways and arterial road buffering should be included in the consideration of land use designations and certain areas may require the limitation of the housing products generally permissible in the zone designation in order to provide appropriate buffering.

1.C. DISCUSSION – Code Amendment Process

Assistant City Administrator/Community Development Director Steve Mumford presented the item and explained the proposal was specific to the land use regulation amendment process. City Attorney Jeremy Cook prepared the amendment at the request of the City Council to clarify the process for initiating Municipal Code review.

Title 17 will specify how land use regulations are placed under review and will most likely be via a vote or request by two or more City Councilmembers. The standards will also formalize the process for the Planning Commission and others to request amendments. The amendment will ensure compliance with State Code, create consistency and clarify the process for developers, and create a timing mechanism as to when the review formally begins including public notification requirements.

Commissioner Wood stated the process for the Planning Commission placing Municipal Code standards under review is included in the Planning Commission Rules of Order and Procedure. He stated he did not believe the Mayor could request Municipal Code amendments.

Mr. Mumford stated State law requires the process to be included in Municipal Code standards. Municipal Code amendments may be requested by the City Council, Planning Commission, Planning Director, Mayor, applicants, developers, and residents. The Mayor sets the agenda for City Council meetings and may include a Municipal Code amendment on the agenda for the consideration of the City Council. Staff desires to ensure the proposed standards and timing triggers are compliant with State Code, are clear and consistent, and are properly publicly noticed.

Commissioner Wood stated he appreciates and is proud of the work of the Planning Commission and said that untrue allegations were made regarding the actions of the Commission. He said the Planning Commission has done their duty and followed Municipal and State Code.

6:30 P.M. – Eagle Mountain City Planning Commission Policy Session

Commissioner Wood called the meeting to order at 6:30 p.m.

Commissioner Wood thanked staff for their time and efforts in preparing the agendas and facilitate the meetings. He thanked Planning Manager Michael Hadley for his time, service, and dedication during his tenure with Eagle Mountain City.

2. Pledge of Allegiance

Mr. Mumford led the Pledge of Allegiance.

3. Declaration of Conflicts of Interest

None.

4. Approval of Meeting Minutes

4.A. November 10, 2020, Planning Commission Minutes

MOTION: *Commissioner Everett moved to approve the November 10, 2020 minutes. Commissioner Wright seconded the motion. Those voting aye: Matthew Everett, Brett Wright, and Rich Wood. Those voting nay: None. The motion carried with a vote of 3:0. Commissioner Wells abstained as she was not in attendance at the November 10, 2020 meeting.*

5. Status Report

Mr. Kane stated that during the November 17, 2020 City Council work session Brylee Farms open space amenities and preliminary plat amendment was discussed including concerns regarding the location of the pool and clubhouse being located in the single-family not multifamily and the item was moved forward to the December 1, 2020 City Council meeting. The Silver Fox Cascade Master Site Plan discussion included concerns regarding the proximity of the parking lot and fencing to the wash and the item was also moved forward to the next policy meeting. The Municipal Code amendment to remove references to tier and bonus density language was discussed and moved forward without concerns. Landscaping encroachment issues in the City and potential solutions were also discussed.

During policy session, after a lengthy discussion, the City Council voted unanimously to approve a one-year business license for La Petite Grooming Salon with a long list of conditions that if not met would result in the revocation of the license and staff was directed not to approve an additional license of the business at that location. La Petite has submitted an application for a conditional use permit for a different property within the City that will come before the Planning Commission

once the application is complete. The City Council approved the C Jay Properties rezone and site plan; the ordinance amending EMMC 16.35 Development Standards for Required Public Facilities and 17.60 Landscaping, Buffering, Fencing and Transitioning; the ordinance amending EMMC 16.10 Master Development Plans; the ordinance approving the Butterfield Annexation petition and establishing zoning regulations for the lands in the Butterfield annexation area; the ordinance approving the Butterfield Annexation area; and the Overland Village Two concept plan and master development agreement (MDA) amendment.

6. Action and Advisory Items

6.A. PUBLIC HEARING – B&H Land Holdings (Rezone & General Plan Map Amendment)

This item was removed from the agenda at the request of the applicant.

6.B. PUBLIC HEARING – Ault Farms (Master Development Plan)

Commissioner Wood opened the public hearing at 6:38 p.m. No comments were submitted to the City Recorder's Office and no public was in attendance to make comment. The public hearing was continued to the following meeting.

MOTION: *Commissioner Wright moved to table the Ault Farms master development plan to a meeting no sooner than the January 12, 2021 Planning Commission meeting, until the applicant can comply with Municipal Code requirements and supply staff with the requested materials. Commissioner Everett seconded the motion. Those voting aye: Matthew Everett, Brett Wright, Rich Wood, and Erin Wells. The motion passed with a unanimous vote.*

6.C. PUBLIC HEARING – Development Code Amendment to Remove Lot Size Transition Requirements (EMMC 17.60 Landscaping, Buffering, Fencing and Transitioning)

Mr. Kane presented the item. The City Council adopted a Municipal Code amendment that added "Zone Transitioning" to EMMC 17.60 Landscaping, Buffering, Fencing, and Transitioning on October 6, 2020. This amendment establishes requirements for compatible zone adjacencies for all zoning districts which establishes appropriate zone transition that shall occur going forward. Previous Planning Commission discussion noted the new zone transition section achieves the intent and purpose of the lot size transition section of EMMC 17.60.150.

Commissioner Wood explained that this amendment removes standards from Municipal Code that supported the lot transition tier standards, which protect the rights of large residential lots, that have since been repealed as the standards no longer coincide with updated business, commercial, and residential standards. The same purpose and protections are now achieved through zone transitioning requirement standards.

Commissioner Wells stated that although she has concerns that an occasional adjacency incompatibility issue may arise regarding animal rights, she concurs that the zone transitioning

standards offer protections for the residential land use rights and has decided not to challenge the amendment despite her concerns.

Commissioner Wright concurred with Commissioner Wells' concerns regarding occasional incompatibility issues. He suggested the addition of verbiage in the standards to require that lots of an average size or above must be used to transition from larger lots in order to prevent adjacencies of the minimum allowable acreage.

Commissioner Wood recommended a footnote to require a median or above lot size for adjacent properties transitioning based upon animal rights rather than acreage.

Discussion ensued regarding the desired transitioning requirements from large lots in order to protect resident animal rights.

Commissioner Wells expressed concern regarding odor complaints against residents on properties with animal rights from residents in future developments and noted her goat stinks worse than her pigs. She requested for animal rights to be a discussion item at a future meeting.

Commissioner Wood opened the public hearing at 6:55 p.m. No comments were submitted to the City Recorder's Office and no public was in attendance to make comment. As there were no comments, Commissioner Wood closed the hearing.

MOTION: *Commissioner Everett moved to recommend approval to the City Council of the amendment to Eagle Mountain Municipal Code Chapter 17.60 Landscaping, Buffering, Fencing, and Transitioning. Commissioner Wells seconded the motion. Those voting aye: Matthew Everett, Brett Wright, Rich Wood, and Erin Wells. The motion passed with a unanimous vote.*

6.D. PUBLIC HEARING – Development Code Amendment to Establish an Overlay Zone (EMMC 17.58 Historical Preservation Zone)

Mr. Kane presented the item. In reviewing Municipal Code standards from other municipalities, it was determined that a historical preservation overlay zoning designation would be more appropriate than a historical preservation zone, as an overlay would allow properties to have an underlying zoning designation. The proposed Municipal Code amendment would incorporate language to establish an overlay zone, clarify the historical site designation process, and allow the Planning Commission to act as the Historic Preservation Board in absence of such a board.

The historic preservation process begins with identification by any person of the location of a possible important historical or archaeological site to the City. An on-site evaluation will be conducted with property owner consent. Next, the site will be considered for addition to the local registry through a request for designation submitted to the City. The Historic Preservation Board will then hold a public meeting to evaluate the request and criteria for designation. Once a property or site is on the local registry, it is eligible for the zoning overlay. A request to rezone the property or site may then be submitted to the City. The Planning Commission will hold a public hearing on

the rezone request to make a recommendation to the City Council. Finally, the City Council will hold a public hearing to take action on the rezone request.

Mr. Kane clarified that either the City or the property owner could request the overlay.

Commissioner Wells stated that although she did not want to infringe upon property owner rights, she expressed concern regarding the loss of historical property should a property owner not be amenable to the application of the overlay.

Discussion ensued regarding legal authority to access private property and concerns regarding landowner prevention of the historical overlay rezone in relation to the City's rights to rezone properties to other zoning designations.

Mr. Kane clarified the proposed amendment requires for a property owner to be notified but does not require property owner consent or permission.

Commissioner Wood opened the public hearing at 7:05 p.m. No comments were submitted to the City Recorder's Office and no public was in attendance to make comment. As there were no comments, Commissioner Wood closed the hearing.

MOTION: *Commissioner Everett moved to recommend approval to the City Council of the amendment to Eagle Mountain Municipal Code Chapter 17.58 Historical Preservation Overlay Zone. Commissioner Wright seconded the motion. Those voting aye: Matthew Everett, Brett Wright, Rich Wood, and Erin Wells. The motion passed with a unanimous vote.*

6.E. PUBLIC HEARING – Development Code Amendment to Establish an Overlay Zone (EMMC 17.62 Ridgeline Protection Standards)

Mr. Kane presented the item. The Planning Commission held a discussion during the summer of 2020 as to whether the Ridgeline Protection Standards chapter should be updated. The conversation focused on the ability to better visualize and increase awareness of areas that fall under these regulations by establishing a zoning district. A zoning overlay designation was proposed as it would allow a property's existing zoning designation to carry which includes land uses while adding the regulations of this chapter. The proposed Municipal Code amendment incorporates language to establish the overlay zone and references to that zone.

Staff recommends the Planning Commission make a motion to recommend approval of the proposed amendments to EMMC 17.62 to the City Council with a condition for staff to work with Legal to incorporate language that will protect the areas that fall under the definition of “ridge,” “prominent ridge,” and “ridgeline setback” be subject to the regulations of this chapter until the rezoning process is completed and the zoning overlay added to the City's zoning map. The amendment does not change any of the existing standards within the chapter.

Commissioner Wood opened the public hearing at 7:09 p.m. No comments were submitted to the City Recorder's Office and no public was in attendance to make comment. As there were no comments, Commissioner Wood closed the hearing.

MOTION: *Commissioner Wood moved to recommend approval to the City Council of the amendment to establish an Overlay Zone in Eagle Mountain Municipal Code Chapter 17.62 Ridgeline Protection Standards with the condition that staff work with Legal to incorporate language that will protect the areas that fall under the definition of “ridge,” “prominent ridge,” and “ridgeline setback” to be subject to the regulations of this chapter until the rezoning process is completed and the zoning overlay added to the City’s zoning map. Commissioner Wright seconded the motion. Those voting aye: Matthew Everett, Brett Wright, Rich Wood, and Erin Wells. The motion passed with a unanimous vote.*

7. Discussion Items

Commissioner Wood requested for the Municipal Code to cite the applicable State Code standards or to include standards regarding the scope of review and de novo appeals in order for residents to better understand the appeal process.

Mr. Kane inquired regarding lengthy agenda attachments and suggested including an executive summary in the agenda and sending an email attachment with the full document in order to reduce packet length.

Commissioner Everett expressed support for the inclusion of an executive summary and suggested having the full report available upon request.

Commissioner Wood suggested for all reports and studies to include executive summaries for the benefit of the Planning Commission and the City Council.

Mr. Kane stated that iLegislate includes a repository with all development MDAs. He inquired if the Planning Commission desired for MDAs also to be attached to the agenda.

Commissioner Wood advocated for the inclusion of the applicable MDA or vested rights under previous Municipal Code standards to be included in the packet materials in order to facilitate the Planning Commission in evaluating the item with the applicable requirements.

Commissioners Wright and Wells concurred with the recommendation of including MDAs in the packet.

8. Next scheduled meeting

The next meeting is scheduled for December 8, 2020.

9. Adjournment

MOTION: *Commissioner Wells moved to adjourn the meeting at 7:27 p.m. Commissioner Wright seconded the motion. Those voting aye: Matthew Everett, Brett Wright, Rich Wood, and Erin Wells. The motion passed with a unanimous vote.*

The meeting was adjourned at 7:27 p.m.

Approved by the Planning Commission on January 12, 2021.

Steve Mumford, AICP
Assistant City Administrator/Community Development Director



EAGLE MOUNTAIN Planning Commission MEETING MINUTES

December 8, 2020, 5:30 p.m.
Eagle Mountain City Council Chambers
1650 East Stagecoach Run, Eagle Mountain, Utah 84005

5:30 PM Work Session – Electronic Meeting via Lifesize

COMMISSION MEMBERS PRESENT: Matthew Everett, Christopher Pengra, Erin Wells, Rich Wood, and Brett Wright.

CITY STAFF PRESENT: Steve Mumford, Assistant City Administrator/Community Development Director; Pete Kane, Long-Range Planning Manager; Jessa Porter, Planner; and Elizabeth Fewkes, Recording Secretary.

Commissioner Wood called the meeting to order at 5:30 p.m.

1. Discussion Items

1.A DISCUSSION – City Center Location on General Plan Map

Long-Range Planning Manager Pete Kane presented the item. He explained that two locations are in consideration for the location of the Town Center and Municipal buildings. The first location is southeast of Pony Express Parkway and East of Mid Valley Road. Another location in consideration for the Town Center is east of Eagle Mountain Boulevard and south of Wride Memorial Highway. He stated the location would be the site of the future City Hall and municipal and emergency services and would ideally be located near park space, major roadways, and commercial applications.

Discussion ensued regarding the desired location for the future Town Center, concerns regarding rezoning Regional Commercial areas to Civic Uses, the amount of Regional Commercial acreage designated in the General Plan, the desired and appropriate acreage to zone for Civic Uses, Town Centers in other cities, the mixture of adjacent uses to civic buildings, criteria for site selection, the number and types of civic services located within the Town Center, future transit considerations, and the benefit of locating the Town Center near Wride Memorial Park.

Assistant City Administrator/Community Development Director Steve Mumford explained the discussion of relocating the proposed Town Center to the west near major roadways arose during the City Council's budget meeting in January 2020 in consideration of transportation and land values. The City hired a consultant to update the Master Transportation Plan. Previous discussions with a traffic engineer focused on concerns regarding future traffic flow conjunction at the intersection of Pony Express Parkway and Airport Road and options to reduce and distribute the traffic to other roads. Preliminary discussions regarding the construction of a public safety building proposed a location near Wride Memorial Park. A future recreation center is also

proposed to be located adjacent to Wride Memorial Park. He noted that civic facilities are not required to be located together; however, the desired distribution of civic uses should be considered when determining the Town Center location.

Commissioner Wood expressed concern regarding locating a justice court near schools.

Commissioner Wells noted that criminal cases would be tried at the county courts and justice courts generally try nonviolent cases such as traffic violations and Municipal Code enforcement.

Commissioner Pengra stated that Regional Commercial uses vary from Civic Uses both in purpose and ambiance and felt placing Municipal buildings adjacent to a regional shopping center would be disharmonious.

Discussion ensued regarding the ownership of the parcel of land currently designated as the Town Center in the General Plan and proposed development projects within and adjacent to the parcel.

Commissioner Wright concurred with Commissioner Pengra regarding the benefit of locating the civic uses near Wride Memorial Park.

Mr. Mumford said staff intends to compile a master plan for the downtown area with consideration from involvement and feedback from the impacted property owners and the public.

Discussion ensued regarding the desired recommendation to the City Council regarding the location of the Town Center. The Commission determined they were in favor of the originally proposed location but were open to considering relocation if provided a compelling reason with supporting data. They concurred that determining the location should be prioritized and achieved promptly in order to secure land in the desired area.

Commissioner Wood directed staff to prepare a plan to present to the Planning Commission during a future meeting.

Commissioner Wood adjourned the work session at 6:15 p.m.

6:30 P.M. – Eagle Mountain City Planning Commission Policy Session

Commissioner Wood called the meeting to order at 6:30 p.m.

2. Pledge of Allegiance

Mr. Mumford led the Pledge of Allegiance.

3. Declaration of Conflicts of Interest

Commissioner Wells noted for transparency that she lives approximately a mile from the Woodward property being considered for a rezone during this meeting.

4. Approval of Meeting Minutes

No minutes were presented.

5. Status Report

Mr. Kane stated that during the work session at the City Council December 1, 2020 meeting discussions included a general overview of the Municipal Code development standards review request process and an amendment to clarify the process is under consideration. During policy session, the City Council unanimously approved the amendment removing tier and bonus language, the Marketplace at Eagle Mountain Town Center development agreement, and the Silver Fox Cascade master site plan with the staff recommendations. The Brylee Farms Open Space and Amenities preliminary plat amendment was discussed at length and due to concerns regarding the location of the pool and clubhouse and the size of the clubhouse, the City Council unanimously tabled the item and directed the applicant to consider relocating the pool and clubhouse and/or increase the size of the clubhouse. The Brylee Farms application is expected to return to the City Council at the January 5, 2020 meeting.

6. Action and Advisory Items

6.A. PUBLIC HEARING – Woodward Property (Rezone)

Mr. Kane presented the item. The subject property of approximately 4.73 acres is located near 5200 Lake Mountain Road and includes the Lake Mountain Road right-of-way. The parcel is currently zoned Agriculture. The property owner would like to build a home on the property which would require a rezone to RA2 as the Agricultural zone requires a lot size of 5 acres or greater for home construction.

The majority of the parcel is designated as Agriculture/Rural Density One on the General Plan. The western-most 1.1 acres of the property is designated as Parks and Open Space. An RA2 zone is an appropriate designation; however, RA2 is not an appropriate designation for the Parks and Open Space land use portion. Staff recommends this portion of the land to be rezoned to Natural Open Space (OS-N). The proposed rezone is compatible with the current use of the surrounding properties. The RA2 zone is permitted as a compatible zone to be adjacent to the Agriculture Zone. The rezone will not burden City services. Staff has requested for the property owner to dedicate a 66-foot wide right-of-way to the City. The traffic generation from the single-family home will have a negligible effect. The rezone is not expected to negatively impact surrounding property values.

Staff recommends that the Planning Commission make a motion to recommend approval of the application to the City Council, for the reasons set forth in the staff report and the meeting, with the following conditions:

1. The western-most portion of approximately 1.1 acres of the property designated as “Parks and Open Space” in the General Plan be zoned as OS-N and the remainder of the property be zoned RA2; and

2. Dedication of a 66-foot-wide right-of-way to the City where Lake Mountain Road is located.

Mr. Kane stated that the portion of the land west of the Lake Mountain Road right-of-way and east of the area proposed to be zoned as OS-N that would be rezoned to RA2, should the application be approved, would be under an acre. The OS-N and RA2 portions of the property west of Lake Mountain Road are not intended to be developed, are to be ancillary to the property east of Lake Mountain Road, and could be used as garden or storage space. Structures are prohibited under the powerline; however, a shed or similar structure could be erected on the RA2 portion. Current Municipal Code standards do not prohibit accessory apartments or ancillary structures on bisected segments of land, but he is unsure if the parcel to the west would be segmented into a separate parcel should the application be approved. He suggested the inclusion of a condition to prohibit a dwelling structure on the west side of the Lake Mountain Road right-of-way.

Commissioner Wright expressed concern that approving the rezone could result in a future rezone request of the RA2 portion of the land west of Lake Mountain Road to RA1, RA2, RD1, RD2, FR, or MEC as those zones are identified as compatible buffers to Agriculture.

Mr. Kane explained the General Plan designation of the area as Agricultural/Rural Density One limits the appropriate zoning for the area to AG, RA1, and RA2.

Commissioner Wood recommended presenting the possibility of dividing the land into three parcels to the City Council.

Applicant Tyler Woodward stated he desires to build a house on the eastern portion of the property and intends to use the western portion for either a garden or livestock. He would not object to a condition to prohibit dwelling structures on the western RA2 portion of the land.

Commissioner Wood opened the public hearing at 6:49 p.m.

Jody Hooly submitted the following email comment: "While I completely understand and would like to see another neighbor on a nearly 5 acre large lot, a request for rezone would be spot zoning in this case. It is completely surrounded by Agriculture zone, and over 5 acres and above each. Many of us residents have talked at many CC meetings about spot zoning and the unintended negative affect it can have. It would however, seem to be appropriate to request a variance to build, which I would whole heartedly support. I wonder if this was considered an option by staff? I would be glad to welcome the Woodwards' as new neighbors, but am very much concerned about the unintended consequence of a rezone. I would liked to have been able to talk to the applicant, but had no contact information available. I would be glad to talk to anyone having questions about my concerns."

Commissioner Wood closed the public hearing at 6:51 p.m.

Commissioner Wood reiterated that the General Plan allows RA2 zoning as an appropriate adjacency to agricultural land and is a permitted zone for the Agricultural Rural Density One

land use designation. Accordingly, the approval of this application would not create spot zoning. He recommended rezoning the other properties in the area to RA1.

Mr. Kane explained that a building variance had not been explored as an option as it would be difficult to prove the need for a variance, because the approval of a variance requires proof of a hardship, such as topographical limitations. Due to the General Plan designation allowance of RA2 zoning, staff determined to recommend a rezone as the appropriate action to allow the applicant to build a home.

Commissioner Wells stated that she spoke to a few of the neighboring landowners and once she explained the reasons for the rezone and the applicant's intended use of the property, they were in favor of approval. She feels that the use is appropriate for the area due to the unique challenges for the property.

Commissioner Everett agreed that granting a rezone is appropriate due to the challenges of the property being bisected by Lake Mountain Road. He said he supports prohibiting dwelling structures on the western portion of the property and dividing the parcels; however, he desires to be sensitive to any tax increase or other burdens that the division of the property might create for the applicant.

Discussions ensued regarding the right-of-way dedication and taxation of the property as a single versus multiple parcels.

Mr. Mumford stated the City desires the dedication of the right-of-way to the City; however, if the dedication creates three separate parcels, the parcel to the west would be below the approved lot size for land designated as Agricultural Rural Density One. He said the Commission could decide to only approve the rezone for the eastern portion of the land, leaving the western portion zoned as AG; however, the western portion would not meet the lot size standards for the AG zone. He noted the entire 4.73 parcel is already below the AG lot size minimum of 5 acres. All of the rezoning options would result in a parcel of land under the size standards.

Commissioner Wright recommended rezoning the entire portion of the property west of Lake Mountain Road to OS-N as it would allow the applicant his desired uses for the property without potentially allowing the construction of dwelling units.

Mr. Kane clarified that livestock housing and grazing are not permitted in the OS-N zone and should the parcel adjacent to the west of Lake Mountain Road be left with AG zoning, the size of the parcel would prohibit the construction of a dwelling unit as it is under the required 5 acres. He recommended leaving the AG zoning on the parcel directly west of Lake Mountain Road as preferable to rezoning the entire western area to OS-N.

Mr. Woodward said he was amenable to the portion of the property to the west of the Lake Mountain Road right-of-way and east of the area in the powerline corridor to remain with the AG zoning as it permitted his desired uses for the land.

Mr. Kane verified that the AG zone permits accessory structures for animal uses.

Commissioner Wright recommended to rezone the western portion of the property to OS-N, retain the AG zoning of the portion of the land between the OS-N area and the Land Mountain Road right-of-way, and rezone the portion of the property east of the Lake Mountain Road right-of-way to RA2. He explained the purpose of rezoning the land within the powerline corridor to OS-N is to create consistency with other areas in the corridor and to be in accordance with the General Plan designation for the land.

Discussion ensued regarding OS-N allowed uses.

Mr. Kane stated that Geographic Information System mapping data was used to determine the parameters of the General Plan land use designations.

Discussion ensued regarding how to best designate the land segmentation.

The meeting was recessed from 7:10 to 7:20 p.m. due to technical difficulties.

MOTION: *Commissioner Pengra moved to recommend approval to the City Council of the Woodward Property rezone with the following conditions:*

- 1. The 1.1 acres on the west side of the parcel shall be rezoned as OS-N from the western property line up to the eastern border of the PacifiCorp corridor;*
- 2. The portion of the property from the eastern border of the PacifiCorp corridor to the western edge of the proposed road dedication shall remain Agriculture and no accessory dwelling units shall be allowed;*
- 3. A 66-foot-wide corridor shall be dedicated to the City for right-of-way; and*
- 4. The remainder of the property shall be rezoned as RA2.*

Commissioner Wood seconded the motion. Those voting aye: Matthew Everett, Brett Wright, Rich Wood, Christopher Pengra, and Erin Wells. The motion passed with a unanimous vote.

Commissioner Everett requested for staff to discuss with the City Council the possibility of dividing the property into two parcels with advice from the City Attorney and County.

6.B. PUBLIC HEARING – Brylee North (Rezone & General Plan Amendment)

This item was removed from the agenda at the request of the applicant.

Commissioner Wood opened the public hearing at 7:27 p.m. No comments were submitted to the City Recorder's Office and no public was in attendance to make comment. The public hearing was continued to the following meeting.

MOTION: *Commissioner Wells moved to table the Brylee North rezone and General Plan amendment until the January 12, 2021 meeting. Commissioner Everett*

seconded the motion. Those voting aye: Matthew Everett, Brett Wright, Rich Wood, Christopher Pengra, and Erin Wells. The motion passed with a unanimous vote.

6.C. PUBLIC HEARING – Scenic Mountain Phase C (Master Site Plan, Conditional Use Permit)

The Scenic Mountain Phase C Master Site Plan and Conditional Use Permit were presented and discussed concurrently.

Mr. Kane presented the item. The entire Scenic Mountain development project includes just under 35 acres of land on the south side of Wride Memorial Highway and northeast of The Ranches. The project was granted an approved master development plan (MDP) and master development agreement (MDA), with the latest amended and restated agreement signed in March 2017. The MDA requires a slope transition area/natural open space along the eastern and southeastern portions of Phase C due to topography and to create a transition between uses. Phase C requires 1,000 square feet of open space per residential unit. The land use proposed is townhome residential for 84 units with alley-loaded garages.

Based on the size of the subject property as over 5 acres, the proposed use of townhomes, and the development occurring in three separate phases, the development requires the approval of a master site plan, which Municipal Code allows to be used as the preliminary plat. The City can choose to waive the requirement for site plan applications for the individual phases based on the master site plan submission. Each separate phase will require individual final plats. A multifamily project, according to City standards at the time of the MDA signing, also requires the approval of a conditional use permit.

The MDA divides the project into three planning areas. Planning Area 1/Phase A is a single-family home cluster development with the right to build up to 86 residential units with a gross density not to exceed 5.49 units/acre. The approved preliminary plat for Phase A includes 80 cluster homes on 15.65 acres. Planning Area 2/Phase B is a townhome development with the right to build up to 83 townhome units with a gross density not to exceed 8.23 units/acre. The approved preliminary plat for Phase B includes 40 townhome units on 4.16 acres, reduced from the original 10.09 acres due to land acquisitions by the Utah Department of Transportation (UDOT). Planning Area/Phase C is the subject of these applications and was preserved as a flexible use area development allowing either a commercial office/retail development, residential units under the previous Tier III-Tier IV subdivision requirements, or a combination of residential and commercial units. The Phase C acreage was reduced from 7.22 acres to 5.39 acres due to UDOT acquisitions. The original approval permitting 120 units was reduced to 89 units due to these acquisitions. The application proposes 84 units for Phase C. The MDA allows for a maximum density of the entire project of 10.15 units/acre.

The MDA requires compliance with the Municipal Code standards at the time of the March 2017 signing. The MDA also includes a statement that "[n]otwithstanding anything to the contrary herein, any City ordinance, amendment to the City's laws, or other development standard enacted by the City after the date of this Agreement which has the effect of prohibiting and/or materially

and unreasonably restricting Developer's rights to develop the vested densities set forth in this Agreement and the Master Development Plan for the Property shall be inapplicable to the Property ... and shall not affect or regulate the development and use of the Property, unless the City Council, on the record, finds that a compelling, countervailing public interest would be jeopardized by applying the provisions of this Agreement."

Based on the approvals in Phases A and B and the request for Phase C, the overall density is 8.1 units/acre. The applicant proposes to develop Phase C in three phases. Phase 1 includes 13 townhomes west of Vernham Lane. Phase 2 includes 39 townhomes south of Hurstbourne Drive. Phase 3 includes 32 townhomes north of Hurstbourne Drive.

The development will utilize the road network currently under construction in the development as well as additional alleys. Access is provided to Wride Memorial Highway on the north, to Phase A to the south, to Phase B to the east, and a stub road to the west for the future development of vacant land. Staff recommends renaming Elkhorn Drive as Elkhorn Road is an existing road in the City in the Valley View North subdivision. "No parking" signs and restrictions need to be applied to one side of any road that is under 32 feet in width and should be applied to the same side of the street where fire hydrants are located with the signs separated no more than 100 feet apart.

Multifamily developments require one off-street guest parking space for every three units. With 84 townhomes, Phase C is required to have 28 off-street parking spaces. The plan calls for 35 guest parking spaces with 21 standard off-street spaces and 14 parallel parking spaces along the north side of Hurstbourne Drive. A fire hydrant should be added near unit 146. The fire hydrant detail in the MDP should be updated to the City standards. All alleys need a turning radius at the entry/exit points for fire apparatus.

Retaining walls are proposed adjacent to the open space along the southeast edge of the property. Retaining walls should be limited to five feet in height; any wall needed in excess of five feet should be tiered with each wall a maximum of five feet and a horizontal separation of six feet. The open space along the southeast portion of the project is required by the MDA as a slope transition area/natural open space. Phase C includes a pickleball court on the south side and a playground on the east side. The entire Scenic Mountain project requires at least 468 amenity points. Phase C includes amenities totaling 155.8 points. When added to the current points for phases A and B, the overall total is 537.5 points. Staff recommends a path/stair connection from the pickleball court to the trail to the east.

The applicant has proposed a wood-alternative composite fence of six feet in height in a grey color; the City Code at the time of MDA signing permitted this type of fence. Chain-link sport fencing of eight feet in height is proposed around the pickleball courts. Chain-link fencing is permitted for this type of use. The USA Pickleball Association, however, recommends a fence height of ten feet.

The project complies with the development and design standards at the time of MDA signing except for variance in roof height, cluster mailboxes, and the location of mechanical equipment. EMMC 17.72.040(C) requires varying roof heights. EMMC 17.72.040(J) states cluster

mailboxes should “emulate the buildings in materials and color.” Additionally, staff recommends that the cluster mailbox be located on Hurstbourne Drive adjacent to the retention area for safer access and to permit residents to utilize guest parking when picking up their mail. EMMC 17.72.040(K) requires the screening of mechanical equipment; the plans do not note the location of each townhome’s mechanical equipment such as HVAC compressors.

The potential use to the west of the property is commercial, the use to the south is cluster homes with an approximate RC to MF1 current zoning class, and the use to the east is townhomes with an approximate MF1 current zoning class. The proposed development of Phase C correlates equivalently to between MF1 to MF2 under the current zoning designations.

The development includes a road network of public and private roads as well as alleys. Although the standard regarding impact on surrounding areas typically applies to commercial developments, Phase C includes congregation and activity areas for a pickleball court off Elkhorn Drive and a playground off Crowley Way. A conditional use permit for Phase B was granted without conditions.

Staff recommends that the Planning Commission make a motion to recommend approval of the master site plan to the City Council, for the reasons set forth in the staff report and the meeting, with the following conditions:

1. Approval of the master site plan to serve as approval of the preliminary plat;
2. Adjacent buildings cannot have the same color palette;
3. Rename Elkhorn Drive;
4. “No Parking” restriction for one side of any road under 32-feet in width;
5. Replace fire hydrant detail with City’s fire hydrant detail;
6. All alleys need a turning radius at the entry/exit points;
7. Approved fencing for Phase C shall be used in Phase B as well;
8. Retaining walls at a maximum of five feet, or tiered, with a fence between retaining wall and trails;
9. Addition of a path/stairway from the pickleball court to the trail to the southeast;
10. Pickleball court fencing to be ten-feet in height;
11. The cluster mailbox shall be relocated to Hurstbourne Drive by the retention area;
12. The cluster mailbox shall be designed to emulate the design of the townhomes in materials and colors;
13. Each townhome's exterior mechanical equipment to be screened from view; and
14. Site plans for each of the separate phases are not required.

Staff recommends the Planning Commission approve the conditional use permit, for the reasons set forth in the staff report and the meeting.

Mr. Kane explained that due to the two egress points, Longleaf Lane meets connectivity and road length standards. Northup Way would not be used for fire service access as fire apparatus would be located on Vernham Lane. He explained that the alleys to access the rear-loading garages have been assigned street names and the townhomes would be assigned house numbers in correlation with the roads, not the alleys.

Commissioner Wood expressed concern that naming the alleys could cause address confusion for emergency services.

Mr. Kane stated Captain Dan DeVoogd, Fire Marshal for Eagle Mountain City, mentioned the named alleys during the project review; however, named alleys have been permitted in other areas in the City and emergency services distinguish between the alleys and roadways.

Commissioner Everett expressed concern regarding the accessibility of the open space.

Mr. Kane stated that in the MDA the area was identified as flex space and as such did not have open space requirements, other than the slope transition, but the project is still required to adhere to City amenity point requirements.

Commissioner Wood expressed concern that the open space was not centrally located and said he believed the requirement for centrally located amenities within a set distance from all residences predated the MDA for the project. He inquired regarding the location of the guest parking.

Mr. Kane stated that the amenities for the project will be utilized by all members of the HOA. The centrality of the amenities could be evaluated in relation to the entire development rather than the individual phases. The project has not been evaluated to determine if the residences are all within a quarter-mile of a park. The standards regarding guest parking stipulate the number of stalls but not the location or the even distribution of the stalls.

Mr. Mumford stated that the City Engineer has recommended short, split-rail fencing along sloped open space areas similar to fencing along the wash in other projects.

Commissioner Wright inquired if parallel parking stalls are allowed to be counted towards the guest parking stall requirement and if the path/stair connection from the pickleball court to the trail to the east recommended by staff would increase the amenity points to the required number. He asked if the units met the man door requirements listed in EMMC 17.72.030(C).

Mr. Kane explained that on-street parking is not permitted to be counted as guest parking stalls. The parallel parking in this development is located outside of the public right-of-way. The recommended path/stair connection would not achieve amenity points; however, the total amenity point calculation for the overall Scenic Mountain project exceeds the required amount.

Commissioner Wood said EMMC 17.72.030(C) was added to Municipal Code after the approval of this MDA at the request of Captain DeVoogd as a townhome access safety measure.

Commissioner Pengra inquired if the 38-foot road width measurement included curb and gutter and sidewalk. He expressed concern regarding the health, safety, and welfare of the residents due to egress for emergency vehicles. He said that during his tenure as United Fire Authority (UFA) Vice-Chair, he witnessed street parking reducing emergency vehicle apparatus site access. He felt the road width was insufficient to adequately accommodate street parking, especially in the case of larger or inappropriately parked vehicles. He expressed his disfavor for the proposed parking configuration, but the removal of the parallel guest parking stalls would result in the

project's failure to comply with Municipal Code requirements. He recommended tabling the item if the applicants were unable to propose resolutions to the parking and emergency vehicle access concerns.

Mr. Kane clarified that Captain DeVoogd was aware of the parallel guest parking and stated the stalls are located outside of the public right-of-way. This topic was discussed during the Development Review Committee (DRC) evaluation. If the right-of-way width is under 32-feet, parking should be prohibited along one side of the street. The addition of a fire hydrant near unit 146 and the prohibition of parking along the south side of Hurstbourne Drive would resolve the fire safety concerns expressed during the DRC meeting.

Commissioner Pengra acknowledged that even though Captain DeVoogd determined the plan meets UFA requirements, in practical application, he believes the plan poses concerns for the health, safety, and welfare of the residents.

Commissioner Wells stated that her questions had been answered by staff prior to the meeting.

Applicant representative Julie Smith with Fieldstone Homes stated she had reviewed the master site plan with Captain DeVoogd and addressed his concerns regarding the townhome street addresses, the parallel parking, and desired road width. In 2017, Municipal Code standards did not require a man door on the garage. She said this a small portion of the overall development and the open space is placed in relation to the overall development and the area meets the sizing standards for the open space requirement. She noted the difficulty in spacing off-street parking throughout the development. As they knew that guest parking is a concern in other multifamily developments, the plan exceeds the required number of guest parking stalls. The alignment of the townhome units is staggered to increase articulation of the front and rear elevations and the roofline.

Commissioner Wood reiterated that the update to Municipal Code regarding a garage man door for rear-loaded townhome products to allow access to townhomes from the alley and for the street addresses to be identified on the rear of the homes to be able to identify units was at the request of the Fire Marshal. He said that the standards were to increase accessibility for all emergency services, not only fire response.

Ms. Smith stated that the layout allows for sufficient emergency access. She reaffirmed that the plan meets the Municipal Code requirements at the time of the MDA signing in 2017 and that Captain DeVoogd had evaluated and was satisfied with the plan as presented.

Commissioner Wood stated that the plan design does not meet the intent of the safety requirements. He said that as the need for a man door on rear-loading townhomes has been identified as a safety concern for the City, it would be reckless to approve a plan that did not provide man door access.

Commissioner Everett cited EMMC 16.35.105 regarding park placement and access and expressed concern regarding the street access to and parking near the pickleball courts and park area.

Ms. Smith stated the original MDA approval established the trail system placement and the placement of the park amenities in this phase of the development is in accordance with the MDA. They have bonded for the amenities during each phase of the development. The amenities plan considers the layout and connectivity of the project as a whole and exceeds requirements.

Commissioner Everett clarified his concern is the accessibility and usability of the pickleball for the residents not the number of amenity points for this phase. He expressed concern that the 20-foot by 20-foot garages, which would not be allowed under current garage width standards, would result in the residents in units 153 through 167 on Hurstbourne Drive parking in the guest parking stalls along the street in front of their homes and impede snow removal.

Ms. Smith stated the guest parking areas will be designated with signage and the HOA could address and enforce the improper use of guest parking as resident parking.

Applicant representative Brett Woodland stated that the pickleball court placement is central to the overall project with the intention of residents accessing the court via the trail system rather than driving. He recognized Commissioner Everett's concerns regarding snow removal and stated the guest parking is not intended for long-time use and the HOA can address issues of parking violation enforcement such as residents using the guest parking for a third vehicle.

Commissioner Everett expressed concern in approving a design that is likely to cause parking violations and enforcement burdens to the HOA.

Ms. Smith stated that most cities express concerns regarding sufficient parking. She feels this project implemented a creative approach to provide additional guest parking. She noted the project has significant elevation differences in portions of the project and requested that the staff-recommended conditions to require five-foot retaining walls be amended to include the verbiage "where possible" and the recommended ten-foot pickleball court fencing be reduced to eight-feet, as she believed eight-feet would be sufficient.

Commissioner Pengra expressed his appreciation to the applicants for providing additional guest parking; however, he felt the location of the parking created safety impediments. He advocated for off-street guest parking to be distributed throughout the projects to increase guest parking accessibility for all the units. He acknowledged that his recommendation would reduce the number of units but felt it was necessary in consideration for the health, safety, and welfare of the residents.

Commissioner Wood opened the public hearing at 8:30 p.m.

Doug Freeman submitted a public comment via email. "Before Phase C is started 1. Can existing streetlights be turned on 2. What happened to the second road exiting the subdivision mentioned in Phase B documents 3. Complete 2nd road exiting the subdivision before Phase C is started 4. We need some kind of traffic control (speed bumps, better signage) on Vernham Rd. Between construction traffic and other subdivisions using as an exit traffic conditions are progressively

becoming unsafe on this street. Somethings needs done on all items before additional construction begins.”

Mr. Mumford stated that Rocky Mountain Power changed their streetlight connection process. The new process is lengthier. Many of the streetlights that have been installed in the previous six months have not been connected. The City is in the process of approving and connecting the streetlights. He explained that Vernham Lane was intended to be used as a connection road for some of the neighborhoods. Staff and the developer can address construction traffic and parking with the contractors.

Discussion ensued regarding traffic patterns and access concerns in the area.

Commissioner Wood closed the public hearing at 8:36 p.m.

Commissioner Wood stated he concurs with Commissioner Pengra’s and Everett’s concerns regarding the parallel parking and the likelihood of the parking being used by residents creating an enforcement and contention burden to the HOA. He believes that Hurstbourne Drive is too narrow as it will likely be used as a public road and thinks the road should be widened to a 53-foot public right-of-way. He stated the installation of a man door on the garage side of the townhomes should be included as a condition of approval for the conditional use permit for the accessibility of emergency services. He stated that the pickleball court should be readily accessible to all the residents and include parking. He felt the residents in the northwest portion of the project were unlikely to walk to the amenities area.

Commissioner Pengra concurred with Commissioner Wood regarding the need for the man door for emergency accessibility. He expressed concern regarding the spread of fire between the units due to delays in accessibility should a man door not be required, and firefighters have to circle the units to gain access.

Mr. Kane verified that EMMC 16.35.105(A)(3) was in place in 2017 at the time of the MDA signing.

Commissioner Wright concurred with the concerns expressed by the other Commissioners and expressed concern regarding the elevations. He requested that the approved elevation renderings on pages 30 to 32 of the MDA agreement to be presented in the meeting for the benefit of the public as a comparison of the elevations included in this proposal. He felt the elevations in this proposal do not meet Municipal Code standards.

Commissioner Wells expressed concern regarding the comments of the other Commissioners regarding the man door requirement. She agrees with the benefits of the inclusion of a man door and would prefer for the applicants to include man doors; however, as the installation of a man door was not a requirement at the time of the signing of the MDA, it cannot be included as a condition of approval for this application. She expressed concern imposing fire safety mitigation measures the Fire Marshal had not indicated were necessary.

Commissioner Wood stated that the safety, health, and welfare of the residents is one of the State Code criteria included in the evaluation of a conditional use permit approval. As the Fire Marshal has recommended the man door as a required safety feature, the approval of the townhomes can include the requirement for a man door as a safety, health, and welfare measure or the conditional use permit could be denied based upon the findings of fact that the proposed plan included hazards to the safety, health, and welfare of the residents.

Commissioner Wells expressed concern with the Commission requiring a road-width expansion not indicated in the staff recommendations. As the pickleball courts are connected by trails and were intended as a private HOA amenity, she feels the location was appropriate and did not need to be required to be located along and accessible via a roadway. However, she would prefer vehicle access and some parking near the amenity. She concurred the building elevations needed additional articulation, roof height fluctuation, and increased color variation.

Commissioner Everett said although the amenities are for HOA use and are connected by trails, EMMC 16.35(A)(5) requires that parks “have access along a public road and may not contain ‘hidden’ areas that are not clearly visible,” and the location of the park between a sloped area and townhomes does not meet the requirement nor the intent of the standards. He stated he was inclined to recommend denial to the City Council of the master site plan.

Commissioner Wright stated that although the guest parking is located outside of the public right-of-way, it did not meet the intent of the off-street guest parking requirement. He stated he would support Commissioner Everett’s recommendation of denial to the City Council.

Commissioner Pengra stated that staff, City Council, and the Planning Commission have frequently discussed MDA vested right protections; however, Municipal Code standards were not created arbitrarily. The MDA permits a total density count and he believes the applicant is attempting to maximize the allowable density for the project in the final phase. He stated the responsibility of the Planning Commission is to protect the health, safety, and welfare of the residents. He said that the applicants and staff can hopefully revise the plan to address the concern expressed during the meeting and retain the same unit counts. He felt the Planning Commission and the applicants were at an impasse regarding the master site plan and concurred with Commissioner Everett’s suggestion to recommend denial to the City Council.

MOTION: *Commissioner Wood moved to recommend denial to the City Council of the Scenic Mountain Phase C Master Site Plan. Commissioner Wright seconded the motion. Those voting aye: Matthew Everett, Brett Wright, Rich Wood, and Christopher Pengra. Those voting nay: Erin Wells. The motion carried with a vote of 4:1.*

The dissenting vote by Commissioner Wells was based on her willingness to work with the applicant on the concerns raised by the Planning Commission.

MOTION: *Commissioner Wood moved to deny the Scenic Mountain Phase C condition use permit based on the following findings of fact:*

1. *Townhome units do not include man doors at the garage, as specified by the Fire Marshal;*
2. *Parallel parking spaces create a safety issue for ingress and egress for safety vehicles and do not present a guest-type parking space; and*
3. *The open space features do not meet the requirement of EMMC 16.35.105, as presented at the signing of the MDA.*

Commissioner Pengra seconded the motion. Those voting aye: Matthew Everett, Brett Wright, Rich Wood, Christopher Pengra. Those voting nay: Erin Wells. The motion carried with a vote of 4:1.

The dissenting vote by Commissioner Wells was based on her willingness to work with the applicant on the concerns raised by the Planning Commission.

6.D. PUBLIC HEARING – Hidden Hollow Phase C (Preliminary Plat)

This item was removed from the agenda at the request of the applicant.

Commissioner Wood opened the public hearing at 9:01 p.m. No comments were submitted to the City Recorder's Office and no public was in attendance to make comment. The public hearing was continued.

MOTION: *Commissioner Everett moved to table the Hidden Hollow Phase C preliminary plat. Commissioner Pengra seconded the motion. Those voting aye: Matthew Everett, Brett Wright, Rich Wood, Christopher Pengra, and Erin Wells. The motion passed with a unanimous vote.*

6.E. 2021 Planning Commission Meeting Schedule

Commissioner Everett stated that election day is noted incorrectly on the schedule as November 9, 2021. Election day will be on November 2, 2021. The Planning Commission would be able to meet on November 9, 2021.

Commissioner Pengra recommended removing the November 23, 2021 meeting due to Thanksgiving on November 25, 2021, in consideration of staff.

Commissioners Wright and Well concurred with meeting on November 9, 2021, and canceling the November 23, 2021 meeting.

Commissioner Everett suggested retaining the November 23, 2021 meeting on the schedule in case a pressing item needs to be addressed and canceling the meeting if it is determined not to be needed.

Commissioner Pengra stated that as the Commission has the ability to call a special meeting, he prefers to not have the meeting scheduled as staff has to plan for the meeting.

Commissioner Wells concurred with Commissioner Pengra.

MOTION: *Commissioner Everett moved to approve the 2021 Planning Commission Meeting Schedule adding a meeting on November 9, 2021, and removing the November 23, 2021 meeting. Commissioner Pengra seconded the motion. Those voting aye: Matthew Everett, Brett Wright, Christopher Pengra, and Erin Wells. Those voting nay: None. The motion carried with a vote of 4:0. Commissioner Wood abstained as he will not be serving on the Planning Commission in 2021.*

7. Discussion Items

Commissioner Wright recognized Commissioner Wood's service to the City and commended him for his efforts.

Commissioner Everett thanked Commissioner Wood for his service and the amount of time he has dedicated in writing, researching, and developing Municipal Code residential and commercial standards to facilitate City development. He expressed appreciation to Commissioner Wood for his sacrifices as both a resident and a fellow Commissioner.

Commissioner Pengra noted the devotion Commissioner Wood demonstrated in service to the City in his dedication to his roles and responsibilities.

Commissioner Wells echoed the sentiments of the other Commissioners and expressed appreciation for Commissioner Wood's assistance.

Commissioner Wood thanked the Commissioners for their words and individual perspectives during application evaluation. He appreciated the scrutiny Commissioner Pengra employed during his appointment of Commissioner Wood to the Commission when Commissioner Pengra was serving as mayor. He said he looks forward to working with Commission as an involved citizen. He stated that Pete Kane is a great asset to the City and thank him for his detailed reports. He expressed appreciation to Steve Mumford, Mike Hadley, and Jessa Porter.

8. Next scheduled meeting

9. Adjournment

MOTION: *Commissioner Wood moved to adjourn the meeting at 9:18 p.m. Commissioner Wells seconded the motion. Those voting aye: Matthew Everett, Brett Wright, Rich Wood, Christopher Pengra, and Erin Wells. The motion passed with a unanimous vote.*

The meeting was adjourned at 9:18 p.m.

Approved by the Planning Commission on January 12, 2021.

Steve Mumford, AICP
Assistant City Administrator/Community Development Director

DRAFT



**EAGLE MOUNTAIN CITY
PLANNING COMMISSION MEETING
JANUARY 12, 2021**

TITLE: PUBLIC HEARING - Hidden Hollow Phase C (Preliminary Plat & Site Plan)

ITEM TYPE: Preliminary Plat & Site Plan

APPLICANT: Ryan Bybee (Cascade Homes)

ACTION ITEM:

Yes

PUBLIC HEARING:

Yes

PREPARED BY:

Steve Mumford, Planning

BACKGROUND:

Zoning

This property was zoned Village Core as part of the Ranches Master Development Plan and Agreement. Along with other parcels it was designated with 20 acres of commercial and 1,002 residential units. The Village Core zone allowed for multifamily uses, but did not provide for a specific density associate with those uses because the density was established through the Ranches MDA. The Ranches Master Development Agreement has expired.

Previous Approvals

The Hidden Valley North Preliminary Plat was approved on May 9, 2006, including a total of 131 SF lots, 300 condominiums, and 226 townhomes. The following preliminary plats and site plans have been approved for areas within the Hidden Valley North project, replacing portions of the 2006 plat.

- Hidden Hollow Elementary School – opened in 2008;
- Hidden Hollow Phase A Preliminary Plat (34 SF lots) was approved November 18, 2014;
- Hidden Hollow Phase B Preliminary Plat & Site Plan (17 SF lots & 54 townhomes) was approved September 4, 2018 (Open Space modified March 17, 2020);
- Juniper Springs Preliminary Plat (84 townhomes) was approved September 18, 2018.

Total Approved Lots = 51 SF lots, 138 townhomes, and the elementary school.

Phase C

The “phase C” area of the Hidden Valley North plat included 300 condominiums and 60 townhomes. Rather than building the preliminarily platted 360 units, the applicant has chosen to reduce the density by over 60% and is proposing 48 SF lots and 86 townhomes, for a total of 134 lots/units. Conceptual discussions were held concerning the amenities in phase C at the meetings for Phase B, with the amenity worksheet and a concept of a portion of Phase C included in the meeting documents. No approval was given to Phase C at that time, since it was not part of the Phase B site plan or preliminary plat that was considered for approval.

It is the opinion of City staff and legal counsel that, since this is a new preliminary plat and the density vesting expired when the Ranches MDA expired, the Planning Commission and City Council can reasonably limit the number of multifamily units in the project. Without conceding any arguments of the City, staff believes that it is a reasonable compromise to allow some multifamily units subject to compliance with the City’s current multifamily design standards and development standards.

ITEMS FOR CONSIDERATION:

CITY PROPERTY

Due to the topography in this area the applicant has worked with staff to redirect the future extension of the 94-foot wide collector road (not Hidden Valley Parkway) to avoid steep terrain. This would result in a small 1.5-acre triangle property between the road, the hillside, and this Phase C development. The applicant has requested to purchase this 1.5-acre property and add it to the Phase C plat. We believe this would be a good use of that land. This area would include portions or all of lots 88-97. The City already facilitated an appraisal of the property, and the applicant is willing to pay the appraised price for the property. The City Council will need to approve an agreement to sell the property along with this project's approval.

CONNECTIVITY

This project complies with the City's connectivity standards found in EMMC 16.30.090.

FUTURE LAND USE

The Future Land Use and Transportation Corridors Map, approved in 2018 (following the approval of Hidden Hollow Phase B), designates this property with the Foothill Residential land use. This proposal does not comply with the Foothill Residential land use; however, it is based instead upon the applicant's reliance on the project history with the Commission and Council and the approved preliminary plat from 2006.

ACCESS & ROADS

The collector roads included on the City's Future Land Use and Transportation Corridors Map are included with this project as 94-foot wide major collector roads. They will be improving a portion of Hidden Valley Parkway with this project, and grading the remainder of the right-of-way for future expansion, ensuring drainage flow is directed to the existing drainage channel that leads to the detention area, and reducing the future cost to the City of grading for the expansion.

OPEN SPACE & AMENITIES

This project is required to have 3.16 acres of improved open space and 316 amenity points. The attached park plan and parks and open space worksheet include the proposed amenities. Although the plans have been modified slightly from the plan and worksheet that was discussed with the Commission and Council in 2018 along with Phase B, the proposal is very similar. The current project includes more units, mainly due to the addition of the City property in the project, which means that additional amenity points are required. The Phase B project was approved to provide two mountain bike trailheads - a large gravel parking lot and a smaller overflow lot, along with a restroom, trail kiosk, bike rack and bike repair station, drinking fountain, tables and shade structures, trees, and wayfinding signs. Last year the City received approval for a grant specifically to pave the large parking lot and provide additional split-rail fencing, if grant funds are sufficient. This trailhead will be frequently used by the local and regional mountain biking community and high school mountain bike teams.

The phase C proposal includes a lighted pickleball court, a playground, a pavilion, trees, benches, and trails. The proposal also includes 82 points for 4,100 linear feet of mountain bike trails(calculated at 2 points per 100 linear feet), as well as 37 acres of open space. This trail system has been developed over the years and

widely used by mountain bike teams and mountain bikers from the region, and has been the location of several Utah High School Cycling League mountain bike races. The pickleball court, playground, and park amenities will be available for the townhomes and the homes, in both Phase B and Phase C. The proposal includes 3.48 acres of improved open space (the plat incorrectly lists 1.85 acres), and the developer is requesting that the mountain bike trails and the hillside open space to the north (around the well site) be approved as part of the required improved open space. A condition of approval has been included that requires an agreement between the property owner and the City, allowing access to the trail systems and open space and agreeing to preserve the trail system (and/or replace removed trails) and dedicate ridgelines and hillside open spaces to the City in the future. As we understand it, the 37 acres of open space near this project will be dedicated to the City along with the first plat in this project. EMMC16.35.105(A)1 states that "improved open space shall not include...common area (not parks) in multifamily and cluster/patio home developments." Landscaped areas must be at least 8,000 square feet in size and no less than 20 feet in any dimension to count as improved open space. The Commission should consider a combination of the park, the 37 acres of hillside with trails, and some larger common areas when weighing the required open space for this project.

Although this alternative open space and amenity plan has been discussed by the Commission and Council with the Phase B project, the Commission should discuss the proposal and determine whether it provides a similar benefit to that of a standard park plan/proposal.

POOL/CLUBHOUSE

EMMC 17.25.050L requires all multifamily developments to include a clubhouse and swimming pool. The clubhouse shall be a minimum of 1,500 square feet and the swimming pool shall be a minimum of 1,000 square feet and accommodate at least 4 square feet per residential unit being served. That code also allows for the approval authority to consider and approve alternatives to these improvements if the improvements are considered comparable or equivalent in cost and in benefit to the future residents.

The applicant is proposing an alternative plan that includes, in his opinion, a comparable benefit to the residents. The attached park plan includes a cost breakdown of the proposal versus the standard

requirement. He is proposing a 1,260 square-foot pool with kid area, a hot tub, a trellis with tables, a building that includes changing rooms/bathrooms, and two drinking fountains. This amenity will be available to all townhome residents in both Phase B and Phase C (140 townhomes). You will have to determine if this alternative proposal provides a comparable benefit to the residents as that of a standard clubhouse and pool.

OFF-STREET PARKING

EMMC 17.55.120(C) requires 2 stalls per townhouse unit (not in tandem configuration) plus 1 guest parking space per 3 dwelling units. 1 space per unit must be within a fully enclosed garage. The applicant has provided 27 stalls and will need to provide an additional 2 stalls. While the stalls are in a great location for use of the pool and park amenities, it would be helpful to move some of the stalls closer to the northern units, so guests won't have to walk so far when visiting. A recommended condition of approval has been included to this effect. Also, the parking in front of the pool contains 15 stalls without a landscaped island, which is required every 12 stalls. Moving a few of these stalls to the northern street will help resolve that issue.

FIRE SAFETY

The applicant is working to resolve the Fire Marshal's concerns, which included adding an additional fire hydrant.

SLOPE ANALYSIS

A color-coded slope analysis map has been provided with the average slope called out for the steepest lots. The steepest lots average 17.5% slope. For the development slope protection the developer will be constructing a section of mountain bike trail behind the single-family lots (replacing the trail that will be removed by the lots), and will be installing a cut-off ditch along the trail, directing the water to the west where the existing drainage channel is located. Each hillside building lot site plan, at building permit, will need to indicate the foundation grade and driveway grades, and show that the driveway will not exceed 12% slope and that the home will be designed appropriately with the hillside to reduce potential slope instability.

DEVELOPMENT STANDARDS

The townhomes were reviewed using the MF1 Zone development standards. The units include 22-foot driveways to the garage and at

least 15 feet between buildings. The applicant designed these townhome units in 2018 for the Phase B project, desiring to construct the same units in Phase C as were approved in Phase B, and relying on that being the case. Since that time the City Code was modified to require minimum dimensions of two-car garages to be 22 feet by 22 feet (EMMC 17.25.050(C)). The applicant is requesting that the Commission and Council allow him to be exempt from that requirement so he can construct the same units that were designed for this project with Phase B. He believes that he would face unreasonable financial costs if the updated requirement were enforced. We recommend that, if the Commission feels that is appropriate, the applicant provide some additional guest parking stalls to help mitigate concerns with adequate parking.

The single-family homes were reviewed using the RC Zone development standards. The only concern exists with the lot frontages of the lots along the loop road. The RC zone requires 58 feet of frontage (20 feet on cul-de-sacs or circles), and eight of the lots appear to have less than 58 feet. The Commission can, however, consider these lots on a circle, as the curve of the road is very similar to that of a circle. At a minimum, the steepest lots should be as wide as possible to provide additional space to accommodate a driveway that complies with the 12% maximum slope.

BUILDING ELEVATIONS / MULTI-FAMILY DESIGN STANDARDS

The applicant is finalizing colored renderings of the townhome buildings. As soon as they are available we will make sure the Planning Commission receives them. The applicant is planning to construct the same townhome buildings that are being built in Phase B, since he considers Phase B and Phase C both part of the same project/neighborhood. The following design standards should be discussed for these buildings.

- Garage location - EMMC 17.72.030(C) states that garages should be placed to the rear and accessed by a service drive. The proposed buildings are the same as were approved in Phase B, and are situated in a similar layout, with garages in the front. The Commission approved the garage locations in Phase B, and will need to consider whether this project should also be approved as proposed or if the buildings should be redesigned to reduce garage dominance further.
- Roofs - EMMC 17.72.040(C) requires that multifamily

buildings "contain sloping roofs, overhanging eaves, and multiple roof planes and heights." The plans demonstrate compliance with this, as long as the units step down due to the terrain. If there is no stepping of the terrain, the main roof of the buildings will lack height variation.

- Building articulation - EMMC 17.72.040(D) requires vertical and horizontal articulation including facade modulation, changes in textures/materials, window patterns, offsets, recesses, and projections. Although difficult to tell without the colored renderings, the front and rear facades appear to include facade offsets and projections. Further clarification will be needed on the building materials, since the renderings for Phase B indicated a mix of stone, fiber cement siding, and board and batten siding, and these Phase C elevations indicate stone, stucco, and board and batten.
- Architectural detailing - EMMC 17.72.040(E)(2) requires "a majority of the following architectural detailing: decorative shutters, bay windows, popouts, trellis or arbor structures, porches, decorative gables, dormer windows, exposed timbers, balconies, columns, turrets, decorative trim and moldings, detailed grilles and railings, architectural lighting, decorative masonry pattern, window grids, and decorative doors and windows. All sides of a building shall include the chosen details, where applicable." The applicant will need to provide information or an exhibit that indicates which details are being included in this proposal and that they will be providing a majority of the detailing described in this code section.
- Building materials - EMMC 17.72.040(F)(1) requires a minimum of at least two exterior materials on all faces with each material used at least on 30% of each side. Although the buildings seem to be mostly dominated by stucco, the board and batten appears to be included on at least 30% of the front and rear facades. The applicant will need to provide side elevations so they can be evaluated for compliance as well.
- Building colors - EMMC 17.72.040(G) states that building colors are not restricted to desert landscape colors and recommends a wide color palette. This will need to be evaluated with the expected colored renderings.
- Garage doors - EMMC 17.72.050(H) requires that garage doors not be "the most prominent or visible feature on a building" and be accessed from the side or rear of the building, or set back from the front facade. While these elevations were

approved in Phase B, the garages still seem quite prominent and not set back from the front facade.

- Lighting - EMMC 17.72.040(I) requires that lighting be shielded and directed downwards. This will be evaluated prior to building permit approval.
- Mailbox structure - EMMC 17.72.040(J) states that cluster mailboxes should be used for multifamily developments based on USPS requirements. It recommends that the structures should "emulate the buildings in materials and color." The applicant should develop specific details/plans for the cluster mailbox to reflect the design of the buildings. Staff recommends that the cluster mailbox be located adjacent to the park, near the parking spaces. This will allow residents to utilize the guest parking spaces in order to pick up mail and keeps this traffic off the main roadways.
- Mechanical equipment - EMMC 17.72.040(K) states that mechanical equipment shall be screened. The plans do not note the location of each townhome's mechanical equipment (i.e. HVAC compressors). This equipment is recommended to be screened, likely with vegetation, while not impeding the function of the equipment.
- Storage, loading areas, and trash enclosures - EMMC 17.72.040(L) requires screening for any outdoor storage, loading area, or collective trash enclosure. The project does not call for any of these features.

FENCING

EMMC 16.35.090 requires 6-foot privacy fencing along the rear or side lot lines abutting an arterial or collector road right-of-way. The applicant will be installing the same fence that will be installed in Phase B, which is the Ranches style cedar wood fencing.

REQUIRED FINDINGS:

Preliminary plat and site plan approvals are based upon compliance with City Code requirements and requirements of any applicable development agreements. The approval criteria for preliminary plats and site plans can be found in EMMC 16.20 and 17.100, respectively.

RECOMMENDATION:

The Planning Commission may recommend approval, approval with conditions, table for more information, or denial based upon findings of facts.

If you choose to approve this application, we recommend the following motion:

I move that the Eagle Mountain Planning Commission recommend approval of the Hidden Hollow Phase C Preliminary Plat and Site Plan to the City Council with the following conditions:

- 1) The approval is contingent upon the purchase of the 1.5 acres of City property at the appraised fair-market value.*
- 2) An agreement must be approved and signed that allows access to the mountain bike trails and open space in the hidden valley area, and agrees to preserve and/or replace the trails and deed the hillside and ridgeline open space to the City in the future.*
- 3) The developer shall grade and prepare the entire Hidden Valley Parkway right-of-way for future expansion, including providing a method to direct the storm water to the existing retention basin.*
- 4) At least two additional parking stalls shall be added, and stalls shall be redistributed to be more evenly spaced in the townhome area.*
- 5) A cut-off ditch shall be built along the new mountain bike trail above the lots, directing storm water to the existing drainage channel. Details to be approved by the City Engineer.*
- 6) Retaining walls shall be stepped to not exceed 5 feet high and include at least 5 horizontal feet between walls.*
- 7) Townhome buildings shall be modified to comply with the multi-family design standards (condition to be amended at the meeting following a review of the colored renderings to be submitted).*
- 8) The cluster mailboxes shall be located adjacent to the park and a structure shall be built that reflects the design of the buildings.*
- 9) The approximately 37 acres of open space near the project shall be dedicated to the City with the first final plat for this project.*

And any conditions the Planning Commission deems appropriate based on findings of facts.

If you feel that there are sufficient findings of facts to recommend denial of the proposed site plan, then the following motion is appropriate:

I move that the Planning Commission recommend denial of the Hidden Hollow Phase C preliminary plat and site plan based on the

following findings of facts...

If you feel that the applicant needs to make changes to the plan in order to comply with code requirements, and the necessary changes are more extensive than can be placed in conditions, then you can make a motion to table the application to the next meeting (or a future meeting) with specific directions given to the applicant.

