

June 5, 2024

Elite Properties of America, Inc.  
2138 Flying Horse Club Drive  
Colorado Springs, CO 80921



**ENTECH**  
ENGINEERING, INC.

505 ELKTON DRIVE  
COLORADO SPRINGS, CO 80907  
PHONE (719) 531-5599

Attn: Loren Moreland

Re: Response to Review Comments  
Retreat at Prairie Ridge Preliminary Plan Phase 1  
El Paso, Colorado  
Entech Job No. 212381

Ref: Entech Engineering, Inc., revised date May 23, 2024. *Soils and Geology Study, Retreat at Prairie Ridge Filings 1, 2, and 3 – Preliminary Plan, Poco Road and Vollmer Road, El Paso County, Colorado.* Entech Job No. 212381.

Colorado Geological Survey, date May 6, 2024. *Review Comments by the Colorado Geological Survey, Retreat at Prairie Ridge Preliminary Plan Phase 1 (AKA Jaynes).* CGS Unique No. EP-24-0047\_2.

Dear Mr. Moreland:

Entech Engineering, Inc. (Entech) has reviewed the CGS comments dated May 6, 2024 on the Prairie Ridge Preliminary Plan Phase 1. This letter presents our responses to the CGS comments. The Prairie Ridge project is in the preliminary plan stage. It should be noted that additional investigation/design will be required and completed as the project continues through the development process.

The CGS comments are attached to this letter. The responses to their comments are presented below:

## **ENTECH ENGINEERING, INC. RESPONSES**

**Entech Response to Comment 1:** Deep cuts are proposed at the ridge in the center of the site. The cuts will encounter bedrock which will require excavators and/or rock buckets. Water was encountered at 29 feet near the ridge. While water is present at or near cut depths, the sandstone will be stable where water is encountered. The overlot grading on the site will alter the groundwater across the site. It is also anticipated that water will be lowered with the utility installation. At this time, it is our opinion that evaluation of areas suitable for basements/no basements should be made after grading and additional investigation. Piezometers will be monitored during the development process.

**Entech Response to Comment 2:** Test Boring 4 (TB-4) is located in the large lot (5-acre) area. Additional investigation on each of the large, rural lots will be required prior to construction. Piezometers P2 and P4 are located in areas to be filled. After grading, the water depths are expected to be 23 and 17 feet. These areas should be suitable for basement construction. Piezometer 3 (P3) is located along the roadway alignment and not in an area of residential lots.

**Entech Response to Comment 3:** Entech will continue to monitor the temporary piezometers during the development process. The readings will be utilized to evaluate the proposed development.

**Entech Response to Comment 4:** Foundations should be 3 feet above water for typical construction practices. Areas of shallow water will be further evaluated to determine mitigation measures required for the proposed construction. Mitigation measures may include raising the site grades, interceptor drains, and utility drains. At this time, we do not believe that a general “no basement” statement is warranted. This statement should be used for areas where further investigation/analysis determines that basement construction is not feasible.



**Entech Response to Comment 5:** Additional investigation and design regarding an underdrain system will be completed. The underdrain system must have a daylight to function properly.

**Entech Response to Comment 6:** Entech is in agreement that the drainages (non-jurisdictional) must be further evaluated prior to overlot grading. Drains to control water that will follow its original path are commonly used. Drainages along the west side of the property will be diverted into drainage swales that run along the property line, see Figures 1 and 2. Absorption fields in the large boundary lots will not be allowed in the drainage areas. Proper setbacks will be required.

We trust this has provided you with the information you require. If you have any questions or need additional information, please do not hesitate to contact us.

Respectfully Submitted,

ENTECH ENGINEERING, INC.

A handwritten signature in blue ink, appearing to read "Logan L. Langford".

