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

August 9, 2017

FIRST REVIEW
WC[3] Project #: *217-525-135*

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

Attention: Craig Browne, Building Official

Subject: Ron Yehuda SFD – Plan Review Comments

Mr. Browne:

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

1. Architectural drawings dated 7/25/2017 by Bertoldi Architects, sealed and signed by Ray Bertoldi, Licensed Architect.
2. Structural drawings and calculations dated 7/25/2017 by LEI, sealed and signed by Joshua KS Anderson, Professional Structural Engineer.
3. Geotechnical investigation report (#01782-002) dated 7/17/2017 by IGES, sealed and signed by David A Glass, Professional Engineer.

The 2015 International Residential Code, 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 do not hesitate to contact me.

Sincerely,

Mike Molyneux

Mike Molyneux
Attachment: Comments

CC:
CC:
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Plan Review Comments

Project Name: Ron Yehuda SFD

Location(s): Lot 65 Summit Powder Mountain, 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	Deck(s)	Covered Patio(s)	Garage	Carport
1111- ft^2	1067- ft^2	584- ft^2	-	87- ft^2	214- ft^2	344- ft^2	-

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. Based on IRC R401.3, lots shall be graded to drain surface water away from the foundation walls. The grade shall fall a minimum of 6 inches within the first 10 feet. Per IRC R403.1.7.3, the top of the foundation is required to be a minimum of 12 inches, plus 2%, above the top of the curb. Please note this information on the footing/foundation sheet of the plans.

A2. Indicate on the plans the location of the smoke *and carbon monoxide* detectors per IRC R314.3 and R315.1 and State Amendments. Clarify that detectors shall be interconnected, hardwired to the building power supply, and provided with battery backup.

A3. Please provide information, notes, and details dimensions for all handrails to be provided at interior and exterior stairs, per IRC R311.7.8.

A4. Sheet AE301 and AE302: While the location of the dumbwaiter is shown on Sheet AE-302, the location of the laundry chute is not shown on any of the building cross sections. Please address.

A5. Sheet AE401: Please address the following:

A. Per IRC 311.7.3 and Utah State Amendments, please identify on the plans the maximum riser height shall be 8” and minimum tread depth shall be 9”.

B. Provide correct dimensions and details for guards to be provided at the interior and exterior stairs, landings, catwalks and at the edge of the exterior decks and patios adjacent to elevation changes 30” or greater. Guards should meet the minimum requirements of IRC R312.1.

A6. AE 601: Please address:

A. Per R308.4, safety glazing subject to human impact loads shall be tempered. This includes adjacent to doors and wet locations. It appears that there are several locations that have not been addressed. Please clearly mark all tempered window locations on the plans as well as on the window schedule.

B. Minimum emergency escape and rescue opening requirements per Section R310. It is not clear that the bedrooms contain provisions for emergency escape and rescue provisions per Section R310.

I. Verify that operable windows meeting the requirements of IRC R310.1 for emergency escape and rescue are provided in each bedroom.

A7. Detail on the plans the required 6 mil vapor barrier below the slab on grade, in accordance with IRC R506.2.3.

A8. IRC R806.5 allows unvented attic assemblies created by ceilings that are applied directly to the underside of the roof framing member, where all the conditions of code are met. Please make necessary corrections to the plans.

MECHANICAL REVIEW COMMENTS:

M1. Sheet AE-130: A VRF cooling unit is identified in the master closet. Please clarify in writing and detail on the plans what is occurring at this location.

PLUMBING REVIEW COMMENTS:

P1. Sheet AE-130: The gas range appears it may be a commercial range. If so, a commercial Type 1 hood will be required. Provide a cut sheet for the range detailing whether it is designed for residential or commercial use.

P2. Please clarify the seismic bracing requirements for the water heater, per IRC P2801.7.

P3. Verify that the water heater and boiler installations will meet the requirements of IRC P2803, including temperature and pressure relief valves and discharge piping

P4. IRC G2407 requires that combustion air be provided for the water heater and boiler. Please clarify how this will be provided, whether it is outdoor, indoor, or a combination.

ELECTRICAL REVIEW COMMENTS:

E1. Sheet AE-123: Please address the following:

A. Revise the electrical outlet spacing to comply with IRC E3901.2.1 requiring that at no point along the floor line of any wall space is more than 6 feet from a receptacle.

B. Note that floor receptacles may not be included in the required number of receptacle outlets unless they are within 18” of the wall, per E3901.2.3.

E2. Please note that the dishwasher branch circuit shall be protected by GFCI, per E3902.9.

E3. Please note that all 125-volt, single phase, 15- and 20-amp receptacles in laundry areas shall have GFCI protection, per E3902.9.

E4. Please note that a dedicated 20-amp branch circuit for the bathroom receptacle outlets. This circuit cannot supply any other receptacles, lights, fans, etc.

E5. Please specify on the plans the types of lighting to be installed over or within 5' horizontally of the hot tub, in accordance with IRC E4203.4.

E6. Per IECC R402.4.5, please indicate that recessed luminaires (can lights) will be sealed to limit air leakage per ASTM E 283.

ENERGY REVIEW COMMENTS:

N1. As of July 1, 2016, compliance shall be per the 2015 IECC as adopted by the State of Utah. Please indicate this on the plans and REScheck.