ATTACHMENTS:

[2006 Approved Hidden Valley North Preliminary Plat](#)

[Hidden Hollow Ph C Preliminary Plat & Site Plan](#)

[Hidden Hollow Ph C Parks & Amenities](#)

[Hidden Hollow Ph C Building Elevations](#)

[Hidden Hollow Ph C Slope Analysis](#)

HIDDEN VALLEY NORTH

LOCATED IN THE SOUTHEAST QUARTER OF SECTION 30, TOWNSHIP 5 SOUTH, RANGE 1
WEST, SALT LAKE BASE AND MERIDIAN, EAGLE MOUNTAIN, UTAH

NOTES:

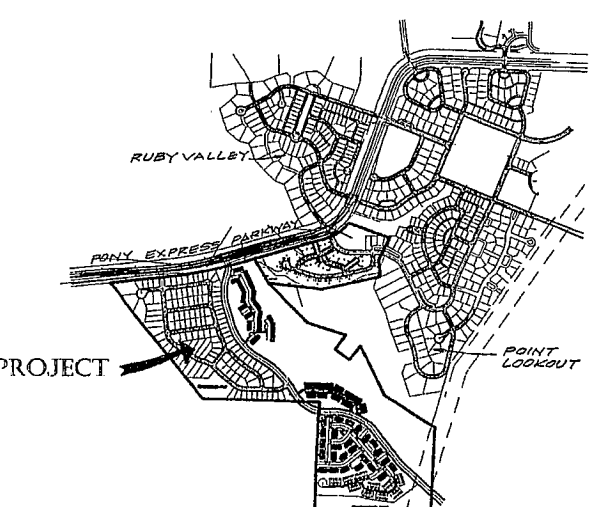
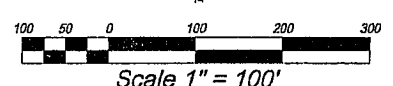
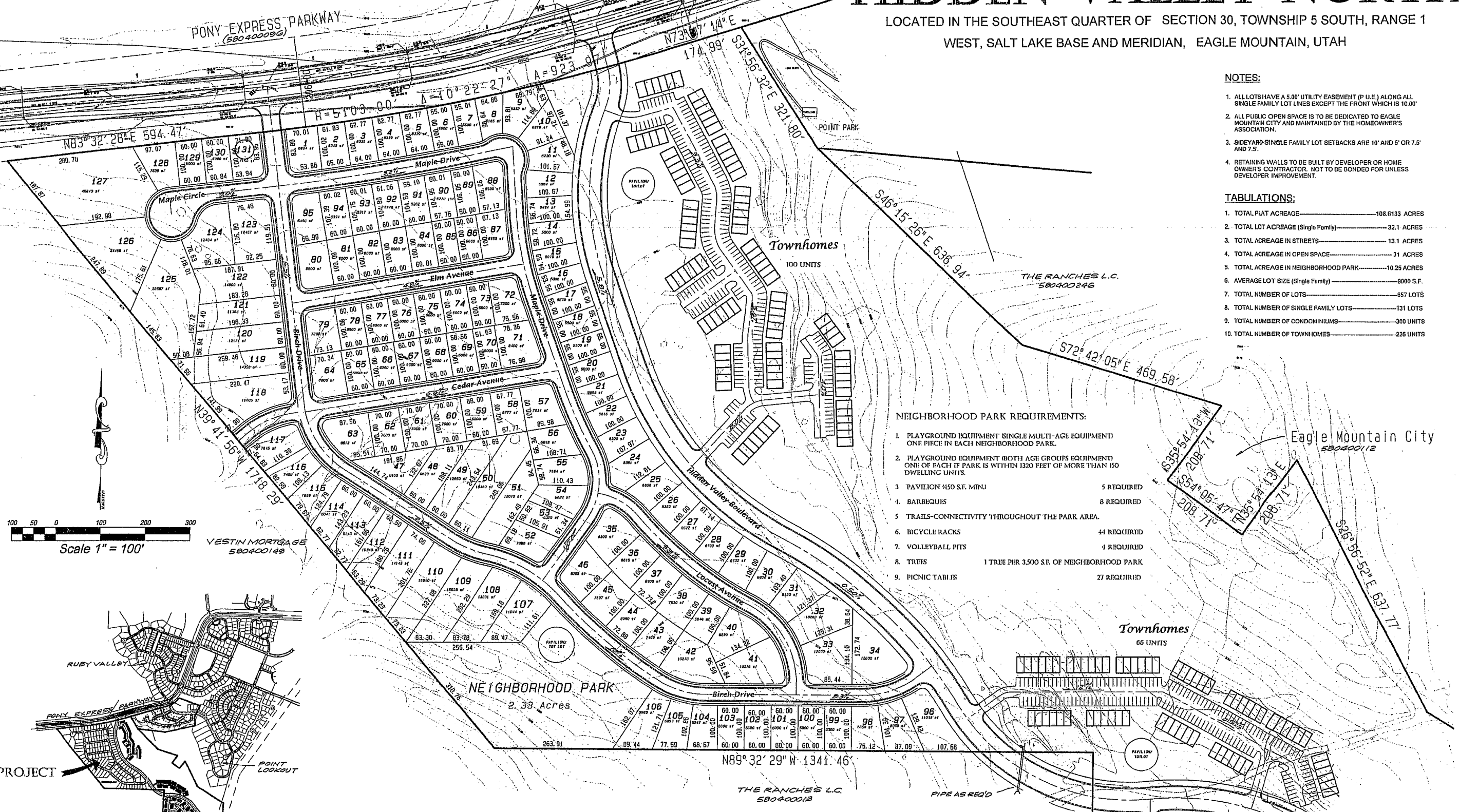
1. ALL LOTS HAVE A 5.00' UTILITY EASEMENT (P.U.E.) ALONG ALL SINGLE FAMILY LOT LINES EXCEPT THE FRONT WHICH IS 10.00'
2. ALL PUBLIC OPEN SPACE IS TO BE DEDICATED TO EAGLE MOUNTAIN CITY AND MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.
3. SIDEYARD SINGLE FAMILY LOT SETBACKS ARE 10' AND 5' OR 7.5' AND 7.5'.
4. RETAINING WALLS TO BE BUILT BY DEVELOPER OR HOME OWNER'S CONTRACTOR. NOT TO BE BONDED FOR UNLESS DEVELOPER IMPROVEMENT.

TABULATIONS:

1. TOTAL PLAT ACREAGE 108.6133 ACRES
2. TOTAL LOT ACREAGE (Single Family) 32.1 ACRES
3. TOTAL ACREAGE IN STREETS 13.1 ACRES
4. TOTAL ACREAGE IN OPEN SPACE 31 ACRES
5. TOTAL ACREAGE IN NEIGHBORHOOD PARK 10.25 ACRES
6. AVERAGE LOT SIZE (Single Family) 8000 S.F.
7. TOTAL NUMBER OF LOTS 657 LOTS
8. TOTAL NUMBER OF SINGLE FAMILY LOTS 131 LOTS
9. TOTAL NUMBER OF CONDOMINIUMS 300 UNITS
10. TOTAL NUMBER OF TOWNHOMES 228 UNITS

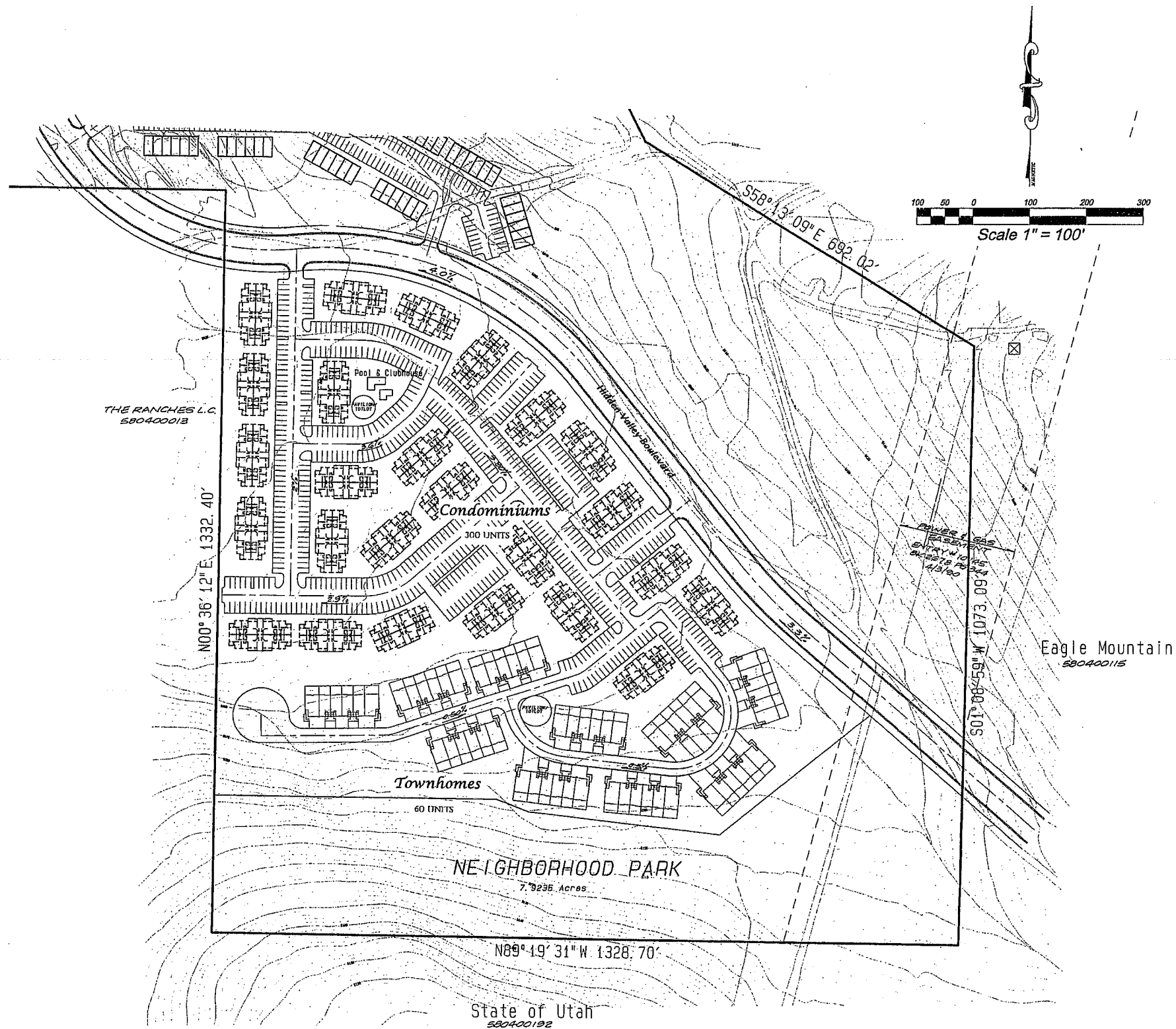
NEIGHBORHOOD PARK REQUIREMENTS:

1. PLAYGROUND EQUIPMENT (SINGLE MULTI-AGE EQUIPMENT) ONE PIECE IN EACH NEIGHBORHOOD PARK.
2. PLAYGROUND EQUIPMENT (BOTH AGE GROUPS EQUIPMENT) ONE OF EACH IF PARK IS WITHIN 1320 FEET OF MORE THAN 150 DWELLING UNITS.
3. PAVILION (150 S.F. MIN.) 5 REQUIRED
4. BARBEQUES 8 REQUIRED
5. TRAILS-CONNECTIVITY THROUGHOUT THE PARK AREA.
6. BICYCLE RACKS 44 REQUIRED
7. VOLLEYBALL PITS 4 REQUIRED
8. TREES 1 TREE PER 3,500 S.F. OF NEIGHBORHOOD PARK
9. PICNIC TABLES 27 REQUIRED



VICINITY MAP

BENCH MARK		REVISIONS			F.J. Clark & Associates		HIDDEN VALLEY NORTH	
		Rev.	Date	Description	6654 West 9680 North Highland, Utah 84003 (801) 492-1307		EAGLE MOUNTAIN, UTAH	
		1	1/9/08	ADDED 66 TOWNHOMES	Plans prepared under the direction of: <i>[Signature]</i> Date 12/13/05		PRELIMINARY PLAT	
					Drawn by: F.J.C. Designed by: F.J.C. Checked by: _____ Approved by: _____		Scale: 1"=100' Date: 12/13/05 Sheet No. 1 of 6	



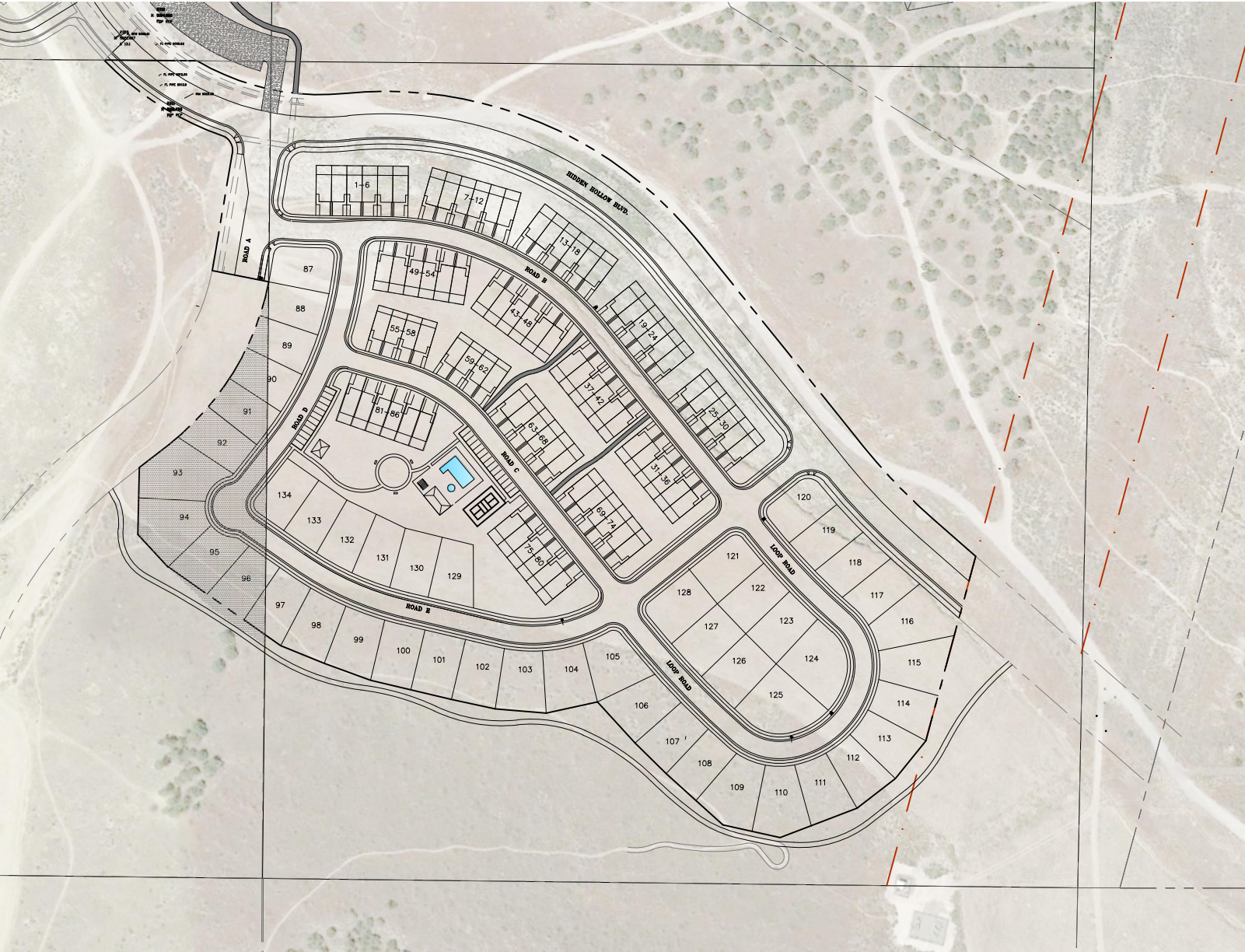
BENCH MARK		REVISIONS				F.J.Clark & Associates		HIDDEN VALLEY NORTH			
	Rev.	Date	Description	App'd	6654 West 9680 North Highland, Utah 84003 (801) 492-1307		EAGLE MOUNTAIN, UTAH		PRELIMINARY PLAT		Scale: 1"=100'
											Date: 12/13/05
					Fred J. Clark P.E. 155153 Date						
							Checked by:		Approved by:		Sheet No. 2 OF 6

HIDDEN HOLLOW: PHASE 'C' PLAT '1'

PRELIMINARY CONSTRUCTION PLANS

prepared for:
CADENCE HOMES
3400 north Ashton Blvd. Suite 180
LEHI, UT 84043
PHONE: (801)768-0500

prepared by:
TRANE ENGINEERING
27 EAST MAIN STREET
LEHI, UT 84043
PHONE: (801) 768-4544



SHEET INDEX

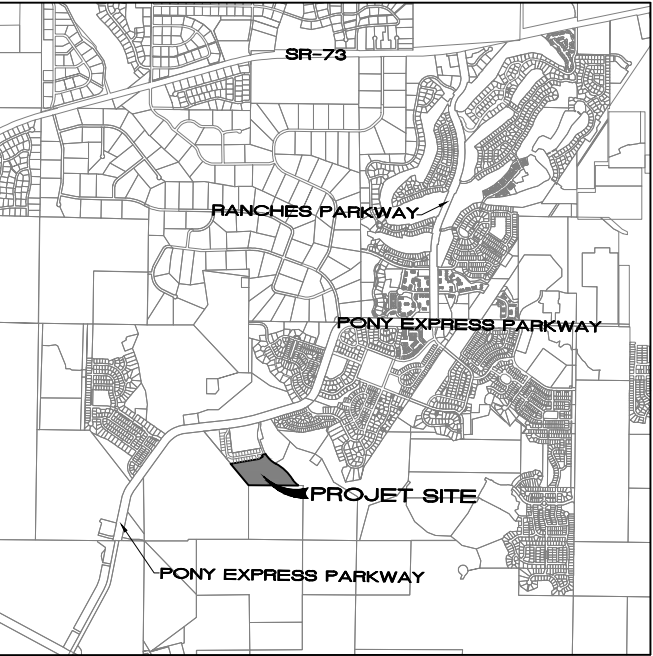
SHEET NO.	SHEET NAME
1	COVER SHEET
2	SITE/UTILITY PLAN
2a	TOWNHOME SITE PLAN
3	GRADING & DRAINAGE PLAN
4	PLAN & PROFILE HIDDEN VALLEY PARKWAY
5	PLAN & PROFILE ROAD A & D
6	PLAN & PROFILE ROAD B
7	PLAN & PROFILE ROAD C
8	PLAN & PROFILE ROAD E
9	PLAN & PROFILE LOOP ROAD
PRELIM	PRELIMINARY PLAT

GENERAL NOTES:

- 1) AS-BUILT DRAWING, FORMATTED IN ACCORDANCE WITH EAGLE MOUNTAIN CITY STANDARD SPECIFICATIONS AND DRAWINGS, SHALL BE SUBMITTED TO THE CITY UPON COMPLETION OF THE PUBLIC IMPROVEMENTS, INCLUDING GPS COORDINATES AND ELEVATIONS FOR UTILITIES.
- 2) ALL CONSTRUCTION IS TO BE DONE AS PER EAGLE MOUNTAIN CITY STANDARD SPECIFICATIONS AND DRAWINGS.
- 3) CONTRACTOR TO ENSURE ALL ADA REQUIREMENTS ARE MET AND CONSTRUCTED IN ACCORDANCE WITH EAGLE MOUNTAIN CITY STANDARD SPECIFICATIONS AND DRAWINGS.
- 4) PRIOR TO COMMENCEMENT OF ANY WORK, A PRECONSTRUCTION MEETING WILL BE HELD WITH THE EAGLE MOUNTAIN CITY STAFF, THE CONTRACTOR, ALL SUBCONTRACTORS AND THE PROPERTY OWNER.

EAGLE MOUNTAIN CITY GENERAL NOTES:

- SEWER-**
- Pipe bedding: ¾" gravel required 6" below, on the sides & 12" above the pipe (minimum).
- Depth : Sewer main/laterals to maintain 4' of cover (minimum) from finished grade, 3' minimum from top of pipe at time of installation.
- Separation: sewer mains & laterals to maintain 10' separation (minimum) from culinary water mains & laterals.
- Sewer Y's: 3' minimum separation between sewer Y's.
- Lateral stubs: A) stubs must extend 15" into property and be marked with 2x4 painted green B) All laterals must be GIS (shot in) at the Y's and stubs. Also slopes (2% min. on 4" pipe) to be checked before backfill.
- Manholes: manholes to be within 1' of finished grade. 12" of whirly gig form (max) and no flat rings allowed. 12" of ¾" gravel required under manholes/boxes.
- WATER-**
- Valves: 1. Valves must be flanged to tee's (fittings). 2. Valves 12" and larger to be butterfly valves.
- Bedding: sand must meet AASHTO (A-3) gradation with 100% passing the #4 sieve. 6" below pipe on the sides & 12" above pipe (minimum).
- Depth: water main & laterals must maintain 4' cover from finished grade (minimum). 3' minimum from top of pipe at time of installation. Max depth 72" from finished grade.
- Services & Fittings: services & fittings to maintain 3' minimum separation from pipe joints and other fittings.
- Setters: all setters to be 21" tall (minimum), have unions at the base and be dual check model, also ¾" setters to have double braces. Setters to be set at: 18" to 22" from the top of setter to top of lid.
- Water can lid: all lids to say "Eagle Mountain" on them recessed with a hole for the ERT and to be set at level to 1" above the plane of the curb & sidewalk.
- Water Can: the water can for 3/4" & 1" services will need to be 36" tall minimum and 21" inside diameter. Water can for 1-1/2" to 2" service will need to follow APWA specifications.
- Hydrants: hydrants to be 5' bury (minimum).
- Laterals: all laterals need to be GIS (shot in) at the corp. stop & setter, and also visual inspection on poly inserts before backfill. Water laterals to extend 15" into property and be marked with a 2x4 painted blue. All poly lines to have visual poly insert inspection.
- Tracer wire: run tracer wire along main & extend up setters and hydrants, do not run up valve boxes.
- Water fittings: all water fittings to be checked for thrust blocks (pre & post) and GIS (shot before backfill).
- Vertical separation: water main to maintain 18" minimum separation from storm drain or other obstacles/utilities.
- Water line fittings: all fittings to have mega-lug followers.
- Water Main Line: NO DEFLECTION or bending of pipe will be allowed in the water lines and bend fittings will be required. All fittings to be Mega-lug fittings.
- STORM DRAIN-**
- Bedding: ¾" gravel 6" below and on sides of pipe & 12" above pipe (minimum).
- ADS: all ADS pipe to be 11P brand.
- Collars: collars to be 1'x1' around pipe, 4000 psi concrete, inspection is needed pre & and post collar pour.
- Man holes: manholes to be within 1' of finished grade. 12" of whirly gig form (max) and no flat rings allowed. 12" of ¾" gravel required under manholes/boxes
- ROAD SECTION-**
- Proof rolls: proof roll required on all sections of road: i.e. sub-grade, sub-base, and curb base and road base. Curb stakes required for sub-grade inspection and string line required for sub-base and road base inspection.
- UTBC: state spec. road base required for all roads, commercial base acceptable for the sidewalks & trails.
- Collars: all collars to be 1' wide by 1' deep with a 6000 psi concrete with 1.5# fiber mesh per cubic yard (3/4" monofilament) required for all street collars, Manhole covers and water valve towers to be ½" down from asphalt edge and concrete to be ¾" to 3/8" down from asphalt edge.



VICINITY MAP

BASIS OF BEARING

THE BASIS OF BEARING FOR THIS SURVEY IS THE LINE BETWEEN THE NORTH QUARTER CORNER AND THE SOUTH QUARTER CORNER OF SECTION 30, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN, WHICH BEARS SOUTH 00°03'34" EAST TAKEN FROM THE STATE PLANE COORDINATE & DEPENDENT RESURVEY PLAT FOUND AT THE UTAH COUNTY SURVEYORS OFFICE. (NAD 83)

REVISIONS				
NO.	DATE	DESCRIPTION	BY	
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2			DRAWN BY:	TT
3			CHECK BY:	TGT
4			DATE:	12/06/20
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TRANE ENGINEERING, P.C.
CONSULTING ENGINEERS AND LAND SURVEYORS
27 EAST MAIN LEHI, UTAH 84043 (801) 768-4544

EAGLE MOUNTAIN
UTAH

HIDDEN HOLLOW
PHASE 'C' PLAT '1'

COVER SHEET

JOB
RYAN
SHEET NO.
1



REVISIONS			
NO.	DATE	DESCRIPTION	BY
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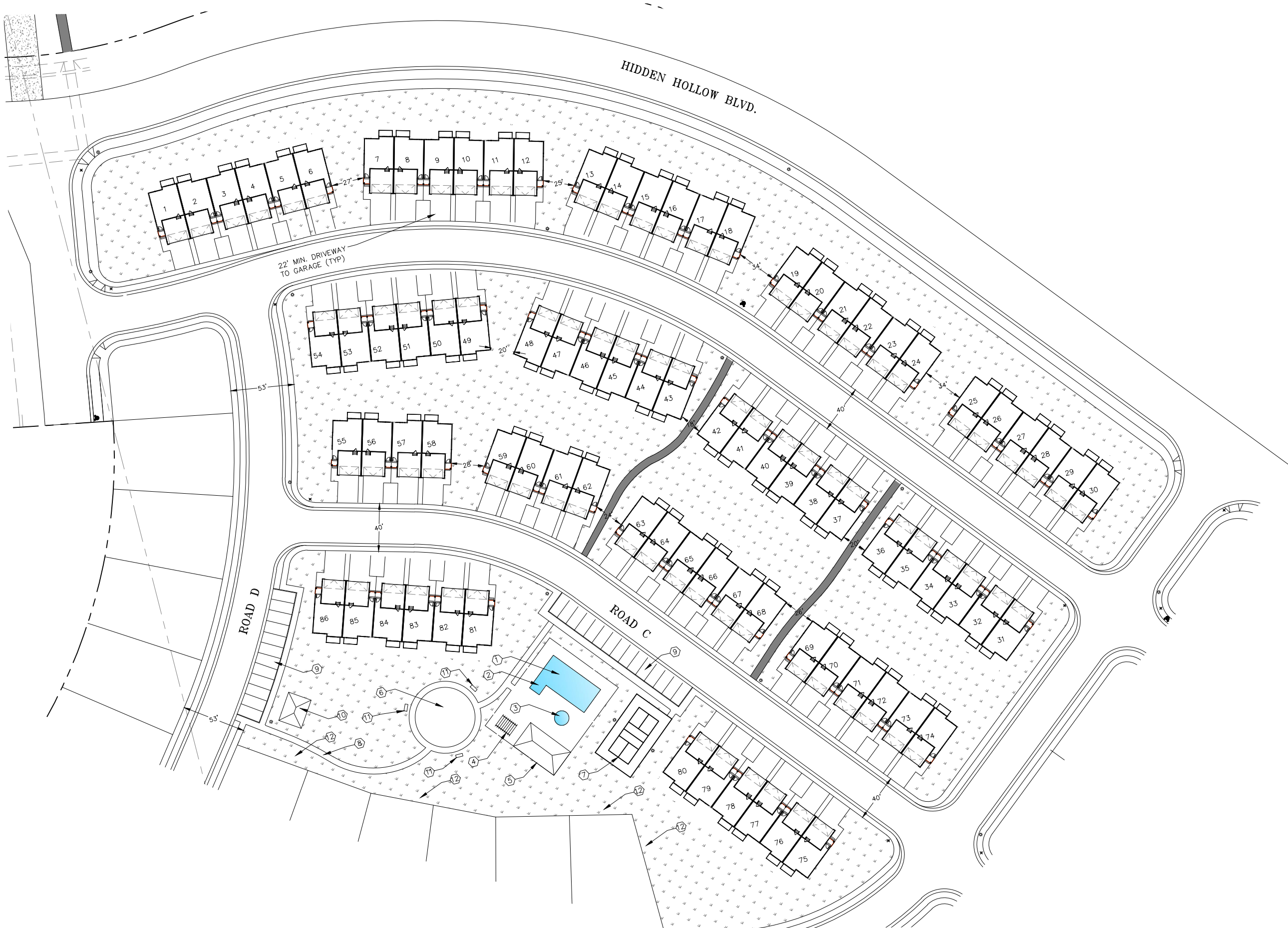
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EAGLE MOUNTAIN
UTAH

HIDDEN HOLLOW
PHASE 'C'

SITE/UTILITY PLAN

JOB HH CAD
SHEET NO. 2



KEYED NOTES

- 1 1200 SQUARE FOOT POOL AREA
- 2 KIDS POOL AREA
- 3 HOT TUB AREA
- 4 TRELLIS WITH PICNIC TABLE
- 5 RESTROOMS WITH CHANGING AREA
- 6 KIDS PLAY AREA WITH PLAY EQUIPMENT
- 7 PICKLE BALL COURT AREA WITH LIGHTING
- 8 TRAIL CONNECTION
- 9 PARKING AREA
- 10 500 SF PAVILION
- 11 BENCHES
- 12 25 SHADE TREES ALONG THE BACK SIDE OF THE SINGLE FAMILY LOTS

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27 EAST MAIN LEHI, UTAH 84043 (801) 768-4544

EAGLE MOUNTAIN
UTAH

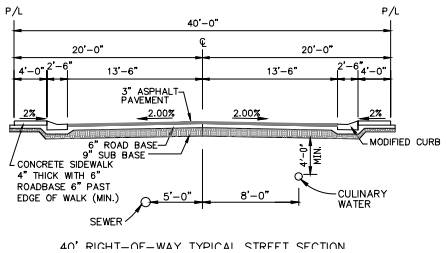
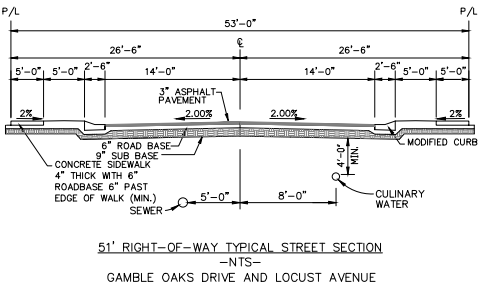
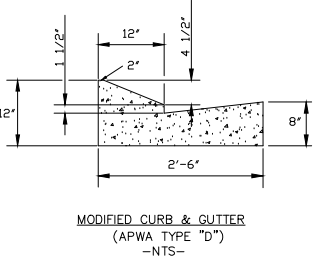
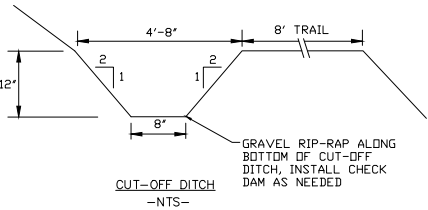
HIDDEN HOLLOW
PHASE 'C'

TOWNHOME SITE PLAN

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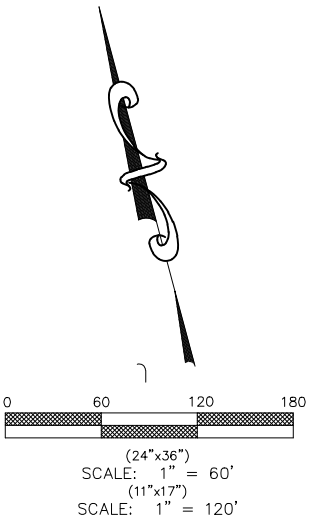
GENERAL NOTES

- ALL CONSTRUCTION TO BE DONE ACCORDING TO EAGLE MOUNTAIN CITY STANDARDS AND SPECIFICATIONS.
- CURB AND GUTTER TO BE A REVERSE LIP WHERE ASPHALT SLOPE IS AWAY FROM CURB. WHERE ASPHALT SLOPES TOWARD CURB, USE AS STANDARD CURB (SEE DETAILS)
- PERMANENT DETENTION FACILITIES TO BE OWNED AND MAINTAINED BY THE PROPERTY OWNERS AND ARE NOT TO BE ALTERED WITHOUT APPROVAL BY EAGLE MOUNTAIN CITY COUNCIL AND CITY ENGINEER.
- CONTRACTOR TO MEET ALL ADA REQUIREMENTS FOR THE SITE.
- WATER TEES, ELBOWS AND TRENCHES SHALL BE INSTALLED AS PER EAGLE MOUNTAIN CITY STANDARDS



LEGEND

- PROPERTY BOUNDARY LINE
- CUL
- SD
- 8"SS
- EX
- COB
- CI
- SD BOX
- PROPOSED 8" PVC CULINARY WATERLINE
- PROPOSED ADS STORM DRAIN W/ MH
- PROPOSED PVC SDR-35 SEWER W/ MH
- EXISTING STORM DRAIN MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING CULINARY OR SECONDARY IRRIGATION PIPE (SIZE AND TYPE SHOWN)
- APPROX. STREET GRADES
- CONST. BLOW-OFF
- CONST. FIRE HYDRANT
- EXISTING FIRE HYDRANT
- EXISTING CATCH BASIN
- COMBINATION BOX
- CURB INLET
- STORM DRAIN BOX



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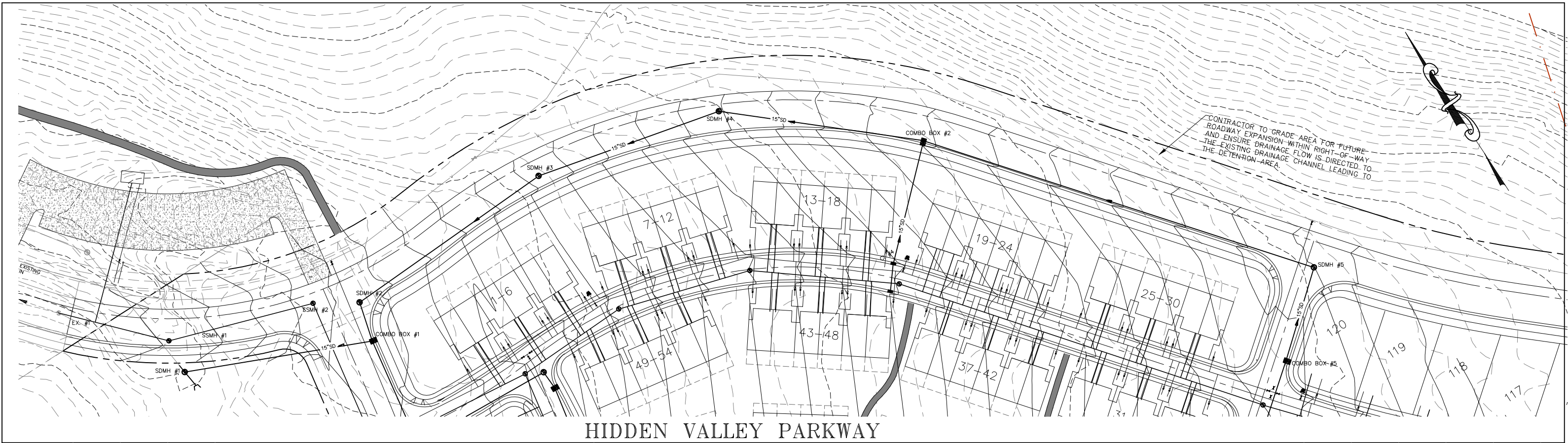
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27 EAST MAIN LEHI, UTAH 84043 (801) 768-4544

EAGLE MOUNTAIN
UTAH

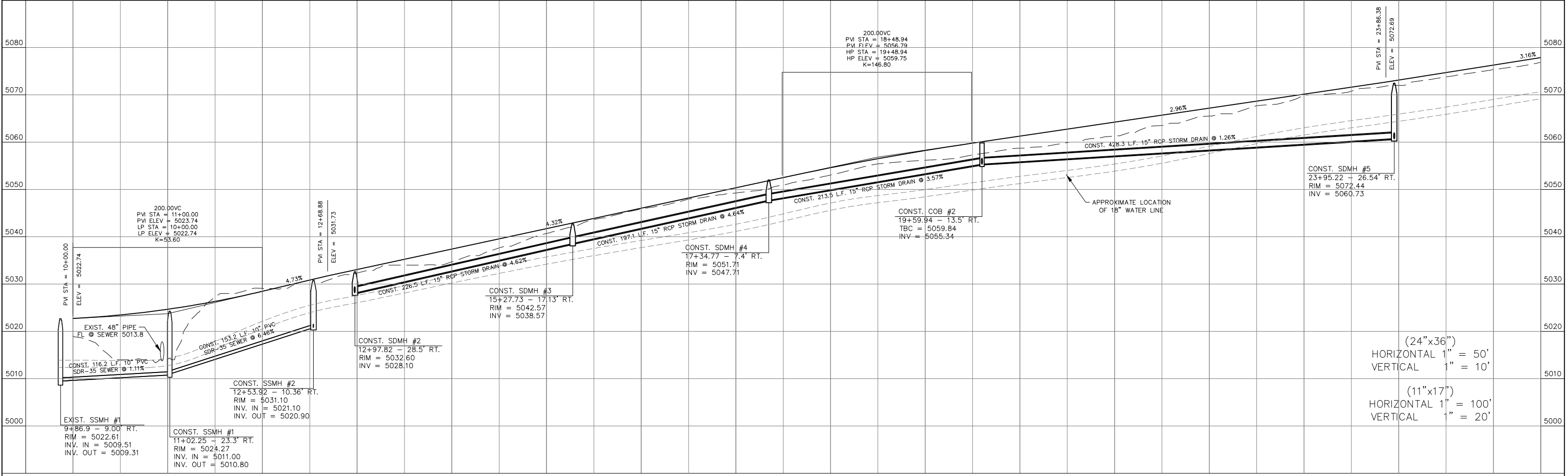
HIDDEN HOLLOW
PHASE 'C'

GRADING AND DRAINAGE PLAN

JOB
RYAN
SHEET NO.
3

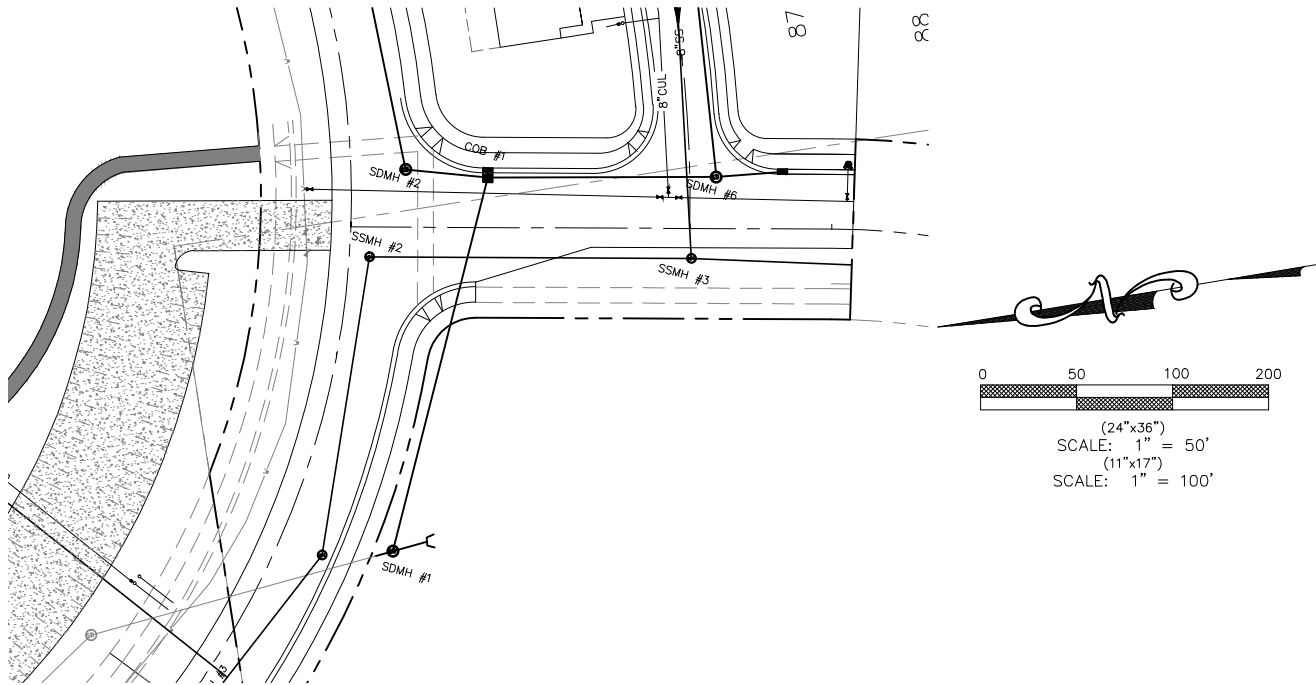


HIDDEN VALLEY PARKWAY

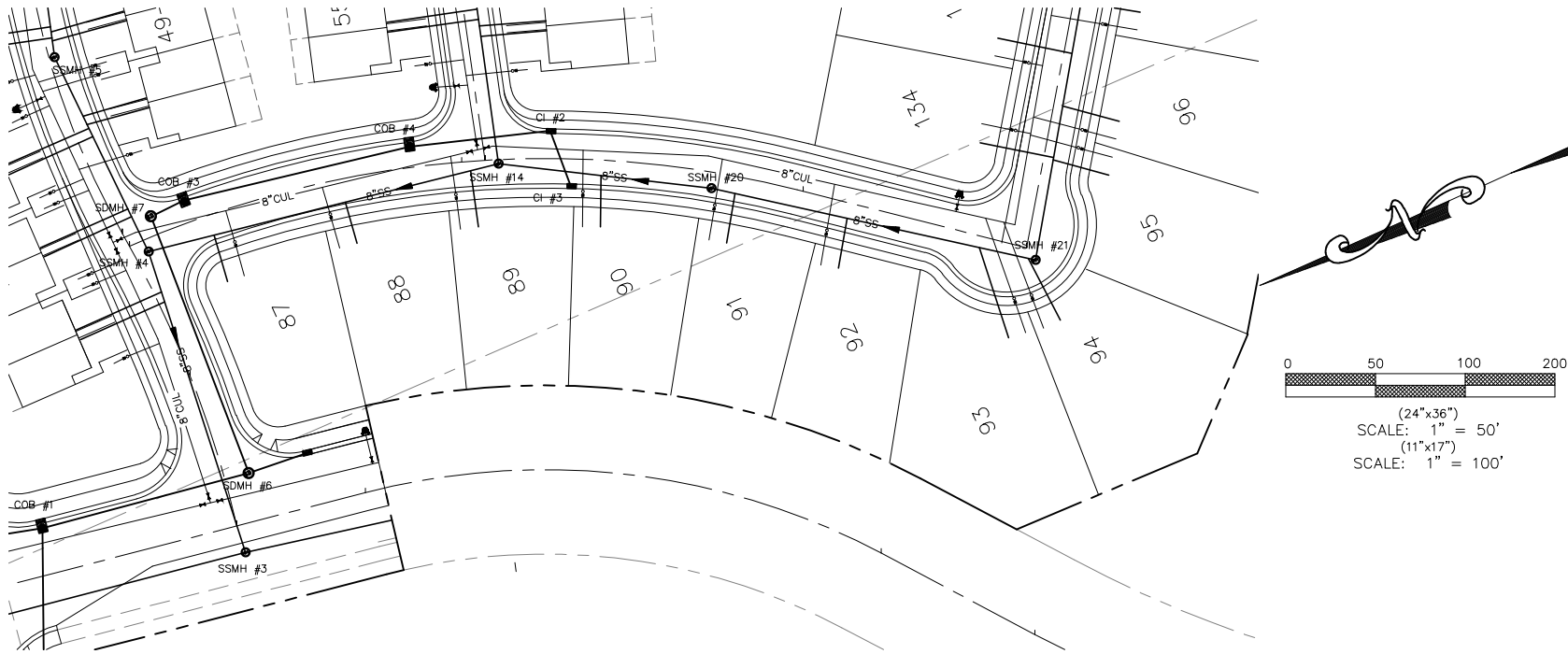


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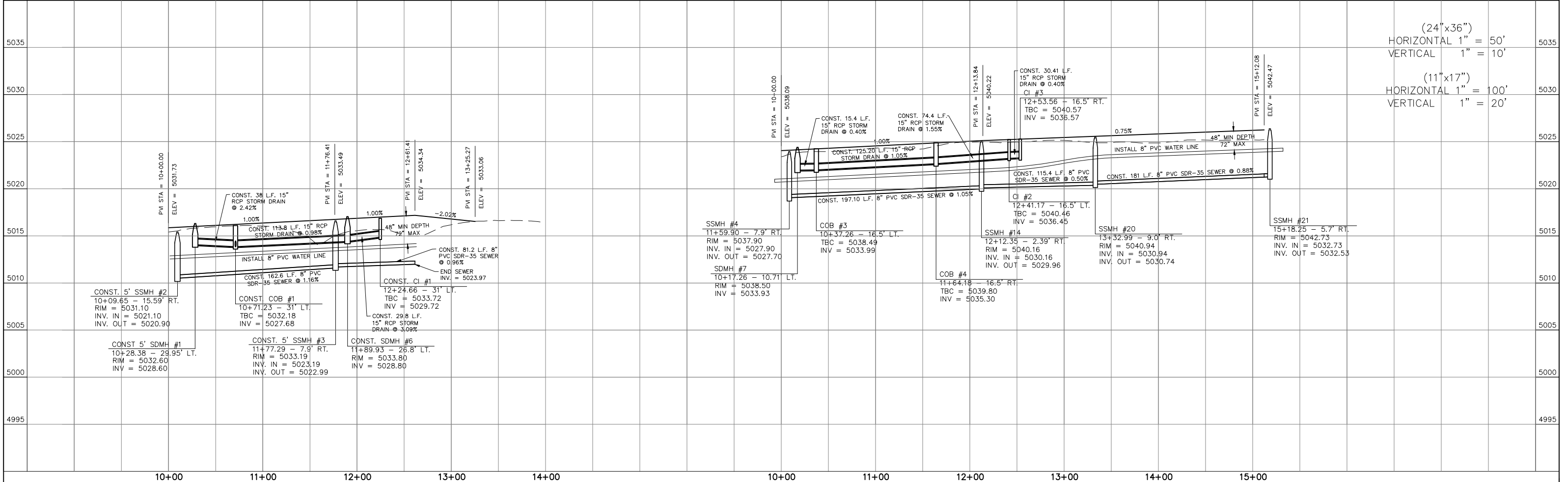
TRANE ENGINEERING, P.C.				EAGLE MOUNTAIN UTAH				HIDDEN HOLLOW PHASE 'C'				HIDDEN VALLEY PARKWAY PLAN AND PROFILE				JOB RYAN			
CONSULTING ENGINEERS AND LAND SURVEYORS																SHEET NO. 4			
27 EAST MAIN LEHI, UTAH 84043 (801) 768-4544																			

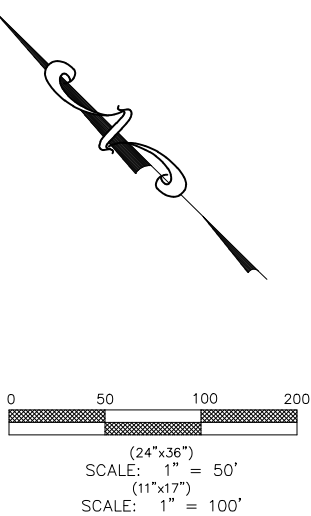
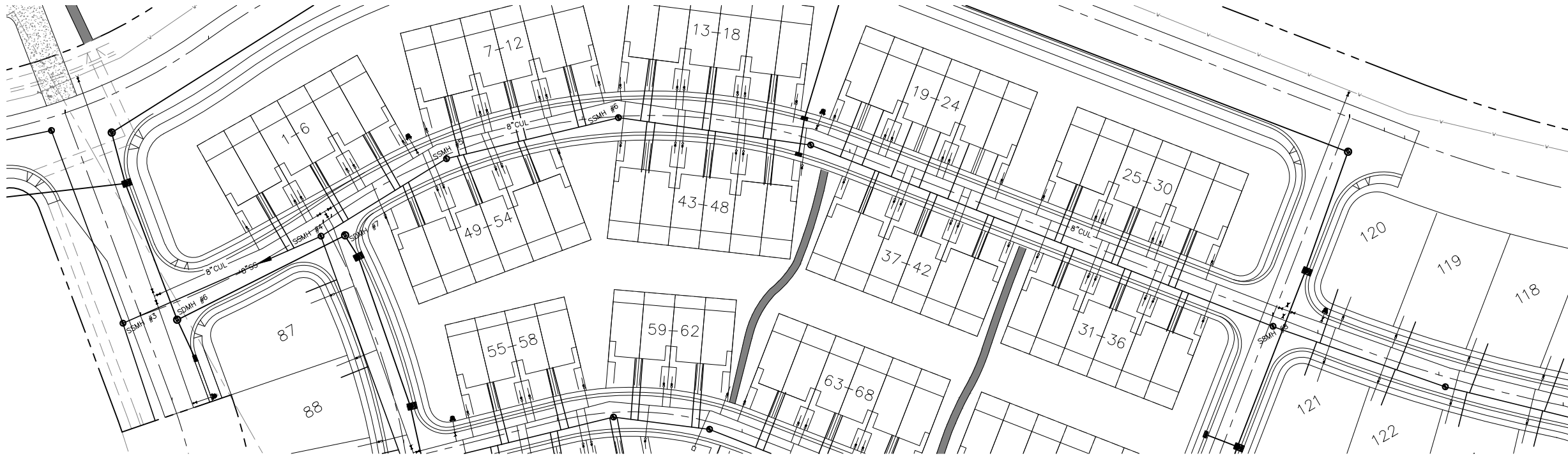


ROADWAY A

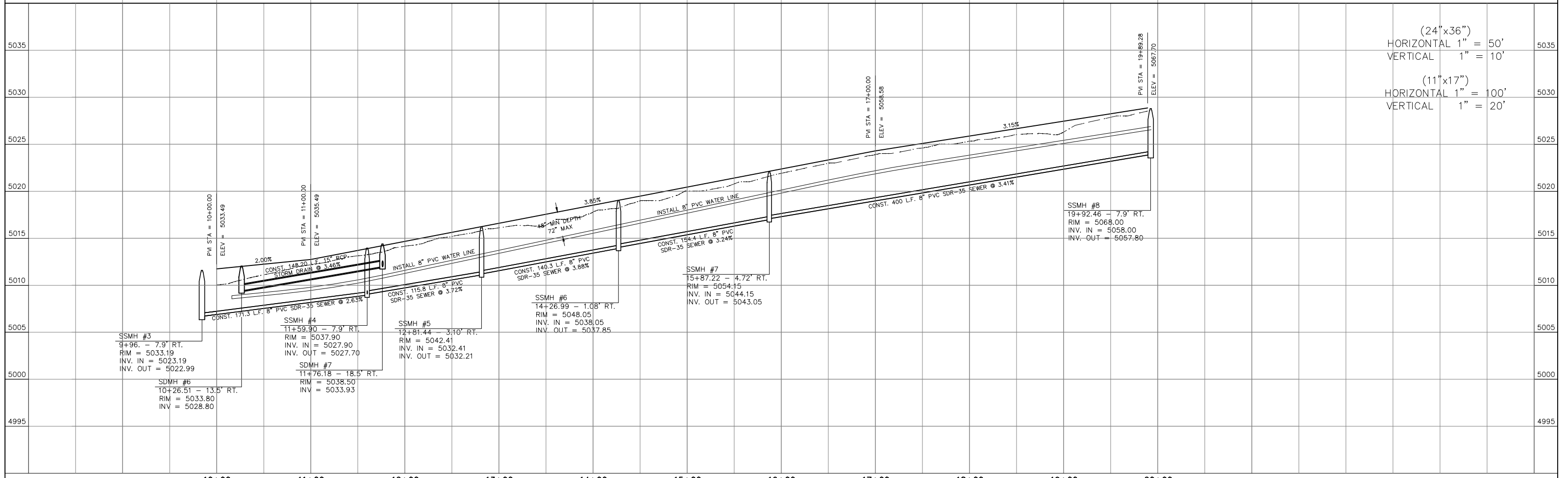


ROADWAY D



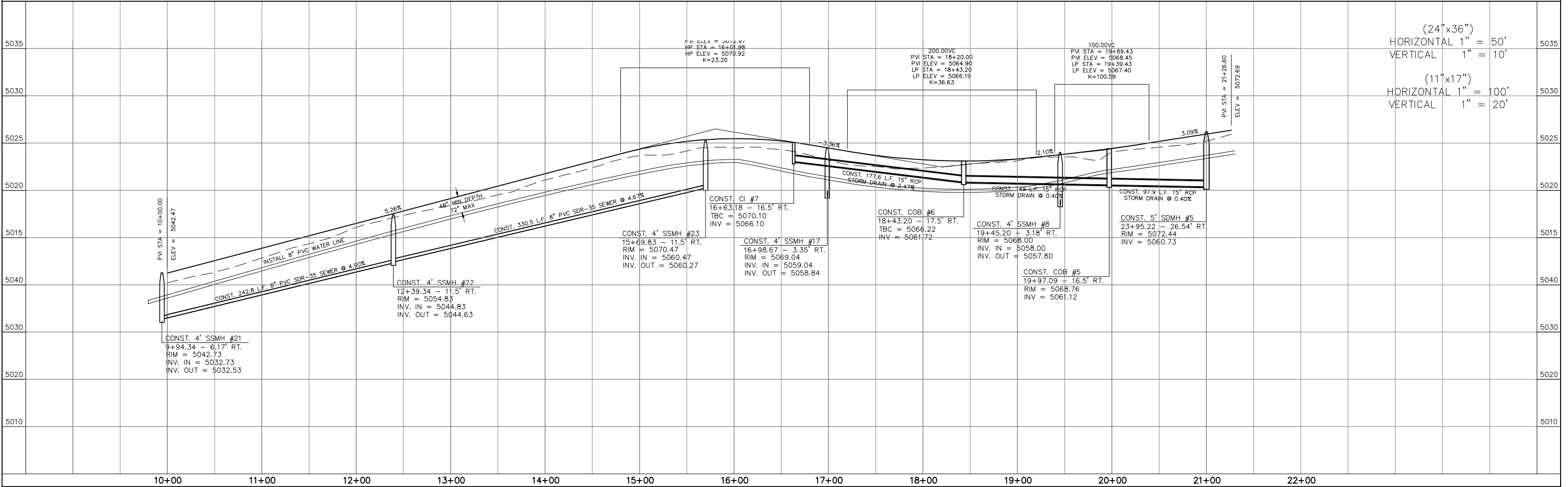
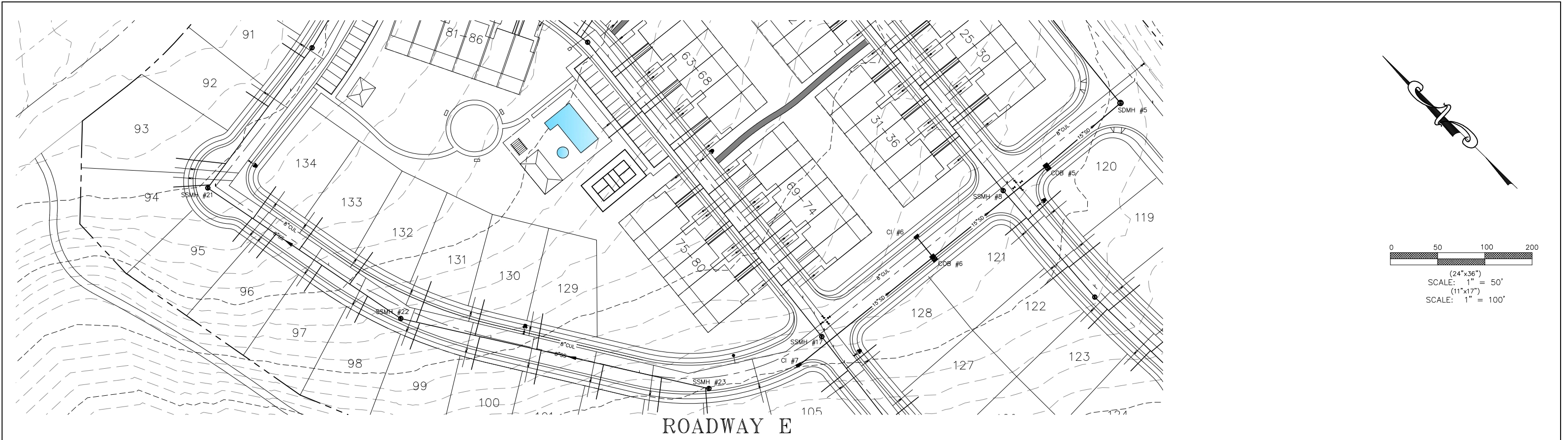


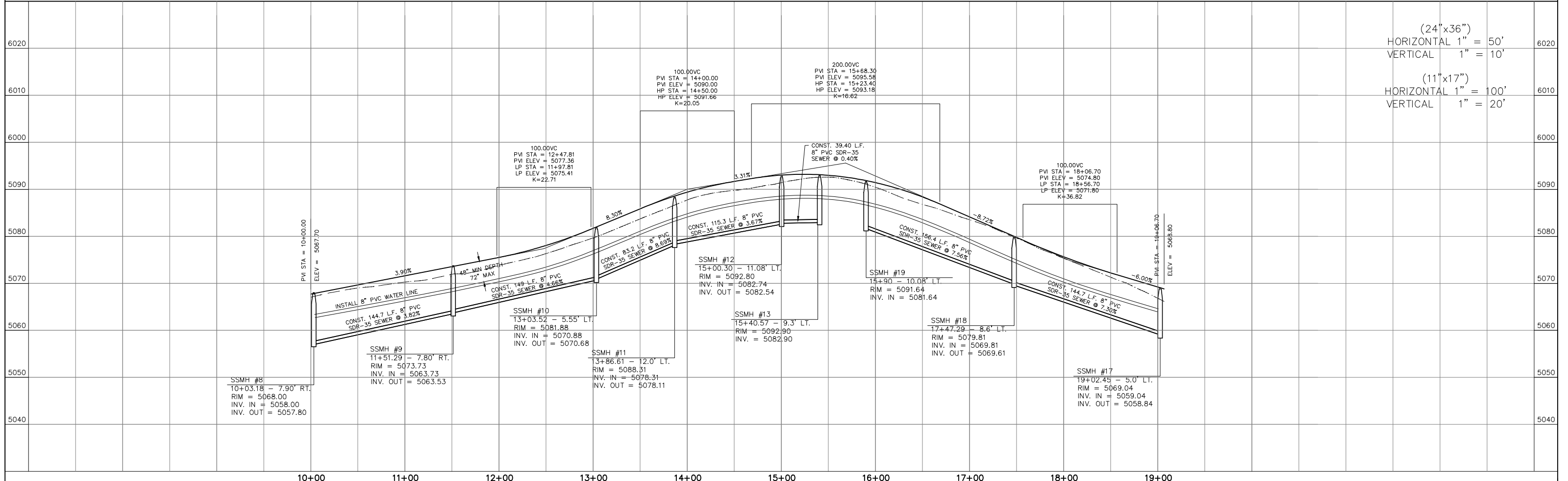
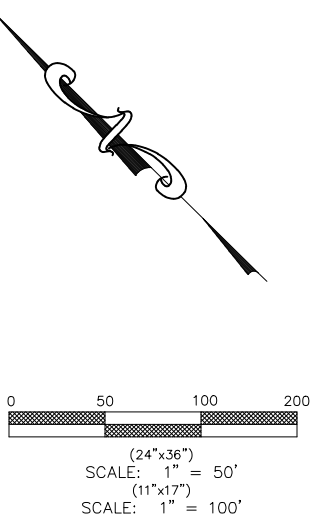
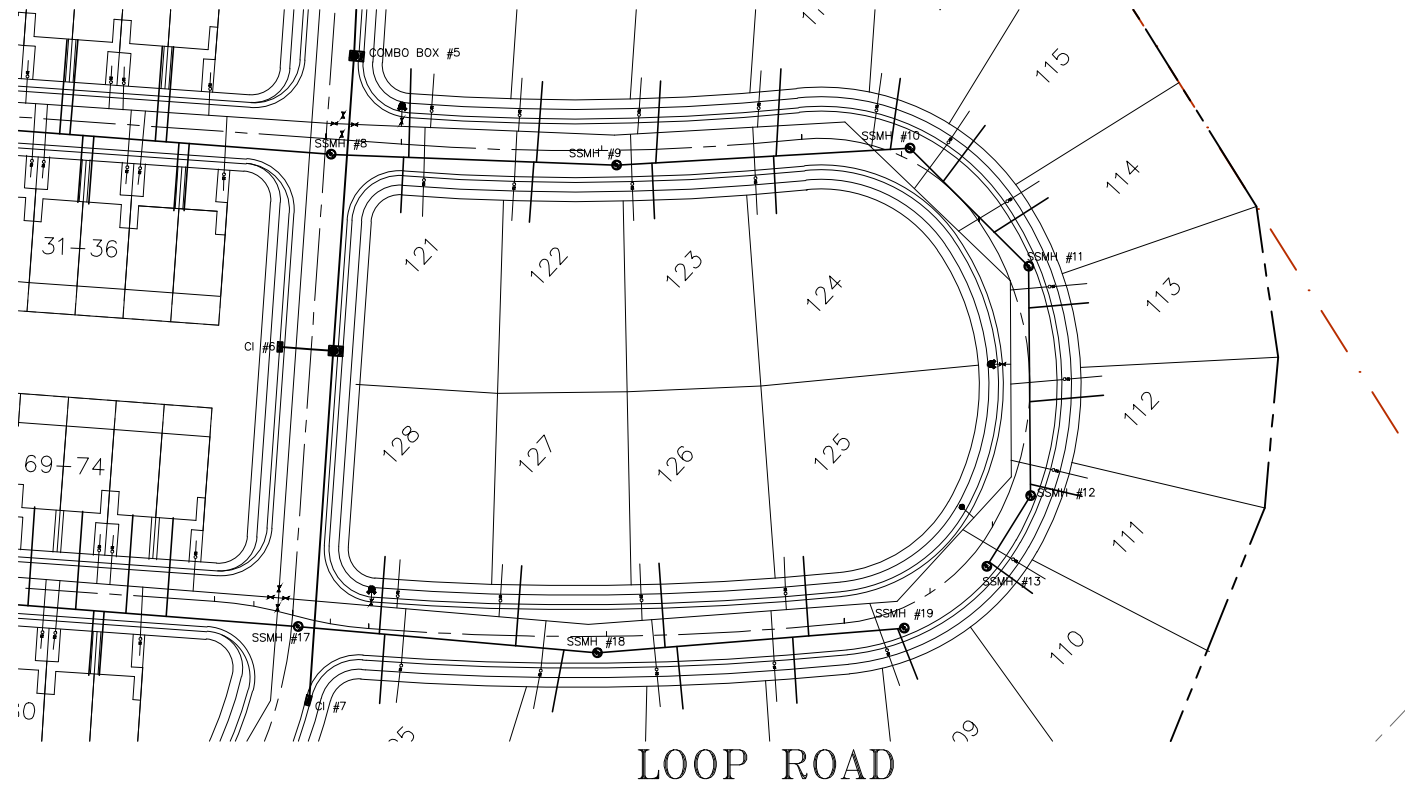
ROADWAY B



(24"x36")
HORIZONTAL 1" = 50'
VERTICAL 1" = 10'

(11"x17")
HORIZONTAL 1" = 100'
VERTICAL 1" = 20'





(24"x36")
HORIZONTAL 1" = 50'
VERTICAL 1" = 10'

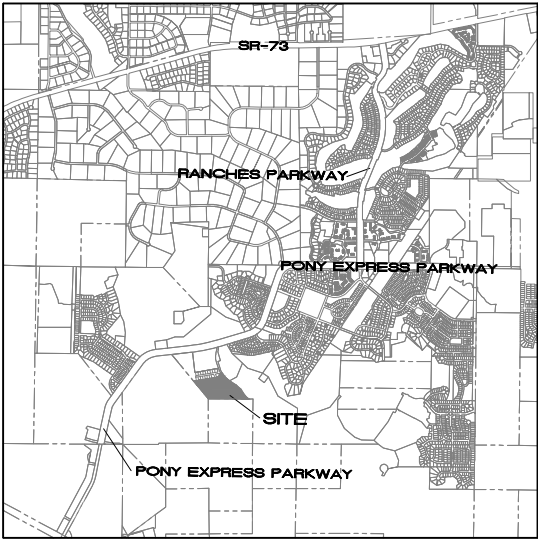
(11"x17")
HORIZONTAL 1" = 100'
VERTICAL 1" = 20'

REVISIONS															JOB RYAN		
NO.	DATE	DESCRIPTION	BY	DESIGNED BY:	TGT												
1				DRAWN BY:	JGW												
2				CHECK BY:	TGT												
3				DATE:	06/24/20												
4				CGGD FILE:													
J:\RYAN\BYBEE\Hidden_Canyon\dwg\05_PP2.dwg																	

TRANE ENGINEERING, P.C. CONSULTING ENGINEERS AND LAND SURVEYORS 27 EAST MAIN LEHI, UTAH 84043 (801) 768-4544						EAGLE MOUNTAIN UTAH			HIDDEN HOLLOW PHASE 'C'			LOOP ROAD PLAN AND PROFILE			SHEET NO. 9	

SITUATED IN THE SOUTHEAST QUARTER OF SECTION
30, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT
LAKE BASE AND MERIDIAN, EAGLE MOUNTAIN, UTAH

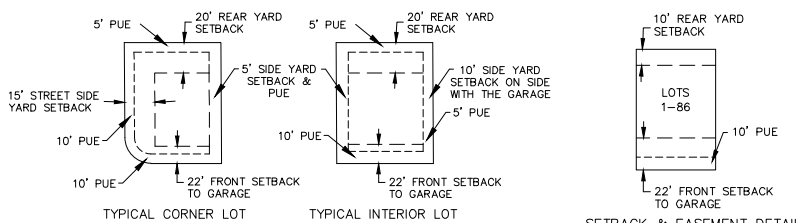
SITUATED IN THE SOUTHEAST QUARTER OF SECTION
30, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT
LAKE BASE AND MERIDIAN, EAGLE MOUNTAIN, UTAH



VICINITY MAP



SCALE: 1" = 80'



SETBACK AND EASEMENT DETAIL

-NTS-

SETBACK & EASEMENT DETAIL

TOWNHO

115

SURVEYOR'S CERTIFICATE

I, TRAVIS TRANE, do hereby certify that I am a Professional Land Surveyor, and that I hold Licence No. 5152741, as prescribed under the laws of the State of Utah. I further certify that by authority of the owners, I have made a survey of the tract of land shown on this plat and described hereon, and have subdivided said tract of land into lots and streets, together with easements, hereafter to be known as HIDDEN HOLLOW PHASE "C" and that the same has been correctly surveyed and monumented on the ground as shown on this plat.

