

**Town of Basalt  
Ordinance No. 21  
Series of 2015**

**AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF BASALT,  
COLORADO, AMENDING CHAPTER 18, BUILDING REGULATIONS, OF THE  
MUNICIPAL CODE OF THE TOWN OF BASALT REGARDING SUSTAINABLE  
BUILDING REGULATIONS AND AMENDING THE TOWN'S FEE SCHEDULE**

A. The Town of Basalt ("Town"), acting by and through its Town Council ("Town Council"), has the power to amend the Municipal Code of the Town of Basalt ("Town Code") pursuant to the Home Rule Charter for the Town of Basalt and Section 1-58, Town Code, and all such amendments shall become a part of the Town Code.

B. The Town adopted Sustainable Building Regulations for single-family and duplex development and some townhome development pursuant to Ordinance No. 11, Series of 2009 at the recommendation of the Town's Green Team.

C. The Green Team, a volunteer group of local citizens, directed a subcommittee to develop sustainable building regulations for commercial and multi-family developments for inclusion in the building regulations of the Town, for the benefit of the environment.

D. Sustainable building regulations expand the scope of the energy code adopted by the Town to include site aspects, water conservation, and indoor-air quality, and encourage reuse, recycling and renewable energy sources.

E. The Town Council desires to adopt sustainable building regulations regulating construction materials and techniques for commercial and multi-family development, for the benefit of the Town.

F. At a public meeting held on October 27, 2015, the Town Council considered the following amendments to Chapter 18 of the Town Code on first reading and scheduled a public hearing and second reading for the ordinance for November 10, 2015, for a meeting beginning no earlier than 6:00 pm at the Basalt Town Hall, 101 Midland Avenue, Basalt, Colorado.

G. At a public hearing and second reading on November 10, 2015, the Town Council continued the public hearing and second reading through December 8, 2015. At a continued public hearing and second reading on December 8, 2015, the Town Council heard evidence and testimony as offered by the Town Staff and members of the public.

H. The Town Council finds and determines it is in the best interests of the Town to amend the Town Code as provided herein, and is reasonably necessary to promote the legitimate public purposes of the public health, safety and welfare.

**NOW, THEREFORE, BE IT ORDAINED** by the Town Council of Basalt, Colorado that the following amendments are adopted to the Town Code of the Town of Basalt.

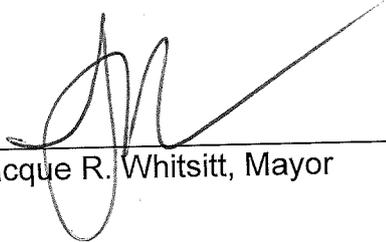
1. Section 18-14 (d), *Fees: REMP Fees* is hereby amended to read as attached in **Exhibit "A"**.
2. The title of Section 18-23, *Sustainable Building Regulations*, is hereby amended to *Type I Sustainable Building Regulations*.
3. The title of Section 18-24, *Exterior Energy Uses* is hereby amended to *Type I Sustainable Building Regulations- Exterior Energy Uses*.
4. The title of Section 18-25, *Point Details* is hereby amended to *Type I Sustainable Building Regulations- Point Details*.
5. Chapter 18 of the Basalt Municipal Code, *Construction Codes*, is hereby amended by the addition of Section 18-26, *Type II Sustainable Building Regulations-Commercial and Multi-Family Residential* to read as attached in **Exhibit "B"**.
6. The Town's Fee Schedule for Section 18-14 of the Town Code is hereby amended as shown in **Exhibit "C"**.
7. The Town's Fee Schedule for Section 18-26 is hereby added as shown in **Exhibit "D"**.
8. MISCELLANEOUS.
  - a. The approvals and conditions contained herein shall be binding on and inure to the benefit of the heirs, successors and assigns of the Applicant and the owners of the Property.
  - b. If any part, section, subsection, sentence, clause or phrase of this Ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this Ordinance and the Town Council hereby declares it would have passed this Ordinance and each part, section, subsection, sentence, clause or phrase thereof regardless of the fact that any one or more parts, sections, subsections, sentences, clauses or phrases be declared invalid.

READ ON FIRST READING, ORDERED PUBLISHED AND SET FOR PUBLIC HEARING AND SECOND READING TO BE HELD ON November 10, 2015 by a vote of 5 to 0 on October 27, 2015. SECOND READING WAS CONTINUED TO December 8, 2015.

READ ON SECOND READING AND ADOPTED, by a vote of 6 to 0 on December 8, 2015.

