Design Standards Checklist for Teton County Idaho

In an effort to inform owners, design professionals, and builders of the minimum requirements the plans examiner is looking for, the Building Department has created this list for your reference.

Directions: Read every item below. If you are unsure of any items, contact the Building Department for assistance. **Sign in the spaces provided** to acknowledge understanding and compliance and submit the completed list with your building permit application. Plans found to be insufficient for architectural, life safety, or structural reasons may be refused.

GENERAL FORMATTING:

- A PDF file of the plans shall be submitted with the application
- Plans must be legible, min. 1/8" lettering; min. ¼" scale, and good contrast.
- Plans shall be to scale; scale shall be indicated for each drawing.
- All pages must bear owner's name, address/location of the project, designer's name, date of drawings, sheet number and description.
- Site plans shall be drawn by a design professional, show all property lines, setback distances, septic and well locations or sewer and water connections.
- Site plans shall include a north indicator and show any wet lands, Special Flood Hazard Areas, easements, ditches, streams, rivers, etc. and shall be the same document that was provided and approved for the Grading and Erosion Control Permit.

Signature: _____

ARCHITECTURAL DRAWINGS:

- Cover sheet showing applicable codes as adopted by Teton County, owner information, contact information, legal description / address, Climatic and Geographic Design Criteria.
- Dimensioned floor plans for each floor including details for stairs, handrails, and guards are required. All doors must show size and direction of swing. Egress windows must be called out.
- Provide the size and location of crawlspace and attic access. Note: access is required within 20 ft. of any mechanical equipment located in crawl spaces or attics.
- Indicate fire separation for garage walls, ceilings and their supporting elements common to the dwelling unit.
- Provide exterior elevations (all sides) of the building indicating existing and final grades.
- Interior cross sections showing ceiling height and headroom at landings and stairs with rise and run called out.
- Window details must indicate locations that are egress units or tempered glass.
- Provide details of egress window wells that include size and depth when required. Wells deeper than 44" shall show window swing and include a ladder.

Signature: _____

BUILDING ENVELOPE:

- Indicate the depth of foundations from finished grade to bottom of footing.
- All basements and crawlspaces must be damp proofed or water proofed against infiltration with an approved moisture barrier on the exterior of the walls enclosing interior spaces or floors.
- Show final grade slopes away from foundations. (No exceptions)
- It is required that a radon system be installed below living spaces in accordance with the currently adopted International Residential Code. Plans must indicate the type of vents to be used and show the locations of vents through the roof.
- Provide wall section(s) showing exterior finish, weather barriers, structural sheathing, building envelope insulation, vapor barrier, interior finished surfaces and roof ventilation.
- Indicate R-values for roof, walls, floors, crawlspaces, basement walls, concrete slabs. Indicate U-factors for windows.
- Flashing details and/or notes shall be provided for all required locations, including decks.

Signature: _____

EXTERIOR & INTERIOR STONE and MASONRY VENEER: (Engineering may be required):

- Indicate size, type, and location of rock or stone veneer.
- Show attachment, support from below and supporting walls in accordance with the requirements and limitations of 2018 IRC Sections R703.8, R1001, IBC sections 1404.10 and 2111 for seismic zone D.

Signature: _____

WOOD BURNING MASONRY FIREPLACE: (Engineering required unless approved by the Building Official):

- Show compliance for clearance from combustibles and required fire blocking.
- Indicate all directional changes in chimney walls and/or flue lining.
- Indicate compliance for chimney termination and spark arrestors.
- Indicate size, thickness, extension, and material type for mantles, hearths and supporting elements.
- Provide dimensions of the fireplace opening.
- If the fireplace is located on an exterior wall, provide a detail of the chimney attachment to floors and roofs more than 6 feet above grade.
- Provide dimensions and location of lintel, throat, damper, smoke chamber and flue.
- Provide combustion air size, material, and location within the firebox. Indicate the termination at the building exterior.
- When used as a structural element of the building, show attachments and reinforcement of beams, etc.

Signature: _____

GAS FIREPLACE:

- Provide manufacturer and model of all vented gas fireplaces and fireplace heaters. Installation shall be in accordance with the manufacture's installation instructions. A copy of these instructions shall be onsite for reference, if needed, by the inspector.
- Provide size and location of the exterior combustion air openings.
- Un-vented heaters are not allowed for comfort heat in occupied spaces. Direct-vent fireplaces and heaters are recommended for sleeping rooms.

Signature: _____

MECHANICAL:

- Show location and BTU rating of all gas appliances including, but not limited to, boilers, furnaces, ranges and cook tops, vented fireplaces and heaters, and water heaters.
- Show gas line piping with sizing, individual appliance demands and total demand.
- Required drain pans and combustion air shall be shown on plans.
- Indicate access to, and required clearances for, all mechanical equipment.
- Provide details and/or notes for proper vent termination of all appliances.
- Show access and clearances for all equipment and appliances. (Including clearances above the cook top.)
- Provide the location of any condensate disposal.
- Provide required water heater and/or boiler combustion air openings, seismic bracing, and drain pans.
- Appliances located in garages shall be protected from impact and have their source of ignition a minimum of 18" off the floor unless otherwise tested, listed and approved for floor installation.