[illegible]

Beginning at a point which is North 00°03'34" East 2654.81 feet along the quarter section line and South 89°32'48" East 1069.96 feet from the South Quarter Corner of Section 30, Township 5 South, Range 1 West, Salt Lake Base and Meridian; thence South 89°32'48" East 151.62 feet; thence Southeastwesterly 251.36 feet along the arc of a non-tangent 396.00 foot radius curve to the left, through a central angle of 36°22'08", the chord of which bears South 77°35'26" East 247.16 feet; thence Southeastwesterly 649.70 feet along the arc of a 654.00 foot radius curve to the left, through a central angle of 56°55'09", the chord of which bears South 67°15'56" East 623.31 feet; thence South 38°51'21" East 430.40 feet; thence Southeastwesterly 100.00 feet along the arc of a 100.00 foot radius curve to the left, through a central angle of 09°57'30", the chord of which bears South 43°50'06" East 165.43 feet; thence South 48°48'51" East 91.33 feet; thence South 15°08'19" West 311.33 feet; thence South 38°54'17" West 79.41 feet; thence South 52°13'19" West 78.77 feet; thence South 69°04'20" West 134.51 feet; thence North 77°19'56" West 95.47 feet; thence North 47°58'31" West 124.60 feet; thence North 45°27'53" East 71.15 feet; thence North 42°29'02" West 90.87 feet; thence South 77°46'14" East 85.67 feet; thence North 85°22'05" West 83.18 feet; thence North 77°55'33" West 209.06 feet; thence North 67°44'47" West 157.14 feet; thence North 55°04'28" West 224.29 feet; thence North 42°58'19" West 72.28 feet; thence North 01°20'46" East 109.21 feet; thence North 52°01'41" East 60.43 feet; thence Northeastwesterly 318.65 feet along the arc of a 447.00 foot radius curve to the left, through a central angle of 40°50'39", the chord of which bears North 13°31'43" East 135.78 feet; thence North 78°51'21" West 100.00 feet; thence North 09°36'52" East 185.33 feet; thence Northwesterly 35.12 feet along the arc of a 25.00 foot radius curve to the left, through a central angle of 80°29'17", the chord of which bears North 30°37'47" West 32.30 feet; thence Northwesterly 230.81 feet along the arc of a 490.00 foot radius curve to the right, through a central angle of 26°59'19", the chord of which bears North 57°22'46" East 228.68 feet to the point of beginning.

Parcel contains: 23.86 acres

Basis of Bearing: the line between the South Quarter Corner and the North Quarter Corner of Section 30, Township 5 South, Range 1 West, Salt Lake Base and Meridian which bears North 00°03'34" West (NAD 83).

DATE _____

SURVEYOR

OWNER'S DEDICATION

We, the undersigned owners of all the real property depicted on this plat and described in the surveyors certificate on this plat, have caused the land described on this plat to be divided into lots, streets, parks, open spaces, easements and other public uses as designated on the plat and now do hereby dedicate under the provisions of 10-9a-607, Utah code, without condition, restriction or reservation to Eagle Mountain City, Utah, all streets, water, sewer and other utility easements and improvements, open spaces, parks and other public uses depicted on this plat. Eagle Mountain City, Utah, together with all improvements required by the Development Agreement between the undersigned and Eagle Mountain City for the benefit of the City on the inhabitants thereof.

OWNER(S):

PRINTED

AUTHORIZED SIGNATURES

ACKNOWLEDGEMENT

On the _____ day of _____, 20____, personally appeared before me the persons signing the foregoing Owners Dedication known to me to be authorized to execute the foregoing Owners Dedication for and on behalf of the owners who duly acknowledge to me that the Owners Dedication was executed by them on behalf of the Owners.

My Commission Expires

NOTARY PUBLIC SIGNATURE

COMMISSION NUMBER

PRINTED NAME OF NOTARY

ACCEPTANCE BY LEGISLATIVE BODY

The City Council of Eagle Mountain City, 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 of _____, 20__.

APPROVED BY MAYOR

APPROVED BY CITY ATTORNEY

APPROVED BY CITY ENGINEER

ATTEST BY CITY RECORDER

PRELIMINARY PLAT PHASE 'C'

HIDDEN HOLLOW

A RESIDENTIAL SUBDIVISION

EAGLE MOUNTAIN

UTAH COUNTY, UTAH

SURVEYOR SEA

NOTARY PUBLIC SEAL

COUNTY ENGINEER SEAL

CLERK-RECORDED SEA

TRANE ENGINEERING, P.C.
CONSULTING ENGINEERS AND LAND SURVEYORS
27 EAST MAIN LEHI, UTAH 84043 (801) 768-4544

Parks & Open Space Worksheet

Directions: Submit a completed worksheet with your preliminary plat or site plan application. Proposed amenities and park designs are subject to approval by the Planning Commission and City Council.

Required Improved Open Space

Residential Lots/Units	130	Required Open Space (Square Feet)	3.16	Required Open Space (Acres)	
0	X 1,000 =	0.00	/ 43,560 =	0.00	Acres

Park Fee-In-Lieu (if applicable)

Required Open Space (Square Feet)	Fee-in-Lieu (w/o appraised value of open space)
0.00	X \$3.75***
	\$0.00

Required Amenity Points

Required Open Space (Acres)	Required Amenity Points
0.00	316
	X 100
	0.00

Parks & Improved Open Space Elements/Amenities

Park Feature / Improvement	Points Available	Proposed Quantities	Proposed Points
Bench/Picnic Table (w/ shade structure or trees)	2	8	16 0
Bicycle Rack (4+ bikes)	2		0
Trees (5) (a majority must be shade trees)	2	6	12 0
Shade Structure	4		0
Drinking Fountain	5		0
Asphalt or Concrete Trails - 8ft wide, excluding sidewalks along streets (per 100 linear feet)	6	6	36 0
Parking** (5 Stalls)	6		0
Swings (4+ Swings)	7		0
Concrete Basketball Court (1/2 Court)	20		0
Pavilion w/tables, garbage receptacles, barbeques (per 100 square feet)	4	5	20 0
Playground Equipment* Per \$1,000	2	50	100 0
Splash Pad* Per \$1,000	2		0
Pickleball court (per court)	40	1	40 0
Tennis court (6,600 sq ft or 55' x 120')	100		0
Sports court (6,600 sq ft or 55'x120')	100		0
Restroom (600+ sq ft)	100		0
Restroom (1,200+ sq ft)	200		0
Public Art	Varies		
Other: Pickle Ball Court Lighting	Varies		10
Other: 4100 Linear Feet BB Trails, 37 Acres OS	Varies	41	82
Other: (2 per 100)	Varies		

Total **316** 0

* Public art should reflect the neighborhood or community identity or culture. Creativity is encouraged in playground equipment and splash pads, and may be awarded more points than Standard Equipment. Costs for playground equipment and splash pads reflect equipment costs only.

** No more than 33% of the required amenity points may be met by a combination of trails and parking. Parking must be adjacent to improved open space, and must be in addition to any required parking for the development.

*** Plus the appraised value of the required open space being applied towards the fee-in-lieu.

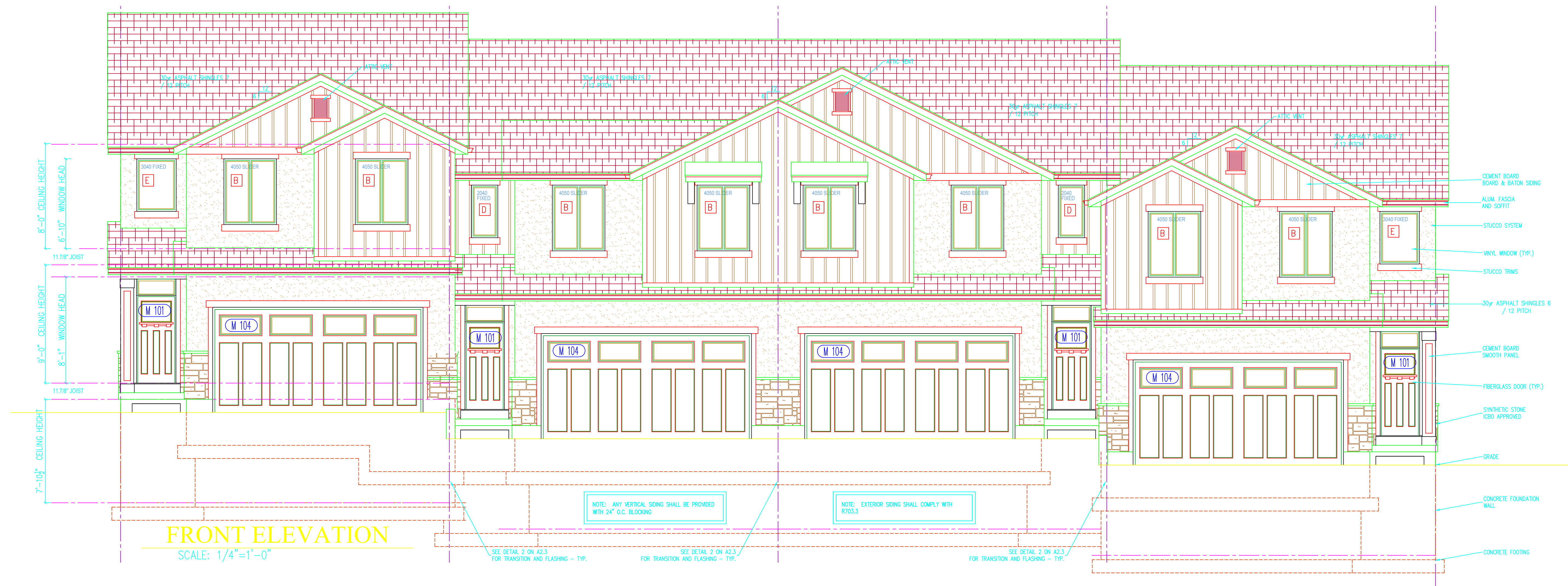
Hidden Hollow Phase C

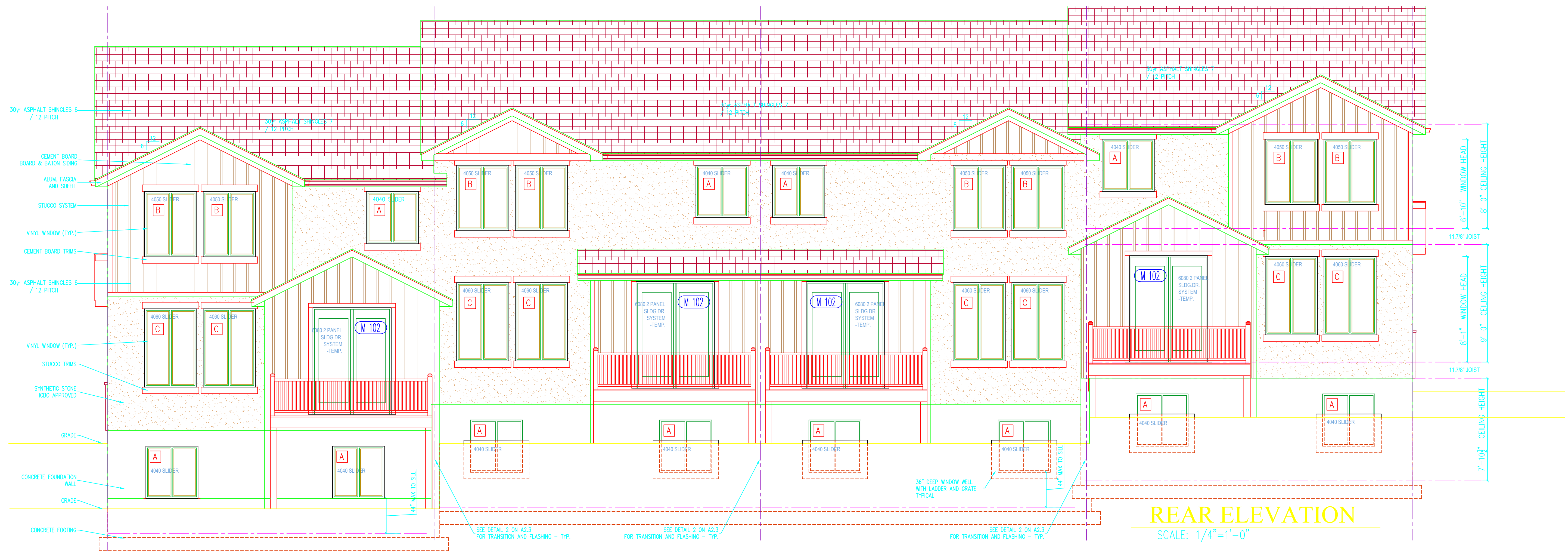
Cost of Clubhouse/Pool

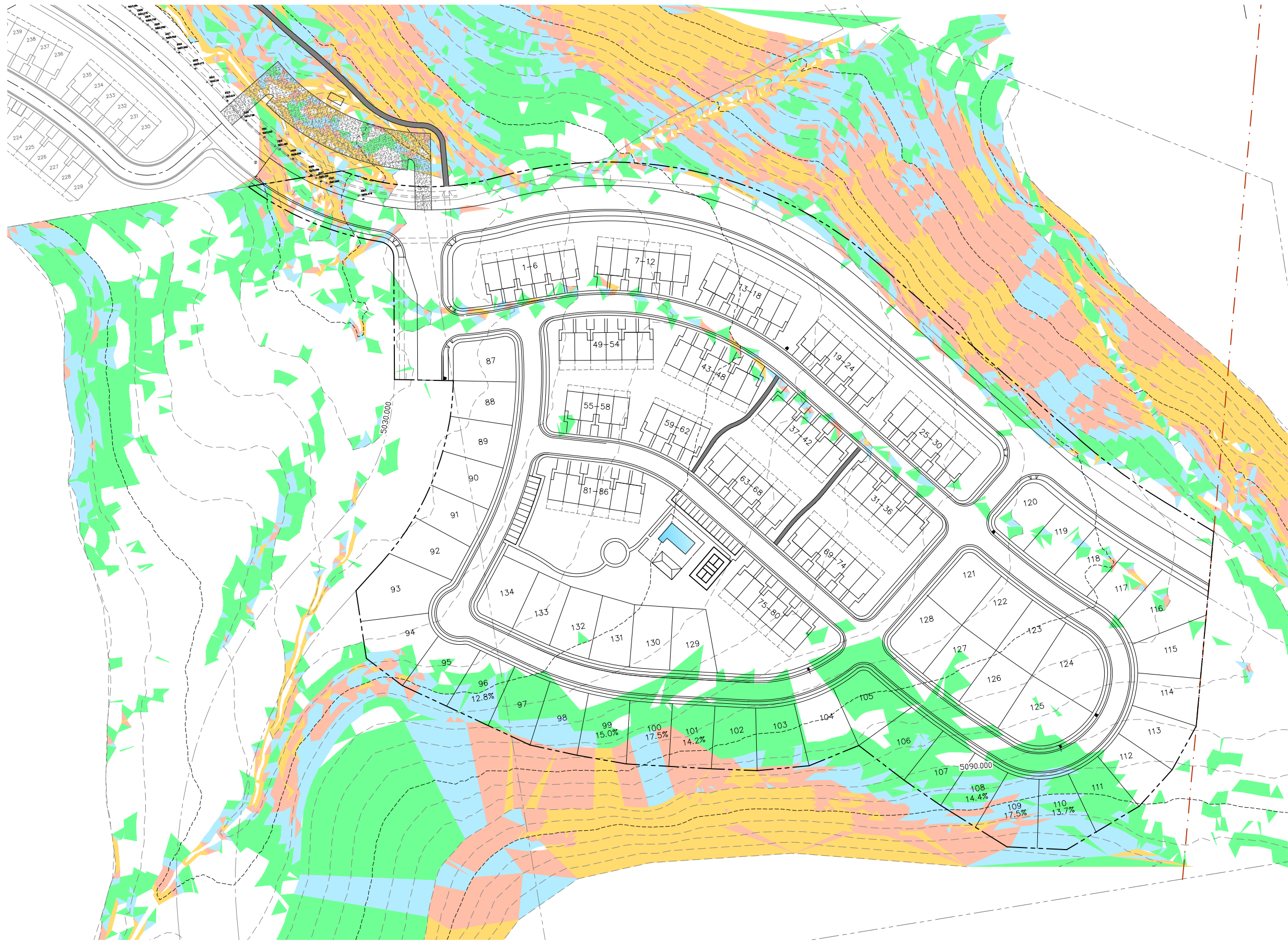
Clubhouse	1500 SF	\$	120.00	\$ 180,000.00
Pool	1000 SF	\$	100.00	<u>\$ 100,000.00</u>
				\$ 280,000.00

Cost of Alternative

Larger Pool w/Kid Area	1260 SF	\$	120.00	\$ 151,200.00
Hot Tub	1 EA	\$	30,000.00	\$ 30,000.00
Trellis/ Tables	1 EA	\$	20,000.00	\$ 20,000.00
Changing/Bathroom	1 EA	\$	90,000.00	\$ 90,000.00
Drinking Fountains	2 EA	\$	500.00	<u>\$ 1,000.00</u>
				\$ 292,200.00







Slopes Table			
Number	Minimum Slope	Maximum Slope	Color
1	10.00%	15.00%	Green
2	15.00%	20.00%	Blue
3	20.00%	25.00%	Orange
4	25.00%	100.00%	Yellow

REVISIONS			
NO.	DATE	DESCRIPTION	BY
1			
2			
3			
4			

DESIGNED BY:	TGT
DRAWN BY:	TT
CHECK BY:	TGT
DATE:	02/27/20
CDGD FILE:	

TRANE ENGINEERING, P.C.
CONSULTING ENGINEERS AND LAND SURVEYORS
27 EAST MAIN LEHI, UTAH 84043 (801) 768-4544

EAGLE MOUNTAIN
UTAH

HIDDEN HOLLOW

SLOPE ANALYSIS AREA 3

JOB
CCEM
SHEET NO.
1



EAGLE MOUNTAIN CITY
PLANNING COMMISSION MEETING
JANUARY 12, 2021

TITLE: PUBLIC HEARING - Brylee North (Rezone & General Plan Amendment)

ITEM TYPE: General Plan Amendment and Rezone

APPLICANT: Randy Smith (Fieldstone Homes)

ACTION ITEM:

Yes

PUBLIC HEARING:

Yes

PREPARED BY:

Pete Kane, Planning

BACKGROUND:

The subject property is about 22 acres in size and located on the west side of Eagle Mountain Boulevard and north of the Brylee Estates development. Brylee Estates (to the south) includes a townhome development phase directly adjacent to the subject property that would fall under the current zoning designation of MF1 (it was approved under the previous city code of Tier III multifamily). The properties to the west and north are currently zoned Agriculture but have a future land use designation of Employment Center/Campus. To the northeast and east, the property is zoned Commercial Storage with a commercial self-storage project approved. The land to the southeast has been approved as a single-family development (Sage Park) under the previous city code, but would fall in the R3 current zoning designation.

The subject property is currently zoned Agriculture. The rezone application requests a change to Commercial Regional on about 10.63 acres of the property and MF2 on the remaining 11.4 acres.

The subject property currently has a future land use designation of Employment Center/Campus on about 14.3 acres of the property and Neighborhood Residential Two on the remaining 7.7 acres. The general plan amendment requests changing the future land use designation to Regional Commercial on about 10.63 acres of the property and Neighborhood Residential Three on the remaining 11.4 acres.

ITEMS FOR CONSIDERATION:

TRANSPORTATION

Desert Willow Drive ends at Eagle Mountain Boulevard just east of the subject property. It is a collector road identified on the Future Land Use and Transportation Map and separates the approved commercial storage development and Sage Park. Based on the City's future land use designation of the property to the west of the subject property as Employment Center/Campus, staff has recommended that the collector road be continued through the subject property, though it could be sized as a minor collector (77' ROW).

REZONE COMPATIBILITY

EMMC 17.60.160 establishes the appropriate zone transitions and compatible adjacencies. Based on development to the south (Brylee Farms Townhomes) which is equivalent to the current zoning district of MF1, the requested zoning of MF2 and CR are compatible zones. The property to the west has been identified for possible commercial use by the property owner/applicant in previous concept plan submissions (B&H Land Holdings). The majority of the land to the east is zoned Commercial Storage (CS). The requested CR zoning along Eagle Mountain Boulevard opposite this CS zone would be compatible. To the southeast, a portion of Sage Park is opposite the subject property and its zoning would be equivalent to the R3 zone. The Commercial Neighborhood (CN) zone is the only commercial zoning district that is compatible as an adjacent zone to the R3. The Commission may find that the distance created by the minor arterial Eagle Mountain Boulevard creates a buffer and separation between these two developments.

REZONE REQUEST

In addition to the zone compatibility, the usability of the requested zoning districts on the portions of the subject property should be considered. The applicant has requested a CR zoning designation for the land directly along Eagle Mountain Boulevard with a minimum depth of about 270 feet. The potential lot layout in the zoning application demonstrates an average lot size of about 1.5 acres. The CR zone is typically used for large retailers such as large grocery stores and big box retailers. Given the proximity of the subject property to the future freeway just to the north, a CR zone may be appropriate but the depth of the zone may not be enough to attract a larger retailer or grocer.

The following uses are allowed in the CR zone as opposed to the CC zone: check cashing and deferred deposit lenders (as a special use),

construction and equipment sales/rental, flex office/retail/warehouse, large/regional grocery store (> 75,000), hospital, pawn shop, plasma/blood collection, race tracks (as a special use), and regional retail sales (> 55,000 sf).

GENERAL PLAN AMENDMENT

The requested future land use designations are appropriate land uses based on the applicant's requested rezoning. If the Planning Commission determines any modifications to the rezone designations is necessary, it may be necessary to also revise the general plan future land use designations for the amendment.

AMENDMENT EFFECTS

Based on the current land use designation on the subject property, 65% is set for Employment Center/Campus (commercial) and 35% as Neighborhood Residential Two (the RC and MF1 residential zones). The applications would shift this land use by reducing the commercial use to 48% and increasing the residential use to 52%. It should be noted that the MF2 zoning district is identified in EMMC 17.60.160 as a compatible zoning district for the Regional Commercial land use designation.

DEDICATION TO CITY

The applicant has been working with the City on a plan to dedicate one of the central commercial parcels along Eagle Mountain Boulevard within the subject property to the City. This would allow the City to direct the potential development and use on that particular parcel.

REQUIRED FINDINGS:

Rezone applications are based upon compliance with City Code requirements and requirements of any applicable development agreements. The approval criteria for a rezone application can be found in EMMC 17.90.060.

Amendments to the General Plan are legislative actions and do not require approval based upon findings of facts. The Commission should consider the health, safety, and welfare of the community.

RECOMMENDATION:

We recommend the Planning Commission make a motion to recommend approval of the application to the City Council, for the reasons set forth in the staff report and in the meeting, with the following conditions:

1. The general plan amendment shall include continuing Desert Willow Drive through the subject property (east to west) as a collector (minor).

ATTACHMENTS:

General Plan Map Amendment Exhibit

Rezone Exhibit

Existing Conditions

Compatibility Statement

Development Opportunities

Multifamily Concepts

FUTURE LAND USE & TRANSPORTATION MAP

LEGEND

Residential Categories:

- Foothill Residential
- Agricultural/Rural Density One
- Agricultural/Rural Density Two
- Neighborhood Residential One
- Neighborhood Residential Two
- Neighborhood Residential Three

Mixed Use/Commercial Categories:

- Community Commercial
- Town Center Mixed Use
- Regional Commercial
- Employment Center/Campus
- Business Park/Light Industry

Public/Civic Categories:

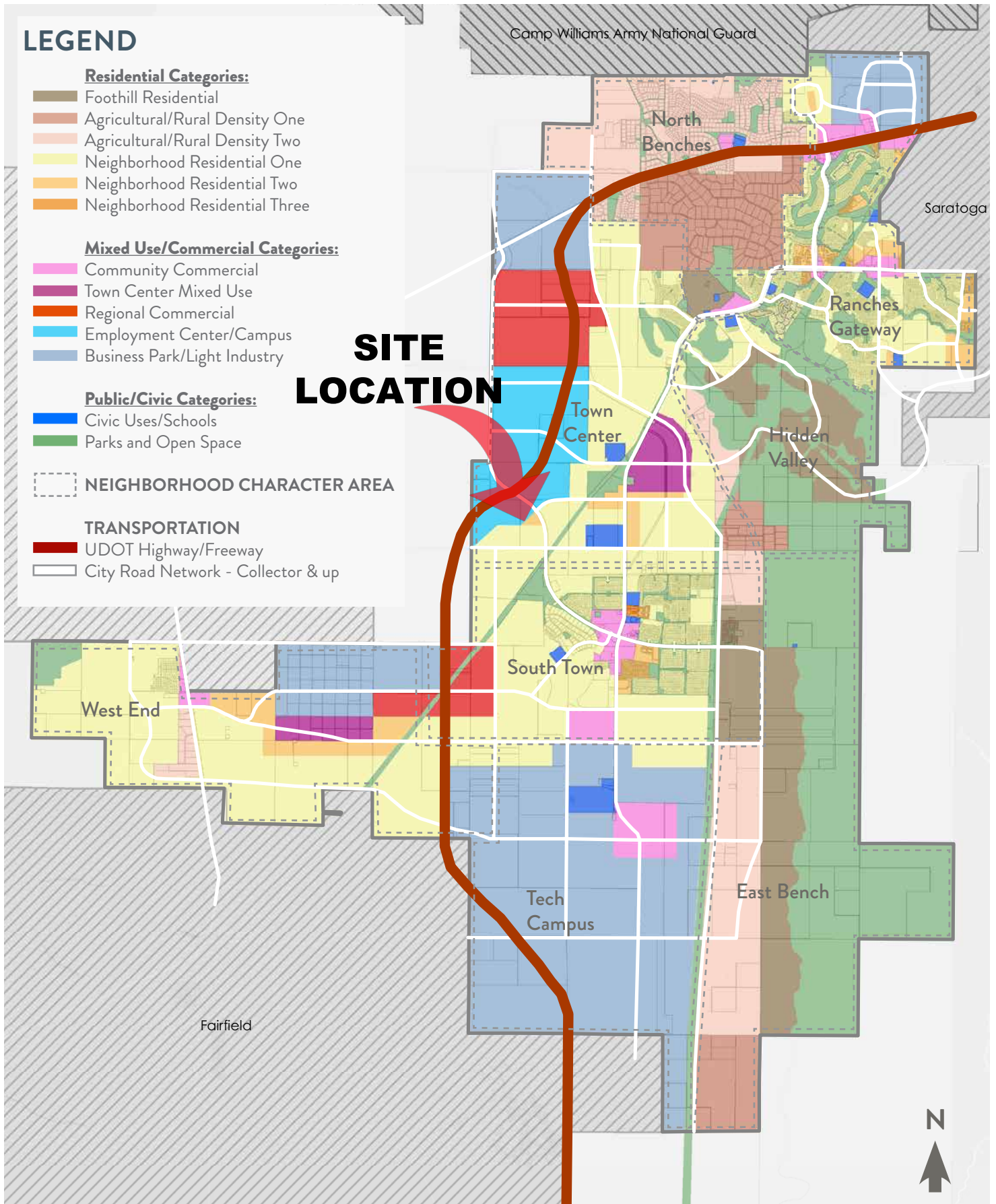
- Civic Uses/Schools
- Parks and Open Space

NEIGHBORHOOD CHARACTER AREA

TRANSPORTATION

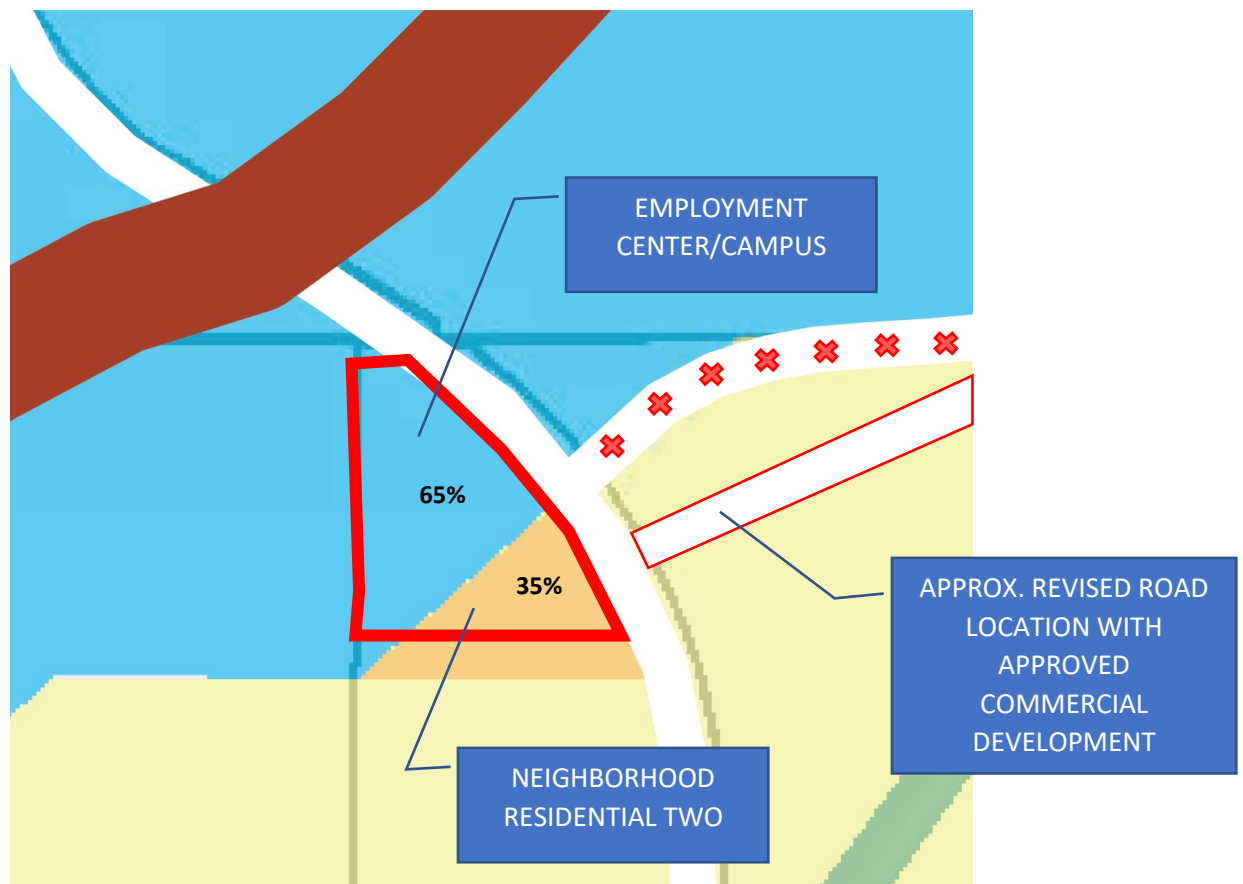
- UDOT Highway/Freeway
- City Road Network - Collector & up

**SITE
LOCATION**



CURRENT GENERAL PLAN

FUTURE LAND USE MAP



- Neighborhood Residential One
- Neighborhood Residential Two
- Neighborhood Residential Three

Mixed Use/Commercial Categories:

- Community Commercial
- Town Center Mixed Use
- Regional Commercial
- Employment Center/Campus

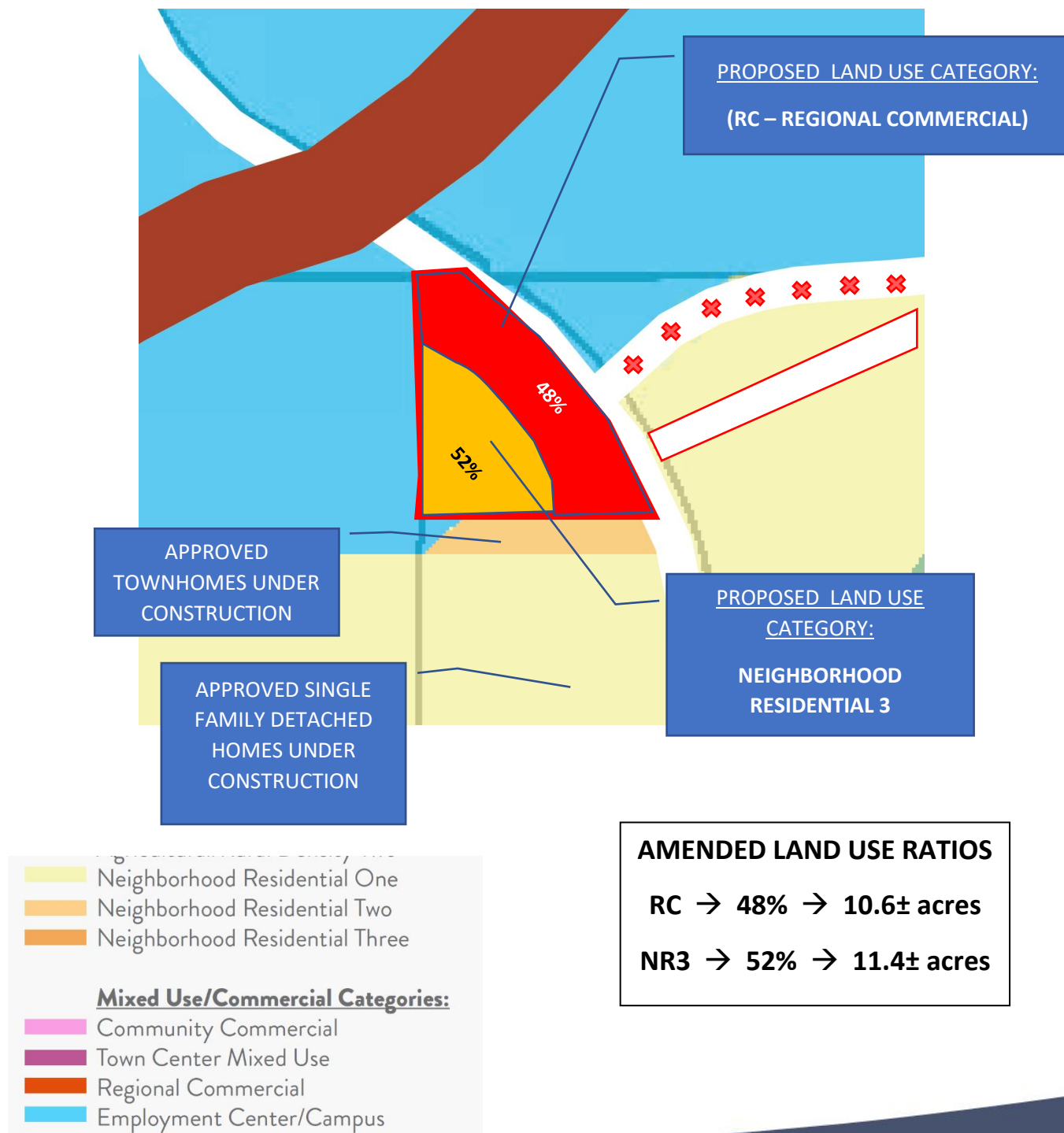
CURRENT LAND USE RATIOS

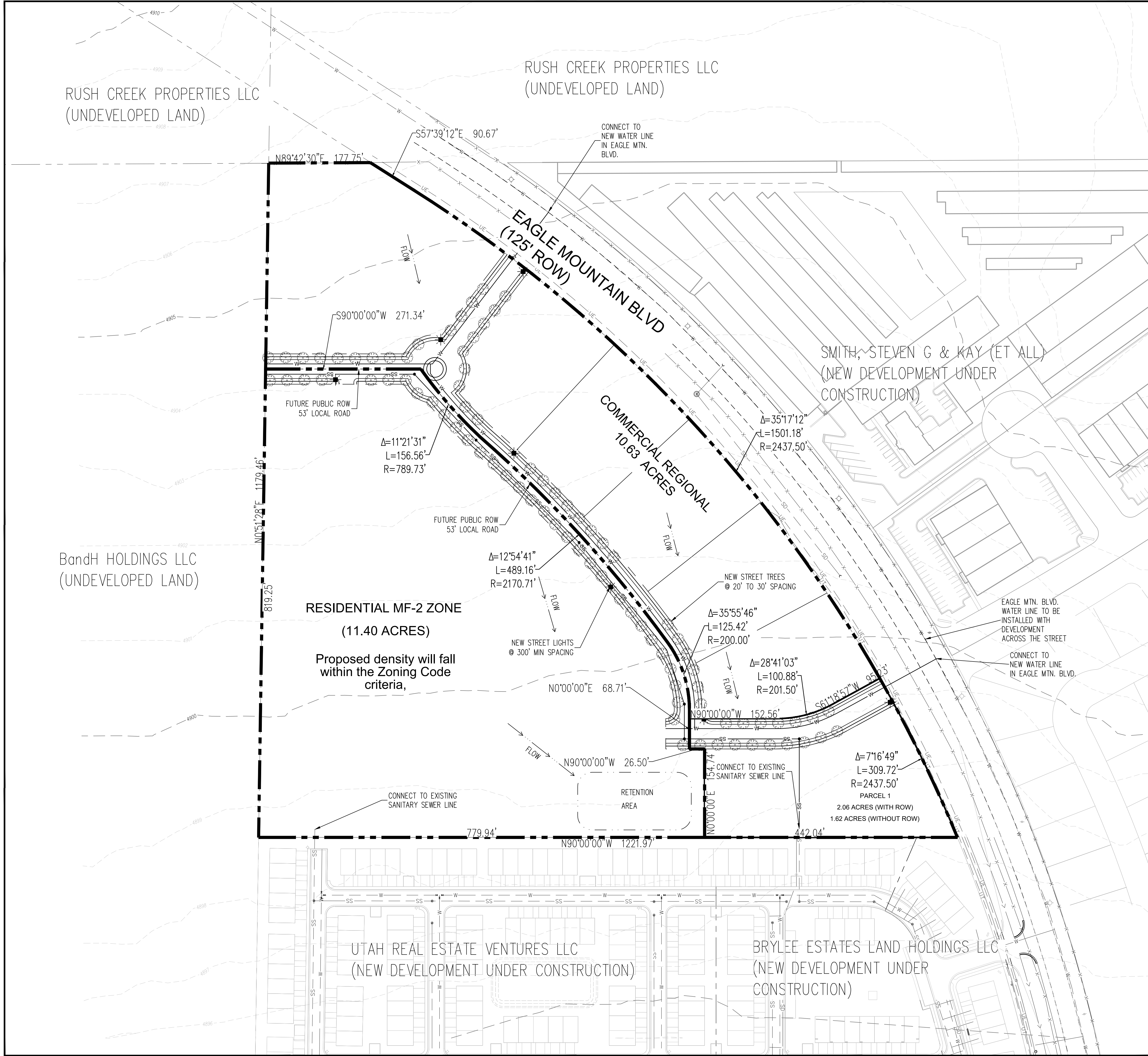
ECC → 65% → 14.3± acres

NR2 → 35% → 7.7± acres

PROPOSED GENERAL PLAN

AMENDED FUTURE LAND USE MAP





Date
9/21/2020

Engineer
B Preece

Project Mgr
B Preece

Sheet
1 of 1

100 YEAR RETENTION CALCULATION

CATCHMENT PROPERTIES					
Area Composition			Runoff Coefficients		
Hardscape	10.00		Ch		0.85
Building	7.00		Cr		0.9
Landscape	5.05		Cl		0.15
Total Area	22.05		Composite C		0.71

100 YEAR RETENTION CALCULATION					
Time (min)	Intensity (in/hr)	CA	Allowable Runoff		Storage (cf)
			Runoff (cf)	Allowed Discharge (cfs)	
5	5.70	15.56	26,603	0	26,603
10	4.34	15.56	40,511	0	40,511
15	3.59	15.56	50,266	0	50,266
30	2.41	15.56	67,487	0	67,487
60	1.49	15.56	83,449	0	83,449
120	0.792	15.56	88,714	0	88,714
180	0.533	15.56	89,554	0	89,554
360	0.272	15.56	91,402	0	91,402
720	0.144	15.56	96,779	0	96,779
1440	0.074	15.56	99,467	0	99,467
					99,467 Cu Ft

DRAINAGE NARRATIVE

THE EXISTING SITE DRAINS FROM NORTH TO SOUTH WITH AN APPROXIMATE 7-FOOT DROP. ALL RUNOFF FROM THE 22.05-ACRE SITE WILL BE RETAINED. THE REQUIRED RETENTION WILL BE 99,467 CU FT USING THE RATIONAL METHOD. THE RATIONAL METHOD INCLUDED THE USE OF RAINFALL INTENSITIES FROM NOAA AND A COMPOSITE RUNOFF COEFFICIENT OF 0.71.

UTILITY NARRATIVE

WATER DEMAND

THE PROPOSED DEVELOPMENT CONSISTS OF APPROXIMATELY EIGHT FUTURE COMMERCIAL SITES, 216 RESIDENTIAL UNITS, 1 CLUB AND A POOL. THE ESTIMATED WATER DEMAND WAS BASED ON INFORMATION CONTAINED IN UTAH ADMINISTRATIVE CODE RULE R309-510. FOR THE RESIDENTIAL UNITS IT WAS ESTIMATED THAT THERE WOULD BE AN AVERAGE DAILY DEMAND OF 400 GALLONS PER DAY PER CONNECTION. THE COMMERCIAL SITES WERE ESTIMATED TO HAVE AN AVERAGE DAILY DEMAND OF 7,000 GALLON PER DAY PER LOT. THE CLUB HOUSE AVERAGE DAILY DEMAND WAS ESTIMATED TO BE 179 GALLONS PER DAY. THE POOL AVERAGE DAILY DEMAND WAS ESTIMATED TO BE 216 GALLONS PER DAY. USING THE VALUE OF 2 FOR THE MAXIMUM DAILY AND PEAK HOUR DEMAND FACTORS THE RESULTS OF THE ESTIMATED WATER DEMANDS ARE SUMMARIZED BELOW.

Total Average Daily Demand	142,795 GPD
Total Maximum Daily Demand	285,589 GPD
Total Peak Hour Demand	397 GPM

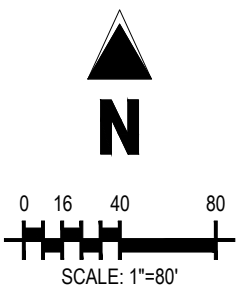
THE REQUIRED FIRE FLOW FOR THE DEVELOPMENT WAS ESTIMATED FROM INFORMATION SUPPLIED BY APPENDIX B IN THE INTERNATIONAL FIRE CODE 2018. EACH BUILDING WAS ASSUMED TO BE TYPE V-B. A SUMMARY OF EACH TYPE OF DEVELOPMENT WITH THE ESTIMATED SQUARE FOOTAGE AND FIRE FLOW IS PROVIDED BELOW.

Required Fire Flows (TYPE V-B)		
Type of development	Square Footage	Required Fire Flow (GPM)
Residential per building (12/bldg)	13,447	3,250
Residential per building (24/bldg)	24,046	4,250
Commercial per building	6,000	2,000
Club House	3,000	1,500

SEWER DEMAND

FOR THE SEWER DEMAND IT WAS ASSUMED THAT IT WOULD BE APPROXIMATELY HALF THE DEMAND REQUIRED FOR THE CULINARY WATER DEMAND WITH THE EXCEPTION OF THE RESIDENTIAL UNITS BEING HELD TO 100 GALLON PER DAY PER UNIT. A PEAK FLOW FACTOR OF 4 WAS ASSUMED. BELOW IS A TABLE SUMMARIZING THE TOTAL AVERAGE DAILY DEMAND AND THE PEAK FLOW.

Total Average Daily Demand	124,998 GPD
Total Peak Flow Demand	258.74 GPM



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NOT FOR BIDDING
NOT FOR CONSTRUCTION

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ENFORCED AND PROSECUTED.



BRYLEE NORTH
MASTER SITE PLAN &
LAND USE PLAN
EAGLE MOUNTAIN, UT

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Project No:
Drawn By: RCL
Checked By: BAP
Date: 2020/08/26

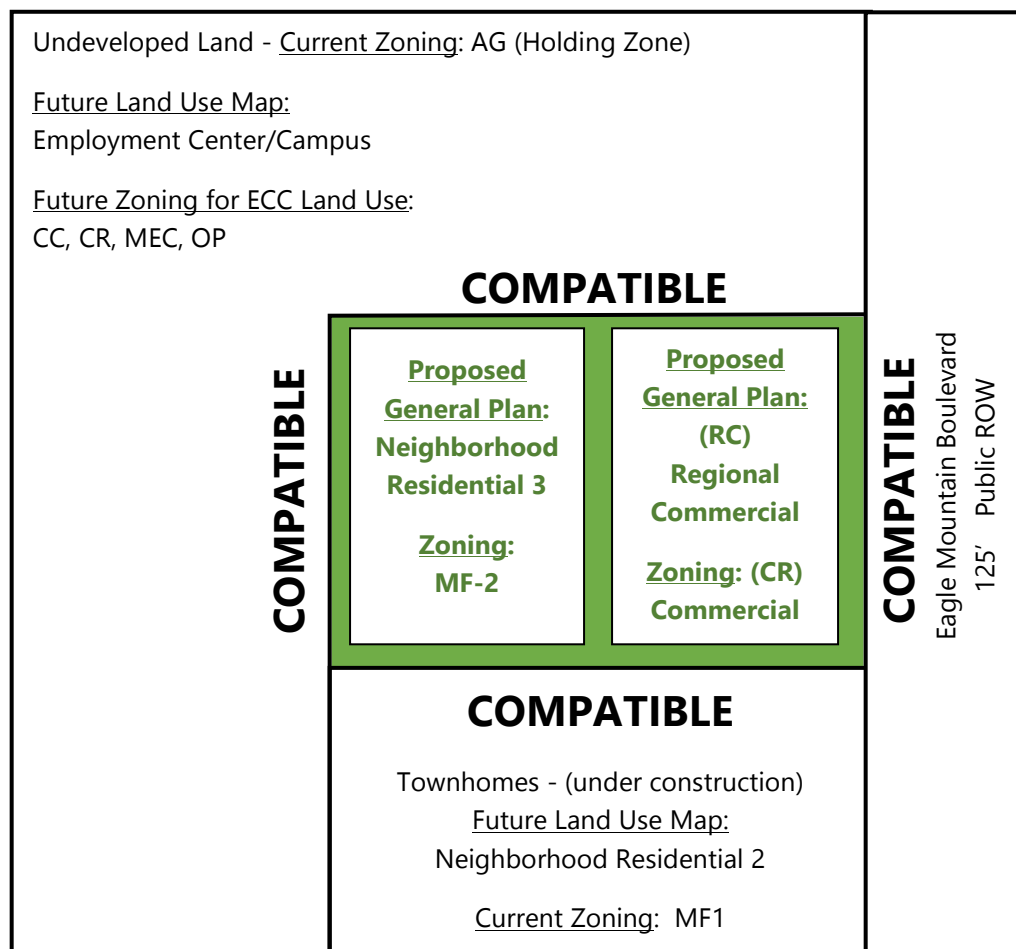
MASTER PLAN

BRYLEE NORTH Compatibility Statement

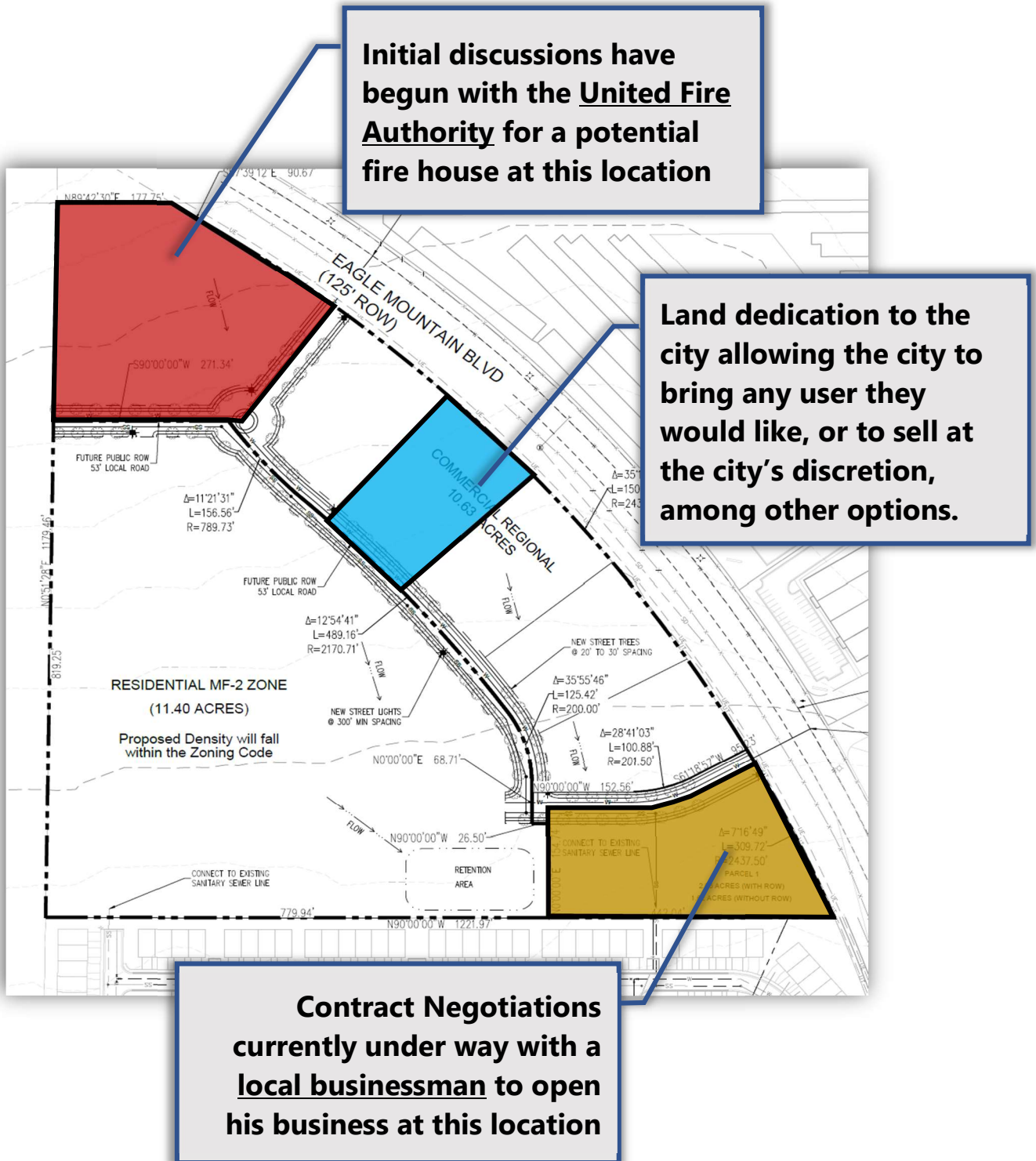
The schematic below demonstrates the subject property and adjacent general plan designations and zoning designations (with the proposed general plan map amendment and proposed zoning applied).

The Proposed Neighborhood Residential 3 land use with the proposed (MF2) Multi-Family 2 zone, is adjacent to the General Plan (ECC) Employment Center/Campus land use within which approved zones include (CC), (CR), (MEC), and (OP); all of which are compatible buffers for the (MF2) zone. Also, the (MF1) Multi-Family 1 to the south and the (CR) Commercial Regional to the west are compatible with the MF2 zone.

The proposed (CR) Commercial Regional zone is compatible with the (ECC) land use designation and its potential zones to the north. The proposed (CR) zone is also an approved use within the (ECC) land use category. The CR zone is also compatible with (MF2) to the west and (MF1) to the south. To the east, the subject property is adjacent to Eagle Mountain Boulevard which is 125' of public right-of-way.



ANTICIPATED DEVELOPMENT OPPORTUNITIES



LAND DEDICATION TO THE CITY

After consulting with city staff on what value the applicant could offer to the city in exchange for approval of their general plan map amendment and rezone applications, the applicant is willing to dedicate to the city some of its land, specifically a commercial development pad within the project and as indicated below; 1.0± acre pad.

The notion of deeding land to the city was introduced by Ifo Pili in a meeting with city staff and the applicant (prior to Ifo's recent departure from the city). The dialogue has continued with Paul Jerome and the planning staff since that time. The basis of the narrative was that owning land empowered to city to promote its objectives and make direct decisions about development and businesses coming to the Eagle Mountain city center area.

Dedicating land directly to the control of Eagle Mountain will provide maximum flexibility to the City with options including: holding the land for future value, selling the land for an immediate financial stimulus, enticing a commercial user/restaurateur to build and operate at this location with a low or non-existent land basis, or ground leasing to a business to build a revenue stream for the city while also bringing the desired amenities to the city. While not an exhaustive list, the options presented are intended to be thought provoking around the possibilities. A partnership in this development is a win all around.



EXHIBIT TO DEMONSTRATE THE EFFECT OF BUILDING SIZE AND PARKING ON SITE LAYOUT AND FEEL.



11.7 ACRES
18 DU/ACRE

12 UNITS / BUILDING
18 BUILDINGS - 216 UNITS

PARKING REQUIREMENTS
2 PER DU + 1 GUEST PER 3 DUs

REQUIRED: 432 + 72 = 504

PROVIDED: 482

EXHIBIT TO DEMONSTRATE THE EFFECT OF BUILDING SIZE AND PARKING ON SITE LAYOUT AND FEEL.



11.7 ACRES
18 DU/ACRE

24 UNITS / BUILDING
9 BUILDINGS - 216 UNITS

PARKING REQUIREMENTS
2 PER DU + 1 GUEST PER 3 DUs

REQUIRED: 432 + 72 = 504

PROVIDED: 372





EAGLE MOUNTAIN CITY
PLANNING COMMISSION MEETING
JANUARY 12, 2021

TITLE: PUBLIC HEARING - Ault Farms (Master Development Plan, Rezone, General Plan Amendment)

ITEM TYPE: Master Development Plan, Rezone, and General Plan Amendment

APPLICANT: Becca Gifford (Flagship Homes)

ACTION ITEM:

Yes

PUBLIC HEARING:

Yes

PREPARED BY:

Pete Kane, Planning

BACKGROUND:

The subject property (~750 acres) is a large parcel of land on the east side of Pony Express Parkway at about 3000 N. The property is currently zoned Agriculture and is identified in the General Plan Future Land Use Map for "Foothill Residential," "Neighborhood Residential One," "Parks and Open Space," and "Business Park / Light Industry."

The applicant (Flagship Homes) for the proposed development (Ault Farms) has submitted concept plans in 2019 and 2020, most recently this past summer. Through those reviews, the Planning Commission and City Council have requested the applicant focus on compliance with the General Plan and requesting zone districts that exist within the current City Code. The mix of uses and level of development intensity was reduced through those concept plan reviews and revisions.

A master development plan has been submitted for the property. The plan includes a rezone and General Plan map amendment. The plan calls for:

Rezoning

The entire parcel is currently zoned Agriculture. The rezoning identified in the plan includes: R1 (58.3 acres), R2 (46.2 acres), R3 (144.6 acres), MF1 (166.2 acres), MF2 (25 acres), Commercial Neighborhood (11.7 acres), Open Space - Natural (36.6 acres), Open Space - Improved (49.7 acres). The remainder of the parcel (208.9 acres) would remain in the Agriculture zone as the applicant is not seeking a rezone of this southern-most portion.

General Plan Map Amendment

The current land use designations for the parcel include: Business Park / Light Industry (~243 acres), Parks and Open Space (~34 acres), Foothill Residential (~35 acres), and Neighborhood Residential One (~438 acres). The land uses identified in the plan would amend the General Plan Map with the following: Neighborhood Residential One (249.1 acres), Neighborhood Residential Two (166.2 acres), Neighborhood Residential Three (25 acres), Community Commercial (11.7 acres), Business Park / Light Industry (208.9 acres), Parks and Open Space (86.3 acres).

ITEMS FOR CONSIDERATION:

CODE COMPLIANCE

The master development application was received during the public hearing process on the code amendment to EMMC 16.10. Based on the filing date and the City Council adoption of the code amendment ordinance, the application is subject to the new version of the code.

WAIVER REQUEST

The applicant has submitted a waiver request from the requirements of EMMC 16.10, as permitted by EMMC 16.10.050. The applicant is seeking a waiver from the code requirement allowing a maximum land area of 200 acres for a master development plan. The request states the applicant would like to move forward with a master development plan for the +/- 500-acre residential component (they have noted this was meant to refer to the +/- 550 residential/commercial/open space component). The applicant notes the following for consideration to recommend this waiver:

1. Comprehensive planning and cohesive design
2. Timing
3. Amenity offering

Staff recommends that the lower 208.9 acres be referenced in any approved master development plan for the project, but the development details and rezoning for this portion be handled through a separate master development plan. The criteria for approving the waiver to allow the primary master development plan to cover a land area greater than 200 acres would require a finding by City Council of one or more of the following:

1. The project's concept plan review (pursuant to Chapter 16.15

EMMC) received feedback from the planning commission and/or city council in regards to reduced master development application requirements;

2. The project will not require modification or additions to existing conditions (zoning designation, land use designation, roadways);
3. The project involves limited development requirements for infrastructure; or
4. The strict application of this chapter would result in peculiar or exceptional difficulties, or exceptional and undue hardship, or the buildable area of the property is significantly reduced by topography or preexisting easement restrictions.

If the waiver is recommended for denial and direction given that the property be segmented into multiple master development plans of no more than 200 acres, the agreement will need to take into consideration the overall public improvements (utilities, roads, parks, amenities, etc.). An overall 750-acre concept plan should be included in each separate master development agreement to ensure the overall context and benefits are considered for each separate plan.

ROAD NETWORK

The development will include three access points from the existing Pony Express Parkway. The central east-west roadway is identified in the city's Future Transportation Plan as a major arterial road (Tiffany Lane). There are also two primary east-west roadways to the north ("North Collector") and south ("South Collector") of Tiffany Lane. The Future Transportation Plan calls for the "North Collector" to be a collector. The "South Collector" should likely be a collector as well as it will separate and service the business park portion of the property. This "South Collector" should be included in the general plan amendment request. All three of these roads will create connections into and through the development as well as to the future arterial road, Airport Road. Many of the interior roadways throughout the development have been developed with a combination of curving and straight roads which provide easy access while increasing visual appeal and safety (EMMC 16.35.070(L)). The development to the northwest (Eagle Village) will have an east-west road that will run along the property line with Ault Farms. The residential street in Ault Farms within the northwest corner should be connected to that road to the north. The master plan should be

updated with the requested road connection to the northwest and to include proposed road widths.

TRAFFIC IMPACT STUDY

A traffic impact study was developed over the summer based on the most recent concept plan (the executive summary is attached, the full report is available upon request). The submitted master development plan has been reduced in its overall intensity. A revised traffic generation report has been submitted based on the revised development intensity. The revised report states the recommendations of the July study remain the same.

OPEN SPACE & PARKS

The plan calls for a central park area with possible water feature in the middle of the development on the northern side of Tiffany Lane. Multiple trails and linear parks run throughout the development, connecting people to this main park as well as a number of other parks nestled within other portions of the development. The electric power corridor would remain as a natural open space, and the applicant has discussed a trail through this corridor. There is no information for open space, parks, or amenities within the southern most portion of the master development. A "local trail" is proposed in the plan to connect the central park area with the southern business park area. We recommend this be changed to a "regional trail" due to the likely higher use of this connection created by the trail. The applicant has been asked to clarify which parks will be dedicated to the City and which will be owned and maintained by an HOA. Any park under two acres will need to be owned/operated by an HOA.

Staff recommends that the applicant provide an outline of potential amenities and features that would be provided throughout these spaces. The trails (regional vs local) should include additional information such as trail width and potential surface material. The two small parks on the far east side of the project should be combined to provide one larger park. A trail connection to the power corridor natural open space/trail system should be added on the west side of the corridor between Tiffany Lane and the North Collector.

PUBLIC FACILITIES

The submitted materials do not currently include designation for potential public facilities. The applicant has discussed the development with the school district and The Church of Jesus Christ of Latter-Day Saints. These entities are interested in possible inclusion within the development, but have not determined desired locations or sizes. Any rezoning to commercial or residential zoning would allow for these uses (permitted in commercial districts; special use in residential districts). The applicant is aware that granting the zoning for the requested districts that are then used for these public and civic uses will not result in permitted additional density within the district. Although not required, the school district and Church are encouraged to request a rezoning of selected sites to the Public Facilities Zone.

REZONE REQUEST

Based on the submitted materials, the southern portion (~200 acres) identified as "Tech Campus/Light Industry" is not requested for a rezoning at this time. As noted above, this portion should be handled through a separate master development plan.

A portion of land along Pony Express Parkway (11.7 acres) is requested to be zoned "Commercial Neighborhood." This portion of the parcel is currently identified as "Business Park / Light Industry" in the Future Land Use Map. The "Commercial Neighborhood" zone is not an appropriate zone for this land use designation. The applicant has requested in the General Plan map amendment exhibit to reclassify this area under the "Neighborhood Commercial" land use (it should be noted this land use does not appear in the General Plan and the exhibit should be corrected to "Community Commercial"). The "Commercial Neighborhood" zoning district is an appropriate zoning district for the "Community Commercial" land use. Based on the previous concept plan review, staff suggests that a portion of the land north of Tiffany Lane opposite the proposed commercial area be considered for "Commercial Neighborhood" zoning and "Community Commercial" land use designation. Tiffany Lane acts as the primary entry to the development from Pony Express Parkway and providing commercial opportunities on both sides of the entrance could be a benefit.

The request also includes rezoning to "MF1" and "MF2" which are the multifamily zoning districts. The "MF2" zone (25 acres) is

proposed to be located adjacent to the commercial district and the business park area - only within the area between Tiffany Lane and the South Collector. Per EMMC 17.25.020(F), the MF2 zone "should be within immediate walking distance of a park, retail/office development, transit facilities, or adjacent to major roadways or intersections." About half of the "MF2" zone would be within 1/4-mile of the central park or linear park to the east. The small half-circle green space within the "MF2" zone should be increased in size to at least two acres to provide better open space access. The "MF1" zone is proposed throughout the project. About 30 acres of the "MF1" zone is suggested to be developed as townhomes to the north of the central park (29.8 acres). The applicant is requesting "MF1" zoning along the North Collector, Tiffany Lane, South Collector, Pony Express Parkway, the western edge of the power corridor, and along the linear park between Tiffany Lane and the South Collector. These areas of "MF1" zoning (136.4 acres) would be developed as single-family patio homes. They act as a transition to the single-family residential districts. EMMC 17.60.160, limits the "MF1" zone to be adjacent to either "MF2" or "RC" residential zones (as well as the proposed "Commercial Neighborhood"). Based on that code, it may be more appropriate that a majority of the "MF1" single-family zoning areas be designated as "RC" zoning to meet the zoning transition requirements. Additionally, the "MF1" zone is identified in the far northeast corner. Although this area is identified as "Foothill Residential" land use in the general plan, the development directly to the north (Eagle Heights Village) are duplex homes which fall within the "MF1" zoning classification. This area should also be considered for "RC" zoning instead in order to act as an appropriate transition from the development to the north to the proposed single-family district to the south within Ault Farms.

The remainder of the proposed residential zoning includes "R1" (58.3 acres), "R2" (46.2 acres), and "R3" (144.6 acres). On the east side of the project, the applicant has requested "R1" zoning for the area south of the proposed "MF1" zoning. Per 17.60.160, "R1" is not an appropriate zoning transition from either "MF1" or the staff-recommended "RC" zone. The applicant should consider a mix of "R1," "R2," and "R3" (with "R3" closest to the staff-recommended "RC" and "R1" at the southern end of this eastern portion). Doing so will provide a zoning and lot size transition from Eagle Heights Village to the north to the concepted Triumph subdivision to the south (the recent concept plan calls for lots of 1/3- and 1/2-acre size

and potential "R1" zoning, no approvals at this time). The portion of the development west of the corridor and north of the North Collector includes all three of these residential zoning districts with "R1" being to the furthest north. The development to the north (Eagle Point) was developed under the old residential code but would be equivalent to the "R3" zone. Based on that, the "R1" zone may not be appropriate next to Eagle Point and instead "R2" may be more appropriate. The area between the North Collector and Tiffany Lane includes a small portion of "R2" and a majority of "R3" zoning. In general, the zoning transitions are appropriate (if the staff-recommendation change from "MF1" single-family to "RC" is made) except for the proposed "R3" portions directly adjacent to the "MF1" zone (townhomes). The "RC" zoning district should be used as a transition between the "MF1" to any "R3" zoning. The area between Tiffany Lane and the South Collector also includes "R2" and "R3" zoning. The zoning transitions are generally appropriate for the eastern portion of this area if the "MF1" single-family is changed to "RC" as recommended by staff. The western portion should be re-evaluated with the potential of the "R3" changed to "RC," the small portion of "R3" adjacent to the "MF2" changed to "MF1," and the "MF1" and "MF2" requests remaining as is, if the Commission agrees.