Logan L. Langford, P.G.  
Sr. Geologist

Reviewed by:



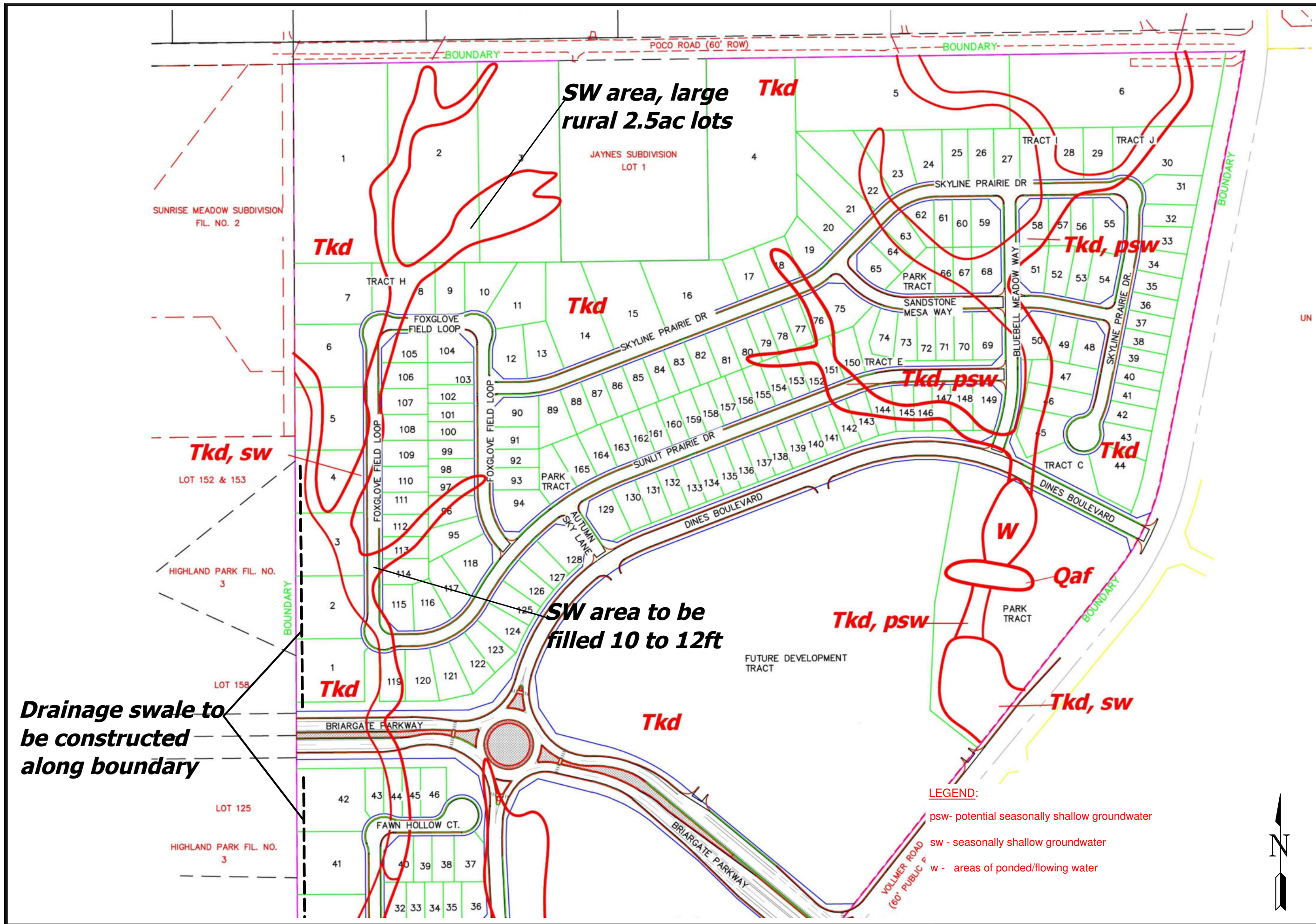
Joseph C. Goode, Jr., P.E.  
President

LLL:JCG/ed

Encl.

