

# SELF-GUIDED TOUR

THE UNIVERSITY OF MICHIGAN  
SCHOOL OF NATURAL RESOURCES AND ENVIRONMENT

# the greening of DANA



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## SELF-GUIDED TOUR

A few things to keep in mind as you take the tour of the Dana Building:

- There are two stairwells in the building—east and west, and the tour references these frequently. You are standing next to the east stairwell right now.
- The building has four floors above ground level, and a ground floor (the basement). You are on the first floor, and this tour will take you up to the second and third floors, and back to the first floor. Though not included in the tour, please feel free to check out the ground and fourth floors if you wish—each includes labs and offices.
- Please be sensitive to faculty, staff and students working in the building. If there is a class or meeting in session, peek in the window and go on to the next tour stop.
- For many of the finishes and technologies pointed out on this tour, there is more information available on the “Greening of Dana” website: <http://www.snre.umich.edu/greendana/>.
- Information can also be found on educational panels found in the stairwells, adjacent to restrooms and outside the southern entrance to the Ford Commons.

## LET'S BEGIN THE TOUR...

- 1) Begin with classroom 1024 in front of you. (If you are starting this tour from somewhere other than the east entrance on the first floor, you will want to go there before continuing.) Look into one of the classrooms in this area (1006, 1024, 1028) and notice some of the environmentally friendly finishes:
  - the tan tackboard in 1006 and 1028 is an all-natural linseed-based material.
  - 100% wool carpet is all-natural and has no toxic “carpet smell”.
  - all of the wood (oak) used in the renovation is from sustainably managed forests, certified by Scientific Certification Systems.
  - in rooms 1024 and 1028, the overhead panels in the front of the room are a biocomposite material, composed of soy resin and recycled newsprint.Also in these classrooms, take note of some new features of the building:
  - Overhead, there are big white metal panels on the ceiling. These make up the radiant cooling system—a network of copper pipes circulates cool water behind the panels. Radiant cooling is a highly efficient way to cool a building; the pump that moves the water through the pipes consumes about 10% of the energy required for fans to blow cool air into the same size space.
  - The exterior walls of the building are covered in dry wall, while some of the interior walls are brick. The entire building underwent an “envelope upgrade”. The exterior walls of the building were insulated and sealed to help prevent heat loss in the winter and heat gain in the summer. The windows on the exterior walls were all repaired so that they do not have any leaks.
  - The chalkboards and whiteboards in most rooms were salvaged from the old building and re-installed after the renovation was complete, to cut down on material resource use.

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- 2) Walk down the corridor toward room 1040. The ceiling tiles overhead are made from pressed aspen fibers, and the ceiling panel running down the center of the corridor is another biocomposite material, made from wheat stubble.

An energy-saving feature that you might not notice is the choice of LED (light-emitting diode) exit signs throughout the building. LEDs are energy efficient (especially when compared to incandescent bulbs) and require little maintenance.

- 3) Go into the Ford Commons (1315) to your right. Here you can get a sense of the “infill” concept applied in the Dana Building renovation—the SNRE community decided to “build in and up”, allowing us to expand our facilities and classroom space without expanding our building footprint. This area in the center of the building used to be a courtyard. During the renovation, we added a fourth floor to the building and filled in this courtyard. These additions together added approximately 20,000 ft<sup>2</sup> of much-needed office and classroom space to the building.

The columns in this commons area are covered with bamboo plywood—bamboo is a rapidly renewable resource. On the far side of the commons, you can see where a few former windows were filled in with bricks—many materials, including bricks, were salvaged during the demolition phases and re-used during construction and the renovation. These windows used to look out on the courtyard, but we didn’t want windows in the restrooms, so we filled the openings with salvaged brick!

The rooms on the perimeter of the commons are the mailroom and the vending room—the floor in both of these rooms is all-natural linoleum. The cabinets are made from biocomposite panels manufactured from sunflower seed hulls and wheat stubble.