Open space uses/zones are proposed throughout the development, providing access to residents throughout. For zoning purposes, the open space for the electric power corridor should be zoned "Open Space - Natural." The large central park with water feature and all other parks and linear parks/trails as "Open Space - Improved."

A map will be presented during the public hearing to better visualize the areas noted above.

GENERAL PLAN AMENDMENT

A general plan amendment to revise the land use designations has been submitted. No changes to the transportation plan within the development are noted in the general plan amendment exhibit. Based on the "Road Network" review above, the plan exhibit should be updated to incorporate the South Collector as a collector road designation in the general plan.

In general, the exhibit reflects the land use designations that are appropriate based on the requested zoning districts and EMMC

17.60.160. Based on the staff recommendations and potential Commission feedback, this exhibit of land use designations may need to be revised.

Based on the current Future Land Use Map and the proposed development, some portions of the General Plan map will not need to be amended. The southern 208 acres may remain "Business Park / Light Industry." The current General Plan map also includes an additional ~35 acres of "Business Park / Light Industry" which would need to be amended due to the requested commercial and multifamily zoning for this portion of the property. The remainder of the property west of the power corridor is identified as "Neighborhood Residential One" in the General Plan map. Per EMMC 17.60.160, the "Neighborhood Residential One" designation is not an appropriate land use designation adjacent to the "Business Park / Light Industry" land use. The requested land use and zoning changes for areas adjacent to this business park area to a multi-family and/or commercial use is an appropriate adjacency and transition.

The area west of the power corridor not identified in the existing General Plan map as "Business Park / Light Industry" is currently identified as "Neighborhood Residential One." Any portions proposed for "R1," "R2," or "R3" zoning would not require a change to the land use map. Areas identified for "RC" or "MF1" have been, or will need to be corrected to, identified to be amended to "Neighborhood Residential Two." Areas for "MF2" zoning would need to be amended to "Neighborhood Residential Three" as is shown in the submitted exhibit.

The portion of the parcel designated as "Foothill Residential" (~35 acres) in the current Future Land Use Map is requested to be changed to "Neighborhood Residential One." The land directly to the north of this portion of the parcel is also designated in the Future Land Use Map as "Foothill Residential."

The portion of the parcel designated as "Parks and Open Space" (~34 acres) in the current Future Land Use Map would also not require an amendment as the applicant intends to utilize this for natural open space. This area of the property is the electric power corridor. The applicant's exhibit notes this area as "Open Space - Natural" in the land use exhibit, however, this should be corrected to the "Parks and Open Space" land use category. The areas requested for "OS-I"

zoning are noted to be amended to "Open Space-Improved" in the applicant's exhibit, however, this should also be corrected to the "Parks and Open Space" land use category.

REQUIRED FINDINGS:

Master development plan approvals are based upon compliance with City Code requirements. The approval criteria for a master development plan can be found in EMMC 16.10.070.

A rezone is a legislative decision and is considered valid if reasonably debatable and not illegal. The criteria for approval for a rezone are listed in EMMC 17.90.060.

Amendments to the General Plan are legislative actions and do not require approval based upon findings of facts. The Commission should consider the health, safety, and welfare of the community.

RECOMMENDATION:

We recommend the Planning Commission review the current application materials, discuss the requests with the applicant, and table the application to allow the applicant time to update the plans to comply with City Code based on specific feedback from the Commission as well as:

- If the Commission recommends compliance with the 200-acre size limit for a master development plan, an exhibit to demonstrate the multiple plan areas;
- A revised master plan with proposed road widths;
- A revised rezoning exhibit with corrections and changes as noted in the staff report;
- A revised general plan amendment exhibit with corrections and changes as noted in the staff report;
- A revised open space exhibit with corrections and changes as noted in the staff report;
- Outline of potential amenities and features for the development;
- Identification of necessary phasing (with specificity as to what open space and infrastructure elements will be included for each phase)

ATTACHMENTS:

[Master Plan](#)

[Master Plan Utilities](#)

[Master Development Plan Requirement Waiver Request](#)

[Traffic Impact Study Executive Summary \(July 2020\)](#)

[Traffic Generation Study \(January 2021\)](#)

[Environmental Impact Report](#)

[Geotechnical Study](#)



LAND USE LEGEND

Neighborhood Residential 1 | 249.1 Ac.



Neighborhood Residential 2 | 166.2 Ac.



Neighborhood Residential 3 | 25.0 Ac.



Neighborhood Commercial | 11.7 Ac.



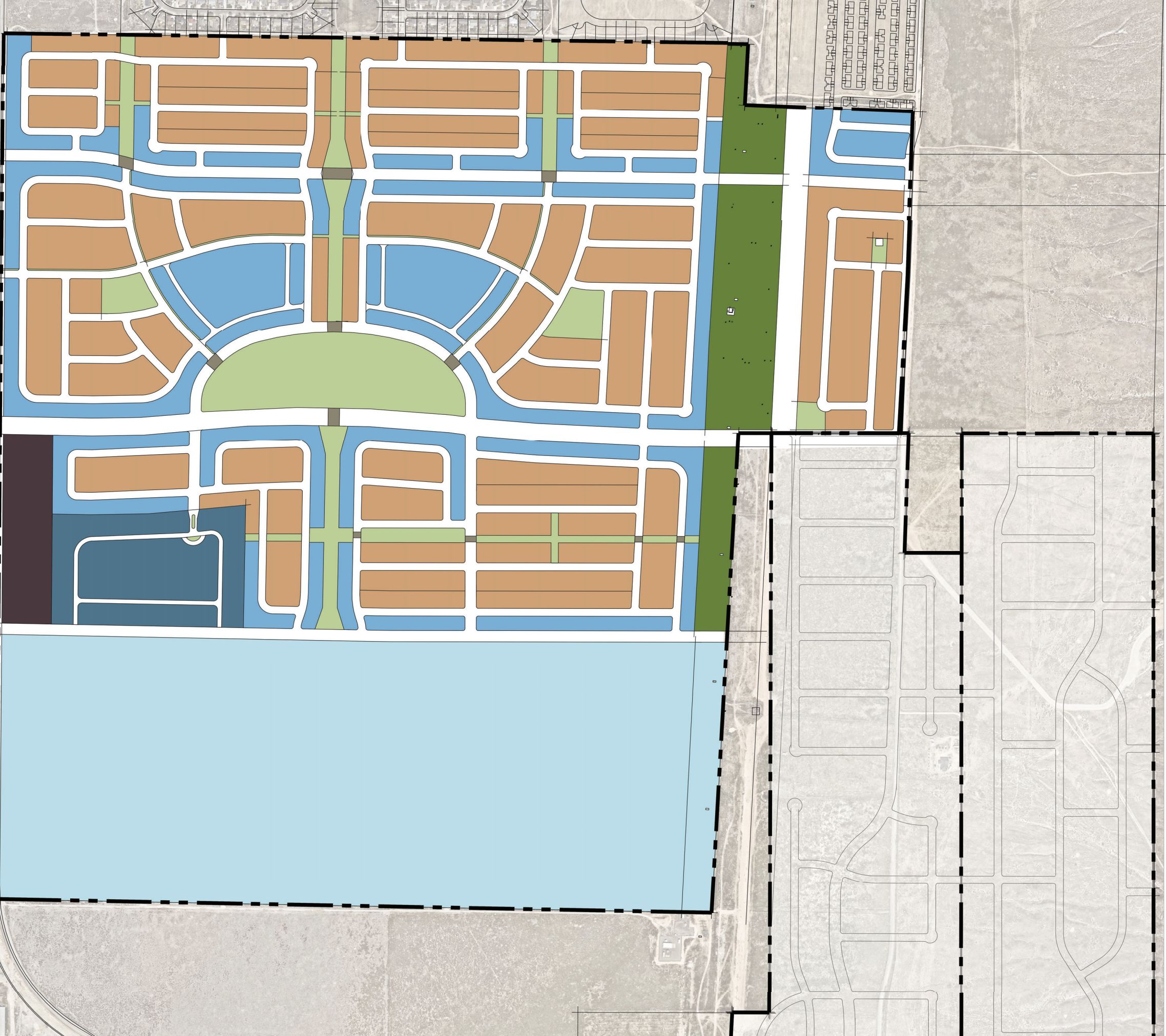
Business Park - Light Industrial | 208.9 Ac.
no change proposed



Open Space - Improved | 49.7 Ac.



Open Space - Natural | 36.6 Ac.



OPEN SPACE LEGEND

Parks

- r** Regional Park (20+ Ac.)
- c** Community Park (10-20 Ac.)
- n** Neighborhood Park (2-10 Ac.)
- l** Local Parks (<2 Ac.)

Trails

- Regional (4.1 Miles)
- Local (2.9 Miles)

Natural Landscapes

- pc** Power Corridor



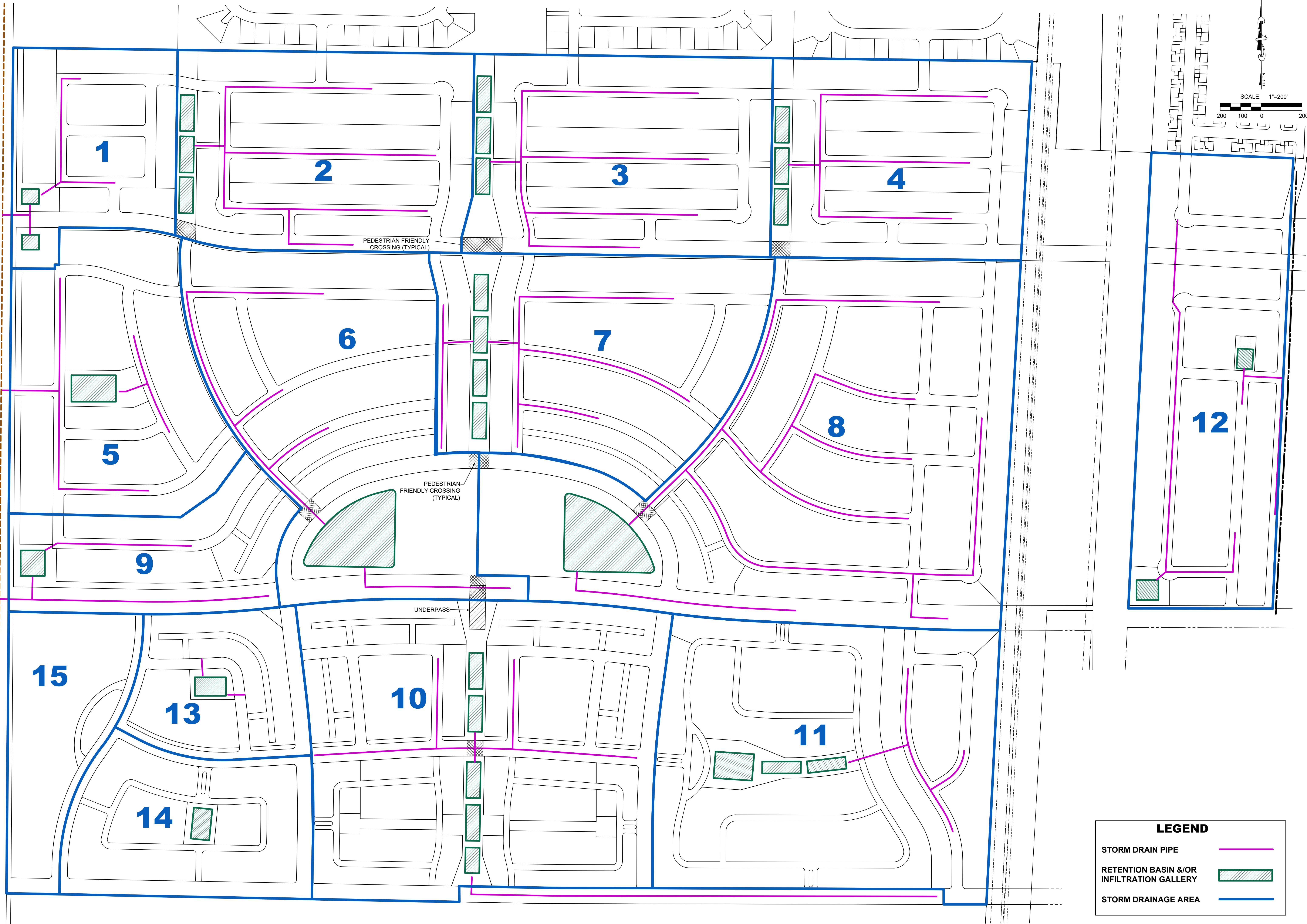
AULT FARMS
Master Plan Tabulations

Product Type & Information				Lot / Unit Tabulation		Residential Land Use Tabulation ¹			Open Space Tabulation	
Product	Min. Area <i>Sq. Ft.</i>	Average Area <i>Sq. Ft.</i>	Min. Frontage <i>Ft.</i>	Lots / Unit #	Percentage Lot/Unit %	Product Area ² <i>Acres</i>	Percentage Area %	Gross Density <i>Lots/Units per Ac.</i>	O.S. Per Lot/Unit <i>Sq. Ft.</i>	Required O.S. <i>Acres</i>
R1 Single Family	10,890	14,520	85	136	6.3%	58.3	11.1%	2.3	750	2.3
R2 Single Family	8,000	10,890	80	141	6.5%	46.2	8.8%	3.1	900	2.9
R3 Single Family	6,500	8,500	65	549	25.4%	144.6	27.5%	3.8	1,000	12.6
MF1	4,500		45	707	32.7%	136.4	25.9%	5.2	1,000	16.2
MF1 Townhomes				252	11.6%	29.8	5.7%	8.5	1,000	5.8
MF2				380	17.6%	25.0	4.7%	15.2	900	7.9
Commercial						11.7				
Open Space - Natural						36.6	7.0%			
Open Space - Improved						49.7	9.4%			
Totals				2,165	100.0%	526.6	100.0%			47.7

¹ Land Use Tabulations not including Tech of approximately 214 acres and 11.7 acres of commercial.

² All areas are approximate and include adjacent road frontages.

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LEGEND

STORM DRAIN PIPE	
RETENTION BASIN &/OR INFILTRATION GALLERY	
STORM DRAINAGE AREA	

LEI
- A Utah Corporation -
**ENGINEERS
SURVEYORS
PLANNERS**
3302 N. Main Street
Spanish Fork, UT 84660
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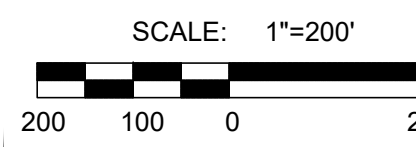
AULT FARMS
EAGLE MOUNTAIN, UTAH
STORM DRAINAGE MASTER PLAN

REVISIONS	
1	-
2	-
3	-
4	-
5	-
LEI PROJECT #: 2019-0046	
DRAWN BY: RWH	
DESIGNED BY: GDM	
SCALE: 1"=200'	
DATE: 03/27/2020	
SHEET 1	



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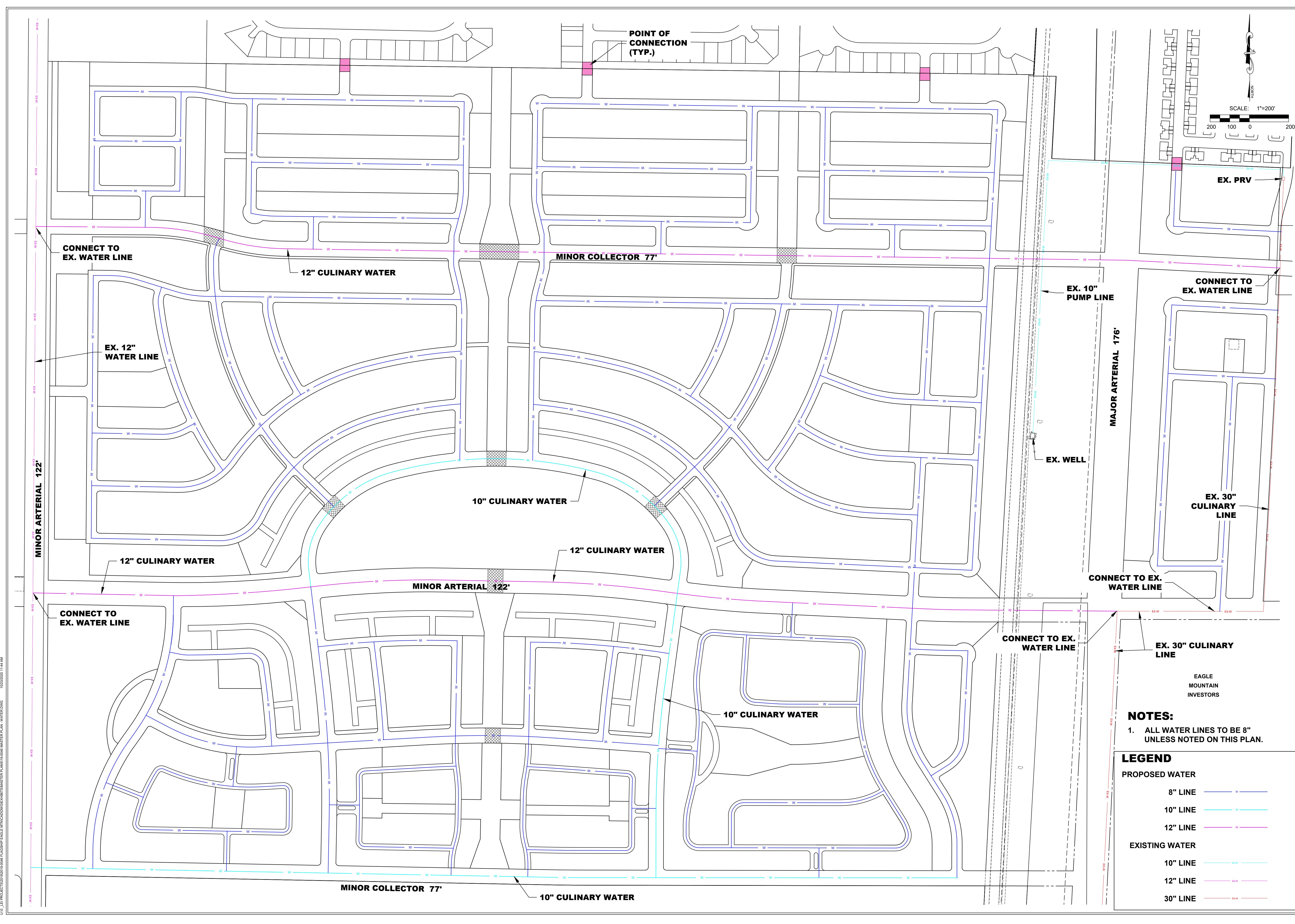


AULT FARMS
EAGLE MOUNTAIN, UTAH
MASTER PLAN WATER

REVISIONS	
1	
2	
3	
4	
5	

LEI PROJECT #:
2019-0046
DRAWN BY:
TJP
DESIGNED BY:
GDM
SCALE:
1"=200'
DATE:
07/14/2020

SHEET
1

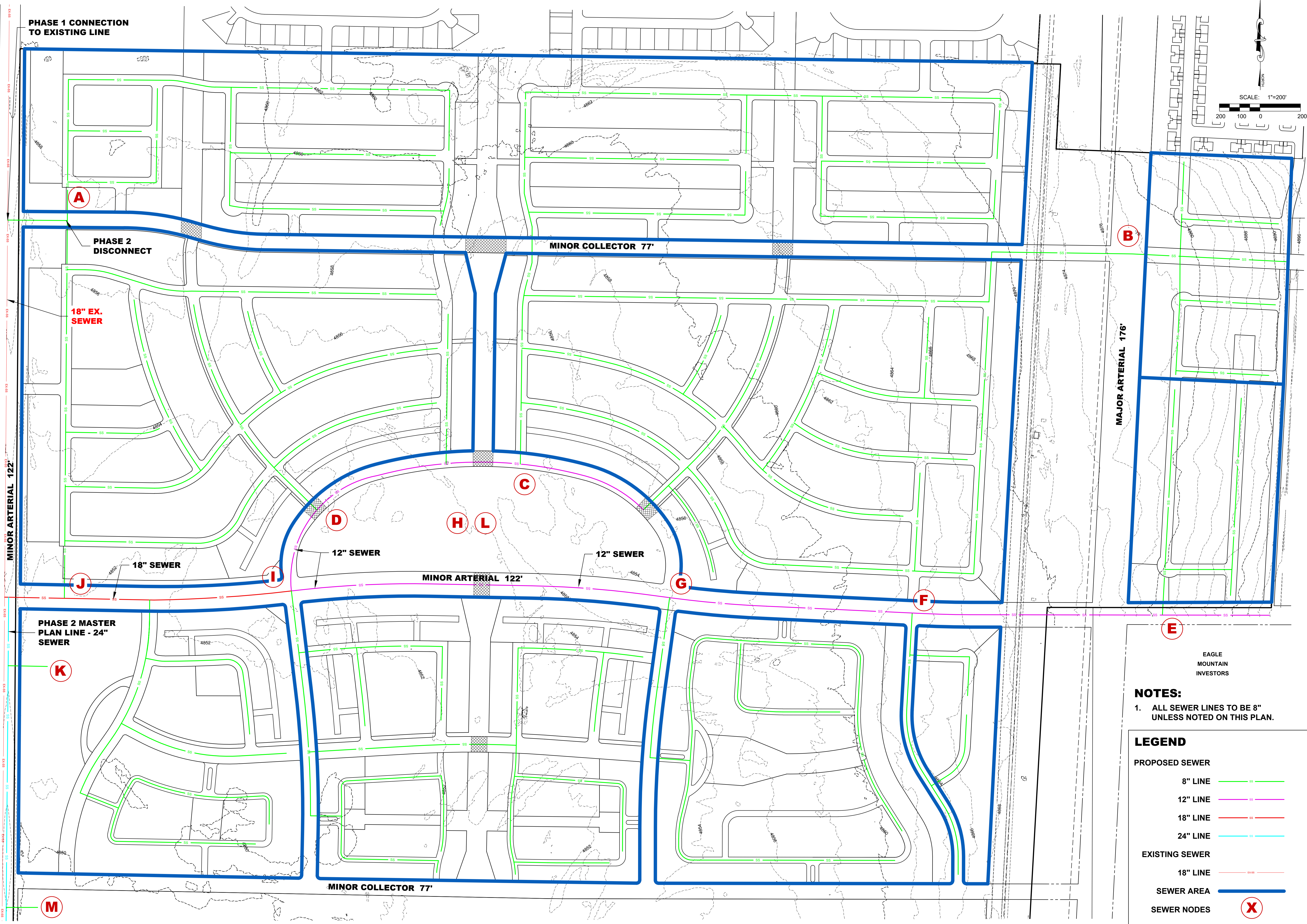


NOTES:
1. ALL WATER LINES TO BE 8" UNLESS NOTED ON THIS PLAN.

LEGEND	
PROPOSED WATER	
8" LINE	— W —
10" LINE	— V —
12" LINE	— W —
EXISTING WATER	
10" LINE	- - - EX - - -
12" LINE	- - - EX - - -
30" LINE	- - - EX - - -

EAGLE MOUNTAIN INVESTORS

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- NOTES:**
1. ALL SEWER LINES TO BE 8" UNLESS NOTED ON THIS PLAN.

LEGEND	
PROPOSED SEWER	
8" LINE	
12" LINE	
18" LINE	
24" LINE	
EXISTING SEWER	
18" LINE	
SEWER AREA	
SEWER AREA	
SEWER NODES	

REVISIONS	
1	
2	
3	
4	
5	

LEI PROJECT #:
2019-0046
DRAWN BY:
TJP
DESIGNED BY:
GDM
SCALE:
1"=200'
DATE:
07/14/2020

AULT FARM MASTER DEVELOPMENT PLAN

Waiver request | January 5th, 2021

Since commencing concept and master development planning on the 750 Acre Ault Farm master planned community July of 2019, City code changed to limit Master Plans to 200 Acre parcels.

We are seeking a waiver to this requirement in order to plan and construct the $\pm$ 500 acre residential component of the 750 acres. The southern most $\pm$ 200 acres is anticipated to be non-residential use. We ask the Planning Commission and City Council to consider the following points in granting this waiver:

1. Comprehensive Planning & Cohesive Design
2. Timing
3. Amenity Offering

Comprehensive Planning & Cohesive Design

Many of the same benefits that come from regional planning are captured by looking at the Ault Farm parcel comprehensively vs. breaking it into 3 or 4 pieces. By planning and designing the $\pm$ 500 acre residential portion together we are able to coordinate traffic impacts, infrastructure, open space, product types, and financing on a larger scale and along with finding efficiencies in each of these categories.

Timing

With the additional consideration of the new expiration component, we understand this came about to only approve what can reasonably be constructed in a 6-8 year time period. Our projections lead us to believe we can build out the $\pm$ 500 acre residential component in this amount of time. We share the same concerns the City does in setting this expiration window due to market shifts, this is why we think a variety of product will help us adapt to market shifts. We have large and small lots, detached and attached product, and as wide a price range as can be provided.

Amenity Offering

By granting the waiver, we are able to create a Master HOA that will encompass the full master planned community which allows us for a larger amenity offering. Amenity cost sharing drives the price of entry down helping with the affordability for potential buyers and gives buyer additional buying power.

Thank you for considering this waiver and look forward to discussing this further during planning commission and city council in upcoming meetings.

Best Regards,

Flagship EM Holdings

EXECUTIVE SUMMARY

This study addresses the traffic impacts associated with the proposed Ault Farm development located in Eagle Mountain, Utah. The Ault Farm project is located on the east side of Pony Express Parkway, to the south of Eagle Mountain Boulevard.

Included within the analyses for this study are the traffic operations and recommended mitigation measures for existing conditions and plus project conditions (conditions after development of the proposed project) at key intersections and roadways near the site. Future 2025 and 2040 conditions were also analyzed.

The peak hour levels of service (LOS) was computed for each study intersection. The results of this analysis are shown in Table ES-1. Recommended storage lengths are shown in Table ES-2.

Intersection		Table ES-1															
		Level of Service Results - Ault Farm TIS															
		Existing (2020)						Future (2025)						Future (2040)			
		Background			Plus Project			Background			Plus Project			Background		Plus Project	
		AM	PM	PM Mit	AM	PM	AM	PM	PM Mit	AM	PM	PM Mit	AM	PM	PM Mit	AM	PM
A	Eagle Mountain Boulevard / Pony Express Parkway	A	A	A	A	B	A	B	B	A	F	B	A	E	B	A	B
B	Eagle Mountain Boulevard / SR-73	c	e	B	B	B	B	B	B	B	C	C	B	C	C	C	D
C	Lone Tree Parkway / Pony Express Parkway	b	f	A	A	A	A	A	A	A	A	A	A	A	A	A	A
D	Ranches Parkway / Pony Express Parkway	B	C	C	B	C	B	E	D	B	F	D	B	F	C	C	D
E	North Collector / Pony Express Parkway	-	-	-	a	a	a	a	a	b	b	c	b	b	b	d	e
F	Road 1 / Pony Express Parkway	-	-	-	a	a	-	-	-	a	a	a	-	-	-	c	a
G	3400 North / Pony Express Parkway	-	-	-	a	a	a	a	a	a	b	b	c	c	c	B	B
H	South Collector / Pony Express Parkway	-	-	-	a	a	-	-	-	a	a	a	a	a	a	a	a
I	Road 2 / 3400 North	-	-	-	a	a	-	-	-	a	a	a	-	-	-	a	c
J	Road 3 / 3400 North	-	-	-	a	a	-	-	-	a	a	a	-	-	-	b	c
K	Road 4 / 3400 North	-	-	-	a	a	-	-	-	a	a	a	-	-	-	c	d
L	Airport Road / Pony Express Parkway	-	-	-	-	-	-	-	-	-	-	-	C	C	C	C	D
M	Eagle Mountain Boulevard / Airport Road	-	-	-	-	-	-	-	-	-	-	-	c	d	c	B	B
N	North Collector / Airport Road	-	-	-	-	-	-	-	-	-	-	-	a	a	a	B	B
O	3400 North / Airport Road	-	-	-	-	-	-	-	-	-	-	-	b	b	b	C	C
P	South Collector / Airport Road	-	-	-	-	-	-	-	-	-	-	-	a	a	a	a	a

TABLE ES-2
Recommended Storage Lengths
Eagle Mountain - Ault Farms TIS

Intersection	Storage Length (feet)							
	Northbound		Southbound		Eastbound		Westbound	
	LT	RT	LT	RT	LT	RT	LT	RT
Eagle Mountain Blvd / Pony Express Pkwy	175	50	100	125	150	275	200	100
Eagle Mountain Blvd / SR-73	250	125	100	100	125	280 / 300	75 / 500	100
Lone Tree Pkwy / Pony Express Pkwy	70 / 100	-	-	70 / 125	100 / 200	-	-	-
Ranches Pkwy / Pony Express Pkwy	125	-	125 / 525	500	100 / 350	100	110 / 425	425
North Collector / Pony Express Pkwy	50	-	50	-	75	50	50	50
Road 1 / Pony Express Pkwy	-	-	50	-	-	-	-	50
3400 North / Pony Express Pkwy	50	-	150	100	100	50	50	75
South Collector / Pony Express Pkwy	-	-	50	-	-	-	-	50
Road 2 / 3400 North	-	50	-	50	50	-	50	-
Road 3 / 3400 North	-	50	-	50	50	-	50	-
Road 4 / 3400 North	-	50	-	50	50	-	50	-
Airport Road / Pony Express Pkwy	325	175	425	100	250	425	425	200
Eagle Mountain Blvd / Airport Road	50	-	225	75	125	75	50	75
North Collector / Airport Road	50	50	100	125	150	50	50	50
3400 North / Airport Road	50	50	75	175	275	50	50	50
South Collector / Airport Road	50	-	-	-	-	75	-	-

Current storage length (if applicable) / Recommended storage length
 Source: Hales Engineering, July 2020

SUMMARY OF KEY FINDINGS/RECOMMENDATIONS

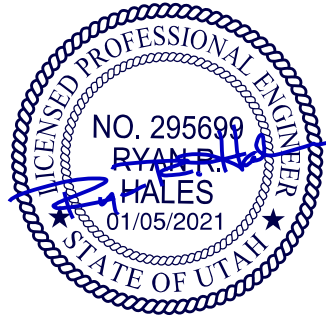
The following is a summary of key findings and recommendations:

- The Eagle Mountain Boulevard / SR-73 and Lone Tree Parkway / Pony Express Parkway intersections are currently operating at an unacceptable LOS during the evening peak hour in existing (2020) background conditions.
 - Recommendation: Install a signal at the Eagle Mountain Boulevard / SR-73 intersection with permissive/protected left-turn phasing on the westbound approach.
 - Recommendation: Install a signal at the Lone Tree Parkway / Pony Express Parkway intersection.
- The development will consist of residential townhome, condo, apartment, and single-family units, and a commercial area.
- All study intersections are anticipated to operate at an acceptable LOS during the morning and evening peak hour with project traffic added.
- The Ranches Parkway / Pony Express Parkway intersection is anticipated to operate at an unacceptable LOS during the evening peak hour in future (2025) background conditions
 - Recommendation: Construct dual eastbound protected left-turn lanes at the Ranches Parkway / Pony Express Parkway intersection.
- The Eagle Mountain Boulevard / Pony Express Parkway and Ranches Parkway / Pony Express Parkway intersections are anticipated to operate at unacceptable LOS during the future (2025) evening peak hour with project traffic added.

- Recommendation: Add a right-turn pocket on the westbound approach of the Ranches Parkway / Pony Express Parkway intersection.
 - Recommendation: Convert the current roundabout at the Eagle Mountain Boulevard / Pony Express Parkway intersection to a signalized intersection.
- The following changes to the roadway network were anticipated to be warranted in future (2040) background traffic conditions:
 - Dual westbound left-turn and northbound channelized free right-turn at the Eagle Mountain Boulevard / SR-73 intersection.
 - According to MAG plans, it was assumed that Eagle Mountain Boulevard was widened to two lanes in each direction by 2040.
- The Eagle Mountain Boulevard / Pony Express Parkway and Ranches Parkway / Pony Express Parkway intersections are anticipated to operate at unacceptable LOS during the future (2040) background conditions.
 - Recommendation: Install a southbound channelized free right-turn at the Ranches Parkway / Pony Express Parkway intersection.
 - Recommendation: Install an additional northbound and southbound through lane at the Eagle Mountain Boulevard / Pony Express Parkway intersection.
 - Recommendation: Consistent with MAG TDM results, which projects over 45,000 vehicles per day on Pony Express Parkway between Ranches Parkway and Airport Road, Hales Engineering recommends widening Pony Express Parkway to 3-lanes in each direction from Ranches Parkway to south of Airport Road.
- The following changes to the roadway network were found to be warranted in future (2040) plus project traffic conditions during the evening peak hour:
 - A traffic signal at the Eagle Mountain Boulevard / Airport Road intersection
 - A traffic signal at the North Collector / Airport Road intersection
 - A traffic signal at the 3400 North / Airport Road intersection
 - A traffic signal at the 3400 North / Pony Express Parkway intersection
 - Dual southbound left-turn lanes at the Airport Road / Pony Express intersection.
- The North Collector / Pony Express Parkway intersection is anticipated to operate at an unacceptable LOS during the evening peak hour in future (2040) plus project conditions.
 - Recommendation: Install a traffic signal at the North Collector / Pony Express Parkway intersection when warrants are met.

MEMORANDUM

Date: January 5, 2021
To: City of Eagle Mountain
From: Hales Engineering



Subject: Eagle Mountain - Ault Farm Updated Trip Generation Study

UT20-1681

This memorandum discusses a comparison of the updated trip generation traffic volumes with those from the previous Traffic Impact Study completed for the proposed Ault Farm development in Eagle Mountain, Utah. A vicinity map of the proposed development is shown in Figure 1.

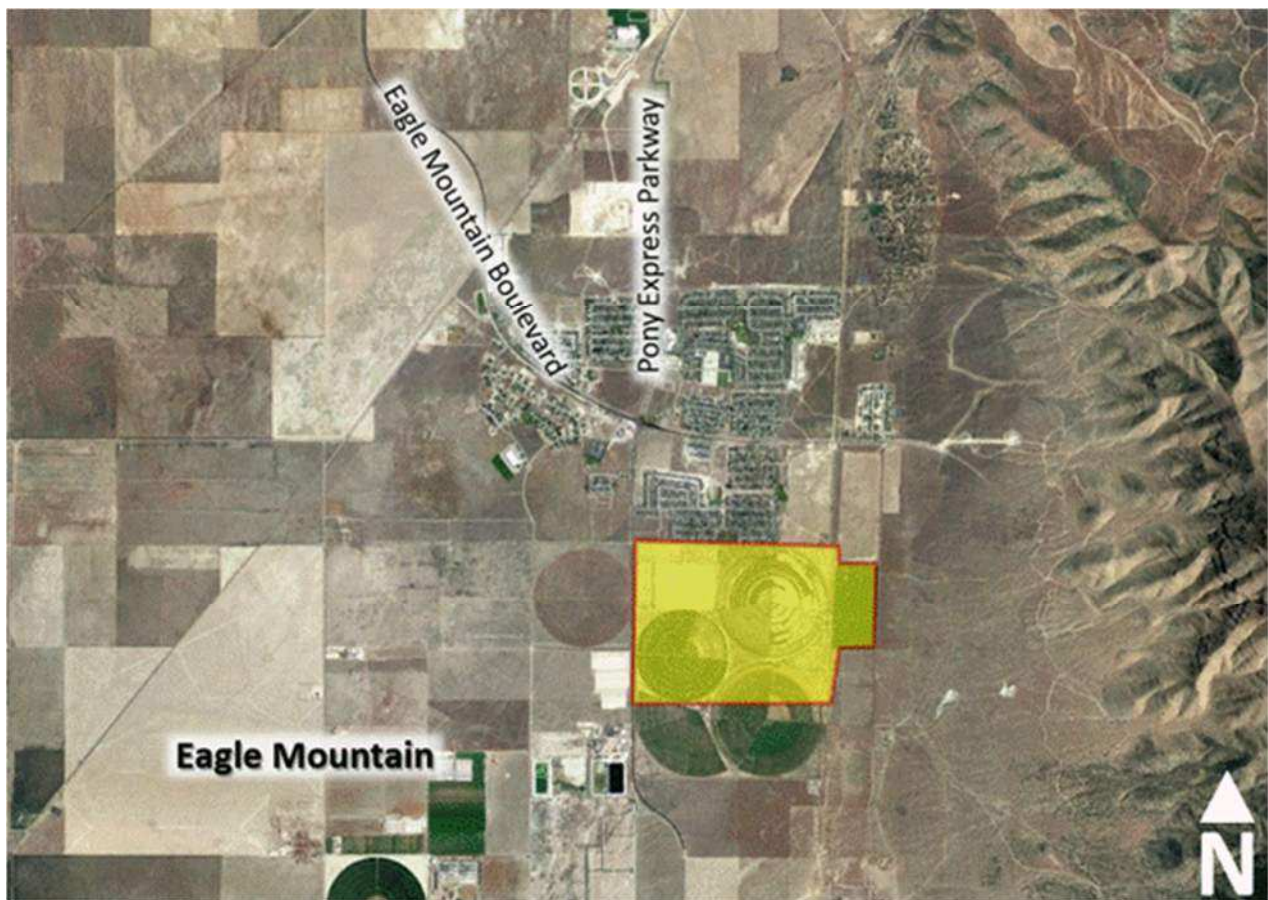


Figure 1: Vicinity map of the proposed development in Eagle Mountain, Utah

Background

The proposed Ault Farm development is located in on the east side of Pony Express Parkway, to the south of Eagle Mountain Boulevard in Eagle Mountain, Utah. The project includes residential single family, residential multi-family, and commercial land use. A floor-to-area ratio of 0.3 was assumed to estimate the commercial square footage. A site plan for the proposed development is included in Appendix A.

The proposed land use for the development has been identified as follows:

- Residential Single Family 1,533 Units
- Residential Multi Family (Townhomes) 252 Units
- Residential Multi Family (Apartments/Condos) 380 Units
- Commercial 153,000 Sq. Ft.

Trip Generation

Trip generation for the updated development was calculated using trip generation rates published in the Institute of Transportation Engineers (ITE) *Trip Generation (10th Edition, 2017)*. Trip generation for the proposed project is included in Table 1. It is anticipated that the proposed residential single and multi-family and commercial land use will generate approximately 22,526 trips on an average weekday, including 1,493 trips during the morning peak hour, and 2,286 trips during the evening peak hour. The comparison with the previous study is included in Table 2.

Table 1: Trip Generation

Trip Generation Eagle Mountain - Ault Farm								
Weekday Daily Land Use ¹	# of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total Daily Trips
Single-Family Detached Housing (210)	1533	Dwelling Units	12,814	50%	50%	6,407	6,407	12,814
Multifamily Housing (Low-Rise) (220)	252	Dwelling Units	1,866	50%	50%	933	933	1,866
Multifamily Housing (Mid-Rise) (221)	380	Dwelling Units	2,070	50%	50%	1,035	1,035	2,070
Shopping Center (820)	153	1,000 Sq. Ft. GLA	5,776	50%	50%	2,888	2,888	5,776
Project Total Daily Trips						11,263	11,263	22,526
Morning Peak Hour Land Use ¹	# of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total a.m. Trips
Single-Family Detached Housing (210)	1533	Dwelling Units	1,094	25%	75%	274	821	1,095
Multifamily Housing (Low-Rise) (220)	252	Dwelling Units	116	23%	77%	27	89	116
Multifamily Housing (Mid-Rise) (221)	380	Dwelling Units	138	26%	74%	36	102	138
Shopping Center (820)	153	1,000 Sq. Ft. GLA	144	62%	38%	89	55	144
Project Total a.m. Peak Hour Trips						426	1,067	1,493
Evening Peak Hour Land Use ¹	# of Units	Unit Type	Trip Generation	% Entering	% Exiting	Trips Entering	Trips Exiting	Total p.m. Trips
Single-Family Detached Housing (210)	1533	Dwelling Units	1,398	63%	37%	881	517	1,398
Multifamily Housing (Low-Rise) (220)	252	Dwelling Units	136	63%	37%	86	50	136
Multifamily Housing (Mid-Rise) (221)	380	Dwelling Units	168	61%	39%	102	66	168
Shopping Center (820)	153	1,000 Sq. Ft. GLA	584	48%	52%	280	304	584
Project Total p.m. Peak Hour Trips						1,349	937	2,286

1. Land Use Code from the Institute of Transportation Engineers (ITE) *Trip Generation*, 10th Edition, 2017.

SOURCE: Hales Engineering, January 2021

Table 2: Trip Generation Comparison

Trip Generation Eagle Mountain - Ault Farm						
Weekday Daily Land Use ¹	Updated			Previous		
	# of Units	Unit Type	Trip Generation	# of Units	Unit Type	Trip Generation
Single-Family Detached Housing (210)	1533	Dwelling Units	12,814	893	Dwelling Units	7,794
Multifamily Housing (Low-Rise) (220)	252	Dwelling Units	1,866	1274	Dwelling Units	9,592
Multifamily Housing (Mid-Rise) (221)	380	Dwelling Units	2,070	938	Dwelling Units	5,112
Shopping Center (820)	153	1,000 Sq. Ft. GLA	5,776	157	1,000 Sq. Ft. GLA	5,928
Project Total Daily Trips			22,526			28,426
Morning Peak Hour Land Use ¹	Updated			Previous		
	# of Units	Unit Type	Trip Generation	# of Units	Unit Type	Trip Generation
Single-Family Detached Housing (210)	1533	Dwelling Units	1,094	893	Dwelling Units	640
Multifamily Housing (Low-Rise) (220)	252	Dwelling Units	116	1274	Dwelling Units	536
Multifamily Housing (Mid-Rise) (221)	380	Dwelling Units	138	938	Dwelling Units	338
Shopping Center (820)	153	1,000 Sq. Ft. GLA	144	157	1,000 Sq. Ft. GLA	148
Project Total a.m. Peak Hour Trips			1,492			1,662
Evening Peak Hour Land Use ¹	Updated			Previous		
	# of Units	Unit Type	Trip Generation	# of Units	Unit Type	Trip Generation
Single-Family Detached Housing (210)	1533	Dwelling Units	1,398	893	Dwelling Units	832
Multifamily Housing (Low-Rise) (220)	252	Dwelling Units	136	1274	Dwelling Units	570
Multifamily Housing (Mid-Rise) (221)	380	Dwelling Units	168	938	Dwelling Units	414
Shopping Center (820)	153	1,000 Sq. Ft. GLA	584	157	1,000 Sq. Ft. GLA	600
Project Total p.m. Peak Hour Trips			2,286			2,416
1. Land Use Code from the Institute of Transportation Engineers (ITE) <i>Trip Generation</i> , 10th Edition, 2017.						
SOURCE: Hales Engineering, January 2021						

Conclusions

The findings of this study are as follows:

- The proposed update to the development includes 640 more units of residential single family; 1,022 fewer units of multi-family townhomes; 558 fewer units of multi-family apartments/condos; and 4,000 fewer square feet of commercial.
- It is anticipated that the proposed update to the project will generate approximately 22,526 trips on an average weekday, including 1,492 trips during the morning peak hour, and 2,286 trips during the evening peak hour.
- Compared to the previous study, this land use update decreases trips by approximately 20% overall, 10% during the morning peak hour and 5% during the evening peak hour. This results in 5,900 fewer trips on an average weekday, including 170 fewer trips during the morning peak hour, and 130 fewer trips during the evening peak hour. The previous recommendations for road classifications remain unchanged with the decrease.

APPENDIX A

Site Plan

LAND USE LEGEND

Neighborhood Residential 1

R1 | 58.3 Ac.

R2 | 46.2 Ac.

R3 | 144.6 Ac.

Neighborhood Residential 2

MF1 Single Family | 136.4 Acres

MF1 Town Homes | 29.8 Ac.

Neighborhood Residential 3

MF2 Condo/Apartments | 25.0 Ac.

Other

Commercial | 11.7 Ac.

Tech Campus/Light Ind. | 208.9 Ac.

Open Space | 86.3 Ac.

Improved | 49.7 Ac.



AULT FARMS
Master Plan Tabulations

Product Type & Information				Lot / Unit Tabulation		Residential Land Use Tabulation ¹			Open Space Tabulation	
Product	Min. Area Sq. Ft.	Average Area Sq. Ft.	Min. Frontage Ft.	Lots / Unit #	Percentage Lot/Unit %	Product Area ² Acres	Percentage Area %	Gross Density Lots/Units per Ac.	O.S. Per Lot/Unit Sq. Ft.	Required O.S. Acres
R1 Single Family	10,890	14,520	85	136	6.3%	58.3	11.1%	2.3	750	2.3
R2 Single Family	8,000	10,890	80	141	6.5%	46.2	8.8%	3.1	900	2.9
R3 Single Family	6,500	8,500	65	549	25.4%	144.6	27.5%	3.8	1,000	12.6
MF1	4,500		45	707	32.7%	136.4	25.9%	5.2	1,000	16.2
MF1 Townhomes				252	11.6%	29.8	5.7%	8.5	900	5.8
MF2				380	17.6%	25.0	4.7%	15.2		7.9
Commercial						11.7				
Open Space - Natural						36.6	7.0%			
Open Space - Improved						49.7	9.4%			
Totals				2,165	100.0%	526.6	100.0%			47.7

¹ Land Use Tabulations not including Tech of approximately 214 acres and 11.7 acres of commercial.
² All areas are approximate and include adjacent road frontages.



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Nebo Environmental, LLC
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801-602-9702

Environmental Impact Report to Eagle Mountain City in support of Land Use Plan for Flagship EM Holding LLC, Parcel 59:018:0044, Eagle Mountain, Utah County, Utah

This Environmental Impact Report is prepared by Nebo Environmental LLC in behalf of Flagship EM Holdings LLC (Flagship) as part of Flagship's Land Use Plan for a master development to be undertaken in Eagle Mountain, Utah County, Utah and fulfills requirements of Eagle Mountain Municipal Code Section 16.10.050 paragraph B.3.

The subject property is a 747.03 acre Parcel #59:018:0044 located roughly in the south portion of Eagle Mountain and east of Pony Express Pkwy. The entire parcel is currently used for agricultural purposes including farmland and cropland. It is bounded on the north by residential housing; on the west by cropland and public works facilities; on the south and east by agricultural grazing land. The land is essentially level to be conducive with sprinkler irrigation supplied by onsite or adjacent water well systems.

The parcel has substantially agricultural vegetation on the surface with no open watercourses, surface impoundments, debris, or waste repositories.

Land development activities are anticipated to be consistent with other residential, commercial, industrial and recreational land development activities recently or currently being performed in the area.

The Utah County land use records show this land being used historically for agricultural purposes.

No areas of this parcel have been identified as being sensitive lands including no wetlands determination as shown on the National Wetlands Inventory of the U.S. Fish and Wildlife Service.

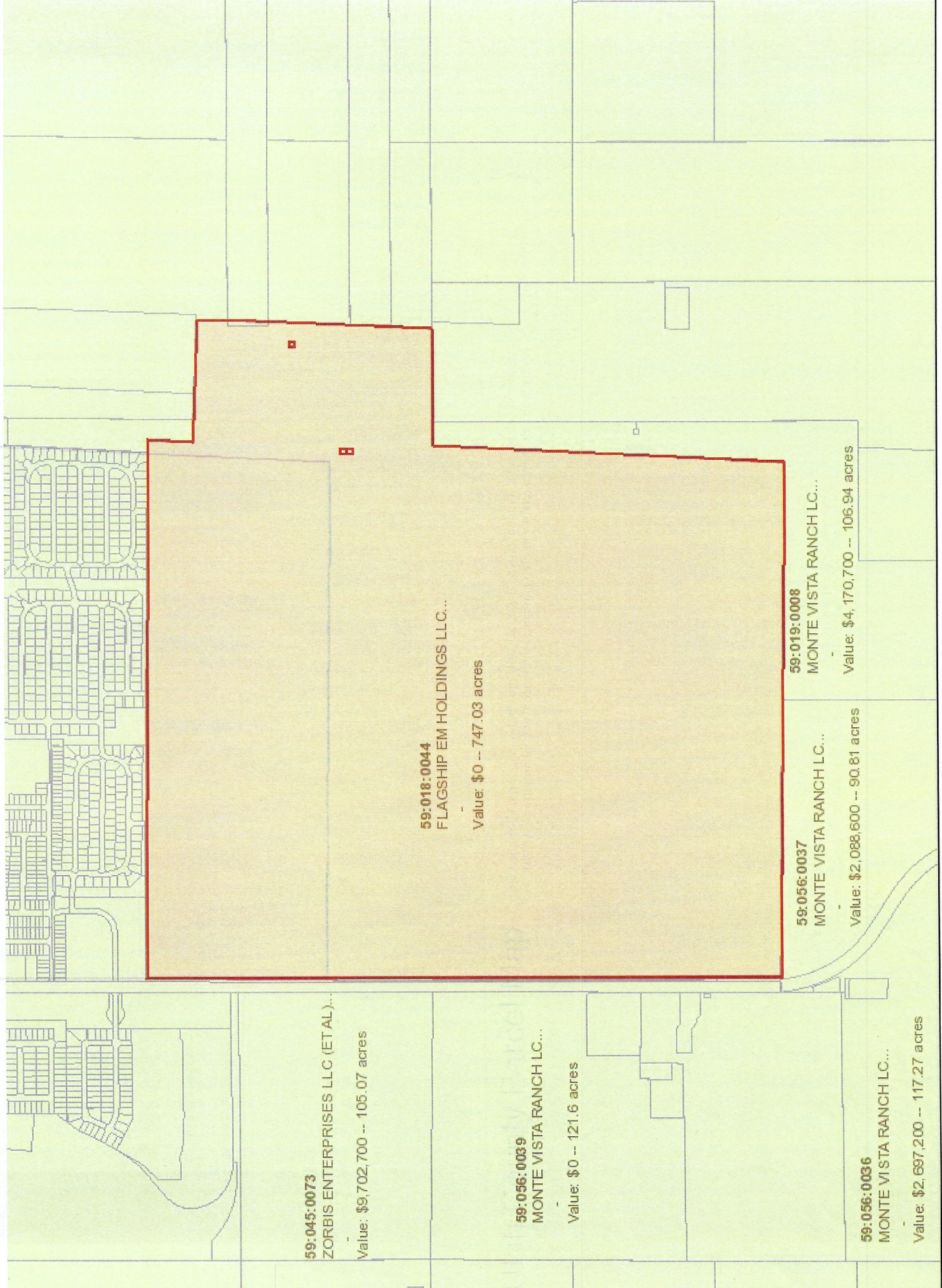
No areas of this parcel are included on the National Register of Historical Places listing in Utah County, Utah.

Because the entire parcel has been used for agricultural use, it is not expected that the land is conducive to threatened or endangered plant species that are known to occur or are believed to occur in Utah County. No endangered plant species were identified during a site visit in May 2020.

Submitted by:

Russell L. Christensen
Environmental Professional
Nebo Environmental LLC





Date: 5/22/2020

This cadastral map is generated from Utah County Recorder data. It is for reference only and no liability is assumed for any inaccuracies, incorrect data or variations with an actual survey

Utah County Parcel Map

590180044



U.S. Fish and Wildlife Service

National Wetlands Inventory

Natl Wetlands Inv Eagle Mtn



May 25, 2020

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond

- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



U.S. Fish & Wildlife Service

ECOS[ECOS](#) / [Species Reports](#) / Species By County Report

Species By County Report

The following report contains Species that are known to or are believed to occur in this county. Species with range unrefined past the state level are now excluded from this report. If you are looking for the Section 7 range (for Section 7 Consultations), please visit the [IPaC](#) application.

County: **Utah, Utah**

CSV

Need to contact a FWS field office about a species? Follow [this link](#) to find your local FWS Office.

Group	Name	Population	Status	Lead Office	Recovery Plan	Recovery Plan Action Status	Recovery Plan Stage
Birds	Yellow-billed Cuckoo (Coccyzus americanus)	Western U.S. DPS	Threatened	Arizona Ecological Services Field Office			
Fishes	June sucker (Chasmistes liorus)	Wherever found	Endangered	Utah Ecological Services Field Office	June Sucker	Implementation Progress	Final
Flowering Plants	Deseret milkvetch (Astragalus desereticus)	Wherever found	Recovery	Utah Ecological Services Field Office			
Flowering Plants	Clay phacelia (Phacelia argillacea)	Wherever found	Endangered	Utah Ecological Services Field Office	Clay Phacelia	Implementation Progress	Final
Flowering Plants	Ute ladies'-tresses (Spiranthes diluvialis)	Wherever found	Threatened	Utah Ecological Services Field Office	Ute Ladies'-Tresses Draft Recovery Plan	Implementation Progress	Draft



**REPORT
GEOTECHNICAL STUDY
PROPOSED EAGLE MOUNTAIN 750-ACRE
DEVELOPMENT
SOUTHEAST OF PONY EXPRESS BOULEVARD
AND BOUNTIFUL LANE
EAGLE MOUNTAIN, UTAH**

Submitted To:

Flagship Homes
1250 East 200 South, Suite D
Lehi, Utah 84043

Submitted By:

GSH Geotechnical, Inc.
473 West 4800 South
Salt Lake City, Utah 84123

September 13, 2019

Job No. 1787-032-19

September 13, 2019
Job No. 1787-032-19

Mr. Peter Evans
Flagship Homes
1250 East 200 South, Suite D
Lehi, Utah 84043

Mr. Evans:

Re: Report
Geotechnical Study
Proposed Eagle Mountain 750-Acre Development
Southeast of Pony Express Boulevard and Bountiful Lane
Eagle Mountain, Utah

1. INTRODUCTION

1.1 GENERAL

This report presents the results of our geotechnical study performed at the site of the proposed Eagle Mountain 750-Acre development to be located southeast of Pony express Boulevard and Bountiful Lane in Eagle Mountain, Utah. The general location of the site with respect to existing roadways, as of 2019, is presented on Figure 1, Vicinity Map. A more detailed layout of the site showing proposed development area, existing roadways, and the test pits excavated in conjunction with this study is presented on Figure 2, Site Plan.

1.2 OBJECTIVES AND SCOPE

The objectives and scope of the study were planned in discussions between Mr. Peter Evans of Flagship Homes and Mr. Alan Spilker of GSH Geotechnical, Inc. (GSH).

In general, the objectives of this study were to:

1. Define and evaluate the subsurface soil and groundwater conditions across the site.
2. Provide appropriate foundation, earthwork, pavement, and geoseismic recommendations to be utilized in the design and construction of the proposed facilities.

In accomplishing these objectives, our scope has included the following:

1. A field program consisting of the excavating, logging, and sampling of 131 exploration test pits.
2. A laboratory testing program.
3. An office program consisting of the correlation of available data, engineering analysis, and the preparation of this summary report.

1.3 AUTHORIZATION

Authorization was provided by returning a signed copy of the Professional Services Agreement No. 19-0813 dated August 6, 2019.

1.4 PROFESSIONAL STATEMENTS

Supporting data upon which our recommendations are based are presented in subsequent sections of this report. Recommendations presented herein are governed by the physical properties of the soils encountered in the exploration test pits, projected groundwater conditions, and the layout and design data discussed in Section 2, Proposed Construction. If subsurface conditions other than those described in this report are encountered and/or if design and layout changes are implemented, GSH must be informed so that our recommendations can be reviewed and amended, if necessary.

Our professional services have been performed, our findings developed, and our recommendations prepared in accordance with generally accepted engineering principles and practices in this area at this time.

2. PROPOSED CONSTRUCTION

The 750-acre rectangular-shaped site is proposed to be developed primarily for single-family residential structures and associated roadways. The structures are anticipated to be 1 to 2 stories above grade with full- or partial-depth basements (if conditions allow) with conventional spread and continuous wall footings.

Maximum real column and wall loads are anticipated to be on the order of 2 to 3 kips and 30 to 40 kips per lineal foot, respectively. Real loads are defined as the total of all dead plus frequently applied (reduced) live loads.

Proposed traffic for the residential roadways is anticipated to consist of a moderate volume of automobiles and light trucks, a light volume of medium-weight trucks (busses and delivery trucks), and occasional heavyweight trucks.

Site development will require some earthwork in the form of minor cutting and filling. At this time, we anticipate that maximum site grading cuts and fills, excluding utilities and basements, will be on the order of 3 to 5 feet.

3. SITE INVESTIGATIONS

3.1 GENERAL

Subsurface conditions in unexplored locations or at other times may vary from those encountered at specific test pit locations. If such variations are noted during construction or if project development plans are changed, GSH must review the changes and amend our recommendations, if necessary.

Test pit locations were established by estimating distances and angles from site landmarks. If increased accuracy is desired by the client, we recommend that the test pit locations and elevations be surveyed.

3.2 FIELD PROGRAM

To define and evaluate the subsurface soil and groundwater conditions across the site, 131 test pits were excavated within the accessible areas. These test pits were completed to depths ranging from 10 to 15 feet with a moderate-sized rubber trackhoe. The approximate locations of the test pits are presented on Figure 2.

The field portion of our study was under the direct control and continual supervision of an experienced member of our geotechnical staff. During the course of the drilling operations, a continuous log of the subsurface conditions encountered was maintained. In addition, samples of the typical soils encountered were obtained for subsequent laboratory testing and examination. The soils were classified in the field based upon visual and textural examination. These classifications were supplemented by subsequent inspection and testing in our laboratory. Graphical representation of the subsurface conditions encountered is presented on Figures 3A through 3EA, Test Pit Logs. Soils were classified in accordance with the nomenclature described on Figure 4, Key to Test Pit Log (USCS).

A 2.42-inch inside diameter thin-wall drive sampler was utilized at select locations and depths within the test pit excavations to collect soil samples for further examination and laboratory testing.

Following completion of excavation operations, 1.25-inch diameter slotted PVC pipe was installed in many of the test pits to provide a means of monitoring the groundwater fluctuations. The test pits were then backfilled. Although an effort was made to compact the backfill with the backhoe, backfill was not placed in uniform lifts and compacted to a specific density. Consequently, settlement of the backfill with time is likely to occur.

3.3 LABORATORY TESTING

3.3.1 General

To provide data necessary for our engineering analysis, a laboratory testing program was performed. This program included moisture, density, partial gradation, Atterberg limits, consolidation, collapse/consolidation, and chemical tests. The following paragraphs describe the tests and summarize the test data.

3.3.2 Moisture and Density Tests

To provide index parameters and to correlate other test data, moisture and density tests were performed on selected samples. The results of these tests are presented on the test pit logs, Figures 3A through 3EA.

3.3.3 Partial Gradation Tests

To aid in classifying the granular soils, partial gradation tests were performed. Results of the tests are tabulated below and presented on the test pit logs, Figures 3A through 3EA.

Test Pit No.	Depth (feet)	Percent Passing No. 200 Sieve	Moisture Content Percent	Soil Classification
TP-2	12.5	78.8	14.9	ML
TP-14	15.0	63.9	14.9	ML
TP-25	10.0	85.9	20.5	ML
TP-32	12.0	86.4	11.6	ML
TP-58	2.5	80.2	21.6	CL
TP-67	12.0	81.9	18.9	ML
TP-73	5.0	47.3	6.5	SM/ML
TP-93	12.0	72.3	14.6	ML
TP-94	2.5	55.5	16.3	ML
TP-101	2.5	54.5	19.3	ML
TP-118	2.5	62.4	16.9	ML

3.3.4 Atterberg Limits Test

To aid in classifying the soils, an Atterberg limits test was performed on a sample of the fine-grained cohesive soils. Results of the test are tabulated below and presented on the test pit logs, Figures 3A through 3EA:

Test Pit No.	Depth (feet)	Liquid Limit (percent)	Plastic Limit (percent)	Plasticity Index (percent)	Soil Classification
TP-104	12.0	42	23	19	CL

3.3.5 Consolidation Tests

To provide data necessary for our settlement analysis, consolidation testing was performed on 13 representative samples of the natural fine-grained clay soils encountered at the site. The results of these tests indicate that the samples tested were moderately over-consolidated and will exhibit moderate strength and compressibility characteristics under the anticipated loading. Detailed results of the tests are maintained within our files and can be transmitted to you, upon your request.

3.3.6 Collapse/Consolidation Tests

To provide data necessary for our settlement analysis, collapse/consolidation tests are currently being performed upon a representative sample of natural fine-grained soil exhibiting a pinhole structure obtained at a depth of 5 feet in Test Pit TP-91.

The collapse portions of the tests were performed as follows:

1. Load sample at in situ moisture content to specific axial pressure.
2. Measure and record axial deflection.
3. Saturate sample.
4. Measure and record resulting collapse.

Test Pit No. No.	Depth (feet)	Soil Type	Natural Dry Density (pcf)	Natural Moisture Content (percent)	Axial Load When Saturated (psf)	Collapse (percent)
TP-91	5.0	ML	NA	NA	800	1.5

Upon completion of the collapse portion of the tests, standard consolidation test loading was applied. The current results of the tests indicate that the soils encountered in the upper 5 feet

containing pinholes with low density and moisture contents will exhibit very low pre-consolidation and are moderately compressible, indicative of collapsible soil.

Detailed results of these tests are maintained within our files and can be transmitted to you, upon your request.

3.3.7 Chemical Tests

To determine if the site soils will react detrimentally with concrete, chemical tests were performed on a representative sample of the near-surface soil encountered at the site. The results of the chemical tests are tabulated below:

Test Pit No.	Depth (feet)	Soil Classification	pH	Total Water Soluble Sulfate (mg/kg-dry)
TP-19	2.5	SM/SC	8.46	255

4. SITE CONDITIONS

4.1 SURFACE

The 750-acre site is located southeast of Pony Express Parkway and Bountiful Lane in Eagle Mountain, Utah. The site is currently comprised of agricultural land consisting of 4 circular and a rectangular irrigated field. The non-irrigated areas between the fields are sparsely to moderately vegetated with various weeds and grasses. Occasional dirt service roads traverse throughout the site. The topography of the site is relatively flat, grading down to the southwest with a total relief of approximately 25 to 30 feet.

The site is bound to the north by a residential subdivision, to the east and south by vacant/undeveloped brush land, and to the west by Pony Express Parkway followed by vacant/undeveloped land and a water treatment plant.

4.2 SUBSURFACE SOIL

The following paragraphs provide generalized descriptions of the subsurface profiles and soil conditions encountered within the test pits conducted during this study. As previously noted, soil conditions may vary in unexplored locations.

The test pits were excavated to depths ranging from 10 to 15 feet. The soil conditions encountered in each of the test pits, to the depths explored, were generally similar across the test pit locations.

- Approximately 6 inches of topsoil was encountered in most of the test pits. Topsoil thickness is frequently erratic and thicker zones of topsoil should be anticipated.

- Natural soils were encountered below the ground surface in all of the test pits. The natural soils consisted primarily of clay with varying silt and sand content, silt with varying clay and sand content, and fine sand with varying silt and clay content.
- The natural silt soils encountered in Test Pit TP-91 contained trace to numerous pinholes to depths of approximately 2.5 to 5 feet below the existing ground surface. Soils with a pinhole structure are indicative of soils that are moisture sensitive and potentially collapsible.

The natural clay and silt soils were soft to stiff, dry to very moist, brown and gray in color, and moderately over-consolidated. The natural clay soils are anticipated to exhibit moderate strength and compressibility characteristics under the anticipated loading. The silt soils encountered in Test Pit TP-91 contained trace to numerous pinholes. Soils with a pinhole structure are indicative of soils that are moisture sensitive and potentially collapsible. These soils are anticipated to exhibit very low strength and very high compressibility characteristics when wetted.

The natural sand and sandy silt soils were loose to medium dense, dry to moist, and gray and brown in color. The natural sand soils are anticipated to exhibit moderately high strength and moderately low compressibility characteristics under the anticipated load range.

For a more descriptive interpretation of subsurface conditions, please refer to Figures 3A through 3EA, Test Pit Logs. The lines designating the interface between soil types on the test pit logs generally represent approximate boundaries. In situ, the transition between soil types may be gradual.

4.3 GROUNDWATER

Groundwater was not encountered to the depths explored in the test pits completed at the site.

Groundwater levels vary with changes in season and rainfall, construction activity, irrigation, snow melt, surface water run-off, and other site-specific factors.

5. DISCUSSIONS AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

The proposed structures may be supported upon conventional spread and continuous wall foundations supported upon suitable natural soils and/or structural fill extending to suitable natural soils.

The most significant geotechnical aspects at the site are:

1. The potentially collapsible soils encountered in Test Pit TP-91 that extended to depths of up to 5 feet below the existing ground surface. These potentially collapsible soils are likely present in unexplored areas of the site and may extend to greater depths.
2. The potential to encounter non-engineered fills in certain areas of site.

