Clearings, Clusters, and Cloisters
A Garden of Trees for Two Rivers Park
Little Rock, Arkansas

UACDC UNIVERSITY OF ARKANSAS COMMUNITY DESIGN CENTER

with the

**Arkansas Forestry Commission** 

March 2005





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A GARDEN OF TREE







# Introduction: Clearings, Clusters, and Cloisters: Arboreal Patterns

#### Stephen Luoni

Steven L. Anderson Chair in Architecture and Urban Studies

"Many people can't distinguish one type of tree from the other...they can't see the trees from the forest."

How might trees be planted to foster the memory of their particular species and characteristics?

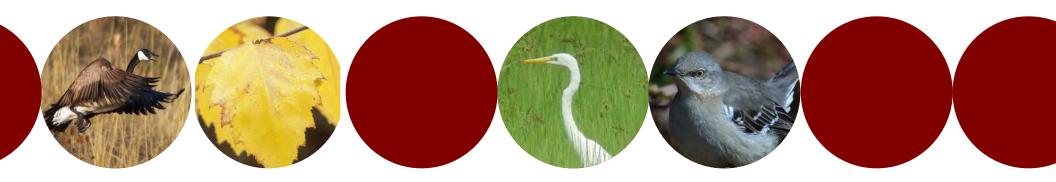
The 1000-acre Two Rivers Park is being developed as a regional urban park six miles outside of downtown Little Rock with bicycle, boat, and vehicular access. A 140-acre section of the park will be planted as a Garden of Trees. The Garden's planting design will highlight indigenous tree species, keeping in mind that most people—as client Judge Buddy Villines observes—often "fail to see the trees from the forest". Memorable arboreal

arrangements like *alleés*, *bosques*, hammocks, and groves will form outdoor rooms. Different from the conventional reforestation program that attempts to recreate a natural condition, the Two Rivers Garden of Trees will be a composed gallery of specimen trees. Similar to paintings in an art museum or specimens in a natural history museum, trees are curated to deepen the appreciation for their ecological work.

Trees are organized to form outdoor rooms of different scales. In the tradition of museological composition—paintings in a museum—curators display objects through thematic or chronological narratives in rooms and galleries to facilitate the memory of those objects. Space is a mnemonic device, constructing memory through a designed sequence of moments. Before the widespread use of movable type to allow reproduction of written records, orators constructed artificial memory systems based on associative images linked to architectural sequences, often the plan of a church or a palace. Akin to the spatial sequence in constructed memory systems, *alleés*, *bosques*, lawns, and groves in the Garden of Trees present an exhibition of trees for our memory.

Two thousand years ago Marcus Tullius Cicero used to make two-hour speeches in the Roman Senate, without notes, by constructing in his mind a palace whose rooms and furnishings, as he imagined himself roaming through them, called up the ideas he wished to discuss: ideas were made memorable by locating them in space.

Donlyn Lyndon and Charles Moore, Chambers for a Memory Palace



#### Site

The site for the Garden of Trees lies within a riparian flood zone maintained by the US Army Corps of Engineers. Part of a former penal colony farm, the site has been subjected to the rationalized partitioning and monolithic planting practices typical of industrialized agriculture. Planted drainage channels drain this flat site and provide its only shade. Neither alterations of the ground plane nor introduction of architectural structures to the Garden site are permitted.

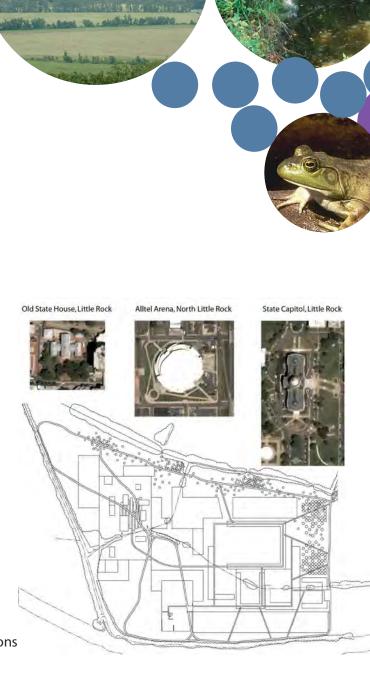
The material palette for the Garden is limited to trees and ground cover. The 21 different trees selected for inclusion in the Garden are indigenous to the area and it's riparian ecology, capable of withstanding the periodic inundations to which the site is subjected. Trees are selected for their aesthetic qualities related to proportion, color, fragrance, texture, and scale, and are arranged according to their changing seasonal features, or succession dynamic.

> The most fundamental aspect of a Memory Palace, however, is the chamber—the defined space indoors or out that sequesters one set of activities from another, one set of ideas from another. Rooms and courts, the chambers in architecture, help us sort. They come in various shapes and sizes and are more and less confining in the uses they encourage and/or allow. Donlyn Lyndon and Charles Moore, Chambers for a Memory Palace

#### **Design Concept: Rooms as a Memory System**

The Garden of Trees is organized as a series of formal rooms carved from a





**Size Comparisons** 

larger wooded matrix of trees called the Forested Cluster. Functioning as a buffer between the existing park and the new rooms, the Forested Cluster integrates the park's unplanned elements—drainage channels, bicycle paths, and vegetated windbreaks—with the new formal system of rooms. From the exterior, the Garden of Trees' edges appear to be an informal arrangement of trees due to the robust species mix and uneven planting intervals. Further progression into the Garden of Trees reveals more structured planting arrangements and dramatic rooms created from the cloistering of select tree species. Didactic planting schemes switch between diverse patterns at the Garden's edges to homogeneous patterns organizing the interior.

Besides accommodating passage between informal, formal, vast, and intimate spaces, the planting scheme is responsive to the different paces of bicyclists and pedestrians. Speedier Mobility Loops for bicyclists are integrated into the Gardens' informal outer ring, while the Garden's inner ring of rooms encourages slowness and a more attentive observation. Multiple cloisters and lawns intensify the Garden's social interior, akin to the Arab bazaar with its wonderful proliferation of peopled rooms. In contrast, the Garden's exterior edges relate to the quiet emptiness of the Park's open meadows and vistas.

