

More Ideas

CHAPTER 6:

Site Work

- ◆ Use drip irrigation or bubbler systems for irrigation instead of high-pressure misting sprinklers.
- ◆ Stockpile existing topsoil for reuse on site.

CHAPTER 7:

Water Quality & Conservation

- ◆ Use existing topography to help maximize runoff control.
- ◆ Use technologies such as waterless urinals and infrared sensors to control water waste.

CHAPTER 8:

Energy

- ◆ Use light colored roofs in hot climates to reflect heat.
- ◆ Install motion detectors in overhead lights so they will shut off automatically.

CHAPTER 9:

Building Materials

- ◆ Choose environmentally preferable materials (non-toxic, recycled-content).
- ◆ Identify all possible contaminant emitters, and limit their use (composite woods, paints, foams, adhesives).

CHAPTER 10:

Waste Management

- ◆ Reduce/Recycle construction waste.
- ◆ Review materials to limit environmental harm (no CFCs or toxins).

CHAPTER 11:

Construction

- ◆ Avoid compaction of soil and destruction of vegetation in construction area.
- ◆ Ventilate facility with 100% outside air during installation of materials and finishes.

CHAPTER 12:

Occupancy and Maintenance

- ◆ Use naturally occurring vegetation to minimize irrigation water needs.
- ◆ Purchase low-toxic cleaning materials.

CHAPTER 13:

Post-Occupancy Evaluation

- ◆ Calculate total resource use of building after it has been built.
- ◆ Measure indoor air quality.

CHAPTER 14:

Facility Reuse

- ◆ Prepare a salvage plan for recyclable materials.
- ◆ Find alternate uses for the old building or donate it to a homeless shelter or a local fire department.

This pamphlet was written by a group of Air Force Academy cadets in the Class of 1998 taking Engineering 410, a class on Engineering Systems Design. It was our task to evaluate the Environmentally Responsible Facilities Guide and determine its usefulness and applicability to a set of blueprints we were given. We found that the book was most useful in application and gave us the ideas that are listed in this pamphlet. It was easy to read and understand and was a great help to us. This Guide provides excellent background and information to wisely invest "green" to gain "green".

Environmentally Sustainable Construction



Air Force Environmentally Sustainable Construction

*"Invest a little 'green' now...
... Gain a lot of 'green' later"*

www.afcee.brooks.af.mil

An Overview
of the USAF
Environmentally
Responsible
Facilities Guide:
**What it is and
How you can help**

What is the Guide?

The Air Force Environmentally Responsible Facilities Guide is a tool. As the Air Force and the rest of the building industry move toward Environmentally Sustainable Construction, you might feel left behind. You can use the Guide as an aid in making your construction projects more environmentally responsible. There are significant benefits to be gained through both environmentally responsible construction and sustainable design. It can mean better facility performance, lower ongoing costs, and a cleaner world. The Air Force Environmentally Responsible Facilities Guide provides easy-to-follow procedures and strategies for implementing environmentally sustainable construction. The Guide is located on <http://www.afcee.brooks.af.mil/green/greenform.htm>

What is Sustainability?

- ◆ Sustainability is responsible stewardship of our natural, human and financial resources through a practical and balanced approach. Sustainability requires changes to the facility delivery process to ensure the “best fit” of the built environment to the natural environment.
- ◆ Sustainability integrates “green” or environmentally responsible practices into the process of facility delivery from the very beginning.
- ◆ Sustainable practices are an investment in the future. Through conservation, improved maintainability, recycling, reduction and reuse of waste, and other actions and innovations, we can meet today’s needs without compromising the ability of future generations to meet their own.

Responsible Facilities Guide Goals

The overall goal is not merely to produce environmental demonstration projects, but to become environmentally responsible in the delivery of all Air Force facilities. Specific goals are:

- ◆ To use resources efficiently and to minimize raw material consumption, including energy, water, land and materials, both during the construction process and throughout the life of the facility.
- ◆ To maximize resource reuse, while maintaining financial stewardship.
- ◆ To move away from fossil fuels and towards renewable energy sources.
- ◆ To create a healthy working environment for all who use the facility.
- ◆ To build facilities of long-term value.
- ◆ To protect and, where appropriate, to restore the natural environment.

Easy things you can do to make your projects more environmentally sustainable

Each of these ideas came from the Environmentally Responsible Facilities Guide and are listed by chapter.

CHAPTER 2:

Planning

- ◆ Identify environmental goals and requirements to be implemented during the design process.
- ◆ Reuse existing facilities on base as legally mandated instead of demolishing them.

CHAPTER 3:

Pre-Contract

- ◆ Advertise for a contractor that knows about sustainable construction and has experience in this area to ensure a good start to the project.
- ◆ Develop a preliminary list of construction materials that support sustainable construction objectives, such as recycled materials.

CHAPTERS 4 & 5:

Defining the Project

- ◆ Incorporate the use of recycled building materials.
- ◆ Design for water conservation and energy conservation.

These are just a few of the ideas given by the Environmentally Responsible Facilities Guide.