Potentially collapsible soils were encountered to depths of up to 5 feet below ground surface within Test Pit TP-91. Although not encountered in any other test pit at the site, potentially collapsible soils may be encountered in other areas of the site. Under no circumstances should foundations, floor slabs, and exterior rigid pavements be established over these collapsible soils. Footings must be placed on the suitable natural soils or granular structural fill extending to natural granular soils as verified by a representative from GSH.

In flexible pavement areas, the in situ, potentially collapsible soils may remain if free of any deleterious materials and if properly prepared, as discussed later in this report. Even with this partial subgrade preparation underlying flexible pavements, some settlement and differential settlement may occur over deep sequences unless the potentially collapsible soils are completely removed. Before the placement of flexible pavements, the subgrade must be properly prepared as discussed later in this report.

Potentially collapsible soils may be present in other small pockets of the site to varying depths. Therefore, a geotechnical engineer from GSH must observe every foundation and floor slab excavation to identify that all collapsible/unsuitable soils have been removed.

Due to the agricultural use of the site, non-engineered fills may be present in isolated areas of the site. Prior to proceeding with construction removal of the existing surface vegetation, root systems, topsoil, non-engineered fill (if encountered), potentially collapsible soils, and any deleterious materials from beneath an area extending out at least 5 feet from the perimeter of the footprint of the proposed structures and 3 feet beyond rigid pavements and exterior flatwork areas will be required. All existing utility locations should be reviewed to assess their impact on the proposed construction and abandoned and/or relocated as appropriate.

To reduce disturbance of the natural soils during excavation, it is recommended that low-impact, track-mounted equipment with smooth edge buckets/blades be utilized.

Detailed discussions pertaining to earthwork, foundations, pavements, and the geoseismic setting of the site are presented in the following sections.

5.2 EARTHWORK

5.2.1 Site Preparation

Initial site preparation will consist of the removal of the existing, potentially collapsible soils, non-engineered fills (if encountered), surface vegetation, root systems, topsoil, and any deleterious materials from beneath an area extending out at least 5 feet from the perimeter of the proposed structure footprint and 3 feet beyond rigid pavements and exterior flatwork areas. All existing utility locations should be reviewed to assess their impact on the proposed construction and abandoned and/or relocated as appropriate.

Below exterior asphaltic pavements and flatwork such as sidewalks and driveways, a minimum of 18 inches of potentially collapsible soils must be removed and either replaced with new structural fill or recompacted to the requirements for structural fill. The replacement structural fill must consist of a sand and gravel mixture containing at least 20 percent fines (that is, either silt or clay particles). The purpose of the relatively high percentage of fines is to render the compacted material less permeable; thus, reducing the possibility of deep infiltration of surface water into the underlying potentially collapsible soil sequence. Even with the recommended minimum removal and replacement, some long-term movement of the slabs and pavements overlying deep sequences of potentially collapsible soils may still occur over time. If this is unacceptable, all potentially collapsible soils must be removed and replaced with compacted structural fill.

Subsequent to stripping and prior to the placement of floor slabs, foundations, structural site grading fills, exterior flatwork, and pavements, the exposed subgrade must be proof rolled by passing moderate-weight rubber tire-mounted construction equipment over the surface at least twice. If excessively soft or otherwise unsuitable soils are encountered beneath footings, they must be completely removed. If removal depth required is greater than 2 feet below footings, GSH must be notified to provide further recommendations. In pavement, floor slab, and outside flatwork areas, unsuitable natural soils should be removed to a maximum depth of 2 feet and replaced with compacted granular structural fill.

Subgrade preparation as described must be completed prior to placing overlying structural site grading fills.

To reduce disturbance of the natural soils during excavation, it is recommended that low-impact, track-mounted equipment with smooth edge buckets/blades be utilized.

GSH must be notified prior to the placement of structural site grading fills, floor slabs, footings, and pavements to verify that all potentially collapsible soils, loose/disturbed soils and non-engineered fills (if encountered) have been completely removed and/or properly prepared.

5.2.2 Temporary Excavations

Temporary excavations up to 8 feet deep in fine-grained cohesive soils, above or below the water table, may be constructed with sideslopes no steeper than one-half horizontal to one vertical (0.5H:1.0V). Excavations deeper than 8 feet are not anticipated at the site.

For granular (cohesionless) soils, construction excavations above the water table, not exceeding 4 feet, should be no steeper than one-half horizontal to one vertical (0.5H:1.0V). For excavations up to 8 feet, in granular soils and above the water table, the slopes should be no steeper than one horizontal to one vertical (1H:1V). Excavations encountering saturated cohesionless soils will be very difficult and will require very flat sideslopes and/or shoring, bracing, and dewatering.

To reduce disturbance of the natural soils during excavation, it is recommended that low-impact, track-mounted equipment with smooth edge buckets/blades be utilized.

All excavations must be inspected periodically by qualified personnel. If any signs of instability or excessive sloughing are noted, immediate remedial action must be initiated.

5.2.3 Structural Fill

Structural fill is defined as all fill which will ultimately be subjected to structural loadings, such as imposed by footings, floor slabs, pavements, etc. Structural fill will be required as backfill over foundations and utilities, as site grading fill, and as replacement fill below footings. All structural fill must be free of surface vegetation, root systems, rubbish, topsoil, frozen soil, and other deleterious materials.

Structural site grading fill is defined as structural fill placed over relatively large open areas to raise the overall grade. For structural site grading fill, the maximum particle size shall not exceed 4 inches; although, occasional larger particles, not exceeding 8 inches in diameter, may be incorporated if placed randomly in a manner such that “honeycombing” does not occur and the desired degree of compaction can be achieved. The maximum particle size within structural fill placed within confined areas shall be restricted to 2 inches.

On-site soils, including existing non-engineered fills (if encountered), may be re-utilized as structural site grading fill if they do not contain construction debris or deleterious material and meet the requirements of structural fill. Fine-grained soils will require very close moisture control and may be very difficult, if not impossible, to properly place and compact during wet and cold periods of the year.

Imported structural fill below foundations and floor slabs shall consist of a well graded sand and gravel mixture with less than 30 percent retained on the three-quarter-inch sieve and less than 20 percent passing the No. 200 Sieve (clays and silts).

Additionally, due to the potentially collapsible soils encountered at the site, a mixture of sand and gravel containing at least 20 percent fines (that is, either silt or clay particles) is required to be utilized as granular structural fills under pavements and flatwork. The purpose of the relatively high percentage of fines is to render the compacted material less permeable; thus, reducing the possibility of deep infiltration of surface water into the underlying potentially collapsible soil sequence.

To stabilize soft subgrade conditions (if encountered) or where structural fill is required to be placed closer than 2.0 feet above the water table at the time of construction, a mixture of coarse angular gravels and cobbles and/or 1.5- to 2.0-inch gravel (stabilizing fill) should be utilized. It may also help to utilize a stabilization fabric, such as Mirafi 600X or equivalent, placed on the natural ground if 1.5- to 2.0-inch gravel is used as stabilizing fill.

5.2.4 Fill Placement and Compaction

All structural fill shall be placed in lifts not exceeding 8 inches in loose thickness. Structural fills shall be compacted in accordance with the percent of the maximum dry density as determined by the AASHTO¹ T180 (ASTM² D1557) compaction criteria in accordance with the following table:

Location	Total Fill Thickness (feet)	Minimum Percentage of Maximum Dry Density
Beneath an area extending at least 5 feet beyond the perimeter of the structure	0 to 10	95
Site grading fills outside area defined above	0 to 5	90
Site grading fills outside area defined above	5 to 10	95
Utility trenches within structural areas	--	96
Road base	--	96

Structural fills greater than 10 feet thick are not anticipated at the site.

Subsequent to stripping and prior to the placement of structural site grading fill, the subgrade shall be prepared as discussed in Section 5.2.1, Site Preparation, of this report. In confined areas, subgrade preparation should consist of the removal of all loose or disturbed soils.

Coarse angular gravel and cobble mixtures (stabilizing fill), if utilized, shall be end dumped, spread to a maximum loose lift thickness of 15 inches, and compacted by dropping a backhoe bucket onto the surface continuously at least twice. As an alternative, the stabilizing fill may be compacted by passing moderately heavy construction equipment or large self-propelled compaction equipment at least twice. Subsequent fill material placed over the coarse gravels and cobbles shall be adequately compacted so that the “fines” are “worked into” the voids in the underlying coarser gravels and cobbles. Where soil fill materials are to be placed directly over more than about 18 inches of clean gravel, a separation geofabric, such as Mirafi 140N or equivalent, is recommended to be placed between the gravel and subsequent soil fills.

¹ American Association of State Highway and Transportation Officials

² American Society for Testing and Materials

Non-structural fill may be placed in lifts not exceeding 12 inches in loose thickness and compacted by passing construction, spreading, or hauling equipment over the surface at least twice.

5.2.5 Utility Trenches

All utility trench backfill material below structurally loaded facilities (footings, floor slabs, flatwork, pavements, etc.) shall be placed at the same density requirements established for structural fill. If the surface of the backfill becomes disturbed during the course of construction, the backfill shall be proof rolled and/or properly compacted prior to the construction of any exterior flatwork over a backfilled trench. Proof rolling shall be performed by passing moderately loaded rubber tire-mounted construction equipment uniformly over the surface at least twice. If excessively loose or soft areas are encountered during proof rolling, they shall be removed to a maximum depth of 2 feet below design finish grade and replaced with structural fill.

Many utility companies and City-County governments are now requiring that Type A-1a or A-1b (AASHTO Designation – granular soils with limited fines) soils be used as backfill over utilities. These organizations are also requiring that in public roadways, the backfill over major utilities be compacted over the full depth of fill to at least 96 percent of the maximum dry density as determined by the AASHTO T180 (ASTM D1557) method of compaction. GSH recommends that as the major utilities continue onto the site that these compaction specifications are followed.

Fine-grained soils, such as silts and clays, are not recommended for utility trench backfill in structural areas.

To reduce disturbance of the natural soils during excavation, it is recommended that low-impact, track-mounted equipment with smooth edge buckets/blades be utilized.

5.3 GROUNDWATER

Groundwater was not encountered to the depths explored in the borings completed at the site.

The groundwater measurements presented are conditions at the time of the field exploration and may not be representative of other times or locations. Groundwater levels may vary seasonally and with precipitation, as well as other factors including irrigation. Evaluation of these factors is beyond the scope of this study. Groundwater levels may, therefore, be at shallower or deeper depths than those measured during this study, including during construction and over the life of the structure.

The extent and nature of any dewatering required during construction will be dependent on the actual groundwater conditions prevalent at the time of construction and the effectiveness of construction drainage to prevent run-off into open excavations.

5.4 SPREAD AND CONTINUOUS WALL FOUNDATIONS

5.4.1 Design Data

The results of our analysis indicate that the proposed structures may be supported upon conventional spread and continuous wall foundations established upon suitable natural soils and/or structural fill extending to suitable natural soils. Under no circumstances shall foundations be established over non-engineered fills, potentially collapsible soils, loose or disturbed soils, topsoil, surface vegetation, root systems, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water. For design, the following parameters are provided:

Minimum Recommended Depth of Embedment for Frost Protection	- 30 inches
Minimum Recommended Depth of Embedment for Non-frost Conditions	- 15 inches
Recommended Minimum Width for Continuous Wall Footings	- 18 inches
Minimum Recommended Width for Isolated Spread Footings	- 24 inches
Recommended Net Bearing Capacity for Real Load Conditions	- 1,500 pounds per square foot
Bearing Capacity Increase for Seismic Loading	- 50 percent

The term “net bearing capacity” refers to the allowable pressure imposed by the portion of the structure located above lowest adjacent final grade. Therefore, the weight of the footing and backfill to lowest adjacent final grade need not be considered. Real loads are defined as the total of all dead plus frequently applied live loads. Total load includes all dead and live loads, including seismic and wind.

5.4.2 Installation

Under no circumstances shall the footings be installed upon potentially collapsible soils, non-engineered fills, loose or disturbed soils, topsoil, surface vegetation, root systems, rubbish, construction debris, or other deleterious materials. If unsuitable soils are encountered, they must be removed and replaced with compacted granular fill. If granular soils become loose or disturbed, they must be recompacted prior to pouring the concrete.

The width of structural replacement fill below footings should be equal to the width of the footing plus one foot for each foot of fill thickness.

5.4.3 Settlements

Based on wall and column loadings, soil bearing capacities, and the foundation recommendations as discussed above, we expect primary total settlement beneath individual foundations to be less than one inch.

The amount of differential settlement is difficult to predict because the subsurface and foundation loading conditions can vary considerably across the site. However, we anticipate differential settlement between adjacent foundations could vary from 0.5 to 0.75 inch. The final deflected shape of the structure will be dependent on actual foundation locations and loading.

5.5 LATERAL RESISTANCE

Lateral loads imposed upon foundations due to wind or seismic forces may be resisted by the development of passive earth pressures and friction between the base of the footings and the supporting soils. In determining frictional resistance, a coefficient of friction of 0.35 may be utilized for the footing interface with in situ natural clay and silt soils and 0.40 for footing interface with granular structural fill. Passive resistance provided by properly placed and compacted granular structural fill above the water table may be considered equivalent to a fluid with a density of 300 pounds per cubic foot. Below the water table, this granular soil should be considered equivalent to a fluid with a density of 150 pounds per cubic foot.

A combination of passive earth resistance and friction may be utilized provided that the friction component of the total is divided by 1.5.

5.6 LATERAL PRESSURES

Parameters, as presented within this section, are for backfills which will consist of drained soil placed and compacted in accordance with the recommendations presented herein.

The lateral pressures imposed upon subgrade facilities will, therefore, be basically dependent upon the relative rigidity and movement of the backfilled structure. For active walls, such as retaining walls which can move outward (away from the backfill), drained backfill may be considered equivalent to a fluid with a density of 40 pounds per cubic foot in computing lateral pressures. For more rigid subgrade walls that are not more than 10 inches thick, granular backfill may be considered equivalent to a fluid with a density of 50 pounds per cubic foot. For very rigid non-yielding walls, granular backfill should be considered equivalent to a fluid with a density of at least 60 pounds per cubic foot. The above values assume that the surface of the soils slope behind the wall is horizontal and that the granular fill within 3 feet of the wall will be compacted with hand-operated compacting equipment.

For seismic loading of below-grade walls, the uniform lateral pressures below, in pounds per square foot (psf), should be added based on wall depth and wall case:

Uniform Lateral Pressures			
Wall Height (Feet)	Active Pressure Case (psf)	Moderately Yielding Case (psf)	At Rest/Non-Yielding Case (psf)
4	15	40	60
6	25	55	90
8	35	75	120
10	40	95	150

5.7 FLOOR SLABS

Floor slabs may be established upon suitable natural subgrade soils or structural fill extending to suitable natural soils. Under no circumstances shall floor slabs be established directly over non-engineered fills, potentially collapsible soils, loose or disturbed soils, sod, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water.

To facilitate curing of the concrete and to provide a capillary moisture break, it is recommended that floor slabs be directly underlain by at least 4 inches of “free-draining” fill, such as “pea” gravel or three-quarters to one-inch minus clean gap-graded gravel.

Settlement of lightly loaded floor slabs designed according to previous recommendations (average uniform pressure of 200 pounds per square foot or less) is anticipated to be less than one-quarter of an inch.

5.8 PAVEMENTS

The natural clay soils and potentially collapsible soils will exhibit poor pavement support characteristics when saturated. All pavement areas must be prepared as previously discussed (see Section 5.2.1, Site Preparation). Under no circumstances shall pavements be established over unprepared non-engineered fills (if encountered), unprepared potentially collapsible soils, loose or disturbed soils, topsoil, surface vegetation, root systems, rubbish, construction debris, other deleterious materials, frozen soils, or within ponded water. With the subgrade soils and the projected traffic as discussed in Section 2, Proposed Construction, the pavement sections on the following page are recommended.

Residential Roadways

(Moderate Volume of Automobiles and Light Trucks,
 Occasional Medium-Weight Trucks and Heavyweight Trucks)
 [3 equivalent 18-kip axle loads per day]

Flexible Pavements: (Asphalt Concrete)

3.0 inches	Asphalt concrete
8.0 inches	Aggregate base
Over	Properly prepared collapsible soils, natural subgrade soils, and/or structural site grading fill extending to properly prepared collapsible soils or natural subgrade soils

Rigid Pavements: (Non-reinforced Concrete)

6.0 inches	Portland cement concrete (non-reinforced)
5.0 inches	Aggregate base
Over	Properly prepared and stabilized natural subgrade soils and/or structural site grading fill extending to properly prepared natural subgrade soils

For dumpster pads, we recommend a pavement section consisting of 6.5 inches of Portland cement concrete, 5.0 inches of aggregate base, over properly prepared natural subgrade or site grading structural fills. Dumpster pads should not be constructed overlying non-engineered fills under any circumstances.

These above rigid pavement sections are for non-reinforced Portland cement concrete. Concrete should be designed in accordance with the American Concrete Institute (ACI) and joint details should conform to the Portland Cement Association (PCA) guidelines. The concrete should have a minimum 28-day unconfined compressive strength of 4,000 pounds per square inch and contain 6 percent $\pm$ 1 percent air-entrainment.

The crushed stone should conform to applicable sections of the current Utah Department of Transportation (UDOT) Standard Specifications. All asphalt material and paving operations should

meet applicable specifications of the Asphalt Institute and UDOT. A GSH technician shall observe placement and perform density testing of the base course material and asphalt.

Please note that the recommended pavement section is based on estimated post-construction traffic loading. If the pavement is to be constructed and utilized by construction traffic, the above pavement section may prove insufficient for heavy truck traffic, such as concrete trucks or tractor-trailers used for construction delivery. Unexpected distress, reduced pavement life, and/or premature failure of the pavement section could result if subjected to heavy construction traffic and the owner should be made aware of this risk. If the estimated traffic loading stated herein is not correct, GSH must review actual pavement loading conditions to determine if revisions to these recommendations are warranted.

5.9 CEMENT TYPES

The laboratory tests indicate that the natural soils tested contain a negligible amount of water soluble sulfates. Based on our test results, concrete in contact with the on-site soil will have a low potential for sulfate reaction (ACI 318, Table 4.3.1). Therefore, all concrete which will be in contact with the site soils may be prepared using Type I or IA cement.

5.10 GEOSEISMIC SETTING

5.10.1 General

Utah municipalities have adopted the International Building Code (IBC) 2018. The IBC 2018 code refers to ASCE 7-16 Minimum Design Loads and Associated Criteria for Buildings and Other Structures (ASCE 7-16) determines the seismic hazard for a site based upon mapping of bedrock accelerations prepared by the United States Geologic Survey (USGS) and the soil site class. The USGS values are presented on maps incorporated into the IBC code and are also available based on latitude and longitude coordinates (grid points).

5.10.2 Faulting

Based on our review of available literature, no active faults pass through or immediately adjacent to the site. The nearest active mapped fault consists of a trace of the Utah Lake Faults, located about 6.5 miles to the northeast of the site.

5.10.3 Soil Class

For dynamic structural analysis, the Site Class D - Stiff Soil Profile as defined in Chapter 20 of ASCE 7-16 (per Section 1613.3.2, Site Class Definitions, of IBC 2018) can be utilized.

5.10.4 Ground Motions

The IBC 2018 code is based on USGS mapping, which provides values of short and long period accelerations for average bedrock values for the Western United States and must be corrected for local soil conditions. The table below summarizes the peak ground and short and long period accelerations for the MCE event and incorporates the appropriate soil amplification factor for a Site Class D soil profile. Based on the site latitude and longitude (40.2905 degrees north and -112.0058 degrees west, respectively), the values for this site are tabulated on the following table:

Spectral Acceleration Value, T	Bedrock Boundary [mapped values] (% g)	Site Coefficient	Site Class D [adjusted for site class effects] (% g)	Design Values* (% g)
Peak Ground Acceleration	31.6	$F_a = 1.219$	38.5	25.7
0.2 Seconds (Short Period Acceleration)	$S_s = 72.6$	$F_a = 1.219$	$S_{MS} = 88.5$	$S_{DS} = 59.0$
1.0 Second (Long Period Acceleration)	$S_1 = 26.4$	$F_v = N/A$	$S_{M1} = N/A$	$S_{D1} = N/A$

* IBC 2018/ASCE 7-16 may require a site-specific study based on the project structural engineer's evaluation and recommendations. If needed, GSH can provide additional information and analysis including a complete site-specific study.

5.10.5 Liquefaction

The site is located in an area that has been identified by the Utah Geological Survey (UGS) as being a "low" liquefaction potential zone. Liquefaction is defined as the condition when saturated, loose, granular soils lose their support capabilities because of excessive pore water pressure, which develops during a seismic event. Clayey soils, even if saturated, will generally not liquefy during a major seismic event.

Liquefaction was not included in the scope of this study and would require a deeper (30+ foot) boring for engineering analysis.

5.11 SITE VISITS

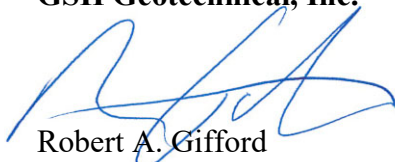
GSH must verify that all topsoil/disturbed soils and any other unsuitable soils have been removed, that non-engineered fills (if encountered) potentially collapsible soils, have been removed and/or properly prepared, and that suitable soils have been encountered prior to placing site grading fills, footings, slabs, and pavements. Additionally, GSH must observe fill placement and verify in-place moisture content and density of fill materials placed at the site.

5.12 CLOSURE

If you have any questions or would like to discuss these items further, please feel free to contact us at (801) 685-9190.

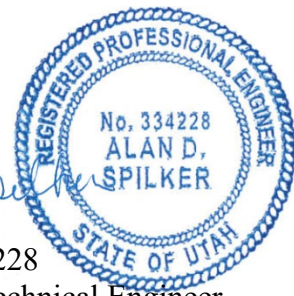
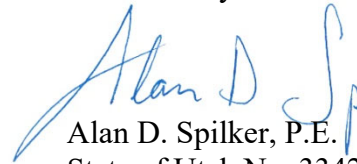
Respectfully submitted,

GSH Geotechnical, Inc.



Robert A. Gifford
Project Engineer/Geologist

Reviewed by:

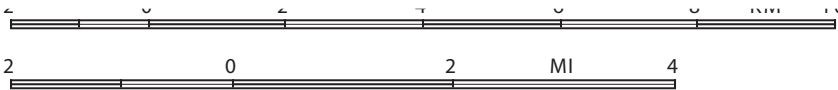
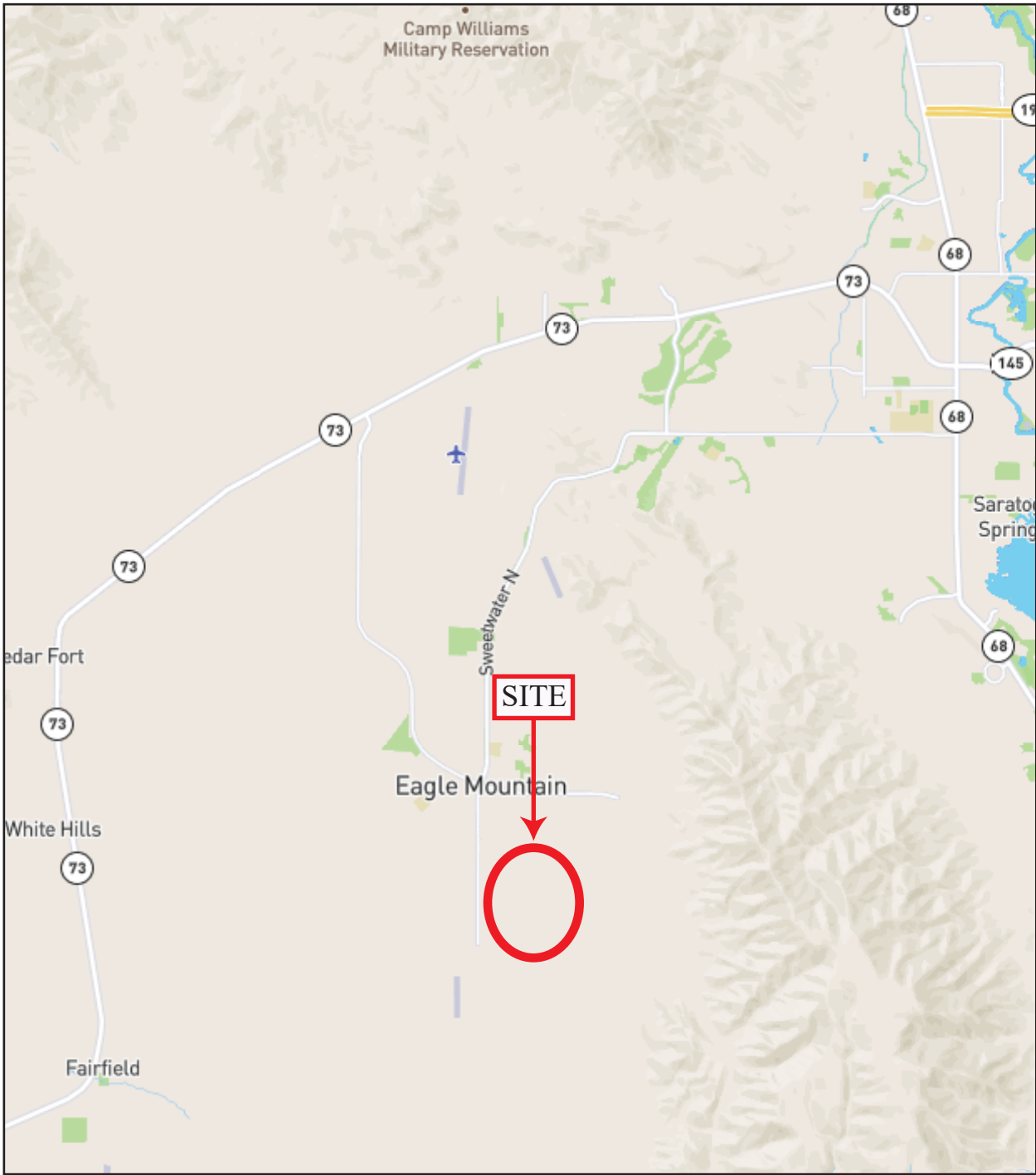


Alan D. Spilker, P.E.
State of Utah No. 334228
President/Senior Geotechnical Engineer

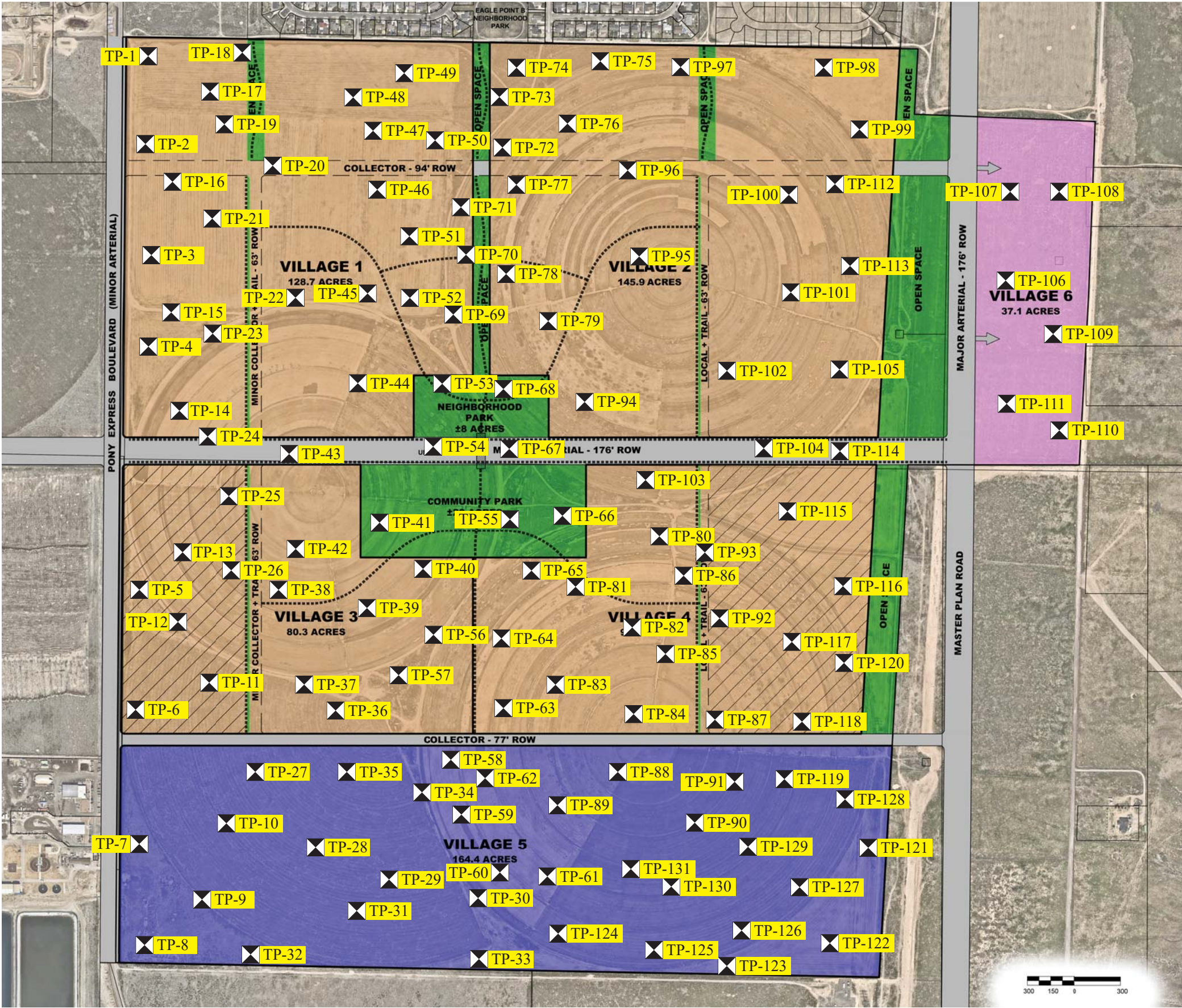
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Encl. Figure 1, Vicinity Map
Figure 2, Site Plan
Figures 3A through 3EA, Log of Test Pits
Figure 4, Key to Test Pit Log (USCS)

Addressee (email)



REFERENCE:
 ALL TRAILS - NATIONAL GEOGRAPHIC TERRAIN
 DATED 2019



REFERENCE:
ADAPTED FROM DRAWING ENTITLED
“LAND USE CONCEPT 6” BY LEI, DATED 7/25/2019

FIGURE 2
SITE PLAN
 GSH



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-1

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/22/19

DATE FINISHED: 8/22/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/22/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; light brown								dry medium stiff
	CL/ ML	FINE SANDY CLAY/FINE SANDY SILT light gray								slightly moist medium stiff
			5		5.4	82				
	CL	SILTY CLAY with some fine sand; dark gray								moist stiff
			10							
			15							
		End of exploration at 15.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 15.0'.								
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3A



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-2

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/22/19

DATE FINISHED: 8/22/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/22/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; light brown								slightly moist medium stiff
			5							
	CL/ ML	SILTY CLAY/CLAYEY SILT with fine sand; light gray								moist medium stiff
			10							
	ML	FINE SANDY SILT brown								moist loose
		End of exploration at 13.0'. No significant sidewall caving. No groundwater encountered at time of excavation.			14.9		78.8			
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3B



TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-3

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/22/19

DATE FINISHED: 8/22/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KX057 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/22/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							dry medium stiff
	CL	FINE SANDY CLAY with fine sand; major roots (topsoil) to 6"; light brown								
	CL	SILTY CLAY with fine sand; gray	5							slightly moist medium stiff
		grades with some fine sand	10							
		grades grayish-brown								
		End of exploration at 14.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 14.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3C



TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-4

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/22/19

DATE FINISHED: 8/22/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KX057 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/22/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							dry medium stiff
	ML	CLAYEY SILT with some fine sand; major roots (topsoil) to 6"; light gray								
	CL	SILTY CLAY with some fine sand; gray								slightly moist medium stiff
			5							
			10							moist
		End of exploration at 14.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							stiff
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3D



TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-5

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/22/19

DATE FINISHED: 8/22/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KX057 - Trackhoe

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							dry medium stiff
	CL/ ML	SILTY CLAY/CLAYEY SILT major roots (topsoil) to 6"; brown								
	CL	SILTY CLAY with some fine sand; brown	5							moist medium stiff
	SM/ ML	SILTY FINE SAND/FINE SANDY SILT brown	10							moist medium dense
		End of exploration at 13.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 13.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3E



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-6

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/22/19

DATE FINISHED: 8/22/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/22/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; brown								dry medium stiff
			5							slightly moist
										stiff
		grades gray	10							
										medium stiff
		End of exploration at 13.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3F



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-7

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/22/19

DATE FINISHED: 8/22/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/22/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY gray								slightly moist medium stiff
			5							
		grades with fine sand	10							
	SM/ ML	SILTY FINE SAND/FINE SANDY SILT brown								slightly moist medium dense
		End of exploration at 14.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 14.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3G



TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-8

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/22/19

DATE FINISHED: 8/22/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KX057 - Trackhoe

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							dry medium stiff
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; brown								
										slightly moist
			grades dark gray							
	SM/ ML	SILTY FINE SAND/FINE SANDY SILT gray	10							moist medium dense
		End of exploration at 12.5'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3H



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-9

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/22/19

DATE FINISHED: 8/22/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/22/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							dry soft
	CL	SILTY CLAY with major roots (topsoil) to 6"; gray								
			5							moist medium stiff
		grades with some fine sand	10							
		End of exploration at 14.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 31



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-10

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/22/19

DATE FINISHED: 8/22/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/22/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with major roots (topsoil) to 6"; light gray								dry medium stiff
		grades with some fine sand								
			5							slightly moist
		grades tan								
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3J



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-11

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/22/19

DATE FINISHED: 8/22/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/22/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with major roots (topsoil) to 6"; light gray								dry medium stiff
		grades with some fine sand			11.8	99				
			5							slightly moist
										stiff
			10							
		grades gray								moist medium stiff
		End of exploration at 13.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3K



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-12

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/23/19

DATE FINISHED: 8/23/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: BZ

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/23/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							moist stiff
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; light brown								
		grades olive gray	5							moist stiff
			10							moist stiff
	CL/ ML	SILTY CLAY/CLAYEY SILT dark brown								moist stiff
		End of exploration at 15.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 15.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3L



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-13

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/23/19

DATE FINISHED: 8/23/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: BZ

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/23/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; light brown								
										moist
			5							
		grades olive gray								
	CL/ ML	FINE SANDY CLAY/FINE SANDY SILT brown								very moist medium stiff
			10							
		End of exploration at 10.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3M



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-14

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/23/19

DATE FINISHED: 8/23/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: BZ

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/23/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							moist stiff
	CL	SILTY CLAY with trace sand; major roots (topsoil) to 6"; mineralization; olive gray with oxidation								
			5							slightly moist
		grades with some fine sand; brown								
			10							very moist medium stiff
	ML	FINE SANDY SILT with clay; brown								very moist medium dense
			15		14.9		63.9			
		End of exploration at 15.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 15.0'.								
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3N



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-15

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/23/19

DATE FINISHED: 8/23/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: BZ

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/23/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; olive gray								
										moist
			5		24.9	90				
	CL/ ML	FINE SANDY CLAY/FINE SANDY SILT gray								moist stiff
			10							
		End of exploration at 10.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 30



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-16

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/23/19

DATE FINISHED: 8/23/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: BZ

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/23/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL/ ML	FINE SANDY CLAY/FINE SANDY SILT with major roots (topsoil) to 6"; brown								
		grades gray/brown	5							moist
	CL	SILTY CLAY gwith trace fine sand; light gray								moist stiff
			10							
			15							
		End of exploration at 15.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 15.0'.								
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3P



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-17

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/23/19

DATE FINISHED: 8/23/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: BZ

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/23/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	FINE SANDY CLAY with some silt and occasional layers of silty fine sand up to 2" thick; major roots (topsoil) to 6"; light brown								dry medium stiff
	CL	SILTY CLAY with some fine sand and layers of silty clay up to 1/4" thick; gray	5							slightly moist medium stiff
	SM/ SC	SILTY/CLAYEY FINE SAND olive gray								moist medium dense
		End of exploration at 10.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	10							
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3Q



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-18

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/23/19

DATE FINISHED: 8/23/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: BZ

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/23/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	SM	SILTY FINE TO MEDIUM SAND with trace clay; major roots (topsoil) to 6"; light brown								dry medium dense
	CL	FINE SANDY CLAY with some silt; olive gray	5							slightly moist medium stiff
			10							
										moist
		End of exploration at 12.5'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.5'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3R



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-19

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/23/19

DATE FINISHED: 8/23/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: BZ

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/23/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium dense
	SM/ SC	SILTY/CLAYEY FINE TO MEDIUM SAND with major roots (topsoil) to 6"; brown								
	CL	SILTY CLAY with some fine sand; brown/gray	5							moist medium stiff
		grades with trace fine sand; gray	10							very moist medium stiff
		End of exploration at 10.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3S



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-20

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/23/19

DATE FINISHED: 8/23/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: BZ

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/23/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; light gray								slightly moist stiff
					14.4	100				
			5							
		grades with trace fine sand; brown	10							moist medium stiff
			15							
		End of exploration at 15.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 15.0'.								
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3T



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-21

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/23/19

DATE FINISHED: 8/23/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: BZ

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/23/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with some clay; major roots (topsoil) to 6"; brown								slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand; brown								moist medium stiff
			5							
			10							
		End of exploration at 10.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3U



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-22

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/23/19

DATE FINISHED: 8/23/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: BZ

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/23/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; olive gray								slightly moist medium stiff
			5							
		grades with trace fine sand; gray/dark gray								moist
			10							
	ML	CLAYEY SILT with fine sand; dark brown								moist medium stiff
		End of exploration at 12.5'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.5'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3V



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-23

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/23/19

DATE FINISHED: 8/23/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: BZ

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/23/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; light gray								
		grades with trace fine sand; olive gray	5							stiff
		grades gray/dark gray	10							
		End of exploration at 10.5'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3W



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-24

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/23/19

DATE FINISHED: 8/23/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: BZ

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/23/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; olive gray								moist medium stiff
			5							
			10							very moist
	ML	CLAYEY SILT with fine sand; gray/dark brown								very moist medium stiff
		End of exploration at 12.5'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.5'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3X



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-25

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/26/19

DATE FINISHED: 8/26/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/26/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; gray								slightly moist medium stiff
			5							
	ML ML	FINE SANDY SILT gray								moist medium stiff
			10		20.5		85.9			
	CL	FINE SANDY CLAY with trace pinholes; gray								moist medium stiff
		End of exploration at 13.5'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 13.5'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3Y



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-26

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/26/19

DATE FINISHED: 8/26/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/26/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; gray								
	CL	FINE SANDY CLAY gray/brown	5							moist medium stiff
			10							
		grades dark gray								
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3Z



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-27

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/26/19

DATE FINISHED: 8/26/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/26/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							dry medium stiff
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; gray								
			5		21.4	107				moist
		grades with trace fine sand								
	CL/ ML	SILTY CLAY/CLAYEY SILT with some fine to coarse sand; gray	10							moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AA



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-28

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/26/19

DATE FINISHED: 8/26/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/26/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; gray								
			5							
		grades with some fine sand; tan								
			10							
		grades with trace fine sand; gray								
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AB



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-29

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/26/19

DATE FINISHED: 8/26/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/26/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist stiff
	CL	SILTY CLAY with some fine sand; brown								
		grades with trace fine sand	5							
		grades gray/brown	10							moist medium stiff
	CL/ ML	SILTY CLAY/CLAYEY SILT with fine sand; gray								moist medium stiff
		End of exploration at 12.5'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.5'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AC



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-30

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/26/19

DATE FINISHED: 8/26/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/26/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	FINE SANDY CLAY with major roots (topsoil) to 6"; light gray								
	SM/ ML	SILTY FINE SAND/FINE SANDY SILT light brown	5							moist medium stiff
	CL/ ML	FINE SANDY CLAY/FINE SANDY SILT light brown	10							slightly moist medium stiff
	CL	SILTY CLAY with some fine to coarse sand; dark gray								slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AD



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-31

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/26/19

DATE FINISHED: 8/26/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/26/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; gray								dry medium stiff
		grades with some fine sand	5							
		grades with trace fine sand	10							
										slightly moist
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AE



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-32

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/26/19

DATE FINISHED: 8/26/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/26/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; light gray								dry medium stiff
		grades with trace fine sand	5							
		grades with some fine sand; gray	10							slightly moist
	SM/ ML	SILTY FINE SAND/FINE SANDY SILT with trace fine to coarse sand; brown			11.6		86.4			slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AF



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-33

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/26/19

DATE FINISHED: 8/26/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/26/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	FINE SANDY CLAY tan								dry medium stiff
					12.9	87				
	ML	FINE SANDY SILT brown	5							slightly moist medium dense
	CL	SILTY CLAY with some fine to coarse sand; brown								slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AG



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-34

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/26/19

DATE FINISHED: 8/26/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/26/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	FINE SANDY CLAY with major roots (topsoil) to 6"; gray/brown								dry medium stiff
	CL	SILTY CLAY with trace fine sand; brown	5							slightly moist medium stiff
		grades with trace fine to coarse sand	10							
	CL/ ML	SILTY CLAY/CLAYEY SILT with fine sand; brown								moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AH



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-35

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/26/19

DATE FINISHED: 8/26/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/26/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand; brown								
			5							moist
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AI



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-36

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/26/19

DATE FINISHED: 8/26/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/26/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; tan								
		grades with trace fine sand; gray	5		23.4	88				moist
		grades with some fine sand	10							
		grades with trace fine sand								
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AJ



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-37

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/26/19

DATE FINISHED: 8/26/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/26/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	SILTY CLAY with tract fine sand; major roots (topsoil) to 6"; brown								
		grades with some fine sand	5							
										moist
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AK



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-38

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/26/19

DATE FINISHED: 8/26/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/26/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL/ ML	FINE SANDY CLAY/FINE SANDY SILT with major roots (topsoil) to 6"; brown								slightly moist medium stiff
			5							
	SM/ ML	SILTY FINE SAND/FINE SANDY SILT brown								moist medium dense
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AL



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-39

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; brown								
		grades with some fine to coarse sand	5							
	SM/ ML	SILTY FINE SAND/FINE SANDY SILT with clay; brown	10							moist medium dense
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AM



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-40

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	FINE SANDY CLAY with major roots (topsoil) to 6"; gray								
		grades with trace fine sand	5							moist medium stiff
	CL/ ML	SILTY CLAY/CLAYEY SILT brown	10							moist medium stiff
		End of exploration at 13.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AN



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-41

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
			5							moist
	SM/ ML	SILTY FINE SAND/FINE SANDY SILT brown								moist medium dense
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AO



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-42

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
		grades with trace fine sand	5		25.5	99				
	CL/ ML	SILTY CLAY/CLAYEY SILT with some fine sand; brown								moist medium stiff
			10							
	CL	SILTY CLAY with some fine sand; brown								moist soft
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AP



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-43

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; brown								
			5							
	SM/ ML	SILTY FINE SAND/FINE SANDY SILT with trace fine sand; brown	10							moist medium dense
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AQ



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-44

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
			5							
		grades with trace fine sand								
			10							moist
		grades with some fine sand								
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AR



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-46

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							dry medium stiff
	CL/ ML	SILTY CLAY/CLAYEY SILT with some fine sand; major roots (topsoil) to 6"; brown								
			5							
	CL	SILTY CLAY with trace fine sand; brown								moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AT



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-47

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; brown								dry medium stiff
	SM	SILTY FINE SAND brown	5							slightly moist medium dense
	CL	SILTY CLAY with trace fine to coarse sand; brown	10							slightly moist stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AU



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-48

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	SM	SILTY FINE SAND with major roots (topsoil) to 6"; brown								dry medium dense
	SM/ ML	SILTY FINE SAND/FINE SANDY SILT brown	5							slightly moist medium dense
			10							slightly moist
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AV



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-49

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL/ ML	SILTY CLAY/CLAYEY SILT with fine to coarse sand; major roots (topsoil) to 6"; brown								dry medium stiff
	CL	SILTY CLAY with some fine sand; brown	5							slightly moist medium stiff
			10							stiff
		grades with trace fine sand								
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AW



TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-50

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KX057 - Trackhoe

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							dry medium stiff
	CL	FINE SANDY CLAY brown								
	CL	SILTY CLAY with some fine sand; brown	5							slightly moist medium stiff
		grades with trace fine to coarse sand	10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AX



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-51

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	FINE SANDY CLAY with major roots (topsoil) to 6"; brown								dry medium stiff
	SM	SILTY FINE SAND brown	5							slightly moist medium stiff
	SM/ ML	SILTY FINE SAND/FINE SANDY SILT with pinholes; brown	10							slightly moist medium dense
	CL	SILTY CLAY with some fine sand; brown								slightly moist medium stiff
		End of exploration at 12.0'.								
		No significant sidewall caving.								
		No groundwater encountered at time of excavation.								
		Installed 1.25" diameter slotted PVC pipe to 12.0'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AY



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-52

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	FINE SANDY CLAY with major roots (topsoil) to 6"; brown								dry medium stiff
			5							slightly moist
	CL	SILTY CLAY with some fine sand; brown	10							moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3AZ



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-53

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	SM/ CL	SILTY FINE SAND/FINE SANDY CLAY with major roots (topsoil) to 6"; brown								slightly moist medium dense
	CL	SILTY CLAY with some fine sand; brown								slightly moist medium stiff
			5		40.2	74				
			10							
	CL	FINE SANDY CLAY brown								slightly moist stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BA



TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-54

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KX057 - Trackhoe

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
	CL	FINE SANDY CLAY gray/brown	5							slightly moist medium stiff
		grades with trace fine sand								
			10							moist medium stiff
		gades with some fine sand								
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BB



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-55

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; brown								dry medium stiff
			5							slightly moist
			10							moist
		grades with trace fine sand								
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BC



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-56

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	FINE SANDY CLAY with major roots (topsoil) to 6"; brown								dry medium stiff
			5							slightly moist
	CL	SILTY CLAY with some fine sand; brown								moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BD



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-57

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; brown								dry medium stiff
					7.7	99				
			5							
		grades with trace fine sand								slightly moist
			10							
	ML	CLAYEY SILT with some fine sand; brown								moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BE



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-58

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; brown								slightly moist soft
					21.6		80.2			
			5		33.7	35				medium stiff
	ML	CLAYEY SILT with trace fine sand; brown								slightly moist medium stiff
			10							
										
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BF



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-59

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	FINE SANDY CLAY with silt; major roots (topsoil) to 6"; brown								slightly moist medium stiff
			5							
	ML	CLAYEY SILT with some fine sand; brown	10							slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BG



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-60

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist soft
	CL	FINE SANDY CLAY with major roots (topsoil) to 6"; brown								medium stiff
			5							
			10							slightly moist medium stiff
	CL	SILTY CLAY with trace sand; brown								
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BH



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-61

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	SILTY CLAY with fine sand; major roots (topsoil) to 6" brown								
			5							
		grades with some sand								
			10							
		grades with trace fine sand								
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BI



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-62

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	FINE SANDY CLAY with major roots (topsoil) to 6"; brown								dry medium stiff
		grades with trace fine sand	5							slightly moist
	ML	CLAYEY SILT with some fine sand; brown								slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BJ



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-63

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	FINE SANDY CLAY with major roots (topsoil) to 6"; brown								dry medium stiff
										slightly moist
	CL	SILTY CLAY with trace fine sand; brown	5							slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BK



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-64

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
					27.9	72				
			5							
	ML	FINE SANDY SILT with clay; brown	10							slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BL



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-65

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE TO COARSE SANDY SILT with clay; major roots (topsoil) to 6"; brown								slightly moist medium dense
			5							
	CL	SILTY CLAY with some fine sand; brown								slightly moist medium stiff
			10							
		grades with trace fine sand								
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BM



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-66

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								dry medium dense
	CL	SILTY CLAY with trace sand; brown	5							slightly moist medium stiff
			10							slightly moist
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BN



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-67

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							dry medium dense
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								
	CL	SILTY CLAY with some fine sand; brown	5							slightly moist stiff
	ML	CLAYEY SILT with fine sand; brown								slightly moist medium stiff
			10							
		grades fine sandy silt								
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BO



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-68

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; brown			21.5	24				slightly moist medium stiff
			5							
		grades with trace fine sand								
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BP



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-69

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand; brown	5							slightly moist medium stiff
			10							
										moist
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BQ



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-70

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium stiff
			5							
										moist
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BR



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-71

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand; brown	5							slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BS



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-72

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT brown								dry medium stiff
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium stiff
			5		30.0	84				
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BT



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-73

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	SM/ ML	SILTY FINE SAND/FINE SANDY SILT brown								dry medium dense
			5		6.5		47.3			
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BU



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-74

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								dry medium dense
	CL	SILTY CLAY with trace fine to coarse sand; brown	5							slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BV



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-75

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/27/19

DATE FINISHED: 8/27/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/27/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with fine to coarse sand; major roots (topsoil) to 6"; brown								dry medium dense
			5							
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BW



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-76

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/29/19

DATE FINISHED: 8/29/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/29/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								slightly moist medium dense
	CL	SILTY CLAY with trace fine sand; brown	5							slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BX



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-77

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/29/19

DATE FINISHED: 8/29/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/29/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist soft
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; brown								
			5							moist
		grades with trace fine sand	10							slightly moist
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BY



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-78

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/29/19

DATE FINISHED: 8/29/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/29/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							dry medium stiff
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; brown								
		grades with trace fine sand	5							moist
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3BZ



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-79

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/29/19

DATE FINISHED: 8/29/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/29/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
					26.3	82				
	ML	SILT with trace fine sand; brown	5							slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand; brown	10							slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CA



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-80

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand; brown	5							slightly moist medium stiff
			10							
	ML	FINE SANDY SILT with silty clay; brown								slightly moist medium dense
		End of exploration at 12.0'.								
		No significant sidewall caving.								
		No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CB



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-81

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; brown								
	CL	FINE SANDY CLAY brown	5							slightly moist medium stiff
		grades with trace fine sand and some silt								
			10							
	ML	CLAYEY SILT with trace fine sand; brown								moist medium stiff
		End of exploration at 12.0'.								
		No significant sidewall caving.								
		No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CC



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-82

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								dry medium stiff
	CL	SILTY CLAY with trace sand; brown								slightly moist medium stiff
			5							
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CD



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-83

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; brown								dry medium stiff
			5							slightly moist
		grades with trace fine to coarse sand								
	ML	FINE SANDY SILT brown	10							slightly moist medium dense
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CE



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-84

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
		grades with silt	5							
		grades with trace fine to coarse sand								
			10							
	ML	FINE SANDY SILT brown								slightly moist medium dense
		End of exploration at 12.0'.								
		No significant sidewall caving.								
		No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CF



TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-85

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KX057 - Trackhoe

ELEVATION: ---

[illegible]

See Subsurface Conditions section in the report for additional information.

FIGURE 3CG



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-86

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace fine sand; major roots (topsoil) to 6"; brown								dry medium stiff
	ML	FINE SANDY SILT with some clay; brown	5							dry medium dense
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CH



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-87

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
	CL	SILTY CLAY with trace fine to coarse sand; brown								slightly moist medium stiff
			5		26.7					
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CI



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-88

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
			5							
			10							
	ML	FINE SANDY SILT brown								slightly moist medium dense
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CJ



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-89

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML/ CL	FINE SANDY SILT/FINE SANDY CLAY with trace fine to coarse sand; major roots (topsoil) to 6"; brown								dry soft
	CL	SILTY CLAY with trace fine sand; brown	5							slightly moist soft
	ML	CLAYEY SILT with fine sand; brown	10							slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CK



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-90

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	SILT with major roots (topsoil) to 6"; brown								slightly moist medium stiff
		grades fine sand	5							
	CL	SILTY CLAY with trace fine sand; brown	10							slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CL



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-91

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; with pinholes brown								dry medium stiff
	ML	CLAYEY SILT with fine sand; brown	5							slightly moist medium stiff
	CL	SILTY CLAY with fine sand; brown	10							slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CM



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-92

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with some fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
	ML	FINE SANDY SILT brown								slightly moist medium dense
			5							
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium stiff
			10							
		grades with trace fine sand								
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CN



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-93

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium stiff
					33.0	82				
			5							
		grades with fine sand	10							
	ML	FINE SANDY SILT with clay; brown			14.2		72.3			slightly moist medium dense
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CO



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-94

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with some clay; major roots (topsoil) to 6"; brown								dry medium stiff
					16.3		85.5			
	CL	SILTY CLAY with trace fine sand and some silt; brown	5							dry medium stiff
			10							slightly moist
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CP



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-95

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (8/30/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with trace clay; major roots (topsoil) to 6"; brown								dry medium dense
	CL	SILTY CLAY with trace fine sand; brown	5							slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CQ



TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-96

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 8/30/19

DATE FINISHED: 8/30/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KX057 - Trackhoe

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							dry medium stiff
	ML	FINE SANDY SILT with trace fine sand; major roots (topsoil) to 6"; brown								
	CL	SILTY CLAY with trace fine sand; brown	5							slightly moist medium stiff
			10							moist soft
										slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CR



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-97

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/3/19

DATE FINISHED: 9/3/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/3/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace fine sand; major roots (topsoil) to 6"; brown								dry medium stiff
					29.6	82				
	CL	SILTY CLAY with trace fine sand; brown								dry medium stiff
			5							
	CL/ ML	SILTY CLAY/CLAYEY SILT with trace fine sand; brown								slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CS



TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-98

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/3/19

DATE FINISHED: 9/3/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KX057 - Trackhoe

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace fine sand; major roots (topsoil) to 6"; brown								dy medium stiff
	ML	FINE SANDY SILT brown	5							slightly moist loose
	CL	SILTY CLAY with trace fine sand; brown								dry medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CT



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-99

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/3/19

DATE FINISHED: 9/3/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/3/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with trace fine sand; major roots (topsoil) to 6"; brown								dry medium dense
			5							soft
	CL	FINE SANDY CLAY with trace fine sand and silt; brown								dry medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CU



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-100

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/3/19

DATE FINISHED: 9/3/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/3/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace fine sand; brown								slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand and silt; brown								slightly moist medium stiff
			5							
			10							
	ML	FINE SANDY SILT brown								slightly moist medium dense
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CV



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-101

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-019

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/3/19

DATE FINISHED: 9/3/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/3/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								dry medium dense
					19.3		54.5			
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium stiff
			5							
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CW



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-102

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/3/19

DATE FINISHED: 9/3/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/3/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with trace fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
	ML	CLAYEY SILT with trace fine sand and clay; brown	5							slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand and some silt; brown								slightly moist medium stiff
			10							
		grades with pinholes/roots								
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CX



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-103

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/3/19

DATE FINISHED: 9/3/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/3/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand; brown	5		41.9	24				slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CY



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-104

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/3/19

DATE FINISHED: 9/3/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/3/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with trace fine sand; major roots (topsoil) to 6"; brown								dry medium dense
	CL	SILTY CLAY with trace fine sand and silt; brown	5							slightly moist medium stiff
			10							
								42	19	
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3CZ



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-105

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/3/19

DATE FINISHED: 9/3/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/3/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								dry medium dense
			5							
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium stiff
			10							
	ML	CLAYEY SILT with fine sand; brown								slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DA



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-106

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/4/19

DATE FINISHED: 9/4/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/4/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with major roots (topsoil) to 6"; brown								slightly moist medium stiff
			5							
			10							
	CL	SILTY CLAY with fine sand; brown								slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DB



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-107

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/4/19

DATE FINISHED: 9/4/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/4/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace fine sand; major roots (topsoil) to 6"; organics?; brown								slightly moist medium stiff
					23.3	64				
			5							
			10							
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DC



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-108

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/4/19

DATE FINISHED: 9/4/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/4/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace fine sand; major roots (topsoil) to 6"; organics?; brown								slightly moist medium stiff
			5							
	ML	FINE SANDY SILT brown	10							slightly moist medium dense
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DD



TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-109

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/4/19

DATE FINISHED: 9/4/19

LOCATION: Southease of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KX057 - Trackhoe

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								slightly moist medium dense
			5							
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DE



TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-110

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/4/19

DATE FINISHED: 9/4/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KX057 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/4/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium dense
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								
	ML	CLAYEY SILT with trace fine sand; brown	5		9.2	77				slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	10							
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DF



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-112

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/4/19

DATE FINISHED: 9/4/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/4/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium stiff
			5							
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DH



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-113

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/4/19

DATE FINISHED: 9/4/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/4/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
	ML	FINE SANDY SILT brown	5							slightly moist medium dense
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium dense
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DI



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-114

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/4/19

DATE FINISHED: 9/4/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KX057 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/4/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	CL	SILTY CLAY with trace sand; major roots (topsoil) to 6"; brown								
			5							
			10							
			15							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DJ



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-115

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/4/19

DATE FINISHED: 9/4/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/4/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; brown								dry medium stiff
			5							
			10							slightly moist
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DK



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-116

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/4/19

DATE FINISHED: 9/4/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/4/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	CL	SILTY CLAY with trace fine sand; major roots (topsoil) to 6"; brown								dry medium stiff
					7.1	85				
			5							
			10							slightly moist
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DL



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-117

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/4/19

DATE FINISHED: 9/4/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/4/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
	CL	SILTY CLAY with some fine sand; brown	5							slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DM



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-118

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/4/19

DATE FINISHED: 9/4/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/4/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								slightly moist medium dense
					16.9		62.4			
	CL	SILTY CLAY with fine sand; brown	5							slightly moist medium stiff
										
		grades with trace fine sand and silt	10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DN



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-119

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/5/19

DATE FINISHED: 9/5/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/5/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with some sand and silt; major roots (topsoil) to 6"; brown								dry medium dense
			5							slightly moist
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DO



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-120

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/5/19

DATE FINISHED: 9/5/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/5/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with some fine sand; major roots (topsoil) to 6"; brown								dry medium stiff
		grades fine to sandy silt	5							
	CL	SILTY CLAY with fine sand; brown								slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DP



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-121

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/5/19

DATE FINISHED: 9/5/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/5/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium stiff
	ML	CLAYEY SILT with some fine to coarse sand; major roots (topsoil) to 6"; brown								
			5							
			10							
		grades fine sandy silt								
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DQ



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-122

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/5/19

DATE FINISHED: 9/5/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KX057 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/5/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace fine to coarse sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
			5							
	CL	SILTY CLAY with trace fine to coarse sand; brown with trace fine to coarse sand; brown	10							slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DR



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-123

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/5/19

DATE FINISHED: 9/5/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/5/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with some sand; major roots (topsoil) to 6"; brown								dry medium stiff
		grades fine sandy silt	5		8.0	70				
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DS



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-124

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/5/19

DATE FINISHED: 9/5/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/5/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							slightly moist medium dense
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								
	CL	SILTY CLAY with trace fine sand; brown	5							slightly moist medium stiff
			10							slightly moist
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DT



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-125

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/5/19

DATE FINISHED: 9/5/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/5/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace fine sand; major roots (topsoil) to 6"; brown								slightly moist medium stiff
	CL	SILTY CLAY with trace fine sand and silt; brown	5							slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.	15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DU



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-126

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/5/19

DATE FINISHED: 9/5/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/5/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with some fine sand; major roots (topsoil) to 6"; brown								dry medium stiff
			5							
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DV



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-127

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/5/19

DATE FINISHED: 9/5/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/5/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with trace fine sand; major roots (topsoil) to 6"; brown								dry medium stiff
			5							
			10							
	CL	SILTY CLAY with trace fine sand; brown								slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DW



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-128

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/5/19

DATE FINISHED: 9/5/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/5/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								dry medium dense
					5.2	73				
			5							
	CL	SILTY CLAY with trace fine to sand; brown	10							slightly moist medium stiff
	ML/ CL	FINE SANDY SILT/FINE SANDY CLAY brown								slightly moist medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DX



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-129

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/5/19

DATE FINISHED: 9/5/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/5/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	CLAYEY SILT with fine sand; major roots (topsoil) to 6"; brown								dry medium stiff
			5							
			10							
	CL	FINE SANDY CLAY brown								dry medium stiff
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DY



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-130

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/5/19

DATE FINISHED: 9/5/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/5/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								slightly moist medium stiff
			5							
	CL	FINE SANDY CLAY with silt; brown								slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation. Installed 1.25" diameter slotted PVC pipe to 12.0'.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3DZ



GSH

TEST PIT LOG

Page: 1 of 1

TEST PIT: TP-131

CLIENT: Flagship Homes

PROJECT NUMBER: 1787-032-19

PROJECT: Proposed Eagle Mountain 750-Acre Development

DATE STARTED: 9/5/19

DATE FINISHED: 9/5/19

LOCATION: Southeast of Pony Express Parkway & Bountiful Lane, Eagle Mountain, Utah

GSH FIELD REP.: JM

EXCAVATING METHOD/EQUIPMENT: KXO57 - Trackhoe

GROUNDWATER DEPTH: Not Encountered (9/5/19)

ELEVATION: ---

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
		Ground Surface	0							
	ML	FINE SANDY SILT with major roots (topsoil) to 6"; brown								dry medium dense
	CL	SILTY CLAY with some fine sand; brown	5							slightly moist medium stiff
	CL	FINE SANDY CLAY brown								slightly moist medium stiff
			10							
		End of exploration at 12.0'. No significant sidewall caving. No groundwater encountered at time of excavation.								
			15							
			20							
			25							

See Subsurface Conditions section in the report for additional information.

FIGURE 3EA

CLIENT: Flagship Homes
PROJECT: Proposed Eagle Mountain 750-Acre Development
PROJECT NUMBER: 1787-032-19

KEY TO TEST PIT LOG

WATER LEVEL	U S C S	DESCRIPTION	DEPTH (FT.)	SAMPLE SYMBOL	MOISTURE (%)	DRY DENSITY (PCF)	% PASSING 200	LIQUID LIMIT (%)	PLASTICITY INDEX	REMARKS
①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪

COLUMN DESCRIPTIONS

- ① **Water Level:** Depth to measured groundwater table. See symbol below.
- ② **USCS:** (Unified Soil Classification System) Description of soils encountered; typical symbols are explained below.
- ③ **Description:** Description of material encountered; may include color, moisture, grain size, density/consistency.
- ④ **Depth (ft.):** Depth in feet below the ground surface.
- ⑤ **Sample Symbol:** Type of soil sample collected at depth interval shown; sampler symbols are explained below.
- ⑥ **Moisture (%):** Water content of soil sample measured in laboratory; expressed as percentage of dryweight of
- ⑦ **Dry Density (pcf):** The density of a soil measured in laboratory; expressed in pounds per cubic foot.
- ⑧ **% Passing 200:** Fines content of soils sample passing a No. 200 sieve; expressed as a percentage.
- ⑨ **Liquid Limit (%):** Water content at which a soil changes from plastic to liquid behavior.
- ⑩ **Plasticity Index (%):** Range of water content at which a soil exhibits plastic properties.
- ⑪ **Remarks:** Comments and observations regarding drilling or sampling made by driller or field personnel. May include other field and laboratory test results using the following abbreviations:

CEMENTATION:

Weakly: 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.

MODIFIERS:

Trace
<5%

Some
5-12%

With
> 12%

MOISTURE CONTENT (FIELD TEST):

Dry: Absence of moisture, dusty, dry to the touch.

Moist: Damp but no visible water.

Saturated: Visible water, usually soil below water table.

Descriptions and stratum lines are interpretive; field descriptions may have been modified to reflect lab test results. Descriptions on the logs apply only at the specific boring locations and at the time the borings were advanced; they are not warranted to be representative of subsurface conditions at other locations or times.

UNIFIED SOIL CLASSIFICATION SYSTEM (USCS)

MAJOR DIVISIONS			USCS SYMBOLS	TYPICAL DESCRIPTIONS	
COARSE-GRAINED SOILS More than 50% of material is larger than No. 200 sieve size.	GRAVELS More than 50% of coarse fraction retained on No. 4 sieve.	CLEAN GRAVELS (little or no fines)	GW	Well-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines	
		GRAVELS WITH FINES (appreciable amount of fines)	GP	Poorly-Graded Gravels, Gravel-Sand Mixtures, Little or No Fines	
			GM	Silty Gravels, Gravel-Sand-Silt Mixtures	
			GC	Clayey Gravels, Gravel-Sand-Clay Mixtures	
	SANDS More than 50% of coarse fraction passing through No. 4 sieve.	CLEAN SANDS (little or no fines)	SW	Well-Graded Sands, Gravelly Sands, Little or No Fines	
		SANDS WITH FINES (appreciable amount of fines)	SP	Poorly-Graded Sands, Gravelly Sands, Little or No Fines	
			SM	Silty Sands, Sand-Silt Mixtures	
			SC	Clayey Sands, Sand-Clay Mixtures	
FINE-GRAINED SOILS More than 50% of material is smaller than No. 200 sieve size.	SILTS AND CLAYS Limit less	Liquid than 50%	ML	Inorganic Silts and Very Fine Sands, Rock Flour, Silty or Clayey Fine Sands or Clayey Silts with Slight Plasticity	
		SILTS AND CLAYS Limit greater 50%	Liquid than 50%	CL	Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays
			SILTS AND CLAYS Limit greater 50%	Liquid than 50%	OL
	SILTS AND CLAYS Limit greater 50%			Liquid than 50%	MH
		SILTS AND CLAYS Limit greater 50%		Liquid than 50%	CH
			Liquid than 50%	OH	Organic Silts and Organic Clays of Medium to High Plasticity
HIGHLY ORGANIC SOILS			PT	Peat, Humus, Swamp Soils with High Organic Contents	

STRATIFICATION:

DESCRIPTION	THICKNESS
Seam	up to 1/8"
Layer	1/8" to 12"
Occasional: One or less per 6" of thickness	
Numerous: More than one per 6" of thickness	

TYPICAL SAMPLER GRAPHIC SYMBOLS

-  Bulk/Bag Sample
-  Standard Penetration Split Spoon Sampler
-  Rock Core
-  No Recovery
-  3.25" OD, 2.42" ID D&M Sampler
-  3.0" OD, 2.42" ID D&M Sampler
-  California Sampler
-  Thin Wall

WATER SYMBOL

-  Water Level

Note: Dual Symbols are used to indicate borderline soil classifications.

