

# 2008 Transforming Local Government Conference Presentation Proposal

Presentation category: Environment

Title of Presentation: Going Green: Pioneering Programs and Policies in Scottsdale

Jurisdiction: City of Scottsdale

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## **Synopsis:**

Scottsdale's Green Building Program was established in 1998 as Arizona's first Green Building Program with an emphasis on residential home construction. It has been an unqualified success. Last year, one-third of the residential building permits issued by the city were for "green" homes. The program also encourages Green Building principles for commercial buildings.

The city is committed to setting the example. Scottsdale in 2005 became the first city in the nation to require all new, occupied city buildings, of any size, to be designed, contracted and built to achieve certification in the Leadership in Energy and Environmental Design (LEED™) Program at the Gold certification level.

In 2007, the city achieved Gold-level certification for the Granite Reef Senior Center, the first building constructed under the new LEED™ goals. There are currently six other projects in the pipeline for Gold certification including a new library, two police buildings, a planned exhibit hall, a fire station and the renovation of the city's performing arts center.

In addition, the city is a partner with the Arizona State University Foundation in the development of SkySong, a new innovation and technology center at the site of a former commercial mall. The foundation has committed to LEED™ certification for the center, and it is expected to be the largest commercial project in the city to meet Green Building standards.

The program features many other components:

- \* Staff assistance and expertise for owners and developers who are incorporating Green Building principles in their projects
- \* A Green Building Advisory Committee of citizen volunteers
- \* A Green Building expo jointly sponsored each year by Scottsdale, Tempe and Phoenix.
- \* Several publications on Green Building principles, including guides to remodeling and landscaping.

The Scottsdale presentation would focus on the origins of the program, how it has developed public support, how the city has worked with the private sector to encourage "green" development, and how Scottsdale is implementing its policy on Green Building standards for new public facilities.

## Components of the presentation:

This presentation would focus of the following components included in the application list:

**Innovation/Creativity:** Scottsdale has a long tradition of innovation in design and planning (Frank Lloyd Wright's Taliesin West was built on the city's north flank in the 1930s). The implementation of the Green Building Program provides additional assistance to builders and developers who are willing to innovate and incorporate Green Building standards into their projects.

**Building Organizational Capacity:** The Green Building Program challenged the city and private builders to incorporate new, environmentally-friendly components into the design of buildings and to ensure they were compatible with existing building codes and requirements. The city's new policy goal, to reach the Gold LEED™ standard for new public buildings also challenges the city to change accepted ways of planning and procuring projects, and to carefully consider the long-term energy and environmental costs associated with new public projects.

**Applicable Results and Real World Advice:** As a pioneer in this field, Scottsdale's staff can elaborate on the challenges they faced trying to promote Green Building principles nearly a decade ago, the issues that arose in adopting LEED™ standards for city buildings and the community response to the Green Building Program. The city recently has toughened its standards for residential buildings in the Green Building Program, raising the bar for future buildings.

Attached is a summary of significant examples of the application of Green Building principles to various types of projects in the city – including many “real world” projects underway or completed.

A significant amount of additional information is available on the city's Green Building Program Web page at <http://www.scottsdaleaz.gov/greenbuilding.asp>.

Attachment

# Exemplary Green Building Projects in Scottsdale

August, 2007

## Residential

### 1 Hotel and Residences

Description: The new "1" will include a day spa, gym, restaurant and gourmet market with products from local farmers. The Natural Resources Defense Council will act as adviser on environmental matters, and 1 percent of revenues will go to local environmental groups. Project will combine environmental sustainable architecture and interior design with high-quality service and comfort.

Architect: Nelsen Partners

Status: In design phase.

### Beaulieu House

Description: The project has numerous passive and active sustainable design features including the use of mass, radiant barriers, and convection air for natural cooling. In addition to using materials for a healthy living environment, the house will improve the air, recycle the water, and literally integrate into the landscape. Photovoltaic (solar electric) power will produce hydrogen from water to use as a fuel for heating water, cooking meals, producing electricity, and running the cars. The project is a part of the city Green Building Program and is the highest scoring project to date.



