

GREEN ARCHITECTURE CHECKLIST: COMMERCIAL

Make your buildings ecological; walk the talk. Please do copy this checklist and distribute it.

by T. Doerr & J. Plagmann Colorado AIA Committee on the Environment www.BuildSustainably.org

GREEN SITING AND LAND USE

- **Select a Good Site** - Avoid development on sites that are: agricultural; in the 100-year flood plain; subject to landslides, erosion or wildfires; habitat to endangered species; wetlands.
- **Redevelop Urban Areas** - Channel development to urban areas with existing infrastructure, protecting greenfields and preserving habitat and natural resources.
- **Alternative Transportation** - Reduce pollution and land development impacts from car use by locating buildings near transit, providing bicycle amenities, and encourage carpooling.
- **Reduce Site Disturbance** - Conserve existing natural areas and restore damaged areas to provide habitat and biodiversity.
- **Manage Stormwater** - eliminate storm water runoff, increase on-site infiltration, and reduce contaminants. Minimize impervious surfaces so groundwater can recharge.
- **Reduce Heat Islands** by eliminating or shading blacktop paving and dark roof surfaces.
- **Reduce Light Pollution** - Eliminate light escape/inefficiency from the building site. Improve night sky visibility.

GREEN WATER

- **Water Efficient Landscaping** - Minimize the use of potable water for irrigation by using xeriscaping and high efficiency irrigation technologies, including drip irrigation, rainwater capture, graywater, etc.
- **Reduce Water Use** - Maximize water efficiency within buildings. Specify water-efficient fixtures and equipment.

GREEN ENERGY AND ATMOSPHERE

- **Optimize Energy Performance** through siting, orientation, building form, insulation, glazing, daylighting, and controls. Study performance with energy modeling programs. Design including all parties of the project team from inception.
- **Promote Renewable Energy** and minimize reliance on limited fossil fuels by incorporating on-site renewable energy sources such as solar, wind, geothermal and biomass.
- **Commission your building** - Verify that the building is designed, constructed, and calibrated to operate as intended with third party quality control assurance.
- **Eliminate HCFCs** - Reduce ozone depletion by installing HVAC and refrigeration equipment and fire suppression systems that do not contain HCFCs.

GREEN MATERIALS

- **Reuse Buildings** - Extend the life cycle of building stock, conserve resources, retain cultural resources, reduce waste, and reduce environmental impact of new buildings.
- **Manage Construction Waste** - Divert construction, demolition, and land clearing debris from landfills. Redirect recyclable material back to the manufacturing process.
- **Reuse Resources** - Specify salvaged or refurbished materials such as wood flooring/paneling/cabinets, doors and frames, mantels, ironwork, decorative light fixtures, brick, masonry.
- **Use Recycling/Recycled Content** - Provide for occupant recycling of waste. Specify products that contain recycled material.
- **Specify Regional Materials** - materials that are harvested, extracted and manufactured regionally reduce transportation.
- **Specify Rapidly Renewable Materials** such as straw, bamboo and some woods.
- **Use Certified Wood** - Specify wood from certified sustainably managed forests.

GREEN INDOOR ENVIRONMENT

- **Carbon Dioxide Monitoring/Exhaust** - Install independent system or make a function of building HVAC system.
- **Assure Ventilation Effectiveness** - Employ architectural and HVAC design strategies to increase ventilation effectiveness and prevent short-circuiting of airflow delivery. Consider underfloor HVAC and operable windows.
- **Low-VOC Materials** - Specify low-VOC adhesives, sealants, coatings, composite wood products and carpet systems.
- **Control Indoor Chemical and Pollutants** - Install entry grates to capture dirt. Separately ventilate areas of chemical use and storage. Appropriately plumb drains used for liquid waste disposal. Protect ventilation system during construction.
- **Controllability of Systems** - Provide a high level of individual control of thermal, ventilation and lighting systems.
- **Daylight and Views** - Provide a connection between indoor spaces and outdoor environment through the introduction of sunlight and views in a glare-free way. Consider courtyards, atriums, clerestory windows, skylights, and light shelves.