



# LAGUNA HONDA

HOSPITAL AND REHABILITATION CENTER

Background Material – Laguna Honda LEED Certification

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## New Laguna Honda is California's First Green-Certified Hospital

San Francisco, June 26, 2010 – San Francisco's new Laguna Honda Hospital and Rehabilitation Center received silver certification by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program on June 18, 2010, becoming the first green-certified hospital in California.

The LEED program is the leading national standard for designating green buildings.

The hospital's three new buildings address environmental impacts in their design, construction and operation across six LEED-designated categories: sustainable sites, water efficiency, energy and atmosphere, materials and resources, indoor environmental quality, and innovation and design process. Some highlights of the greening of Laguna Honda include the following.

### **Energy Savings**

- ◆ The hospital will use 30% less energy than statutory requirements, saving over \$7 million over its first ten years of operation.
- ◆ Its exterior walls are fitted with insulation and windows specially designed to reduce air conditioning and heating needs.
- ◆ The Link building, which joins the old buildings to the new ones, is designed to allow photovoltaic (PV) panels to be installed on the roof when technology improves and costs come down.
- ◆ The roofs earned Energy Star ratings by the U. S. Environmental Protection Agency and the U.S. Department of Energy. They are constructed to keep the buildings cooler on hot days and reduce energy use.

### **Greenhouse Gas Reduction**

- ◆ The air conditioning systems are designed to eliminate the need to use ozone-depleting chemicals.

## **Water conservation**

- ◆ Efficient mechanical design using evaporative cooling and integrating the unique micro-climate of Laguna Honda eliminated the need for cooling towers, which are typical in hospital facilities but waste lots of water. Compared to a conventional cooling tower, the reduced evaporation rate of the indirect cooling coils will save approximately eight gallons of water per minute.
- ◆ Air conditioning systems are “closed-loop,” meaning water used for cooling is reused rather than wasted.
- ◆ Water consumption will be reduced by the use of auto-on water faucets. These are powered by a long life battery employing a spinning a mini-turbine.

## **Indoor air quality**

- ◆ Paints, wood, glues, and flooring materials in the new buildings do not emit high quantities of volatile organic compounds (VOC's) and other indoor air contaminants. Reducing VOC's, which are carcinogenic, and other indoor air contaminants that are potentially irritating or harmful, will increase the comfort and well-being of Laguna Honda residents and staff. Many of the building materials emit no VOC's.
- ◆ The ventilation system in the hospital provides 100% fresh, outside air in the buildings at all times.

## **Windows**

- ◆ Each resident room has its own large operable window. Open windows allow gentle breezes and fresh air into the building, creating comfortable rooms without raising energy consumption. The operable windows also help residents to control their own environment.
- ◆ Ninety percent of the regularly occupied interior spaces have windows and views to the outdoors, bringing in sunlight and enhancing therapeutic benefits.

## **Construction materials**

- ◆ Seventy-five percent of the construction waste, including scraps, demolition debris, and packaging material usually labeled solid waste has been recycled instead of being sent to the landfill. The concrete and asphalt from old parking lots demolished during construction was crushed and reused as base material under the new roads and parking areas.
- ◆ The hospital is built with many materials that have a high quantity of recycled content. For example, the ceramic tile in the hospital is made with recycled glass, and the ceiling tiles are made with recycled ceiling panels and newsprint.

- ◆ The hospital has been built using limited polyvinyl chloride (PVC), which poses major hazards in its manufacture, during its product life and at disposal.

### **Transportation**

- ◆ Bicycle racks accommodating 51 bicycles will be installed to allow for more than 5% of the hospital staff to ride their bicycle to work.
- ◆ The hospital uses alternative fuel and electric vehicles in its maintenance and operations fleet to reduce dependence on oil.
- ◆ The hospital is located across the street from the MUNI Metro Forest Hill station, and encourages public transit use.

### **Maintenance**

- ◆ The hospital will be cleaned with environmentally friendly cleaning chemicals.
- ◆ The hospital kitchen will participate in the city's waste management program for organic compost. Food waste from the kitchen will be collected and turned into nutrient-rich soil that helps produce the organic food and wine that the San Francisco Bay Area is famous for.
- ◆ The hospital will participate in San Francisco's Integrated Pest Management (IPM) ordinance minimizing the use of toxic pesticides. Since the introduction of the ordinance in 1996, the city has reduced overall pesticide use by more than 70 percent.

### **Landscaping and Open Space**

- ◆ The hospital campus is greatly increasing the amount of landscaped public space by adding 10 therapeutic gardens and a meadow. The gardens are specifically intended to address the unique long term care and rehabilitation needs of residents, and are all designed to be secure, accessible, safe, and peaceful places of respite.

Restorative landscapes, healing gardens, wellness gardens, and other garden-based healthcare programs that are integrated into healthcare facility designs and programs have been shown to increase the health and well being of residents living in long term care facilities, as well as staff.

Most existing open space will be preserved in its pristine natural state.