TOWN OF BASALT, COLORADO

By:

  
Jacquie R. Whitsitt, Mayor

Attest:

By:

  
Pamela Schilling, Town Clerk

First Publication: Thursday, November 5, 2015  
Final Publication: Thursday, December 17, 2015  
Effective Date: Thursday, December 31, 2015

*Underlined language shows language being added to the Code. Strikethrough language is language being deleted.*

**Exhibit "A"**

Section 18-14 (d) REMP fees. REMP fees will be collected by the Building Department at the time of the permit application issuance. REMP fees will be used to offset the greenhouse gas emissions of these applications through community investments in renewable energy and energy efficiency. Expenditures of REMP funds for community projects will be recommended for Town Council approval by a joint committee of the Community Office for Resource Efficiency and the Building Official.

(1) Under the Renewable Energy Mitigation Program (REMP), houses over three thousand five hundred (3,500) square feet of habitable space must install a renewable energy system on site (e.g., a two-panel solar hot-water system, a two-module photovoltaic array or a geothermal system) or pay an REMP fee of ~~three thousand five hundred dollars (\$3500.00)~~ as set forth in the Town of Basalt's Fee Schedule.

(2) For exterior uses of energy, such as snowmelt, pools, spas and garages, the REMP fees are based on the cost of electricity for the equivalent amount of BTUs used over twenty (20) years. Except one hundred percent (100%) of the energy required is permitted if one hundred fifty percent (10050%) of the annual energy required is produced with renewable energy systems and installed on site or if 125% of the annual energy required is produced with renewable energy systems off site, if approved by the Town Building Official.

Calculation of the REMP fee is made as per the following schedule.

Energy Use	BTUs per sq. ft. per year	"Free allowed square footage"	Fee per sq. ft. for 20 years*
Snowmelt	34,425	200	\$14 <u>See Town's Fee Schedule</u>
Small Spa	430,000	64	\$176 <u>See Town's Fee Schedule</u>
Summer Pool	29,000	200	\$12 <u>See Town's Fee Schedule</u>
Winter Pool	332,000	none	\$136 <u>See Town's</u>

			<u>Fee Schedule</u>
Heated Garage	19,500	See Section 18-84(f)	<del>\$8</del> <u>See Town's Fee Schedule</u>
*These fees must be adjusted for efficiency.			

Example: Snowmelt system of 400 square feet is needed for a driveway, boiler efficiency is 85%, 200 square feet is free.

REMP Fee=  $(\frac{\$14 \text{ Price per sq. ft. in Town's Fee Schedule}}{0.85}) \text{ times } (400-200 \text{ sq. ft.}) = \$3,294$

Example: Summer pool with surface area of 600 square feet, boiler efficiency is 87%, 200 square feet is free.

REMP Fee=  $(\frac{\$12 \text{ Price per sq. ft. in Town's Fee Schedule}}{0.87}) \text{ times } (600-200 \text{ sq. ft.}) = \$5,517$

*Add Section 18-26, Type II Sustainable Building Regulations in its entirety as included herein.*

## **Exhibit "B"**

### **Section 18-26, Type II Sustainable Building Regulations- Non-Residential and Multi-family Residential**

#### **PURPOSE**

The intent of the Sustainable Building Regulations program is to encourage cost-effective sustainable building methods to create durable, energy efficient structures that conserve natural resources, promote the efficient use of building materials, and improve the quality of the indoor environment for non-residential and multi-family residential development.

#### **APPLICABILITY AND CHECKLIST**

Type II Sustainable Building Regulations apply to all new non-residential, mixed use, and/or multi-family construction not covered by the Type I Sustainable Building Regulations. Type II Sustainable Building Regulations also apply to additions; reconstruction of over 50% of the existing floor area. A completed Sustainable Building Regulations checklist must be submitted along with a building permit application, demonstrating compliance with the appropriate threshold level based on type of use. References in this section to the IECC shall mean the 2015 IECC. The required categories do not apply to tenant finish permits as long as the tenant finish permit meets the required tenant finish threshold set in this section.

#### **EXCEPTIONS**

- 1) Manufactured housing approved by Colorado Department of Housing; and,
- 2) LEED certified buildings are excepted from compliance with the Type II Sustainable Building Regulations. Projects achieving LEED Gold or better will receive a 25% building permit rebate, not to exceed the rebate amount specified in the Town of Basalt Fee Schedule.

#### **DEFINITIONS**

*Building component* is one of the following: framing, wall, siding, flooring, trim, and other primary elements of a building as determined by the Town Building Official.

*Engineered lumber* is a composite wood product made from pieces of recycled/reconstituted/scrap wood and fibers bonded together with adhesive to create a durable and resource friendly substitute for raw-sawn lumber.

*Conditioned building area* is the area in building, inside insulated walls, being heated or cooled, containing uninsulated ducts, or with a fixed opening directly into an adjacent conditioned space.

