

Campus Master Plan

Spring 2019

Osage
Forest
of Peace



May Peace Prevail On Earth

世界人類が平和でありますように

OUUDS



Osage Forest of Peace Campus Master Plan

Prepared for the:

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Osage Forest of Peace

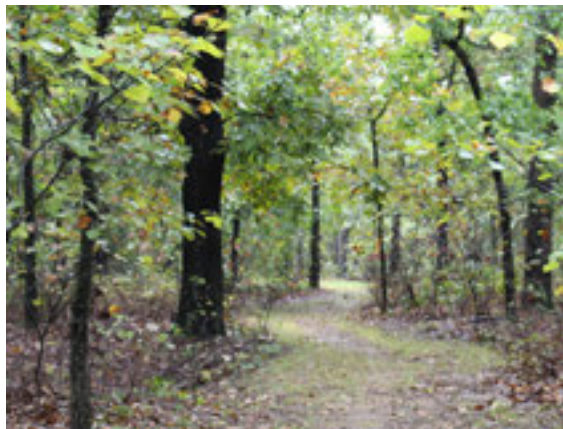
Rev. Don Chatfield, Ph.D.



Campus Master Plan

Mission

The Osage Forest of Peace is an interspiritual, contemplative retreat center, providing sacred space for individual retreats, group retreats, or a day of respite from the busy world. Our environment is supportive of all those who desire to engage in *a dialogue of the heart* through prayer and meditation. Inspired by the wisdom and vision of Father Bede Griffiths, Osage Forest of Peace was founded as a monastic ashram in 1979 by Sister Pascaline Coff and the Benedictine Sisters of Perpetual Adoration. Today we continue to embody the original vision by being an interspiritual, contemplative retreat center and drinking from the wellsprings of the great spiritual traditions. Through contemplative silence, a simple life-style, and communal living, we offer hospitality to all who seek to deepen their spiritual practice



A natural and spiritual pathway in the Forest.

Vision

Our vision is to create sacred space to nurture spirit in support of a more peaceful world. The Forest develops our programs and retreats based on **Five Focus Areas** designed to guide the realization of our vision:

Interfaith Connection – including interspiritual dialogue, interfaith forums, and community building. Our affiliation with the Foundation for New Monasticism and InterSpirituality aligns us with groups around the world who share a similar vision.

Education – we are committed to offering educational programs to teach meditation, mindfulness, contemplative practice and spiritual direction. Our School of Spiritual Direction graduates new spiritual companions each year trained in deep listening.

Caring for Caretakers – we seek to provide programs and retreats to support clergy, therapists, medical personnel, and teachers. These programs integrate contemplative practice into self-care activities that keep caretakers strong and balanced.

Mental Health and Addiction – we partner with 12-step programs, therapists, and spiritual teachers to provide tools to deal with addictive tendencies and to recognize and address co-dependency and anxiety.

Veterans and Veterans' Families – we seek to provide support and spiritual tools for veterans and their families. Offerings include a Respite Retreat for veterans' families in collaboration with Veterans Families United.

Growth

The demand for facilities to support the vision of the Osage Forest of Peace continues to grow. This plan is the Forest's official plan to guide expansion. Currently, the Forest can host groups of up to 30 people and house up to 25 overnight guests in its 15 cabins. Larger groups of up to 100 people regularly make inquiries looking to book space for retreats, meetings, and special gatherings. The Osage Forest of Peace Campus Master Plan provides guidance on how to expand the campus to accommodate day groups of 75 to 100 guests and eventually provide lodging for around 60 to 70 people.