The Garden's ground surfaces are a response to the site's changing dynamics. Outer ring ground surfaces accommodate a certain wildness caused by river flooding, proliferation of "nuisance" urban wildlife like the whitetail deer, existing wildgrass meadows, and the fast-paced movements of bicyclists.

Outer edges support a more robust and indeterminate succession dynamic than inner ring tree arrangements whose precision requires planned human management. Inner ring surfaces of manicured lawns and rock gardens celebrate the more cultivated social life expected in the Garden's *alleés*, bosques, and groves.

Five major rooms constitute the Garden of Trees: 1) Tupelo Foyer, 2) Great Lawn and Shumard *Alleé*, 3) The Red Room, 4) Fibonacci Garden, and the 5) *Bosque* Plaza. Secondary rooms include the Fall Fruit Room, *Alleé* Room, and the White Spring Room.

Great rooms ennoble gatherings: intimate ones shelter precious moments. Stern cloisters imprint order on the mind, lush patios harbor its secrets...the foyer offers the space (or time) to manage the transition from being outside to being inside...and to prepare the mind for a new encounter.

Donlyn Lyndon and Charles Moore, Chambers for a Memory Palace

## Taking a walk through the Garden, starting from the parking lot...

#### **Tupelo Foyer**

This is the grand entry foyer to the Great Lawn and Shumard *Alleé* room. The foyer is defined by a gridded deciduous overstory of high-canopied *Water Tupelos*, the tallest tree in the Garden. An understory of the coniferous *Eastern Red Cedar* accompanied by the decorative *Carolina Silverbell*, is



sprinkled beneath the Tupelo stand, providing an intimate scale within the grand Foyer. This nestling of understory trees within overstory and midstory stands is an important transition between species found in the taller spaces of the Garden.

Not only the size of a room or its degree of enclosure are of consequence in determining its character, but the way the defining walls, floors, and ceiling are proportioned and the locations of openings within them.

Donlyn Lyndon and Charles Moore, Chambers for a Memory Palace

#### The Great Lawn and Shumard Alleé

This is the most majestic room in the Garden with a grand, manicured lawn bordered by an *alleé* of *Shumard Oaks*, one of the largest oaks and the largest tree on the site. The *alleé* is a wide pedestrian promenade in the American tradition of the urban park, and frames views west to Pinnacle Mountain. The Great Lawn is an ideal place for passive recreation and picnicking. It serves as a seam linking wild and manicured rooms.

A noble memorable room has immediately definable limits, a volume great enough to afford an appropriate freedom of action and bounding shapes that are carefully measured and related to one another.

Donlyn Lyndon and Charles Moore, Chambers for a Memory Palace

#### **The Red Room**

The Red Room receives its name from the Red Maple that wraps three sides

of the room. The *Red Maple* turns a vibrant, showy red in the fall and is complimented by a wildflower meadow, of which 30% is *Purple Coneflower*, a reddish-purple flower. The planting arrangement follows a skewed grid, creating an oblique view that appears random from one view, and highly ordered from another view. Like other cloistered rooms bordering it, the Red Room is subsumed by a singular and dramatic interior effect, while informal exterior edges merge into the surrounding Forested Clusters.

In a process known as emergence, tree arrangements morph from managed patterns featuring a single tree species that define room interiors, to self-organizing species clusters that merge rooms with the Forested Cluster. The Garden is neither a picturesque composition, attempting to emulate nature nor a highly rigid landscape, subduing nature. Rather, the Garden of Trees is a dynamic system, simultaneously accommodating various degrees of order. We liken this to a pixelated landscape.

Orderly rows of trees, columns, or piers mark off modules in a field of space. In architecture as in orchards, the intervals between uprights make a measure you can count and count on. The rhythmic measure that columns make in space so satisfies that it is often imprinted on the surface of buildings by pilasters that temper our perceptions.

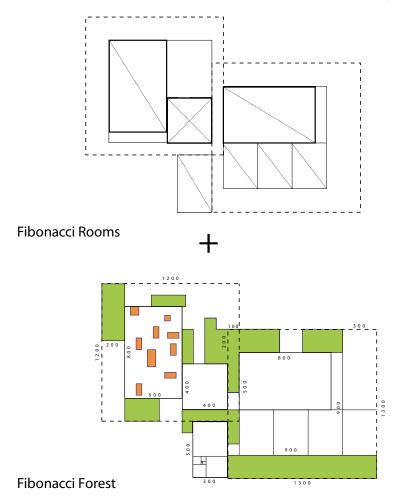
Donlyn Lyndon and Charles Moore, Chambers for a Memory Palace

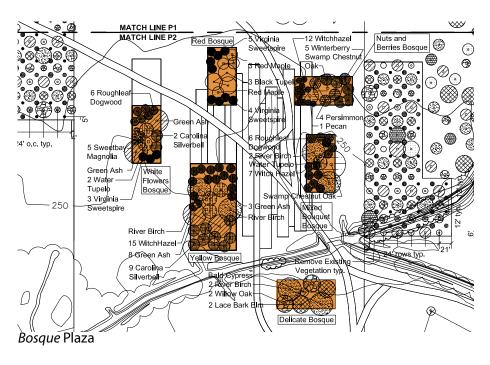
#### Fibonacci Garden

This subsection contains the most elegant and best-dressed rooms in the



Garden. The Fibonacci Garden recalls the intimate English court garden with its spaces for courtship, weddings, casual strolling, and relaxed lawn sports. The northern, eastern, and western edges are lined with *Winterberry*, a shrub that is dark green in summer and will grow to about six to ten feet tall. They produce red berries that often last through the winter, creating an elegant border with winter interest. Interior borders are lined with *Virginia Sweetspire*, which grows to about four feet in height. This lower shrub allows people to see over the various rooms across the Fibonacci Garden. They produce fra-





grant, white flowers in the spring, and turn a beautiful maroon-purple in the fall. Marking the four centers of each of the four rooms are specimen *Pecans* and vivid *Yellowwoods*.

The Fibonacci Garden is named after the 12th century Italian mathematician who discovered the proportioning system, or algorithm, organizing most natural phenomenon. The entire Garden of Trees is designed along the Fibonacci proportioning system, using golden section rectangles and squares to generate spatial relationships. The spiral-generated squares of the Fibonacci Garden follow the Fibonacci proportioning system as the sum total of the last two numbers generates the next 1,1,2,3,5,8,13,21,34,55,89,144,233,377,610....