*Construction element* is one of the following: framing material, siding, flooring, trim, and other primary elements of a building as determined by the Town Building Official.

*Occupancy* is the occupancy as designated by the building code in affect at the time of perm it submittal.

*Renewable energy source* is incoming solar radiation and photosynthetic processes; natural phenomenon including wind, hydropower, and lake or pond thermal differences; from decomposition of waste material; and processes that use regenerative materials, including wood and bio-based products; and from the internal heat of the earth.

#### **POINT REQUIREMENTS**

All Type II construction must demonstrate compliance with these standards by demonstrating that it meets the minimum point thresholds. The minimum points required for applicable construction projects range from 30-68 points depending on the project type as shown below.

#### **REQUIRED THRESHOLDS**

Commercial building (complete)	68 points
Commercial building (core and shell)	65 points
Commercial tenant finish	30 points
Multi-family (apartments or condos)	65 points
Hotel	68 points

Projects not meeting the minimum points shall pay a mitigation fee as follows:

Fee = Square footage of project x number of points short x \$ .15.

For example, a 4000 square foot project that is 5 points short would be assessed a fee as follows:

$$4000 \times 5 \times \$ .15 = \$3000$$

#### **COMMITMENTS MUST BE MAINTAINED**

Commitments to construction methods and materials are binding toward issuance of a certificate of occupancy, or must be mitigated. Commitments that are credited towards satisfying the Type II cannot be removed after issuance of a certificate of occupancy unless sufficient mitigation is provided for the commitment removed to the satisfaction of the Town Building Official.

## **POINT DETAILS**

### **SECTION 1 SITE/WATER CONSERVATION**

#### **1.01 Construction Activity Pollution Prevention (CAPP)**

**BENEFIT:** Proper erosion control measures prevent off-site sedimentation in storm sewers, and ultimately, our rivers.

**QUALIFICATION:** Include on construction management plan, and field implement. Limits of disturbance to have sediment fencing, staked hay bales in swales/drainage ditches, and revegetation matting in any areas outside fencing disturbed by construction.

**POINTS:** REQUIRED

**CONFIRMATION** will be at plan review and footing inspection.

#### **1.02 Site is either a redevelopment location or brownfield redevelopment**

**BENEFIT:** Redevelopment is preferable to sprawl. Brownfields are previously developed industrial and commercial sites that are potentially contaminated. Brownfield redevelopment additionally eliminates the hazard of contaminants.

**QUALIFICATION:** Show on site plan location of existing or pre-existing structures. Deconstruction is required for existing structures for any reusable/recyclable items. For brownfield redevelopment, show documentation demonstrating previous or existing site contamination and clean-up.

**POINTS:** Redevelopment 5 points. Brownfield redevelopment 10 points

**CONFIRMATION** will be at plan review.

#### **1.03 Development Density and Community Connectivity**

**BENEFIT:** High-density development as defined in Site Section Credit 2 of LEED limits sprawl and preserves our natural surroundings and Community connectivity encourages basic services within easy reach of residential neighborhoods as defined in Site Section Credit 2 of LEED.

**QUALIFICATION:** Demonstrate at Plan Review that they satisfy both density and connectivity.

**POINTS:** 5

**CONFIRMATION** will be at plan review.

#### **1.04 RFTA Bus Stop**

**BENEFIT:** Convenience promotes bus ridership.

**QUALIFICATION:** Development is within ¼ mile of a RFTA bus stop.

**POINTS:** 1

**CONFIRMATION** will be at plan review.

#### **1.05 Proximity to Schools**

**BENEFIT:** A close proximity to schools allows children to easily bike or walk to school and alleviates need for use of vehicles.

QUALIFICATION: Demonstrate that property is within ½ mile of schools.

POINTS: 1

CONFIRMATION will be at plan review.

**1.06 Walkability/bikability: The site/design provides connection to a multi-use path network.**

BENEFIT: A close proximity to bike paths allows employees to easily bike, or walk, to work; or to get to work easily and safely from a bus stop.

QUALIFICATION: Show direct connection to path network on site/vicinity plan that are within ½ of a mile of a RFTA bus stop. Measurement shall be along the most direct pedestrian with a sidewalk or improved trail.

POINTS: 2

CONFIRMATION will be at plan review.

**1.07 Covered Bicycle racks**

BENEFIT: Convenient weather protection and security for bikes.

QUALIFICATION: Planned and constructed bike storage must be covered, at a minimum, and include rack space or other means of security for at least one bike per 10 occupants as defined by the building code.

POINTS: 1

CONFIRMATION will be at plan review and final inspection.