A. Per IECC R401.2 compliance with the energy code may be shown in 4 different methods. Method 4, as amended by the State of Utah, allows the building envelope to be shown in compliance using REScheck for the Utah Energy Conservation Code (UA trade-off method)

B. The REScheck does not appear to identify the floor/ceiling insulation separating the house and garage. Please clarify.

N2. Please identify on the plans the efficiencies for water heater and boiler.

N3. 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.

N4. Please indicate and detail the extent of the building thermal envelope. N1101.5.1

N5. 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.

N6. Per IECC R402.4.5, please indicate that recessed luminaires (Can Lights) will be IC rated, air-tight and sealed to limit air leakage per ASTM E 283.

N7. Per N1102.4.5, recessed lighting installed in the building thermal envelope shall be IC rated and sealed to the interior finish. Please note these requirements on the plans.

N8. Per N1102.2.4, please note that the attic access door over conditioned spaces shall be weather stripped and insulated to a level equivalent to the insulation of the surrounding areas.

STRUCTURAL COMMENTS:

General:

S1. Fasteners, including nuts and washers in contact with preservative treated wood shall be protected according to IBC 2304.10.5.1. Please verify and address as required.

S2. The jogs of the building disrupt the continuity of the top plate chords. Please verify that the chord or sub chord extend far enough into the adjacent diaphragm to develop the axial force through shear transfer. This may require additional blocking and straps. Diaphragm sheathing to resist direct tension or compression forces is not permitted. Please see ASCE 7-10 1.4, 12.1.3, 12.10 and 12.11.2.2.

Structural Drawings:

S3. Sheet S1.0:

A. FT2 is noted as 18" wide. It is used for the interior footing. The Geotech's report recommends 20" wide minimum for continuous footings. Please verify and revise as required. Please see IBC 107 and Geotech's report.

B. Foundation Wall Schedule: FW3A and FW3B are listed as 3'-0" high. The total height with 10" footing minus the 6" exposure does not appear to meet the 42" frost depth recommended by the Geotech's report. Please verify and revise as required. Please see detail 18/SD.1, IBC 107.

C. Foundation Wall Schedule: FW12 is 12'-0" high. It appears to conflict with details 16/SD.1 and 17/SD.2 where 9'-0" is shown. Please verify and revise as required. Please see IBC 107.

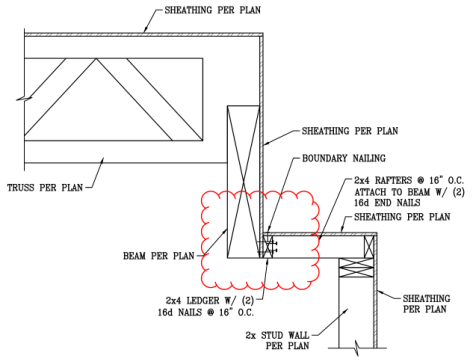
D. Call out 19/SD.1 indicates an interior footing. This area is a covered garage which is unheated. Please verify and revise as required. Please see IBC 1809.5.

S4. Sheet SD.0:

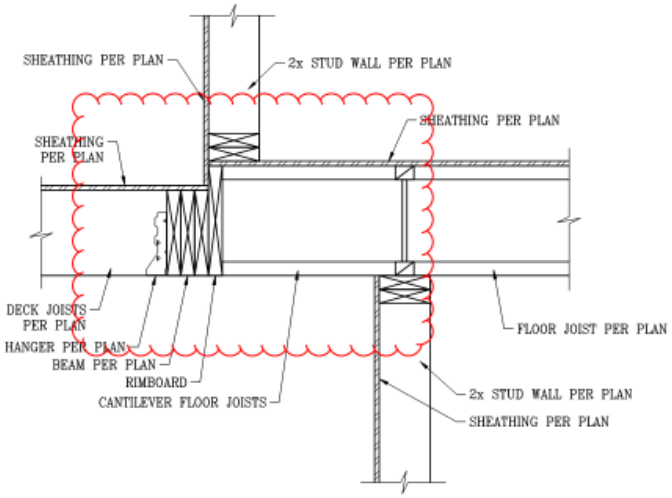
A. Basis of Design: Roof snow load is shown as 30 psf. The Roof snow load on P.2 of the calculation is shown as 180.6 psf. Please verify and revise as required. Please see IBC 107, 1603.

S5. Sheet SD.1:

A. Detail 4 shows an offset diaphragm condition. ASCE 7 12.11.2.2.3 does not permit the use of nails subject to withdrawal nor shall wood ledgers or framing be used in cross grain bending or cross grain tension. Please consider providing strapping for the members in shear.



B. Detail 11 shows an offset diaphragm condition. ASCE 7 12.11.2.2.3 does not permit the use of nails subject to withdrawal nor shall wood ledgers or framing be used in cross grain bending or cross grain tension. Please consider providing strapping for the members in shear.



Detail 14 shows an offset diaphragm condition. ASCE 7 12.11.2.2.3 does not permit the use of nails subject to withdrawal nor shall wood ledgers or framing be used in cross grain bending or cross grain tension. Please consider providing tension device for the framing member to the concrete wall.

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]