



June 17, 2022

Bob Hagerty
Bola Enterprises, Inc.
PO Box 773630
Steamboat Springs, Colorado 80477

Re: Geologic Hazard Evaluation
Proposed Lots 1 & 2, Filing 9
Aspen Heights Subdivision
Routt County, Colorado
Western Slope Geotech Project No. 22-1035A

Dear Bob,

As requested, Western Slope Geotech, Inc. (WSG) has prepared this report summarizing our observations and available data regarding potential geologic hazards associated with the proposed Lots 1 and 2 of the Aspen Heights Subdivision, Filing No. 9 to be developed in Routt County, Colorado.

The scope of our work included a site visit on May 17, 2022, to observe current site conditions, the review of readily available geologic and geologic hazard mapping, and the preparation of this report.

Proposed Development: WSG understands the proposed development will include the replatting of multiple existing, but currently unusable single family residential building lots and adjacent other parcels to create two single-family residential building lots of approximately 5-acres in size each. Each lot will be required to develop individual water and on-site wastewater treatment systems (OWTS's). No site grading or road construction are planned.

Field Exploration/Site Conditions: WSG visited the project site on May 17, 2022, to observe site conditions, potential building sites and to identify potential geologic hazards within and adjacent to proposed development areas.

The existing properties are currently a part of the Steamboat Lake Subdivision, Filing No. 7. Proposed Lot 1 is generally located at the west end of Horse Shoe Lane, off the west

side of County Road 129. Proposed Lot 1 consists of 16 existing but currently unusable land parcels. A residence was located on an adjacent property to the east. The site lies along the crest of a low ridge line bordered by seasonal drainages to the north (Ways Gulch) and south (unnamed). Both drainages were flowing strongly at the time of our site observations. Topography was variable and ranged from gently sloping along the crest of the ridgeline to steeply sloping near the drainage ways. Evidence of recent slope instability was not observed.

Proposed Lot 2 is generally located along Antelope Way and Big Horn Way and consists of two adjoining land parcels separated by Antelope Way. Residences were under construction on nearby properties to the north and southwest. Site topography was fairly consistent and generally sloped moderately down to the north. No significant drainageways were present in the vicinity of the site.

A site plan indicating existing and proposed development areas is shown on Figure 1.

Geologic Conditions: Geologic mapping (Segerstrom & Young, *General Geology of the Hahns Peak and Farwell Mountain Quadrangles, Routt County Colorado*, USGS Bulletin 1349, 1972) indicates the area is underlain by the Tertiary Browns Park Formation generally consisting of poorly indurated silty to clayey sandstone. Mapping also indicates post-Browns Park faulting including the Steamboat Lake fault and the Spillway fault, both generally striking east-west and located south of the site. Displacement of up to 150 feet is inferred.

Geologic Hazard Evaluation: Based on WSG's review of geologic mapping and experience with previous residential development within the Aspen Heights Subdivision indicate the site is underlain by residual sand and clay soils and sandstone-claystone bedrock of the Tertiary Browns Park Formation. Residual soils and bedrock typically display variable swell potentials ranging from non-expansive to low and occasionally moderate. Foundations constructed on similar soil and bedrock conditions in the area have historically experienced good foundation and floor slab performance using engineered design, good construction practices and maintenance. With the exception of seasonally perched groundwater, groundwater conditions that would preclude basement construction are not anticipated.

Geologic faults of Tertiary age are mapped to the south of the site. Associated seismic activity has not been recorded within the last 150 years. The risk of future seismic activity is considered low.

Based on WSG's review of Routt County Geologic Hazard Maps of the project area, the area is included in mapped Potentially UnStable (PUS) or mapped UnStable (US) areas. Based on site topography and proposed construction, WSG believes the potential for slope instability associated with residential development is low at both proposed lots.

Site development activities associated with residential development include construction of roadways, site grading including unretained cuts and fills and construction of On-site Wastewater Systems (OWTS's). These activities can lead to decreased slope stability through concentrated drainage and erosion, loss of slope support and increased slope loading. WSG recommends development activities be limited by a setback distance of 50 feet from the steep slopes (greater than 30%) to help decrease the potential for slope instability.

Conclusions and Limitations: Based on the proposed development, our site observations and review of available mapping, WSG does not believe there are geologic conditions associated with the site that are considered excessively hazardous or would render the proposed development unfeasible.

Soils and bedrock with generally low swell potential are anticipated within the development. Geotechnical explorations should be conducted at individual building sites to evaluate local soil and bedrock conditions. Drainage and steep slope setbacks for OWTS absorption fields should be observed in accordance with Routt County regulations and good engineering practice.

Geologic Hazard Evaluation
Proposed Lots 1 & 2, Filing 9
Aspen Heights Subdivision
Routt County, Colorado
WSG # 22-1035A

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Western Slope Geotech appreciates the opportunity to be of service to you on this project. If you have any questions concerning the enclosed information or if we can be of further service to you in any way, please do not hesitate to contact us.