#### **Bosque Plaza**

Akin to the classic Asian rock garden, the ground surface of the *Bosque* Plaza is a fine granulated rock accented with *bosques* (tree stands) of specimen trees. The open Plaza showcases individual *bosques* composed to create the

coordinated floral effects of bouquets. Unlike the Grand Lawn and Shumard Alleé, the Plaza's character derives from the tree arrangements within it, rather than trees aligned at the edge as a frame. Five primary bosques are situated in the Plaza.

The Red Bosque consists of trees whose leaves turn red in the fall. These are the Black Tupelo, Red Maple, and Virginia Sweetspire.

The White Bosque consists of trees that produce white flowers in the spring. These are the Water Tupelo, Yellowwood, Carolina Silverbell, Sweetbay Magnolia, Roughleaf Dogwood, and Virginia Sweetspire.

The Yellow Bosque consists of trees whose leaves turn yellow in the fall. These are Water Tupelo, River Birch, Yellowwood, Carolina Silverbell, and Witchhazel.

The Delicate Bosque consists of trees whose leaves create a delicate texture. These are the Bald Cypress, River Birch, Black Willow, and Willow Oak.

The Nuts and Berries Bosque consists of trees that produce nuts or berries. These are the Swamp Chestnut Oak, Pecan, Persimmon, Witchhazel, and Winterberry.

The Plaza's large scale accommodates the bustle and traffic produced from the concentration of existing paths in the Plaza. The fast speeds of cyclists are calmed by the diffused placement of the bosques, allowing for pedestrians and cyclists to safely share the space. Intimacy is provided by the bicycle rest station and seating for pedestrians in the shade of the bosques.

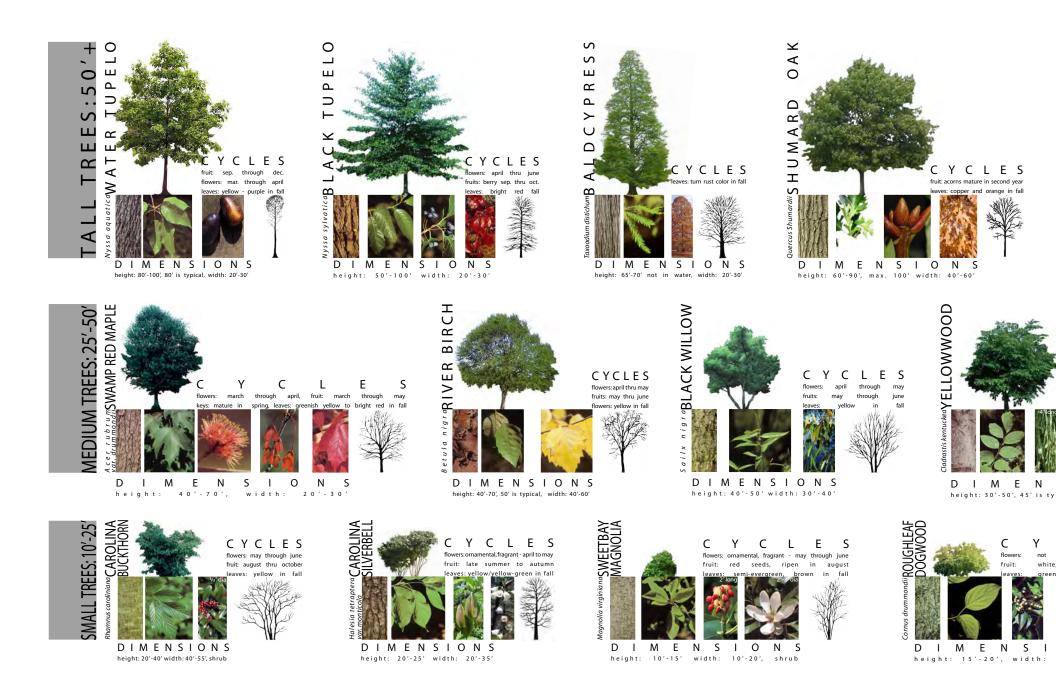
> Yet another way to make a room fascinating, which is my favorite, is to alter the borders, to blow out some of the walls, ceiling, or the floor, or—and especially—the corners, to give us the chance to make the space inside escape, around the corners and out of sight, or down into the dark, or most expansively up into the light.

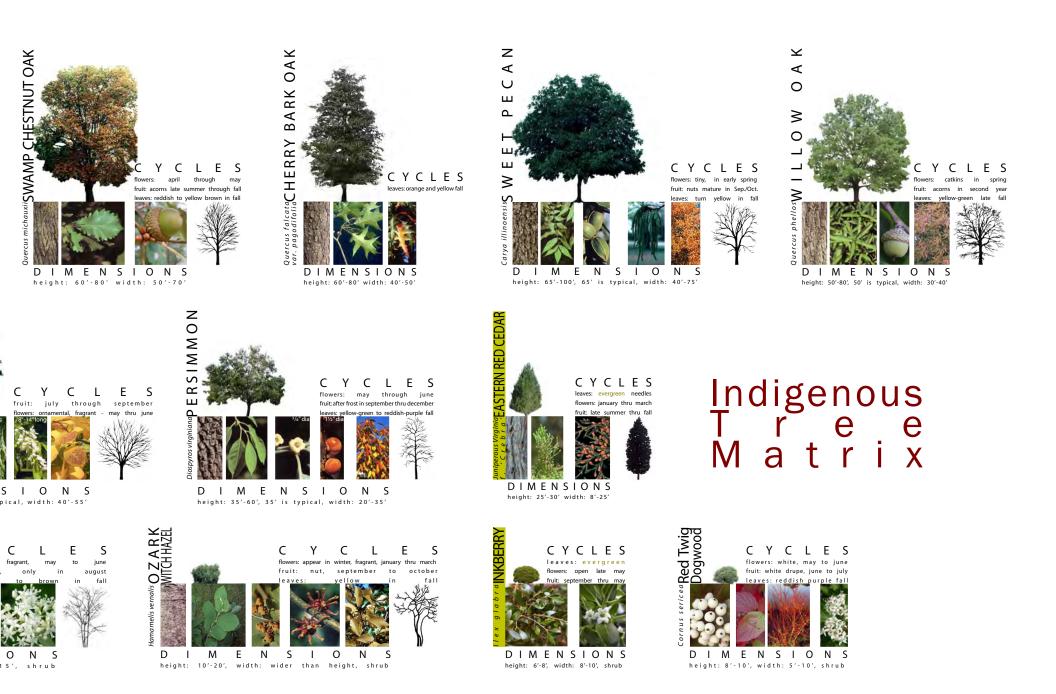
Donlyn Lyndon and Charles Moore, Chambers for a Memory Palace

