Using Biophilia in Remodeling to Create a “Sense of Place”
Richard Rauh, AIA, NCARB
Lake Forest, CA, USA

INTRODUCTION
Hello, my name is Rich Rauh and I very pleased to be here today to discuss the use of biophilia to create a sense of place for your hospital remodel. For those of you that missed my first presentation, I discussed the use of Biophilia as it applied to my wife’s veterinary hospital remodel.

During this session, I will go a bit deeper into biophilia. I will show more examples and features of biophilia’s application relating to veterinary hospital design to create an intrinsic sense of place.

We have owned and operated our veterinary hospital in Lake Forest, California for the past 24 years. During this time, we have seen many changes in hospital design & technology prompting us to remodel on 3 occasions to remain current & contemporary.

If you are stuck in the past with an aging practice and are looking for something more inspiring - look to nature by introducing biophilic design into your space. Embracing nature can help you move into the future with the best and the brightest.

Features of biophilic design include:
Natural lighting
Colors & patterns
Sensory & discovery experiences

BIOPHILIA DEFINED
Biophilic design extends the theory and practice of green building into a new dimension - the realm of human connection with nature and sense of place. Incorporating biophilia reaps enormous benefits - from improving financial conditions to creating a more socially acceptable and healthy working environment.

THINKING OUTSIDE THE BOX
So what makes you happy being in a space?
What are some of the immediate sensory experiences that seek your invitation and comfort?
Does your current design increase or diminish from your sense of well-being?
How does your existing working environment affect your health (both mentally and physically)?
BIOPHILIC COLOR PALETTES
Nature provides us with wonderful biophilic color palettes. For me, there is no better tool than looking at nature to arrive upon a color solution for any given project. We can simply extract these colors from nature and apply it to our uses.

I also love photography and use it to capture nature’s color combinations. I often share it with each individual client to select the color combo that’s just right for them.

From shells on the beach, to the spiral galaxies beyond, and to the food we eat - color and patterns of nature are all around us. These can be referred to as fractal patterns. They are chaotic equations containing repeating patterns of complexity and magnitude. The fern is one of many flora that are fractal; it’s an especially good example. From the fractals found in nature, artists have created some incredible renderings and textile patterns as well. Fractals are a natural wonder - recursive and seemingly infinite.

THE WORLD OF BIOPHILIC DESIGN
The world contains an infinite variety of natural colors and patterns. Our core connections with nature help shape decisions that benefit us and our pets alike, improving upon our environment on which we all depend.

Using a palette of natural textures, colors, patterns, and images of nature helps serve as a biophilic reminder. Experiencing nature in the workplace makes us generally happier and healthier. Biophilic design is essential to human mental, physical and social well-being. The colors and patterns derived from biophilia reinforce the intrinsic connections we have between nature and self.

Both happiness and misery are influenced by the quality of the environment around us. And yet, a concern for architecture is too often described as frivolous or even self-indulgent. It is architecture’s task therefore to stand as an eloquent reminder of our innate relationship to nature to reach our full human potential prompted by a sense of place.

This Atwater Veterinary Center facility reflects the use of biophilic color, its fractal patterning, and its textures.
Biophilic design features for this project include:
Natural lighting provided by the abundant use of storefront glass, along with both clerestory and gable end windows.
Colors & patterns: Rich earth-tone fall seasonal colors in harmony with the fractal patterning of the cedar ceiling, the seating fabric, the Ledgerstone, and the Ayers Rock porcelain slate variegated tile floors. Sensory & discovery experiences of the sculptural qualities of the open volume lobby and the canvas artwork depicting personal pet photography.

**ARTWORK PERSONALIZATION**
The doctors at Atwater Veterinary Center chose personalized photos over generic artwork for their practice. The receptionist, an amateur photographer, took photos of the doctor’s and staff’s pets to create a portfolio, then had them transferred to canvas and displayed as artwork throughout the building. This approach personalized the practice for the employees while showing commitment to their pets.

The fractal inspired textiles at the seating surround, the clear cedar ceiling, the ledgerstone walls, and the slate textured porcelain flooring work in harmony with these personalized pet images to reinforce the hospital as a “Sense of Place” for both its staff and clients alike.

**FRACTAL PATTERNED FABRICS**
Here are examples of fractal inspired textiles for seating. These particular ones are Krypton fabrics and come in a wide variety of colors, textures, and patterns.
DISCOVERY
Connecting with nature through discovery is essential to happiness and a sense of well-being. This connection is something that sustains us. For nature is the ultimate sensory experience.

SAN CLEMENTE VETERINARY HOSPITAL REMODEL WITH BIOPHILIA APPLICATION
This is the San Clemente Veterinary Hospital project. The Hacienda-style lobby uses a wood ceiling, hanging pendant lights, and a Revival-style rectangular reception station to give the area a living room feel. Custom built-in benches with tear- and puncture-proof fabric coverings offer comfortable yet practical seating for clients.

For this project, the four exam rooms were arranged within a pod for easy access. Per client wishes, each exam room had a window to the outside for natural light and viewing opportunities. Once again, the room is decorated with fractal patterned upholstery, utilizing earth-tone colors and personalized photography and sculpture.