Architect: Bryan Beaulieu and R.J. Bacon Company

Status: Substantially completed 2006. On-going building systems refinement.

### Corriente

Description: Corriente Condominium Residences will consist of 192 homes in eight, three-story buildings. Homes will range in size from 1,048 square feet to 1,547 square feet in floor plans of one, two and three bedrooms.

Architect: Todd & Associates

Status: Under construction.

### Duke

Description: Built under the Scottsdale Green Building Program, the project extends to the exterior of each unit by featuring colored metals, expansive use of glass, and integral metal panels for shading. Each home features two bedrooms plus den, approximately 1330+- square feet (+-), private garage with contemporary architecture.



Architect: Circle West Architects

Status: Completed in 2006.

## Hayden Array

Description: The Array is located in a unique, secluded, infill property two blocks east of the Indian Bend Wash just south of Oak Street. Within a short walking distance, the ten-mile linear park full of trees, water, golf, rollerblading, and biking is a major amenity that encourages a pedestrian and recreational lifestyle. Another prime attraction of the project is its proximity to the ASU Center, downtown Scottsdale, downtown Tempe, the 101 Loop and the 202 Freeway. It's adjacency to the Scottsdale greenbelt and greater urban context makes the Array an ideal live, work, and play location.

While the project addresses many "local" built environment considerations, the design of the Array incorporates environmentally-friendly strategies and materials. In fact, it will be the first condominium project to achieve Scottsdale's "Advanced" Green Building Rating and LEED for Homes green building certification. It will utilize passive heating and cooling techniques and numerous innovative and environmentally-friendly materials.



Architect: [merz] project

Status: In review for building permits.

## Loloma 5

Description: This project creates a live work environment in the heart of Scottsdale. The building's vertical scale is tempered with an entry courtyard for the work spaces, along the project's southern edge and a landscaped auto court along the northern edge of the site is veiled behind a perforated metal gate and a



living ocotillo fence. Carefully detailed window walls are screened from the sun behind perforated aluminum scrims while private cantilevered balconies project behind aluminum plate railings. The architecture is folded in an angular manner to define each unit and provide for views of Camelback Mountain.

Architect: Will Bruder Architects

Status: Completed in late 2004.

### **Optima Camelview Village**

Description: Optima Camelview Village will incorporate Scottsdale's local character and history, the Valley of the Sun desert environment and contemporary life. The project is an opportunity to develop unique design solutions for the following questions: How can the city's urban and natural landscapes be woven together to create an open, pedestrian-friendly development that maximizes desert and mountain views? What are Scottsdale's contemporary architectural features, elements, materials and vernacular? The result will be innovative architecture balancing local historical traditions with twenty-first century housing requirements and should become an Arizona landmark destination.



Camelview Village will be a mixed-use development with 750 residential units in eleven buildings and 38,000 sq. ft. of retail space that will emerge from a 13.3-acre site situated between the dominant Camelback Mountain to the northwest and the regional Scottsdale Fashion Square Mall immediately to the south. Optima Camelview Village is designed to achieve LEED green building certification by incorporating passive design, water efficient technologies and renewable energy. This will be Arizona's first mixed-use/condominium green development.

Architect: Optima Architects

Status: Phase one completed. Phase two and three are under construction.

### **Project Miller**

Description: Sixteen three-story living condominium units. Garage and garden are on the first level. Living, dining, kitchen, powder room, and balcony are on second level and two bedroom suites on third level.

Architect: Circle West Architects

Status: Under construction.

## Safari Drive

Description: Safari Drive is designed to be a neighborhood. Live/work units provide the opportunity to operate businesses on lower levels while living above. Residents and visitors alike will enjoy a lush public-square oasis, gourmet markets and cafes. The project incorporates innovative green-building techniques with high efficiency floor-to-ceiling glazing, outdoor living spaces, and environmentally friendly finishes.

Architect: Miller Hull Partnership

Status: Under construction.



