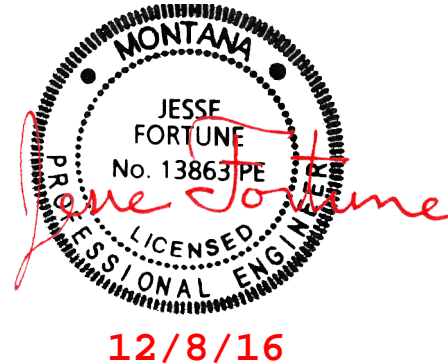


December 8, 2016

**Mr. Bryan Bauder**  
**BKB Construction**  
**424 Eagle Lane**  
**Corvallis, MT 59828**

Re: Site Observation  
North Valley Public Library  
208 Main St.  
Stevensville, Montana 59870



Bryan,

On Tuesday, November 29, 2016, a representative from Eclipse Engineering made a site visit to the above stated address. The purpose of the visit was to investigate the condition of the roof framing after an issue with a failing roof beam was found during renovation.

### Background & Observations

The building is part one story and part two story. The structure is concrete, brick and wood frame construction. The area in question is a one story flat roof with wood rafters and beams. There are three bays of 2x rafters with an approximate 10 ft. span and a fourth with approximately 19 ft. span that were visible at the time of the site visit. The built up beams are supported by a steel beam on one side and steel posts on the other. The beam in question, the first beam back from the wall on Main street side, supporting approximately 15 ft. of tributary load, is cracked, sagging, and coming apart at the splice near mid-span. The other beams, all appearing in good condition, are supporting 10 tributary load. These beams span approximately 19 ft. with braces from the steel beam. (Reference attached photos).

### Conclusions/Recommendations:

The 19 ft. rafter span is too long for 2x8's at 24" on center. Add (sister) 1 3/4"x 9 1/2" LVL rafters to each 2x8 rafter spanning 19 ft. Use Simpson HUS1.81/10 hangers at the new beam. Nail existing rafter and new rafter with (3) 16d nails per 12".

The damaged (3) 2x10 beam needs to be removed and replaced with a new (3) 1 3/4" x 11 7/8" LVL beam. Attach all new and existing rafters to this beam with Simpson hangers. If required, the beam may be notched to match the bearing conditions of the existing (3) 2x10 beam, do not notch with a square cut, ref. detail A.



Children's Area where damaged beam is located



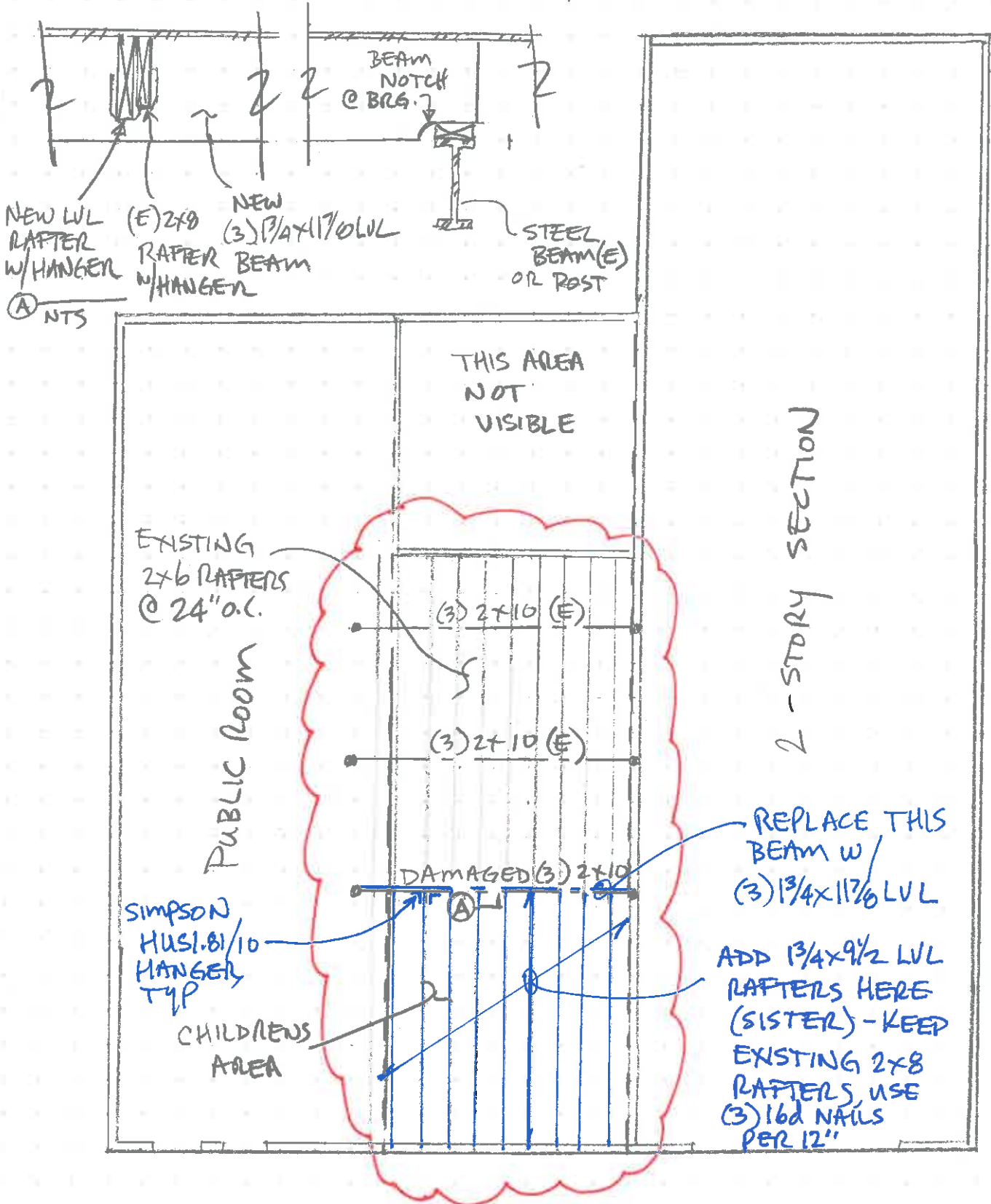
Eclipse Engineering has reviewed the specific elements identified above only and takes no responsibility for any other element or the remainder of the existing structure.

Sincerely,  
**Eclipse Engineering, Inc.**



Lynn Gmeiner  
Project Engineer

Attch: Partial framing plan and detail



PARTIAL FRAME PLAN - NOT TO SCALE