LINE AND SPACE PHILOSOPHY & PROCESS

PHILOSOPHY
What we learn from the land and climate shapes our architecture - over the years, Line and Space has developed a philosophy which will guide our approach for the new Prima Animal Care Center:

Environmental Design - As messengers of environmental awareness, we dig deeply into the land. Minimal disturbance of site, use of solar energy, water harvesting, grey water reuse, and incorporation of recycled or salvaged materials are important to the success of our projects.

Respect for Place - Our work is biased by a deep reverence for the environment. By demonstrating our respect for the site, users will come away with a newfound sensitivity to place.

Design of its Time - We are students of our regional influences and favor the deeper meaning of entry sequence, views, scale, and timelines. Our designs are shaped by climate, context, and program rather than discard or adornment.

Inside/Outside - We emphasize spatial and visual connections with the surroundings and create gentle transitions between interior and exterior while containing significant amounts of energy. We are pioneers in extending the usability of outdoor space by creating tempered microclimates.

Discovery - We design many of our projects to be teaching tools on how to live appropriately and in harmony with one's environment and we believe buildings have the power to delight, inspire, and uplift the spirit of those that use them.

Maintenance - Even when capital funds are available, it is often times difficult to find money for maintenance. We specify easily maintained, long-lasting materials and systems to minimize maintenance costs.

Accessibility - Barriers are intolerable and we believe in seamless integration of building elements for users of various abilities and needs.

Constructability and Budget - Over the years we have gained significant experience acting as General Contractors for several of our projects. This aspect of our practice further our understanding of how to maximize architectural possibilities within budgetary constraints beyond that of traditional design professionals.

PROCESS
For both Line and Space and Animal Arts, a high quality project begins with high quality information; our proven knowledge-gathering processes have successfully led the way for all of our projects. Key to this approach is a thorough understanding of our client's needs and goals, which we conveyed to our team in a collaborative Programming Workshop setting:

- Workshops are organized in sessions that will cover all aspects of a given project, with topics given to topics such as mission, goals and precepts, users, site, spaces, and others depending on the project specifics
- It is important for us to work with the actual end-users of the project (such as the public, PACC staff, and volunteers), as often this input from people not commonly part of the “building committee” can significantly affect the concept.
- As we’ve done in the past (photos 1 and 2), workshops for PACC could be held on site, to immerse participants in the place and connect them to the environment.
- We have found that these workshops are the best method for building consensus among all stakeholders.

After the workshops, our team produces a document known as the Architectural Design Program, that establishes and defines all parameters for the project and, after Prima County review and approval, becomes our manual for planning and design.

Other important aspects of our process that go hand-in-hand with our programming methods include:

Site Documentation and Analysis - As a precursor to design, we carefully study the site (image 1 and context, trails, paths, water, wind, drainage, circulation, noise, and other forces that help fully integrate our work with its surroundings.

Formation of Concepts - Concepts lead to the formation of concepts based upon circulation (especially critical in a medical facility), function, and site parameters. The concept images (4 and 5) is the overarching organizational idea that allows us to meld together all the specifics of the Architectural Design Program. This takes the form of diagrams that will be the centerpiece of continued dialogue with PACC.

Solution - Once the concept is finalized, it will be carefully developed with sketches and models as we strive to strengthen our design ideas as an ever more focused solution evolves.

Testing of Ideas - We will test our designs with the PACC/Prima County representatives at the site. Using computer and/or physical models, we can walk stakeholders through the project in a way that concepts can be easily visualized.
RED ROCK CANYON NCA COMPLEX
near Las Vegas, Nevada - by Line and Space

Line and Space designed a number of related buildings at the
BLM’s Red Rock Canyon National Conservation Area near Las
Vegas, including a Wild Horse and Burro Adoption Center new
Visitor Center, Contact Station, and remodel of the old visitor
center to serve as administrative offices.