Signature: _____

ELECTRICAL:

- Show location and type of exterior light to meet requirements in the Teton Land Development Code, including Chapter 5 Section 3: Outdoor Lighting.
- Provide the location of smoke/carbon monoxide detectors. (All smoke/carbon monoxide detectors must be interconnected and hard wired with battery backup).

Signature: _____

CLIMATE AND GEOGRAPHIC DESIGN CRITERIA:

- **Ground to Roof Snow Load Calculation:** An engineer, licensed in the state of Idaho, may calculate the site-specific roof snow load using the **1986** University of Idaho Normalized Ground Snow Load Map or other approved source.
- **Roof Snow Load:** In lieu of an engineer's determination, the following prescriptive requirements should be used:
  - Minimum roof snow load for elevations less than 6,600 feet above sea level is 85 psf + dead load + drift
  - Minimum roof snow load for elevations of 6,600 above sea level or higher is 100 psf + dead load + drift
- **Wind Design Speed:** 115 mph
- **Seismic Category**: D-1
- **Weathering:** Severe - Concrete and masonry shall conform to "Severe" requirements of the currently adopted IRC.
- **Frost Line Depth:** 32" measured from bottom of footing vertically to finished grade or as determined by a soils investigation.
- **Termite:** None to Slight as per IRC
- **Winter Design Temp:** -20° F outdoor design temperature.
- **Under-Layment Requirement:** Ice water shield shall extend from the lowest edges of all roof surfaces to a point 24 inches inside the exterior wall line of the building.
- **Air Freezing Index:** 2500 per 2018 IRC Figure 403.3(2). An Estimate of the 100 year (1%) Return Period
- **Mean Annual Temp:** 40.4° F
- **Climate Zone:** 6B

Table of IECC / IRC* Building Envelope Requirements for Idaho

TABLE N1102.1.2 (TABLE R402.1.2)
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT [a, k]

Climate Zone	Fenestration U-Factor[b]	Skylight[b] U-factor	Glazed Fenestration SHGC[b, e]	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value [i]	Floor R-Value	Basement [c] Wall R-Value	Slab [d] R-Value & Depth	Crawlspace [c] Wall R-Value
6	0.30	0.55	NR	49	22 or 13+5[h]	15/20	30[g]	15/19	10, 4 ft	15/19

a. R-values are minimums. U-factors and SHGC are maximums. Where insulation is installed in a cavity that is less than the label or design thickness of the insulation, the installed R-value of the insulation shall be not less than the R-value specified in the table.
b. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
Exception: In Climate Zones 1 through 3, skylights shall be permitted to be excluded from glazed fenestration SHGC requirements provided that the SHGC for such skylights does not exceed 0.30.
c. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation on the interior of the basement wall. "15/19" means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation on the interior of the basement wall. Alternatively, compliance with "15/19" shall be R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home.
d. R-5 insulation shall be provided under the full slab area of a heated slab in addition to the required slab edge insulation R-value for slabs, as indicated in the table. The slab edge insulation for heated slabs shall not be required to extend below the slab.
e. There are no SHGC requirements in the Marine Zone.
f. Basement wall insulation shall not be required in warm-humid locations as defined by Figure N1101.7 and Table N1101.7.
g. Alternatively, insulation sufficient to fill the framing cavity providing not less than an R-value of R-19.
h. The first value is cavity insulation, the second value is continuous insulation. Therefore, as an example, "13+5" means R-13 cavity insulation plus R-5 continuous insulation.
i. Mass walls shall be in accordance with Section N1102.2.5. The second R-value applies where more than half of the insulation is on the interior of the mass wall.
k. For residential log home building thermal envelope construction requirements see Section R402.6.

Table of IECC / IRC* Building Envelope Requirements for Idaho

TABLE N1102.1.4 (TABLE R402.1.4)
EQUIVALENT U-FACTORS [a]

Climate Zone	Fenestration U-Factor[b]	Skylight[b] U-factor	Glazed Fenestration SHGC[b, e]	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value [i]	Floor R-Value	Basement [c] Wall R-Value	Slab [d] R-Value & Depth	Crawlspace [c] Wall R-Value
6	0.30	0.55	NR	49	22 or 13+5[h]	15/20	30[g]	15/19	10, 4 ft	15/19

a. Nonfenestration *U*-factors shall be obtained from measurement, calculation or an approved source.
b. Mass walls shall be in accordance with Section N1102.2.5. Where more than half the insulation is on the interior, the mass wall *U*-factors shall not exceed 0.17 in Climate Zone 1, 0.14 in Climate Zone 2, 0.12 in Climate Zone 3, 0.087 in Climate Zone 4 except Marine, 0.065 in Climate Zone 5 and Marine 4, and 0.057 in Climate Zones 6 through 8.
c. In warm-humid locations as defined by Figure N1101.7 and Table N1101.7, the basement wall *U*-factor shall not exceed 0.360.

*For details, references and footnotes, see the currently adopted International Energy Conservation Code. A copy is available in the Building Department office.