# **Planning & Development Services**



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Phone: 208/384-3802 Fax: 208/384-3867 TDD/TTY: 800/377-3529 Website: www.cityofboise.org/pds

# Green Construction Code Submittal Checklist

Case #: \_\_\_\_\_

Date: \_\_\_\_\_ Project Name: \_\_\_\_\_

Site Address:

# Note

This submittal checklist is in addition to other required submittal checklists for construction projects intending to meet the City of Boise Green Construction Code.

# **Application Submittal**

Building permit applications and plans can be submitted to the City by two methods. This checklist must be completed no matter which method is used.

#### **1.** Electronic Submittal

Our PDS Online | ePlanReview system lets you submit documents and plans electronically for review. Go to <u>www.cityofboise.org/pds</u> for more information. All electronic files must meet the requirements specified in the "Electronic Plan Review Submittal Standards" document. Electronic files that do not meet these requirements will not pass pre-screen review.

#### 2. Paper Submittal

Paper plans must be reviewed at a plan intake meeting where staff will verify that the project submittals are complete. The meeting is not a "plan review" for code compliance. The applicant is responsible for contacting plan review if additional consultation is required.

Plan intake meetings must be scheduled at least one day in advance. Call 208/384-3802 to schedule or go to www.cityofboise.org/PDS and log into PDS Online. Meetings are available each business day, begin at 9:00 a.m. and last approximately one (1) hour. All zoning approvals must be completed prior to scheduling your meeting.

# Application Acceptance

- Incomplete submittals will not be accepted. Applicants with incomplete submittals must upload additional documents (electronic submission) or make the needed corrections and return to the Permit Counter for another intake meeting (paper submission).
- Plans must be accepted as complete and the plan review fee must be paid before review can begin.

# Instructions

- Checklist must be completed by the project's Idaho-licensed design professional of record (or applicant if design professional not required) and submitted with the application (paper), or uploaded with the plans and documents (ePlanReview).
- The checklist is not complete unless all applicable information is filled out, all appropriate boxes are checked and all plan page numbers are listed.

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**Note**: If using ePlanReview to submit electronic files, only one (1) copy of each document is required. Paper submittals require additional copies as noted.

# Green Construction Code Compliance (Note project type/green construction method)

#### **Project Type**

New Building (including site)
Existing Building
Existing Building

Green Construction Method

Yes N/A

U.S. GREEN BUILDING COUNCIL LEED DESIGN – Version\_\_\_\_\_

**Choose Certification Level:** 
□ Platinum □ Gold □ Silver □ Certified (existing buildings only)

- □ **LEED Registration Documentation.** Submit for project. (2 paper copies)
- LEED Credits/Points Checklist. Submit for project. (2 paper copies)
- □ Submit **Building Commissioning Agencies form.** Include agency qualifications. (2 paper copies)
- Building commissioning plan. Submit for project (e.g. mechanical systems, lighting and electrical systems including controls, other applicable items required by LEED). (2 paper copies) Building commissioning requirements notes to also be provided on plans. [Page(s) \_\_\_\_\_]
- Plans and documents. Submit compatible with the design outlined in the LEED Credits/Points Checklist. (2 paper copies) Plans drawn to scale on minimum 18" x 24" size sheets. Architectural stamped and signed by an Idaho licensed architect; Civil, Plumbing, Mechanical and Electrical stamped and signed by Idaho licensed engineers. Include a Green Code Summary Sheet in plan set: [Page(s) \_\_\_\_\_] Note: Remaining items in this submittal checklist are not required to be completed for this method.

#### □ □ GREEN BUILDING INITIATIVE – GREEN GLOBES

Choose Certification Level: 
Four Green Globes
Three Green Globes

- $\Box$  Two Green Globes  $\Box$  One Green Globe (existing buildings only)
- Green Globes Registration Documentation. Submit for project. (2 paper copies)
- Green Globes Credits/Points Checklist. Submit for project. (2 paper copies)
- □ Submit **Building Commissioning Agencies form.** Include agency qualifications. (2 paper copies)
- Plans and documents. Submit compatible with the design outlined in the Green Globes
   Credits/Points Checklist. (2 paper copies) Plans drawn to scale on minimum 18" x 24" size sheets.
   Architectural stamped and signed by an Idaho licensed architect; Civil, Plumbing, Mechanical and
   Electrical stamped and signed by Idaho licensed engineers. Include a Green Code Summary Sheet in plan set: [Page(s) \_\_\_\_\_\_] Note: Remaining items in this submittal checklist are not required to be completed for this method.