**1.08 Employee changing rooms**

BENEFIT: This may encourage employees to bike to work which benefits not only the environment, but also the employees' fitness level.

QUALIFICATION: Changing rooms must have lockers and shower facilities for employees in commercial buildings.

POINTS: 2

CONFIRMATION will be at plan review and final inspection.

**1.09 Bike share facility**

BENEFIT: Having bikes readily available promotes their use for short trips as an alternative to driving.

QUALIFICATION: Development must be within ¼ mile of a bike share facility.

POINTS: 1

CONFIRMATION will be at plan review.

**1.10 On-site affordable housing unit, live-work mixed use beyond code-required minimum.**

BENEFIT: Living where you work makes for a short commute.

QUALIFICATION: Show on-site dwelling unit(s) that meet the Town of Basalt Affordable Housing Guidelines for either a deed restricted for sale unit or rental unit, which are beyond the code-required minimum mitigation.

POINTS: 5 per unit; 25 maximum

CONFIRMATION will be at plan review and final inspection.

### **1.11 Maximize Open Space and Habitat**

**BENEFIT:** Lessens visual impact of development; increases visual appeal. Natural habitat supports biodiversity.

**QUALIFICATION:** Total lot coverage is less than 75% of maximum allowable for lot and total surface parking and hardscape area is less than building footprint(s).

**POINTS:** 2

**CONFIRMATION** will be at plan review and final inspection.

### **1.12 Stormwater Design**

**BENEFIT:** Provides a portion of irrigation needs from natural precipitation, eliminates direct discharge of potential pollutants or sediment, and promotes groundwater recharge.

**QUALIFICATION:** 100% of surface water runoff travels through bioswales, landscaped detention areas, or combination thereof.

**POINTS:** 3

**CONFIRMATION** will be at plan review and final inspection.

### **1.13 Diverse native landscaping**

**BENEFIT:** Increases survivability rate of plantings; and limits invasive species.

**QUALIFICATION:** Landscaping plan includes 10 or more native species over 90% of landscaped area.

**POINTS:** 1

**CONFIRMATION** will be at plan review and final inspection.

### **1.14 Water Efficient Landscaping**

**BENEFIT:** Reduces irrigation demands and conserves water.

**QUALIFICATION:** Irrigated turf area must be equal or less than 40% of landscaped area, or 1000 square feet, whichever is smaller. Show turf areas and drip-irrigation lines/beds on landscaping plan. Irrigation systems shall be controlled with automatic timer and rain sensors.

**POINTS:** 2

**CONFIRMATION** will be at plan review and final inspection.

#### **1.14.1 Use of low-water-demand or xeriscape-rated plants ONLY**

**BENEFIT:** Reduced irrigation demands and water conservation at the next level.

**QUALIFICATION:** Landscaping plan must only show xeriscape plants listed by Colorado State University Extension Horticulture office, listed on [www.xratedgardening.com](http://www.xratedgardening.com), or source recognized by the Town Building Official. Any turf area (must meet above standard) shall use species that utilizes at least 25% less water than Kentucky blue grass.

**POINTS:** 1 additional point

**CONFIRMATION** will be at plan review and final inspection.

#### **1.14.2 Landscape design requires no permanent irrigation**

**BENEFIT:** Conserves water.

**QUALIFICATION:** Landscape plan must meet landscaping minimum standards. (Temporary irrigation is permissible during plant establishment period.) Landscaping must be planted prior to CO to be eligible.

**POINTS:** 4 total

**CONFIRMATION** will be at plan review and final inspection.

#### **1.15 Interior Water Use Reduction**

**BENEFIT:** Conserves water.

**QUALIFICATION:** Demonstrate all water use reductions on interior fixtures, including but not limited to: toilets, showers, sinks, faucets, dishwashers, clothes washers and urinals. Estimates are based on average occupant usage pursuant to the 1992 Energy Policy Act (EPACT) for fixture flow rates. (Need to know what this is.)

**POINTS:** 2 for 20% reduction; and 3 points for 30% or more reduction in use.

**CONFIRMATION** will be at plan review and final inspection.

#### **1.16 Fill/Excavation Transport Reduction**

**BENEFIT:** Reduces truck traffic necessary to haul excavation spoils and bring in fill.

**QUALIFICATION:** Dispose of or store excavation spoils within 1 mile of development. Source fill materials within 1 mile of development.

