



THINK SMART PLAN-DEVELOP-BUILD BEYOND THE CODE

Beyond Code Concepts and Practices to Consider on All Developments and Projects

The Yampa Valley Sustainability Council, City of Steamboat Springs, and Routt County encourage our citizens to build beyond the code, and we support and recognize those who incorporate sustainable practices and green building concepts into their projects. Our goal is to provide you with information, tips, and practices that will benefit your client and our community as you plan your next development or project. Our concepts and ideas are voluntary not mandatory, and our goal is to provide you options through outreach and education so you can choose programs and consider alternative building methods to lift your project above the line of minimum code.

Sponsored by: Yampa Valley Sustainability Council / City of Steamboat Springs / Routt County
Three Fundamental Principles
Energy Efficiency / Resource Conservation / Environmental Quality

Energy Efficiency

Energy Efficiency is the foundation for green building. Energy codes define the minimum acceptable standards for the Routt County climate zone. In today's world it is critical to take additional measures to reduce or minimize your building's energy consumption. There are two tiers to Energy Efficiency: 1) Efficiency in energy use during the construction process and 2) Efficiency in energy used in the building. Energy efficiency during the construction process requires a whole house system approach where all components interact to reduce energy consumption. All elements of the building shell including: foundation, under-slab, framing, roof structure, windows, and doors play key roles in defining the potential energy savings for a house. Designing the building as a system with each of these elements supporting each other will decrease the energy load. The second tier of consideration, energy use inside the building, involves sizing mechanical equipment to handle the actual loads of the building and providing natural daylighting and ventilation. These steps can reduce energy use and add comfort. Proper selection of appliances and lighting can minimize energy use, or utilizing solar panels or other renewable energy resources at the time of construction, or preparing your home for future solar installations. Use of renewable energy resources is especially important if your project is not able to avoid use of outdoor heat sources such as patio fireplaces, hot tubs or heated sidewalks or driveways. All of these options need to be considered early on during the planning phase of your project in order to maximize your upfront costs with potentially financial savings after construction.

Resource Conservation

By utilizing renewable, recycled and reused products for building materials we can build much more efficiently with fewer resources. Taking advantage of all local resources first before outsourcing also supports resource conservation and generates income and supports our local economy. Local Beetle Kill wood is currently an excellent local resource and can be utilized for exterior and interior wood products and incorporated into your projects. We have great local resources that harvest, mill, and make a variety of products out of the Pine Beetle Kill. Water conservation should be a priority in any design of a new building. Select fixtures and products that will help reduce your water usage. Water conservation is an extremely important topic locally and throughout the State of Colorado. Smart building designs can be extremely effective, by reducing inside/outside corners and utilizing dimensions that coincide with materials sold can maximize your materials and reduce waste. Design and build in increments that match up with material sizing.

Environmental Quality

Indoor air quality is often worse than outdoor air quality, and the selection of your materials and products play a factor in the air quality. For decades product manufacturers have been introducing products that reduce formaldehyde, volatile

organic compounds and other potentially harmful chemicals. Today there is a wide range of products available in paints, adhesives, flooring and other finishes that are much healthier inside the home, especially for children. Noise reduction inside the home can be critical if your home is close to a busy street, highway, railroad, or airport. Creating a tight envelope improves energy efficiency but also reduces sound transfer through your walls, and a quiet home is proven to be a better environment for kids and adults. Important to the health of occupants is providing natural light and fresh air ventilation, including the ability to allow fresh air into the building during the warm months, while utilizing mechanical ventilation during cold seasons to still allow fresh air into the home. It's crucial to incorporate natural light and proper window placement into your design. Utilizing the south and west exposure to maximize the amount of natural light into your building is a great place to start. Windows are made to be energy efficient in today's world, so having more windows along the south and west walls (instead of the north walls) can effectively warm your building. During the summer months having proper shades or blinds can reduce the heat from transferring into your home. Construction site management, landscaping, and controlling run-off and erosion during construction and thereafter will protect our entire community and most importantly our water bodies. Managing a clean construction site is extremely important. Erosion control devices, constructing temporary driveway access or use of a construction mat at your entrance to reduce mud and silt from entering the street or leaving the site, and perimeter control measures around the site all help reduce run-off and erosion.

The Cost of Green Building

There is a common misconception that "green" is synonymous with expensive, but this is not true in all cases. Our goal is to provide you with tips and education that can benefit your projects with minimal effort or financial contribution. Building and designing smart to reduce materials can potentially benefit you financially while saving energy and reducing waste. Our goal is to provide you with options to choose from to build beyond the code. We understand some options may increase the cost of your projects, but other options may offset your cost and benefit our community as a whole. And builders and designers with green building experience attest that green building practices become less expensive over time as a company incorporates those practices into their regular procedures.

Outcome

The nonprofit Yampa Valley Sustainability Council, City of Steamboat Springs, and Routt County are here to support and recognize those who build beyond the code and support sustainable practices and energy efficiency into your developments or projects. By working together and providing support to our developers, professionals, owners, and contractors we can improve and protect our community for the future generations to come.