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

July 25, 2017

FIRST REVIEW
WC[3] Project #: *217-525-117*

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

Attention: Craig Browne, Building Official

Subject: Huberman SFD – Plan Review Comments

Mr. Browne:

West Coast Code Consultants, Inc. (WC[3]) has completed the first review of the proposed Huberman SFD project located in Eden, UT. This review was based upon the following:

1. Architectural drawings dated 6/17/2015 by Architects Limited, sealed and signed by Brian MacKay-Lyons, Licensed Architect.
2. Civil drawings dated 6/30/2017 by Talisman Civil Consultants, sealed and signed by Ryan W Cathey, Professional Engineer.
3. Structural drawings and calculations dated 6/29/2017 by Sullaway Engineering, sealed and signed by Michael F Sullaway, Professional Structural Engineer.
4. Geotechnical investigation report (#01628-015) dated 12/1/2016 by Intermountain Geo Environmental Services, sealed and signed by David A Glass, Professional Engineer.

The 2015 IRC, as adopted by the State of Utah, was 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 do not hesitate to contact me.

Sincerely,

Mike Molyneux

Mike Molyneux
Attachment: Comments

CC:
CC:
CC:
CC:

Plan Review Comments

Project Name: Huberman SFD

Location(s): 5741 North Daybreak Ridge, Eden, UT

Checked By: DeAnn Wilde

Code Review by: Jason vonWeller

Structural by: Joe Bingham

SQUARE FOOTAGE SUMMARY:

Main Level	Upper Level	Finished Basement	Unfinished Basement	Covered Deck(s)	Covered Porch(s)	Garage	Carport
756 - ft²	-	642 - ft²	-	126 - ft²	44 - ft²	276 - ft²	-

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 A001 is a part of the complete plan set. However, the same sheet is shown redlined as part of the Wildland Urban Interface letter addressed to the Weber County Fire Marshal, dated July 12, 2017. Please clarify and make all necessary corrections to accurately identify all wall types and construction.

A2. Sheet A201: Please indicate completely on the plans the location of the smoke detectors per IRC 314.3.

- A. Every level, every bedroom, and in the immediate vicinity outside the bedroom.
- B. Clarify that smoke detectors shall be interconnected, hardwired to the building power supply, and provided with battery backup per IRC R314.4 and R314.5.

A3. At various locations throughout the plans specifications are referenced. However, specifications for the project were not provided. Please address.

A4. Indicate location of carbon monoxide detectors per IRC R315.1 and State Amendments. CO detectors must be installed in the immediate vicinity outside of all bedrooms and be located on each level of the home. R315.2.

A5. Sheet A510: Per R506.2.3, identify on the plans the required 6 mil vapor barrier below the slab in the basement.

A6. Legends are shown on the plans for the various doors and windows. However, a door and window schedule do not appear to be a part of the plans. Please address.

- A. Please clearly indicate on the plans safety glazing and *where* it is to be provided, per IRC R308.4
- B. 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 IECC R402.3.

A7. Sheet A610: Please note on Detail 3 that handrail ends shall be returned to the wall or terminate to a newel, per R311.7.8.2.

A8. Detail on the plans how the requirements of IRC R806.5 will be met for unvented attics and unvented enclosed roof framing assemblies created by ceilings that are applied directly to the underside of the roof framing members.

MECHANICAL REVIEW COMMENTS:

M1. Please provide general plumbing sheet notes and details.

M2. Please identify mechanical room equipment and locations. No heating or cooling equipment or appliances have been noted or detailed. Please address.

A. Please provide size and type of heating and cooling equipment and sizes. Sizing should be in accordance with IRC M1401.3 and ACCA Manuals S and J.

B. No duct work is being shown on the plan. Please verify and note that mechanical ducts will meet all the requirements of IRC M1601 and ACCA Manual D. (If necessary).

C. 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, per IRC G2407.6.2.

M3. Dryers located in closets shall be provided with make-up air, per IRC G2439.4. Please address.

M4. If a factory-built chimney is being used for the fireplace and since the chimney will have an offset, please note on the plans that the chimney must be at an angle of not more than 30 degrees from the vertical and the assembly will not contain more than 4 elbows, per IRC R1005.7.

M5. 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, per IRC G2407.6.2.

PLUMBING REVIEW COMMENTS:

P1. Please note on plans that a backwater valve is required to protect plumbing fixtures that are located below the elevation level of the nearest upstream man hole cover. Fixtures that are above the elevation level of the manhole cover shall not discharge through the backwater valve. IRC P3008.1

P2. Please specify the supply and DWV materials, per IRC P3002.1.

ELECTRICAL REVIEW COMMENTS:

E1. Sheet A201: Please address the following:

A. Please show the electrical panel on the plans so that working space can be verified, per IRC E3405.1.

B. A minimum of one 125 volt, single phase, 15 or 20-amp receptacle shall be located in the garage.

I. All 125 volt, single phase, 15 or 20-amp receptacles in the garage shall be GFCI protected including the opener, per IRC E3902.2. Please show the receptacle for the garage door opener on the plans.

E2. Receptacles in unfinished portions of the basement (mechanical room if applicable) shall be GFCI protected, per IRC E3902.5.

E3. Please indicate dishwasher branch circuit shall be GFCI protected, per IRC E3902.9.

