



9.0 sustainability

9.1 sustainable design

9.1.1 Introduction

Sustainable design guidelines provide an alternate vision for the built environment. These planning concepts promote a healthier lifestyle thereby reducing the dependence on automobiles, providing substantial areas of parks and open space through the design of an integrated community that contains housing, shops, work places, schools and community facilities. This consists of encouraging an environment that is:

- A. Sympathetic and in harmony with the natural environment. Buildings should be low in profile and feature colors and materials that complement the land and native environment;
- B. Based in the sound economic practices of thoughtful design that results in the long-term viability of the project.



Figure 9.1.1 A business park that is designed to complement the natural landscape

- C. Possessive of a cohesive architectural theme, a “sense of place,” evolving logically over time; and
- D. Aesthetically pleasing for those who spend their time there.

9.1.2 Sustainable Planning

The integration of office, retail and residential space should be considered to create a vibrant neighborhood and further reduce the need for the automobile. Shops, offices and places of entertainment should be designed to be reached on foot creating interactions that reduce sprawl and create a true neighborhood.

- A. The design of flexible industrial and commercial buildings should be considered to reduce future waste while increasing the buildings' market appeal to future tenants.
- B. To produce a community of lasting value, develop spacious pedestrian-friendly streets and boulevards, convenient public transportation, open space, parkland and bicycle paths.
- C. Livability and walkability will be integrated in the planning and design with transit and bicycling as alternate forms of transportation being promoted to reduce the dependency on cars.

9.1.3 Sustainable Design

Developers are encouraged to incorporate sustainable strategies whenever economically feasible. Use of the Leadership in Energy and Environmental Design (LEED™) standard will be supported and encouraged in the development of more sustainable buildings. Energy conserving



Figure 9.1.2 Buildings that meet LEED standards incorporate principles of sustainable design

strategies to be considered should include, but not be limited to, the following:

- A. Building shape, mass, orientation and placement. Buildings should be oriented to take advantage of prevailing summer breezes and to buffer against adverse winter wind conditions;
- B. Building clustering;
- C. Materials that have superior insulation and/or thermal mass characteristics;
- D. The passive solar effectiveness of building fenestrations, including the placement of all glass areas and their shading devices, and employment of glazing performance standards;
- E. Building systems that conserve water;

F. Daylighting.;



Figure 9.1.3 Building placement that takes advantage of natural light

- G. Earth sheltering with creative land forming.
- H. Building systems that conserve water.
- I. In hardscape areas, when feasible, a variety of paving materials in sand settling beds should be considered instead of concrete to promote water infiltration and increase the site's water absorption capacity.
- J. Wherever possible, drought tolerant plants are to be used reducing the amount of manicured landscaping. The reliance on indigenous, low maintenance plants instead of turf grass will limit the need for fertilization, pesticides and irrigation.
- K. Bio-retention should be considered as a natural stormwater management system which will improve water quality and increase groundwater recharge. Native trees, shrubs and groundcovers that can handle the ebb and flow of water can be used in combinations naturally found in the region.



- L. The use of materials that are manufactured locally from available resources should be considered to conserve energy use and limit costs associated with transportation. Use of materials that originate in the region helps to connect the project to the community and to support the local economy.



Figure 9.1.4 Local produce and products are fresher and reduce transport needs