

# Sustainable Building Practices and Materials



Tim Street-Porter

Construction and furnishing of buildings accounts for about half of all raw material use in the United States. The energy used to manufacture building products totals five to seven percent of U.S. energy consumption.

NRDC conserved material resources by converting an existing structure for our new Southern California office. We recycled nearly 90 percent of the materials from deconstruction and those left over from construction. We requested many products with high recycled or natural content. Even the exhibits in The David Family Environmental Action Center, created by top designers from the Getty Center and elsewhere, are made in part of wheat chaff and recycled soda bottles.

## Carpet

Nylon carpeting used throughout the building is made by Bentley Prince Street and contains roughly 30 percent recycled nylon scrap left over from Bentley's manufacturing operations. The carpet is also dyed with a process that uses 10 times less water than conventional methods. Bentley Prince Street uses solar power and other renewable energy sources to run its operations. Like NRDC, it is a charter member of the California Climate Action Registry, a nonprofit group that encourages voluntary actions to increase energy efficiency and decrease greenhouse gas emissions. The carpet padding is made of 100 percent recycled material, including blue jeans. Bentley Prince Street is a part of Interface, Inc., a global provider of commercial floor coverings and textiles. Interface is also a charter member of the USGBC and helped develop the LEED Rating System. Bentley Prince Street, City of Industry, California: 800-423-4709; [www.bentleyprincestreet.com](http://www.bentleyprincestreet.com); Interface, Inc., Kennesaw, Georgia: 770-420-6655; [www.interfacesustainability.com](http://www.interfacesustainability.com).



Cary Leonard

## Ceiling Tiles

Ceiling tiles throughout the building are made of 66 to 78 percent recycled mineral-fiber ceiling tiles. They are the Ultima line from Armstrong World Industries, a charter member of the USGBC. Armstrong World Industries, Lancaster, Pennsylvania: 877-ARMSTRONG; [www.armstrong.com](http://www.armstrong.com).

## Concrete Flooring

The colored concrete flooring in the restrooms contains fly ash, a by-product of coal burning. It is widely available.

## Countertops in Dorathy M. Wood Room, Workroom, Break Areas and Restrooms

The countertops in the Dorathy M. Wood Room, workroom, break areas and restrooms consist of a material composed primarily of nontoxic resins and layers of plain and decorative paper. It is the Fiber line from Abet Laminati of Italy. Abet Laminati: 800-228-2238; [www.abetlaminati.com](http://www.abetlaminati.com).



Gary Leonard

## Doors

Interior and exterior wood doors contain no formaldehyde. Marshfield Door Systems, Inc., Marshfield, Wisconsin: 800-869-3667; [www.marshfelddoors.com](http://www.marshfelddoors.com).



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## Elevator Panels

The building's elevator sidings contain wheat straw, a byproduct of wheat harvesting that is often disposed of by burning, which creates carbon dioxide. Biofiber Wheat Composite by Phenix Biocomposites, LLC, Mankato, Minnesota: 507-388-3434; [www.phenixbiocomposites.com](http://www.phenixbiocomposites.com).



## Exterior and Interior Siding

Hardiplank, a durable wood substitute made of cement and sawdust, was used on the building's front, rear, and side facades and in the three interior light wells. Hardiplank does not shrink or expand; therefore, it can hold paint three times longer than wood, significantly reducing maintenance, replacement costs, and material resource consumption. James Hardie, Mission Viejo, California: 888-542-7343; [www.jameshardie.com](http://www.jameshardie.com).



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## Flooring

The lobby and conference room floors are Plyboo, which is laminated bamboo. The bamboo is harvested from managed forests in China, where it grows 40 feet tall in four years. Bamboo, a grass that is harder and more stable than red oak wood, is processed using nontoxic materials. Smith & Fong Company, San Francisco, California: 866-835-9859; [www.plyboo.com](http://www.plyboo.com).

The flooring in the The Dorothy M. Wood Room, our workroom, and basement hallway is Marmoleum, a natural linoleum made primarily of raw materials including, linseed oil, rosins, wood flour, and timber grown in controlled European forests, with a jute backing. Forbo Flooring, Inc., Hazleton, Pennsylvania: 570-459-0771; [www.themarmoleumstore.com](http://www.themarmoleumstore.com).



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## Glass Tile

Tiles in the showers and bathrooms are made from 58 percent recycled glass. Terra Green Ceramics, Inc., Richmond, Indiana: 765-935-4760; [www.terragreenceramics.com](http://www.terragreenceramics.com).

## Insulation

Insulation used throughout the building consists of over 25 percent recycled glass, with an acrylic binder that eliminates binder-related formaldehyde emissions during manufacturing. After installation, it emits no formaldehyde. Johns Manville, Denver, Colorado: 800-654-3103; [www.jm.com](http://www.jm.com).

## Recycled Gypsum Drywall

Fiberock Aqua Tough Interior Panels, used throughout the building, are a type of drywall made of 95 percent recycled materials, such as newspaper and gypsum from titanium dioxide production, and such post-industrial sources as power plant desulfurization equipment. The panels are moisture-, mold-, and fire-resistant and designed for high traffic areas. The United States Gypsum Company, Chicago, Illinois: 800-874-4968; [www.usg.com](http://www.usg.com).

## Restroom Partitions

Bathroom stall partitions and doors are 100 percent postconsumer recycled polyethylene milk containers. Yemm & Hart, Green Materials, Marquand, Missouri: 573-783-5434; [www.yemmhart.com](http://www.yemmhart.com).



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## Stairways

The stairs throughout the building are made of poplar, a fast-growing, widely available, abundant wood certified by the Forest Stewardship Council (FSC). Taylor Stair Company, Santa Ana, California: 714-836-5931; [www.taylorstair.com](http://www.taylorstair.com).



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## Wood

Over 60 percent of the wood and lumber products used in the building are FSC certified. FSC is a nonprofit organization that encourages responsible management of the world's forests. It accredits independent organizations to assess the forest management practices of landowners and companies to determine if its environmental, social, and economic standards have been met. FSC-certified wood is derived from forests that are conscientiously thinned, not permanently depleted. Non-FSC-certified woods in the building were either reclaimed from deconstructed buildings or are fast-growing, abundant hardwood and softwood species, such as maple and poplar. Forest Stewardship Council — United States: 202-342-0413; [www.fscus.org](http://www.fscus.org).