# □ □ ICC-700 NATIONAL GREEN BUILDING STANDARD (For R-2 and R-4 residential buildings four stories or less in height above grade plane)

Choose Rating Level: 

Emerald 
Gold 
Silver 
Bronze

Plans and documents. Submit compatible with the design requirements of ICC-700. (2 paper copies) Plans drawn to scale on minimum 18" x 24" size sheets. Architectural stamped and signed by an Idaho licensed architect; Civil, Plumbing, Mechanical and Electrical stamped and signed by Idaho licensed engineers. Include a Green Code Summary Sheet in plan set:
 [Page(s) \_\_\_\_\_]

**Note:** Remaining items in this submittal checklist are <u>not</u> required to be completed for this method.

#### □ ASHRAE 189.1 STANDARD FOR THE DESIGN OF HIGH-PERFORMANCE GREEN BUILDINGS, EXCEPT LOW-RISE RESIDENTIAL BUILDINGS

- □ Submit **Building Commissioning Agencies form.** Include agency qualifications. (2 paper copies)
- Building commissioning plan. Submit for project (e.g. mechanical systems, lighting and electrical systems including controls, other applicable items required by ASHRAE 189.1). (2 paper copies) Building commissioning requirements notes to also be provided on plans.
   [Page(s)]
- Plans and documents. Submit compatible with the design requirements of ASHRAE 189.1 (2 paper copies) Plans drawn to scale on minimum 18" x 24" size sheets. Architectural stamped and signed by an Idaho licensed architect; Civil, Plumbing, Mechanical and Electrical stamped and signed by Idaho licensed engineers. Include a Green Code Summary Sheet in plan set:
   [Page(s) \_\_\_\_\_\_] Note: Remaining items in this submittal checklist are not required to be completed for this method.
- □ INTERNATIONAL GREEN CONSTRUCTION CODE (IgCC) Include a Green Code Summary Sheet in plan set: [Page(s) \_\_\_\_\_\_] Note: Remaining items noted in this submittal checklist below <u>must</u> be completed for this method. Note: See the Boise City Green Construction Code ordinance for amendments to the IgCC.

# **IGCC Documents Provided**

#### Yes N/A

- □ □ Whole Building Life Cycle Assessment (If this method chosen) (2 paper copies)
- Planning & Zoning letter(s) of approval (2 paper copies) i.e. If site located in a Flood Hazard Area, a Waterways Overlay District, or in a Hillside & Foothills Development area.
- Plans with IgCC green construction components and notes incorporated into the plans. (2 paper copies)
   Plans drawn to scale on minimum 18" x 24" size sheets. Architectural stamped and signed by an Idaho licensed architect; Civil, Plumbing, Mechanical and Electrical stamped and signed by Idaho licensed engineers.

## IGCC Chapter 4 – Site Development & Land Use

#### Yes N/A

□ □ **Predesign site inventory and assessment** indicating natural resources and baseline conditions of building site, any protection areas on/adjacent to site, native soils, hydrological conditions, previous site disturbance, invasive plant species, and native plant species on the site.

□ Narrative/Plan □ Plan Sheets [Page(s) \_\_\_\_\_]

		Stormwater management system details	[Page(s)	_]
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□ □ Water for outdoor landscape irrigation. Outdoor landscape irrigation systems shall be designed and installed to reduce potable water use by 50 percent from a calculated mid-summer baseline in accordance with Section 404.1.2 or the system shall be supplied with alternate onsite nonpotable water complying with Chapter 7 of the IGCC.

Exceptions: Potable water is permitted to be used as follows:

- 1. During the establishment phase of newly planted landscaping;
- 2. To irrigate food production;
- 3. To supplement nonpotable water irrigation of shade trees for heat island mitigation (Sec. 408.2.3);
- 4. When approved in the development review and planning process.

[Page(s) \_\_\_\_\_]

□ □ **Irrigation system design and installation.** Where in-ground irrigation systems are provided, the systems shall comply with all of the following:

1. The design and installation of outdoor irrigation systems shall be under the supervision of an irrigation professional accredited or certified by an appropriate local or national body.

2. Landscape irrigation systems shall not direct water onto building exterior surfaces, foundations or exterior paved surfaces. Systems shall not generate runoff.

3. Where an irrigation control system is used, the system shall be one that regulates irrigation based on weather, climatological or soil moisture status data. The controller shall have integrated or separate sensors to suspend irrigation events during rainfall.

4. Irrigation zones shall be based on plant water needs with plants of similar need grouped together. Turf grass shall not be grouped with other plantings on the same zone.

5. Micro-irrigation zones shall be equipped with pressure regulators that ensure zone pressure is not greater than 40 psi, filters, and flush end assemblies.

6. Refer to IgCC Sec. 404.1.2 for further details on sprinkler requirements.

[Page(s) \_\_\_\_\_]

□ □ Stormwater pollution prevention plan (SWPPP). Regardless of the size of the site, include a narrative and plan meeting requirements in the current Construction General Permit (CGP), also include treatment details for each zone of soil restored (type, source, expected volume of materials, compost amendments, mulch, topsoil), also include the following Appendices to the SWPPP where applicable:

	Narrative/Plan	Plan Sheets [Page(s)	_]
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#### Appendices

Yes N/A

- □ □ Vegetation and Soil Protection Plan per 405.2.1 of IGCC as amended in accordance with Chapter 11-07-05 of the Boise City Development Code (including Tree Protection Zones)
- □ □ Soil Reuse and Restoration Plan per 405.1.4 of IGCC
- □ □ Building Site Waste Management Plan per 406.1 of IGCC as amended, divert not less than 75% of land clearing debris (rock, trees, stumps, vegetation) and excavated soils from the landfill. See ordinance for all items to include in plan.
- □ □ Invasive Species Management Plan per 405.2.2 of IGCC noting methods of containment, removal and replacement.
- □ □ **Landscape plan with native and adaptive plants** showing new landscaping on the site with not less than 50% planted with native or adaptive plants or low water use vegetation. An approved list of plant materials is available from the Planning Division.

