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Belmar
Responsible Management of Resources Implemented Through Design

Responsible use of limited natural resources and an eye towards reducing energy use were key considerations in designing Belmar.

Building Design

- Continuum used the U.S. Green Building Council LEED criteria (Leadership in Energy and Environmental Design) to guide the development of many buildings. The criteria include water efficiency, energy use and impacts on the atmosphere, selection and reuse of materials and resources, indoor environmental quality, and innovation in the design and building commissioning process.
- One of the buildings--a two-floor office over retail space with one level of parking--was the first building of its type in the country to be certified by the USGB LEED program as a silver level green building. To achieve this level, the building had to accumulate a minimum of 33 points based on the criteria above.
    - It includes indirect/direct evaporative cooling system and a raised access floor system for heat and cooling distribution.

Urban Wind Farm

- Belmar includes a small, electric power generating urban wind farm to produce electricity to light one of the parking lots. When the lighting is not in use, the power will be added to the Xcel Energy main electrical grid for use elsewhere.
    - Fourteen light poles are outfitted with small wind turbines that will collectively generate approximately 400 watts of power at a wind speed of 28 mph.
    - Each 13 lb. wind turbine will have a carbon-fiber reinforced composite rotor blade with a diameter of 46 inches that will spin up to 600 revolutions per minute (RPM).
    - The turbine bodies change direction with the wind to maximize power output.
    - The wind farm has the potential to generate 700-900 kilowatt hours of electric power per month.

Solar Power

- The 350 pay-and-display parking kiosks are solar powered.
- Continuum is working closely with the National Renewable Energy Laboratory in Golden to explore additional solar and renewable applications.

Recycling

- Much of the construction material from the original mall structure, which was demolished, has been recycled.

- 88 percent of all materials by weight and by volume from the original site have been reused.
- One hundred percent, or in excess of 2 million square feet, of asphalt originally on site, was crushed into more than 40,000 tons of base material used for temporary road ways and the base under building slabs.
- 186,000 tons of concrete from the original mall slab were crushed and reused on site, the weight of which is equivalent to approximately two aircraft carriers.
- All steel, cooper and aluminum was taken to recycling centers.
- Glass, doors, windows and light fixtures have been reused in Continuum's downtown headquarters office as well as the on-site sales and leasing office at Belmar.

Tree program

- Approximately 130 mature trees from the original site have been transplanted to a temporary nursery site so they can be replanted in the Belmar district.

Lighting

- All outdoor lighting has been designed in cooperation with the International Dark Skies Association to preserve and protect the nighttime environment and reduce light pollution.
- Belmar's streetlights have been custom-designed to reduce light pollution.
  - Low-intensity lamps are suspended from a cable that runs across the streets.
  - Each light pole has a pedestrian fixture that projects indirect light by bouncing it off an arched reflector.

Pedestrian and Transit Orientation

- The project has been designed to reduce automobile reliance and to promote pedestrian and transit activity.
  - It is built on a street grid that permits regional bus service to penetrate all portions of the site.
  - Continuum is working with the City of Lakewood to ensure future connections to the regional rail transit system planned for a location approximately 1½ miles west of Belmar.
  - Public parking has been designed to take advantage of shared use opportunities presented by different uses on the site (office and cinema, for example) that have different patterns of peak activity.

Housing

- All housing is built with high quality, sustainable materials and energy conservation technology.
- In addition to homes and apartments being developed by Continuum, McStain, a long-recognized premier green residential builder, is building 132 row homes.
  - McStain homes exceed Energy Star standards for energy consumption.
  - Design includes features to enhance indoor air quality, employ sustainable and environmentally friendly materials, and promote water conservation.

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