**POINTS:** 1

**CONFIRMATION** will be at plan review.

#### **1.17 Heat Island Reduction**

**BENEFIT:** Limits heat island effects on microclimates, the built environment, and nature.

**QUALIFICATION:** Shade parking lots; use solar-reflective building materials.

**POINTS:** 2

**CONFIRMATION** will be at plan review and final inspection.

### **RECYCLING, REUSE, MATERIALS**

#### **2.01 Storage and Collection of Recyclables in Design**

**BENEFIT:** Provides for convenient recycling.

**QUALIFICATION:** Show on construction plans areas for storage of recycling containers next to trash container(s). Adequate space for a cardboard 2-yard minimum container, and totes for co-mingled and newspaper/mixed paper required.

**POINTS:** REQUIRED

**CONFIRMATION:** will be at final inspection.

### **2.02 Construction Waste Recycling**

**BENEFIT:** Reduces construction waste to landfills.

**QUALIFICATION:** Provide labeled containers during construction for recycling cardboard, wood waste, and/or metal scrap.

**POINTS:** 2 per material type; 6 maximum

**CONFIRMATION:** Labeled containers clean of trash with evidence of use must be in place during inspections.

### **2.03 Efficient Framing Techniques**

**BENEFIT:** Optimum value engineering (OVE) reduces building materials and can increase overall energy envelope performance.

**QUALIFICATION:** Design and construct using advanced framing techniques consistent with OVE.

**POINTS:** 2

**CONFIRMATION** will be at framing inspection.

### **2.04 Use of Beetle Kill Pine**

**BENEFIT:** Use of cosmetically blemished natural resource from Colorado. Left in forests the timber will either decay or burn in forest fires, either way releasing the CO<sub>2</sub> they stored while growing.

**QUALIFICATION:** Structural use as dimensional framing material, or as cross laminated timber (CLT); and/or nonstructural uses such as siding, flooring, trim, etc. Material must be used for over 50% of total construction element.

**POINTS:** 2 for structural; 2 for nonstructural

**CONFIRMATION** will be at framing and/or final inspection.

### **2.05 Reclaimed and/or recycled-content materials**

**BENEFIT:** Supports recycling market and reduces use of virgin materials.

**QUALIFICATION:** Use of construction materials that are either reclaimed from another structure, and/or any materials with recycle-content in them qualify.

Materials that are purchased from a reclaimed materials distributor, deconstructed by the owner/applicant from another structure, or that are purchased from a used building materials exchange all qualify as reclaimed materials (must provide documentation). Some common recycle-content materials include composite decking, recycle-content faux shake/slate roofing, cellulose or shredded cotton batt insulation, recycle-content carpets, counter tops, recycle-content tile, etc. Provide material info onsite; field inspected. More than 50% of the material type in place must be reclaimed and/or recycled.

**POINTS:** 2 per material type; 6 maximum

**CONFIRMATION:** Material information/documentation must be on job site with field set of plans for inspection.

### **2.06 FSC or SFI certified materials or steel studs**

**BENEFIT:** Promotes sustainable stewardship of forest resources. Steel framing requires less lumber, is recyclable, and reduces scrap material.

**QUALIFICATION:** FSC (Forest Stewardship Council) or SFI (Sustainable Forestry Initiative) stamped certification on material(s) required. Material must be used in over 50% of the construction element.

**POINTS:** 2 per material type

**CONFIRMATION:** Field inspected.

### **2.07 Materials manufactured within Colorado and/or rapidly renewable materials**

**BENEFIT:** Reducing travel distance reduces carbon footprint. Rapidly renewable materials have less of an environmental impact.

**QUALIFICATION:** Show documentation for any materials used that were manufactured within Colorado, or that consist of rapidly renewable materials (naturally reproducing within 15 years). Material type must be used in over 50% of the building component.

**POINTS:** 2 per material type

**CONFIRMATION:** Field inspected.

## **ENERGY**

### **3.01 Building Energy, Envelope and Systems Commissioning**

**BENEFIT:** Confirms performance levels of design and construction that may not be obvious from visual inspection.

**QUALIFICATION:** A commissioning plan must be provided for buildings over 5000 s.f. the plan must be followed by an inspection report.

**POINTS:** REQUIRED (For all new systems)

**CONFIRMATION** will be prior to certificate of occupancy. (Opportunity for innovation points for providing ongoing monitoring system.)

### **3.02 Infrared Heat Loss Analysis and Remediation**

**BENEFIT:** Infrared cameras can be effective tools for pinpointing areas of heat loss (interior-exterior temperature difference must be at least 25 degrees).

**QUALIFICATION:** Provide detailed report from an accredited professional on analysis performed, areas of heat loss, and demonstrated remediation (if stated in analysis).