**Exception:** Schools, parks, outdoor sports facilities and other similar uses with large open fields are allowed to be less than 50% at discretion of the code official.

[Page(s) \_\_\_\_\_]

□ □ Walkways and bicycle paths. Not less than one independent, paved walkway or bicycle path suitable for bicycles, strollers, pedestrians, and other forms of non-motorized locomotion connecting a street or other path to a building entrance shall be provided. Walkways and bicycle paths shall connect to existing paths or sidewalks, and shall be designed to connect to any planned future paths. Paved walkways and paths to be designed to minimize stormwater run-off. [Page(s) \_\_\_\_\_]

- □ □ Changing and shower facilities. Buildings which require long-term or covered bicycle parking per the Boise City Development Code shall be provided with onsite changing room and shower facilities. Not less than one shower shall be provided for each 20 long-term bicycle parking spaces, or fraction thereof. When more than one changing room and shower facility is required, separate facilities shall be provided for each sex. [Page(s) \_\_\_\_\_]
- Bicycle parking and storage. Long-term and short-term bicycle parking shall be designated on the site plan by a registered design professional as specified in Table 407.3. The required number of spaces shall be per the Boise City Development Code Chapter 11-07-03. Accessory occupancy areas shall be included in the calculation of primary occupancy area. Locations, illumination, sizes and rack per ordinance. [Page(s) \_\_\_\_\_\_]
- □ **High-occupancy vehicle parking.** Where employee parking is provided for a building with a total building floor area greater than 10,000 square feet, a building occupant load greater than 100 and not less than 20 employees, at least 5%, but not less than two, of employee parking spaces shall be designated as preferred parking for high-occupancy vehicles. [Page(s) \_\_\_\_\_]
- □ **Low-emission, hybrid, and electric vehicle parking.** Where parking is provided for a building having a total building floor area greater than 10,000 square feet and that has a building occupant load greater than 100, at least 5%, but not less than two, of the parking spaces provided shall be designated as preferred parking for low emission, hybrid, and electric vehicles. [Page(s) \_\_\_\_\_]
- □ □ Heat island mitigation Site hardscape. Not less than 40% of the site hardscape shall be provided with one or any combination of the following options noted in Sections 408.2.1 through 408.2.4:
  - □ Hardscape materials per 408.2.1 with initial solar reflectance value of not less than 0.30 per ASTM E 1918 or ASTM C 1549, or concrete paving without added color or stain
  - $\Box$  Shading by structures per 408.2.2  $\Box$  Shading by trees per 408.2.3
  - Pervious and permeable pavement per 408.2.4 as amended with design infiltration rate not less than 10 inches per hour per square foot.

[Page(s) \_\_\_\_\_]

□ □ Site Heat Island Mitigation Worksheet form. Submit for project. (2 paper copies)

## **IGCC Chapter 5 – Material Resource Conservation & Efficiency**

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#### Yes N/A

- □ □ **Recycling areas for waste generated post certificate of occupancy.** Waste recycling areas for use by building occupants shall be provided in accordance with one of the following:
  - 1. Waste recycling areas shall be designed and constructed in accordance with the City of Boise Solid Waste Ordinance.
  - 2. Where laws or regulations do not exist or where limited recycling services are available, waste recycling areas shall be designed and constructed to accommodate recyclable materials.

[Page(s) \_\_\_\_\_

□ □ Storage of lamps, batteries and electronics. Storage space shall be provided for fluorescent lamps, high-intensity discharge (HID) lamps, batteries, electronics, and other discarded items requiring special disposal. [Page(s) \_\_\_\_\_]

- □ □ Construction material and waste management plan. Not less than 35 percent of non-hazardous construction waste shall be diverted from landfill. A construction material and waste management plan shall be developed and implemented to recycle or salvage construction materials and waste. This plan can be a deferred submittal, however, the plan must be submitted for review and approval prior to the first inspection on the construction site. The construction material and waste management plan shall comply with all of the following:
  - 1. The location for collection, separation and storage of recyclable construction waste shall be indicated.
  - 2. Materials to be diverted from disposal by efficient usage, recycling, reuse, manufacturer's reclamation, or salvage for future use, donation or sale shall be specified.
  - 3. The percentage of materials to be diverted shall be specified and shall be calculated by weight or volume, but not both.
  - 4. Receipts or other documentation related to diversion shall be maintained through the course of construction. Where requested by the code official, evidence of diversion shall be provided.

For the purposes of this section, construction materials and waste shall include all materials delivered to the site and intended for installation prior to the issuance of the certificate of occupancy, including related packaging. Construction and waste materials shall not include land-clearing debris, excavated soils and fill and base materials.

