Field of *dreams*

The 787 final assembly building that is now under construction embraces Boeing's environmental policies

It will make a worthy home for the innovative 787 Dreamliners that will roll out its huge doors—and for the many hundreds of Boeing employees who will work there.

The Boeing South Carolina Final Assembly building is being designed with the environment in mind.

"The new assembly building and supporting infrastructure will include programs that embrace environmental responsibility, such as optimizing the use of energy and water, and a robust program for solid waste and recycling," said Rick Muttart, Shared Services Group site director.

Site leaders are also taking environmentally responsible steps during the building phase, such as recycling demolished concrete and asphalt for reuse during construction, and transporting excavated soil unsuitable for engineered fill to a local gravel pit reclamation project, Muttart said.

The facility will be built to a LEED Silver rating or higher.

The Leadership in Energy and Environmental Design, or LEED, program, developed by the U.S. Green Building Council, is the U.S. benchmark for sustainable building design, construction and operation. In 2009, Boeing established a LEED Silver rating for all new construction and major renovations of Boeing-owned buildings in the United States.

The LEED certification process verifies that a building is designed and built using strategies that will save energy and water, reduce greenhouse gas emissions, improve indoor environmental quality, and increase the recycling and reuse of materials.

Designing and building to a LEED rating supports Boeing's five-year target for 25 percent improvements in energy and water consumption and greenhouse gas emission intensity on a revenue-adjusted basis, and a similar target for hazardous waste generation, at its major manufacturing facilities.

Mike Magee of Global Performance, a construction management company, is teaming with Boeing and several other contractors and designers to provide the improved environmental performance.

"These initiatives at this new facility are a testament to Boeing's environmental policy," Magee said. "We've been teaming with them every step of the way to ensure the best possible product that meets these standards."

Building to LEED standards is important to Boeing and the surrounding community, said Boeing Conservation leader Jeff Nunn. "Embedding environmentally responsible building practices into facility planning, design and project implementation processes is a major focus area within Boeing's enterprise Conservation Initiative to use resources wisely, reduce the company's environmental footprint and increase productivity," Nunn said.

Boeing's Bay Area Boulevard building in Houston and the 18-26 building in Kent, Wash., achieved LEED Gold certification in 2009.

– Kathleen Spicer

From the **ground up**

The Boeing South Carolina Final Assembly and Delivery facility features an environmentally progressive building design. Highlights include:

- A stormwater management system to control water runoff during the construction phase and, once the building is operational, to eliminate the erosion and sedimentation of local waterways
- Water-saving strategies, including dual-flush toilets and flow-restrictive faucets, are expected to reduce water consumption by more than 40 percent; additionally, native plants have been selected for landscaping that do not require sprinklers or irrigation
- An Energy Management System to allow maintenance and service personnel to remotely monitor the heating and air-conditioning systems while providing a comfortable environment for employees
- Healthy interior design and construction, plus a smoke-free environment, to enhance indoor air quality, including the use of paints, adhesives, sealants and coatings with low or no volatile organic compounds
- A robust waste reduction and recycling program, including working with material and equipment suppliers to minimize shipping waste and increase use of reusable shipping containers
- Working with the community to offer mass transit service to the site to help reduce traffic and associated exhaust emissions, while also reducing the need for parking
- Boeing also is evaluating the installation of rooftop solar cells that will convert sunlight directly into electricity to help supplement the building's energy needs

PHOTO: The final 787 assembly building now rising from the Boeing South Carolina site will be a model of environmental responsibility. Mark Schwarztrauber (left), construction manager, and John Rhodes, system engineering manager, overlook part of the stormwater management system that will control water runoff into local waterways.