**POINTS:** 3

**CONFIRMATION** will be prior to certificate of occupancy

### **3.03 No recessed lights on ceiling to exterior**

**BENEFIT:** Ceiling penetrations allow heat loss and moisture transfer.

**QUALIFICATION:** Avoid recessed light fixtures in the ceiling of the building envelope.

**POINTS:** 2

**CONFIRMATION** will be at final inspection.

### **3.04 Efficient Boiler/Furnace**

**BENEFIT:** Energy saving.

**QUALIFICATION:** Design and install heating equipment with an efficiency rating percentage over 87%. For multiple boilers/furnaces, ratings area averaged.

**POINTS:** 1 to 7 (1 point for each percent increase over an AFUE efficiency rating percentage of 87%.)

**CONFIRMATION** will be at heating appliance inspection.

### **3.05 Cold Climate Heat Pump**

**BENEFIT:** Heat pump technology heats and cools efficiently and is cheaper to operate.

**QUALIFICATION:** Specify and install heat pump(s) for primary heating and cooling.

**POINTS:** 1 per unit

**CONFIRMATION** will be at plan review and final inspection

### **3.06 Geoexchange system**

**BENEFIT:** Reduce use of fossil fuels.

**QUALIFICATION:** Must be designed and constructed to serve the entire building

**POINTS:** 6

**CONFIRMATION** will be at final inspection.

### **3.07 Tankless water heater(s)**

**BENEFIT:** Energy saving.

**QUALIFICATION:** Gas or electric tankless on-demand water heater models qualify, must meet over 50% of total hot water needs. Units must have an intermittent ignition device (IID) instead of a standing pilot light to qualify.

**POINTS:** 1 to 3 (Tankless systems get 3 points. Side-arm boilers qualify for one point as part of a modulating condensing boiler 90% AFUE efficiency or above.)

**CONFIRMATION** will be at final inspection.

### **3.08 Evaporative Cooling Only or No Mechanical Air Conditioning**

**BENEFIT:** Evaporative cooling works efficiently in arid dry climates in Colorado and is considered more energy efficient than air conditioning.

**QUALIFICATION:** HVAC design must specify evaporative cooling. Evaporative cooling is defined as cooling which relies only on evaporation of water for its cooling needs.

**POINTS:** 2 for evaporative cooling; 4 for other less energy consumptive alternatives such as passive cooling or ceiling fans.

**CONFIRMATION** will be at final inspection.

### **3.09 HVAC Economizer System**

**BENEFIT:** Saves energy by using unconditioned outside air for cooling. Use of outside air also improves indoor air quality.

**QUALIFICATION:** Specify and install an economizer system for over 50% of heated area of the structure.

**POINTS:** 1 for 50% of heated area, 2 for 100% of heated area

**CONFIRMATION** will be at plan review and final inspection.

### **3.10 Radiant in-floor heat**

**BENEFIT:** Radiant heat warms building occupants rather than the air, which allows boiler to operate at lower temperatures, thus saving energy.

**QUALIFICATION:** Hydronic in-floor heating in over 50% of the heated area of the structure

**POINTS:** 2

**CONFIRMATION** will be at plan review and final inspection.

### **3.11 Air-to-Air Heat Exchanger**

**BENEFIT:** An air-to-air heat exchanger (also referred to as a Heat Recovery Ventilator (HRV) or Energy Recovery Ventilator (ERV)) pre-warms or cools outside air by providing a heat exchange with exhaust air.

**QUALIFICATION:** Majority of total mechanical ventilation must go through a heat exchanger for points.

**POINTS:** 2

**CONFIRMATION** will be at plan review and final inspection.

### **3.12 Roof/Ceiling Insulation**

**BENEFIT:** Reduces heat loss.

**QUALIFICATION:** One point awarded for each manufacturer-rated R-value of insulation, *above IECC minimum*, installed in the roof assembly. For structures/roof assemblies with multiple different R-values, a weighted average is used.

**POINTS:** 1 to 8

**CONFIRMATION** will be at plan review and insulation inspection.

### **3.13 Wall Insulation**

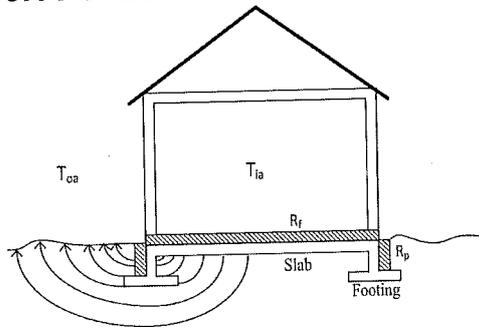
**BENEFIT:** Reduces heat loss.

**QUALIFICATION:** One point awarded for each manufacturer-rated R-value of insulation, *above IECC minimum*, installed in the exterior wall assembly. For multiple wall types with different R-values, a weighted average is used.

