



908 WEST GORDON AVE. SUITE #3
LAYTON, UT 84041
(801) 547-8133

August 21, 2018

FIRST REVIEW
WC³ Project #: 218-525-099
Weber County

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

Attention: Craig Browne Building Official

Subject: Morar - SFD – Plan Review Comments 1st Review

Mr. Browne:

West Coast Code Consultants, Inc. (WC³) has completed the first review of the proposed Morar - SFD project located in Eden, UT. This review was based upon the following:

1. An Envelope Certificate (ECC) was also provided.
2. Structural drawings by Vector Engineering.
3. Geotechnical investigation report (#01628-008) by Geotechnical and Geologic Hazard Investigation, sealed and signed by David A. Glass, Professional Engineer.

The 2015 International Codes and 2017 NEC, as adopted by the State of Utah, were used as the basis of our review. Specific comments regarding this project are enclosed with this cover letter. If you have any questions regarding this review, please contact me.

Sincerely,

Mike Molyneux, P.E.
Senior Plan Review Engineer

Attachment: Comments



Plan Review Comments

Project Name: Morar - SFD

Code Review by: Josh Goodman

Location(s): Ridge Nest 14r, Eden, UT

Structural by: Joe Bingham

OCCUPANCY & BUILDING SUMMARY:

Main Level	Upper Level	Finished Basement	Unfinished Basement	Deck(s)	Covered Patio(s)	Garage
885 ft2	-	701 ft2	-	-	-	-

* - Items noted with an asterisk may change as a result of the plan review comments.

GENERAL INFORMATION:

The submitted documents for the above-mentioned project, as outlined in the cover letter, 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. Sheet A2.2: Please address:
 - A. Windows W7 and W8 appear to need all three panes of glass to be safety glazing, not just two. Please update the plans to show this, per R308.4.2.
- A2. Sheet A3.3: Please address:
 - A. Per R308.4.4, safety glazing is required for keyed note 2. Please update the plans accordingly.
- A3. Please provide manufacturer's installation instructions for the Gyrofocus fireplace.
- A4. Per R506.2.3, identify on the plans the required 6 mil vapor barrier below the slab.

STRUCTURAL COMMENTS:

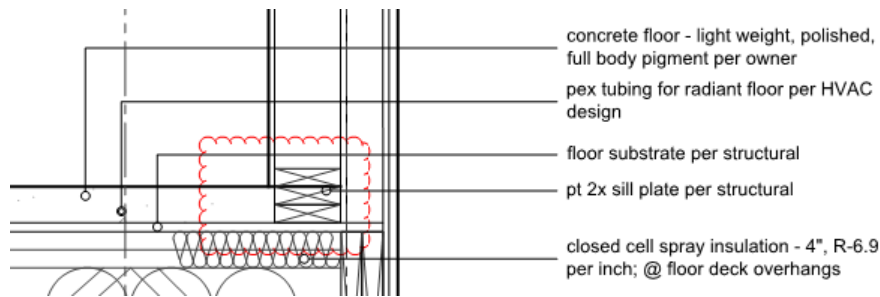
General:

- S1. Fasteners, including nails, nuts and washers in contact with preservative treated wood shall be protected. It is not obvious that this has been indicated, please verify and include this on the drawing. (IBC 2304.10.5.1) (IRC 317.3)

Structural Drawings:

- S2. Sheet S1:

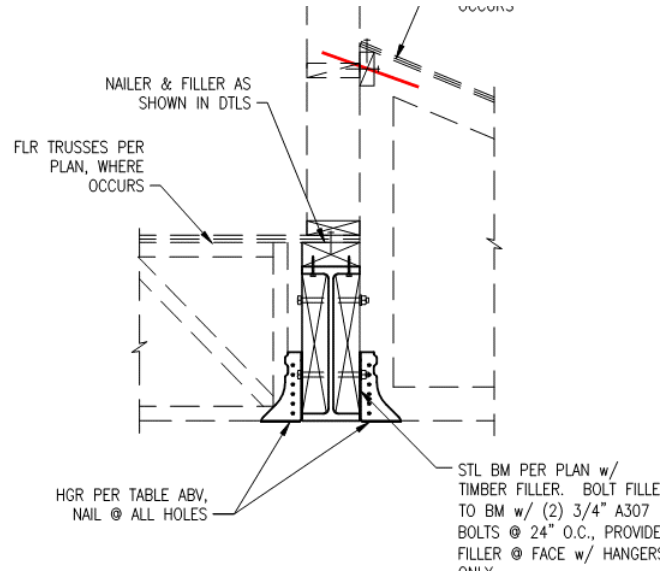
- A. Design loads: It appears that there are different seismic force resisting systems used. Please provide their corresponding V, Cs, R values. (IBC 1603.1.5)
- B. Design loads: Floor dead load is shown as 28 psf. Sheet A3.2 appears to suggest 3" concrete topping. The indicated load may be below requirement. Please verify thickness gypcrete to be used. This could affect gravity and lateral design. (IBC 1604)



