

Sustainable Park Design at Oregon Hills Park

Conservation

- Reduce fuel needed for transportation:
 - This is a Neighborhood park and as such, is located within walking distance of the park user
 - Encourage pedestrian and bike access to park with connectivity and parking
 - Utilize local resources in specified construction materials
 - Use recycled products when feasible
 - Eliminate the need for imported topsoil by stockpiling topsoil separate from sub-soils
 - Use locally sourced materials- climbing rock, original/local art and artists, boulders, topsoil
 - Use low energy consumptive lighting
 - Use low water consumptive landscaping and feature existing natives as a part of the design
- Implement technologies that utilize natural energy sources such as solar gain for lighting, solar water heating, and natural ventilation for cooling
- Implement planting strategies promoting shading of hard surfaces and buildings in the summer, full solar exposure in the winter, and evergreen vegetative screen protection from winter winds
- Minimize potable water needs for irrigation
 - Efficient irrigation system design including drip irrigation for establishing natives
 - Utilize native and drought tolerant plant species
 - Reduce the area dedicated to high water consumptive plantings such as irrigated lawns
- Conform with night sky friendly standards for park lighting
- Recycling
 - Use locally produced compost for soil amendments
 - Provide segregated trash opportunities for recycling
 - Utilize site's organic material for on-site composting
 - Use recycled or second use wood for tree house lumber

Imaginative Non-traditional Play Facilities

- Provide stimulating and imaginative play opportunities for children
 - Positive impact on physical & mental well-being;
 - Rich, diverse, multi-sensory experiences;
 - Noisy, boisterous, vigorous, physically active play;
 - Physical challenge and risk-taking that are inherent in the value of play;
 - Rough, uneven surfaces, with opportunities for the development of physical strength, balance, and coordination; and
 - Natural elements and loose parts that children can combine, manipulate, and adapt for their own purposes.
- Provide art and whimsical design that stimulates the imagination of child and adult alike in play areas and focal points throughout the park
- Include the local community in facility development as modeled by the Leathers Playground at Bear Creek Park

Social Community Needs

- Accessibility for all patrons wherever possible
- Anticipate community coming together for social interactions in the design of the park with social gathering areas adjacent to play areas and courts, picnic areas, mini-amphitheatre, shelters
- Interpretive signage describing sustainable design principles, local history, non-traditional play, native plantings, storm-water treatment, trash recycling, solar lighting, alternative irrigation, wildlife
- Provide public art in both play areas and focal points throughout the park
- Facilities that promote family life, myth, folklore, ideology, song, dance, and new cultural features as they are created

Storm Water Improvement Opportunities

- Integrate storm water detention and filtration systems such as bio-swales into the park design; particularly for water being shed from basketball courts, impervious surfaces, and buildings
- Eliminate impervious surfaces where feasible using pavers and porous asphalt or concrete
- Encourage rain infiltration into soil throughout the site, as possible
- Create wetlands for educational opportunities and to improve habitat and water quality;

The Guiding Principles of Sustainable Design

Office of Professional and Employee Development, Denver Service Center, National Park Service

OPPORTUNITIES FOR INTERPRETATION

A value-based visitor experience requires interpretation as an essential part of the planning and design process. Interpretive values cannot be successfully added to a development or operation as a last-minute enhancement.

The primary interpretive resources of a site must be identified early in the planning process. There can be no substitute for a scientific knowledge of the resources involved; however, interpretive opportunities can usually be identified in the planning stages of a new development by answering the following questions:

- What is special or unusual about the site? (Consider both the natural and cultural aspects)
- What is particularly interesting, scenic, or photogenic about the site?
- What do visitors come to see?
- What is fun to do? (Answers must be resource-oriented and non-consumptive)
- What can be done on the site that is both environmentally sustainable and challenging?
- What resources provide particularly strong opportunities to demonstrate the underlying value system of sustainable development?
- What significant environmental controversies might be illustrated using local resources?
- What experiences are currently fashionable?
- What knowledge do visitors already have about the area?
- What knowledge and attitudes do neighboring residents have about the site and its resources?
- What messages can be offered about sustainability that visitors can use in their everyday lives?

In addition, interpretation must be reinforced in all visitor experiences and inherent in management's thinking and in the relationship of the proposed development to the larger cultural context. The value system that interpretation communicates must pervade the entire cycle of planning, design, construction, operations, and maintenance.

NATURAL RESOURCES

A basic premise of sustainable park development is that facilities must, to the fullest extent possible, function within the ecosystem and its processes rather than separately. Although it is not always readily apparent, ecosystems provide direct services to the human developments within them. Obvious ecological services are those such as vegetative screening, water/wastewater purification, self-maintenance, and continual recovery of the resource around a development (e.g., beaches, forests, reefs, and wildlife). If the ecosystem becomes overloaded or severely stressed, these services are jeopardized.

Cultural resources are those tangible and intangible aspects of cultural systems, both past and present, that are valued by or representative of a given culture, or that contain information about a culture.

CULTURAL RESOURCES

Tangible cultural resources include, but are not limited to, sites, structures, districts, landscapes, objects, and historic documents associated with or representative of peoples, cultures, and human activities and events, either in the present or in the past. Tangibles also include plants, animals, and other natural resources culturally defined as food, manufacturing, and ceremonial items; and naturally occurring or designated physical features, such as caves, mountain peaks, forest clearings, dance grounds, village sites, and trails, regarded as the sacred homes of deities, spirits, ancestors, and/or places of worship and ceremony. Such cultural aspects are ethnographically documented for the Sioux in relation to the Black Hills, the Navajo and Rainbow Bridge, resources used by the Miccosukee within Big Cypress Preserve, and resources used by Eskimo and native Hawaiian peoples in Alaskan and Hawaiian parks. Intangible cultural resources include the primary written and verbal data for interpreting and understanding those tangible resources.

Intangible cultural features including family life, myth, folklore, ideology, folk song, and folk dance are renewable and transmitted from generation to generation. Although material evidence of past cultures is finite, cultural resources in general are not, but are produced by each successive generation.

SUSTAINABLE DESIGN

"Hannover Principles" or "Bill of Rights for the Planet," developed by William McDonough Architects for EXPO 2000 held in Hannover, Germany.

- Insist on the right of humanity and nature to co-exist in a healthy, supportive, diverse, and sustainable condition.
- Recognize Interdependence. The elements of human design interact with and depend on the natural world, with broad and diverse implications at every scale. Expand design considerations to recognizing even distant effects.
- Respect relationships between spirit and matter. Consider all aspects of human settlement including community, dwelling, industry, and trade in terms of existing and evolving connections between spiritual and material consciousness.
- Accept responsibility for the consequences of design decisions upon human well-being, the viability of natural systems, and their right to co-exist.
- Create safe objects to long-term value. Do not burden future generations with requirements for maintenance or vigilant administration of potential danger due to the careless creations of products, processes, or standards.
- Eliminate the concept of waste. Evaluate and optimize the full life-cycle of products and processes, to approach the state of natural systems in which there is no waste.
- Rely on natural energy flows. Human designs should, like the living world, derive their creative forces from perpetual solar income. Incorporate this energy efficiently and safely for responsible use.
- Understand the limitations of design. No human creation lasts forever and design does not solve all problems. Those who create and plan should practice humility in the face of nature. Treat nature as a model and mentor, not an inconvenience to be evaded or controlled.
- Seek constant improvements by sharing knowledge. Encourage direct and open communication between colleagues, patrons, manufacturers, and users to link long-term sustainable considerations with ethical responsibility, and reestablish the integral relationship between natural processes and human activity.