**POINTS:** 1 to 8

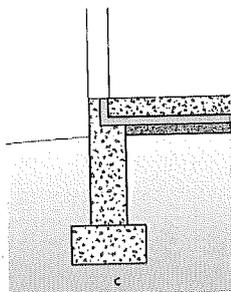
**CONFIRMATION** will be at plan review and insulation inspection.

### 3.14 Under-slab Insulation



**BENEFIT:** Reduces heat loss. Most of the heat loss occurs at the slab perimeter. For commercial buildings the IECC requires perimeter insulation of R-10 for 24", unheated; and R-15 for 36", heated. For residential it is R-15 for 24", unheated; and R-20 for 48", heated. *Increasing R-value beyond R-15 has little effect on heat loss, but increasing perimeter coverage or providing full coverage has significant benefits.*

### Slab on Grade

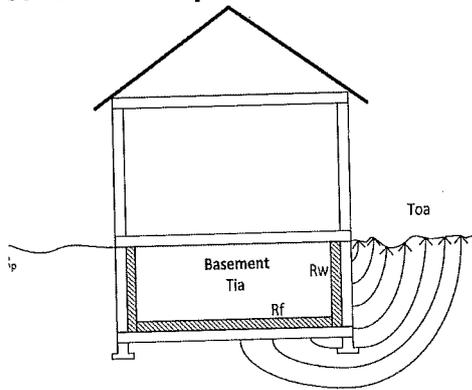


**QUALIFICATION:** insulate the outer 48" of the slab perimeter (commercial only); or full continuous with a minimum of R-10 for unheated slabs and a minimum of R-15 for heated slabs. Isolate slab.

**POINTS:** 48" perimeter: 2; full, continuous: 4

**CONFIRMATION:** Field inspected prior to pouring slab.

### 3.15 Crawl Space/Basement Foundation Wall Insulation



**BENEFIT:** Reduces heat loss. Most of the heat loss occurs at the upper walls. Placing the insulation on the exterior is preferred for better thermal performance and moisture control.

**QUALIFICATION:** Insulate crawl space or basement foundation walls (either inside or outside) beyond applicable code minimums.

**POINTS:** 0.5 for each manufacturer-rated R-value of insulation, *above IECC minimum*; 1 additional point for exterior applied insulation

**CONFIRMATION** will be at plan review and insulation inspection.

### 3.16 Blown or Sprayed Insulation

**BENEFIT:** The higher density of these types of insulation reduces airflow (infiltration and exfiltration).

**QUALIFICATION:** Blown-in, or minimum 2.0 pcf density foam, insulation specified and installed in attics/ceilings, walls, and basements/crawlspaces qualifies.

**POINTS:** 1-4 (1 per Quantity Level). For example, if 80% of the insulated area of a structure is blown-in, then quantity level 4 (76-100%) or 4 points would be given.

**CONFIRMATION** will be at plan review and insulation inspection.

### 3.17 High Performance Windows

**BENEFIT:** Reduce heat loss and solar gain.

**QUALIFICATION:** Specify U-values for all glazing designed and installed.

**POINTS:** 1-8 (1 point for each U-.01 below IECC minimum)

**CONFIRMATION** will be at plan review and framing inspection.

### 3.18 Insulating Window Shades

**BENEFIT:** Reduce window heat loss.

QUALIFICATION: 75% or more of total windows must have insulating window coverings installed.

POINTS: 2

CONFIRMATION will be at plan review and final inspection.

## **RENEWABLE ENERGY**

### **4.1 Onsite Renewable Energy**

BENEFIT: This is the epitome of sustainability.

QUALIFICATION: Provide calculations demonstrating any onsite renewable energy systems as a function of total energy use offset for that energy source (total electricity or total gas).

POINTS: Required 2% of energy budget or 25% of common load for core and shell buildings

Over 2% - 5% offset: 3 points

Over 5% - 10% offset: 5 points

Over 10% - 25% offset: 10 points

Over 25% - 50% offset: 15 points

Over 50% - 75% offset: 20 points

Over 75% offset 25 points

CONFIRMATION will be at plan review and final inspection.

### **4.02 Future solar**

BENEFIT: Eases future installation of a solar system.

QUALIFICATION: Provide a chase from the mechanical room to the roof. Space must be provided on the roof and in the mechanical room.

POINTS: Required

CONFIRMATION will be at plan review and final inspection.

## **INDOOR QUALITY**

### **5.01 Radon mitigation system**

BENEFIT: High concentrations of radon gas are considered to be a health risk by the EPA, ranking high as a carcinogen.

