

CGS Unique No. EP-26-0066_2

Project Name: Pyramid Mountain

El Paso File Number: SF262

Location: SW¼ Section 23, T13S, R68W, 6th P.M.
38.9015, -104.9652

As requested (email dated April 6, 2026), the Colorado Geological Survey reviewed the resubmittal documents for the final plat for Pyramid Mountain in Cascade, Colorado. The documents include a Soils and Geology Study (Entech Engineering Inc., Revised April 1, 2026), Final Plat (Gould Land Surveying, Rev. March 25, 2026), Site Plan (RDK Design, (April 2, 2026), Preliminary Drainage Report (All Terrain Engineering, March 2026), and other documents. The site consists of one single-family lot within 16.9 acres. CGS previously reviewed the application for the final plat and provided comments dated February 16, 2026.

According to Entech, the primary geologic conditions likely to affect the development plan for this property are: downslope creep, a potential seasonally shallow groundwater area, debris-flow-susceptible drainage, and the potential for elevated radon levels. Another geologic constraint that is typically associated with alluvial fans is hydrocompaction. Entech provided their Rockfall Analysis (June 29, 2006) as CGS requested in our previous review. Rockfall-susceptible outcrops are located upslope to the northeast and southeast of the site. We agree with Entech that no signs of past rockfall events or rockfall susceptible outcrops were observed within or directly upslope of the parcel.

CGS provided recommendations in our previous review letter that do not appear to have been addressed in the current referral documents. These include:

Debris fans/debris flow susceptibility. CGS recommends that the final drainage study analyze bulk flow dynamics associated with hyperconcentrated flooding emanating from the drainages for 25- and 100-year storm events.

Downslope creep. CGS recommends that building-specific foundation investigations be conducted prior to building to determine subsurface geologic characteristics that may affect foundation design (e.g., loose soils, large boulders, downslope creep).

Surface drainage and erosion. CGS recommends establishing erosional setbacks from any drainage/channel within the site, along with site grading that provides positive surface drainage and stormwater BMPs.

Geologic Hazard Note. CGS recommends that geologic hazards, constraints, and mitigation measures (if necessary) be included in the final plat/site plan in accordance with El Paso County's Land Development Code and the Engineering Criteria Manual. Hydrocompaction associated with unconsolidated alluvial fan deposits should also be included.

Entech's recommendations should be strictly adhered to during design and construction, and any mitigation measures should be noted in the final plat.

Submitted 4/17/2026 by Amy Crandall, Engineering Geologist, Colorado Geological Survey (303-384-2632 or acrandall@mines.edu)