- C. Special Inspection:
- I. Please provide statement of special inspections identifying the following: (IBC 1704.3.1)
- The materials, systems, components and work required to have special inspections
 - The type and extent of each special inspection.
 - The type and extent of each test.
 - For each type of special inspection, identification as to whether it will be continuous special inspection, periodic special inspection or performed in accordance with the notation used in the referenced standard where the inspections are defined.
 - For steel special inspections, please provide requirements from AISC 360 Chapter N. (IBC 1705.2.1)

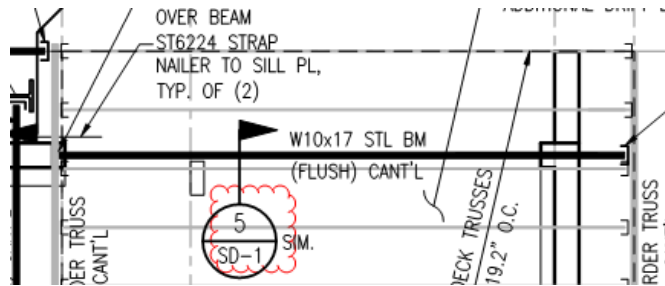
S3. Sheet S1.2:

- A. Typical Truss Hangers: Cross grain bending may occur at ledger. Face nailing may also experience pull out forces. Please consider adding tension devices and blocking at suitable spacing to transfer transverse loads to the interior studs. (ASCE 7 12.11.2.2, 1.4, 12.1.3, 12.10.)

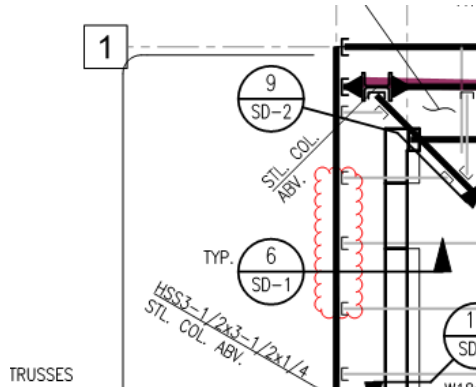


S4. Sheet S3:

- A. Main Floor Framing: Detail 5/SD-1 does not appear to be applicable for the shown condition. Please verify and revise as required. (IBC 107)



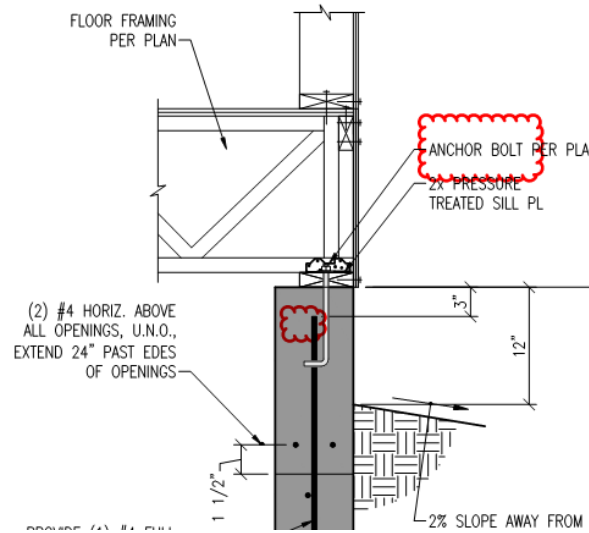
- B. GL-1, A: Beam information appears to be missing. Please verify and indicate on the drawing. (IBC 107)



S5. Sheet SD1:

