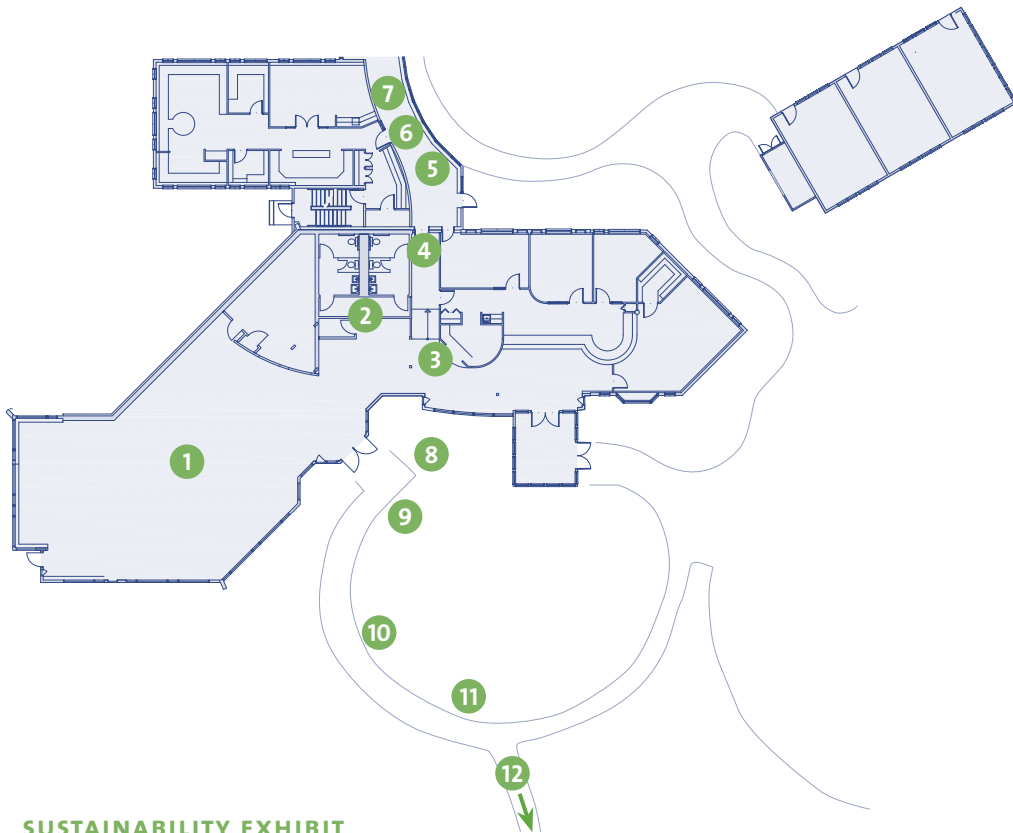


Welcome to our Green Building Trail

You can use this guide to familiarize yourself with some of the most environmentally friendly aspects of our building and site. Each number on the guide corresponds to a number on the trail, and we hope that you will enjoy your self-guided tour of our building and grounds as you discover what makes our nature center “green.”

When planning our new building we looked for design solutions and materials that require minimum maintenance but deliver maximum performance. It’s impossible to put all the in-depth information about our sustainable design features on just a page or two, but you can find out much more by visiting our website at www.massaudubon.org/Nature_Connection/Sanctuaries/Wellfleet and our green building blog at www.greenbuilding.typepad.com/naturecenter.



1

SUSTAINABILITY EXHIBIT

What makes a green building? Green buildings are designed and built with health and conservation concerns foremost in the design. Also, green buildings aim to reduce consumption of non-renewable resources and minimize waste. The idea is to minimize contact with potentially harmful building materials, glues, and fumes. This exhibit and trail explain the process and some of the materials used in this building.

2

TOILETS

Our toilets are special composting toilets manufactured by Clivus. A few drops of water are mixed with drops of an environmentally safe soap to “foam flush” the toilets. All waste is composted in specially-made bins in the basement and is eventually added to the soil mix used in our flower gardens. You would have to flush these toilets approximately 127 times to use the same amount of water that a regular low-flush toilet uses for a single flush.

3

FLOORING AND MATERIALS

Many unique recycled and renewable materials have been used throughout the building, for flooring and other purposes. As you walk around, look for wood that was previously used in other buildings, concrete floors made with extra amounts of fly ash, flooring produced from rubber tires or recycled aluminum, composite wood materials, and certified wood materials.

4

GALLERY

Notice the curve of the wall here with a full bank of windows. This hallway acts as a tempered air space that links other spaces, in this case our exhibit hall and the auditorium. In the summer the windows are always in shade, creating natural cooling. The suspended light fixtures contain very thin fluorescent tubes which are highly efficient.

5

WINDOWS

These windows, and all windows in the building, are double paned and filled with argon gas, which provides excellent insulation in both cold and hot weather.

6

CEILING

Take a look at the ceiling and you will see one of the new engineered wood products used in the building. They are called TJIs (Truss Joist I-Joists). Engineered wood products are designed to use all parts of the tree and waste very little. They are held together with resin products and are stronger and straighter than natural wood of the same dimension.

7

COLLECTED WATER

Look out the window from here and you can see the tops of tanks used to hold rainwater collected from our roof. The four tanks hold up to 1600 gallons of water which is piped into the underground irrigation system for our butterfly and hummingbird garden.

Please go outdoors for the next 5 stops on the trail.

8

AIRLOCK AND REFLECTIVE SHINGLES

This area serves as an airlock, keeping the outside and inside temperature separate, so that the indoors stays cool in summer and warm in winter without expending additional resources. The skylight is situated to take advantage of the southern exposure in winter, adding a passive solar element. The shingles reflect heat.

9

MONITOR WINDOWS AND BAHAMA DOORS

Look up to see the monitor windows. These windows are all motorized, allowing hot air to be released in summer and retained in winter. Fans aid in the ventilation, and as heat rises it flows out the windows. Louvered bahama doors are left open to allow cool night air to flow into the building as the warm air rises and escapes through the monitors.

10

GRAYWATER

Graywater refers to water from our sinks, dishwasher, and drinking fountains, but not water we flush, which is known as black water. In homes and businesses, most graywater, though perfectly usable, is wasted. Here, graywater keeps our garden green.

11

BUILDING SITING

The building is carefully situated to take advantage of passive solar energy as well as other energy saving and green elements. In accordance with the strictest environmental regulations it is 300 feet from freshwater wetlands and 100 feet from saltwater wetlands. Also, during construction we restricted our disturbance to the smallest possible site.

12

SOLAR PANELS

Our solar panels presently provide approximately 30% of our electricity. The large array you'll see as you start down the trail and the smaller array on the day camp classroom building produce 21kW of power. Whatever is not used is sold back to the grid. Even here in the northeast, we can produce electricity directly from the sun.

The Green Building Trail is generously sponsored by the children of Peter and Bette Fishbein in honor of their 50th anniversary.