□ ■ Material selection. Not less than 40% of the total building materials (not including electrical, mechanical, plumbing, security, fire protection systems and elevator/conveying systems) (also not required if a whole building life cycle assessment is performed per 303.1) used in the project, based on cost, shall comply with one or any combination of the following material properties noted in Sections 505.2.1 through 505.2.5:

□ Used materials and components per 505.2.1 □ Recycled content building materials per 505.2.2

- □ Recyclable building materials and building components per 505.2.3
- □ Bio-based materials per 505.2.4 □ Indigenous materials per 505.2.5
- [Page(s) \_\_\_\_\_\_

**Building Material Selection and Properties Worksheet form.** Submit for project. (2 paper copies)

- □ □ Moisture control preventative measures. Moisture preventative measures shall be inspected in accordance with Sections 902 and 903 for the categories listed in Items 1 through 7. Inspections shall be executed in a method and at a frequency as listed in Table 903.1.
  - 1. Foundation sub-soil drainage system.
  - 2. Foundation waterproofing
  - 3. Foundation dampproofing.
  - 4. Under slab water vapor protection
  - 5. Flashings: Windows, exterior doors, skylights, wall flashing and drainage systems.
  - 6. Exterior wall coverings.
  - 7. Roof coverings, roof drainage, and flashings.
  - [Page(s) \_\_\_\_\_]
- □ □ **Straight fluorescent lamps.** Straight, double-ended fluorescent lamps less than 6 feet in nominal length and with bi-pin bases shall contain not more than 5 milligrams of mercury per lamp.

**Exception:** Lamps with a rated lifetime greater than 22,000 hours at 3 hours per start operated on an ANSI reference ballast shall not exceed 8 milligrams of mercury per lamp.

[Page(s) \_\_\_\_\_]

□ □ **Compact Fluorescent Lamps.** Single-ended pin-base and screw-base compact fluorescent lamps shall contain not more than 5 milligrams of mercury per lamp, and shall be listed and labeled in accordance with UL 1993.

**Exception:** Lamps rated at 25 watts or greater shall contain not more than 6 milligrams of mercury per lamp.

[Page(s)		_]
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# IGCC Chapter 6 – Energy Conservation, Efficiency & CO<sub>2</sub>e Emission Reduction

Buildings and their associated building sites shall comply with either the *Performance-Based Compliance* method <u>or</u> the *Prescriptive-Based Compliance* method.

Energy Metering, Monitoring and Reporting (For both Performance-Based and Prescriptive Based)

Yes N/A

□ □ Energy distribution design requirements and load type isolation in buildings. Energy distribution systems within, on or adjacent to and serving a building shall be designed such that each primary circuit, panel, feeder, piping system or supply mechanism supplies only one energy use type as defined in Sections 603.2.1 through 603.2.5. The energy use type served by each distribution system shall be clearly designated on the energy distribution system with the use served, and adequate space shall be provided for installation of metering equipment or other data collection devices to measure their energy use. The energy distribution system shall be designed to facilitate the collection of data for each of the building energy use categories in Section 603.4 and for each of the end use categories listed in Sections 603.2.1 through 603.2.5. Where there are multiple buildings on a building site, each building shall comply separately with the provisions of Section 603. (Unless sub-meters or other equivalent approved methods)

603.2.1 HVAC system total energy use.	603.2.2 Lighting system total energy use.
603.2.3 Plug loads.	603.2.4 Process loads.

603.2.5 Energy used for building operations loads and other miscellaneous loads. [Page(s) ]

□ □ **Energy-type metering.** Buildings shall be provided with the capability to determine energy use and peak demand as provided in this section for each of the energy types specified in Sections 603.3.1 through 603.3.7. Utility energy meters or supplemental sub-meters are permitted to be used to collect whole building data, and shall be equipped with a local data port connected to a data acquisition system in accordance with Section 603.5.

603.3.1 Gaseous fuels.	603.3.2 Liquid fuels.
603.3.3 Solid fuels.	603.3.4 Electric power.
603.3.5 District heating and cooling.	603.3.6 Combined heat and power.
603.3.7 Renewable and waste energy.	
[Page(s)]	

- □ □ Energy load type sub-metering. For buildings that are not less than 25,000 sq. ft. in total building floor area the energy use of the categories specified in Section 603.2 shall be metered through the use of sub-meters or other approved, equivalent methods meeting the capability requirements of Section 603.3. [Page(s) \_\_\_\_\_]
- □ □ Buildings less than 25,000 square feet. For buildings that are less than 25,000 sq. ft. in total building floor area, the energy distribution system shall be designed and constructed to accommodate the future installation of sub-meters and other approved devices in accordance with Section 603.4. This includes, but is not limited to, providing access for distribution lines and ensuring adequate space for the installation of sub-meters and other approved devices. [Page(s) \_\_\_\_\_]

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#### Yes N/A

- □ Minimum energy measurement and verification. Meters, sub-meters, and other approved devices installed in compliance with Sections 603.3 and 603.4 shall be connected to a data acquisition and management system capable of storing not less than 36 months worth of data collected by all meters and other approved devices and transferring the data in real time to a display as required in Section 603.6. [Page(s) \_\_\_\_\_]
- □ □ **Energy display.** A permanent, readily accessible and visible display shall be provided. The display shall be capable of providing all of the following:
  - 1. The current energy demand for the whole building level measurements, updated for each fuel type at the intervals specified in Section 603.3.
  - 2. The average and peak demands for the previous day and the same day the previous year.
  - 3. The total energy usage for the previous 18 months.