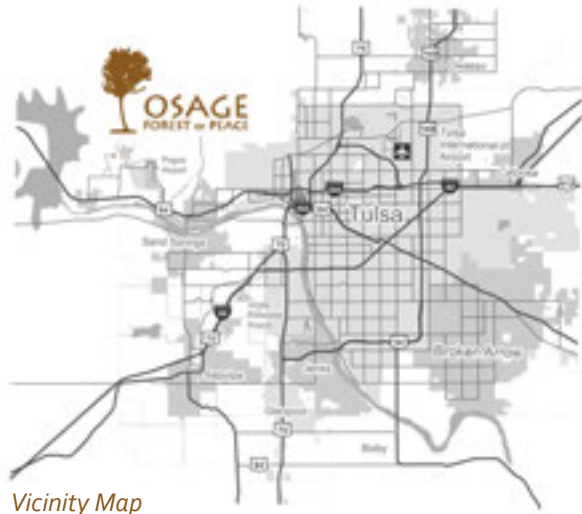
The plan recognizes the need to balance the varying needs of the permanent residents and long-term visitors of the Forest with short-term needs of small and large groups. Maintaining the contemplative and intentional way-of-life in the Forest is essential. Creating sustainable and resilient development is also important to the Forest, particularly the need to preserve the fragile forest environment and withstand the threat of natural disasters.



Campus Master Plan

Existing Conditions





Vicinity Map

Tract C :

Lots 17 and 18, Block One, The Estates at Shell Creek West, a Subdivision in Section 26, Township 20 N, Range 10 E, Osage County, State of Oklahoma, according to the recorded plat thereof.



Location Map

Tract A:

A tract of land in the NE/4 of Section 26, Township 20N, Range 10 E of the Indian Base and Meridian, Osage County, State of Oklahoma, according to the the US Government Survey thereof,



Property Plat

Which tract is described as follows: Beginning at the corner of said NE/4; thence Westerly along the Northerly line thereof a distance of 1,0008.00 feet; thence Southerly and parallel to the Easterly line of said NE/4 a distance of 1,782.15 feet; thence Northeasterly along a deflection angle to the left of 96° 10' 20" a distance of 1,013.88 feet to a point on the Easterly line of said NE/4; thence Northerly along said Easterly line a distance of 1,675.00 feet to the point of beginning.

Tract B:

A tract of land in the NE/4 of Section 26, Township 20N, Range 10 E of the Indian Base and Meridian, Osage County, State of Oklahoma, according to the the US Government Survey thereof, said tract being more particularly described, to wit: starting at the NE corner of Section 26; thence Westerly along the Northerly line of Section 26 for 1008.00 feet; thence South along a deflection angle to the left of 89° 53' 39" and parallel with the Easterly line of Section 26 for 909.91 feet to the point of beginning of said tract of land; thence continuing Southerly and parallel with the Easterly line of Section 26

for 802.24 feet; thence Northwesterly along a deflection angle to the right of 133° 19' 45" for 83.00 feet; thence Northwesterly along a deflection angle to the right of 7° 23' 57" for 167.38 feet; thence Northerly along a deflection angle to the right of 34° 36' 53" for 668.37 feet, thence Southeasterly along a deflection angle to the right of 107° 32' 24" for 226.29 feet to the point of beginning of said tract of land.

The Osage Forest of Peace is conveniently located 20 minutes west of Downtown Tulsa. The Forest is approximately a one hour drive from Stillwater, Pawhuska, or Bartlesville, OK. Oklahoma City, Wichita, KS, and Fayetteville, AR are two hours away. Tulsa International Airport is 30 minutes to the east and provides direct flights to Los Angeles, Denver, Dallas, St. Louis, Atlanta, and 14 other U.S. destinations.

