



Project Overview:

Location:

- Eagles Nest
Banner Elk, NC

Architect:

- KA Architecture,
Inc.

Contractor:

- Kidder
Construction, Inc.

Total Conditioned Space:

- 7,798 Square Feet

Project type:

- Residential

Our Role in the Project

The Avery County Mountain Retreat was a fun project for us here at Areté Engineers; providing structural plans for a home from the ground up. Steel and timber design was our main focus for this project and for good reason. Perched on the side of a mountain where elevations reach 5,000 feet, this 7,798 square foot mountain get-away was no small undertaking to support. The cast in place concrete foundations support numerous steel I-beams that make up the floor systems for both the primary and guesthouse. The home will feature an open floor plan, utilizing open web floor trusses to achieve 30-foot spans. A rockery style retaining wall is to be incorporated into the south facing side of the site, which will support a patio area above, also giving the home a rustic and aesthetically pleasing look. Utilizing a combination of concrete, steel, and conventional timber framing, the Retreat was designed to last and to provide a comfortable yet dependable mountain homestead in the high country.

See the work in progress on [2](#)



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❖ A TV garage with guesthouse above.



❖ 2nd floor of main house.



❖ Front entrance to main house.

- ❖ Steel I-beam supporting floor trusses of second floor.



- ❖ View of first floor.

- ❖ View of I-beam and posts supporting 2nd floor.



- ❖ View of cast in place concrete foundation walls.



- ❖ 3-car garage of main house.

- ❖ South facing view.