QUALIFICATION: Install a passive radon mitigation system that eliminates potential for radon or other soil gases from entering habitable areas of the structure. Must ventilate below floor or slab vapor barrier to exterior. Mechanical ventilation of radon system is not necessary unless otherwise specified.

POINTS: REQUIRED

CONFIRMATION will be at framing and final inspection.

### **5.02 HEPA filter in HVAC**

BENEFIT: Improves indoor-air quality.

**QUALIFICATION:** Specify and install a High Efficiency Particulate Air (HEPA) or MERV 13 (0.1 micron) or higher filter that effectively filters 100% of HVAC system.

**POINTS:** 1

**CONFIRMATION** will be at plan review and final inspection.

### **5.03 Low- or Non-Toxic Floor Coverings**

**BENEFIT:** Improves indoor-air quality.

**QUALIFICATION:** Materials are either listed on [www.greenguard.org](http://www.greenguard.org); or otherwise demonstrated to be below EPA thresholds for low toxicity. In general, most tile, wood, and natural carpets meet low-toxic standards. For other coverings, provide documentation demonstrating compliance.

**POINTS:** 1-4 (1 point per Quantity Level) Quantity Level is determined by the percentage of total floor area meeting the above criteria. For example, if 80% of the total flooring was non-toxic, then quantity level 4 (76-100%) would apply, so 4 points would be given.

**CONFIRMATION** will be at final inspection.

### **5.04 Construction IAQ Plan**

**BENEFIT:** Protects construction workers as well as eventual occupants of the building.

**QUALIFICATION:** Provide and implement plan (need to elaborate on what's to be included on plan.)

**POINTS:** 1

**CONFIRMATION:** From LEED: It is important to remember that IAQ management is not a one-time compliance event that can be checked off a list—it must be an ongoing effort for the duration of the construction process.

### **5.05 Indoor Chemical and Pollutant Control**

**BENEFIT:** Prevents contamination of indoor air

**QUALIFICATION:** Any onsite hazardous material storage must be air-tight; provided with an exhaust fan; and must provide spill/leakage containment. Also, install a minimum 4x4' grated area with void below for all major entryways that reduces potential for dirt and other pollutants from entering the structure.

**POINTS:** 2

**CONFIRMATION** will be at plan review and final inspection.

### **5.06 Mechanical Ventilation Beyond Code**

**BENEFIT:** Improves indoor air quality by removing contaminants.

**QUALIFICATION:** Provide mechanical ventilation at least 20% over ASHRAE Standard 62.1-2013 that operates on occupancy controls (motion activated or CO2 activated). An air-to-air heat exchanger (ERV or HRV) that pre-heats or cools fresh intake air is required with this option.

**POINTS:** 2

**CONFIRMATION** will be at plan review and final inspection.

### **5.07 Daylighting**

**BENEFIT:** Provides building occupants with a daylight connection to outdoors.

**QUALIFICATION:** Bring daylight to occupied areas of the building without hindering tasks.

**POINTS:** 4 maximum, 1 per each 25% of occupied area to which daylight is provided

**CONFIRMATION** will be at plan review and final inspection.

### **5.08 Quality Views**

**BENEFIT:** Provides building occupants with a visual connection to outdoors.

**QUALIFICATION:** 75% of occupied spaces have a direct line of sight to the outdoor environment.

**POINTS:** 1

**CONFIRMATION** will be at plan review and final inspections.

### **INNOVATION POINTS**

Innovative product use and/or design points will be given points on a case by case basis. The item must specifically meet the intent of the SBR guidelines as stated at the beginning, and points will be scaled as the item would apply to similar comparable items in this code section. Possibilities include additional daylighting and views above 5.08 above to LEED standards.

Underlined language shows language to be added to the Fee Schedule. ~~Strikethrough~~ language is language to be deleted.

**Exhibit "C"**

Town of Basalt  
Building Department

Licensing and Fees

Code Section	Subject	Fee
Section 18-14 (d) (2)	RENEWABLE ENERGY MITIGATION PROGRAM	
	Snowmelt	<u>Snowmelt over 200 square feet: \$34 per square foot</u>
	Small Spa	<u>Spa/hot tub over 64 square feet: \$176 per square foot</u>
	Summer Pool	<u>Exterior pool: \$136 per square foot</u>
	Winter Pool	<u>\$136 per square foot</u>
	Heated Garage	<u>\$8 per square foot</u>

The following language is being added to the Town Building Department Section of the Town of Basalt Fee Schedule.

**Exhibit "D"**

Town of Basalt  
Building Department

Licensing and Fees

Code Section	Subject	Fee
<u>Section 18-16</u>	<u>MAXIMUM BUILDING PERMIT REBATE FOR LEED GOLD CERTIFICATION</u>	<u>\$5,000</u>