VISITOR CONTACT STATION

• The gateway to the National Conservation Area
• Responds to security/control needs by providing a means of
  observation for staff inside with windows that wrap around the
  building.
• To mitigate direct heat gain, steel window boxes and vertical
  louvers provide continuous shade.
• As the only entry point for the NCA, continuous operation
  during construction of the new building was mandatory.
  Careful planning, and care during construction
  allowed the new facility to be built directly adjacent to the
  active entry road and old building (later demolished and the
  footprint re-vegetated).

VISITOR CENTER

• Red Rock Canyon NCA has 200,000+ acres of interesting
  geology and fluvial biology, with more than 1.0 million visitors
  each year
• Architecture and the stunning landscape are integrated as
  one, encouraging visitors explore the surroundings.
• Building materials blend with the environment so as to not
  detract from the natural beauty.
• Many resource-conserving ideas are incorporated into the
  LEED Gold-certified Visitor Center, including a 55KW
  photovoltaic array, air-to-air heat recovery ventilation
  system, natural ventilation, interactive interpreted water
  harvesting, accumulated tube solar collectors (which fulfill 95% of
  hot water needs), and the first known institutional use of
  translucent solar collectors for passive heating.
• The largest resource savings by far, however, came from re-
  thinking the design program and relocating around 44,000
  sq ft of 60,000 sq ft total exhibit/teaching/gathering spaces from
  air-conditioned interiors to fully daylit, tempered pavilion
  microclimate.
WILD HORSE AND BURRO ADOPTION CENTER
Red Rock Canyon NCA, near Las Vegas - Iby Line and Space

The WHB was designed to expand public awareness of the BLM’s management of herd populations through adoptions of animals to the public. Functions include holding and sorting pens with resident horses and burros, showcased near the building’s entry, an arena and pasture, an animal nursery, research lab, orientation/learning patio, and feed storage/tack room.

- Innovate elevated catwalk at the perimeter of the arena allows visitors to view the inner-workings of the facility without disturbing the animals.
- Environmental Workshop (photo at top right corner) held early in the design process to establish resource conservation goals, facility is designed to achieve at least Silver level LEED certification.
- State-of-the-art equipment and features such as hydraulic stall tables and holding pens with no 90-degree corners (to prevent horses from attempting to climb out)
USFWS SAN DIEGO NWR COMPLEX
Chula Vista, California  By Luro and Sauer

Design of the San Diego National Wildlife Refuge Complex was highly influenced by the site forces and resource conservation, supporting the US Fish & Wildlife Service’s mission.

- Site lies in a major migratory path for endangered birds and mitigating bird strikes on windows was a predominant goal which ultimately had a direct influence on the building’s form; glass panels are angled downward to reflect the ground and are thus visible to birds (as opposed to vertical reflections which they perceive as open sky).

- Project evolved from the FWS’s standard “regional design” plans to respond to its special site; the low-profile facility is in harmony with the landscape.

- The LEED Gold-certified building features optimized solar orientation, extensive daylighting (client reports that electric lights are rarely used during the day), solar water heating, pervious parking/trail surfaces, and simple systems for passive heating and cooling. The roof-mounted 300W photovoltaic array allowed the facility to be a net producer of electricity in the first year true-up period.
HELEN S. SCHAEFER POETRY CENTER
University of Arizona, Tucson  |  By Line and Space

The new University of Arizona Poetry Center creates a landmark where the mission of providing an outstanding research collection and meeting place for visitors, writers and readers of poetry can be fulfilled. The Center houses one of the most outstanding collections of contemporary poetry in the nation, and is one of the only library buildings on any university campus dedicated solely to celebrating and advancing poetry.

- Concepts of accessibility and the strong personal connection between reader and poetry informed the design.
- Program includes offices, collection stacks, controlled rare book storage, areas for comfortable discourse in both small and large groups, and the Garden of Inspiration where one can enjoy reading or writing in natural light.
- Glass partitions at the second floor staff offices overlook the collection area (the secundum), provide daylighting, and connect users to the outdoors.
- In 2012 this project was honored as a New Landmark Library in a nationwide search by Library Journal.