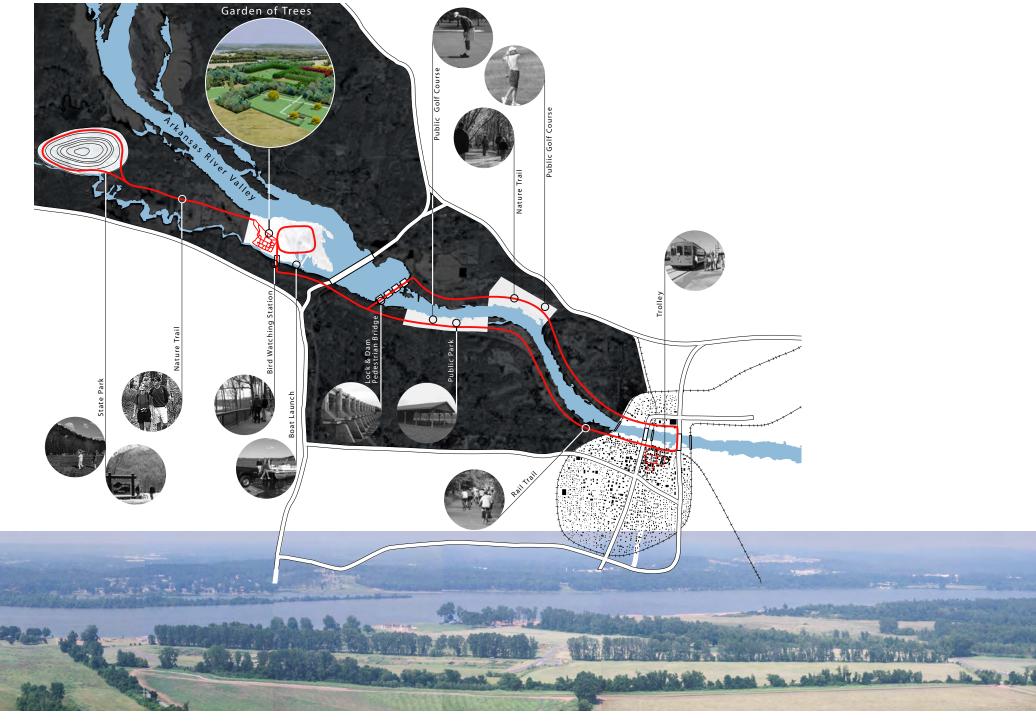
#### **Other Rooms and Memory**

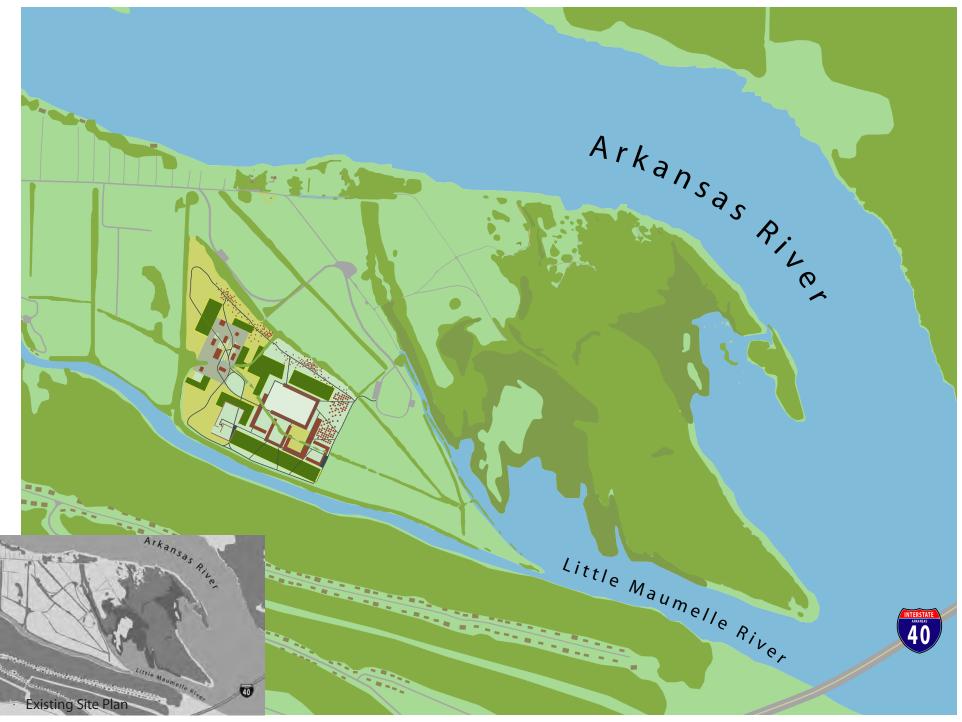
Secondary rooms and other transition spaces sponsor a range of human activity, speeds, and aesthetic qualities. The Fall Fruit Room is wrapped with Persimmons. They produce an interesting fruit in the fall, which persists into the winter. The Alleé Room is lined with two rows of River Birch on three sides. The leaves of the River Birch create a delicate texture, and are often used by landscape designers to form small-scaled alleés. The Alleé Room is a fitting contrast to the majesty of the Shumard Oak Alleé. The White Spring Room is wrapped on three sides with two rows of Yellowwood. Yellowwood produces an ornamental and fragrant white flower, which profusely covers the tree.