SENSORY EXPERIENCES OF DISCOVERY
What do you feel when you walk into a lobby and look up to see a skylight that graces the space with natural light? Do you notice the patterns and reflections of light on the walls and the floors? This is the innate beauty we feel through biophilia - for natural light and its patterns are both inviting and healing to the soul.

There is also something very appealing about the use of glass block when it comes to utilizing it as a curved wall feature in an exam room in the absence of natural light. Not only does it allow for privacy but also lends visual interest to the room, creating fractal images beyond the space.
**Using Sound**
Alicia Petcare Center in Mission Viejo, California: The sound of water flowing out of sculptured metal artwork into rocks is used to emulate the sound in a stream bed. This "white noise" is ideal for blocking out unwanted sounds and distractions.

**Creating a Unique Sense of Place - Greek & Associates Veterinary Hospital**
This Hospital was designed using a Googie style vernacular. The Googie style got its origins from the California car culture in the 50’s then was used extensively in Las Vegas and at Disneyland’s Tomorrowland.

The Owner chose the work of Shag for the color inspiration of their hospital. Shag is a painter, designer and illustrator working in Southern California. His work spans over 5 decades.

His artwork is embodied with a sly sense of humor in vividly colored, sharply rendered panels where the characters drink, smoke, and eat in lavishly jazzy surroundings. For this hospital, we actually derived the color scheme directly from Shag’s lithograph artwork utilizing a color spectrometer to extract the exact cross-referenced Pantone color to match.

---

**Cats & Color**
For many years, it was believed that cats saw the world only in black and white. Recent research suggests that cats may indeed possess a degree of color vision. It’s now believed that cats can see different shades of blues and greens, as well as other colors not perceived as we see them.

Cats love lounging around and getting lots of sunlight. They also love to climb and perch high where they can keep an eye on the world around them. Cats also love to naturally scratch to sharpen their claws. Their claws are used to catch prey, for manipulating toys during play or to grip while climbing.

So, when it comes to Biophilic design for cats, we wanted to create a very special sense of place for our furry friends. Something that offered the best of both worlds for them.

This colored exhibit is a 3D isometric drawing of the catwalk play station we designed for the remodel addition at Alicia Petcare Center in Mission Viejo, CA.

It is surrounded by storefront glass to allow for viewing opportunities from the outside as well as the interior of the hospital’s lobby. The elevated catwalk play station makes this a fun place for cats to perch. It is like an elevated train track for cats - so they can perch high to see what’s going on around them.
THE SENSE OF SMELL
Many animals have a far greater sense of smell than that of people. Therefore, they have more sensitivity to odors than we do, and possess a greater ability to process and analyze different smells. Dogs also communicate with their sense of smell. They sniff other dogs to learn about their age, sex, and status. They can even tell a lot about a person’s mood by the way he or she smells.

Today’s modern kennels have evolved through the years with better sound attenuation, waste disposal, and air handling systems. However, conventional wisdom has recently given way to better ways to enhance the quality of kennel environments. Again...thinking outside the box.

TRENCH VS. TRENCHLESS KENNEL RUNS
PetSuites in Aliso Viejo, California was the first luxury boarding facility featuring trenchless design. The late Dr. Norm Costello was the visionary and the pioneer of this concept. It forever changed how we approached odor and disease control. The formula was simple: minimize the moisture that harbors and promotes bacterial growth and you minimize the odor produced.

Most hospitals presently clean their wards and kennel runs utilizing pressurized water (hoses) and elaborate disinfectant sprayers to evacuate urine, feces, and hair into common trench drains.
With any HVAC system, water vapor molecules carrying odor-producing bacteria are get absorbed into the walls, air return ducts, grills and plenums. Humidity is also an inherent problem in a wash down environment.

Without exception, every run that we have designed utilizing the trenchless system has significantly eliminated most odors in a hospital. Recently, Yorba Regional Animal Hospital has eliminated all of its trenched kennel systems and has replaced them with trenchless (after a 10 year period of using both systems in place).

Runs are cleaned individually with special cleaners on a cart like maid service at a hotel. Animal waste is collected and deposited into sanitary clinic flushing sinks. This cost effective method results in a more odor free space. We have discovered that by eliminating the hose and trench system approach it will eliminate most odors - for the battle against odor is won at the floor line and not in the air by itself.

**BIOPHILIA PROMOTES BUSINESS**

Today’s boarding facilities provide a new and higher level of comfort and care for our companion friends. If you’re looking for a very fun and profitable boarding environment, you can create luxurious comfort for the canine breeds with themed individual upscale suites.

At Yorba Regional Animal Hospital, we did just that, boasting nine (9) different up-scaled themed rooms. This is where they love to lounge, enjoy napping, and enjoy the ultimate pampered experience.

We understand how hard it is for some owners to leave their pets with strangers when they go out of town. Offering a better boarding experience for their pets other than the typical boarding kennel makes pets less stressed.

Nothing is more Americana than the Wild West. This is the “Cowboy Bunkhouse” theme at Yorba Regional Animal Hospital. Yee-Haw! Right off the dusty trail and ready to bed down for the night with all the comforts of home.

**SUMMARY**

Architecture influences and affects our senses, our performance, our thought processes, and our moods. It either enhances our quality of life - or diminishes from it.

So remember... the next time you walk into a space and get that special feeling of awe inside of you, think about the light. For it is the light from nature that inspires all of us.

Thank you.