FIGURE 4





EAGLE MOUNTAIN CITY
PLANNING COMMISSION MEETING
JANUARY 12, 2021

TITLE: PUBLIC HEARING - Scarlet Ridge Estates (Master Development Plan, Preliminary Plat, Rezone, and General Plan Amendment)

ITEM TYPE: Master Development Plan, Preliminary Plat, Rezone, and General Plan Amendment

APPLICANT: Ryan Kent (RK Builders)

ACTION ITEM:

Yes

PUBLIC HEARING:

Yes

PREPARED BY:

Pete Kane, Planning

BACKGROUND:

The subject property is made up of two parcels (59:019:0004 & 59:019:0005) totaling about 160 acres and located east of Lake Mountain Road and south of the future Tiffany Lane extension. The property is currently zoned Agriculture and is identified in the General Plan Future Land Use Map for "Agriculture / Rural Density Two."

The applicant (RK Builders) for the proposed development (Scarlet Ridge Estates) has submitted concept plans in 2019 and 2020 for a new residential subdivision. The Planning Commission's review of the 2019 concept plan received feedback regarding concerns about the placement and distances of roads and equestrian trails, connectivity, and a recommendation of zoning the smaller lots to RD2 the larger lots to RD1. The concept plan was revised and reviewed by City Council in August 2020. The updated concept plan received feedback that included a request for a minimum of 30 one-acre lots and aesthetic appeal by adjusting lot widths and including curved roads.

A master development plan has been submitted for the property which also includes a request to rezone the property and make an amendment to the General Plan map related to the Future Transportation Plan. The applicant has also submitted a preliminary plat for review and approval based on the master development plan. The plan calls for:

Preliminary Plat

A residential subdivision that includes 35 one-acre and 179 half-acre

lots along with associated infrastructure and open space improvements.

Rezoning

The two parcels are currently zoned Agriculture. The rezoning requests rezoning these parcels to RD2 which is described in the City Code as a zone for single-family large lots in traditional suburban neighborhoods with parks, trails, and other open space. The minimum lot size for the zone is one-half acre (21,780 square feet).

General Plan Map Amendment

The land use designation for the parcels is for "Agriculture / Rural Density Two." The applicant is not seeking an amendment to the land use. The future transportation plan calls for a collector road running along the eastern and southern edges of the property as well as a major arterial (Tiffany Lane) along the property's northern edge. The amendment requests a change in classification for Tiffany Lane: from major arterial to collector for the portion from the future Airport Road to the northwest corner of the subject property and then from major arterial to a residential road (of 53' width) for the portion running along the northern edge of the subject property and connecting to the future collector road on the east side of the property.

ITEMS FOR CONSIDERATION:

GENERAL PLAN AMENDMENT

The applicant is seeking to amend the future transportation plan as it relates to Tiffany Lane (future) between Airport Road (future) and the north-south collector (future) along the eastern edge of the subject property. This section of Tiffany Lane is designated as a major arterial in the General Plan. The request is to change the classification to a collector road for the portion between Airport Road and the northwest corner of the subject property and then to a residential road (53' width) for the portion running along the northern edge of the property up to the north-south collector on the eastern edge of the property. Staff has reviewed this request and agrees that a change to the classification of collector is appropriate. However, because the road will connect a major arterial (Airport Road) and the collector to the east, the entire length should be a collector and should not be reduced down to a residential road.

REZONE REQUEST

The applicant is seeking a rezoning of the property from Agriculture to RD2. The property is given a land use designation of "Agriculture / Rural Density Two" in the General Plan. Per EMMC 17.25.020 and 17.60.160, the RD2 zone is an appropriate zone for this land use designation.

PROPOSED RESIDENTIAL LOTS

The preliminary plat and master development plan propose a mix of 35 one-acre and 179 half-acre residential lots. Note that although some documentation in the application states a mix of 36/178, the preliminary plat identifies a mix of 35/179. The one-acre lots are located along the eastern edge of the property, with the remainder of the residential lots being between a half-acre to just under one-acre in size. For context, the land to the south and west of the property is also designated as "Agriculture / Rural Density Two." The land to the north and east of the property is designated with a "Foothill Residential" land use which means the potential rezoning of that land will be the FR zone which allows for a minimum lot size of one-quarter acre (10,890 square feet), and an average lot size of one-half acre (21,780 square feet). The proposed lot mix would be appropriate given the land use designation for that neighboring land.

PHASING

The application identifies the development to be constructed and platted in seven phases. The phasing would start at the north where Tiffany Lane and the related infrastructure will first be constructed with each subsequent phase being added to the south. One possible consideration may be that phase 1, 2, and 3 could be combined and re-divided into two phases so that the park feature is developed as part of phase 2 rather than 3. This would leave the project to be developed in six phases.

OPEN SPACE AND AMENITIES

The project proposes a large park of about 2.5 acres which would be dedicated to the City. The proposed park does meet the 2-acre size minimum for dedication. The park includes: asphalt/concrete pathways, eight pavilions, ten picnic tables spread among the

pavilions, garbage receptacles, grills, drinking fountain, two pickleball courts, one full basketball court, trees, landscaping, and open lawn space. Staff recommends a few modifications to the park plan:

1. Reorienting the basketball and pickleball courts to a north-south orientation. Current orientation will make use of the courts difficult with the sun;
2. The drinking fountain will need to be connected to a culinary water line and protected by a backflow preventer;
3. Landscape rock for shrub beds should be approved by the City and shall consist of landscape colors; no colors such as lava rock, grey gravel, or other types will be permitted;
4. All shade structures should be prefabricated structures and made of steel and be wind and load rated;
5. The small landscape island in the middle of the pathways to the northwest of the pickleball court should be removed and the sidewalks simplified;
6. The lawn to the east of the pickleball courts should be graded in a way that directs the drainage from the field away from the courts; and
7. The north direction is incorrectly placed on the current park plan.

EMMC 16.35.105(A)(4) states that "No unit/lot should be located more than one-quarter mile from a park, wherever possible." The proposed location of the park results in the southern third of the subdivision (91 residential lots) and lot 101 in the far northeast corner being outside of the 1/4-mile distance. The linear layout of the property does make placement of a single park difficult to allow access to all lots within 1/4-mile. Staff does not recommend breaking up the park into two smaller parks as they would not meet the size requirement to be dedicated to the city and would result in few amenities and limited use. The park is planned to have on-street parking adjacent to it which would provide access for residents to drive and park, if needed.

Based on the 214 proposed residential lots, the development must attain 246 amenity points. The amenities provided in the plan results in 248 points and meet the amenity point requirement for the project.

The development also includes five retention areas throughout the project to handle stormwater. All retention areas will need to be

improved and maintained by the HOA in order to ensure they do not become an issue or eyesore in the future. Staff suggests the applicant consider parkstrip drainages, swales, or some other low impact development method to handle stormwater rather than multiple retention areas.

A 10-foot trail is proposed between lots 626/627/632/633 as well as between lots 322/333/420/421 to improve connectivity.

ROAD NETWORK

The proposed road network includes multiple connections: two road connections at the north to Tiffany Lane, three connections to the east to the future collector road that will run along that side of the development, two connections to the south to the future collector road that will run along that side of the development, and three connections to the west to the concepted residential development (Triumph).

As noted above, the future transportation plan calls for collector roads on the east and south of the property. Additionally, staff agrees with a General Plan amendment to change Tiffany Lane along the north from the current plan of major arterial, however, this should be changed to a collector. The plans are missing the half-width for the collector roads on the east and south of the property which should be included in the project. Any adjustments to the lots in order to accommodate the collector roads on the east and south should maintain the current proposed ratio between half- and one-acre lots.

Collector roads are required to have street trees (EMMC 16.35.080(A)) and residential properties along those collector roads will be required to have privacy fencing (EMMC 16.35.090). Fence details have not been provided and will need to comply to EMMC 16.35.090. The City Council may require specific color and material for the privacy fencing.

The road network also includes varying curves as recommended in EMMC 16.35.070(L) to help reduce speeding.

A couple of the proposed street names in the plans are already used/approved elsewhere in the city and will need to be renamed: Maverick Road and Wyatt Lane.

Streetlighting is planned throughout the project. The specifics and details will be finalized as part of the final plat process and will need to comply with EMMC 15.10.390, such as spacing and locating at intersections.

REQUIRED FINDINGS:

Master development plan and preliminary plat approvals are based upon compliance with City Code requirements. The approval criteria for a master development plan and preliminary plat can be found in EMMC 16.10.070 and 16.20.050, respectively.

A rezone is a legislative decision and is considered valid if reasonably debatable and not illegal. The criteria for approval for a rezone are listed in EMMC 17.90.060.

Amendments to the General Plan are legislative actions and do not require approval based upon findings of facts. The Commission should consider the health, safety, and welfare of the community.

RECOMMENDATION:

We recommend the Planning Commission make a motion to recommend approval of the master development plan to the City Council, for the reasons set forth in the staff report and in the meeting, with the following conditions:

1. That phases 1, 2, and 3 are adjusted into two phases and the park feature constructed as part of phase 2;
2. Revisions to the park plan as outlined in the staff report;
3. Consideration of utilizing parkstrip drainage, swales, or other low impact development method in place of multiple retention areas;
4. Incorporation of the half-width of the east and south collector roads; and
5. If retention areas are included, they shall be improved open space and maintained by the HOA.

We recommend the Planning Commission make a motion to recommend approval of the preliminary plat to the City Council, for the reasons set forth in the staff report and in the meeting, with the following conditions:

1. Incorporation of the half-width of the east and south collector roads;
2. Renaming of Maverick Road and Wyatt Lane;
3. Streetlighting is required to comply with EMMC 15.10.390; and
4. Privacy fencing must be installed for residential lots with a rear and/or side lot adjacent to a collector road in compliance with EMMC 16.35.090.

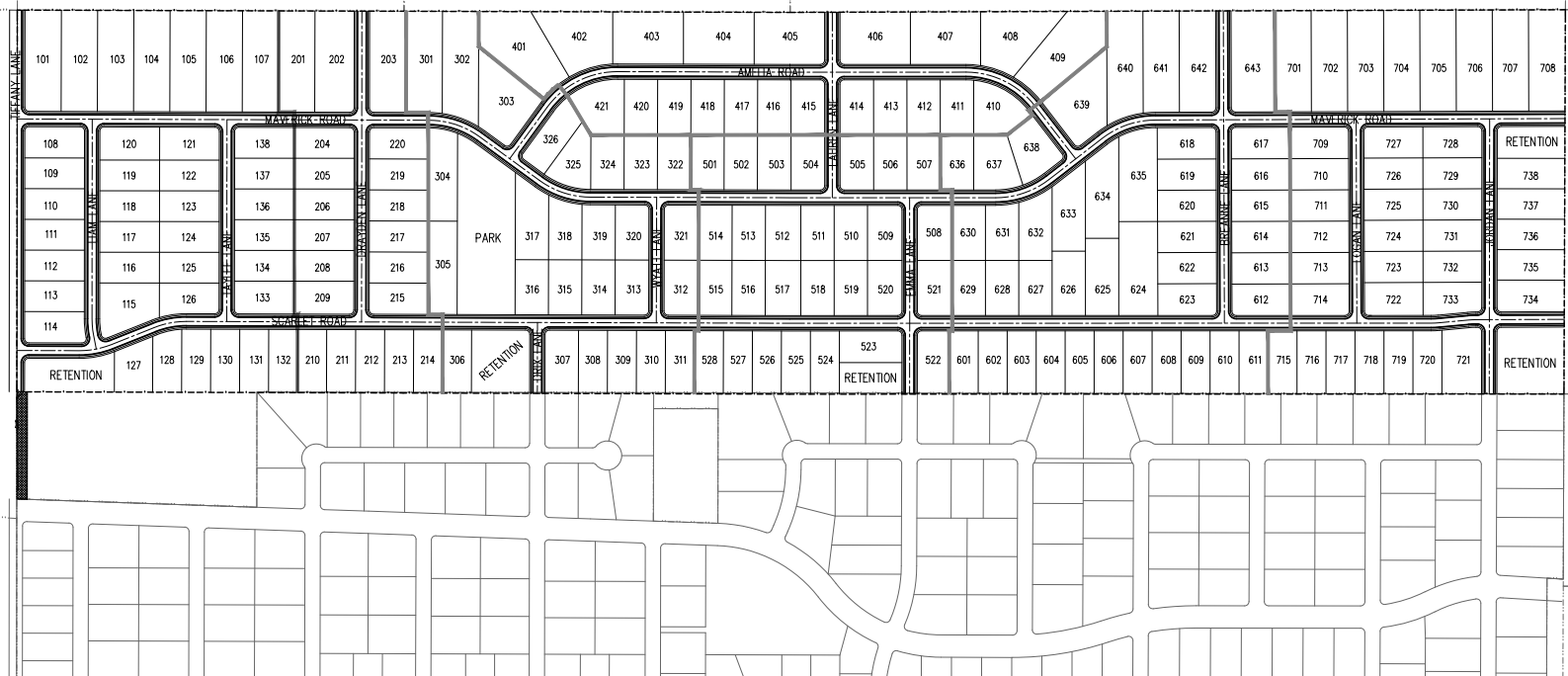
We recommend the Planning Commission make a motion to recommend approval of the rezone to the City Council, for the reasons set forth in the staff report and in the meeting.

We recommend the Planning Commission make a motion to recommend approval of the General Plan amendment to the City Council, for the reasons set forth in the staff report and in the meeting, with the following condition:

1. That the amendment revise the Future Transportation Plan Map for the road running along the north edge of the subject property between the future Airport Road and the future collector road to the east of the subject property from a "major arterial" to a "collector."

ATTACHMENTS:

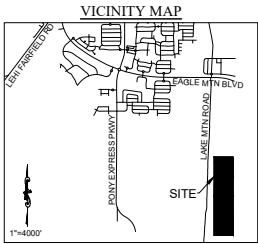
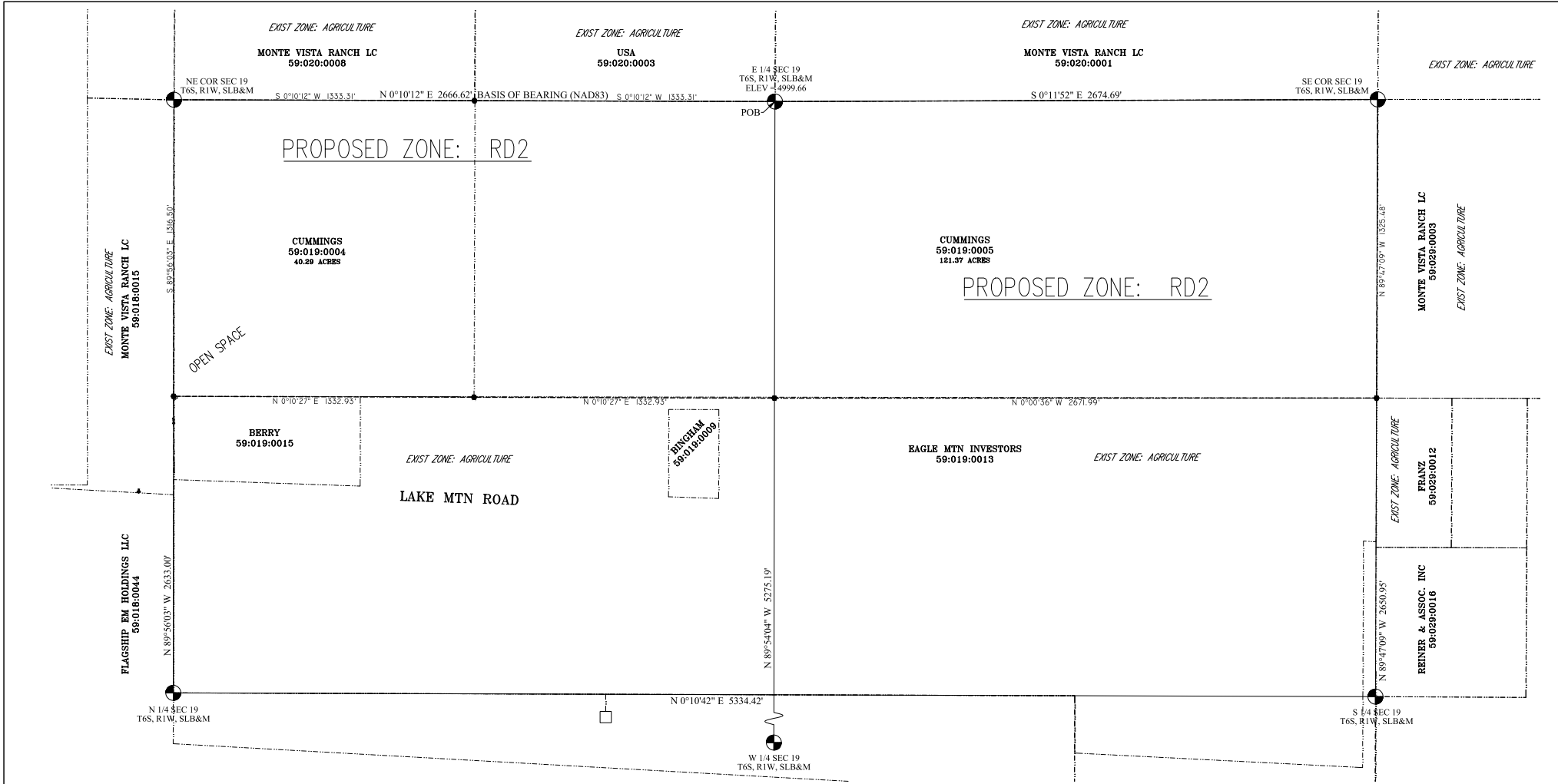
[Concept Plan, Rezone Exhibit, and General Plan Amendment Exhibit](#)
[Preliminary Plat](#)
[Open Space & Amenities](#)
[Economic Analysis, Compatibility Statement, and Environmental Impact Report](#)
[Slope Analysis](#)
[Traffic Study](#)
[Preliminary Storm Drainage Report](#)
[Geotechnical Study](#)



REVISIONS		
Rev.	Date	Description

EXCH ENGINEERING
 David W. Peterson, P.E., L.A.S. 4246-201913
 12 West 100 North, Suite 201, American Fork, UT 84003
 P: (801) 756-4304, david@exchevill.com

SCARLET RIDGE ESTATES		
EAGLE MOUNTAIN	UTAH	Scale: 1"=200'
Drawn by: D.W.P.	CONCEPT	Date: 10/26/20
Designed by: D.W.P.		C1
Checked by: D.W.P.		

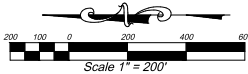


LEGAL DESCRIPTION

Parcel 59:019:0004
The Northeast Quarter of the Northeast Quarter of Section 19, Township 6 South, Range 1 West, Salt Lake Base and Meridian.
Area = 40.29 Acres

Parcel 59:019:0005
The East Half of the Southeast Quarter and the Southeast Quarter of the Northeast Quarter of Section 19, Township 6 South, Range 1 West, Salt Lake Base and Meridian.
Area = 121.37 Acres

Combined Description
Beginning at the East Quarter Corner of Section 19, Township 6 South, Range 1 West, Salt Lake Base and Meridian; thence South 0°11'52" East along section line 2674.69 feet to the Southeast Corner of said Section 19; thence North 89°47'09" West along section line 1325.48 feet; thence North 0°00'36" West along sixteenth section line 2671.99 feet; thence North 0°10'27" East along sixteenth section line 2665.86 feet; thence South 89°56'03" East along section line 1316.50 feet to the Northeast Corner of said Section 19; thence South 0°10'12" West along section line 2666.62 feet to the point of beginning.
Area = 161.66 Acres



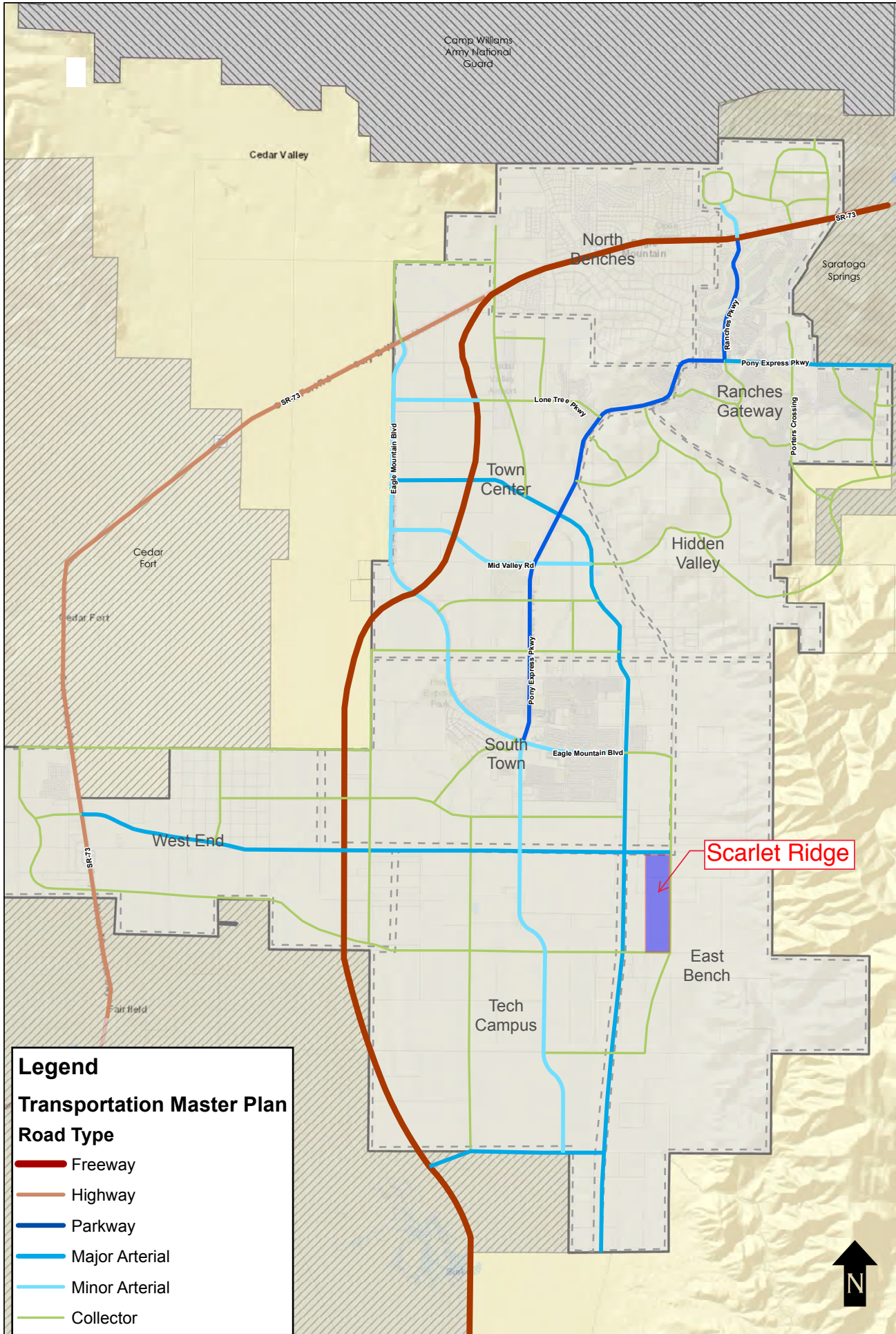
PROPOSED ZONE: RD2

REVISIONS			
Rev.	Date	REVISOR FOR DIS. COMMENTS	Description
1	12/29/20		

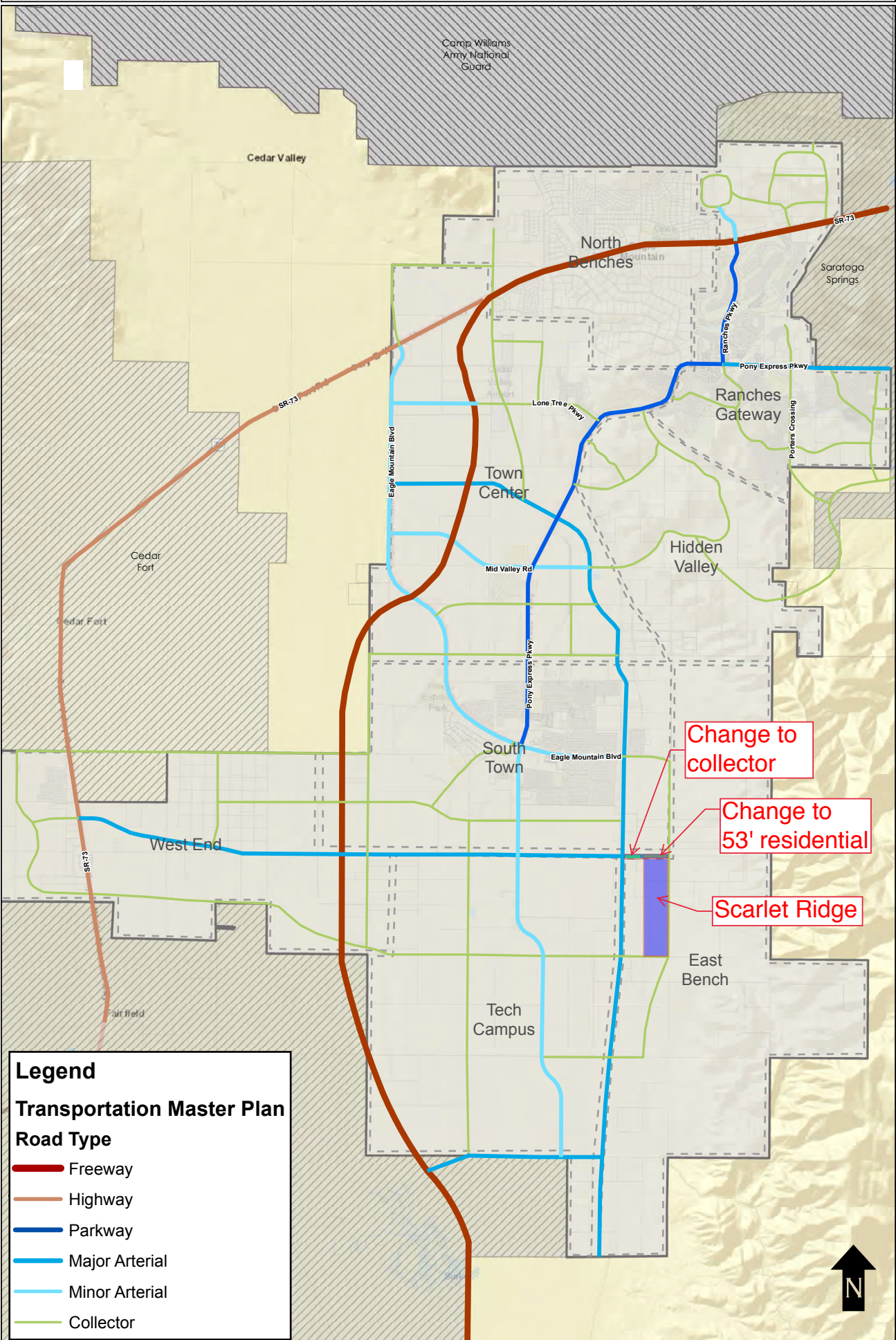


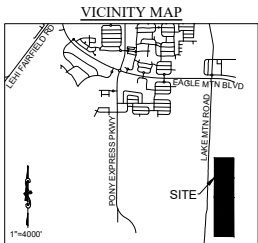
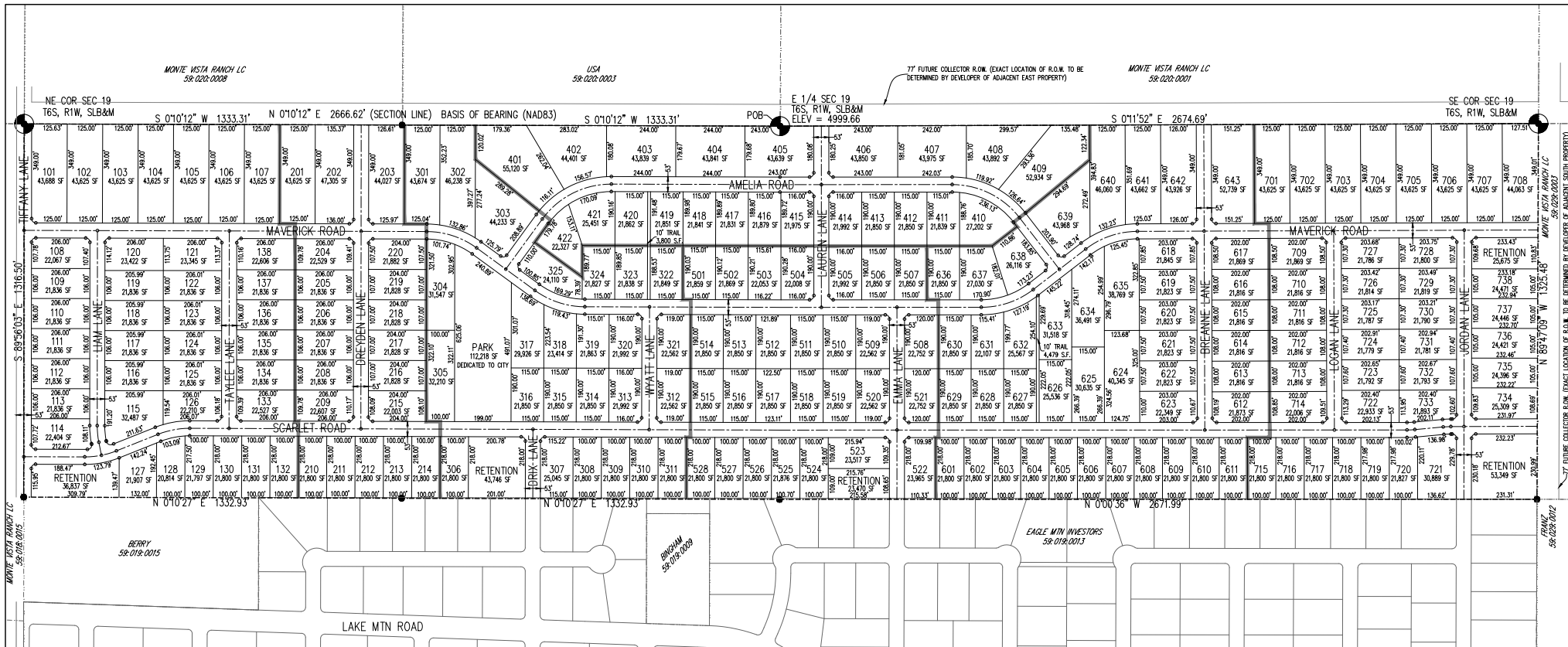
SCARLET RIDGE ESTATES		
EAGLE MOUNTAIN	UTAH	
Drawn by: D.W.P.	REZONE EXHIBIT	Scale: 1"=200'
Designed by: D.W.P.		Date: 11/04/20
Checked by: D.W.P.		C1

TRANSPORTATION MASTER PLAN



TRANSPORTATION MASTER PLAN





CONNECTIVITY NOTES

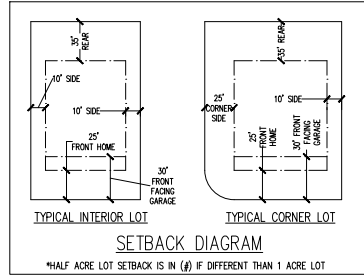
1. THERE ARE 42 UNITS AND 23 NODES WITHIN THIS SUBDIVISION. THIS PROVIDED A RATION OF 1.2 WHICH IS GREATER THAN THE TIER 1 REQUIRED RATION OF 1.0.
2. MAXIMUM BLOCK LENGTH ALLOWED IS 1000 FEET OR 1200 FEET WITH A MOBILCOCK PEDESTRIAN PATH. TWO BLOCKS HAVE A LENGTH OF GREATER THAN 1000' (BUT LESS THAN 1200'). MOBILCOCK PEDESTRIAN PATHS HAVE BEEN PROVIDED ALONG THOSE BLOCKS.

GENERAL NOTES

1. SEE SHEETS 4 & 5 FOR EXISTING CONTOURS.
2. THERE ARE A FEW VERY SMALL AREAS IN THIS SUBDIVISION WITH A NATURAL GRADE THAT EXCEEDS 15% IN RELATION TO THE PROPOSED LOT LAYOUT. A SLOPE ANALYSIS PLAN HAS BEEN PROVIDED FOR THIS SITE.
3. BUILDING SETBACKS ARE SHOWN IN THE SETBACK DIAGRAM.
4. ALL ROADS WILL BE PUBLIC AND MEET CITY STANDARDS.
5. A FIRE FLOW ANALYSIS IS REQUIRED AFTER INSTALLATION OF FIRE HYDRANTS AND PRIOR TO BUILDING PERMITS.
6. ALL OUTDOOR LIGHTING MUST BE FULL CUT-OFF, DARK SKY COMPLIANT IN ACCORDANCE WITH CITY CODE.
7. HOMES CONSTRUCTED WITHIN THIS SUBDIVISION MUST COMPLY WITH CITY CODE ARCHITECTURAL DESIGN REVIEW.
8. CITY WILL OWN AND MAINTAIN THE PROPOSED OPEN SPACE AREAS SHOWN ON THIS PRELIMINARY PLAN.
9. TURNAROUNDS WILL BE PROVIDED AT PHASING LOTS WITH A 60-FOOT RADIUS PAVED TURN AROUND OR AN APPROVED PAVED HAMMERHEAD FIRE TURN AROUND PER EAGLE MOUNTAIN STANDARDS.
10. PROPOSED ZONE = RD2
11. THERE ARE NO IRRIGATION DITCHES OR STRUCTURES, CANALS, WELLS, STREAMS, SIGNIFICANT ROCK OUTCROPPINGS, WETLANDS, FLOOD PLAINS, OR OTHER NATURAL FEATURES ON SITE.
12. PUBLIC UTILITY EASEMENTS ARE 10' FRONT, AND 10' REAR AND SIDES ON EACH LOT.

PROPOSED ZONE: RD2

PRELIM PLAN LAND CALCULATIONS	
TOTAL ACREAGE:	161.66 ACRES
BUILDABLE ACREAGE:	161.66 ACRES
TOTAL ACREAGE IN LOTS:	129.98 ACRES
TOTAL ROADWAY AREA:	24.71 ACRES
TOTAL OPEN SPACE (INCLUDES PONDS/TRAILS):	6.97 ACRES
TOTAL DEVELOPED OPEN SPACE REQUIRED:	2.46 ACRES
TOTAL DEVELOPED OPEN SPACE PROVIDED:	2.58 ACRES
AVERAGE LOT SIZE:	26,497 SF/0.61 ACRES
LARGEST LOT SIZE:	55,120 SF/1.27 ACRES
SMALLEST LOT SIZE:	21,786 SF/0.50 ACRES
OVERALL DENSITY:	1.32 LOTS/ACRE
TOTAL # OF LOTS:	179 LOTS
1/2 ACRE LOTS:	35 LOTS
1 ACRES LOTS:	35 LOTS



LEGAL DESCRIPTION

Beginning at the East Quarter Corner of Section 19, Township 6 South, Range 1 West, Salt Lake Base and Meridian; thence South 0°11'52" East along section line 2674.69 feet to the Southeast Corner of said Section 19; thence North 89°47'09" West along section line 1325.48 feet; thence North 0°00'38" West along sixteenth section line 2671.99 feet; thence North 0°10'27" East along sixteenth section line 2665.86 feet; thence South 89°50'03" East along section line 1316.50 feet to the Northeast Corner of said Section 19; thence South 0°10'12" West along section line 2666.62 feet to the point of beginning.

Area = 161.66 Acres

SHEET INDEX

1. PRELIMINARY PLAT
2. UTILITY PLAN (NORTH)
3. UTILITY PLAN (SOUTH)
4. GRADING, DRAINAGE & EROSION PLAN (NORTH)
5. GRADING, DRAINAGE & EROSION PLAN (SOUTH)

SURVEYOR:
ATZTEC ENGINEERING INC.
732 N. 780 W.
AMERICAN FORK, UT, 84003
ATZTECENGINEERING@GMAIL.COM

BENCH MARK	
EAST QUARTER CORNER, SECTION 19, TOWNSHIP 6 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN ELEVATION = 4999.66'	

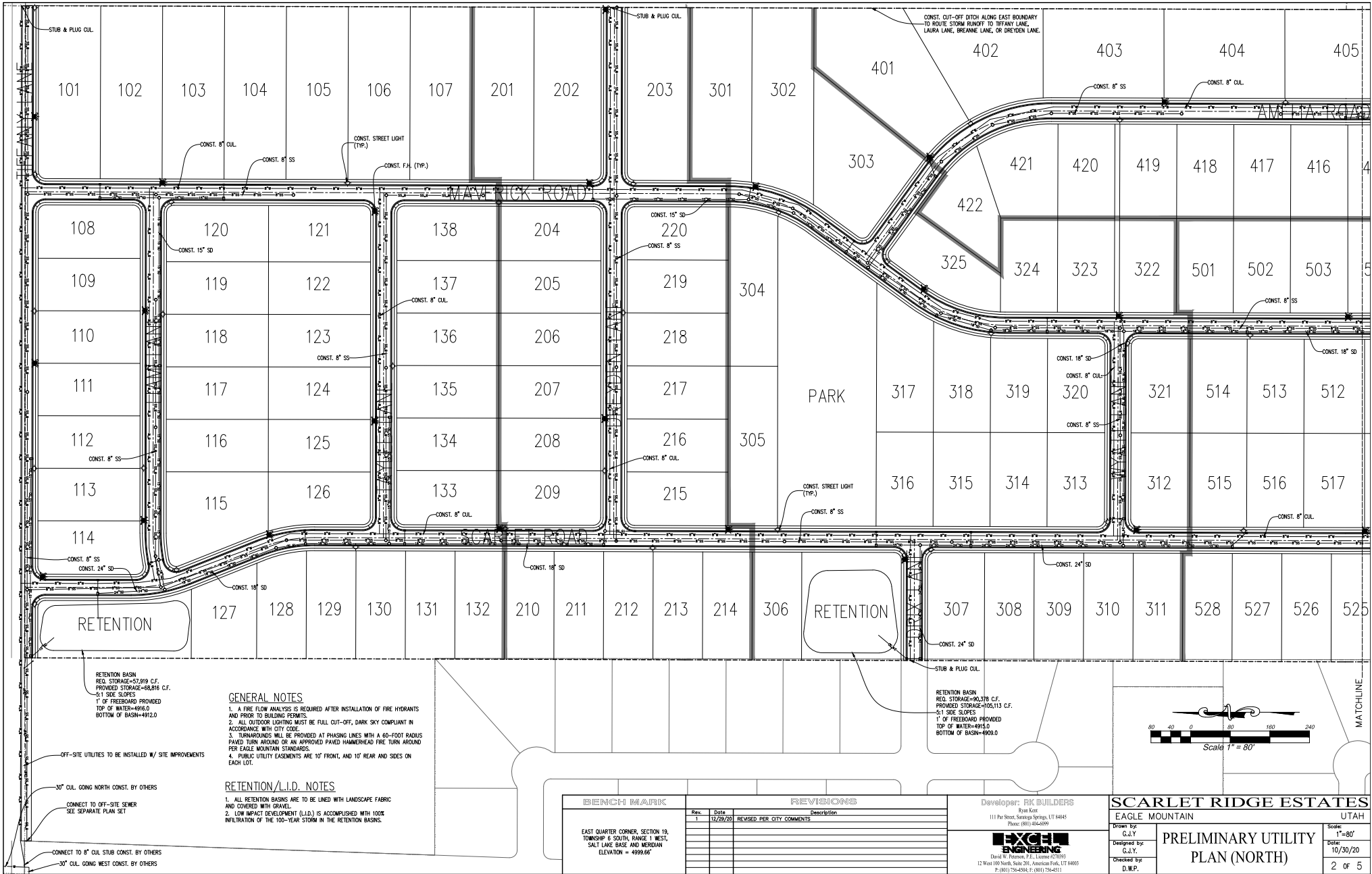
REVISIONS	
Rev.	Date
1	12/29/20
REVISOR PER CITY COMMENTS	
Description	

Developer: **RK BUILDERS**
Ryan Kott
1111 Pea Street, Springville, UT 84606
Phone: (801) 464-6999

SCARLET RIDGE ESTATES
EAGLE MOUNTAIN
UTAH

PRELIMINARY PLAT
DATED: 10/30/20
1 OF 5

Scale: 1"=160'



GENERAL NOTES

1. A FIRE FLOW ANALYSIS IS REQUIRED AFTER INSTALLATION OF FIRE HYDRANTS AND PRIOR TO BUILDING PERMITS.
2. ALL OUTDOOR LIGHTING MUST BE FULL CUT-OFF, DARK SKY COMPLIANT IN ACCORDANCE WITH CITY CODE.
3. TURNAROUNDS WILL BE PROVIDED AT PHASING LINES WITH A 60-FOOT RADIUS PAVED TURN AROUND OR AN APPROVED PAVED HAMMERHEAD FIRE TURN AROUND PER EAGLE MOUNTAIN STANDARDS.
4. PUBLIC UTILITY EASEMENTS ARE 10' FRONT, AND 10' REAR AND SIDES ON EACH LOT.

RETENTION / L.I.D. NOTES

1. ALL RETENTION BASINS ARE TO BE LINED WITH LANDSCAPE FABRIC AND COVERED WITH GRAVEL.
2. LOW IMPACT DEVELOPMENT (L.I.D.) IS ACCOMPLISHED WITH 100% INFILTRATION OF THE 100-YEAR STORM IN THE RETENTION BASINS.

BENCH MARK

EAST QUARTER CORNER, SECTION 19,
TOWNSHIP 6 SOUTH, RANGE 1 WEST,
SALT LAKE BASE AND MERIDIAN
ELEVATION = 4999.66'

REVISIONS

Rev.	Date	Description
1	12/29/20	REVISED PER CITY COMMENTS

Developer: RK BUILDERS
Ryan Kott
111 Pa Street, Salt Lake City, UT 84143
Phone: (801) 464-6999

EXCEL ENGINEERING
David W. Rose, P.E., License #1895
12 West 100 North, Suite 201, American Fork, UT 84003
P: (801) 754-4264, F: (801) 754-4511

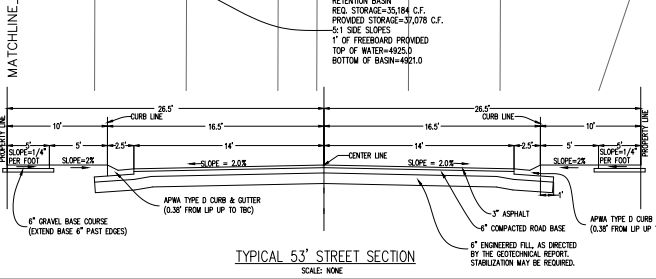
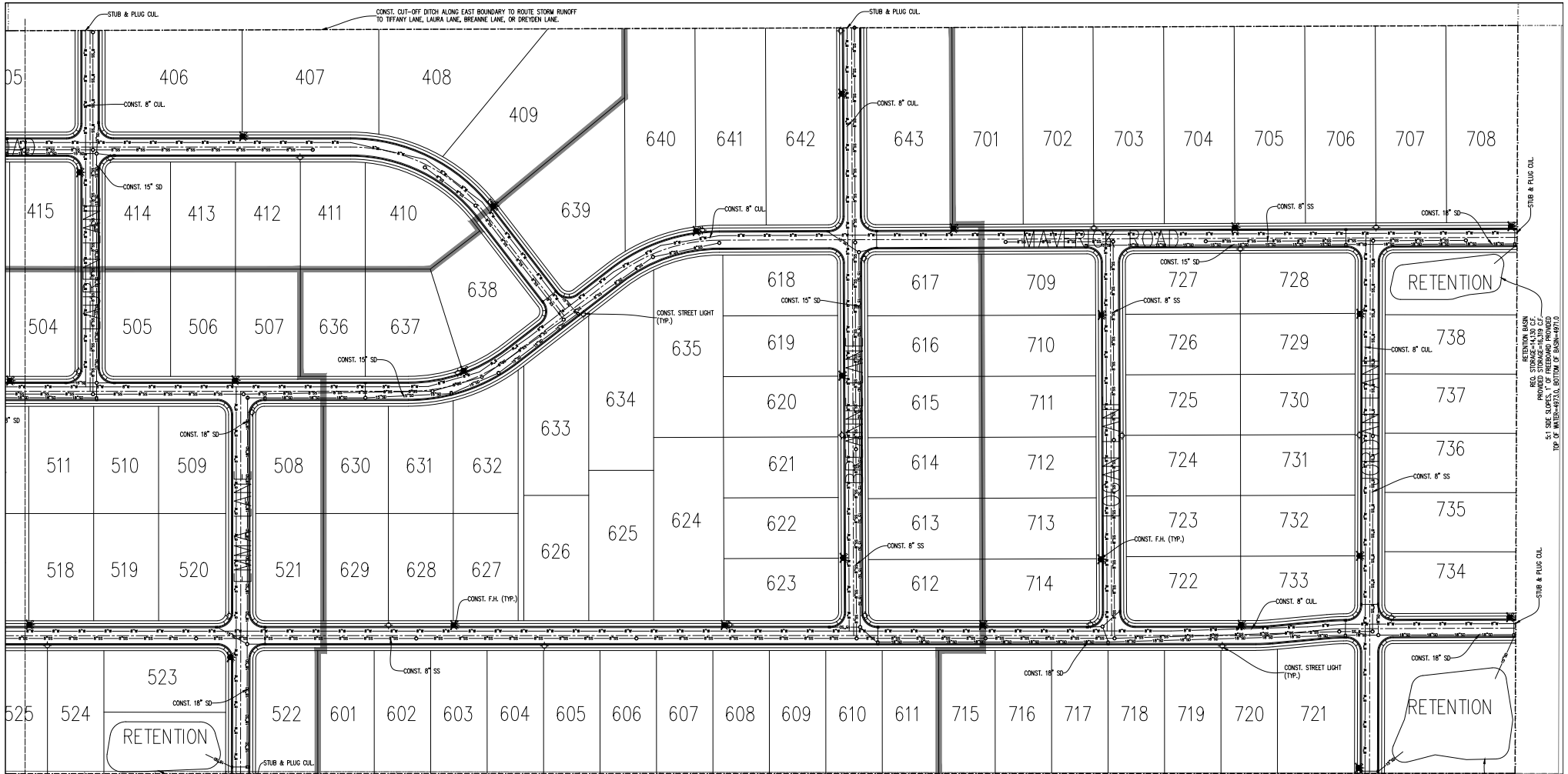
SCARLET RIDGE ESTATES

EAGLE MOUNTAIN UTAH

Drawn by:
G.J.Y.
Designed by:
G.J.Y.
Checked by:
D.W.P.

PRELIMINARY UTILITY
PLAN (NORTH)

Scale:
1"=80'
Date:
10/30/20
2 OF 5

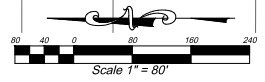


GENERAL NOTES

1. A FIRE FLOW ANALYSIS IS REQUIRED AFTER INSTALLATION OF FIRE HYDRANTS AND PRIOR TO BUILDING PERMITS.
2. ALL OUTDOOR LIGHTING MUST BE FULL CUT-OFF, DARK SKY COMPLIANT IN ACCORDANCE WITH CITY CODE.
3. TURNAROUNDS WILL BE PROVIDED AT PHASING LINES WITH A 60-FOOT RADIUS PAVED TURN AROUND OR AN APPROVED PAVED HAMMERHEAD FIRE TURN AROUND PER EAGLE MOUNTAIN STANDARDS.
4. PUBLIC UTILITY EASEMENTS ARE 10' FRONT, AND 10' REAR AND SIDES ON EACH LOT.

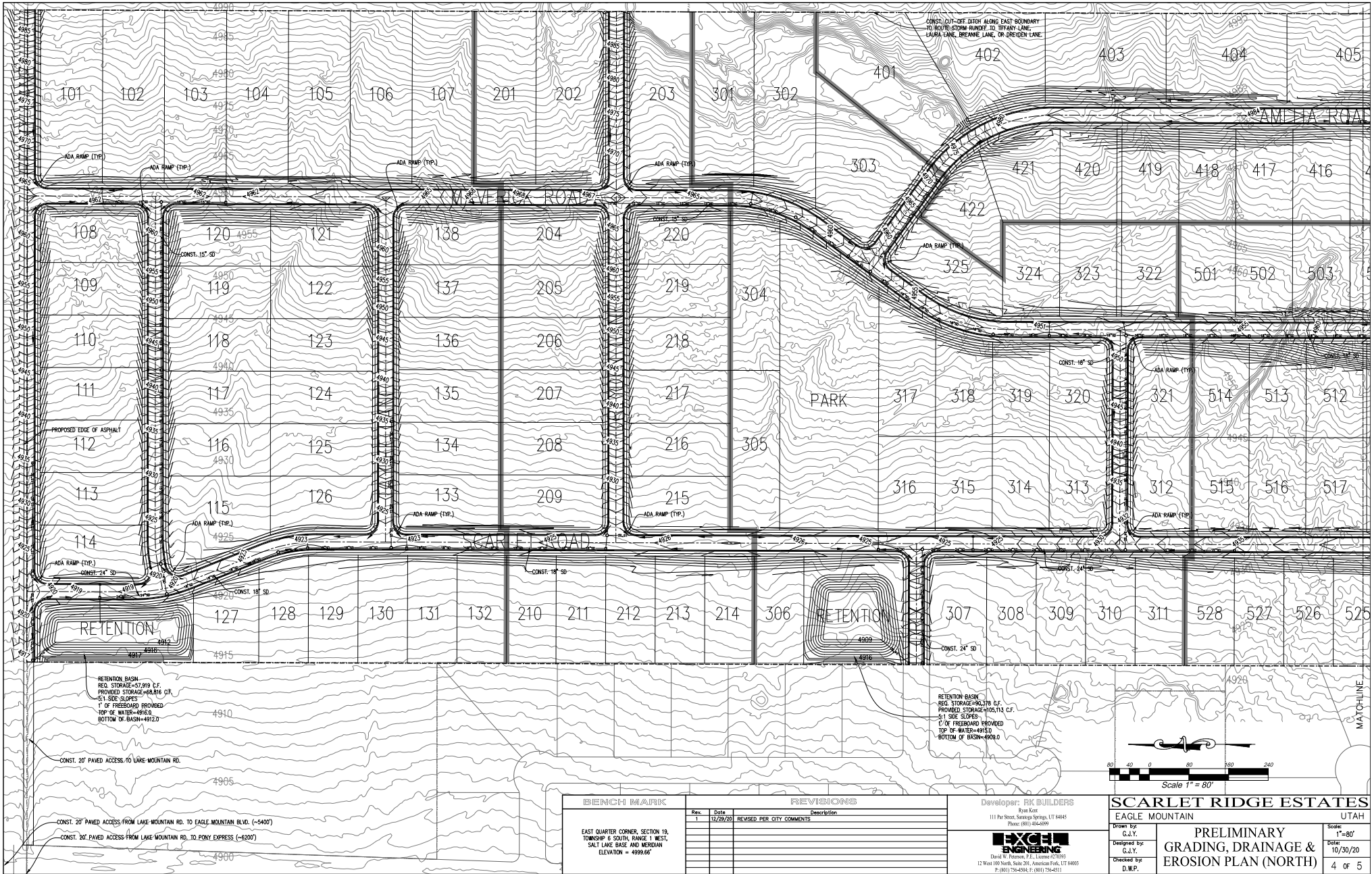
RETENTION/L.I.D. NOTES

1. ALL RETENTION BASINS ARE TO BE LINED WITH LANDSCAPE FABRIC AND COVERED WITH GRAVEL.
2. LOW IMPACT DEVELOPMENT (L.I.D.) IS ACCOMPLISHED WITH 100% INFILTRATION OF THE 100-YEAR STORM IN THE RETENTION BASINS.



BENCH MARK			REVISIONS	
EAST QUARTER CORNER, SECTION 19, TOWNSHIP 8 SOUTH, RANGE 1 WEST, SALT LAKE BASE AND MERIDIAN ELEVATION = 4999.66'			Rev.	Date
			1	12/29/20
			REVISOR PER CITY COMMENTS	

Developer: RK BUILDERS Ryan Kott 111 Pea Street, Saratoga Springs, UT 84045 Phone: (801) 464-6999		SCARLET RIDGE ESTATES EAGLE MOUNTAIN UTAH	
EXCEL ENGINEERING David W. Peterson, P.E., License #01893 12 West 100 North, Suite 201, American Fork, UT 84003 P: (801) 754-4264, F: (801) 754-4511		Drawn by: G.J.Y. Designed by: G.J.Y. Checked by: D.W.P.	PRELIMINARY UTILITY PLAN (SOUTH) Scale: 1"=80' Date: 10/30/20 3 OF 5



BENCH MARK

EAST QUARTER CORNER, SECTION 19,
TOWNSHIP 8 SOUTH, RANGE 1 WEST,
SALT LAKE BASE AND MERIDIAN
ELEVATION = 4999.66'

REVISIONS

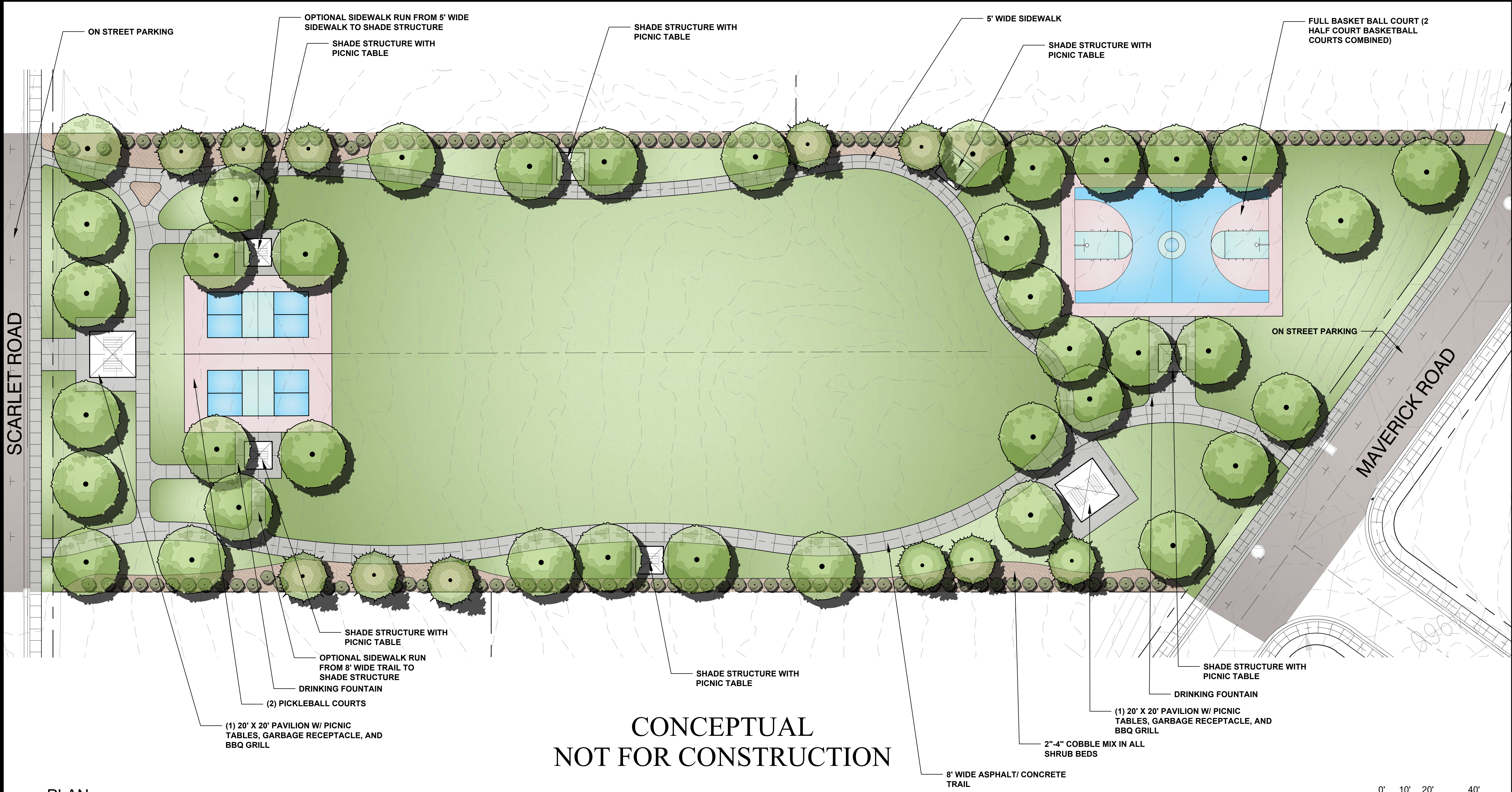
Rev.	Date	Description
1	12/29/20	REVISED PER CITY COMMENTS

Developer: RK BUILDERS
Ryan Kott
111 Pa Street, Salt Lake City, UT 84143
Phone: (801) 464-6999

EXCH
ENGINEERING
David W. Brown, P.E., License 018851
12 West 100 North, Suite 201, American Fork, UT 84003
P: (801) 754-4264, F: (801) 754-4511

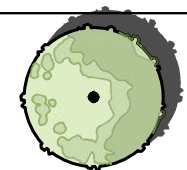
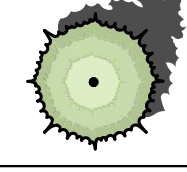
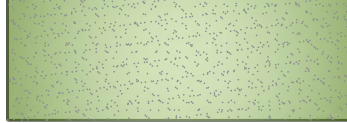
SCARLET RIDGE ESTATES
EAGLE MOUNTAIN UTAH

Drawn by: G.J.Y.
Designed by: G.J.Y.
Checked by: D.W.P.
**PRELIMINARY
GRADING, DRAINAGE &
EROSION PLAN (NORTH)**
Scale: 1"=80'
Date: 10/30/20
4 of 5



CONCEPTUAL
NOT FOR CONSTRUCTION

PLAN

PLANT SCHEDULE					
TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	REMARKS
	DEC TRE	39	Deciduous Tree	Deciduous Tree	Large deciduous shade tree
	EVE CON	11	Evergreen Conifer	Evergreen Conifer	Evergreen Conifer
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	REMARKS
	SHR MED	142	Shrub	Shrub	Medium sized shrub
GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	REMARKS
	POA IMP	80,296 sf	Poa pratensis 'Imperial Blue'	Imperial Blue Kentucky Bluegrass	Turf area with overhead rotor and spray irrigation.

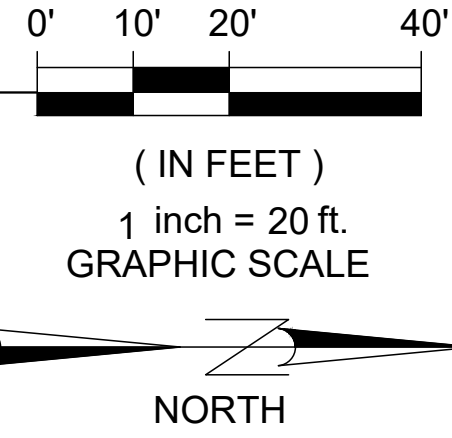
REFERENCE NOTES SCHEDULE		
SYMBOL	DESCRIPTION	QTY
	Shrub planting area with drip irrigation.	9,877 sf

PARK SUMMARY	
ITEM	QTY
CONCRETE BASKETBALL COURTS (1/2 COURT)	2
PICKLEBALL COURTS	2
8' WIDE ASPHALT/CONCRETE TRAIL (LINEAR FEET)	560
20' X 20' PAVILIONS W/ TABLES, GARBAGE RECEPTACLES, AND BBQ GRILLS	2
SHADE STRUCTURES	6
PICNIC TABLES UNDER SHADE STRUCTURES	6
DRINKING FOUNTAINS	2
TREES (LARGE SHADE TREES AND EVERGREEN CONIFERS)	50
STATISTICS	AREA / PERCENTAGE
TOTAL IMPROVED OPEN SPACE AREA	2.58 ACRES / 100%
TOTAL LANDSCAPE AREA (TURF AND SHRUB BEDS)	2.07 ACRES / 80.2%
TURF	1.84 ACRES / 71.4%
PERCENTAGE SHRUB BEDS	0.23 ACRES / 8.8%

PLEASE NOTE:
IMPROVED OPEN SPACE TO BE DEDICATED TO CITY AND
MAINTAINED BY THE CITY

Call before you Dig
Avoid cutting underground
utility lines. It's costly.

Call
811
OR
1-800-662-4111
OR
1-801-208-2100



M L L B U R N
Lawn & Landscape®

PRELIMINARY
NOT FOR
CONSTRUCTION

No.	Revisions	Date	By

IMPROVED OPEN SPACE
SCARLET RIDGE ESTATES
EAGLE MOUNTAIN UTAH

CONCEPTUAL
MASTER PLAN

Scale:
SEE PLAN
Date:
NOVEMBER 24, 2020
Drawn By:
GGG
Approved By:
GREG GRAHAM, UT LA 349753

North

Job No.
20-042

Sheet No.
L-101
1 of 1



Eagle Mountain City
1650 E Stagecoach Run
Eagle Mountain, UT 84005

RE: Scarlet Ridge Estates – Parks and Open Space Map and Statement of Explanation

Scarlet Ridge Estates is a proposed Master Development consisting of 160 acres and approximately 214 building lots, consisting of approximately (36) 1-acre and (178) ½-acre lots.

Please see the attached map showing approximate locations and acreage of areas of planned open space.

Per city code, this development is required to provide approximately 2.46 acres of improved open space and 246 amenity points. Please refer to the attached Parks and Open Space Worksheet. Our plan provides for 2.57 acres of open space and 248 amenity points, exceeding city requirements.

Scarlet Ridge Estates endeavors to be a highly coveted semi-custom and custom home active community. Its amenities and open space reflect that through the implementation of amenities such as 2 pickle ball courts, 2 basketball courts, shade structures, pavilions, BBQ areas, drinking fountains, picnic tables and 50 ornamental and shade trees throughout its several open space areas.

All open spaces within Scarlet Ridge Estates will be dedicated to Eagle Mountain City and maintained by Eagle Mountain City.

Thank you for your consideration,

Ryan Kent
RK Builders

Parks & Open Space Worksheet

Directions: Submit a completed worksheet with your preliminary plat or site plan application. Proposed amenities and park designs are subject to approval by the Planning Commission and City Council.

Required Improved Open Space

Residential Lots/Units		Required Open Space (Square Feet)		Required Open Space (Acres)
214	X 500	107,000	/ 43,560 =	2.46 Acres

Park Fee-In-Lieu (if applicable)

Required Open Space (Square Feet)		Fee-in-Lieu (w/o appraised value of open space)
107,000	X \$3.75***	\$ 401,250

Required Amenity Points

Required Open Space (Acres)		Required Amenity Points
2.46	X 100	246

Parks & Improved Open Space Elements/Amenities

Park Feature / Improvement	Points Available	Proposed Quantities	Proposed Points
Bench/Picnic Table (w/ shade structure or trees)	2	6	12
Bicycle Rack (4+ bikes)	2		
Trees (5) (a majority must be shade trees)	2	50 trees	20
Shade Structure	4	6	24
Drinking Fountain	5	2	10
Asphalt or Concrete Trails - 8ft wide, excluding sidewalks along streets (per 100 linear feet)	6	500 L/F	30
Parking** (5 Stalls)	6		
Swings (4+ Swings)	7		
Concrete Basketball Court (1/2 Court)	20	2	40
Pavilion w/tables, garbage receptacles, barbeques (per 100 square feet)	4	400 sq ft x 2	32
Playground Equipment* Per \$1,000	2		
Splash Pad* Per \$1,000	2		
Pickleball court (per court)	40	2	80
Tennis court (6,600 sq ft or 55' x 120')	100		
Sports court (6,600 sq ft or 55'x120')	100		
Restroom (600+ sq ft)	100		
Restroom (1,200+ sq ft)	200		
Public Art	Varies		
Other:	Varies		
Other:	Varies		
Other:	Varies		

Total FOR SCARLET RIDGE MASTER DEVELOPMENT

248

* Public art should reflect the neighborhood or community identity or culture. Creativity is encouraged in playground equipment and splash pads, and may be awarded more points than Standard Equipment. Costs for playground equipment and splash pads reflect equipment costs only.