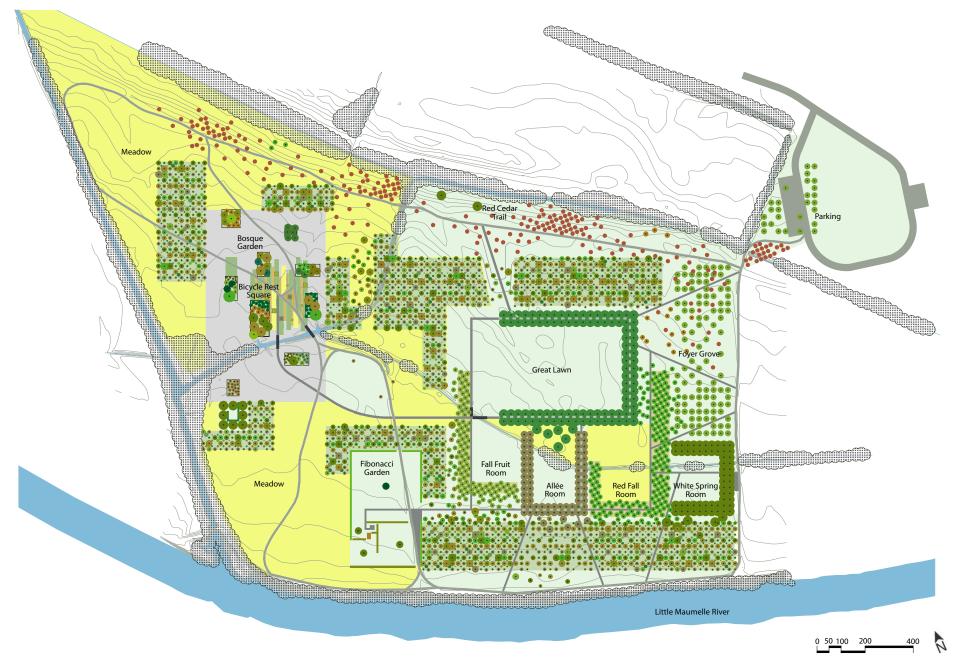
Rooms are the devices for creating memory as they sharpen our ability to see the trees from the forest. It is in both the collective and singular effects of tree arrangements, in their sequencing, color, modulations and combinations—their arboreal patterns—that permit trees to become memorable...a place for ideas.