[Page(s) \_\_\_\_\_]

#### Specific Appliances and Equipment (For both Performance-Based and Prescriptive Based)

Yes N/A

Permanent appliances and equipment. Equipment that is permanently connected to the building energy supply systems (elevators, escalators, commercial food service equipment and conveyors) shall comply with the provisions of IgCC section 609 including local amendments. Consult with the State of Idaho Division of Building Safety on elevator and escalator requirements. [Page(s) \_\_\_\_\_]

#### Performance-Based Compliance method (to comply with Sections 602, 609, and 611)

#### Yes N/A

#### □ □ Predictive Modeled Performance Pathway Design per Section 602 (see Section for details)

- Narrative/Plan Plan Sheets [Page(s) \_\_\_\_\_\_
- Building Energy Simulation performed by Registered Design Professional in Responsible Charge or a Modeler certified by an approved accrediting entity.

□ Specify the proposed Energy Use Index (EUI) for building and building site.

[Page(s) \_\_\_\_\_]

- Show a Zero Energy Performance Index (zEPI) of not more than 51.
   [Page(s) \_\_\_\_\_]
- □ Specify the  $CO_2e$  emissions calculations for the building and building site. [Page(s) \_\_\_\_\_]

Prescriptive-Based Compliance method (to comply with Sections 605, 606, 607, 608, 609, and 611)

#### Yes N/A

□ □ **Building envelope prescriptive compliance.** Where buildings are designed using the prescriptivebased compliance path, building thermal envelope systems shall comply with the provisions of Section C402 of the *International Energy Conservation Code* and the provisions of the IgCC (see IECC and IgCC for details)(insulation, fenestration, shading, air leakage, air barriers, building thermal envelope air tightness testing).

**Insulation and fenestration criteria.** The building thermal envelope shall exceed the requirements of Tables C402.1.2 and C402.3 of the IECC <u>by not less than 10 percent</u>. For purposes of compliance with this code, each U-factor, C-factor, F-factor and SHGC in the specified tables shall be reduced by 10 percent to determine the prescriptive criteria. [Page(s) \_\_\_\_\_]

#### N/A Yes

- **Permanent shading devices for fenestration.** Vertical fenestration within 45 degrees of the nearest west, south, and east cardinal ordinate shall be shaded by permanent horizontal exterior projections with a projection factor greater than or equal to 0.25. Where different windows or glass doors have different projection factor values, each shall be evaluated separately, or an area-weighted projection factor value shall be calculated and used for all windows and glass doors. Horizontal projections shall extend laterally beyond the edge of the glazing not less than one-half of the height of the glazing, except at building corners. See section for any exceptions. [Page(s) \_\_\_\_\_]
- Building mechanical systems prescriptive compliance. Where buildings are designed using the prescriptive-based compliance path, building mechanical systems shall comply with the provisions of the IECC and the provisions of the IgCC (see IECC and IgCC for details)(HVAC equipment performance. ground source heat pumps criteria, duct/plenum insulation/sealing/testing, HVAC piping insulation, economizer systems, VAV fan controls, kitchen exhaust systems, laboratory exhaust systems, R-1 occupancy HVAC controls).

- Building service water heating systems prescriptive compliance. Where buildings are designed using the prescriptive-based compliance path, service water heating systems shall comply with the provisions of the IECC and the provisions of the IgCC (see IECC and IgCC for details)(service water heating equipment performance, controls for dwelling units, pools/hot tubs/spas, snowmelt systems, waste water heat recovery, service water heating piping insulation, buried piping, circulating hot water systems). [Page(s) \_ ٦
- Building electrical power and lighting systems prescriptive compliance. Where buildings are П designed using the prescriptive-based compliance path, building electrical power and lighting systems shall comply with the IECC and the provisions of the IqCC (see IECC and IqCC for details)(occupant sensor controls, time switch controls, automatic daylight controls, sleeping unit controls, sleeping unit bathroom controls, interior light reduction controls, exterior lighting controls, exterior lighting reduction, exterior lighting and signage shut-off, automatic daylight controls, transformer efficiency, voltage drop in feeders, voltage drop in branch circuits, main electrical service entrance panel listed/labeled as suitable connection for onsite renewable energy source).

[Page(s) ]

#### Building Renewable Energy Systems (If chosen as an Elective from Table A106 of Appendix A) N/A Yes

- Building renewable energy system will be installed. (Where yes, check system below)
  - □ **Solar photovoltaic system** shall be sized to provide not less than 2 percent of the total estimated annual electric energy consumption of the building, or collective buildings on the building site. [Page(s) ]
  - □ Wind energy systems shall be sized to provide not less than 2 percent of the total estimated annual electric energy consumption of the building, or collective buildings on the building site. [Page(s) \_\_\_\_\_ ]
  - □ Solar water heating equipment not less than 10 percent of the building's annual estimated hot water energy usage shall be supplied by onsite solar water heating equipment. [Page(s) ]
  - **Geothermal heating systems** connection to the City of Boise geothermal system for heating in accordance with the requirements of the City of Boise Public Works Department. [Page(s) 1
- Renewable energy system performance monitoring and metering. Renewable energy systems shall be metered and monitored in accordance with Section 610 (see IgCC for details). 1

[Page(s)