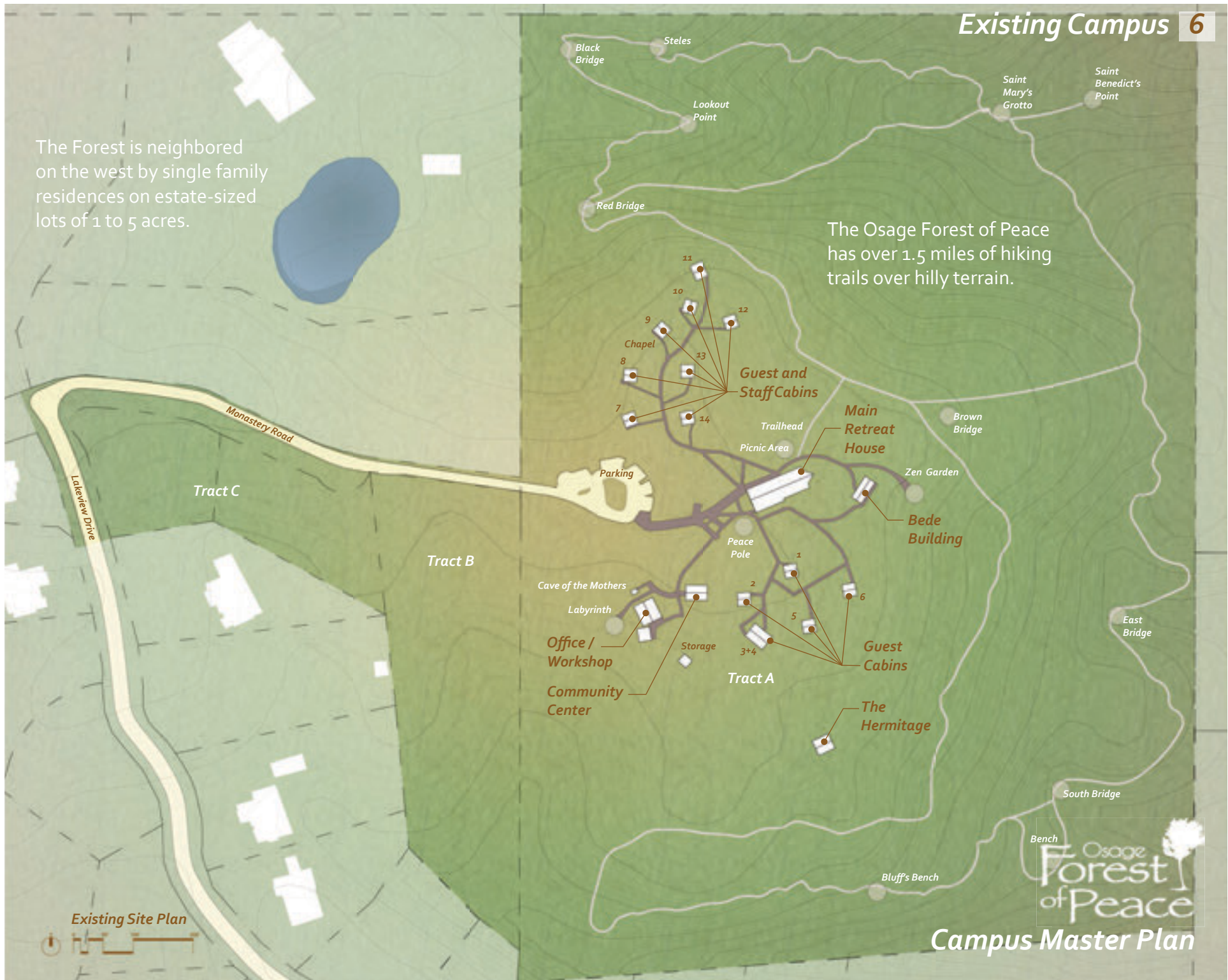
Driving Directions: Take US Highway 412/64 West past the town of Sand Springs; exit at 177 West Avenue. Turn right and drive about 1 mile to Anderson Road. Turn left on Anderson Road. Continue about 1/2 mile to the entrance to the Shell Creek West housing subdivision. Turn right onto North Ridge Avenue. Turn right at Lakeview Drive. Turn right onto Monastery Road and continue to the parking lot.

The Forest consists of four tracts of land comprising a 45 acre campus. The main site and all of the improvements are located on Tract A. Tract B and Tract C are buffer tracts to give the Forest privacy and reduce impact on nearby neighbors. Tract C consists of two subdivision lots originally intended for houses. These lots have restrictive covenants, but may be used for single residences or low-intensity uses like a campus garden. Tract B has no restrictions and as a cleared, level spot, may be useful for parking.



