Dissecting the process of designing a green office.

In November 2008, SHW Group Austin completed the design of their new studio. It occupies the second floor of an existing building, which was completely gutted and re-designed to accommodate SHW Austin's growth and expansion. The studio was designed by members of the staff, and sustainability was among the highest priorities. However, sustainable design was considered along with other factors, such as design appropriateness, aesthetics and budget. The objective of the project was to give equal attention to all these components without sacrificing any one in particular. By all standards this project is a success: the studio is spacious, bright and open, and promotes an environment of collaboration and idea sharing. It is also currently in the process of LEED certification, expecting LEED silver. We sat down with the lead interior designer, Jacqui Dodson, AIA, LEED AP, to discuss the process of designing a green office and to share the lessons learned along the way.

- What resources are available to a designer looking to select materials that are sustainable and high performing? LEED favors materials that are produced within a 500 mile radius of the project site – how does a designer find them? Any particular online or printed resources you used?

Many manufacturers have been working toward more sustainable solutions. If we ask for it, the vendor will typically have a more green product to choose from that was either locally manufactured, locally extracted, contains recycled material or low volatile organic compounds (VOC) material. For our Austin Studio project, we attempted to use less material in general in the project. For furnishings, we looked for products that are Greenguard certified. Greenguard is a third-party certification company that reviews the way a manufacturing plant runs. For example, do they recycle water used in the manufacturing process? Does the post industrial waste make it back into the product? Do they take back the product when its shelf life expires? When we did use locally manufactured products, we had our contractor submit to us a list of all available manufacturing sites for Gypsum Board, Insulation, metal products, and we chose plants that were within a 500 mile radius.

- Are there directories of local vendors that practice sustainably?

Our approach to sustainability is to educate ourselves about every vendor that comes into the office. We ask the questions when we are looking at them for the first time: Where is your product manufactured? What is used to make the product? What happens to the product at the end of its usefulness in our application? There are also resources available online to help you in the selection process. For example, the City of Austin has a Green Building Program with an online sourcebook:

http://www.austinenergy.com/energy%20efficiency/programs/Green%20Building/Sourcebook/index.htm

Another link, http://www.sustainableflooring.com, has a wide selection of beautiful and ecologically responsible options for flooring selections. Industry leading manufacturers such as Herman Miller and Steel Case have links to their Greenguard Certified products right on their websites.

- What about recycling and diverting from landfill? Any special programs or incentives in Central Texas?

Almost all of the products that come out of a commercial office building, especially those in excellent condition, can be re-used or recycled. Since we occupy a multi-user building, the owner retained much of the demolished product for re-use in other projects in their properties. These items included building standard doors, hardware and light fixtures. Many of the re-usable products were donated to Habitat for Humanity, including cabinets and mechanical diffusers. Metal, data cabling, carpet, sheetrock, wood and cardboard were all recycled. Ceiling tiles and glass were retained by the contractor and warehoused for use in future projects.

- Was the design informed in any way by the sustainable features and LEED planning?

As architects, we always look at the sustainable component of our projects as an integral part of the design rather than an add-on. There were a couple of items that added to the cost, but helped us achieve a more sustainable project, and we had to make these choices. Some were incorporated into the project; some were not implemented.
For example, we had to pay an extra premium to recycle the carpet, but we decided that had value for us. There was an additional charge to put CO2 sensors in the conference rooms, and we chose not to do that. Each project is unique and its goals need to be considered early in the planning process, and weighed against the budget and expected ROI.

- Were any consultants involved? What was their role in helping this process?

We hired a commissioning agent to perform enhanced commissioning on the job, and mechanical, electrical and plumbing (MEP) engineers were on board with their designs. MEP is a very important part of LEED with Indoor air quality, energy use of mechanical systems, electrical and lighting systems, and water use for the suite.

- How was the management of the building involved, if at all?

The project management was very supportive in our pursuits. There were a couple of credits that they had to team up with us on. For example, the building did not recycle glass so we encouraged them to incorporate a glass recycling program along with the other items they recycle.

- Is there any way to track how the sustainable environment improves the bottom line?

  The most obvious way in which we're seeing concrete results is in the utilities cost of running our business. Our lighting system is at 75 percent of energy consumption requirement, which means it costs us 25 percent less to light the space. Dual flush toilets mean real savings on water. All of our appliances are Energy Star certified, which further reduces electricity costs. Over the months, these savings inevitably add up, and help improve the bottom line of our business.

- Any lessons learned?

This was a unique project both in that we had to design it and live with the results of our design as occupants. The biggest lesson we learned is that you don't have to pay more for sustainability or make design sacrifices in order to achieve your goal of an environmentally responsible project. Often it comes down to simply pausing to think, and making a choice – such as in selecting your vendors or materials. Often between two very comparable options, one will be more green, you just have to know what to look for. It also takes some up-front planning: if you plan on having reduced overall lighting, plan to include some task lighting throughout. Stop to consider everything: water usage, electricity, waste disposal – the solution will present itself, often with little to no added cost.