



Garfield County Efficient Building Design and Construction Guidelines for Government and Institutional Buildings

Jeff Dickinson, Energy and Sustainable Design, CLEER/G-NECI

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PROCESS:

It is important to start the process early, beginning with including Efficient Building language in the Request For Proposals , Setting measurable goals, assembling a team with the capacity to meet the goals , and appointing an advocate to keep the project on target.

GUIDELINES:

LEED Gold Certification is the target, however, for financial reasons, not all projects will be able to meet the requirements, and therefore we are considering 'Design Guidelines' vs. Mandates. Certain area will have mandatory requirements such as meeting a 30% energy improvement target, and earn an Energy Star® rating of 75 or better, see <http://www.energystar.gov/newbuildingdesign> and also to have HVAC systems commissioned. The remaining points are guidelines that should be considered during the design process. Consult the LEED Reference Guide for Green Building Design and Construction, 2009 Edition, Published by the U.S. Green Building Council.

FOCUS AREAS:

Sustainable Sites

Avoid 'Greenfield' sites, steer development to previously developed sites within urban boundaries, close to public transportation.

Provide for bicycle storage and changing rooms or showers.

Maximize Open Space-Exceed local zoning by 25%

Storm water control on site,

Quantity-Aim to maintain predevelopment storm flow rates after construction, if not possible, create stormwater management plan that protects receiving stream channels from excessive erosion.

Quality-Promote onsite infiltration and treatment of stormwater via minimizing impervious surfaces and utilizing best management practices.

Heat Island Effect-

Non Roof-Provide shading for hardscaped areas

Roofs-Low reflectivity roofs, flat roofs: SRI>78, sloped roofs SRI>29.

Light pollution control

Interior-Shield lighting to exterior

Exterior-Lighting levels must not exceed ASHRAE 90.1 2007

Water Efficiency

Exterior: Avoid plantings that use excessive amounts of water, encourage xeriscaping.
Utilize non-treated water sources.
Interior: Utilize High Efficiency Toilets, 1 gpm or less, waterless urinals, , low flow faucets with sensors. Goal is 20% less than LEED baseline.

Energy and Atmosphere

Energy Savings Target: 30% Better Energy Performance than ASHRAE 90.1 2007.
Testing and Balancing of all HVAC systems.
Commissioning of Mechanical and Energy Systems.
10% Onsite Renewable energy generation.
No CFCs or HCFCs in refrigeration systems, Use HFCs or natural refrigerants. Avoid HFC-23.

Materials and Resources

Encourage Building Reuse
Provide for Storage and Collection of Recyclables
Utilize 10% recycled content in building materials
Utilize local materials when possible, (within 500 miles or closer)
Consider utilizing Rapidly Renewable Materials and FSC Certified Wood
Recycle 50% of onsite construction waste.

Indoor Environmental Quality

Prohibit smoking within buildings
Construction Air Quality Management
Follow SMACNA guidelines, protect materials on site, seal duct openings
Low-Emitting Materials, Adhesives & Sealants, Paints & Coatings, Flooring Systems,
Composite Wood and Agrifiber Products
Follow LEED Guidelines.
Indoor Chemical and Pollutant Source Control
Permanent Entryway dirt walkoff systems
Exhaust fans for hazardous chemical areas
MERV 13 or higher filters on AHUs
Controllability of Systems
Lighting-Provide controls for individual work spaces and multi-occupant spaces.
(90% Target)
Thermal: Provide individual comfort controls or windows within 10' side to side
or within 20' to interior. (50% target)
Daylighting and Views
Provide Daylighting for 75% of spaces via windows, skylights or clerestories.
Views
Provide line of sight to exterior for 90% of regularly occupied spaces.