Exit the commons through the same door that you entered (to the left of the glass display cases) and check to see if there is a class in session in the auditorium (1040). If there is not a class, then go into this room; if there is a class, then go back into the commons and exit at the other end (near the blue lockers) and turn left into the foyer. [skip to (5) if not going into the auditorium]

- 4) If you go into the auditorium, take a look at the seats—they are upholstered with fabric made from recycled soda bottles! The acoustic panels on the walls are also upholstered with fabric made completely from recycled plastic. The tan-colored tackboard at the front of the room is an all-natural linseed-based material. The oak doors and frames are milled from certified sustainably grown and harvested lumber. The dark green panels overhead are a biocomposite material made from soy resin and recycled newsprint.

When you are finished in this room, exit on the far side and continue to the foyer.

- 5) While in the west entrance foyer, notice the flooring under your feet is made from 100% recycled rubber—the black is from tires and the white is post-industrial waste!
- 6) Go up the West stairs to the second floor. Consider this... prior to the renovation, the Dana Building looked (in terms of spaces and rooms) fairly similar to what it looks like today. While some walls were moved and the infill is obviously new, much of the existing structure was maintained. The most environmentally-sensitive features of the building are not the paints or carpet—they are the things you can't see: the entire building had a mechanical and electrical overhaul, and more energy and water-efficient systems were installed. These systems will save resources over the lifetime of the building.

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- 7) On the second floor, go left (the Dean's and Administrative Offices should be in front of you). Notice the biocomposite panels overhead. Continue around the corridor. Go into the campus computing site on your left. Go to the far end (by the printers) and go out on the infill balcony to take a good look at the infill. Note the natural light that filters into the interior spaces by way of this "lightwell". Here, if you look up, you can also see the new fourth floor (above the old brick wall). All of the windows on the old brick wall were replaced during the renovation. The old windows were still functional, so Recycle Ann Arbor (a local non-profit organization devoted to recycling and "green" building) took the old windows to sell in their Re-Use Center, diverting over 3,000 pounds of material from the landfill!
- 8) Go back out to the corridor and continue along toward the east stairs. Stop to peek into the Dean's conference room (2026)—the pine table and ceiling fixture were milled from 100-year-old Southern Yellow pine beams salvaged from the old attic of the building at the beginning of the renovation.
- 9) Continue to the east stairwell. If you'd like to see the opposite corridor (mostly offices and a few classrooms), feel free—just come back to this stairwell to continue the tour.
- 10) Go up the East stairs to the third floor. Turn right (the Center for Sustainable Systems is in front of you). Note: you can find more information on the Center for Sustainable Systems and other research initiatives within SNRE on the SNRE website: <http://www.snre.umich.edu/>.
- 11) Continue down the corridor. The landscape architecture studios are on your left; very little changed in these studios during the renovation, as they were renovated in 1994. The studios did get new paint, carpet, and cooling panels, and the floors were refinished.
- 12) On the other side of the corridor, the "infill" side, you will find the Environmental Spatial Analysis (ESA) computer lab (rooms 3315 and 3325), where students work with Geographic Information Systems (GIS) to conduct research and do classwork.
- 13) As you walk down the corridor, take note of the fabric covering the bulletin boards—it's made from recycled plastic bottles.
- 14) Go through the west stairwell and walk around the other corridor on the third floor. Check out some of the classrooms in this corridor and look for some of the "green" finishes already mentioned on the tour: the tackboard, biocomposite panels, carpet, upholstery fabric and linoleum.
- 15) The restrooms are on your right. Take a look into either the men's room or the women's room (you choose!). The tiles on the floor and walls are made mostly from recycled glass. The plastic partitions and countertops are made from 100% recycled #2 plastic (heavy plastic bottles, like shampoo and laundry detergent). The toilets and water faucets are low-flow fixtures, and the men's rooms are outfitted with waterless urinals, all of which contribute to water conservation within the building.
- 16) In between the men's room and the women's room (on the first, second and third floors), you will find a composting toilet—try it out! Composting toilets are a very environmentally sound choice because they don't use any water.
- 17) Continue down the corridor to the east stairwell. Descend two flights of stairs to the building entrance—now you are back where you started (you picked up this tour guide just to the side of the foyer.) We hope that you enjoyed this tour and that you will now see buildings and construction in a new light, and maybe you will consider renovating your home or office with some of these environmentally sensitive goals—energy conservation, water conservation, material resource conservation and indoor environmental quality—in mind.