

FINAL TECHNICAL REPORT

for the

Regional Animal Campus

Las Vegas, Nevada

The United States Green Building Council (USGBC) has established guidelines for designing sustainable, or environmentally sound, buildings and a corresponding rating system called L.E.E.D. (Leadership in Energy and Environmental Design.) It is intended that the Regional Animal Care Campus will achieve Certification under the LEED standards. According to the LEED reference guide, "green buildings embody a design intent on balancing environmental responsiveness, resource efficiency and cultural and community sensitivity" (USGBC, *LEED Reference Guide 2.0*, June 2001).

Designing an energy-efficient building helps reduce pollution from burning fossil fuels, reduce disturbance of natural habitats for the harvesting of resources and minimizes global warming. The project will be a leader in the use of renewable energy by relying on photovoltaic panels and wind turbines to produce a portion of the project's energy needs. The building will operate more efficiently in comparison to a typical shelter through the use of monitoring and specialized cooling / heating equipment. Windows bringing in natural daylight will reduce the center's demand for electricity.

The photovoltaic panels are mounted on canopies that also serve to shade the dog adoption park. The solar PV arrays are oriented on 24 degree angled, (south-facing) independent shade structures. Each structure accommodates eight (8) 160 watt solar modules. The 24 solar shade structures accommodates up to 30 kilowatts DC. This solar installation produces an approximate average of 150 kilowatt-hours AC per day annually. This equates to 28% of all electrical energy demands for the Dog Adoption Park. All equipment used on the project, Sunnyboy 6000U Inverters and Sharp ND-167U3 modules, are in accordance with the California Energy Commission "List of Eligible Renewable Equipment". Additionally, the project is in compliance with the Nevada Statewide Energy Conservation Plan and the Governor's Energy Protection Plan.

Photovoltaic panels, wind turbines, and solar collectors will all respond in a unified fashion to make the Regional Animal Campus the most energy – efficient facility in Nevada. With the guiding principles of sustainability, the Animal Foundation has committed to take an active role in conserving our natural resources.

