

October 6, 2014

K.E. Project #: 214-525-104

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

Attention: Craig Browne, Building Official

Subject: Mendelsohn SFD – Plan Review Comments

Mr. Browne:

Kimball Engineering has completed the first review of the proposed Mendelsohn Residence (Ridge Nest Lot 4) located at Weber Co.(Powder Mountain), Utah. This proposed project consists of an approximately 1,281 square foot home. This review was based upon the following:

1. Construction drawings dated 9/19/2014 provided by Bertoldi Architects.
2. Structural drawings and calculations dated 8/20/2014 provided by LEI Engineers. The structural plans and calculations have been sealed and signed by Joshua K.S. Anderson, Licensed Structural Engineer.
3. A geotechnical report (#01628-008) dated September 16, 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: Mendelsohn SFD

K.E. Project #: 214-525-104

Location(s): Lot 4 Ridge Nest, Weber Co., Utah

Structural By: Mike Molyneux

Date of Comments: 09/25/2014

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. Please specify the exact type of fireplace that is to be installed on the main level. For wood burning fireplaces, please specify on the plans that the wood burning chimney termination must extend at least 2 feet higher than any portion of the building within 10 feet, as required by IRC G2427.5.3.

STRUCTURAL COMMENTS:

Structural Drawings:

- S1. Please add a note to the plans stating that all fasteners (i.e. nails, screws, anchor bolts, etc.) which are to be installed in preservative treated wood (i.e. sill plates) shall meet the requirements of IBC 2304.9.5.
- S2. Sheet SN.0: Please address the following...
 - A. The roof snow load is listed as 67.5 psf while the calculations indicate that 190psf should be used.
 - B. Please list the steel ordinary moment frame as part of the design criteria on the plans.
- S3. Sheet S1.0: The footing FT8 does not meet the minimum reinforcement requirements of Section 10.5.4 of ACI 318-11. Please address.
- S4. Sheet S2.0: Clarify the hold down at the top left of the main floor shear plan. It appears that a hold down is intended but the hold down is not clear on the plans.
- S5. Sheet S3.0: Please provide the angled column size at the main floor framing plan.

- S6. Sheet S3.1: The roof diaphragm calculations indicate that 7/8" roof sheathing is required while the framing notes indicate to use 5/8" sheathing. Please coordinate.
- S7. Sheet S4.1: The notes in details 25, 26, and 27 indicate that (6) bolts are required while the detail shows (3). Please clarify the drawings.
- S8. Sheet S4.2: Please address the following...
 - A. The vertical reinforcing in detail 48 does not meet the minimum reinforcement requirements of Sections 10.9.1 or 10.8.4 of ACI 318-11.
 - B. Please provide tie details for detail 48 that meet the requirements of Section 7.10.5.3 of ACI 318-11.

Structural Calculations:

- S9. Many of the calculations were performed in reference to outdated building codes and standards. Please confirm that calculations meet the requirements of the 2012 IBC and its referenced standards as listed in Chapter 35. This includes steel and wood beam calculations.
- S10. Please verify that the footing shown under the angled columns considers eccentric loading.
- S11. It appears that a response modification factor of 6.5 was used in the lateral calculations. The response modification factor for an ordinary moment frame is 3.5 per Table 12.2-1 of ASCE 7-10. Please address.