“The Line and Space team not only created a building that meets our every programmatic need, they produced a beautiful place that resonates with poetic gestures throughout.”

Gail Brown, Executive Director (Retired)
University of Arizona Poetry Center
ARIZONA-SONORA DESERT MUSEUM MULTI-PURPOSE COMPLEX
Tucson, Arizona - by Line and Space

Considered one of the top ten museums worldwide, the Arizona-Sonora Desert Museum desired flexible multipurpose space for dining and special events that could demonstrate ecologically-sensitive design:

- The project included the first known use of recycling HVAC exhaust air to actively temper exterior space. The cool HVAC exhaust air, which is normally vented through the roof, is captured and used in a weather network.
- Other resource-conserving features include grey water is recycling, sunflower harvesting, and shading of glass to reduce solar heat gain.
- Existing vegetation was carefully studied and located so that the design avoided any impact to several native specimens and all saguaro cactus on site.
- In addition to being the architect for the project, Line and Space also served as General Contractor for construction.
CESAR CHAVEZ REGIONAL LIBRARY
Phoenix, Arizona - by Line and Space

Located adjacent to an existing lake in a public park, the LEED Silver-certified Cesar Chavez Regional Library is a landmark building for the rapidly growing Laveen area of Phoenix.

- The Library blends state-of-the-art technology with a ‘Living Room’ atmosphere and columns provide and open office space for staff, study and tutoring spaces, a computer classroom as well as an outstanding collection that is accessible in a manner that encourages reading and interaction.
- A large window in the Learning Commons provides a view to the existing lake and mountains beyond while a patio on the north side a deep roof overhang and recycled building exhaust air to temper the space, providing a comfortable reading area.
- Spaces developed specifically for adults to enjoy the library were designed include reading benches integrated with windows, providing natural light and views to colorful mobiles. A central objective of the Library was to encourage reading and interaction amongst young people and the design contributes greatly to the achievement of this goal.
- The LEED Silver Library implements many environmental design building strategies, including:
  - Proper solar orientation and shading that creates visual and thermal transitions as one enters the building
  - Abundant natural light and automatic lighting controls to reduce energy use
  - Water volume for toilet flushing more than 100% offset by harvested rainwater
  - High-efficiency building envelope with foam roof
  - Earth integration (beams on the east and west) for thermal mass
- These environmental design features are expressed architecturally and function as an added learning tool for the library, educating visitors on resource conservation.
- The building’s response to its site conditions and the Desert climate has garnered ardent community support along with multiple design and environmental awards, including a recognition as a national Top Ten Green Project from the American Institute of Architects (AIA), Committee on the Environment (COTE), Crescenda Award for Environmental Excellence from Phoenix’s Valley Forecast Association and selected as an inaugural New Landmark Library in a nationwide search by the premier publication Librarian.
ELOY COMMUNITY CENTER
Eloy, Arizona - By Line and Space

The Eloy Community Center provides learning and meeting spaces for people of all ages and includes flexible spaces that can be used in many different ways, from lectures to arts and crafts, intended to meet the changing needs of the City.

- Environmental design strategies such as large roof overhangs serve a secondary role by creating comfortable outdoor activity spaces. Materials and finishes were specially chosen for their durable, low maintenance characteristics.
- The new Center connects to the existing historic Dust Bowl Theater which was built in the 1940s. The theater is a symbol of a prosperous community that every Eloy native remembers with pride. Through renovation and rehabilitation, this historic facility will once again provide a unique experience for community events.
- The new multi-generational Eloy Community Center and restoration of the historic Dust Bowl Theater will be one of the first projects undertaken in the revitalization of Eloy's Downtown, serving as a catalyst for future business growth and providing a vibrant landmark for the city.
WUJiatang Multi-Generational Neighborhood Center
Kunming, China • By Line and Space

The Wujiatang Neighborhood Center (currently in construction) is a multi-generational, multipurpose facility that demonstrates sound environmental design. The building's integration with a large wetland garden seamlessly connects it to an adjacent natural wetland park.