# IGCC Chapter 7 – Water Resource Conservation, Quality & Efficiency

Yes	N/A	
		Fitting and fixture consumption. Fixtures shall comply with IgCC Table 702.1. Note maximum flow rates of fixtures on plans. [Page(s)]
		<b>Energy Star Qualified Appliances.</b> Note requirement on plans for clothes washers, ice makers and dishwashers per requirements of the IgCC. [Page(s)]
		<b>Efficient hot and tempered water distribution</b> is to comply with either the Maximum Allowable Pipe Length Method or the Maximum Allowable Pipe Volume Method per requirements of the IgCC and Table 702.8.2. [Page(s)]
		<b>HVAC systems and equipment</b> (hydronic closed systems, humidification systems, condensate, heat exchangers, cooling towers, wet-hood exhaust scrubber systems, evaporative cooling) shall comply with IgCC Section 703. [Page(s)]
		<b>Water treatment devices and equipment</b> (water softeners, reverse osmosis water treatment systems or onsite reclaimed water treatment systems) shall comply with IgCC Section 704. [Page(s)]
		<b>Metering.</b> Water consumed from any source associated with the building or building site shall be metered. All potable and nonpotable water supplied to the applications listed in IgCC Table 705.1.1 shall be individually metered. [Page(s)]
		Water reuse. The design of any water reuse system must be permitted and approved by the Idaho Department of Environmental Quality (IDEQ) prior to permit approval by the City.
		IDEQ approval documents
		System design details. [Page(s)]
		<b>Gray water systems.</b> The design of any gray water systems must be permitted and approved by the Idaho Department of Environmental Quality (IDEQ) prior to permit approval by the City.
		IDEQ approval documents
		System design details. [Page(s)]

# IGCC Chapter 8 – Indoor Environmental Quality & Comfort

#### Yes N/A

□ □ Indoor air quality management plan required. An indoor air quality management plan shall be developed. Such plan shall address the methods and procedures to be used during design and construction to obtain compliance with Sections 802 through 805.

□ Narrative/Plan □ Plan Sheets [Page(s) \_\_\_\_\_]

- □ Air handling system filters. Filter racks shall be designed to prevent airflow from bypassing filters. Access doors and panels provided for filter replacement shall be fitted with flexible seals to provide an effective seal between the doors and panels and the mating filter rack surfaces. Special tools shall not be required for opening access doors and panels. Filter access panels and doors shall not be obstructed. [Page(s) \_\_\_\_\_]
- □ □ Duct openings. During construction, duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or shall be closed by an approved method to reduce the amount of dust and debris that collects in the system from the time of rough-in installation and until startup of the heating and cooling equipment. Dust and debris shall be cleaned from duct openings prior to system flush out and building occupancy. [Page(s) \_\_\_\_\_]

- □ **Ventilation.** Ventilation <u>during construction</u> shall be achieved through openings in the building envelope using one or more of the following methods:
  - 1. Natural ventilation in accordance with the provisions of the IBC or IMC.
  - 2. Fans that produce a minimum of three air changes per hour.
  - 3. Exhaust in the work area at a rate of not less than 0.05 cfm/ft2 and not less than 10 percent greater than the supply air rate so as to maintain negative pressurization of the space.

[Page(s) \_\_\_\_\_]

- Protection of HVAC system openings. <u>During construction</u>, HVAC supply and return duct and equipment openings shall be protected during dust-producing operations. [Page(s) \_\_\_\_\_]
- Return air filters. Where a forced air HVAC system is used <u>during construction</u>, new return air filters shall be installed prior to system flush out and building occupancy.
   [Page(s) \_\_\_\_\_]
- □ □ Construction phase ductless system or filter. Where spaces are conditioned <u>during the construction</u> phase, space conditioning systems shall be of the ductless variety, or filters for ducted systems shall be rated at MERV 8 or higher in accordance with ASHRAE 52.2, and system equipment shall be designed to be compatible. Duct system design shall account for pressure drop across the filter. [Page(s) \_\_\_\_\_]
- □ □ **Thermal environmental conditions for human occupancy.** Buildings shall be designed in compliance with ASHRAE 55, Sections 6.1, "Design," and 6.2, "Documentation" (operational procedures, controls, seasonal set points, schedules). [Page(s) \_\_\_\_\_]
- □ □ Environmental tobacco smoke control. Smoking shall not be allowed inside of buildings. Any exterior designated smoking areas shall be located not less than 25 feet away from building entrances, outdoor intakes and operable windows. [Page(s) \_\_\_\_\_]
- □ □ Isolation of pollutant sources print, copy and janitorial rooms. Enclosed rooms or spaces that are over 100 square feet in area and that are used primarily as a print or copy facility containing five or more printers, copy machines, scanners, facsimile machines or similar machines in any combination, and rooms used primarily as janitorial rooms or closets where the use or storage of chemicals occurs, shall comply with all of the following:
  - The enclosing walls shall extend from the floor surface to the underside of the floor, roof deck or solid ceiling above and shall be constructed to resist the passage of airborne chemical pollutants and shall be constructed and sealed as required for 1-hour fire-resistance-rated construction assemblies. Alternatively, for janitorial rooms and closets, all chemicals shall be stored in approved chemical safety storage cabinets.
  - 2. Doors in the enclosing walls shall be automatic or self-closing.
  - 3. An HVAC system shall be provided that: provides separate exhaust airflow to the outdoors at a rate of not less than 0.50 cfm per square foot; that maintains a negative pressure of not less than 7 Pa within the room; and that prohibits the recirculation of air from the room to other portions of the building.