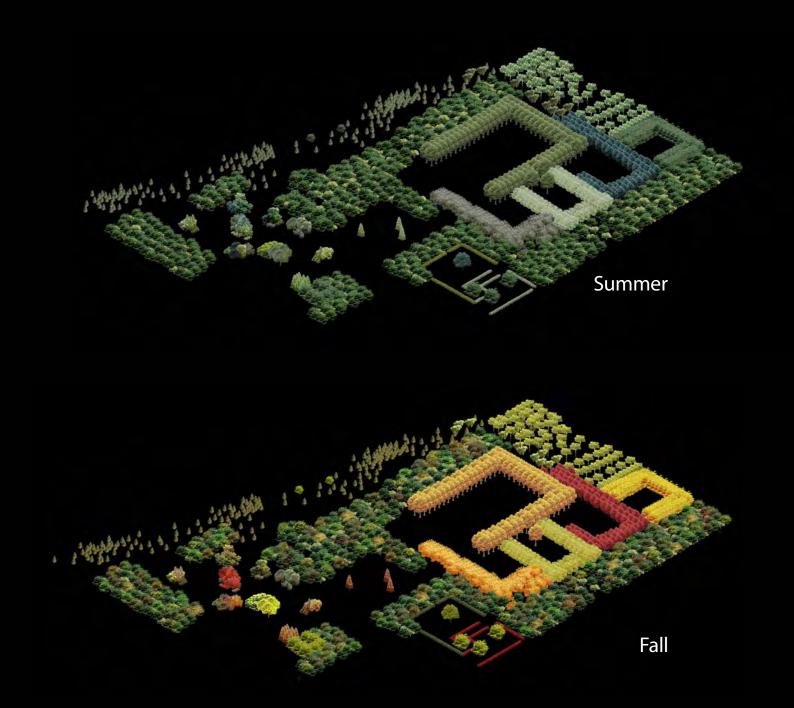


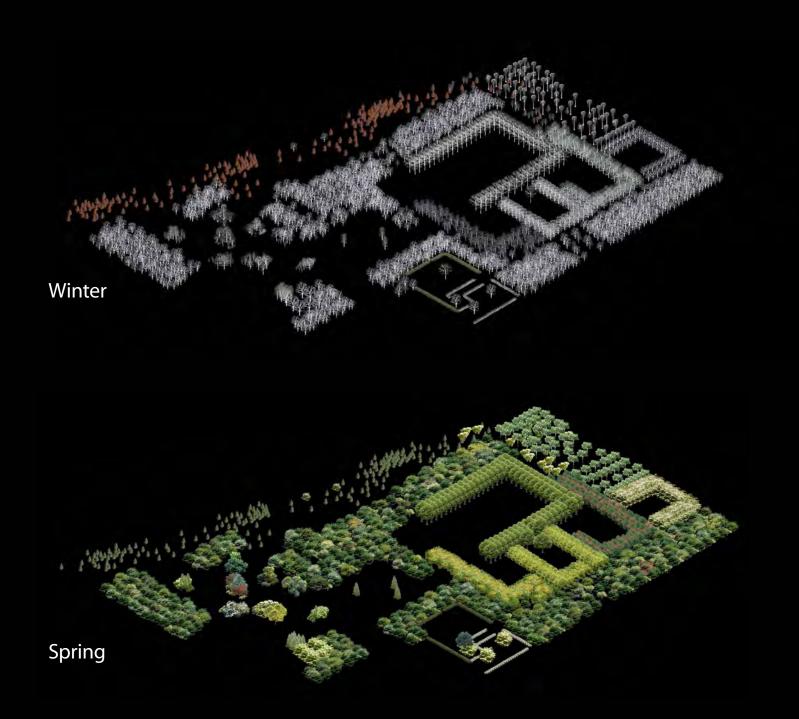


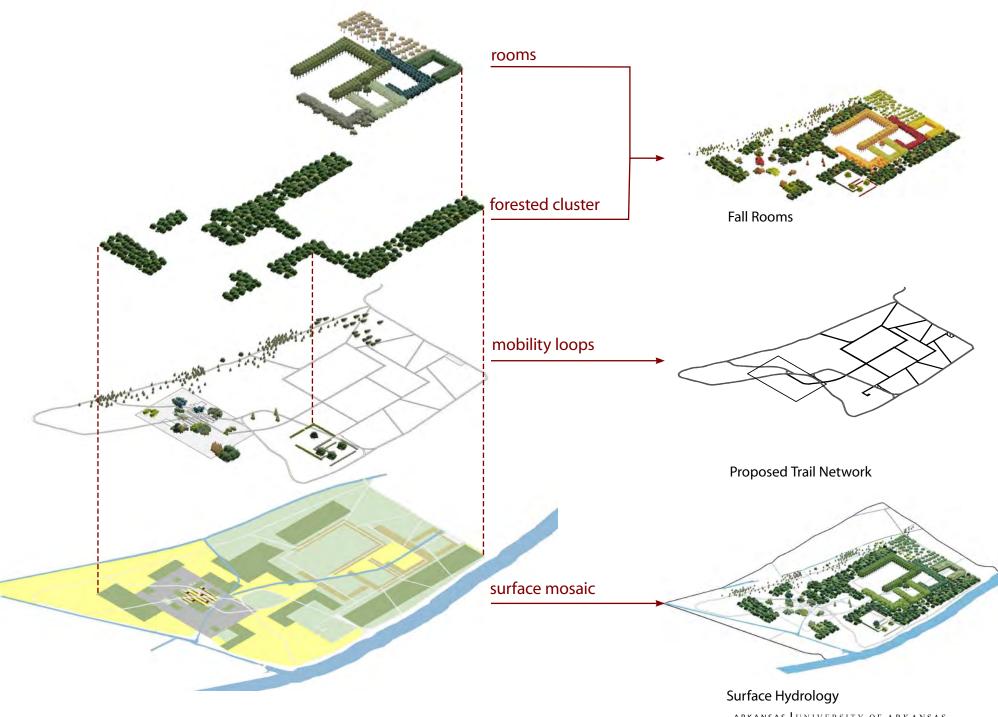


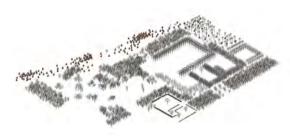
Proposed Site Plan











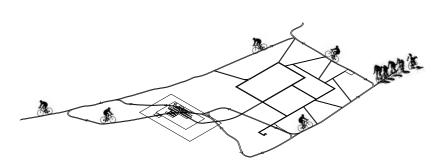


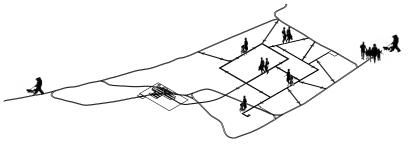
**Spring Rooms** 



Winter Rooms

**Summer Rooms** 





Cycling/ Jogging Circuits

**Walking Circuits** 

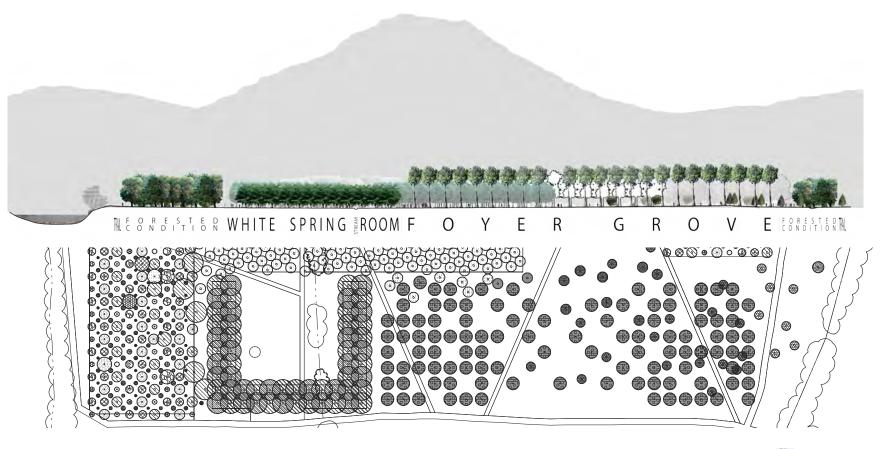


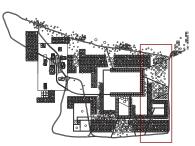
100-Year Flood Event



# A Walk Through the Garden Rooms





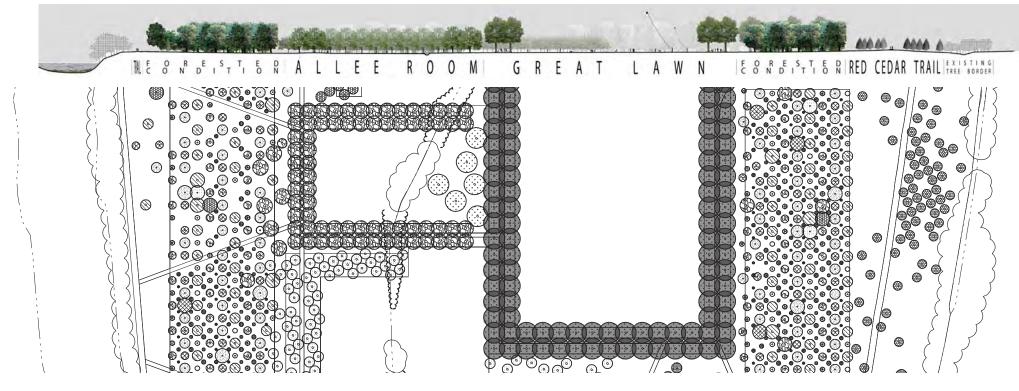


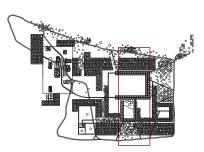
# Tupelo Foyer





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**Great Lawn** and Shumard Oak Alleé