- A broad range of activities will unite the community while allowing individuals to enhance and improve their well-being. Health, fitness, and wellness spaces are integrated with educational and entertainment functions, creating dynamic interactions between users.

- Educational elements include a dedicated lounge, study, tutoring, and music practice spaces for community teams. Regional gallery that will teach residents about the history, culture, local art, and culture of this part of Fuxian Province, studio spaces for ceramics, painting/art, and dance. A natural history classroom where residents can gain a deeper understanding through experimentation and direct interaction with the adjacent botanical wetland garden.
THE GREGORY SCHOOL SCIENCE AND TECHNOLOGY COMPLEX
Tucson, Arizona - by Line and Space

This new facility consists of classrooms and instructor offices for Physics, Biology, and Chemistry (each with laboratories), Math and English.

- Roofs open up to the north, allowing natural light to penetrate the interior and framing views of the Catalinas that remind users of their incredible surroundings.
- As the building sits in a floodplain directly adjacent to the Willcox, special consideration was necessary during initial planning. Rather than heavily altering the landscape to mitigate flooding, the building is elevated and water runs around an outdoor Living Lab. This space is allowed to flood, providing the opportunity for hands-on discovery and environmental experimentation by students.
- Roofs slope toward the Living Lab, facilitating water harvesting. The stored water feeds trees and other vegetation in the area or can be used by students in the nearby greenhouse.
SELECTED PROJECTS FROM THE PACC DESIGN TEAM ANIMAL EXPERTS

ANIMAL ARTS DESIGN
- King County Animal Care and Control, Washington
- National Capital Animal Care Center, Humane Society of the United States, Gaithersburg, Maryland
- Placer County Animal Shelter, Tahoe Vista, California (in progress with Koret SAMP)
- Longmont Humane Society Shelter, Colorado (#1)
- Arizona Humane Society, Phoenix - ongoing (needs assessment complete 2015)
- Logan County Animal Shelter, Sterling, Colorado
- City of Dallas Animal Shelter
- Humane Society of Boulder Valley, Colorado (#2)
- SPCC of Monterey County, California
- Best Friends Society, Kanab, Utah - multiple projects (#3)
- PAWS Seattle, Washington
- Denver Dumb Friends League - multiple projects (#4)
- Wake County (North Carolina) Animal Services (w/Koret SAMP)
- Larimer County Humane Society, Fort Collins, Colorado
- Donita’s Den - A unique facility to provide long term housing for the dogs of military families, Bayview City, Texas
- Humane Society of Truckee-Tahoe, California (#6)
- Multiple VCA Animal Hospitals, nation wide (#7 and #9)
- Seattle Humane Society, Washington (with Koret SAMP) - currently in Design Development (Image #8)
- Franklin County Dog Shelter/Adoption Center, Ohio (#10)
- Guide Dogs for the Blind, San Rafael, California (for Koret SAMP)
- Louisiana SPCC, New Orleans - post Katrina rebuild (#11)
- Animal Rescue League of Arlington, Virginia
- PLUS ANOTHER 50+ VETERINARY HOSPITAL, PET RESORT AND ANIMAL SHELTER PROJECTS

UC DAVIS KORET SHELTER MEDICINE PROGRAM
- Sacramento City Animal Care and Control, California
- Humane Society for Tacoma Pierce County, Washington (recent consultation meeting shown in photo #3)
- Humane Society of the Pikes Peak Region, Colorado
- Lassen County Animal Shelter, California
- Orange County Animal Care Services, California
- Sonoma County Animal Control, California
- Albuquerque Animal Services, New Mexico
- Marin County Humane Society, California
- Johnson County Animal Control, Indiana
- Berkeley East Bay Humane Society, California
- City of Tracy Animal Services, California
- Jacksonville Animal Care and Control, Florida
- Jefferson Parish Animal Shelter, Louisiana
- Louisiana SPCC, New Orleans
- Montgomery County Animal Shelter, Ohio
- Pikes Peak Humane Society, Colorado Springs, Colorado
- Southern Oregon Humane Society, Medford
- Irvine City Animal Care Center, California
- Palm Desert Animal Care, Palm Desert, California
- PLUS CONSULTATION SERVICES FOR ANOTHER 400+ SHELTERS, REPRESENTING ALL SIZES AND PHILOSOPHIES