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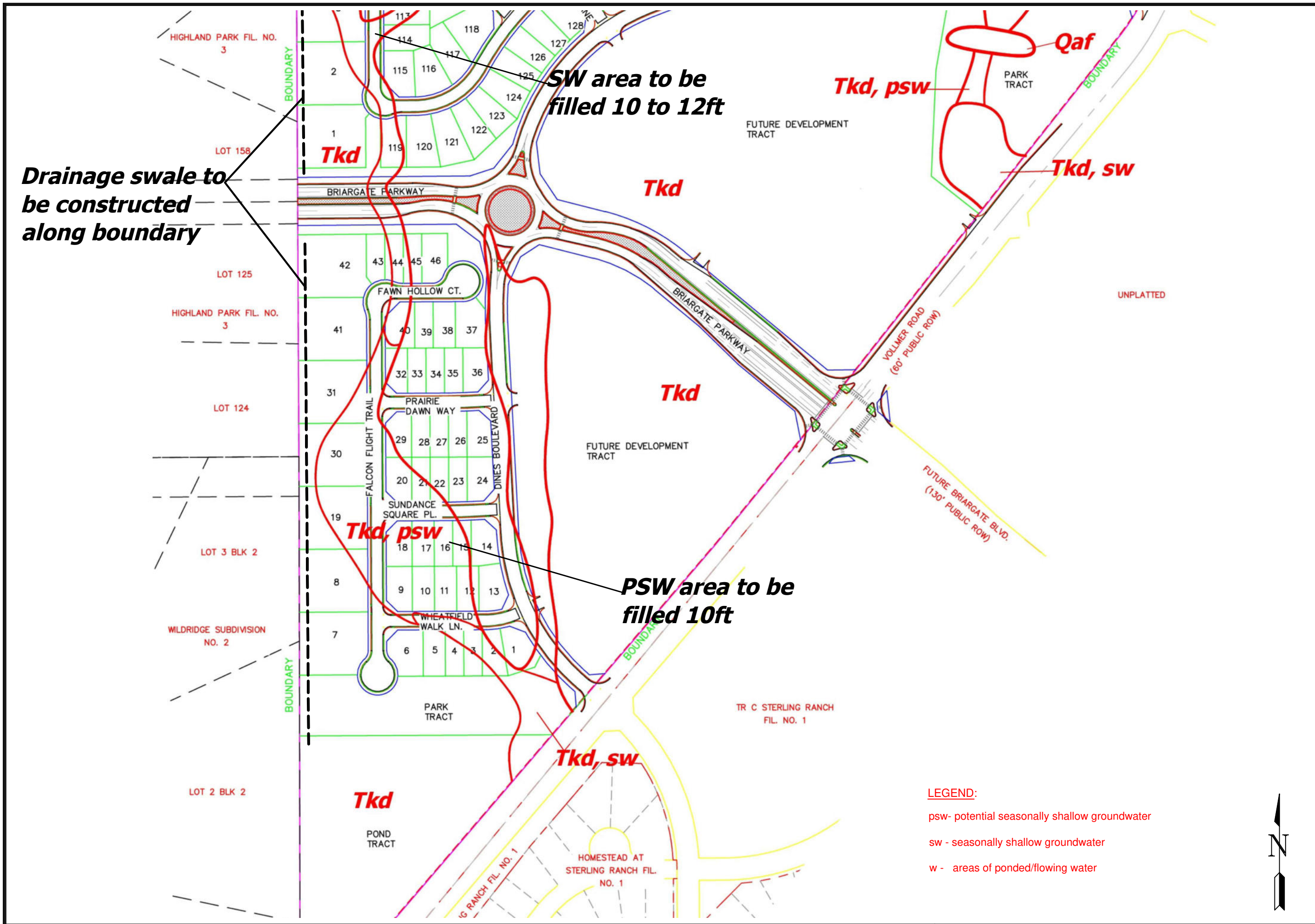
REVISION	BY



**GEOLOGIC CONSTRAINTS**  
 RETREAT AT PRAIRIERIDGE  
 POCO ROAD & VOLLMER ROAD  
 EL PASO COUNTY, CO  
 ELITE PROPERTIES OF AMERICA, INC.

JOB NO.  
212381  
 FIG. 1





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**GEOLOGIC CONSTRAINTS**  
 RETREAT AT PRAIRIERIDGE  
 POCO ROAD & VOLLMER ROAD  
 EL PASO COUNTY, CO  
 ELITE PROPERTIES OF AMERICA, INC.

