



**Project Name:** Byrne - SFD  
**Project Location:** 8483 East Spring Park  
Eden, UT

**Code by:** Rob Sears  
**Structural by:** Joe Bingham

**SQUARE FOOTAGE SUMMARY:**

Main Level	Upper Level	Finished Basement	Unfinished Basement	Deck(s)	Covered Patio(s)	Garage	Carport
2,146 ft <sup>2</sup>	348 ft <sup>2</sup>	2,470 ft <sup>2</sup>	50 ft <sup>2</sup>	173 ft <sup>2</sup>	112 ft <sup>2</sup>	485 ft <sup>2</sup>	-

The following residential plan review comments address non-compliance with governing 2015 IRC, as adopted by the State of Utah and potential errors or omissions in the proposed design.

**PLAN REVIEW COMMENTS:**

*Please provide a written response to each comment listed. Revisions to the plans and structural calculations are required where identified below. Please cloud any revisions made to the construction drawings and provide the date of the latest revision of each revised sheet.*

**CODE REVIEW**

- A1. A letter has been provided stating a Geotech report has been generated. Please provide the soils report in compliance of IBC 1803.6.
- A2. The plans do not provide sufficient information regarding the spiral staircase. Please identify the requirements of the treads for the winder stair of the spiral staircase to show compliance with R311.7.5.2 or to the requirements of the exception listed on R311.7.10.1.
- A3. The general notes for the stairs identify the spacing between guardrail to be max of 40". Please revise to state openings in guards shall have intermediate rails or ornamental closures that do not allow passage of a 4-inch sphere.
- A4. A window schedule has not been provided to show the types of windows to be installed. Please address the following:
  - A. It appears there may be casement windows installed at bedrooms that open into the room. For emergency egress and rescue purposes, please verify that the windows will open to the outdoors for the egress path per R310.1.
  - B. Per R308.4, please clearly indicate on the plans the requirements for safety glazing and where it is to be provided, i.e., all shower compartments, sliding glass doors, windows adjacent to doors, and other hazardous areas.
- A5. The general notes list the requirements for roofing shingles. Since this does not apply due to the installation of metal roof panels, please provide the manufacturer's installation specifications or provide the requirements as listed in R905.10.
- A6. The plans show a chimney will be installed. Please address the following



- A. The structural plans need to detail how the chimney is to be constructed and be seismically anchored for Seismic Design Category D.
  - B. Sheet 3.1 identifies a wood burning chimney, while the floor plans all indicate gas fireplaces will be provided. Please update the plans to show continuity throughout the plan set.
- A7. There is conflicting information regarding the heating of the house. The plans indicate a boiler will be installed, while the Manual J&D list a furnace. Please identify the appliance to be provided and provide continuity between the plans and reports.
- A. Please provide a gas line schematic identifying the BTU rating for all gas fueled appliances, size, and length of main and all branch lines per G2413.
  - B. If a boiler is being installed, will there be hydronic piping or radiant floor heating?
    - I. Please provide the manufacture specs of the boiler to show that the protection of potable water will be provided per M2101.3.
- A8. The Manual J&D lists insulation values in the floors and certain walls that have not been included on the plans or the REScheck. Please ensure the plans, the REScheck and the Manual J&D all provide the same complete and accurate information.
- A9. It appears there will be lighting installed above the hot tub. Per E4203.4, please specify on the plans the types of lighting to be installed within 5' horizontally of the hot tub and less than 12' above the maximum water level.
- A10. It appears there will be sauna installed. Please provide the manufacturer specifications and label all requirements on the plans to show compliance as required per G2440.

## STRUCTURAL REVIEW

### **General:**

- S1. Please provide a copy of the geotechnical report for review.

### **Structural Drawings:**

- S2. Sheet S0: The Design Criteria Notes show the basic wind speed as 204 mph which does not appear to be correct. Please address.
- S3. Sheet S3: Please address the following:
- A. MB2 is missing from the Floor Beam Schedule. Please address.
  - B. MB4 in the Floor Beam Schedule is shown as three Glulam beams. This seems to be a mistake since multiple Glulam beams are not usually put together to make a single beam. Please clarify.
    - I. Comment also applies to RB14 which shows two Glulam beams.
  - C. RB21 in the Roof Beam Schedule is shows as a W5x19 steel beam while the calculations show W8x21 or W6x25. Please address.
- S4. Snow drift loads do not appear to be indicated at all locations where drift is possible. Please address.



- S5. Please verify that there is a note on 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 2304.10.5.

**Structural Calculations:**

- S6. Please address any building irregularities as defined in Tables 12.3-1 and 12.3-2 of ASCE 7-16 that may apply and show that the ASCE 7 requirements for each irregularity type have been met.
- A. Some that may apply include re-entrant corner irregularities, nonparallel system irregularities, and in-plane discontinuity in vertical lateral force-resisting element irregularities.
- S7. Please verify that the requirements of Section 4.2.5.2 AWC SDPWS-2015 for “open front structures” have been met at locations where the roof diaphragm cantilevers beyond the lateral resisting elements.
- S8. There are very few exterior walls that are large enough to act as shear walls, particularly the south elevation which is full of windows and doors. Please address the lateral load path at these locations.

**REDLINE/CONDITIONAL APPROVAL COMMENTS:**

*The following plan review items are required by the IRC and are not a part of the submitted plans. The code information may be added as part of the required revisions to the plans. Otherwise, the information will be redlined on the plans as part of WC3's final review process.*

- R319.1: Buildings shall be provided with address identification legible and placed in a position that is visible from the street fronting the property.
- R703.8 and R905: Wall and roof flashings are required to meet code based upon the applicable application, i.e., siding, brick veneer, asphalt shingles, clay tiles.
- R903.2.2: A cricket or saddle is required on the ridge side of any roof penetration or chimney more than 30 inches wide.
- R1004.1: Provide the listing and manufacturer's installation instructions for the gas fireplace to the inspector.
- G2419.4: Sediment traps are required on the downstream side of the gas-fired appliances shutoff valve.
- E3901: Electrical receptacles are required at the following locations:
  - No point measured horizontally along “wall space” is more than 6 feet from receptacle. “Wall space” includes any space 2 feet or more in width.
  - At each wall counter space 12” or wider so that no point along the wall is more than 24” from a receptacle outlet.
  - Within 6 feet of intended appliance locations (i.e. oven, laundry, etc.). No less than one receptacle is required in laundry areas.
  - Basements, garages, and accessory buildings shall have at least one receptacle outlet, in addition to any provided for specific equipment. To be GFCI protected.
  - Provide a convenience receptacle for the servicing of appliances (HVAC) within 25 feet of the appliance. To be GFCI protected when outdoors.
- E4003.9: All lighting over tubs or showers shall be suitable for wet or damp locations.
- E3903.3: A least one wall-switched lighting outlet shall be installed in hallways and stairways and shall be switched at each floor level.
- R315 and Utah State Amendments: Carbon monoxide detectors are required in the following locations and shall receive their primary power from the building wiring and shall have battery backup:
  - A minimum of one carbon monoxide alarm on each habitable level including the loft.
- Provide all documentation at time of inspection to ensure a timely inspection.

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]