** No more than 33% of the required amenity points may be met by a combination of trails and parking. Parking must be adjacent to improved open space, and must be in addition to any required parking for the development.

*** Plus the appraised value of the required open space being applied towards the fee-in-lieu.



Eagle Mountain City
1650 E Stagecoach Run
Eagle Mountain, UT 84005

RE: Scarlet Ridge Estates – Economic Analysis

Scarlet Ridge Estates is a proposed Master Development consisting of 160 acres and approximately 214 building lots, consisting of approximately (36) 1-acre and (178) ½-acre lots.

By nature of the location of proposed community, there is a significant amount of off-site development that must occur prior to on-site construction. Scarlet Ridge Estates is not requesting the use of an Assessment Area or any other financial cooperation from Eagle Mountain City. All acquisition and development costs will be funded through private equity partners, bank loans or other traditional methods using the property as collateral, and will not unduly burden the city, adjoining landowners or other property owners in the city.

Over the last 12 months we have been working on entitlements, utility access, Rights of Way, and other easements to protect and provide to the development area. We have worked with adjacent landowners as well as the city, and feel confident we now have a viable, serviceable development.

The following is a summary of required access and utilities and intended way of procurement and fee schedule.

Access:

We have secured written access agreements with the adjacent landowners to provide access to the development and have recommendations from the Fire Chief. Tiffany Lane is a planned 77' ROW to extend from Pony Express Parkway going east and will connect to Scarlet Ridge Estates and parallel its northern boundary. Tiffany Lane will neck down to a 53' ROW at the Lake Mountain Rd. intersection.

Eagle Mountain City requires a 40' strip of asphalt beginning at Pony Express Parkway going east and parallel the northern property line.,

Additional access is available via the existing Lake Mountain Road, beginning at Eagle Mountain Blvd. extending south to the northern property boundary.

All costs associated with Access will be funded through private equity partners, bank loans or other traditional methods.

Off-Site Utilities:

Gas, power, fiber and water are accessible from the existing Lake Mountain Road within a reasonable distance of the northwest property corner.

A sewer line large enough to service Scarlet Ridge Estates and some of the future adjacent developments must be installed within the 40' future Tiffany Lane beginning at Pony Express parkway extending east to Scarlet Ridge Estates.

Storm water will be collected and retained on site.

All Off-Site Utilities will be funded through private equity partners, bank loans or other traditional methods.

On-Site Utilities:

Utilities will be designed and approved through master preliminary plan, and detailed through phasing as development progresses into final plats. Civil Engineer will provide an accurate Engineer's Estimate prior to beginning any construction.

All On-Site Utilities will be funded through private equity partners, bank loans or other traditional methods.

Water Rights:

Water rights will be purchased through the city utilizing the CUP culinary water.

All Water Rights will be purchased through private equity partners, bank loans or other traditional methods.

Open Space and Parks:

Per Eagle Mountain city development standards, approximately 2.46 acres of improved open space is required for the development. Amenities such as pickle ball courts, basketball courts, pavilions, bike racks, picnic tables, shade trees, and/or the like will be installed in the dedicated open spaces.

All Parks and Open Space improvements will be funded through private equity partners, bank loans or other traditional methods.

Please let me know if you have any questions.

A handwritten signature in blue ink, appearing to read 'R-K-J'.

Ryan Kent
RK Builders



Eagle Mountain City
1650 E Stagecoach Run
Eagle Mountain, UT 84005

RE: Scarlet Ridge Estates – Compatibility Statement and Zoning Districts

Scarlet Ridge Estates is a proposed Master Development consisting of 160 acres and approximately 214 building lots, requesting a rezone to Rural Density Two. The current zoning is Agricultural, and has been slated as future Rural Density Two per the Eagle Mountain City Future Land Use Map.

As such, the average lot size required is $\frac{1}{2}$ acres. Scarlet Ridge Estates development meets this requirement with an overall density of approximately 1.32 lots per acre.

Scarlet Ridge Estates is proposing approximately (36) 1-acre and (178) $\frac{1}{2}$ -acre lots.

The surrounding land uses are Foothill Residential and Rural Density Two, making Scarlet Ridge Estates compatible with the Zoning Districts and in compliance with all Eagle Mountain City zoning requirements.

Thank you for your consideration,

Ryan Kent
RK Builders

Scarlet Ridge Environmental Impact Report

November 30, 2020

The purpose of this report is to detail potential impacts of the proposed subdivision on existing vegetation and wildlife, water courses, sources of water, waste generation, noise, etc.

Vegetation and wildlife:

The subject property is sparsely vegetated and has not been irrigated in the past. Due to the sparse vegetation, little wildlife other than insects and small desert wildlife will occasionally cross through this property. No known endangered plants are located on this property. The impact on vegetation and wildlife will be minimal.

Water courses and sources of water

There are no continuous flowing water sources on or near this property. Additionally, there are no ground water wells or other sources of water located on this property. There are a few shallow drainages located on the property that have been created from large hillside runoff during past large Spring and Summer rainfall events. Bench drains will be designed and installed on the East side of the property to intersect and divert runoff into proposed public roadways. The bench drains will serve to protect the proposed residences on this property.

Waste Generation

All waste generated during land development and home construction will be disposed of properly by the respective contractors. Waste generated from the proposed residences will be handled by the city waste disposal services.

Noise

The primary sources of noise generated from this site will be associated with land development construction, home construction, and vehicle travel. This noise generation is temporary in nature and is consistent with land development activities and long-term residences.

Sensitive Lands

There are no known sensitive lands located on this property.

Historical Sites

There are no known historical sites on this vacant property.



Scarlet Ridge

Average Lot Slope

Lot#	Factor	S (%)	L (ft)	L (ft)	A (sf)	A (acres)
401	0.00229	11.2	2	3089	55120	1.27
503	0.00229	10.1	2	1118	22053	0.51
511	0.00229	13.6	2	1493	21850	0.50
618	0.00229	10.5	2	1153	21845	0.50
640	0.00229	12.6	2	2899	46060	1.06
642	0.00229	18.7	2	4117	43926	1.01
720	0.00229	11.1	2	1218	21827	0.50
732	0.00229	12.6	2	1380	21793	0.50
733	0.00229	11.8	2	1299	21893	0.50

*All other lots have no slopes over 25%



SURFACE SLOPE DATA			
NUMBER	MINIMUM SLOPE	MAXIMUM SLOPE	COLOR
1	0.000%	15.000%	Green
2	15.000%	25.000%	Red
3	25.000%	30.000%	Blue
4	30.000%	100.000%	Purple



David W. Peterson, P.E., License #21093
12 West 100 North, Suite 200, American Fork, UT 84003
P: (801) 756-4504; F: (801) 756-4511

SCARLET RIDGE ESTATES

EAGLE MOUNTAIN

UTAH

Scale: 1"=160'

Date: 12/01/20

1 OF 1

Drawn by: G.A.Y.

Designed by: G.A.Y.

Checked by: D.W.P.

SLOPE ANALYSIS PLAN

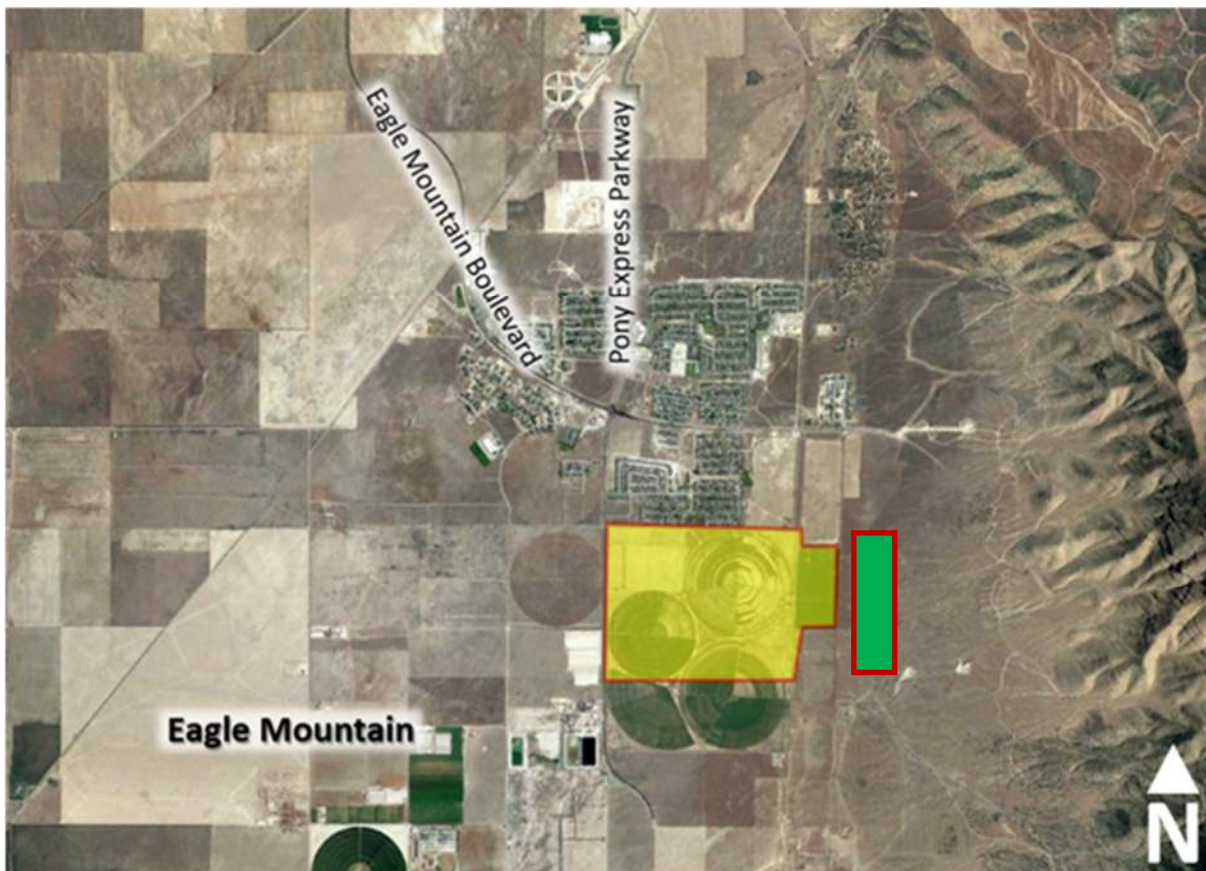
MEMORANDUM

Date: December 28, 2020
To: D. Ryan Kent, RK Builders
From: Hales Engineering

Subject: Eagle Mountain Scarlet Ridge Development Traffic Study

UT20-1792

This memorandum discusses the Scarlet Ridge project located in Eagle Mountain, Utah. The Scarlet Ridge project is located east of the Ault Farm project and Lake Mountain Road, and south of Eagle Mountain Boulevard.



**Figure 1: Vicinity map showing Scarlet Ridge (green)
and Ault Farm (yellow) in Eagle Mountain, Utah**

other developments in the vicinity were included in the east / west traffic due to the use of the MAG / WFRC travel demand model for background growth and therefore have been included within the Ault Farm TIS, August 12, 2020, for roadway sizing and classification. It should be noted that during the Ault Farms traffic discussion with Eagle Mountain, it was identified that future 2025 traffic volumes at the Eagle Mountain Boulevard / Pony Express Parkway intersection will overwhelm the existing roundabout and that eventually, the intersection should be upgraded to a traffic signal. In addition, it was recommended that between 2025 and 2040 that Airport Road should be constructed. Figure 2 shows the projected 2040 traffic volumes on the roads in the vicinity of Scarlet Ridge.



Figure 2: Projected 2040 traffic volumes near Scarlet Ridge

Conclusions / Recommendations

Based on the future cumulative analyses of the Ault Farm TIS, traffic from the Scarlet Ridge development were included within the full build analyses and therefore the roadway sizing recommended in the Ault Farm TIS for both the North Collector (2-lanes with turn pockets at major intersections) within a 77-foot right-of-way from Pony Express to Lake Mountain Road, and within a 53-foot right-of-way from Lake Mountain Road to the east side of Scarlet Ridge (roadway widths were discussed at a meeting on Dec. 17th, 2020, without Hales Engineering, and are repeated

here as requested by the meeting attendees) and 3400 North (3-lanes with right-turn pockets at major intersections) are still valid and will remain as previously planned / recommended. It is also recommended that Airport Road be constructed between years 2025 and 2040.

Hales Engineering did not complete a full traffic impact study for the Scarlet Ridge project.

Please let us know if you have any questions or need further information with regard to the proposed Scarlet Ridge development.

Scarlet Ridge Estates

Preliminary Storm Drainage Report

October 30, 2020

Introduction:

The purpose of this study is to show how the storm runoff from Scarlet Ridge Estates will be adequately conveyed and retained. This report will also calculate the peak storm and determine the pipe sizes required to collect the storm water for the 10-year 24-hour storm event. All rainfall data was obtained from NOAA Atlas 14, Volume 1, Version 5 for this area of Eagle Mountain.

Retention Basins Calculations:

The storm water runoff from Scarlet Ridge is designed to flow into five retention basins and infiltrate into the ground. The measured percolation rate was determined to be 2 minutes per inch or 3.5 minutes per inch depending on the test hole. To be conservative, a percolation rate of 5 minutes per inch was used to calculate the infiltration rate for each basin. The percolation test results are included in the appendix. Four of the basins are located along the west side of the project and one is located near the southeast corner of the site. The retention basins are sized to store the 100-year storm event with one foot of freeboard. The calculations for the retention basin sizing are shown on the attached spreadsheets.

Overflow:

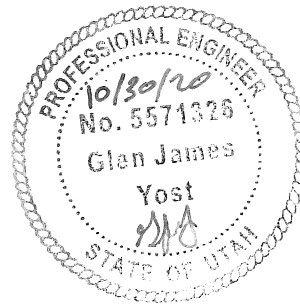
If one of the retention basins was to overflow, the storm runoff would bubble up thru the storm drain grate in the street and flow into the proposed roadways. The basins are located at the low side of the project and no lots in this subdivision or lots in adjacent subdivisions would be in danger of flooding from storm runoff from this subdivision.

Pipe Calculations:

The attached subarea map shows how Scarlet Ridge was divided into different subareas to calculate the peak flow in each pipe section. The pipes were sized for the 10-year storm event. The peak flow for each subarea was determined using the rational method. The time of concentration was calculated using the Kinematic Wave formula by determining the longest travel path of the combined subareas contributing to that portion of storm drain pipe. The attached 'Time of Concentration Table' shows the time of concentration for each subarea. The sizes of storm drain pipes throughout this subdivision have been sized and checked to verify sufficient capacity for the 10-year storm event. The attached 'Rational Formula Table' shows the peak flow calculations as well as the required pipe sizes of slopes of the storm drain pipes.

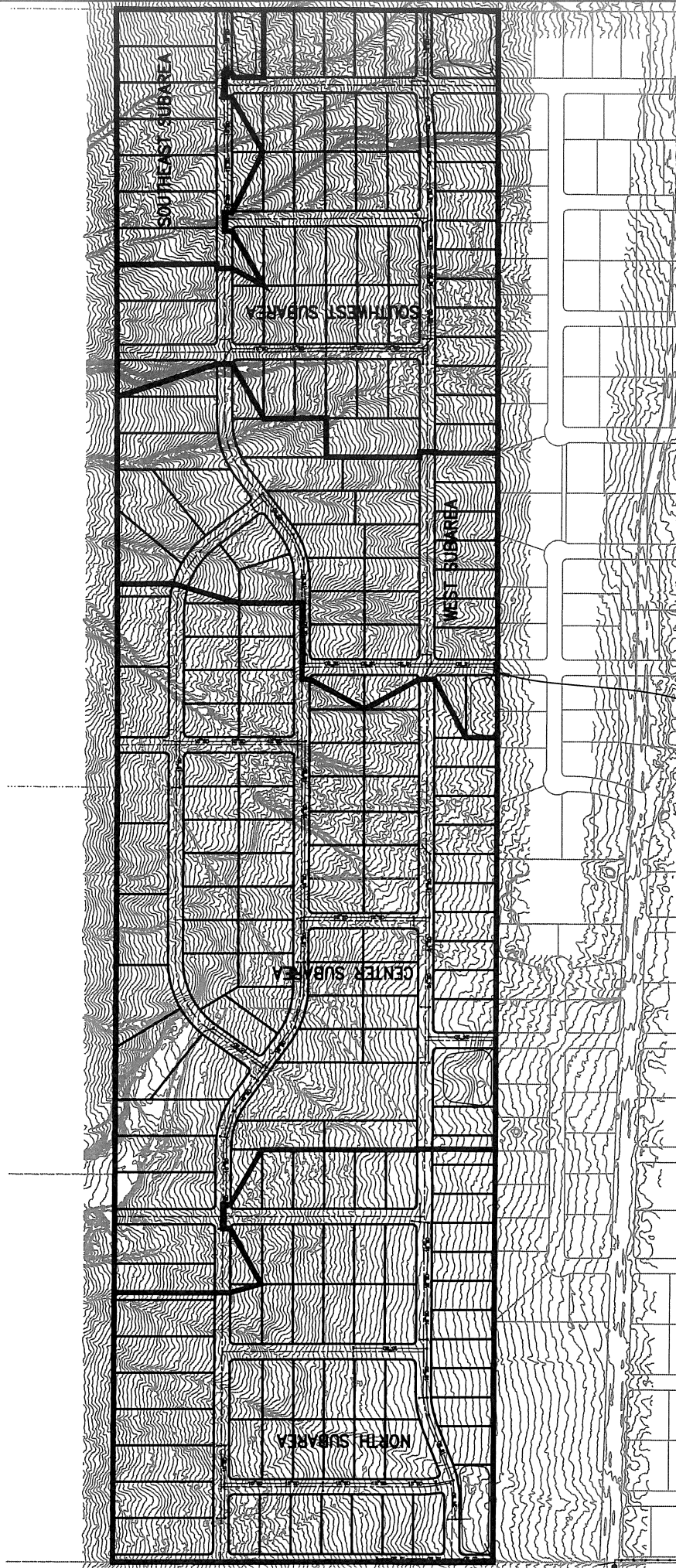
Conclusion:

The proposed retention basins can store the 100-year storm event and the proposed storm drain piping throughout this project is adequate to collect and pass the 10-year peak storm water runoffs.



Appendix

- Scarlet Ridge Estates Subarea Map
- Scarlet Ridge – North Basin 100-year Storm Water Retention Calculations
- Scarlet Ridge – Center Basin 100-year Storm Water Retention Calculations
- Scarlet Ridge – West Basin 100-year Storm Water Retention Calculations
- Scarlet Ridge – Southwest Basin 100-year Storm Water Retention Calculations
- Scarlet Ridge – Southeast Basin 100-year Storm Water Retention Calculations
- Scarlet Ridge 10-year Rational Formula Table
- Scarlet Ridge 10-year Time of Concentration Table
- NOAA Atlas 14, Volume 1, Version 5 Point Precipitation Estimates
- Percolation Test Results



BASIN OVERFLOW IS ACCOMPLISHED WITH THE STORM
WATER BUBBLING UP IN THE CATCH BASIN AT THE
TOP OF WATER ELEVATION & OVERFLOWING INTO
THE ROADWAY (TYPICAL FOR ALL BASINS)



SCARLET RIDGE ESTATES SUBAREA MAP

Scarlet Ridge - North Basin
100-Year Storm Water Calculations
Retention Calculations
30-Oct-20

The storm drain calculations were performed using the rational method.

Hydrologic Calculations

CA CALCULATION

	C	Area (sf)	C * A	
Roadway Area	0.85	267911	227724	
Lot Impevious Area (3,500 sf/lot)	0.9	189000	170100	
Open Space/Lot Landscape	0.15	1194245	179137	
Total CA		1651156	576961	0.35 c-value

The measured percolation rate used was 5 minutes per inch.

The infiltration area will be the average depth surface area of the pond.

The infiltration area is 17,086 s.f.

The infiltration rate = (17,086 s.f.)(1 inch/5 min.)(1 ft/12 inch)(1 min./60 sec.) = 4.75 cfs

Retention calculations

Lapsed Time (min.)	Rainfall intensity (in/hr)	Total Rainfall (in)	Rainfall Volume (cu.ft.)	Release Volume (cu.ft.)	Required Storage (cu.ft.)
A	B	C	D	E	F
5	5.95	0.50	23848	1424	22424
10	4.53	0.76	36300	2848	33453
15	3.74	0.94	44955	4272	40683
30	2.52	1.26	60581	8543	52038
60	1.56	1.56	75005	17086	57919
120	0.84	1.68	80775	34172	46603
180	0.56	1.69	81255	51258	29997
360	0.30	1.78	85583	102516	-16933
720	0.17	1.98	95199	205032	-109833
1440	0.09	2.16	103853	410064	-306211

Required Retention Storage = 57,919 cf

Notes:

A, B, & C are based upon NOAA Atlas 14, Volume 1, Version 5 rainfall data for Eagle Mountain

D = C / (12 inches/foot) x total acreage of site x 43,560 sf/acre x run-off coefficient, where Q=CIA and V=CiA

E = infiltration rate x A x 60 sec.

F = D - E to determine storage volume

Retention pond

	Elevation	Volume (cf)
1' of Freeboard provided	4917	94482
Top of water surface	4916	68816
	4915	46692
	4914	27953
	4913	12441
Bottom of Pond	4912	0

Storm Drain Discussion

1. Retention basin provides storage volume of 68,816 cf which exceeds required storage volume of 57,919 cf

Scarlet Ridge - Center Basin
100-Year Storm Water Calculations
Retention Calculations
30-Oct-20

The storm drain calculations were performed using the rational method.

Hydrologic Calculations

CA CALCULATION

	C	Area (sf)	C * A	
Roadway Area	0.85	380401	323341	
Lot Impevious Area (3,500 sf/lot)	0.9	252000	226800	
Open Space/Lot Landscape	0.15	1852800	277920	
Total CA		2485201	828061	0.33 c-value

The measured percolation rate used was 5 minutes per inch.

The infiltration area will be the average depth surface area of the pond.

The infiltration area is 17,270 s.f.

The infiltration rate = (17,270 s.f.)(1 inch/5 min.)(1 ft/12 inch)(1 min./60 sec.) = 4.80 cfs

Retention calculations

Lapsed Time (min.)	Rainfall intensity (in/hr)	Total Rainfall (in)	Rainfall Volume (cu.ft.)	Release Volume (cu.ft.)	Required Storage (cu.ft.)
A	B	C	D	E	F
5	5.95	0.50	34227	1439	32787
10	4.53	0.76	52099	2878	49220
15	3.74	0.94	64520	4318	60202
30	2.52	1.26	86946	8635	78311
60	1.56	1.56	107648	17270	90378
120	0.84	1.68	115929	34540	81389
180	0.56	1.69	116619	51810	64809
360	0.30	1.78	122829	103620	19209
720	0.17	1.98	136630	207240	-70610
1440	0.09	2.16	149051	414480	-265429

Required Retention Storage = 90,378 cf

Notes:

A, B, & C are based upon NOAA Atlas 14, Volume 1, Version 5 rainfall data for Eagle Mountain

D = C / (12 inches/foot) x total acreage of site x 43,560 sf/acre x run-off coefficient, where Q=CiA and V=CiA

E = infiltration rate x A x 60 sec.

F = D - E to determine storage volume

Retention pond

	Elevation	Volume (cf)
1' of Freeboard provided	4916	132132
Top of water surface	4915	105113
	4914	81071
	4913	59847
	4912	41286
	4911	25229
	4910	11519
Bottom of Pond	4909	0

Storm Drain Discussion

- Retention basin provides storage volume of 105,113 cf which exceeds required storage volume of 90,378 cf

Scarlet Ridge - West Basin
100-Year Storm Water Calculations
Retention Calculations
30-Oct-20

The storm drain calculations were performed using the rational method.

Hydrologic Calculations

CA CALCULATION

	C	Area (sf)	C * A	
Roadway Area	0.85	148725	126416	
Lot Impevious Area (3,500 sf/lot)	0.9	108500	97650	
Open Space/Lot Landscape	0.15	779870	116981	
Total CA		1037095	341047	0.33 c-value

The measured percolation rate used was 5 minutes per inch.

The infiltration area will be the average depth surface area of of the pond.

The infiltration area is 9,152 s.f.

The infiltration rate = (9,152 s.f.)(1 inch/5 min.)(1 ft/12 inch)(1 min./60 sec.) = 2.54 cfs

Retention calculations

Lapsed Time (min.)	Rainfall intensity (in/hr)	Total Rainfall (in)	Rainfall Volume (cu.ft.)	Release Volume (cu.ft.)	Required Storage (cu.ft.)
A	B	C	D	E	F
5	5.95	0.50	14097	763	13334
10	4.53	0.76	21458	1525	19932
15	3.74	0.94	26573	2288	24285
30	2.52	1.26	35810	4576	31234
60	1.56	1.56	44336	9152	35184
120	0.84	1.68	47747	18304	29443
180	0.56	1.69	48031	27456	20575
360	0.30	1.78	50589	54912	-4323
720	0.17	1.98	56273	109824	-53551
1440	0.09	2.16	61388	219648	-158260

Required Retention Storage = 35,184 cf

Notes:

A, B, & C are based upon NOAA Atlas 14, Volume 1, Version 5 rainfall data for Eagle Mountain

D = C / (12 inches/foot) x total acreage of site x 43,560 sf/acre x run-off coefficient, where Q=CIA and V=CiA

E = infiltration rate x A x 60 sec.

F = D - E to determine storage volume

Retention pond

	Elevation	Volume (cf)
1' of Freeboard provided	4926	52006
Top of water surface	4925	37078
	4924	24571
	4923	14327
	4922	6189
Bottom of Pond	4921	0

Storm Drain Discussion

1. Retention basin provides storage volume of 37,078 cf which exceeds required storage volume of 35,184 cf

Scarlet Ridge - Southwest Basin
100-Year Storm Water Calculations
Retention Calculations
30-Oct-20

The storm drain calculations were performed using the rational method.

Hydrologic Calculations

CA CALCULATION

	C	Area (sf)	C * A	
Roadway Area	0.85	202107	171791	
Lot Impevious Area (3,500 sf/lot)	0.9	161000	144900	
Open Space/Lot Landscape	0.15	933846	140077	
Total CA		1296953	456768	0.35 c-value

The measured percolation rate used was 5 minutes per inch.

The infiltration area will be the average depth surface area of the pond.

The infiltration area is 22,356 s.f.

The infiltration rate = (22,356 s.f.)(1 inch/5 min.)(1 ft/12 inch)(1 min./60 sec.) = 6.21 cfs

Retention calculations

Lapsed Time (min.)	Rainfall intensity (in/hr)	Total Rainfall (in)	Rainfall Volume (cu.ft.)	Release Volume (cu.ft.)	Required Storage (cu.ft.)
A	B	C	D	E	F
5	5.95	0.50	18880	1863	17017
10	4.53	0.76	28738	3726	25012
15	3.74	0.94	35590	5589	30001
30	2.52	1.26	47961	11178	36783
60	1.56	1.56	59380	22356	37024
120	0.84	1.68	63947	44712	19235
180	0.56	1.69	64328	67068	-2740
360	0.30	1.78	67754	134136	-66382
720	0.17	1.98	75367	268272	-192905
1440	0.09	2.16	82218	536544	-454326

Required Retention Storage = 37,024 cf

Notes:

A, B, & C are based upon NOAA Atlas 14, Volume 1, Version 5 rainfall data for Eagle Mountain

D = C / (12 inches/foot) x total acreage of site x 43,560 sf/acre x run-off coefficient, where Q=CIA and V=CiA

E = infiltration rate x A x 60 sec.

F = D - E to determine storage volume

Retention pond

	Elevation	Volume (cf)
1' of Freeboard provided	4921	71838
Top of water surface	4920	44791
	4919	20897
Bottom of Pond	4918	0

Storm Drain Discussion

- Retention basin provides storage volume of 44,791 cf which exceeds required storage volume of 37,024 cf

Scarlet Ridge - Southeast Basin
100-Year Storm Water Calculations
Retention Calculations
30-Oct-20

The storm drain calculations were performed using the rational method.

Hydrologic Calculations

CA CALCULATION

	C	Area (sf)	C * A	
Roadway Area	0.85	77135	65565	
Lot Impevious Area (3,500 sf/lot)	0.9	42000	37800	
Open Space/Lot Landscape	0.15	451918	67788	
Total CA		571053	171152	0.30 c-value

The measured percolation rate used was 5 minutes per inch.

The infiltration area will be the average depth surface area of of the pond.

The infiltration area is 8,410 s.f.

The infiltration rate = (8,410 s.f.)(1 inch/5 min.)(1 ft/12 inch)(1 min./60 sec.) = 2.34 cfs

Retention calculations

Lapsed Time (min.)	Rainfall intensity (in/hr)	Total Rainfall (in)	Rainfall Volume (cu.ft.)	Release Volume (cu.ft.)	Required Storage (cu.ft.)
A	B	C	D	E	F
5	5.95	0.50	7074	677	6398
10	4.53	0.76	10768	1353	9415
15	3.74	0.94	13336	2030	11306
30	2.52	1.26	17971	4060	13911
60	1.56	1.56	22250	8120	14130
120	0.84	1.68	23961	16240	7721
180	0.56	1.69	24104	24360	-256
360	0.30	1.78	25388	48720	-23332
720	0.17	1.98	28240	97440	-69200
1440	0.09	2.16	30807	194880	-164073

Required Retention Storage = 14,130 cf

Notes:

A, B, & C are based upon NOAA Atlas 14, Volume 1, Version 5 rainfall data for Eagle Mountain

D = C / (12 inches/foot) x total acreage of site x 43,560 sf/acre x run-off coefficient, where Q=CiA and V=CiA

E = infiltration rate x A x 60 sec.

F = D - E to determine storage volume

Retention pond

	Elevation	Volume (cf)
1' of Freeboard provided	4974	27851
Top of water surface	4973	16319
	4972	7088
Bottom of Pond	4971	0

Storm Drain Discussion

- Retention basin provides storage volume of 16,319 cf which exceeds required storage volume of 14,130 cf

Scarlet Ridge - 10-year Storm - Rational Formula Table

C = Runoff Coefficient

I (10-yr) = Intensities were taken from NOAA Atlas 14, Volume 1, Version 5 for this area

Assume manning's n=0.012

Subarea	Total area (s.f.)	Total area (acres)	C	CA
North	1651156	37.91	0.35	13.27
Center	2485201	57.05	0.33	18.83
West	1037095	23.81	0.33	7.86
Southwest	1296953	29.77	0.35	10.42
Southeast	571053	13.11	0.30	3.93

Combined Subareas	Tc (min.)	I in/hr	Qt (cfs) Combined	Assumed Pipe Slope	Pipe size required (in.)	Pipe Capacity (cfs)
North	30	1.31	17.4	0.006	24	19.0
Center	45	0.98	18.5	0.0075	24	21.2
West	30	1.31	10.3	0.012	18	12.5
Southwest	30	1.31	13.7	0.018	18	15.3
Southeast	30	1.31	5.2	0.0075	18	9.9

*-Time of concentration was taken from the Time of Concentration Table in the appendix and was rounded to the nearest Tc associated with the intensity table (i.e. 15,30, 45, or 60 minutes).

Scarlet Ridge 10-year Time of Concentration Table

Subarea(s)	Lot/Overland Flow		tc (Minutes)	Street Flow		tc (Minutes)	Total tc (Minutes)
	L	N		I	N		
North	100	0.45	1.94	0.02	1730	0.012	19.52
Center	100	0.45	1.94	0.02	3400	0.012	29.27
West	100	0.45	1.94	0.02	1830	0.012	20.18
Southwest	100	0.45	1.94	0.02	2200	0.012	22.54
Southeast	100	0.45	1.94	0.02	930	0.012	15.75
							38

*-The time of concentration was calculated using the Kinematic Wave formula and is the longest amount of time it takes for water to travel from the upper portion to the lower portion of the combined subareas listed. The Total tc used in the Rational Formula Table (see appendix) is the Total tc value rounded to the nearest standard Rainfall Intensity measurement as shown in the appendix (ie 15 min, 30 min, etc.)



NOAA Atlas 14, Volume 1, Version 5
 Location name: Eagle Mountain, Utah, USA*
 Latitude: 40.28°, Longitude: -111.9904°
 Elevation: 4949.11 ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic,
 Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel
 Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps_&_aerials](#)

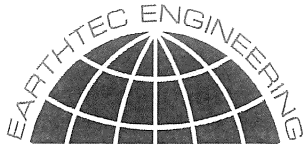
PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.116 (0.100-0.137)	0.148 (0.128-0.175)	0.206 (0.177-0.244)	0.257 (0.218-0.307)	0.337 (0.280-0.403)	0.411 (0.333-0.494)	0.496 (0.392-0.600)	0.595 (0.454-0.730)	0.751 (0.548-0.936)	0.890 (0.624-1.13)
10-min	0.177 (0.152-0.209)	0.225 (0.196-0.267)	0.314 (0.269-0.371)	0.391 (0.332-0.467)	0.513 (0.426-0.614)	0.626 (0.507-0.752)	0.755 (0.596-0.913)	0.905 (0.691-1.11)	1.14 (0.833-1.43)	1.35 (0.950-1.71)
15-min	0.219 (0.189-0.259)	0.279 (0.242-0.331)	0.389 (0.334-0.461)	0.485 (0.411-0.578)	0.636 (0.528-0.761)	0.776 (0.629-0.932)	0.935 (0.738-1.13)	1.12 (0.857-1.38)	1.42 (1.03-1.77)	1.68 (1.18-2.13)
30-min	0.295 (0.254-0.349)	0.376 (0.326-0.445)	0.524 (0.449-0.620)	0.654 (0.554-0.779)	0.857 (0.712-1.02)	1.04 (0.847-1.26)	1.26 (0.994-1.52)	1.51 (1.15-1.85)	1.91 (1.39-2.38)	2.26 (1.59-2.86)
60-min	0.366 (0.315-0.432)	0.465 (0.404-0.551)	0.648 (0.556-0.767)	0.809 (0.685-0.964)	1.06 (0.881-1.27)	1.29 (1.05-1.55)	1.56 (1.23-1.89)	1.87 (1.43-2.29)	2.36 (1.72-2.95)	2.80 (1.96-3.54)
2-hr	0.450 (0.401-0.518)	0.566 (0.501-0.653)	0.743 (0.654-0.856)	0.909 (0.792-1.05)	1.17 (0.995-1.35)	1.40 (1.17-1.64)	1.68 (1.36-1.97)	2.00 (1.56-2.38)	2.50 (1.87-3.04)	2.95 (2.12-3.66)
3-hr	0.503 (0.454-0.570)	0.626 (0.563-0.707)	0.803 (0.718-0.907)	0.958 (0.850-1.08)	1.20 (1.05-1.37)	1.42 (1.22-1.65)	1.69 (1.41-1.99)	2.01 (1.62-2.41)	2.52 (1.94-3.07)	2.98 (2.20-3.70)
6-hr	0.642 (0.590-0.707)	0.792 (0.725-0.872)	0.972 (0.884-1.07)	1.13 (1.03-1.25)	1.36 (1.22-1.51)	1.55 (1.37-1.73)	1.79 (1.55-2.02)	2.08 (1.76-2.43)	2.56 (2.11-3.10)	3.00 (2.40-3.73)
12-hr	0.791 (0.728-0.867)	0.971 (0.892-1.07)	1.18 (1.08-1.29)	1.35 (1.23-1.48)	1.59 (1.44-1.75)	1.78 (1.59-1.97)	1.98 (1.75-2.21)	2.24 (1.95-2.54)	2.67 (2.26-3.13)	3.03 (2.50-3.77)
24-hr	0.933 (0.867-1.01)	1.14 (1.06-1.24)	1.37 (1.27-1.47)	1.55 (1.43-1.67)	1.79 (1.65-1.93)	1.97 (1.82-2.12)	2.16 (1.98-2.33)	2.35 (2.14-2.56)	2.69 (2.35-3.16)	3.06 (2.52-3.81)
2-day	1.07 (0.992-1.15)	1.31 (1.21-1.41)	1.55 (1.45-1.68)	1.76 (1.64-1.89)	2.03 (1.89-2.18)	2.24 (2.08-2.40)	2.46 (2.26-2.64)	2.67 (2.44-2.87)	2.94 (2.68-3.22)	3.17 (2.85-3.85)
3-day	1.17 (1.08-1.26)	1.42 (1.32-1.55)	1.70 (1.57-1.84)	1.93 (1.78-2.09)	2.24 (2.07-2.42)	2.48 (2.28-2.68)	2.73 (2.50-2.95)	2.97 (2.71-3.22)	3.30 (2.99-3.62)	3.57 (3.20-4.10)
4-day	1.26 (1.16-1.38)	1.54 (1.42-1.68)	1.84 (1.70-2.01)	2.09 (1.93-2.28)	2.44 (2.25-2.66)	2.72 (2.49-2.96)	3.00 (2.74-3.27)	3.28 (2.98-3.58)	3.67 (3.30-4.01)	3.97 (3.55-4.36)
7-day	1.49 (1.37-1.63)	1.82 (1.68-1.99)	2.17 (2.00-2.36)	2.46 (2.26-2.67)	2.84 (2.61-3.08)	3.13 (2.87-3.39)	3.42 (3.14-3.71)	3.71 (3.39-4.03)	4.10 (3.71-4.46)	4.38 (3.95-4.78)
10-day	1.67 (1.54-1.82)	2.05 (1.88-2.22)	2.43 (2.24-2.63)	2.73 (2.52-2.95)	3.13 (2.88-3.38)	3.43 (3.15-3.70)	3.72 (3.41-4.02)	4.00 (3.66-4.33)	4.36 (3.97-4.73)	4.62 (4.18-5.01)
20-day	2.19 (2.02-2.38)	2.68 (2.47-2.92)	3.17 (2.92-3.44)	3.55 (3.27-3.84)	4.03 (3.71-4.35)	4.37 (4.03-4.72)	4.70 (4.32-5.08)	5.01 (4.60-5.42)	5.38 (4.93-5.83)	5.64 (5.15-6.13)
30-day	2.60 (2.40-2.81)	3.18 (2.94-3.43)	3.76 (3.48-4.05)	4.20 (3.89-4.52)	4.79 (4.43-5.15)	5.21 (4.81-5.61)	5.63 (5.18-6.06)	6.02 (5.53-6.49)	6.52 (5.96-7.05)	6.86 (6.26-7.44)
45-day	3.22 (2.99-3.47)	3.93 (3.65-4.24)	4.61 (4.29-4.95)	5.13 (4.77-5.50)	5.79 (5.38-6.20)	6.25 (5.81-6.70)	6.68 (6.21-7.15)	7.08 (6.57-7.58)	7.54 (6.99-8.07)	7.83 (7.27-8.39)
60-day	3.78 (3.51-4.05)	4.62 (4.29-4.94)	5.40 (5.03-5.77)	6.00 (5.59-6.40)	6.75 (6.28-7.19)	7.28 (6.77-7.75)	7.77 (7.22-8.27)	8.21 (7.62-8.75)	8.72 (8.09-9.30)	9.05 (8.40-9.66)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).
 Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.
 Please refer to NOAA Atlas 14 document for more information.

[Back to Top](#)

PF graphical



1497 West 40 South
London, Utah - 84042
Phone (801) 225-5711

840 West 1700 South #10
Salt Lake City, Utah - 84104
Phone (801) 787-9138

1596 W. 2650 S. #108
Ogden, Utah - 84401
Phone (801) 399-9516

October 26, 2020

RK Builders
Attention: Mr. Ryan Kent
111 Par Street
Saratoga Springs, UT 84046

Re: **Addendum**
Scarlett Ridge Estates
2500 North Lake Mountain Road
Eagle Mountain, Utah
Job No: 208793

Mr. Kent:

This letter is an addendum to the previously completed geotechnical study¹ completed by Earthtec Engineering on October 20, 2020. As requested, this addendum provides percolation rates at the two requested locations.

Percolation Test

Two percolation tests were performed along the western boundaries of the site at varying depths. The soils at the base of the percolation tests generally consisted of Silty Gravel with sand (GM). The tests were performed by hand augering down to the gravel, filling the hole with water, and measuring the water loss over time. The tests were performed until the rate stabilized. The final measured rates for the percolation tests performed are shown in the table below. The location of the percolation tests can be found on the attached figure.

Percolation Testing

Percolation Test Location	Test Depth (ft)	Percolation Rate (min/in)
Perc-1	3	2
Perc-2	1	3½

General Conditions

The information presented in this letter applies only to the soils encountered during our field investigation at the subject site. Site grading activities completed in other areas such as driveways, sidewalks, or detached structures, were not observed during this site visit, are outside of the scope of our work, and are not addressed in this letter. The observations and recommendations presented in this letter were conducted within the limits prescribed by our client, with the usual thoroughness and competence of the engineering profession in this area at this time. No warranty or representation is intended in our proposals, contracts, reports, or letters.

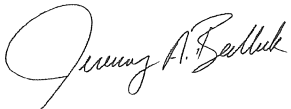
¹ Geotechnical Study, Scarlett Ridge Estates, 2500 North Lake Mountain Road, Eagle Mountain, Utah, Earthtec Engineering, Project No. 208793, October 20, 2020.



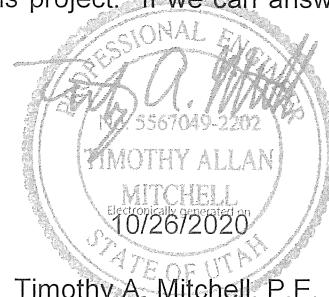
Closure

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

Respectfully;
EARTHTEC ENGINEERING



Jeremy A. Balleck, E.I.T.
Staff Engineer



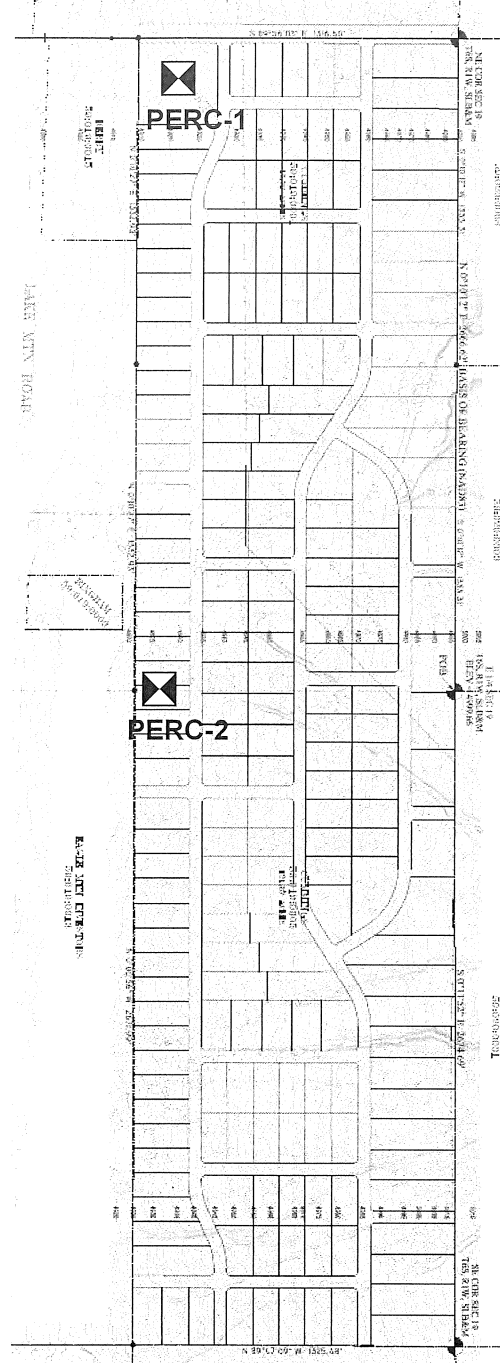
Timothy A. Mitchell, P.E.
Senior Geotechnical Engineer

Attachments:

Figure No. 1 *Site Plan Showing Location of Percolation Tests*

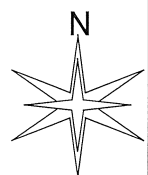


SITE PLAN SHOWING LOCATION OF PERCOLATION TESTS SCARLETT RIDGE ESTATES 2500 NORTH LAKE MOUNTAIN ROAD EAGLE MOUNTAIN, UTAH



*Site Plan provided by Client.

 Approximate Percolation Test Locations



Not to Scale

PROJECT NO.: 208793



FIGURE NO.: 1



1497 West 40 South
Lindon, Utah - 84042
Phone (801) 225-5711

840 West 1700 South #10
Salt Lake City, Utah - 84104
Phone (801) 787-9138

1596 W. 2650 S. #108
Ogden, Utah - 84401
Phone (801) 399-9516

**Geotechnical Study
Scarlett Ridge Estates
2500 North Lake Mountain Road
Eagle Mountain, Utah**

Project No. 208793

October 20, 2020

Prepared For:

**RK Builders
Attention: Mr. Ryan Kent
111 Par Street
Saratoga Springs, UT 84045**



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No. 1	VICINITY MAP
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APPENDIX A

OSHPD-U.S. Seismic Design Maps



1.0 SUMMARY

This entire report presents the results of Earthtec Engineering's completed geotechnical study for the Scarlett Ridge Estates in Eagle Mountain, Utah. This summary provides a general synopsis of our recommendations and findings. Details of our findings, conclusions, and recommendations are provided within the body of this report.

- The native clay and silt soils have a negligible to severe potential for collapse (settlement) and a high potential for compression under increased moisture contents and anticipated load conditions. (see Section 6)
- Conventional strip and spread footings may be used to support the structures, with foundations placed entirely on firm, undisturbed, uniform native gravel soils that extend a minimum 3 feet below footings, on a minimum 18 inches of properly placed, compacted and tested structural fill extending to native gravels, or on deep foundations for structural loads up to 5,000 pounds per linear foot for bearing walls and up to 40,000 pounds for column loads. If loads exceed these see Section 10 for further recommendations.

Based on the results of our field exploration, laboratory testing, and engineering analyses, it is our opinion that the subject site may be suitable for the proposed development, provided the recommendations presented in this report are followed and implemented during design and construction.

Failure to consult with Earthtec Engineering (Earthtec) regarding any changes made during design and/or construction of the project from those discussed herein relieves Earthtec from any liability arising from changed conditions at the site. We also strongly recommend that Earthtec observes the building excavations to verify the adequacy of our recommendations presented herein, and that Earthtec performs materials testing and special inspections for this project to provide continuity during construction.

2.0 INTRODUCTION

The project is located at approximately 2500 North Lake Mountain Road in Eagle Mountain, Utah. The general location of the site is shown on Figure No. 1, *Vicinity Map* and Figure No. 2, *Site Plan Showing Location of Test Pits*, at the end of this report. The purposes of this study are to evaluate the subsurface soil conditions at the site, assess the engineering characteristics of the subsurface soils, and provide geotechnical recommendations for general site grading and the design and construction of foundations, concrete floor slabs, miscellaneous concrete flatwork, and asphalt paved residential streets.

The scope of work completed for this study included field reconnaissance, subsurface exploration, field and laboratory soil testing, geotechnical engineering analysis, and the preparation of this report.



3.0 PROPOSED CONSTRUCTION

We understand that the proposed project, as described to us by Mr. Ryan Kent with RK Builders, consists of developing approximately 160-acres with the construction of a new residential subdivision. The proposed structures will consist of conventionally framed, one- to two-story, residences with basements. We have based our recommendations in this report that the anticipated foundation loads for the proposed structures will not exceed 5,000 pounds per linear foot for bearing walls, 40,000 pounds for column loads, and 100 pounds per square foot for floor slabs. If structural loads will be greater Earthtec should be notified so that we may review our recommendations and make modifications, if necessary.

In addition to the construction described above, we anticipate that utilities will be installed to service the proposed buildings, exterior concrete flatwork will be placed in the form of curb, gutter, and sidewalks, and asphalt paved residential streets will be constructed.

4.0 GENERAL SITE DESCRIPTION

4.1 Site Description

At the time of our subsurface exploration the site was several undeveloped parcels vegetated with native grasses and weeds. The ground surface appears to slope less than 15 percent grade, we anticipate up to 6 of cut and fill may be required for site grading on each lot. The site was bounded on the north, east, and south by undeveloped land, and on the west by a residence and undeveloped land.

4.2 Geologic Setting

The subject property is located in Cedar Valley west of the Lake Mountains. The surficial geology of much of the eastern margin of the valley has been mapped by Constenius, 2011¹. The surficial geology at the location of the subject site and adjacent properties is mapped as "Younger alluvial-fan deposits" (Map Unit Qafy) dated to Holocene and upper Pleistocene. These soil or deposits are generally described in the referenced mapping as "mostly sand, silt, and gravel." However, a geologic hazard study was not performed for the subject site during this study.

5.0 SUBSURFACE EXPLORATION

5.1 Soil Exploration

Under the direction of a qualified member of our geotechnical staff, subsurface explorations were conducted at the site on September 28, 29, and 30, 2020 by the excavation of twenty-six (26) test

¹ Constenius, K.N., Clark, D.L., King, J.K., Ehler, J.B., 2011, Interim Geologic Map of the Provo Quadrangle, Utah, Wasatch and Salt Lake Counties, Utah; U.S. Geological Survey, Open-File 586DM, Scale 1: 62,500.



pits to depths of 6½ to 12 feet below the existing ground surface using a track-mounted mini excavator. The approximate locations of the test pits are shown on Figure No. 2, *Site Plan Showing Location of Test Pits*. Graphical representations and detailed descriptions of the soils encountered are shown on Figure Nos. 3 through 28, *Test Pit Log* at the end of this report. The stratification lines shown on the logs represent the approximate boundary between soil units; the actual transition may be gradual. Due to potential natural variations inherent in soil deposits, care should be taken in interpolating between and extrapolating beyond exploration points. A key to the symbols and terms on the logs is presented on Figure No. 29, *Legend*.

Disturbed bag samples and relatively undisturbed block samples were collected at various depths in each test pit. The soil samples collected were classified by visual examination in the field following the guidelines of the Unified Soil Classification System (USCS). The samples were transported to our Lindon, Utah laboratory where they will be retained for 30 days following the date of this report and then discarded, unless a written request for additional holding time is received prior to the 30-day limit.

6.0 LABORATORY TESTING

Representative soil samples collected during our field exploration were tested in the laboratory to assess pertinent engineering properties and to aid in refining field classifications, if needed. Tests performed included natural moisture contents, dry density tests, liquid and plastic limits determinations, mechanical (partial) gradation analyses, and one-dimensional consolidation tests. The laboratory test results are also included on the attached *Test Pit Logs* at the respective sample depths, and on Figure Nos. 30 through 33, *Consolidation-Swell Test*.

As part of the consolidation test procedure, water was added to the samples to assess moisture sensitivity when the samples were loaded to an equivalent pressure of approximately 1,000 psf. The native clay and silt soils have a negligible to severe potential for collapse (settlement) and a high potential for compression under increased moisture contents and anticipated load conditions.

7.0 SUBSURFACE CONDITIONS

7.1 Soil Types

On the surface of the site, we encountered topsoil which is estimated to extend about up to 1½ feet in depth at the test pit locations. Below the topsoil we encountered layers of clay, silt, and gravel extending to depths of 6½ to 12 feet below the existing ground surface. Graphical representations and detailed descriptions of the soils encountered are shown on Figure Nos. 3 through 28, *Test Pit Log* at the end of this report. Based on our experience and observations during field exploration, the clay and silt soils visually ranged from medium stiff to stiff in consistency and the gravel soils visually had a relative density varying from medium dense to very dense.



It should be considered that a limited number of test pits were used during the course of our subsurface exploration. Topsoil material composition and contacts are difficult to determine from test pit sampling. Variation in topsoil depths may occur at the site.

7.2 Collapsible Soils

Collapsible soils are typically characterized by a pinhole structure and relatively low unit weights. Foundations, floor slabs, and roadways supported on these soils may be susceptible to large settlements and structural distress when wetted.

Collapsible soils are not suitable for support of foundations, floor slabs, and pavements. All footings shall be constructed at the same elevation, including the garage footings. The entire excavation shall be over-excavated, not just the footing areas. In addition, areas where entrance steps, porches, etc. will be constructed or the steps and porches should be structurally supported shall be over-excavated. In areas where isolated open sidewalks, driveways, and pavements will be constructed, if properly prepared, the moisture sensitive soils may be allowed to remain in place if some settlement can be tolerated. In addition, measures to limit surface water from wetting supporting soils beneath foundations and floor slabs shall be implemented. These measures include maintaining positive surface drainage away from the structures, downspouts should discharge away from foundations or be conveyed to suitable locations down gradient from the structures, minimizing landscape irrigation adjacent to structures, and ensuring proper and adequate compaction of foundation wall backfill.

Depending on the level of risk the owner is willing to assume, several alternatives may be considered to reduce the risk of settlement to the proposed structures. These alternatives include, but are not limited to:

- Removal of the collapsible soils and the establishment of the footings directly upon the underlying non-collapsible soils. Structurally supported floors and/or crawl space construction may be utilized.
- Removal and replacement of the collapsible soils with structural fill and establishing the footings and floor slabs directly upon the structural fill.
- Extending the foundation support system through the collapsible soils using alternative foundation systems, such as, helical piers, small diameter pipe piles, or small diameter drilled piles. Floor slabs will also have to be structurally supported or the structures should be designed utilizing a crawl space.

7.3 Groundwater Conditions

Groundwater was not encountered within the excavations at the depths explored. Note that groundwater levels will fluctuate in response to the season, precipitation, snow melt, irrigation, and other on and off-site influences. Quantifying these fluctuations would require long term monitoring, which is beyond the scope of this study. The contractor should be prepared to dewater excavations as needed.



8.0 SITE GRADING

8.1 General Site Grading

All surface vegetation and unsuitable soils (such as topsoil, organic soils, undocumented fill, soft, loose, or disturbed native soils, collapsible, and any other inapt materials) should be removed from below foundations, floor slabs, exterior concrete flatwork, and pavement areas. We encountered topsoil on the surface of the site. The topsoil (including soil with roots larger than about ¼ inch in diameter) should be completely removed, even if found to extend deeper, along with any other unsuitable soils that may be encountered. Over-excavations below footings and slabs also may be needed, as discussed in Section 10.0.

Fill placed over large areas, even if only a few feet in depth, can cause consolidation in the underlying native soils resulting in settlement of the fill. The site slopes down from east to west, we anticipate that up to 6 feet of fill may be placed in some areas of the site during grading. If more than 6 feet of grading fill will be placed above the existing surface (to raise site grades), Earthtec should be notified so that we may provide additional recommendations, if required. Such recommendations will likely include placing the fill several weeks (or possibly more) prior to construction to allow settlement to occur.

8.2 Temporary Excavations

Temporary excavations that are less than 4 feet in depth and above groundwater should have side slopes no steeper than ½H:1V (Horizontal:Vertical). Temporary excavations where water is encountered in the upper 4 feet or that extend deeper than 4 feet below site grades should be sloped or braced in accordance with OSHA² requirements for Type B soils.

8.3 Fill Material Composition

The native granular soils appear to be suitable for use as placed and compacted engineered fill provided the material meets the requirements for structural fill and any existing debris and particles larger than 6 inches in diameter are removed prior to use. Excavated soils, including clay and silt, may be stockpiled for use as fill in landscape areas.

Structural fill is defined as imported fill material that will ultimately be subjected to any kind of structural loading, such as those imposed by footings, floor slabs, pavements, etc. Gradation requirements stated below shall be verified in intervals not exceeding 1,000 tons. We recommend that imported structural fill consist of sandy/gravelly soils meeting the following requirements in the table below:

² OSHA Health and Safety Standards, Final Rule, CFR 29, part 1926.



Table 1: Imported Structural Fill Recommendations

Sieve Size/Other	Percent Passing (by weight)
4 inches	100
3/4 inches	70 – 100
No. 4	40 – 80
No. 40	15 – 50
No. 200	0 – 20
Liquid Limit	35 maximum
Plasticity Index	15 maximum

Engineered fill is defined as reworked native material that will ultimately be subjected to any kind of structural loading, such as those imposed by footings, floor slabs, pavements. We recommend that a professional engineer or geologist verify that the engineered fill to be used on this project meets the requirements. Engineered fill should be clear of all organics, have a maximum particle size of 4 inches, less than 70 percent retained on the ¾-seive, a maximum Liquid Limit of 35, and a maximum Plasticity Index of 15.

In some situations, particles larger than 4 inches and/or more than 30 percent coarse gravel may be acceptable but would likely make compaction more difficult and/or significantly reduce the possibility of successful compaction testing. Consequently, stricter quality control measures than normally used may be required, such as using thinner lifts and increased or full-time observation of fill placement.

We recommend that utility trenches below any structural load be backfilled using structural fill or engineered fill. Local governments or utility companies required specification for backfill should be followed unless our recommendations stricter.

If native soil is used as fill material, the contractor should be aware that native clay and silt soils (as observed in the explorations) may be time consuming to compact due to potential difficulties in controlling the moisture content needed to obtain optimum compaction and changes proctor values.

If required (i.e. fill in submerged areas), we recommend that free draining granular material (clean sand and/or gravel) meet the following requirements in the table below:

Table 2: Free-Draining Fill Recommendations

Sieve Size/Other	Percent Passing (by weight)
3 inches	100
No. 10	0 – 25
No. 40	0 – 15
No. 200	0 – 5
Plasticity Index	Non-plastic

Three-inch minus washed rock (sometimes called river rock or drain rock) and pea gravel materials usually meet these requirements and may be used as free draining fill. If free draining



fill will be placed adjacent to soil containing a significant amount of sand or silt/clay, precautions should be taken to prevent the migration of fine soil into the free draining fill. Such precautions should include either placing a filter fabric between the free draining fill and the adjacent soil material, or using a well-graded, clean filtering material approved by the geotechnical engineer.

8.4 Fill Placement and Compaction

Fill should be placed on level, horizontal surfaces. Where fill will be placed on slopes steeper than 5H:1V, the existing ground should be benched prior to placing fill. We recommend bench heights of 1 to 4 feet, with the lowest bench being a minimum 3 feet below adjacent grade and at least 10 feet wide.

The thickness of each lift should be appropriate for the compaction equipment that is used. We recommend a maximum lift thickness prior to compaction of 4 inches for hand operated equipment, 6 inches for most "trench compactors" and 8 inches for larger rollers, unless it can be demonstrated by in-place density tests that the required compaction can be obtained throughout a thicker lift. The full thickness of each lift of structural fill placed should be compacted to at least the following percentages of the maximum dry density, as determined by ASTM D-1557:

- In landscape and other areas not below structurally loaded areas: 90%
- Less than 5 feet of fill below structurally loaded areas: 95%
- 5 feet or greater of fill below structurally loaded areas: 98%

Generally, placing and compacting fill at moisture contents within ± 2 percent of the optimum moisture content, as determined by ASTM D-1557, will facilitate compaction. Typically, the further the moisture content deviates from optimum the more difficult it will be to achieve the required compaction.

Fill should be tested frequently during placement and we recommend early testing to demonstrate that placement and compaction methods are achieving the required compaction. The contractor is responsible to ensure that fill materials and compaction efforts are consistent so that tested areas are representative of the entire fill.

8.5 Stabilization Recommendations

Near surface soils may rut and pump during grading and construction. The likelihood of rutting and/or pumping, and the depth of disturbance, is proportional to the moisture content in the soil, the load applied to the ground surface, and the frequency of the load. Consequently, rutting and pumping can be minimized by avoiding concentrated traffic, minimizing the load applied to the ground surface by using lighter equipment, partially loaded equipment, tracked equipment, by working in dry times of the year, and/or by providing a working surface for equipment.

During grading the soil in any obvious soft spots should be removed and replaced with granular material. If rutting or pumping occurs traffic should be stopped in the area of concern. The soil in rutted areas should be removed and replaced with granular material. In areas where pumping occurs the soil should either be allowed to sit until pore pressures dissipate (several hours to



several days) and the soil firms up or be removed and replaced with granular material. Typically, we recommend removal to a minimum depth of 24 inches.

For granular material, we recommend using angular well-graded gravel, such as pit run, or crushed rock with a maximum particle size of four inches. We suggest that the initial lift be approximately 12 inches thick and be compacted with a static roller-type compactor. A finer granular material such as sand, gravelly sand, sandy gravel or road base may also be used. Materials which are more angular and coarse may require thinner lifts in order to achieve compaction. We recommend that the fines content (percent passing the No. 200 sieve) be less than 15%, the liquid limit be less than 35, and the plasticity index be less than 15.

Using a geosynthetic fabric, such as Mirafi 600X or equivalent, may also reduce the amount of material required and avoid mixing of the granular material and the subgrade. If a fabric is used, following removal of disturbed soils and water, the fabric should be placed over the bottom and up the sides of the excavation a minimum of 24 inches. The fabric should be placed in accordance with the manufacturer's recommendations, including proper overlaps. The granular material should then be placed over the fabric in compacted lifts. Again, we suggest that the initial lift be approximately 12 inches thick and be compacted with a static roller-type compactor.

9.0 SEISMIC AND GEOLOGIC CONSIDERATIONS

9.1 Seismic Design

The State of Utah has adopted the 2015 International Residential Code (IRC) and residential structures should be designed in accordance with the 2015 IRC. The IRC designates this area as a seismic design class D₀.

The site is located at approximately 40.281 degrees latitude and -111.989 degrees longitude from the approximate center of the site. The IRC site value for this property is 0.596g. The design spectral response acceleration parameters are given below.

Table 3: Design Acceleration for Short Period

S _s	F _a	Site Value (S _{DS})
		$2/3 S_s \cdot F_a$
0.741g	1.207	0.596g

9.2 Faulting

The subject property is located within the Intermountain Seismic Belt where the potential for active faulting and related earthquakes is present. Based upon published geologic maps³, no active faults traverse through or immediately adjacent to the site and the site is not located within local fault study zones. The nearest mapped fault trace is part of a group of faults beneath Utah Lake

³ U.S. Geological Survey, Quaternary Fault and Fold Database of the United States, November 3, 2010.



located about 6¼ miles northeast of the site.

9.3 Liquefaction Potential

According to current liquefaction maps⁴ for Utah County, the site is located within an area designated as "Very Low" in liquefaction potential. Liquefaction can occur when saturated subsurface soils below groundwater lose their inter-granular strength due to an increase in soil pore water pressures during a dynamic event such as an earthquake. Loose, saturated sands are most susceptible to liquefaction, but some loose, saturated gravels and relatively sensitive silt to low-plasticity silty clay soils can also liquefy during a seismic event. Subsurface soils encountered were composed of unsaturated clay, silt and gravel soils.

The soils encountered at this project do not appear liquefiable, but the liquefaction susceptibility of underlying soils (deeper than our explorations) is not known and would require deeper explorations to quantify. The client chose not to have the liquefaction and lateral spread analysis performed.

10.0 FOUNDATIONS

10.1 General

The foundation recommendations presented in this report are based on the soil conditions encountered during our field exploration, the results of laboratory testing of samples of the native soils, the site grading recommendations presented in this report, and the foundation loading conditions presented in Section 3.0, *Proposed Construction*, of this report. If loading conditions and assumptions related to foundations are significantly different, Earthtec should be notified so that we can re-evaluate our design parameters and estimates (higher loads may cause more settlement), and to provide additional recommendations if necessary.

To address the collapse potential, foundations and slabs should be constructed using one of several alternatives, as follows:

- Install concrete piers, or straight or helical piers extending below the collapsible soils to support all footings, with either a crawl space and without a slab-on-grade, or reinforced structural slab/walls that can span between the deep foundation supports.
- Install aggregate piers on a rectangular grid pattern, extending below the collapsible soils to support all footings and slabs.
- Remove all collapsible soils from beneath building footprints.