## Stoker Residence

Description: This passive solar designed home is constructed of autoclaved aerated concrete (AAC) that is light weight, sound absorbing and thermal resistive. Other features include recycled graywater for irrigation, optimal window placement and room depth for effective daylighting, spectrally selective glazing, certified wood from sustainably managed forests and low-emitting finishes.

Architect: Edwards Design Group

Status: Completed in 2004.



## Upton Project

Description: The Upton will be a dynamic addition to the growing residential and pedestrian oriented urbanism of downtown Scottsdale. Ten unique luxury condominium dwellings are organized around a central courtyard of landscape and shade. Large terraces connect each dwelling to the light and breezes of Arizona, while reserved underground parking is provided for each residence. Of contemporary southwest character, this project is a celebration of sun, shadow, and the tradition of Sonoran desert courtyard living, in a sophisticated new form.

Architect: Will Bruder Architects

Status: In project review process.



### **Waterview at Project Scottsdale**

Description: Waterview is a mixed-use development along the east bank of the Scottsdale Canal (NE corner of Scottsdale and Camelback). The development includes a hotel, condo, single family residences, restaurants and bar while allowing for private interaction in a public realm with a string of spaces connected by vertical levels and horizontal planes. High-performance glazing, concrete, and rustic metal panels clad the skin of the building. The use of layered forms creates flat-planed overhangs, mitigating sun exposure while maximizing natural light. Architectural elements, water features and native plant materials will reduce the urban heat island effect conducive for a pedestrian friendly urban environment.

Architect: Talley Associates

Status: Design phase.



### **Commercial**

**Dial Headquarters and R & D Facility**



Description: The new Dial Headquarters and R & D Facility is being designed to achieve LEED Silver level green building certification. Some of the innovative design strategies include 1) green roof terrace; 2) multi-layered skylight system that adapts to weather conditions (changes from various levels of transparency to opacity to reduce solar heat gain, while low-pressure cushioned air increases insulation value); and 3) fritted (patterned ceramic-enamel coating) glass used in window glazing to filter and reduce solar radiation while providing diffuse daylight.

Architect: CH2M Hill and Will Bruder Architects

Status: Under construction.



### **Fitch Design**

Description: Green Tenant Improvements designed to achieve LEED-CI Gold level green building certification

Architect: Fitch Design

Status: Completed mid-2007.

### **Moran Architects**

Description: Green Tenant Improvements designed to achieve LEED-CI Gold level green building certification

Architect: Moran Architects

Status: Completed mid-2007.

### **One Scottsdale**

Description: One Scottsdale, being developed by DMB Associates, will include up to 1.2 million square feet of Class A office space, 600,000 square feet of retail space, 400 resort class boutique hotel rooms, 1,100 mixed-use residential and urban-estate home sites.



Architects: Field Paoli, DFD/CornoyerHedrick, Langdon Wilson, Will Bruder Architects, Dale Gardon Design, Robert A. M. Stern Architects, BAR Architects and three.

Status: Design phase. Dial Headquarters under construction (see above).

## Sky Song

Description: SkySong is a mixed-use project consisting of 1.2 million square feet of office, research and retail space, and a hotel /conference center at full build-out. In addition to the commercial space, SkySong will include multi-family residential units. The project is anchored by the iconic SkySong shade structure. Oriented around shaded and landscaped pedestrian scale boulevards with street-level shops, restaurants, public gathering places and open spaces, water features and bike paths, SkySong will serve the needs of businesses, research and technology, industry and academia while building vital networks between university innovations, regional progress and the global technology industry. SkySong will be adopting innovative and environmental programs into the construction. As a result SkySong will be the largest privately funded LEED certified project in Arizona.

SkySong residential units will have cutting-edge style consistent with the technology-focused commercial buildings. The design features simple forms with deeply recessed windows, horizontal 'ledge' bands, and aluminum louvers. Color is utilized as an accent and unifying element made to recall the vibrant hues found in desert blooming plants. Complemented by sandstone entry walls and corners, the overall affect is a synthesis of technology, sustainable responsiveness and abstract desert imagery.