[Page(s) \_\_\_\_\_]

□ **Filters.** Filters for air conditioning systems that serve occupied spaces shall be rated at MERV 11 or higher, in accordance with ASHRAE Standard 52.2, and system equipment shall be designed to be compatible. The air handling system design shall account for pressure drop across the filter. Filter performance shall be shown on the filter manufacturer's data sheet. [Page(s) \_\_\_\_\_]

- □ □ **Fireplaces and appliances.** Where located within buildings, fireplaces, solid fuel-burning appliances, vented decorative gas appliances, vented gas fireplace heaters and decorative gas appliances for installation in fireplaces shall comply with IgCC Sections 804.1.1 through 804.1.3. Unvented room heaters and unvented decorative appliances, including alcohol burning, shall be prohibited. [Page(s) \_\_\_\_\_]
- Post-construction, pre-occupancy baseline indoor air quality (IAQ) testing. After all interior finishes are installed, the building shall be tested for indoor air quality and the testing results shall indicate that the levels of VOCs meet the levels detailed in IgCC Table 804.2 using testing protocols in accordance with ASTM D 6196, ASTM D 5466, ASTM D 5197, ASTM D 6345, and ISO 7708. Test samples shall be taken in not less than one location in each 25,000 square feet of floor area or in each contiguous floor area. See IgCC Section 804.2 for any exceptions. [Page(s) \_\_\_\_\_]
- □ □ **Emissions from composite wood products.** Composite wood products used interior to the approved weather covering of the building shall comply with the emission limits or be manufactured in accordance with the standards cited in Table 806.1 of the IgCC. See Section 806.1 for standard to comply with and for any exceptions. [Page(s) \_\_\_\_\_]
- □ Adhesives and sealants. A minimum of 85 percent by weight or volume, of site applied adhesives and sealants used on the interior side of the building envelope shall comply with the VOC content limits in Table 806.2(1) or alternative VOC emissions limits in Table 806.2(2) of the IgCC. See Section 806.2 for standards and test methodology to comply with including any exceptions. [Page(s) \_\_\_\_\_]
- □ Architectural paints and coatings. A minimum of 85 percent by weight or volume, of site-applied interior architectural coatings shall comply with VOC content limits in Table 806.3(1) or the alternate emissions limits in Table 806.3(2) of the IgCC. See Section 806.3 for standards and test methodology to comply with. [Page(s) \_\_\_\_\_]
- □ □ **Flooring.** A minimum of 85 percent of the total area of flooring installed within the interior of the building shall comply with the requirements of Table 806.4(2) of the IgCC. See Section 806.4 for standards and test methodology to comply with. [Page(s) \_\_\_\_\_]
- □ Acoustical ceiling tiles and wall systems. A minimum of 85 percent of acoustical ceiling tiles and wall systems, by square feet, shall comply with the requirements of Table 806.5(2) of the IgCC. See Section 806.5 for standards and test methodology to comply with. [Page(s) \_\_\_\_\_]
- Insulation. A minimum of 85 percent of insulation shall comply with the requirements of Table 806.6(1) or Table 806.6(2) of the IgCC. See Section 806.6 for standards and test methodology to comply with. [Page(s) \_\_\_\_\_]
- □ □ **Daylighting** of building spaces in accordance with IgCC Section 808.3 shall be required for buildings containing:
  - □ **Group A-3 occupancy** where the specific use of the room or space is for reading areas in libraries, waiting areas in transportation terminals, exhibition halls, gymnasiums, and indoor athletic areas.
  - □ **Group B occupancy** where the specific use of the room or space is for educational facilities for students above the 12<sup>th</sup> grade, laboratories for testing and research, post offices, print shops, offices, and training and skill development not within a school or academic program.
  - □ Group E, F and S occupancies.
  - □ **Portions of Group M occupancies** located directly underneath a roof where the net floor area of the entire occupancy is 10,000 square feet or greater. See Section 808.2 for any exceptions.

[Page(s) \_\_\_\_\_]

	<b>Daylit area of building spaces.</b> In buildings not greater than two stories above grade, not less than 50
	percent of the net floor area shall be located within a daylit area. In buildings three or more stories above
	grade, not less than 25 percent of the net floor area shall be located within a daylit area. Buildings
	required to have more than 25,000 square feet of daylit area shall comply with IgCC Section 808.3.2
	(performance method). All other buildings shall comply with either Section 808.3.1 (prescriptive method)
	or Section 808.3.2 (performance method) of the IgCC.

#### Method:

□ Pre	escriptive	- or -	Performance Method	with	Daylight	Analysis	per IgC	C 808.	3.2.3
[Page(	s)		] - and/o	r _	🗆 Nai	rrative/Pla	an		

# **IGCC** Chapter 9 – Commissioning, Operation & Maintenance

#### Yes N/A

- □ □ Building Commissioning Agencies form. Submit for project. (2 paper copies)
- □ □ **Commissioning agency qualifications.** Where not on file with the building official, submit documentation outlining qualifications, experience, certifications and/or licenses of agency personnel conducting commissioning work to the building official for review and approval. (2 paper copies)
- □ □ **Building commissioning plan.** Submit for project (e.g. mechanical systems, lighting and electrical systems including controls, and all applicable items noted in IgCC Table 903.1 as amended). Building commissioning requirements notes to also be provided on plans. [Page(s) \_\_\_\_\_\_