JOB NO.  
212381  
  
FIG. 2

## Review Comments by the Colorado Geological Survey – 5/6/2024

CGS Unique No.: EP-24-0047\_2 Retreat at Prairie Ridge Preliminary Plan Phase 1 (AKA Jaynes)

Location: Portions of SW ¼ Section 28 and NW ¼ Section 33, T12S, R65W, 6th P.M.

Lat/Long: 38.9736, -104.6738

EP File Number: SP239, 217 SF lots and 6 rural residential lots on 108.89 acres for future residential development

The available referral documents include a Soil and Geology Study and Wastewater Study, Jaynes Property – Preliminary Plan (Entech Engineering, Job No. 212381, Revised April 2, 2024), Preliminary Plan (Classic Consulting, April 1, 2024), Letter of Intent (N.E.S., Inc., April 2024), and other documents. CGS provided comments on January 25, 2024, some of which are repeated herein.

1. Entech states (page 13), “Cuts of up to 30 feet are anticipated in the north central portion of the site.” Groundwater was encountered at 6 to 28 feet below grade during drilling, and Entech observed areas of ponded water in some locations. Also, bedrock was encountered in the test borings at depths of 1 to 9 feet. These conditions will significantly affect the excavation/grading operations at this site. The shallow groundwater conditions likely preclude the construction of below-grade levels for this development.
2. Test Boring 4, P2, P3, and P4 show groundwater at depths of 6.5 to 11.5 feet below grade. These areas are depicted as TKd (Dawson Formation) in Figure 8 of Entech’s report and Sheet 28 of the preliminary plan. These areas also contain potentially seasonally shallow groundwater (psw) or seasonally wet area (sw) and should be updated.
3. CGS appreciates Entech's installation of monitoring wells within the site. Groundwater depths between 6.5 to 30 feet were recorded in August and October 2023 and February 2024. It is crucial that these groundwater elevations continue to be measured during Spring/Summer/Fall 2024 and after early grading operations. This is necessary to determine the extent of shallow groundwater impacts on the overall development, as mandated by code.
4. We agree with Entech (page 11 of their report) that “Foundations should be a minimum of 3 feet above the lowest foundation/building grade and the maximum anticipated groundwater level.” If the minimum separation cannot be achieved (as determined from the continued groundwater monitoring/observation program) and mitigation measures are not possible (such as raising site grades well above maximum groundwater elevations based on a minimum yearlong monitoring program), then **NO basements** or other below-grade spaces (crawlspaces, walkouts, etc.) should be permitted within Prairie Ridge Filing No. 1. **CGS recommends that the preliminary plans include a statement indicating “no basements or other below-grade spaces allowed” or mitigation measures, such as raising the site grades be incorporated.**
5. Note 14 of the preliminary plan states, “In areas of shallow groundwater: Due to shallow groundwater in the area, all foundations shall incorporate an underground drainage system.” Plans regarding an underground drainage system have not been provided. It has been our experience that these systems have issues due to individual connections and lack of a gravity discharge to a daylight outfall. An underdrain system should be allowed ONLY if it can gravity discharge to a daylight outfall. Additionally, as stated previously, significant cuts are planned. CGS recommends that the underdrain system be designed during the preliminary plan stage. Individual foundation perimeter drains are intended to handle small amounts of intermittent, perched water, and CANNOT be used to mitigate persistent shallow groundwater conditions.
6. Two drainages exist within the project area that are designated as existing non-jurisdictional wetlands per the National Wetlands Inventory (U.S. Fish and Wildlife Service, National Standards and Support Team, [wetlands\\_team@fws.gov](mailto:wetlands_team@fws.gov)) and the drainage report. **CGS recommends that the existing channel alignments be further evaluated** to determine the effect of these systems (i.e., groundwater conditions, differential settlement, etc.) on future development. Since water will tend to convert back to its natural pathway, drain systems may be necessary within these areas, i.e., piped, burrito drain, etc. Per the letter of intent (page 10), “Absorption fields must also be located a minimum of 50 feet from any drainages, floodplains or ponded areas and 25 feet from dry gulches.”