“Animal Arts knows how to design spaces that truly consider what animals hear, what they smell, what they see – and what can help make them more comfortable.”

-Kate Bindy, Executive Director during design and construction, Santa Fe Humane Society and Animal Shelter
DENVER ANIMAL SHELTER
Denver, Colorado - by Animal Arts

This highly-visible municipal shelter by Animal Arts for the City and County of Denver is located on a brownfield redevelopment site near a sensitive riparian zone along the South Platte River.

- Many other local shelters were being utilized to offset a lack of space in the proposed facility, but the new shelter allows the City and County of Denver to accommodate their current and future capacity in a state-of-the-art, contemporary facility.
- Incorporates the latest concepts in animal housing and shelter design while providing care for up to 120 animals and a large, flexible space used for outreach programs, spay clinics, obedience classes, staff/volunteer training, etc.
- Animal Arts successfully met specific city-driven project schedules and facilitated the various workshops needed for buy-in from a large and diverse group of stakeholders. Through this coordinated effort, the project was delivered on time and within budget.
- As the first LEED Platinum shelter in the country, the building incorporates many sustainable design principles, which promote both human and animal well-being.
ANIMAL HUMANE NEW MEXICO
Albuquerque, New Mexico - by Animal Arts

Animal Humane New Mexico is a progressive animal welfare organization that currently operates out of a campus of buildings in Albuquerque.

- In order to help them accomplish their mission and better serve their community, Animal Arts designed a renovation and 10,000 sq ft addition to their intake building as well as a new 12,000 sq ft adoption building.

- After reviewing Animal Humane’s goals and budget, a prefabricated metal building was proposed for the new adoption building to control costs.

- Design incorporates playful colors, graphics and interior details that create an inviting environment.

- Project also included site improvements to unify the campus and create a welcoming public plaza.

- The project budget was utilized strategically to create environments that provide the best animal care.
ANIMAL RESCUE LEAGUE OF IOWA
Des Moines, Iowa - by Animal Arts

The Animal Rescue League (ARL) is Iowa’s largest nonprofit animal shelter, sending rescue pets from across the state through its pet adoption, humane education, behavior training, spay/neuter, animal cruelty intervention, and many other programs.

- ARL cares for up to 19,000 animals a year and houses a wide variety of functions, with ample space for interaction between adopters and animals, training, and education.

- Adoption center features animal-friendly housing that makes use of natural light and includes 10 real-life rooms, 4 puppy pens, 2 cat colonies, 2 small mammal rooms, small dog adoption kennels, large kitty condo, and a rabbit room.

- Their new facility has fostered the growth of ARL’s programs (designed specifically to address the reasons animals end up in shelters).

- Design for ARL was a collaborative effort, with a design/build team that included Webb Construction, Simmonson (chef/enclosure architect), and Animal Arts who provided animal-care-specific design and interior architecture.
The Orange County Animal Services building brings together the shelter and animal control units which were previously two independent operations.

- The new 24,000 sf building houses all of the county’s animal services, including pet adoption, public education, and animal seizure and detention.
- The building and site design incorporate best practice standards of animal sheltering.
- The facility includes a total animal capacity of 204 with cat colonies, a spay/neuter clinic, multi-purpose rooms for outreach and education, a sallyport for two vehicles.
- The OCAS is a green building and has achieved local High Performance Building standards. Sustainable design strategies include water reclamation and reuse, energy efficient HVAC systems with heat recovery, and clerestory windows for natural daylighting.