# IGCC Chapter 10 – Existing Buildings

#### Yes N/A

- □ Additions to any building site-built building or structure shall comply with the requirements of the IgCC for new construction. [Page(s) \_\_\_\_\_]
- Alterations to existing buildings and building systems shall be in accordance with the requirements of the IgCC for those assemblies, systems and components being altered.
   [Page(s) \_\_\_\_\_]
- □ Alterations. Unless any of the exceptions to 1003.2 apply, alterations of portions or components of buildings shall comply with Sections 1003.2.1 through 1003.2.7 (metering devices, heating, ventilating and air conditioning systems, service water systems, lighting, swimming pools and spas, insulation in unconditioned attics, roof replacement insulation). See IgCC sections for specific requirements and show compliance on plans. [Page(s) \_\_\_\_\_\_]
- □ □ **Historic buildings.** As determined by the code official, the provisions of the IgCC may not be required when each individual provision is evaluated separately on its own merit, and any are found to provide a conflict with a building function or affect visible configuration of the building components in a manner not keeping with the historic nature. [Page(s) \_\_\_\_\_]
- □ Deconstruction and demolition material and waste management plan. Where buildings, structures or portions thereof are deconstructed or demolished, a minimum of 35 percent of materials shall be diverted from landfills. [Page(s) \_\_\_\_\_\_] or □ Deferred Submittal

# **IGCC Chapter 11 – Existing Building Site Development**

#### Yes N/A

□ Additions to any building site improvements shall comply with the requirements of the IgCC for new construction. [Page(s) \_\_\_\_\_]

- Alterations to existing portions or site improvements on building sites shall be in accordance with the requirements of the IgCC for those portions or building site improvements being altered.
   [Page(s) \_\_\_\_\_]
- □ □ **Changes to hardscapes and surface vehicle parking.** Where existing hardscapes are altered, the alterations shall comply with the provisions of the IgCC, the Boise City Development Code 11-07-05, and the City of Boise Stormwater Management and Discharge Control ordinance.

#### **Exceptions:**

- 1. Existing hardscapes and vegetation are permitted to be replaced with materials shown in previously approved construction documents as allowed by Boise City Development Code 11-07-05.
- 2. Where existing vehicle surface parking lots are altered without changing parking space configuration or increasing the number of parking spaces, the altered parking lot shall not be required to comply with Section 407.4 (Preferred Vehicle Parking).

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[Page(s) _____
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□ □ **Change of occupancy.** Where a change in the use or occupancy of a building or tenant space places it in a different division of the same group or occupancy or in a different group of occupancies, as determined by the IBC, the following shall be required:

**Building site improvements.** Where a change in occupancy results in an increase in the occupant load of the building, bicycle parking shall comply with the following:

- 1. Short-term bicycle parking spaces shall be provided in accordance with Section 407.3 (as amended and per Boise City Development Code 11-07-03) equivalent to a new building of the new occupancy.
- 2. Where the existing building and building site have parking for motorized vehicles, long-term bicycle parking shall be provided in accordance with Section 407.3 (as amended and per Boise City Development Code 11-07-03) equivalent to a new building of the new occupancy.
- [Page(s) \_\_\_\_\_
- □ □ **Historic building sites.** As determined by the code official, the provisions of the IgCC may not be required when each individual site provision is evaluated separately on its own merit, and any are found to provide a conflict with site function, a distinct environmental hazard or affect visible configuration of the building site in a manner not keeping with the historic nature. [Page(s) \_\_\_\_\_]

### **IGCC Appendix A – Project Electives**

Each project shall choose a minimum of three (3) electives from not less than two of the categorized tables located in Appendix A. List the description of each elective chosen and from which table below:

Yes	N/A	
		Table A104 Site Project Electives         [Page(s)]           Description            Description
		Table A105 Material Resource Conservation & Efficiency Electives [Page(s)]         Description         Description
		Table A106 Energy Conservation & Efficiency Electives       [Page(s)]         Description

N/A	
	Table A107 Water Resource Conservation & Efficiency Electives [Page(s)]
	Description
	Description
	Table A108 Indoor Environmental Quality & Comfort Electives [Page(s)]
	Description
	Description

# **Deferred Submittals**

#### Yes N/A

	Deferred submittal items. List any deferred submittals on the plans (e.g. construction material and
	waste management plan, deconstruction/demolition material and waste management plan, or others).
	[Page(s)]

- □ Letter from owner, submitted to building official, certifying the receipt of record documents and building operations and maintenance documents prior to issuance of the Certificate of Occupancy. Note requirement under Deferred Submittals on the plans. [Page(s) \_\_\_\_\_]
- Preoccupancy commissioning report submitted to building official prior to issuance of the Certificate of Occupancy. Note requirement under Deferred Submittals on the plans. [Page(s) \_\_\_\_\_]

### **Applicant Acknowledgement**

I have completed the above checklist noting all pages and supporting documents for the project.

Name of Submitting Design Professional of Record (or applicant if design professional not required)

Date

For Staff Use (paper submittal)		
□ Accepted		
Not Accepted	_by _	
Date		Staff Member Conducting the Intake
□ Accepted		
Not Accepted	_by _	
Date		Staff Member Conducting the Intake