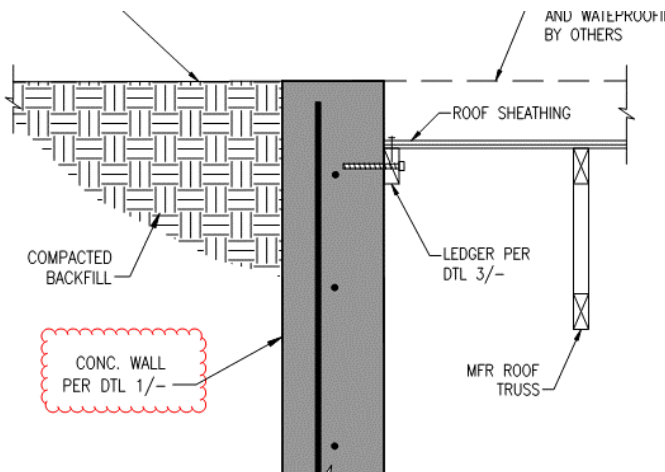
- A. Detail 1:

- I. Please verify that anchor bolt spacing on the plan has included consideration for restraint retaining wall condition. (IBC 1604)
- II. Please verify if continuous reinforcements are missing at anchor bolts location. Otherwise, please provide analysis for restraint condition of the retaining wall showing how the retained loads are transferred to the anchor bolts. (IBC 1604)



B. Detail 11:

- I. The detail appears to show an unrestraint retaining wall. The reference to Detail 1 is for restraint condition. Please verify if the intent was for restraint condition and provide blocking at suitable spacing to transfer loads into the diaphragm. (IBC 107)
- II. Cross grain bending may occur at ledger. Please consider adding tension devices and blocking at suitable spacing to transfer transverse loads to the concrete wall. (ASCE 7 12.11.2.2, 1.4, 12.1.3, 12.10.)



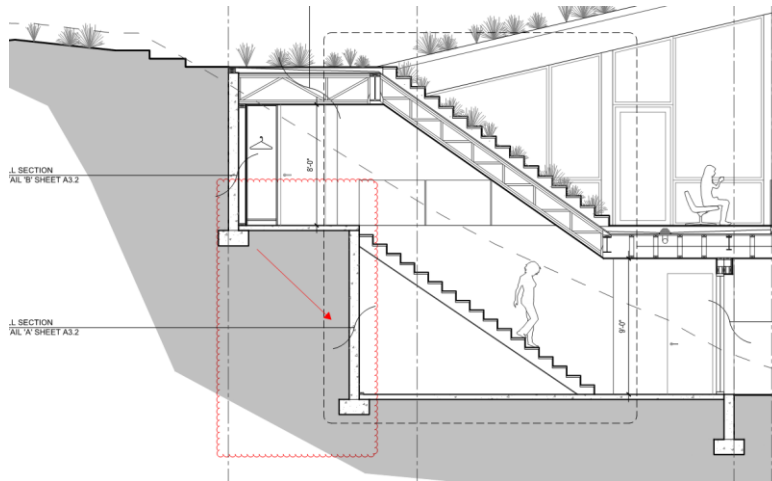
- S6. Special moment frame information does not appear to be complete. Please provide steel beam and column information. Please provide foundation connection detail of column. (IBC 107)
- S7. Special reinforced concrete shear wall information does not appear to be complete.

- A. Please provide details for the special reinforced shear wall. (ACI 318 18.10)
- B. At least 2 curtains of reinforcement shall be used in a wall if $h_w/l_w \geq 2.0$. Please verify and revise as required. (ACI 318 18.10.2.2)

Special RC Shear Wall Checks per 18.10 (1.2-1ST)

$t_w := 8 \text{ in}$
 $l_w := 3 \text{ ft} + 10 \text{ in}$
 $h_w := 8 \text{ ft}$
 $\frac{h_w}{l_w} = 2.087$
 $\alpha_c := 3$
 $A_{cv} := l_w \cdot h_w = 30.667 \text{ ft}^2$

- S8. Sheet A3.0: Sections indicate that upper foundations may impose surcharge loads on lower foundations. Please verify that this has been considered for the design of the lower foundations. (IBC 1808.3.2)



If you have any questions regarding the above comments, please contact Mike Molyneux at mikem@wc-3.com or by phone at (801) 547-8133.

[END]