10.2 Strip/Spread Footings

We recommend that conventional strip and spread foundations be constructed entirely on firm,

⁴ Utah Geological Survey, Liquefaction-Potential Map for a Part of Utah County, Utah, Public Information Series 28, August 1994.



undisturbed, uniform native gravel soils that extend a minimum 3 feet below footings, on a minimum 18 inches of properly placed, compacted and tested structural fill extending to native gravels, or on deep foundations for structural loads up to 5,000 pounds per linear foot for bearing walls and up to 40,000 pounds for column loads. If loads exceed 5,000 pounds per linear foot for bearing walls, 40,000 pounds for column loads, and 100 pounds per square foot for floor slabs, please contact Earthtec for further recommendations. For foundation design we recommend the following:

- Footings founded on undisturbed native gravel soils or on a minimum 18 inches of structural fill extending to undisturbed native gravel soils may be designed using a maximum allowable bearing capacity of 2,000 pounds per square foot. The values for vertical foundation pressure can be increased by one-third for wind and seismic conditions per Section 1806 when used with the Alternative Basic Load Combinations found in Section 1605.3.2 of the 2018 International Building Code.
- Continuous and spot footings should be uniformly loaded and should have a minimum width of 20 and 30 inches, respectively.
- Exterior footings should be placed below frost depth which is determined by local building codes. In general, 30 inches of cover is adequate for most sites; however local code should be verified by the end design professional. Interior footings, not subject to frost (heated structures), should extend at least 18 inches below the lowest adjacent grade.
- Foundation walls and footings should be properly reinforced to resist all vertical and lateral loads and differential settlement.
- The bottom of footing excavations should be compacted with at least 4 passes of an approved non-vibratory roller prior to erection of forms or placement of structural fill to densify soils that may have been loosened during excavation and to identify soft spots. If soft areas are encountered, they should be stabilized as recommended in Section 8.5.
- Footing excavations should be observed by the geotechnical engineer prior to beginning footing construction to evaluate whether suitable bearing soils have been exposed and whether excavation bottoms are free of loose or disturbed soils.
- Structural fill used below foundations should extend laterally a minimum of 6 inches for every 12 vertical inches of structural fill placed. For example, if 18 inches of structural fill is required to bring the excavation to footing grade, the structural fill should extend laterally a minimum of 9 inches beyond the edge of the footings on both sides. Gravel may not be used as structural fill.

10.3 Estimated Settlements

If the proposed foundations are properly designed and constructed using the parameters provided above, we estimate that total settlements should not exceed one inch and differential settlements should be one-half of the total settlement over a 25-foot length of continuous foundation, for non-



earthquake conditions. Additional settlement could occur during a seismic event due to ground shaking, if more than 6 feet of grading fill is placed above the existing ground surface, if loading conditions are greater than anticipated in Section 2, and/or if foundation soils are allowed to become wetted.

10.4 Lateral Earth Pressures

Below grade walls act as soil retaining structures and should be designed to resist pressures induced by the backfill soils. The lateral pressures imposed on a retaining structure are dependent on the rigidity of the structure and its ability to resist rotation. Most retaining walls that can rotate or move slightly will develop an active lateral earth pressure condition. Structures that are not allowed to rotate or move laterally, such as subgrade basement walls, will develop an at-rest lateral earth pressure condition. Lateral pressures applied to structures may be computed by multiplying the vertical depth of backfill material by the appropriate equivalent fluid density. Any surcharge loads in excess of the soil weight applied to the backfill should be multiplied by the appropriate lateral pressure coefficient and added to the soil pressure. For static conditions the resultant forces are applied at about one-third the wall height (measured from bottom of wall). For seismic conditions, the resultant forces are applied at about two-third times the height of the wall both measured from the bottom of the wall. The lateral pressures presented in the table below are based on drained, horizontally placed native soils as backfill material using a 28° friction angle and a dry unit weight of 110 pcf.

Table 4: Lateral Earth Pressures (Static and Dynamic)

Condition	Case	Lateral Pressure Coefficient	Equivalent Fluid Pressure (pcf)
Active	Static	0.36	43
	Seismic	0.49	59
At-Rest	Static	0.53	64
	Seismic	0.71	85
Passive	Static	2.77	332
	Seismic	3.54	425

*Seismic values combine the static and dynamic values

These pressure values do not include any surcharge and are based on a relatively level ground surface at the top of the wall and drained conditions behind the wall. It is important that water is not allowed to build up (hydrostatic pressures) behind retaining structures. Retaining walls should incorporate drainage behind the walls as appropriate, and surface water should be directed away from the top and bottom of the walls.

Lateral loads are typically resisted by friction between the underlying soil and footing bottoms. Resistance to sliding may incorporate the friction acting along the base of foundations, which may be computed using a coefficient of friction of soils against concrete of 0.55 for native gravels or structural fill meeting the recommendations presented herein. Concrete or masonry walls shall be selected and constructed in accordance to the provision of Section R404 of the 2015 International Residential Code or sections referenced therein. Retaining wall lateral resistance



design should further reference Section R404.4 for reference of Safety Factors.

11.0 FLOOR SLABS AND FLATWORK

Concrete floor slabs and exterior flatwork may be supported on a minimum of 12 inches properly placed, compacted, and tested engineered fill or imported structural fill extending to undisturbed native soils after appropriate removals and grading as outlined in Section 8.1 are completed. We recommend placing a minimum of 4 inches of free-draining fill material (see Section 8.3) beneath floor slabs to facilitate construction, act as a capillary break, and aid in distributing floor loads. For exterior flatwork, we recommend placing a minimum of 4 inches of road-base material. Prior to placing the free-draining fill or road-base materials, the native sub-grade should be proof-rolled to identify soft spots, which should be stabilized as discussed above in Section 8.5.

For slab design, we recommend using a modulus of sub-grade reaction of 120 pounds per cubic inch. The thickness of slabs supported directly on the ground shall not be less than 3½ inches. A 6-mil polyethylene vapor retarder with joints lapped not less than 6 inches shall be placed between the ground surface and the concrete, as per Section R506 of the 2015 International Residential Code.

To help control normal shrinkage and stress cracking, we recommend that floor slabs have adequate reinforcement for the anticipated floor loads with the reinforcement continuous through interior floor joints, frequent crack control joints, and non-rigid attachment of the slabs to foundation and bearing walls. Special precautions should be taken during placement and curing of all concrete slabs and flatwork. Excessive slump (high water-cement ratios) of the concrete and/or improper finishing and curing procedures used during hot or cold weather conditions may lead to excessive shrinkage, cracking, spalling, or curling of slabs. We recommend all concrete placement and curing operations be performed in accordance with American Concrete Institute (ACI) codes and practices.

12.0 DRAINAGE

12.1 Surface Drainage

Due to the collapse potential of native soils, wetting of subsurface soils (including those below foundations) could result in adverse settlement. Accordingly, we recommend the following:

- The contractor should take precautions to prevent significant wetting of the soil at the base of the excavation. Such precautions may include: grading to prevent runoff from entering the excavation, excavating during normally dry times of the year, covering the base of the excavation if significant rain or snow is forecast, backfill at the earliest possible date, frame floors and/or the roof at the earliest possible date, other precautions that might become evident during construction.



- Adequate compaction of foundation wall backfill must be provided i.e. a minimum of 90% of ASTM D-1557. Water consolidation methods should not be used.
- The ground surface should be graded to drain away from the building in all directions. We recommend a minimum fall of 10 inches in the first 10 feet.
- Roof runoff should be collected in rain gutters with down spouts designed to discharge well outside of the backfill limits, or at least 10 feet from foundations, whichever is greater.
- Sprinkler nozzles should be aimed away, and all sprinkler components kept at least 10 feet, from foundation walls. A drip irrigation system may be utilized in landscaping areas within 10 feet of foundation walls to minimize water intrusion at foundation backfill. Also, sprinklers should not be placed at the top or on the face of slopes. Sprinkler systems should be designed with proper drainage and well maintained. Over-watering should be avoided.
- Any additional precautions which may become evident during construction.

12.2 Subsurface Drainage

Section R405.1 of the 2015 International Residential Code states, "Drains shall be provided around all concrete and masonry foundations that retain earth and enclose habitable or usable spaces located below grade." Section R310.2.3.2 of the 2015 International Residential Code states, "Window wells shall be designed for proper drainage by connecting to the building's foundation drainage system." An exception is allowed when the foundation is installed on well drained ground consisting of Group 1 soils, which include those defined by the Unified Soil Classification System as GW, GP, SW, SP, GM, and SM. The soils observed in the explorations at the depth of foundation consisted primarily of silty gravel with sand (GM) which is a Group 1 soil.

13.0 PAVEMENT RECOMMENDATIONS

We understand that asphalt paved residential streets will be constructed as part of the project. The native soils encountered beneath the topsoil during our field exploration were predominantly composed of silts. We estimate that a California Bearing Ratio (CBR) value of 3 is appropriate for these soils. Also, the near-surface native clay/silt soils are potentially collapsible, and over-excavation may be needed to minimize the potential settlement of pavements. If the topsoil is left beneath concrete flatwork and pavement areas, increased maintenance costs over time should be anticipated.

We anticipate that the traffic volume will be about 2,000 (for minor collectors) vehicles per day (9.6 ESAL/day) and 500 vehicles per day (2.4 ESAL/day) or less for the residential streets, consisting of mostly cars and pickup trucks, with a daily delivery truck and a weekly garbage truck. Based on these traffic parameters, the estimated CBR given above, a 20-year life expectancy, and the procedures and typical design inputs outlined in the UDOT Pavement Design Manual



(2008), we recommend the minimum asphalt pavement section presented below.

Table 5: Pavement Section Recommendations (collectors)

Asphalt Thickness (in)	Compacted Aggregate Base Thickness (in)	Compacted Subbase Thickness (in)
3	6	12*
3	16*	0

* Stabilization may be required

Table 6: Pavement Section Recommendations (residential streets)

Asphalt Thickness (in)	Compacted Aggregate Base Thickness (in)	Compacted Subbase Thickness (in)
3	6	6*
3	10*	0

* Stabilization may be required

If the pavement will be required to support excessive construction traffic (such as dump trucks hauling soil to raise or lower the site), more than an occasional semi-tractor or fire truck, or more traffic than listed above, our office should be notified so that we can re-evaluate the pavement section recommendations. The following also apply:

- The subgrade should be prepared by proof rolling to a firm, non-yielding surface, with any identified soft areas stabilized as discussed above in Section 8.5.
- Site grading fills below the pavements should meet structural fill composition and placement recommendations per Sections 8.3 and 8.4 herein.
- Asphaltic concrete, aggregate base and sub-base material composition should meet local, APWA, or UDOT requirements. Gradation requirements and frequency shall be followed as required by local, APWA, or UDOT requirements, but not to exceed 500 tons.
- Aggregate base and sub-base is compacted to local, APWA, or UDOT requirements, or to at least 95 percent of maximum dry density (ASTM D 1557).
- The aggregate base shall have a CBR value to 70 percent or greater and the subbase shall have a CBR value of 10 percent or greater.
- Asphaltic concrete is compacted to local or UDOT requirements, or to at least 96 percent of the laboratory Marshall density (ASTM D 6927).

14.0 GENERAL CONDITIONS

The exploratory data presented in this report was collected to provide geotechnical design recommendations for this project. The explorations may not be indicative of subsurface conditions outside the study area or between points explored and thus have a limited value in



depicting subsurface conditions for contractor bidding. Variations from the conditions portrayed in the explorations may occur and which may be sufficient to require modifications in the design. If during construction, conditions are different than presented in this report, Earthtec should be advised immediately so that the appropriate modifications can be made.

The findings and recommendations presented in this geotechnical report were prepared in accordance with generally accepted geotechnical engineering principles and practice in this area of Utah at this time. No warranty or representation is intended in our proposals, contracts, letters, or reports. Failure to consult with Earthtec regarding any changes made during design and/or construction of the project from those discussed herein relieves Earthtec from any liability arising from changed conditions at the site.

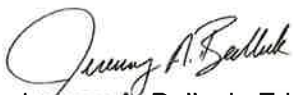
This geotechnical report is based on relatively limited subsurface explorations and laboratory testing. Subsurface conditions may differ in some locations of the site from those described herein, which may require additional analyses and possibly modified recommendations. Thus, we strongly recommend consulting with Earthtec regarding any changes made during design and construction of the project from those discussed herein. Failure to consult with Earthtec regarding any such changes relieves Earthtec from any liability arising from changed conditions at the site.

To maintain continuity, Earthtec should also perform materials testing and special inspections for this project. The recommendations presented herein are based on the assumption that an adequate program of tests and observations will be followed during construction to verify compliance with our recommendations. We also assume that we will review the project plans and specifications to verify that our conclusions and recommendations are incorporated and remain appropriate (based on the actual design). Earthtec should be retained to review the final design plans and specifications so comments can be made regarding interpretation and implementation of our geotechnical recommendations in the design and specifications. Earthtec also should be retained to provide observation and testing services during grading, excavation, foundation construction, and other earth-related construction phases of the project.

We appreciate the opportunity of providing our services on this project. If we can answer questions or be of further service, please contact Earthtec at your convenience.

Respectfully;

EARTHTEC ENGINEERING



Jeremy A. Balleck, E.I.T.
Staff Engineer



Timothy A. Mitchell, P.E.
Senior Geotechnical Engineer



VICINITY MAP
SCARLETT RIDGE ESTATES
2500 NORTH LAKE MOUNTAIN ROAD
CITY, UTAH



Google



Not to Scale

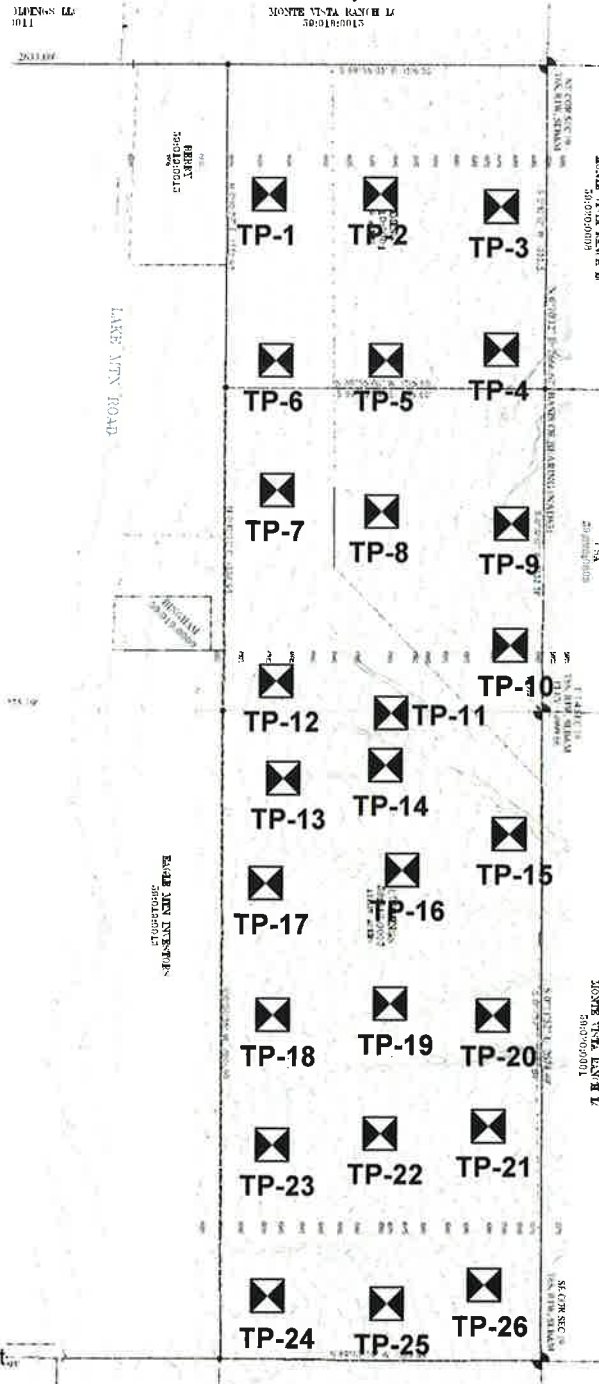
PROJECT NO.: 208793



FIGURE NO.: 1

SITE PLAN SHOWING LOCATION OF TEST PITS

SCARLETT RIDGE ESTATES 2500 NORTH LAKE MOUNTAIN ROAD CITY, UTAH



*Site Plan provided by Client

 **Approximate Test Pit**



Not to Scale

PROJECT NO.: 208793



FIGURE NO.: 2

TEST PIT LOG

NO.: TP-01

PROJECT: Scarlett Ridge
CLIENT: RK Builders
LOCATION: See Figure 2
OPERATOR: JSI
EQUIPMENT: Mini Excavator
DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793
DATE: 09/28/20
ELEVATION: Not Measured
LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silt, dry, brown									
1			Sandy SILT, medium stiff (estimated), dry to slightly moist, brown									
2												
3												
4		ML		X								
5												
6					8	85	21	NP	4	40	56	C
7			Silty Gravel with sand, medium dense (estimated), dry to slightly moist, brown	X								
8												
9		GM										
10												
11				X								
12			Maximum depth explored approximately 11½ feet									
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio
C = Consolidation
R = Resistivity
DS = Direct Shear
SS = Soluble Sulfates
B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 03

TEST PIT LOG

NO.: TP-02

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/28/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.) 0	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
			TOPSOIL, silty gravel, dry, brown									
1		GM	Silty GRAVEL with sand, dense (estimated), dry, brown, boulders									
2												
3				X								
4												
5												
6												
7												
8												
9		GC	Clayey GRAVEL, dense (estimated), slightly moist, brown	X	6		23	NP	48	30	22	
10												
11	X											
12												
13			Maximum depth explored approximately 12 feet									
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 04

LOG OF TESTPIT LOGS.GPJ EARTHTEC.GDT 10/20/20

TEST PIT LOG

NO.: TP-03

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/28/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.) 0	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
			TOPSOIL, silty gravel, dry, brown									
1		GM	Silty GRAVEL with sand, dense (estimated), dry, brown, boulders									
2												
3												
4				X	4			35	31	34		
5												
6												
7			Maximum depth explored approximately 6½ feet due to equipment refusal	X								
8												
9												
10												
11												
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 05

TEST PIT LOG

NO.: TP-04

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/28/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silty gravel, dry, brown									
1			Silty GRAVEL with sand, dense (estimated), dry, brown									
2												
3												
4		GM										
5												
6												
7												
8			Maximum depth explored approximately 7 feet due to equipment refusal									
9												
10												
11												
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 06

TEST PIT LOG

NO.: TP-05

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/28/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silty gravel, dry, brown									
1			Silty GRAVEL with sand, dense (estimated), dry, brown, boulders									
2												
3												
4		GM		X								
5												
6												
7				X								
8			Maximum depth explored approximately 7 feet due to equipment refusal									
9												
10												
11												
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 07

TEST PIT LOG

NO.: TP-06

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

PROJECT NO.: 208793

DATE: 09/28/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

DEPTH TO WATER; INITIAL ∇ :

AT COMPLETION ∇ :

Depth (Ft.) 0	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
1		ML	TOPSOIL, silty gravel, dry, brown									C
2			Sandy SILT, stiff (estimated), dry, brown									
3												
4												
5												
6		GM	Silty GRAVEL with sand, dense (estimated), dry, brown, boulders	X								
7												
8												
9												
10					X							
11			Maximum depth explored approximately 10 feet									
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 08

TEST PIT LOG

NO.: TP-07

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/28/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silty gravel, dry, brown									
1			Silty GRAVEL with sand, dense (estimated), dry, brown									
2		GM										
3				X								
4		CL	Gravelly Lean CLAY, stiff (estimated), dry, brown		9	91	30	14	22	9	69	C
5			Poorly Graded GRAVEL with silt and sand, medium dense (estimated), dry, brown	X								
6		GP-GM										
7												
8			Silty GRAVEL with sand, dense (estimated), slightly moist, brown									
9												
10		GM		X								
11												
12				X								
13			Maximum depth explored approximately 12½ feet									
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 09

TEST PIT LOG

NO.: TP-08

PROJECT: Scarlett Ridge
CLIENT: RK Builders
LOCATION: See Figure 2
OPERATOR: JSI
EQUIPMENT: Mini Excavator
DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793
DATE: 09/28/20
ELEVATION: Not Measured
LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.) 0	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
			TOPSOIL, silty gravel, dry, brown									
1		GP	Poorly Graded GRAVEL, dense (estimated), dry, brown									
2												
3				X								
4												
5												
6												
7				X								
8												
9												
10												
11		GP-GM	Poorly Graded GRAVEL with silt and sand, dense (estimated), slightly moist, brown	X	4		27	9	72	17	11	
12												
13			Maximum depth explored approximately 12½ feet									
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio
 C = Consolidation
 R = Resistivity
 DS = Direct Shear
 SS = Soluble Sulfates
 B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 10

TEST PIT LOG

NO.: TP-09

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/28/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silt, dry, brown									
1			Silty GRAVEL with sand, dense (estimated), dry, brown									
2												
3				X								
4												
5				X								
6		GM										
7												
8												
9												
10												
11				X								
12												
13			Maximum depth explored approximately 12 feet									
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 11

TEST PIT LOG

NO.: TP-10

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/29/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silty gravel, dry, brown									
1			Silty GRAVEL with sand, dense (estimated), dry, brown, boulders									
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13			Maximum depth explored approximately 12 feet									
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 12

TEST PIT LOG

NO.: TP-11

PROJECT: Scarlett Ridge
CLIENT: RK Builders
LOCATION: See Figure 2
OPERATOR: JSI
EQUIPMENT: Mini Excavator
DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793
DATE: 09/29/20
ELEVATION: Not Measured
LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silty gravel, dry, brown									
1			Sandy Lean CLAY, stiff (estimated), dry, brown									
2												
3		CL										
4					9	89	30	11	3	27	70	C
5												
6			Silty GRAVEL with sand, dense (estimated), dry, brown, boulders	X								
7												
8												
9		GM										
10												
11												
12												
13			Maximum depth explored approximately 12 feet									
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio
 C = Consolidation
 R = Resistivity
 DS = Direct Shear
 SS = Soluble Sulfates
 B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 13

TEST PIT LOG

NO.: TP-12

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

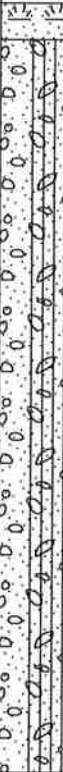
PROJECT NO.: 208793

DATE: 09/29/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.) 0	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
			TOPSOIL, silty gravel, dry, brown									
1		GP-GM	Poorly Graded GRAVEL with silt and sand, dense (estimated), dry, brown, boulders									
2												
3												
4				X								
5												
6												
7												
8												
9												
10				X	2			72	18	10		
11			Maximum depth explored approximately 10½ feet									
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 14

TEST PIT LOG

NO.: TP-13

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/29/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.) 0	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
			TOPSOIL, silty gravel, dry, brown									
1		GM	Silty GRAVEL with sand, dense (estimated), dry to slightly moist, brown, boulders									
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
			Maximum depth explored approximately 11 feet									
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 15

TEST PIT LOG

NO.: TP-14

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/29/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silty gravel, dry, brown									
1			Silty GRAVEL with sand, dense (estimated), slightly moist, brown, boulders									
2												
3												
4												
5				X								
6		GM										
7												
8												
9												
10												
11				X								
12			Maximum depth explored approximately 11 feet									
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 16

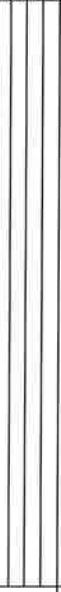
TEST PIT LOG

NO.: TP-15

PROJECT: Scarlett Ridge
CLIENT: RK Builders
LOCATION: See Figure 2
OPERATOR: JSI
EQUIPMENT: Mini Excavator
DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793
DATE: 09/29/20
ELEVATION: Not Measured
LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silty gravel, dry, brown									
1		GM	Silty GRAVEL with sand, dense (estimated), slightly moist, brown, boulders									
2												
3												
4												
5		ML	SILT with gravel, medium stiff (estimated), slightly moist, brown									
6												
7												
8												
9												
10												
11												
12												
13			Maximum depth explored approximately 12½ feet									
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio
 C = Consolidation
 R = Resistivity
 DS = Direct Shear
 SS = Soluble Sulfates
 B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 17

TEST PIT LOG

NO.: TP-16

PROJECT: Scarlett Ridge
CLIENT: RK Builders
LOCATION: See Figure 2
OPERATOR: JSI
EQUIPMENT: Mini Excavator
DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793
DATE: 09/29/20
ELEVATION: Not Measured
LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.) 0	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
			TOPSOIL, silty gravel, dry, brown									
1		GM	Silty GRAVEL with sand, dense (estimated), dry, brown									
2												
3												
4												
5												
6												
7												
8												
9												
10												
11			Maximum depth explored approximately 10½ feet									
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio
 C = Consolidation
 R = Resistivity
 DS = Direct Shear
 SS = Soluble Sulfates
 B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 18

TEST PIT LOG

NO.: TP-17

PROJECT: Scarlett Ridge
CLIENT: RK Builders
LOCATION: See Figure 2
OPERATOR: JSI
EQUIPMENT: Mini Excavator
DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793
DATE: 09/29/20
ELEVATION: Not Measured
LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silty gravel, dry, brown									
1			Silty GRAVEL with sand, very dense (estimated), dry, brown, boulders									
2												
3												
4												
5				X								
6		GM										
7												
8												
9												
10												
11				X								
12			Maximum depth explored approximately 11 feet									
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio
 C = Consolidation
 R = Resistivity
 DS = Direct Shear
 SS = Soluble Sulfates
 B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 19

TEST PIT LOG

NO.: TP-18

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/29/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.) 0	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
			TOPSOIL, silty gravel, dry, brown									
1		GM	Silty GRAVEL with sand, dense (estimated), dry, brown									
2												
3												
4												
5					X							
6												
7												
8												
9		ML	Sandy SILT with gravel, medium stiff (estimated), slightly moist, brown									
10				X	8		18	3	21	28	51	
11			Maximum depth explored approximately 10½ feet									
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 20

TEST PIT LOG

NO.: TP-19

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/30/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silty gravel, dry, brown									
1		GM	Silty GRAVEL with sand, very dense (estimated), dry, brown, boulders									
2												
3												
4												
5												
6												
7												
8												
9												
10												
11			Maximum depth explored approximately 10½ feet									
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 21

TEST PIT LOG

NO.: TP-20

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/30/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silty gravel, dry, brown									
1		GM	Silty GRAVEL with sand, dense (estimated), dry, brown, boulders									
2												
3		CL-ML	Sandy Silty CLAY, medium stiff (estimated), slightly moist, brown									
4					5		24	6	11	24	65	
5												
6												
7												
8												
9												
10												
11			Maximum depth explored approximately 10½ feet	X								
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 22

TEST PIT LOG

NO.: TP-21

PROJECT: Scarlett Ridge
CLIENT: RK Builders
LOCATION: See Figure 2
OPERATOR: JSI
EQUIPMENT: Mini Excavator
DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793
DATE: 09/30/20
ELEVATION: Not Measured
LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silty gravel, dry, brown									
1			Silty GRAVEL with sand, dense (estimated), dry, brown									
2												
3												
4		GM		X								
5												
6												
7				X								
8			Maximum depth explored approximately 7 feet due to equipment refusal									
9												
10												
11												
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio
 C = Consolidation
 R = Resistivity
 DS = Direct Shear
 SS = Soluble Sulfates
 B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 23

TEST PIT LOG

NO.: TP-22

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/30/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silty gravel, dry, brown									
1		GM	Silty GRAVEL with sand, very dense (estimated), dry, brown, boulders									
2												
3												
4												
5				X								
6												
7			Maximum depth explored approximately 6½ feet due to equipment refusal	X								
8												
9												
10												
11												
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 24

TEST PIT LOG

NO.: TP-23

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/30/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.) 0	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
			TOPSOIL, silty gravel, dry, brown									
1		GM	Silty GRAVEL with sand, very dense (estimated), dry, brown, boulders									
2												
3				X								
4												
5												
6				X	4			59	28	13		
7			Maximum depth explored approximately 7 feet due to equipment refusal									
8												
9												
10												
11												
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 25

TEST PIT LOG

NO.: TP-24

PROJECT: Scarlett Ridge

CLIENT: RK Builders

LOCATION: See Figure 2

OPERATOR: JSI

EQUIPMENT: Mini Excavator

DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793

DATE: 09/30/20

ELEVATION: Not Measured

LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silty gravel, dry, brown									
1			Silty GRAVEL with sand, very dense (estimated), dry, brown, boulders									
2												
3												
4		GM		X								
5												
6												
7												
8			Maximum depth explored approximately 7 feet due to equipment refusal									
9												
10												
11												
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio

C = Consolidation

R = Resistivity

DS = Direct Shear

SS = Soluble Sulfates

B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 26

TEST PIT LOG

NO.: TP-25

PROJECT: Scarlett Ridge
CLIENT: RK Builders
LOCATION: See Figure 2
OPERATOR: JSI
EQUIPMENT: Mini Excavator
DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793
DATE: 09/30/20
ELEVATION: Not Measured
LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.)	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
0			TOPSOIL, silty gravel, dry, brown									
1			Silty GRAVEL with sand, medium dense to very dense (estimated), dry, brown									
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio
 C = Consolidation
 R = Resistivity
 DS = Direct Shear
 SS = Soluble Sulfates
 B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 27

TEST PIT LOG

NO.: TP-26

PROJECT: Scarlett Ridge
CLIENT: RK Builders
LOCATION: See Figure 2
OPERATOR: JSI
EQUIPMENT: Mini Excavator
DEPTH TO WATER; INITIAL ∇ :

PROJECT NO.: 208793
DATE: 09/30/20
ELEVATION: Not Measured
LOGGED BY: S. Roberts

AT COMPLETION ∇ :

Depth (Ft.) 0	Graphic Log	USCS	Description	Samples	TEST RESULTS							
					Water Cont. (%)	Dry Dens. (pcf)	LL	PI	Gravel (%)	Sand (%)	Fines (%)	Other Tests
			TOPSOIL, silty gravel, dry, brown									
1		GM	Silty GRAVEL with sand, very dense (estimated), dry, brown, boulders									
2												
3												
4				X								
5				X								
6												
7			Maximum depth explored approximately 6½ feet due to equipment refusal									
8												
9												
10												
11												
12												
13												
14												
15												

Notes: No groundwater encountered.

Tests Key

CBR = California Bearing Ratio
 C = Consolidation
 R = Resistivity
 DS = Direct Shear
 SS = Soluble Sulfates
 B = Burnoff

PROJECT NO.: 208793



FIGURE NO.: 28

LEGEND

PROJECT: Scarlett Ridge
CLIENT: RK Builders

DATE: 09/28/20 - 09/30/20
LOGGED BY: S. Roberts

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR SOIL DIVISIONS			USCS	SYMBOL TYPICAL SOIL DESCRIPTIONS	
COARSE GRAINED SOILS (More than 50% retaining on No. 200 Sieve)	GRAVELS (More than 50% of coarse fraction retained on No. 4 Sieve)	CLEAN GRAVELS (Less than 5% fines)		GW	Well Graded Gravel, May Contain Sand, Very Little Fines
				GP	Poorly Graded Gravel, May Contain Sand, Very Little Fines
		GRAVELS WITH FINES (More than 12% fines)		GM	Silty Gravel, May Contain Sand
				GC	Clayey Gravel, May Contain Sand
	SANDS (50% or more of coarse fraction passes No. 4 Sieve)	CLEAN SANDS (Less than 5% fines)		SW	Well Graded Sand, May Contain Gravel, Very Little Fines
				SP	Poorly Graded Sand, May Contain Gravel, Very Little Fines
		SANDS WITH FINES (More than 12% fines)		SM	Silty Sand, May Contain Gravel
				SC	Clayey Sand, May Contain Gravel
FINE GRAINED SOILS (More than 50% passing No. 200 Sieve)	SILTS AND CLAYS (Liquid Limit less than 50)			CL	Lean Clay, Inorganic, May Contain Gravel and/or Sand
				ML	Silt, Inorganic, May Contain Gravel and/or Sand
				OL	Organic Silt or Clay, May Contain Gravel and/or Sand
	SILTS AND CLAYS (Liquid Limit Greater than 50)			CH	Fat Clay, Inorganic, May Contain Gravel and/or Sand
				MH	Elastic Silt, Inorganic, May Contain Gravel and/or Sand
				OH	Organic Clay or Silt, May Contain Gravel and/or Sand
HIGHLY ORGANIC SOILS				PT	Peat, Primarily Organic Matter

SAMPLER DESCRIPTIONS

-  SPLIT SPOON SAMPLER
(1 3/8 inch inside diameter)
-  MODIFIED CALIFORNIA SAMPLER
(2 inch outside diameter)
-  SHELBY TUBE
(3 inch outside diameter)
-  BLOCK SAMPLE
-  BAG/BULK SAMPLE

WATER SYMBOLS

-  Water level encountered during field exploration
-  Water level encountered at completion of field exploration

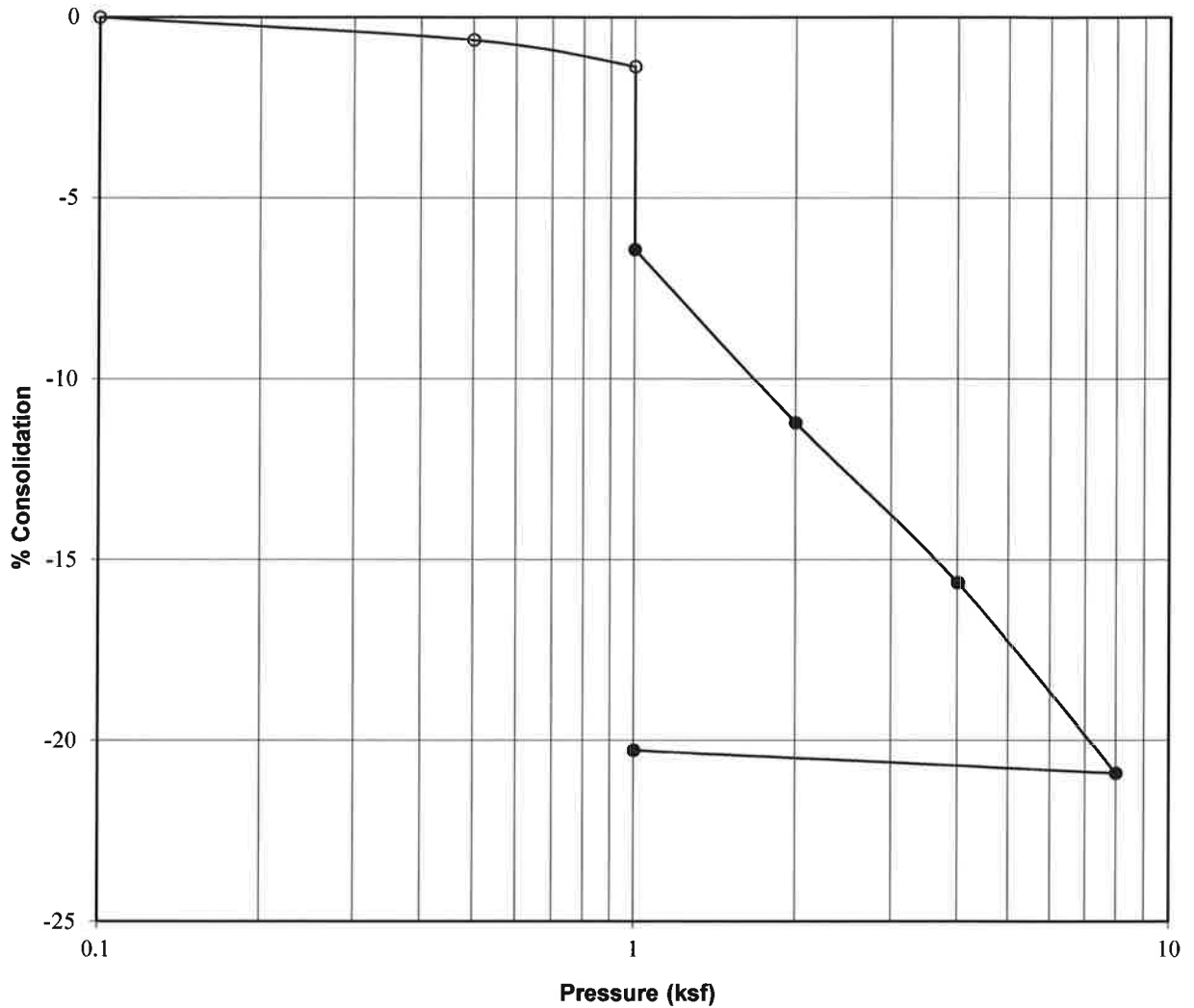
- NOTES:**
- The logs are subject to the limitations, conclusions, and recommendations in this report.
 - Results of tests conducted on samples recovered are reported on the logs and any applicable graphs.
 - Strata lines on the logs represent approximate boundaries only. Actual transitions may be gradual.
 - In general, USCS symbols shown on the logs are based on visual methods only: actual designations (based on laboratory tests) may vary.

PROJECT NO.: 208793



FIGURE NO.: 29

CONSOLIDATION - SWELL TEST



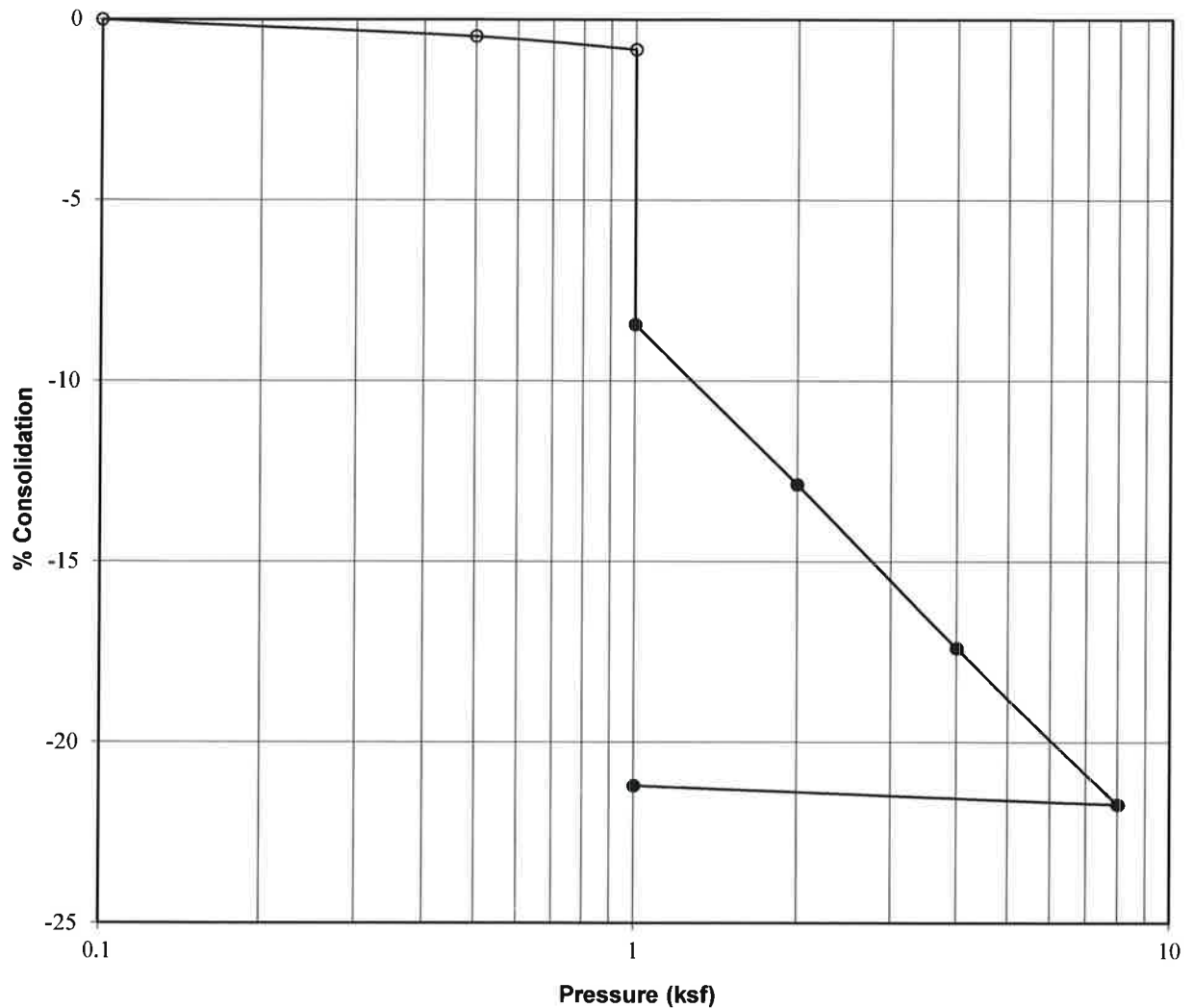
Project:	Scarlett Ridge
Location:	TP-1
Sample Depth, ft:	5
Description:	Block
Soil Type:	Sandy SILT (ML)
Natural Moisture, %:	8
Dry Density, pcf:	85
Liquid Limit:	21
Plasticity Index:	NP
Water Added at:	1 ksf
Percent Collapse:	5.1

PROJECT NO.: 208793



FIGURE NO.: 30

CONSOLIDATION - SWELL TEST



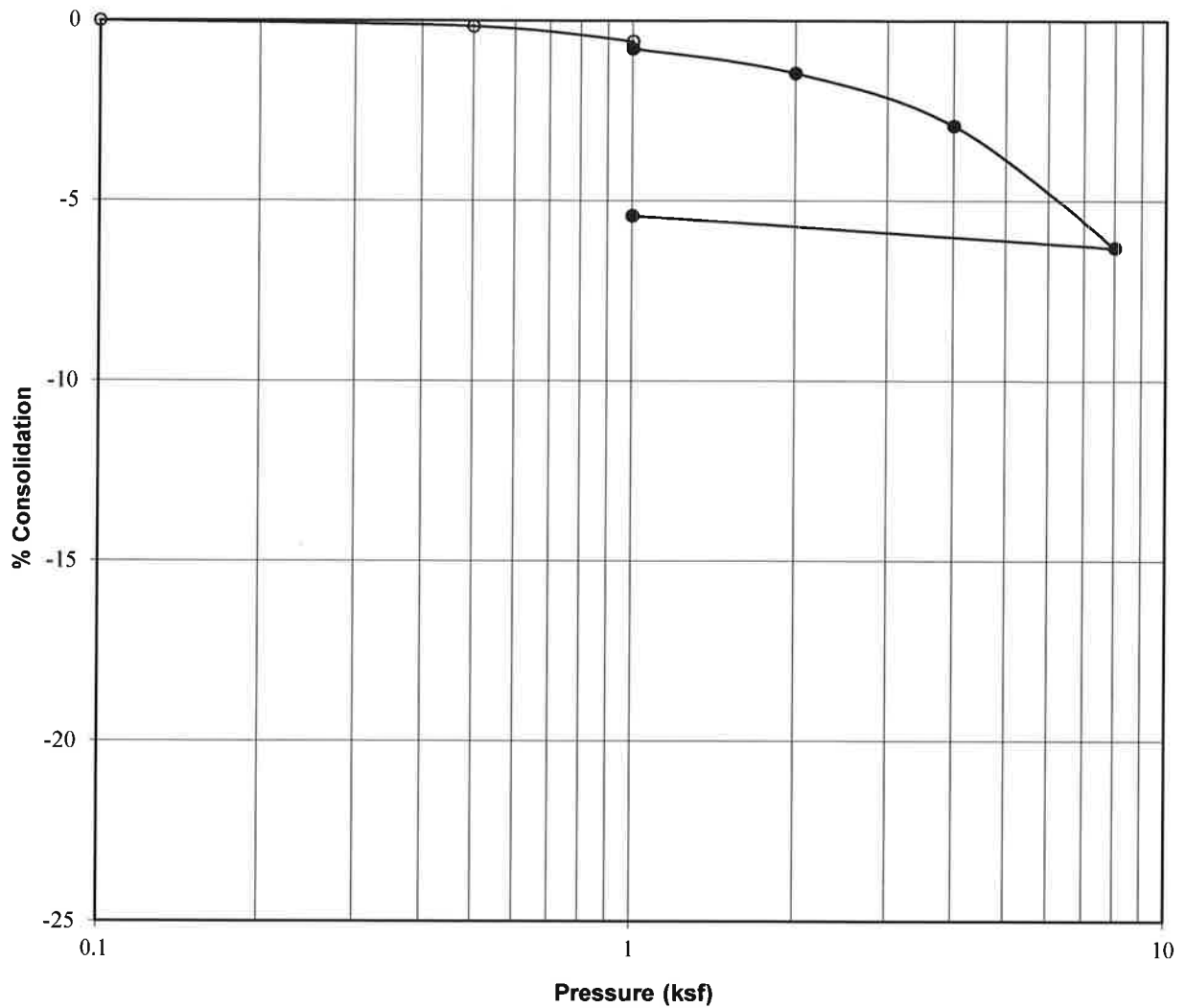
Project:	Scarlett Ridge
Location:	TP-6
Sample Depth, ft:	3
Description:	Block
Soil Type:	Sandy SILT (ML)
Natural Moisture, %:	6
Dry Density, pcf:	84
Liquid Limit:	22
Plasticity Index:	NP
Water Added at:	1 ksf
Percent Collapse:	7.6

PROJECT NO.: 208793



FIGURE NO.: 31

CONSOLIDATION - SWELL TEST



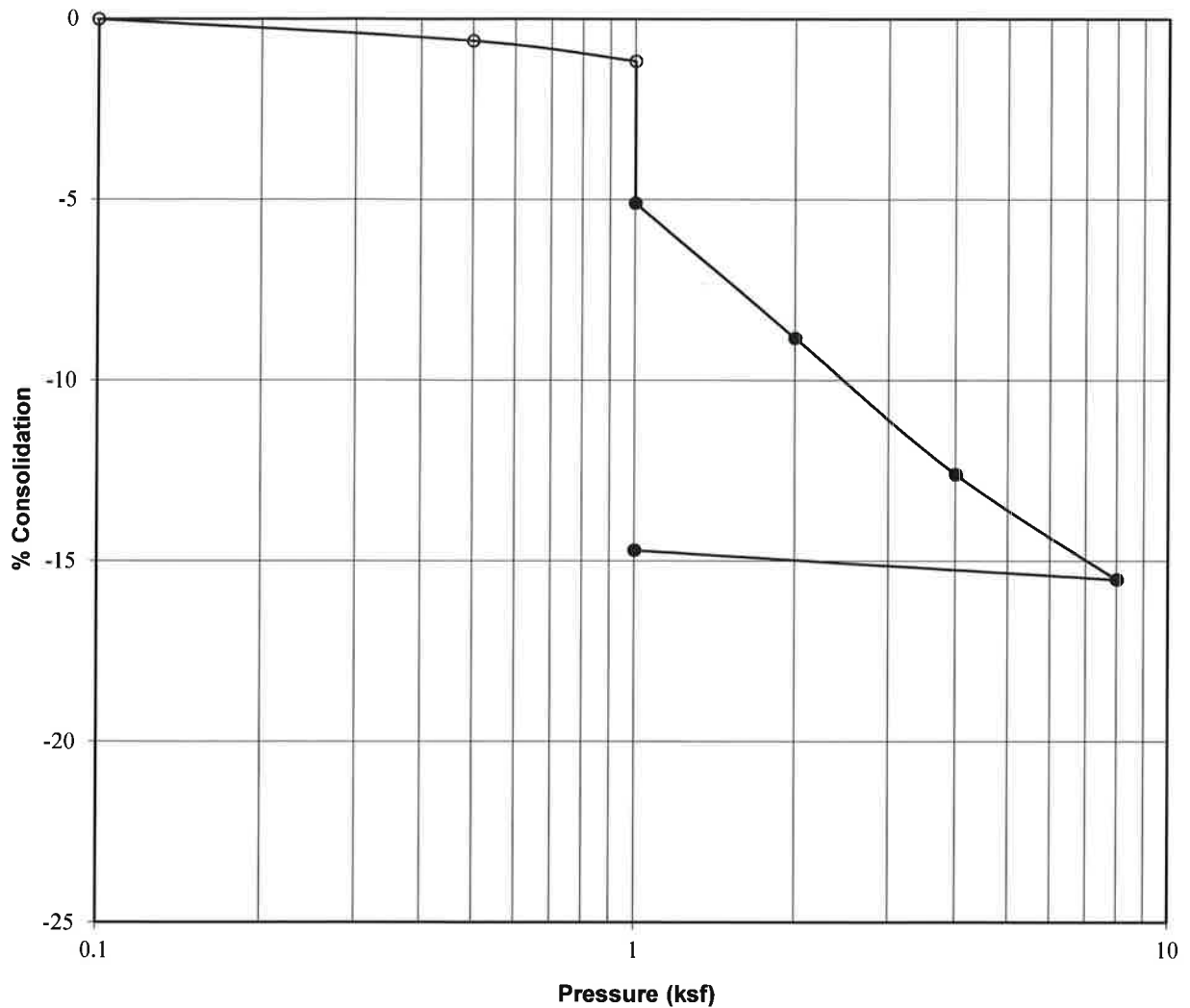
Project:	Scarlett Ridge
Location:	TP-7
Sample Depth, ft:	3½
Description:	Block
Soil Type:	Gravelly Lean CLAY (CL)
Natural Moisture, %:	9
Dry Density, pcf:	91
Liquid Limit:	30
Plasticity Index:	14
Water Added at:	1 ksf
Percent Collapse:	0.2

PROJECT NO.: 208793



FIGURE NO.: 32

CONSOLIDATION - SWELL TEST



Project:	Scarlett Ridge
Location:	TP-11
Sample Depth, ft:	3
Description:	Block
Soil Type:	Sandy Lean CLAY (CL)
Natural Moisture, %:	9
Dry Density, pcf:	89
Liquid Limit:	30
Plasticity Index:	11
Water Added at:	1 ksf
Percent Collapse:	3.9

PROJECT NO.: 208793



FIGURE NO.: 33

APPENDIX A



Latitude, Longitude: 40.281164, -111.988835



Map data ©2020

Date	10/19/2020, 2:54:49 PM
Design Code Reference Document	ASCE7-16
Risk Category	II
Site Class	D - Default (See Section 11.4.3)

Type	Value	Description
S_S	0.741	MCE_R ground motion. (for 0.2 second period)
S_1	0.269	MCE_R ground motion. (for 1.0s period)
S_{MS}	0.895	Site-modified spectral acceleration value
S_{M1}	null -See Section 11.4.8	Site-modified spectral acceleration value
S_{DS}	0.596	Numeric seismic design value at 0.2 second SA
S_{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8	Seismic design category
F_a	1.207	Site amplification factor at 0.2 second
F_v	null -See Section 11.4.8	Site amplification factor at 1.0 second
PGA	0.322	MCE_G peak ground acceleration
F_{PGA}	1.278	Site amplification factor at PGA
PGA_M	0.411	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
$SsRT$	0.741	Probabilistic risk-targeted ground motion. (0.2 second)
$SsUH$	0.828	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.5	Factored deterministic acceleration value. (0.2 second)
$S1RT$	0.269	Probabilistic risk-targeted ground motion. (1.0 second)
$S1UH$	0.302	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
$S1D$	0.6	Factored deterministic acceleration value. (1.0 second)
$PGAd$	0.5	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.895	Mapped value of the risk coefficient at short periods
C_{R1}	0.891	Mapped value of the risk coefficient at a period of 1 s

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**EAGLE MOUNTAIN CITY
PLANNING COMMISSION MEETING
JANUARY 12, 2021**

TITLE: PUBLIC HEARING - Development Code Amendment to Add EMMC 17.49 Wildlife Corridor Overlay Zone

ITEM TYPE: Development Code Amendment

APPLICANT: Staff

ACTION ITEM:

Yes

PUBLIC HEARING:

Yes

PREPARED BY:

Pete Kane, Planning

BACKGROUND:

The Eagle Mountain General Plan includes a number of key initiatives, goals, and strategies in order to create the community residents desire and appreciate. One such strategy is "Preserve wildlife migration routes and habitat, where possible." This strategy, included in the "Meaningful Open Space & Amenities" initiative, is outlined as part of the goal to "Preserve Eagle Mountain's scenic beauty, vistas, and wildlife habitat." This General Plan initiative is further in the "Parks, Trails, and Open Space Plan" that was adopted by the City this past year which includes the goal of "Create solutions to protect wild animal movement such as creating a designated wildlife corridor and protected roadway crossings."

The proposed development code is brought forward in order to implement these elements of the community's long range plans. The code establishes the purpose of the overlay, restrictions and requirements for the corridor, and methods of further protection. Upon adoption of the code amendment, staff will work with property owners to establish and request rezoning of properties to apply the overlay zone and create a continuous migration and habitat corridor through the city.

ITEMS FOR CONSIDERATION:

REQUIRED FINDINGS:

Development Code Amendments are legislative decisions and are considered valid of reasonably debatable and not illegal.

RECOMMENDATION:

We recommend the Planning Commission make a motion to recommend approval of the proposed code amendments to add EMMC 17.49 Wildlife Corridor Overlay Zone to the City Council as presented (or with minor changes as agreed upon at the meeting).

ATTACHMENTS:

[17.49 Wildlife Corridor Overlay Zone - PROPOSED](#)

EMMC 17.49 Wildlife Corridor Overlay Zone

[PROPOSED]

- 17.49.010 Purpose and objective.
- 17.49.020 Area of designation.
- 17.49.030 Applicability.
- 17.49.040 Definitions.
- 17.49.050 Land use regulations.
- 17.49.060 Conflict regulations.
- 17.49.070 Development standards.
- 17.49.080 Development recommendations adjacent to the overlay zone.
- 17.49.090 Wildlife corridor protection.

17.49.010 Purpose and objective.

This chapter establishes the land use regulations and protections for the wildlife corridor overlay zone in Eagle Mountain City, including permitted, minimum land use standards, and other development provisions. This chapter does not change the underlying zoning.

The chapter provides support for and methods by which to preserve wildlife migration routes and habitat in and through Eagle Mountain City. This is a key strategy identified in the Eagle Mountain General Plan and Parks, Trails, and Open Space Master Plan. The chapter provides a means to reduce the continuing loss and fragmentation of habitat and migration routes for native and migrating species while simultaneously accommodating development.

Wildlife corridors preserve natural habitat areas or undeveloped lands that can facilitate movement, migration, foraging, breeding, and dispersal of animals, birds, insects, and reptiles. These areas of land permit wildlife such as raptors, deer, pronghorn, and other fauna to move from one area of their range to another. Habitat fragmented by subdivision and development, such as roads and structures, prevent wildlife from accessing their full home range and often lead to human/wildlife conflict. It is important that animals be able to move for food, access thermal and hiding cover, and to preserve genetic diversity of the species. These corridors also help provide contiguous habitat for plants, invertebrates that are essential pollinators, and other wildlife. Preservation of these corridors, along with fencing and safe crossings, will also help to reduce vehicle-animal collisions.

Primarily supporting wildlife in the region, wildlife corridors may also provide for recreation opportunities, open space preservation, potential tourism, and education for students and the general public.

17.49.020 Area of designation.

Wildlife corridors shall include and be characterized by one or more of the following:

A. Wildlife corridors and landscape linkages.

B. Areas with one of the following attributes: significant seasonal ranges for wildlife and/or wildlife migration corridors, and continuous habitat appropriate for wildlife. These may be identified using scientific data by city, county, state, and/or federal agencies.

C. Species that are unique, rare, threatened, endangered, or otherwise deemed to be of significance to Eagle Mountain City. Species shall be those on the federal listed species and sensitive species as provided by the US Forest Service and Bureau of Land Management, as well as those deemed as such by city, county, state, and/or federal agencies.

17.49.030 Applicability.

A. Partial Coverage. If only a portion of a property is located within the overlay zone, the standards, requirements, and procedure of this chapter shall only apply to the portion of the property that is located inside the overlay zone.

B. Corridor Width. The recommended minimum width for the corridor is 330 feet (330') wide. The United States Department of Agriculture (USDA), US Forest Service, and other research studies have determined this minimum width based on the various species and size of animals that utilize migratory corridors. Road crossings and other constrained areas may require a reduced width for short distances.

C. Natural Wash. When applying the overlay zone, any natural wash within the corridor should include a 50 foot (50') area on both sides of the wash within the overlay zone. This additional area is measured from the top of the bank of the natural wash. This adds a buffer to minimize erosion; stabilize the wash banks; prevent pollution; protect sensitive animals, plants, and riparian habitat; and protect property owners from building on highly-collapsible soil.

17.49.040 Definitions.

"Conservation nonprofit organization" refers to a private organization operating under section 501(c)(3) of the US Internal Revenue Code with the primary purpose of preserving and protecting land in its natural, scenic, historical, recreational, or open space condition.

"Mule deer migration season" refers to the time of year the mule deer migrate between their winter and summer ranges. The mule deer typically migrate through the City of Eagle Mountain between March 15-April 30 and December 1-January 15 annually.

"Native vegetation" refers to all plant species that occur naturally in a particular habitat and provide essential habitat for native insects and animals. These plants have evolved together over time to form communities that are well-suited to the specific combination of soil, temperature, nutrients, and rainfall of their region. Native species are naturally resilient because they adapt to local conditions.

"Nesting season" refers to the period of the year in which birds are building nests and raising young, generally March 15-July 31. The phrase includes any nesting period for documented bird species within the overlay zone.

"Sensitive areas" refers to areas that include nesting grounds/boxes, natural wash, recently-planted seedlings, and other regions deemed sensitive by Eagle Mountain City, Utah Division of Wildlife Resources (DWR), or other public agency.

“Wildlife” refers to wild animals and vegetation, especially animals living in a natural, undomesticated state.

“Wildlife crossing structure” refers to a structure such as a culvert, bridge, or underpass containing features that enhance its suitability for use by wildlife to safely cross human-made barriers such as roads or highways. Examples of such features include the presence of vegetation providing cover or habitat near the entrances and/or natural light visible at the opposite entrance. The term does not include cattle guards.

“Wildlife impermeable fencing” refers to a fence or wall, other than a retaining wall, that prevents various species of wildlife from freely passing through with little or no interference. Except for gates and associated gate support components, a fence or wall that includes the following design features is considered wildlife impermeable fencing:

A. Any fence or wall that is higher than eight feet (8') above grade, inclusive of any wire strands placed above a top rail of a fence or wall.

“Wildlife permeable fencing” refers to a wildlife-friendly fence visible to ungulates and birds, allows wildlife to jump over or crawl under, and provides wildlife access to essential habitats and travel corridors. Wildlife permeable fencing has the following characteristics:

A. Use a rail, high-visibility wire, flagging, or other visual markers for the top.

B. Smooth wire or rounded rail for the top and bottom.

C. Height of top rail or wire should be 42 inches (42") or less from grade.

D. At least 12 inches (12") or more between the top two wires.

E. At least 16 inches (16") between the bottom wire or rail and grade.

F. Posts at a minimum of 16 foot (16') intervals.

G. Gates, drop-downs, removable fence sections, or other passages where animals congregate and cross.

17.49.050 Land use regulations.

The land use regulations shall be those of the underlying zoning with which the Wildlife Corridor Overlay Zone is combined, unless modified by the overlay zone.

17.49.060 Conflict regulations.

Where any provision of federal, state, county, or city statutes, codes, or laws conflicts with any provision of this chapter, the most restrictive shall govern unless enforcement will result in a violation of the federal, state, county or city statutes, codes, or laws.

17.49.070 Development standards.

The following standards are designed to ensure that resources comprising the wildlife corridor area are impacted to the least possible extent. The standards ensure that the landscape will remain connected and that resources can function in a natural state.

The following standards are applicable to all development activities that occur within the Wildlife Corridor Overlay Zone.

A. Open Space Credit/Density Transfer.

1. Developer may be awarded amenity points toward the requirements of EMMC 16.35.105 for public trails, observation structures, and other passive recreation improvements built within the overlay zone as approved by the City.
2. Developer may be granted credit for improved open space area for significant buildable property made unbuildable by this overlay zone as approved on a case-by-case basis by the City Council.
3. Developer may transfer density from overlay zone areas to other areas within a project or development in the case where significant buildable property is made unbuildable by this overlay zone, as approved on a case-by-case basis by the City Council.

B. Fragmentation. Development shall be planned to maintain ecological connections and protect critical resources. Gaps within the corridor created by development, other than roadways, are not permitted. This includes, but is not limited to, non-utility structures, buildings, and wildlife impermeable fencing.

C. Construction period. Permitted construction within the overlay zone shall only occur outside the mule deer migration season and nesting season. Construction may only be permitted during the mule deer migration season and nesting season when certification from DWR is provided stating that the construction area will not impede migration or nesting during the proposed construction period.

D. Vegetation. Native vegetation shall be retained and protected wherever possible. The DWR, City, volunteer groups, developers, and other organizations should work together to replant native vegetation where it has been previously removed or destroyed. Native, drought-tolerant vegetation is permitted.

1. Property used for farming or grazing is exempt from this requirement, unless the landowner grants the City or other organization permission to restore the land to its native habitat.
2. Development adjacent to the overlay zone is encouraged to integrate native vegetation into their landscape plan.

E. Underground utility construction. The construction of underground utility lines involving installation, maintenance or repair shall be subject to the following criteria:

1. Trenches of no more than half the width of the corridor at the construction area are to be opened at one time.
2. During periods when active construction is not occurring, trenches shall be:
 - a. Covered to prevent wildlife access;
 - b. Surrounded by temporary fencing; or
 - c. Include escape ramps.
3. Where consistent with safety and space consideration, excavated material is to be placed on the uphill side of trenches.
4. Trench dewatering devices shall discharge in a manner which will not adversely affect flowing streams, drainage systems, or off-site property.

5. Disturbed areas are to be replanted with native vegetation to resemble their native state prior to construction.

F. Fencing and walls. The following fencing and walls are permitted within and adjacent to the overlay zone:

1. Overlay zone perimeter only – wildlife impermeable fencing to discourage or hinder wildlife from exiting the corridor into developed, urban areas of the city. Wildlife impermeable fencing is not permitted within the overlay zone.
2. Wildlife permeable fencing for agricultural purposes that permit wildlife movement through the corridor.
3. All other fences or walls are prohibited unless otherwise approved by the city council.

G. Trails. Natural trails are permitted within the overlay zone to provide public use, access, and education, but must mitigate as best as possible any negative impact of or restrict the needs of wildlife. These trails may include the trail itself, trailheads, trailhead parking, restrooms, and pavilions so long as these features do not cut off the migration route within the corridor nor deter wildlife from utilizing the area of breeding or feeding.

H. Wildlife crossing structures. To aid in wildlife access and movement through the corridor, wildlife crossing structures are permitted and encouraged over and under roads and highways. Public use of these structures may be permitted and may include trails or paths for the public if it does not negatively impact the wildlife from using the crossing.

1. Feasibility. In situations where a wildlife crossing structure over or under a road is not possible, an alternative at-grade crossing wildlife crossing is required.
2. At-grade crossings. The preferred at-grade wildlife crossing is a combination of impermeable wildlife fencing on both sides of the opening and an advance animal detecting system located in the wildlife crossing, alerting drivers of possible animals crossing. At a minimum, wildlife fencing or an advance animal detecting system shall be installed. When installing an at-grade crossing, the following design criteria should be included:
 - a. Avoid creating pooled water in the right-of-way;
 - b. Incorporate unpalatable plant species or no vegetation;
 - c. Avoid crossing rip-rap;
 - d. Provide a pull-out location for maintenance;
 - e. Locate the crossing on flat terrain;
 - f. Ensure long lengths of wildlife impermeable fencing includes escape opportunities from the right-of-way; and
 - g. Install wildlife warning signs.

17.49.080 Development recommendations adjacent to the overlay zone.

Land adjacent to the overlay district is encouraged to be developed with the following considerations:

A. Consultation. Property owners and developers of land adjacent to the overlay zone are encouraged to consult with the local Wildlife Habitat Biologist at the DWR or other qualified wildlife biologist for guidance on appropriate development adjacent to the corridor.

B. Light Pollution. In addition to compliance with EMMC 17.56 Outdoor Lighting Standards, property adjacent to the overlay zone is encouraged to consider the following:

1. Color and brightness. Outdoor lighting should use lighting that does not affect wildlife or attract insects by limiting the color temperature and brightness:
 - a. Color temperature should not exceed 3,000 Kelvins.
 - b. Light output of individual fixtures should not exceed 850 lumens.
2. Outdoor recreation lighting. Lighting for outdoor recreational facilities directly adjacent to the overlay zone is recommended to be mounted no higher than 15 feet (15') above the ground.
3. Exceptions. The following items are exempt from these recommendations:
 - a. Temporary lighting for construction. Permissible during construction hours, but shall be turned off otherwise.
 - b. Temporary emergency lighting.
 - c. Wireless communication facilities. Lighting should not exceed the minimum requirements established by the Federal Aviation Agency.

17.49.090 Wildlife corridor protection.

A. Conservation and stewardship. Land within the overlay district may be protected using any of the three methods listed here.

1. Dedication for public use. The land may be dedicated to the City or to another public agency. This is the preferred method.
2. Private land conservation. Any private land, whole or a portion of, may apply a conservation easement on that land. The easement may be held by the City, another public agency, or a qualified conservation nonprofit organization.
3. Homeowners' association. Every preliminary plan that includes natural or improved open space that will be owned and maintained by the lot owners shall be accompanied by a conservation easement and proposed articles of incorporation and covenants for a homeowners' association in which all lot owners shall be members, and which is responsible for the maintenance and preservation of natural and improved open space required by this chapter. These documents shall be recorded with the final plat, upon their approval.

B. Sensitive areas. Sensitive areas within the overlay zone shall be protected from human activity by minimize access into or through the sensitive areas.

C. Recreational vehicles. No recreational vehicles, such as Off-Highway Vehicles (OHVs), shall be allowed in the corridor during the mule deer migration season, except for corridor maintenance.