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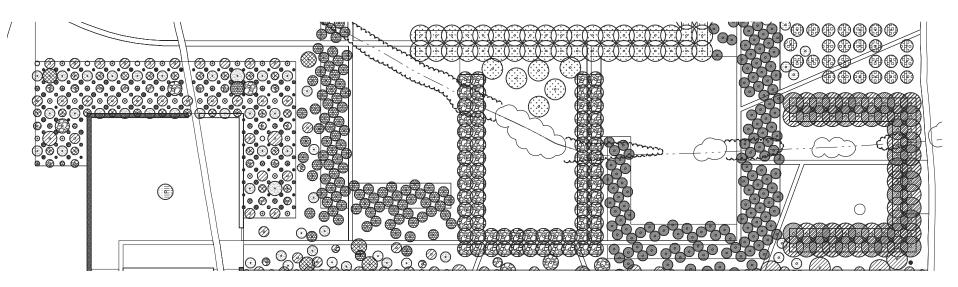


G R E A T



L A W N

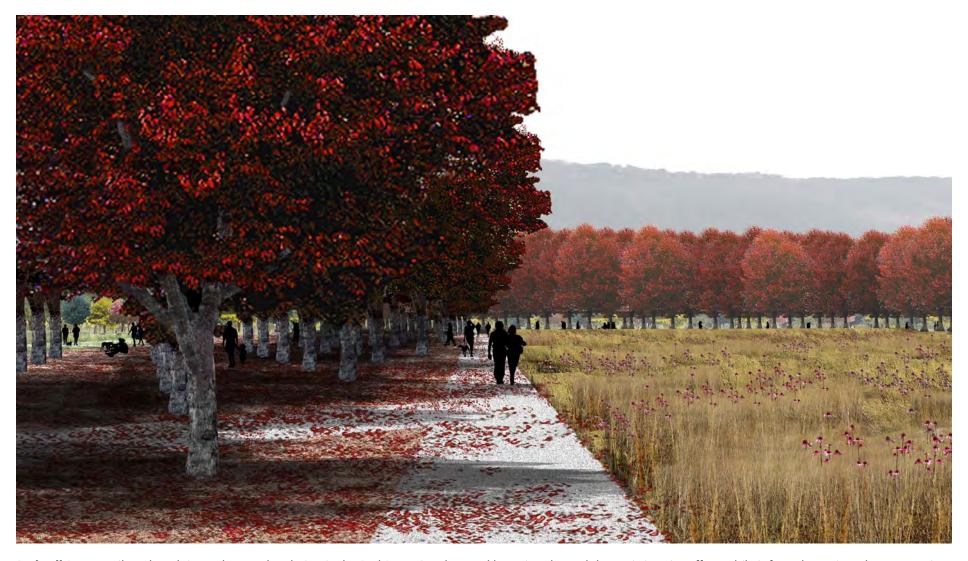




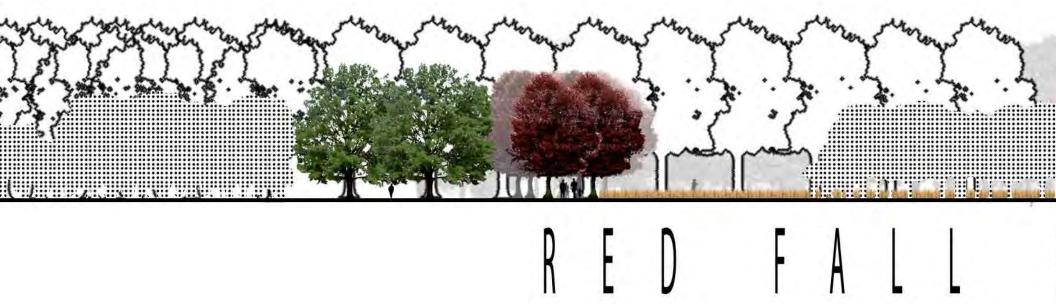


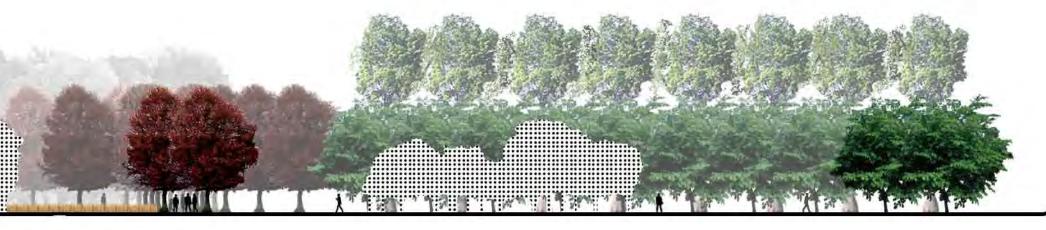
**Red Fall** Room





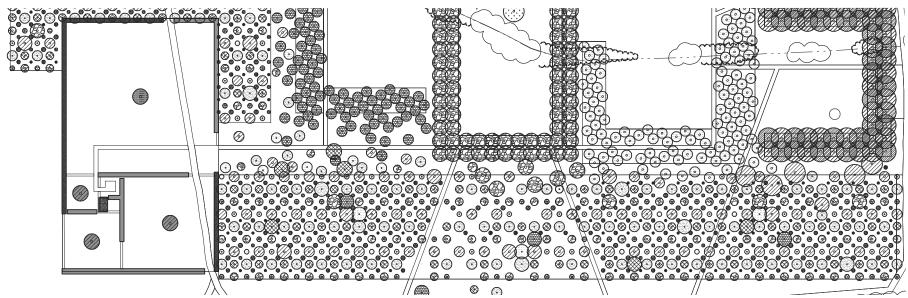
Red Fall Room: Like other cloistered rooms bordering it, the Red Room is subsumed by a singular and dramatic interior effect, while informal exterior edges merge into the surrounding Forested Clusters.

