

September 17, 2014

K.E. Project #: 214-525-095

Weber County
Building Inspection Department the
2380 Washington Blvd., Suite 240
Ogden, Utah 84401
Phone: (801) 399-8374

Attention: Craig Browne, Building Official

Subject: Bingham Residence – Plan Review Comments

Mr. Browne:

Kimball Engineering has completed the first review of the proposed Bingham Residence (Lot 77 of Powder Mt. Resort) located at Weber Co., Utah. This proposed project consists of an approximately 5,185 square foot home, not including the attached garage. This review was based upon the following:

1. Construction drawings dated 8/21/2014 provided by Bertoldi Architects.
2. Structural drawings and calculations dated 8/21/2014 provided by BHB Engineers. The structural plans and calculations have been sealed and signed by Scott M. Pettit, Licensed Structural Engineer.
3. A geotechnical report (#01628-006) dated August 7, 2014 by IGES, sealed and signed by David A. Glass, Licensed Professional Engineer.

The 2012 International Residential and Building Codes, as adopted by the State Utah, were used as the basis of our review. Specific comments in regards to this project are enclosed with this cover letter. If you have any questions in regards to this review please do not hesitate to contact me.

Sincerely,



Mike Molyneux, P.E.

Attachment: Comments

Plan Review Comments

Project Name: Bingham Residence

K.E. Project #: 214-525-095

Location(s): 8443 E. Spring Park, Weber Co., Utah

Structural By: Mike Molyneux

Date of Comments: 09/17/2014

Code Review By: Doug Smith

The plans, structural calculations, and REScheck for the above-mentioned project have been reviewed. The following comments address areas of concern, non-compliance with the governing code, potential errors, or omissions in the proposed design. The appropriate design professional must address each comment below and submit a written response in addition to revised plans and calculations if necessary. **Please cloud any revisions made to the construction drawings and provide the date of the latest revision on each revised sheet.**

CODE REVIEW COMMENTS:

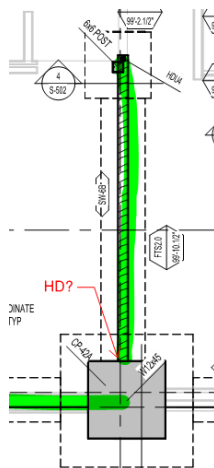
- A1. On Sheet AE-101, it does not appear that there is 21" directly in front of the toilet at the guest suite bathroom (room 015). 21" of clear space in front of toilets is required by IRC R307.1. Please address this on the plans.
- A2. Please provide notes or details on the plans showing the required separation between the garage and the dwelling with a minimum of ½ inch gypsum board as required by IRC R302.6, and 5/8 type X at the ceiling where living space is located above the garage.
- A3. At various floor plans, cross sections, and at detail #4 on sheet AI-405: There is a ship ladder shown for access to the loft area at the guest suits (room 014). However, IRC 311.4 requires an approved ramp or stairway from any portion of habitable space. Please contact Craig Brown with Weber County Building Dept. to verify if they will allow a ladder to the proposed space (please be aware that in the past they have not approved such a setup).
- A4. On sheets AE-331 and AE-332, please show how graspable handrail is to be provided along all stairs. Please also specify the dimensions of such handrail in accordance with IRC 311.7.8.
- A5. On sheets AE-601, AE-602, and AE-603 please show tempered glass in the following locations:
 - A. Window W12 at the guest suite (room 014) that is adjacent to the exterior stairway, as required by IRC R308.4.6.
 - B. Window W11 at guest suite (room 014) because it is within 24" of the door, as required by IRC R308.4.2.
 - C. Window W2 located next to the "Gear" room door, as required by IRC R308.4.2.

- A6. Please specify on the plans that operable windows meeting the requirements of IRC R310.1 for emergency escape and rescue are provided in each bedroom. Please also specify the dimensions of such openings.
- A7. Please specify the exact type of fireplace that is to be installed within the master bedroom. Fireplaces located in bedrooms or bathrooms must be the “direct vent” type and be listed to be located within such spaces, as required by IRC G2406.2.

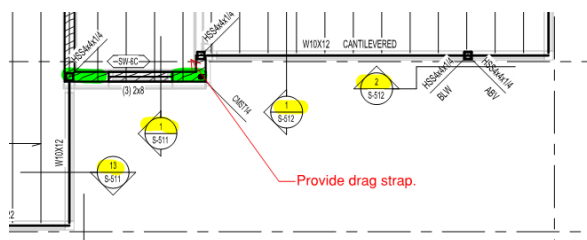
STRUCTURAL COMMENTS:

Structural Drawings:

- S1. Sheet S-101: There is a hold down missing at gridline 3.



- S2. Sheet S-111: Please provide a drag strap at gridline D.



- S3. Sheet S-112: Detail 8/S-501 is shown at the openings in the concrete walls. Detail 8 is for openings less than 3'-0". Please provide concrete lintel sizes for all openings in the concrete walls at the garage.
- S4. Sheet S-113: Multiple shear wall types are shown at gridline 3. Per Section 4.3.3.4 of AWC SDPWS 2008 shear walls along the same line should be of similar material and construction unless it can be shown that the forces are distributed according to rigidity. Please address.

Structural Calculations:

- S5. No calculations were included for unbalanced or snow drift loads. Please provide calculations and revise the roof framing calculations and plans as necessary to include these increased loads where they occur.