Very Truly Yours,
Western Slope Geotech, Inc.

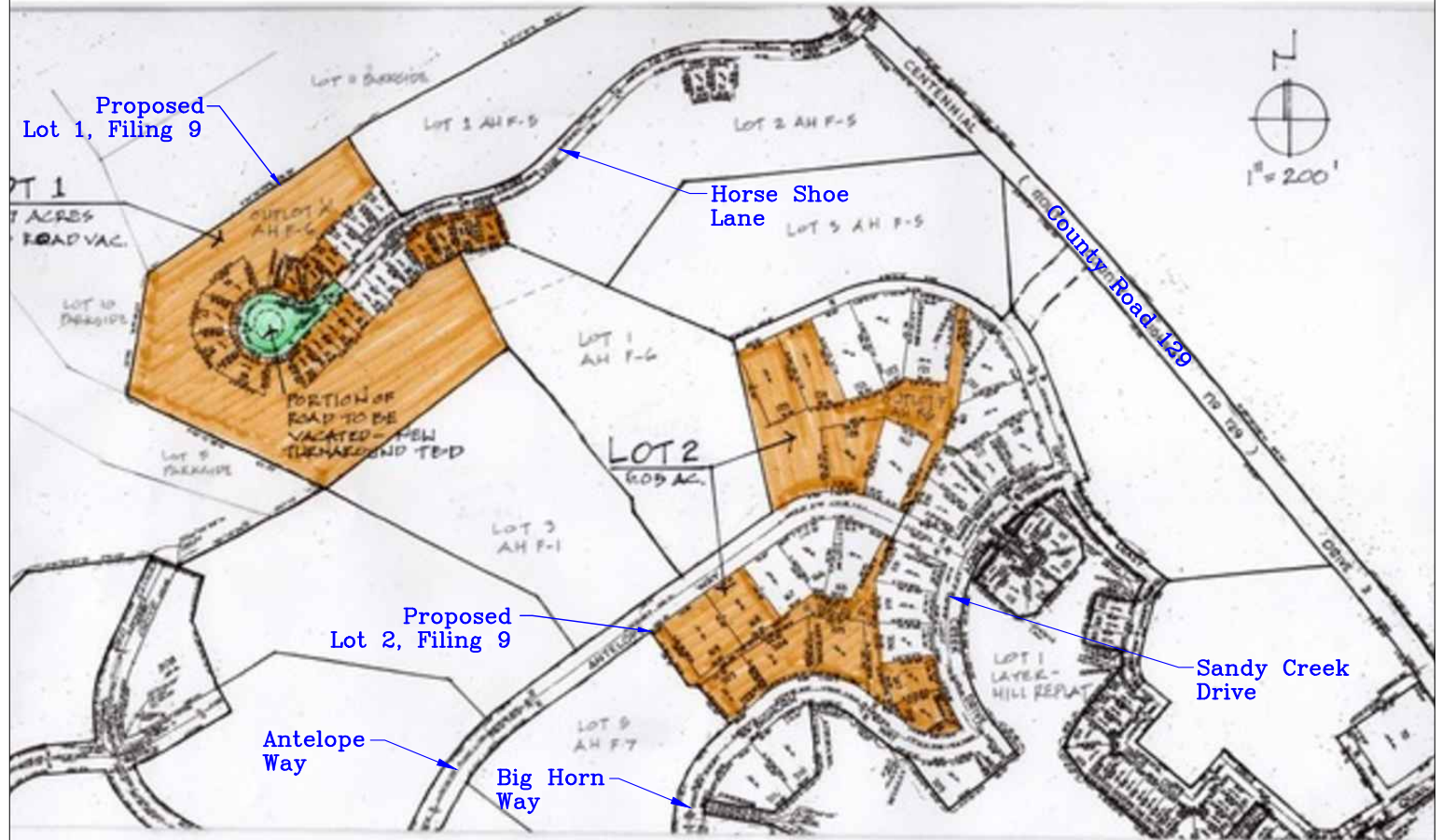


Harold Schlicht, P.E.
Principal Engineer



8-5256

Format



ASPEN HEIGHTS SUBDIVISION FILING No. 9

A REPLAT OF LOTS 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 37, 38, 39, 40, 124, 125, 159, 168, 169, 203, 204, 205, 207 AND 208, STEAMBOAT LAKE SUBDIVISION FILING No. 7, EAST PARCEL 'G', ASPEN HEIGHTS SUBDIVISION, FILING No. 2 AND OUTLOT 'A' AND OUTLOT 'P', ASPEN HEIGHTS SUBDIVISION FILING No. 6

SITE PLAN

Project Name: Lots 1 & 2, Aspen Heights, Filing 9

Location: Routt County, CO



Project No.: 22-1035A

Date: 6/17/22

Drawn/Checked: HS

Figure No.: 1