E4. Please note that a dedicated 20-amp branch circuit is required for the bathroom receptacle outlets.

E5. Indicate that outlets will be provided on the exterior of the home in accordance with IRC E3901.7.

A. Please specify that all receptacles located outside must be the weather resistant type, as required by IRC E4002.9.

B. A weather resistant type, GFCI protected receptacle shall be located on the exterior of the home within 25' of the air conditioning unit, if applicable.

E6. Revise the electrical outlet spacing to comply with IRC E3901.2.1. Outlets must be located within 6-feet of all doors and a maximum or 12-feet o.c. along all walls.

E7. Please provide a note on the plan indicating that all outlets will be tamper resistant, in accordance with IRC E4002.14.

ENERGY REVIEW COMMENTS:

N1. Please indicate on the plans that no less than 75% of the lamps permanently installed in lighting fixtures shall be high efficacy lamps or not less than 75 percent of the permanently light fixtures shall contain only high efficacy lamps. IRC N1104.1

N2. Please note that a permanent certificate shall be completed and located in an approved location that lists the predominant R-values of the insulation installed in the ceiling/roof, walls, foundation and ducts outside conditioned spaces, and U-factors for fenestration.

N3. No insulation values have been noted on the plans. Please provide corresponding insulation values on the plans which correspond with the REScheck.

N4. REScheck:

A. The report identifies Wall 1 with R-20 cavity insulation, as well as R7.5 continuous insulation. Provide a wall detail showing how the walls will be constructed and identifying the listed product being used to achieve the continuous insulation.

B. The report identifies Wall 2 with R-6.7 cavity insulation, as well as R-20.1 continuous insulation. Provide a wall detail showing how the R-values are to be achieved for the concrete walls and identify the listed product being used to achieve the continuous insulation.

WILDLAND-URBAN INTERFACE COMMENTS:

G1. It appears that a wood burning stove is being installed. Please note on the plans that a spark arrester will be installed that meets the requirements of IWUIC 605.

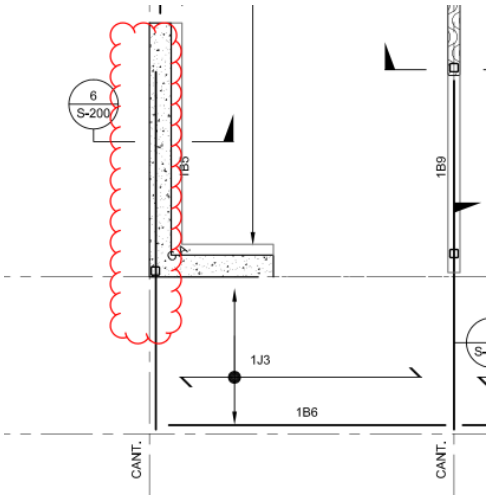
G2. Please note on the plans that all vent openings through vertical exterior walls or through the roof cannot exceed 144 sq inches. Also note that these openings must be covered with a mesh that meets the requirements of IWUIC 504.10.

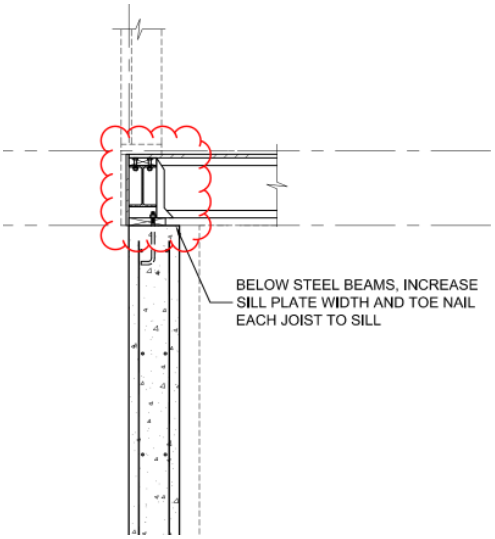
STRUCTURAL COMMENTS:

Structural Drawings:

S1. Sheet S-001: Foundation note #4 refers to 2600 psf allowable bearing value. Please revise this to 2500 psf as per p. 10 of the Geologic Hazards Assessment #01628-015.

S2. Sheet S-100 and 6/S200: It is unclear how cantilevered beam is connected to the concrete wall. Please provide additional information. Please see IBC 107, 1604.





S3. Sheet S-100 and S-101: Note #2 for Roof member schedule references IBC 2016 and CISC Handbook of Steel. Please verify and revise with IBC 2015 and AISC 341 / 360 references. Please see IBC 107.

S4. Sheet S-101 and Design Loads p. 2: K brace has been shown as a steel ordinary concentrically braced frame. AISC 341 F.4b does not permit this application. Please revise with a different type of braced frame.

Structural Calculations:

S5. Design Loads p. 2 and 3: References to IBC 2012 were made. Please revise all calculations and references to IBC 2015. Please see IBC 107.

S6. Since the roof snow load is greater than 30 psf, Please confirm that a percentage of the snow was considered in the seismic weight of the structure as required by Section 1605.3.1 and 1605.3.2 of the Utah Amended Code.

S7. It is unclear which response modification coefficient R has been used for the building design. Since this is a combination of 2 different systems, please verify that ASCE 7 12.2.3 has been satisfied.

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]