Drawing Descriptions
Entry 425

01-02. The quality and abundance of natural resources like sun, wind, and water provided valuable assets for engaging all design and construction disciplines in a substantive dialogue about the interface between site planning and architecture. The team therefore focused on climate and hydrology data, mapping and charting an array of natural factors – insolation, wind, precipitation, heating and cooling days – with the greatest potential impact on sustainable design

03-04. Despite the presence of innovative local models of residential development, relatively few examples in Davis use building orientation or other design strategies to create natural ventilation from the cooling "Delta Breeze" phenomenon or to use the abundant solar resources for optimal southern exposure for daylighting, winter heat gain, and photovoltaic arrays.

05-06. Building upon conventional base cases and current best practices, the project seeks to identify the multiplier effects and anticipate the benefits resulting from integrated strategies in both the present and the near-term future.

07-11. By studying the effects of different building typologies and organization, the project seeks to use the development patterns of buildings, the street, and space to optimize local climate conditions throughout the year.

12-15. Detailed cost/benefit analyses of individual materials, strategies, and systems shaped a broader framework that viewed specifications for vegetation, geothermal systems, constructed wetlands, or wall structures as part of larger interdependent systems. This abstract, bottom-up, small-to-large scale method of inquiry enabled the team to gain a deeper understanding of how the new neighborhoods' water, energy, site, and building systems relate to each other.