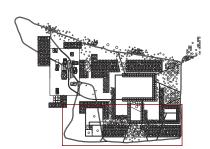




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# **Fibonacci** Garden



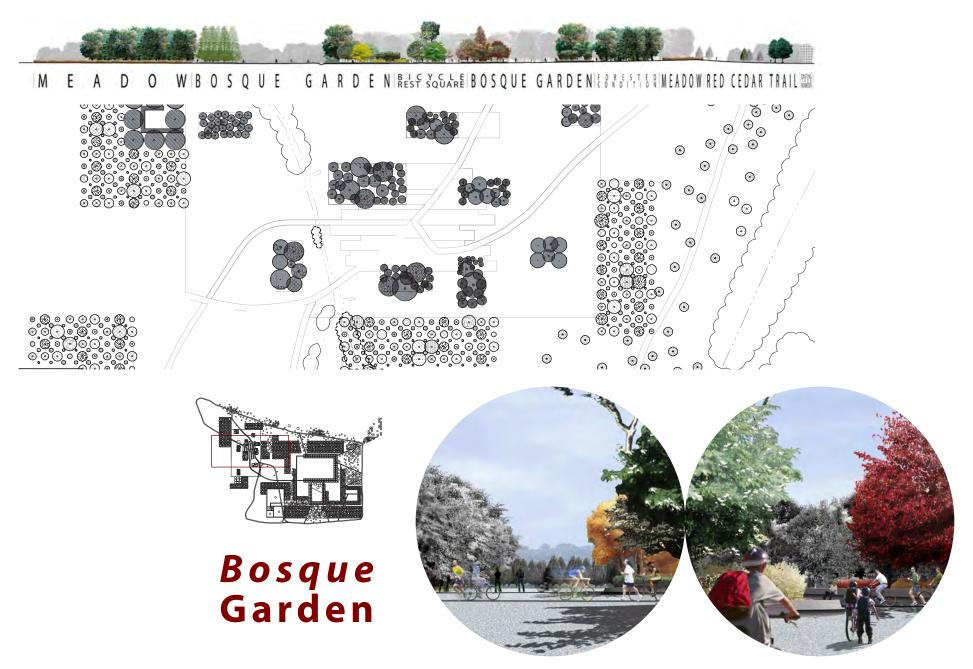


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# FIBONACCI GARDE



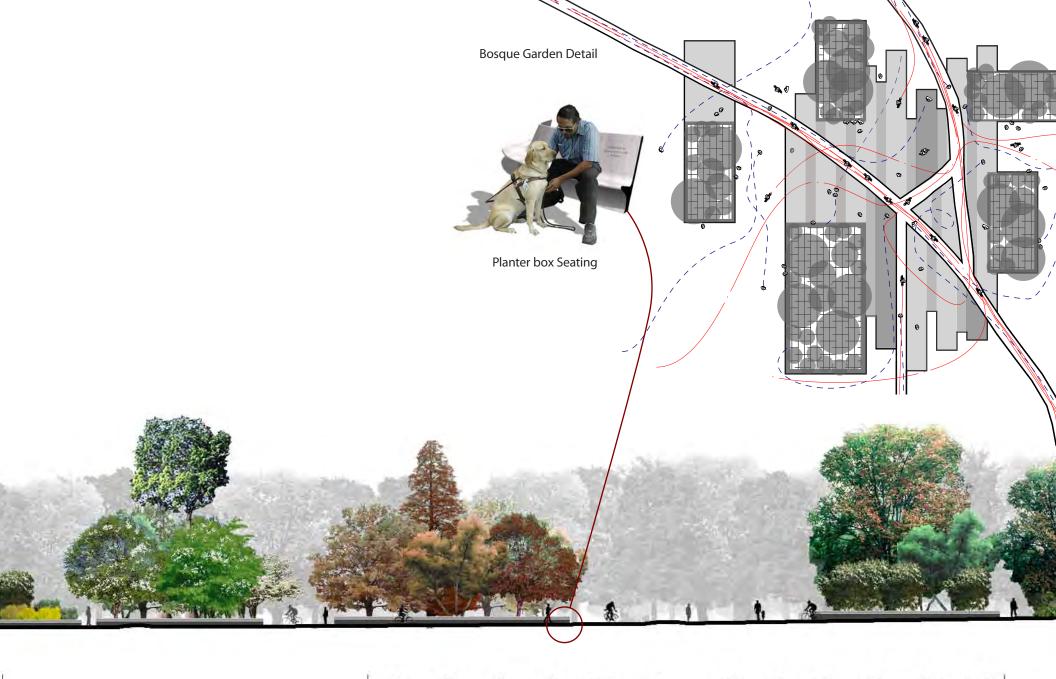




**Bosque Plaza**: Akin to the classic Asian rock garden, the ground surface of the Bosque Plaza is a fine granulated rock accented with bosques (tree stands) of specimen trees. The open Plaza showcases individual bosques composed to create the coordinated floral effects of bouquets. Unlike the Grand Lawn and Shumard Allee, the Plaza's character derives from the tree arrangements within it, rather than trees aligned at the edge as a frame. The Plaza's large scale accommodates the bustle and traffic produced from the concentration of existing paths in the Plaza. The fast speeds of cyclists are calmed by the diffused placement of the bosques, allowing for pedestrians and cyclists to safely share the space. Intimacy is provided by the bicycle rest station and seating for pedestrians in the shade of the bosques.



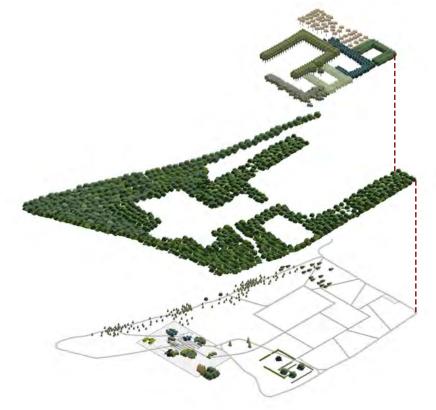
BOSQUE GARDEN



## BOSQUE GARDEN







Even if the meadow ecology were allowed to succeed into its natural climax system of forested trees, the garden rooms would remain.





## Clearings, Clusters, and Cloisters

A Garden of Trees for Two Rivers Park
Prepared for Pulaski
County, Arkansas

## List of Drawings

L1 Trail Dimension Plan L2 Ground Surfaces Plan

L3 Bosque Garden Surfaces Dimension Plan

L4 Fibonacci Garden Surfaces Dimension Plan

P0 Planting Key Plan

P1 Planting Plan Sheet 1 of 6 P2 Planting Plan Sheet 2 of 6

P3 Planting Plan Sheet 3 of 6 P4 Planting Plan Sheet 4 of 6

P5 Planting Plan Sheet 5 of 6 P6 Planting Plan Sheet 6 of 6

P7 Planting Plan Large Format





UACDC University of Arlansas Community Design Center ARKANSAS FORESTRY COMMISSION

Two Rivers Park

