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June 16, 2016

FIRST REVIEW  
WC<sup>3</sup> Project #: 216-525-018

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

Attention: Craig Browne, Building Official

Subject: Turner Residence – Plan Review Comments

Mr. Browne:

West Coast Code Consultants, Inc. (WC<sup>3</sup>) has completed the first review of the proposed Turner Residence project located in Eden, Utah. This review was based upon the following:

1. Architectural drawings dated 6/1/2016 by Bertoldi Architects, sealed and signed by Ray Bertoldi, Licensed Architect.
2. Civil drawings dated 5/21/2016 by 5ive Engineering, sealed and signed by Benjamin P. Thomas, Professional Structural Engineer.
3. Structural drawings and calculations dated 5/21/2016 by 5ive Engineering, sealed and signed by Benjamin P. Thomas, Professional Structural Engineer.

The 2012 IRC and IBC, as adopted by the State of 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:** Turner Residence

**Code Review by:** Mike Molyneux

**Location(s):** 7914 E Heartwood Dr. #3, Eden, Utah

**Structural by:** Mike Molyneux

**Checked by:** Joe Bingham

### 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. Provide a detail showing how the underside of the stairs will be protected with a minimum of ½ inch gypsum board. (IRC R302.7)
- A2. Please indicate on the plans how fire blocking required by IRC R302.11 is provided in the stair framing.
- A3. Clarify that fans will be provided in the interior bathrooms without operable windows as required by IRC R303.3. Indicate the air change rate of the fans and if they will be intermittent or continuous.
- A4. Please indicate on the plans how non-absorbent floors and walls (up to 72" above finished floor), as required by IRC R307.2, are being provided for shower compartments.
- A5. Note that all fasteners installed into preservative treated wood are to be zinc coated or treated as required by IRC R317.3.
- A6. Please show on the plans how the building address will be listed as required by IRC R319.1.
- A7. Please provide the listing and manufacturer's installation instructions for the gas fireplace per IRC R1004.1. Also clarify the air supply being provided for combustions per IRC R1006.
- A8. Please show or specify combustion air for all fuel-burning appliances. If a single duct will be used for combustion air, please specify a minimum duct size of 1 sq inch per 3000 Btu/hour input. The one opening must be in the top 12 inches of the room. –IRC G2407.6.2
- A9. Indicate on the plans the maximum flow rates for the shower heads, lavatory and sink faucets, and water closets. Flow rates should meet requirements of IRC P2903.2.
- A10. Indicate on the plans that hose bibs shall be provided with an atmospheric or pressure type vacuum breaker per IRC P2902.4.3.
- A11. Sections P2708.3 and 2713.1 of the IRC require that temperature limiting devices set at 120°F for bathtubs and showers. Please address.
- A12. Please clarify the location of the water heater.
- A13. Please clarify the seismic bracing requirements for the water heater per IRC P2801.7.



- A14. Verify that the water heater installation will meet the requirements of IRC P2803, including temperature and pressure relief valves and discharge piping.
- A15. Please indicate the U-factor for the windows on the plans. Include a note which clarifies that all U-factors shall be determined by testing in accordance with NFRC 100 and labeled as such by the manufacturer, per Section 102.1.3 of the 2006 IECC.
- A16. Provide a minimum working space in front of the electrical panel per Section 3405.1 of the IRC.

## **STRUCTURAL COMMENTS:**

### **General:**

- S1. Please provide the geotechnical report referenced on Sheet S101 of the structural plans.

### **Structural Drawings:**

- S2. A shear wall plan has not been provided to indicate the required locations of shear walls along with the required nailing and hold downs.
- S3. Sheet S101: Please address the following...
- A. The Wood Connection Hardware section references the STHD8. The STHD8 is no longer an approved hold down anchor.
  - B. The “special inspection” portion of sheet S101 does not meet the requirements for a “Statement of Special Inspections” as required by IBC 1704.2.3 and defined in IBC 1704.3.
    - I. The extent of inspections/testing to be provided and their frequency (e.g. inspection of reinforcing steel - periodic, inspection of anchors cast in concrete – periodic)
  - C. 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.
- S4. Sheet S301: Please address the following...
- A. Detail 3 references the plans for the baseplate size. The baseplate has not been provided on the plans.
  - B. Please specify the ties and post base shown in the concrete pier in detail 4.
  - C. Detail 5 references the plans for the post base. The post base has not been provided on the plans. Please address.
- S5. Sheet S401: Please address the following...
- A. 2”o.c. edge nailing is specified on some of the shear walls yet 3x framing members are not specified as required by Section 4.3.7.1(4) of AWC SDPWS-2008.
  - B. The schedule calls for sheathing on each face of some shear walls yet they do not specify staggered edge nailing or 3x framing members as required by footnote 6 of Table 4.3A of AF&PA SDPWS. Please address.
  - C. Please provide the required floor joist depth for the TJI’s shown on the plans.
  - D. CS16, (2) CS16 and (2) CS14 hold downs are shown in the calculations. These hold downs have not been shown at this level.



- S6. Sheet S402: Please address the following...
- A. Calculations for the upper floor joists show TJI 360 floor joists at 16" on center. The plans show TJI 210's at 16" on center. Please clarify.
  - B. Please provide the required floor joist depth for the TJI's shown on the plans.
  - C. Please show beam ff05 on the plans. This header is not shown.
- S7. Sheet S501: Please address the following...
- A. Option 1 of detail 7 does not provide for endwall blocking at the floor joists which run parallel to the foundation walls. Please provide a detail showing the blocking requirements as required by Section 12.11.2.2 of ASCE 7-10.
  - B. Provide the connection of the wood joist to the wood beam shown in detail 11.

**Structural Calculations:**

- S8. Provide an updated beam key plan and calculations for the upper floor framing plan to match what is shown in the plans. The current calculations do not show what has been provided in the plans. See ff06, ff08, ff09, ff10, ff12, ff13, etc.
- S9. Please provide a shear wall key plan to verify the shear wall calculations.

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]