Project Name: SMHG LLC - Pioneer Cabin
Project Location: 7860 East Horizon Run
Eden, UT

Code by: Josh Goodman
Structural by: Daniel Mooney

SQUARE FOOTAGE SUMMARY:

Main Level	Upper Level	Finished Basement	Unfinished Basement	Deck(s)	Covered Patio(s)	Garage	Carport
1,152* ft^2	1,152* ft^2	1,152* ft^2	-	-	-	-	-

* Please note, this information may change due to plan review comments.

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. This does not appear to be an IRC building/single-family dwelling. Please provide a narrative as to why this should be review under the IRC, or provide updated plans per the IBC, IMC, IPC, etc.

A. Please note, this will generate additional code comments.

STRUCTURAL REVIEW

S1. General: No geotechnical report was provided for review. In lieu of providing a ground motion hazard analysis (GMHA) as required per IBC Table 1613.2.3(2) where site class D occurs, or is assumed in this case, and the one-second spectral acceleration (S_1) equals or exceeds 0.2, please show compliance with one of the exceptions of §11.4.8 of ASCE 7-16.

S2. Sheet S0 – Please address the following.

A. Please clarify on what the floor live load listed of 40 psf is based in accordance with IBC Table 1607.1 since the intended use of the facility does not appear to be residential; for example, there appear to be assembly, gymnasium, and poolroom use areas per the architectural sheets. Please revise the drawings and calculations as necessary.

B. Please list the seismic acceleration parameters (S_{DS}, S_{D1}, etc.), the seismic force resisting system and corresponding values, (R, C_S, base shear, etc.) as required per IBC 1603.1.5 and in accordance with ASCE 7-16 Table 12.2-1.

C. The concrete section does not appear to specify the required material properties of the various concrete elements, including strength, mix design properties, etc. Please also note that section 19.3.1.1 of ACI 318-14 requires the design professional to assign exposure classes to structural concrete members in accordance with Table 19.3.1.1.

D. It appears the roof truss design is intended to be deferred. Please note that the trusses are not to be installed until found to be in conformance with the building design by the design professional in responsible charge and approved by the building official in accordance with IBC 107.3.4.1.

S3. Sheet S1 – Please address the following.

A. The reinforcement for multiple footings per the footing schedule (e.g. WF2 long., WF3.5 trans., etc.) do not appear to meet the minimum reinforcement requirements of ACI 318-17 §24.4.3.2 and §7.6.1.1. Please address.

B. Please clarify to what the "A Bars, B Bars, etc." refers to in the foundation wall schedule.

C. It appears the horizontal wall reinforcement in the W1 wall type per the foundation wall schedule (A Bars, B Bars or D Bars) does not meet the minimum reinforcement requirements of ACI 318-14 §11.6.1. Please address.

S4. Sheet S3: It appears the structural design of the pedestrian bridge shown in the architectural sheets is intended to be deferred since there are no structural detailing or calculations of the bridge included in the documents provided. Please list it as such in accordance with IBC 107.3.4.1.

A. Please provide detailing of the connection of the pedestrian bridge to the proposed structure that shows how whether the connection is intended to transfer lateral forces from the bridge to the lateral system of the building structure. Please also verify whether the vertical and lateral (seismic and wind) reactions of the bridge, including the weight of the snow for both vertical and lateral as required, are accounted for in the design of the building lateral force resisting system elements and connections.

S5. Sheet S4 – Please address the following.

A. Please provide collector elements and connections as necessary to develop the required lateral diaphragm forces into the relatively short full-height wall pier segment along the left side of the building. Please also provide supporting diaphragm calculations.

B. The calculated unbalanced snow loads per page 5 of 41 of the calculations does not appear to be specified on the roof plan for the deferred roof truss design. Please address.

C. It appears the RB3 roof beam is intended to be cantilevered at the top/right end of the roof framing. Please provide detailing of the connection of the fixed end of the beam to the wall framing beyond the bridge landing.

I. The calculation for RB3 does not appear to correspond with this member since the calculation does not appear to be a cantilevered beam (see page 26 of 41 of the calculations). Please address.

S6. Structural Calculations: The calculations provided for review do not appear to be complete since a stamp and signature by a licensed engineer in the State of Utah was not included on the document. Please address.

S7. Page 7 of 41: Please clarify to what lateral system the response modification coefficient, R, used of 2.5 refers in ASCE 7-16 Table 12.2-1 and provide justification for the use of that value since stacked log bearing wall construction does not appear to be included in the table.

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]