The Forest is neighbored on the west by single family residences on estate-sized lots of 1 to 5 acres.

The Osage Forest of Peace has over 1.5 miles of hiking trails over hilly terrain.



Existing Site Plan



Vegetation

The site is heavily forested with post oak, blackjack, black hickory, black oak, and invasive red cedar, typical of the Cross Timbers, a wooded ecosystem combining species from eastern and western forests. Understory includes a variety of shrubs, grasses, and another invasive plant, greenbrier. The site has few clearings or open spaces.

Geology

The Forest sits atop a ridge between Keystone Lake and Shell Lake, manmade reservoirs on the Arkansas River and Shell Creek respectively. The nearby lakes are not usually visible due to the forest foliage, but could be easily observed from an observation deck above the tree line. The ridge is part of the Wann Formation of sandstone and shale which trends south from Kansas. Avant Limestone from the Lola Formation is exposed in the ravines. These sedimentary rocks are near the surface and the site has many outcroppings. Areas with soil are sandy loam of the Darnell Series with excellent drainage characteristics.



Campus Master Plan



From eye level, the Forest presents isotropic views in all directions. The master plan rejects grids, concentric circles, axes, tile patterns and other formal geometries that are poorly perceived in this visual environment.

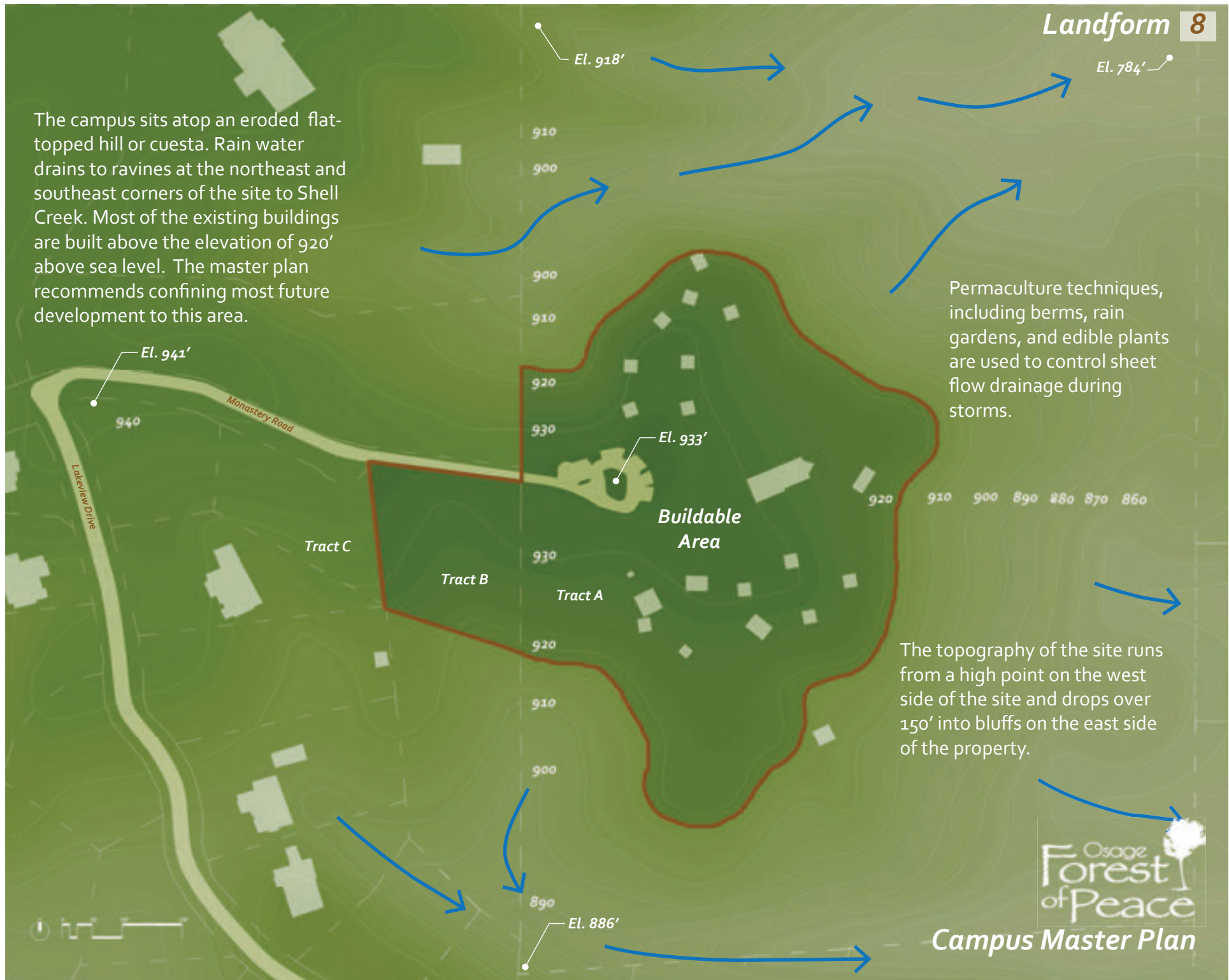


View looking east above the treeline of the Forest. Photo taken during the winter season.

The campus sits atop an eroded flat-topped hill or cuesta. Rain water drains to ravines at the northeast and southeast corners of the site to Shell Creek. Most of the existing buildings are built above the elevation of 920' above sea level. The master plan recommends confining most future development to this area.

Permaculture techniques, including berms, rain gardens, and edible plants are used to control sheet flow drainage during storms.

The topography of the site runs from a high point on the west side of the site and drops over 150' into bluffs on the east side of the property.



Trails and Landscape Art