Architect: Pei, Cobb, Freed & Partners and DMJM Design (Office buildings), Todd & Associates (Apartment building)

Status: Under construction. Phase I is expected to open in Fall 2007.

### **Vanguard Appraisal**

Description: Contemporary office design with metal standing seam “V” shaped roof for collection of rain water, reclaimed wood roof beams and ground faced CMU walls. Clerestory windows for daylighting and glass curtain wall at entry, shaded by overhangs. Low water use landscape without turf.



Architect: VVG Associates

Status: Under construction.

### **Vanguard Group**

Description: This three-story, 123,340 square foot office building was designed and built for the Vanguard Group. The project is designed to achieve LEED Silver level green building certification and is the first LEED project in Scottsdale. The building incorporates solar electric power generation (photovoltaic), shading techniques, healthy interiors, resource efficient materials, and recycled graywater for flushing toilets.

Architect: RSP Architects

Status: Completed in 2006.

### **Public/Institutional**

#### **Granite Reef Senior Center**

Description: The 37,500 square foot Granite Reef Senior Center is a showcase of sustainable design in the context of the Sonoran Desert urban environment. It is the first green city facility under Scottsdale’s Green Building Policy and will be the first LEED gold certified Senior Center in the State of Arizona. The building was designed by Gabor Lorant Architects and constructed by Cal Wadsworth Construction. SRP EarthWise Energy partnered with the city for the building integrated solar electric system. Green building certification was facilitated by Green Ideas, Inc.



Architect: Gabor Lorant Architects

Status: Completed in 2006.

## Fire Station 602

Description: This will be Scottsdale first green fire station. It is being designed to achieve LEED Gold green building certification by incorporating passive solar heating, summer shading, solar water heating, solar electric power generation (photovoltaics), high efficiency heating/cooling systems, high efficiency plumbing, graywater recycling and rain water harvesting.

Architect: LEA Architects

Status: Under construction.



## Foothills Academy

Description: Private school constructed of non-load bearing straw bale walls, passive solar design, daylighting, decomposed granite parking lot and walkways, and low water use landscape. The largest known straw bale structure in the US

Architect: Weddle Gilmore Architects

Status: Completed in 2003.



## Lost Dog Wash Trail Head Building

Description: Preserving open space and providing connectivity were guiding principles in the design and development of the Lost Dog Wash Trailhead, which serves as a staging area for exploration of Scottsdale's McDowell Sonoran Preserve. From Lost Dog Wash, hikers, mountain bicyclists and equestrians can access a network of more than 17 miles within the preserve. Well over 500 cacti were salvaged and utilized for revegetation of the site and scarred areas throughout the preserve. Parking areas and driveways were developed with stabilized decomposed granite and the rammed earth walls of the structures utilize material that was excavated during construction of the foundation. The project uses numerous green building strategies including photovoltaic (solar electric generation)



for powering building and site lighting, rainwater harvesting, and graywater recycling (drain water from bathroom sinks and water fountain) for landscape irrigation.

Architect: Weddle Gilmore Architects

Status: Completed in 2006.

### **Papago Buttes Church of the Brethan**

Description: The Papago Buttes Church of the Brethren made a clear commitment to being earth-friendly. This project incorporates many green environmentally responsible strategies including insulated concrete form (ICF) walls, high-efficiency heating/cooling equipment, high-performance windows and shaded walkways. In lieu of asphalt paving, the church uses decomposed granite for the parking lot. This increases permeability of the ground for absorbing rain and reduces the amount of heat absorption during hot summer months.



Architect: FEZ Architectural Design

Status: Completed in 2005.

### **Pinnacle Presbyterian Church**

Description: Pinnacle Presbyterian Church incorporates passive design features including shaded entrances, recessed congregation hall (earth sheltering for summer coolness) and ample daylight features.

Architect: Robert/Jones Associates

Status: Completed in 2001.