The Osage Forest of Peace is a haven for hikers, naturalists, and visitors interested in outdoor contemplation. The site has over 1.5 miles of trails with several benches to rest at or picnic. The terrain is hilly and can prove strenuous in areas. The Forest also provides habitat for many species of plants, mammals, birds, reptiles, and insects.



Osage Forest of Peace Trailhead

There are several excellent sculptures and art works along the trails, including a group of stacked stones or steles, each with its own personality. A small shrine to the Virgin Mary can be found in Saint Mary's Grotto. The Forest also has a small Zen Garden that can be raked mindfully. Prayer flags adorn the surrounding



Steles

trees, blowing their prayers into the wind. Another activity is the Woodland Labyrinth, designed for practicing walking meditation. Even the Forest's storm shelter has been designed

for reflection. Known as the Cave of the Mothers, it is a chamber devoted to the feminine divine with decorative art work inspired by the subterranean Hal-Saflieni Hypogeum in Malta. It also houses a small altar inspired by the Alhambra in Granada.



St. Mary's Grotto



Woodland Labyrinth



Zen Garden



Cave of the Mothers

History

The Benedictine Sisters of Perpetual Adoration (BSPA) under the leadership of Sister Pascaline Coff purchased the original 40-acre property in the late 1970s for construction of a monastery. BSPA purchased the property from the Osage Nation. When the building of the monastery was complete, the tribal elders dedicated the site with a buffalo roast. When the subdivision to the west was being developed, the BSPA purchased an additional 3 acres as a buffer from the residences. BSPA operated the monastery until 2009, at which time it became an independent, nonprofit retreat center.

Existing Improvements

The largest structure is the Main Retreat House, which includes the meditation chapel, dining room, library, kitchen, and laundry facilities. The Bede Building and the Community Center provide meeting space. Fourteen residential cabins provide accommodations for guests and resident staff. The Executive Director's Office and Workshop share another building.



Campus Master Plan



View of Main Retreat House

Existing Campus Plan

Plan view of existing development. Gravel parking for approximately 20 cars is provided at the terminus of Monastery Road.

Electricity, communications, water, and gas service enters the site from Monastery Road. The electric and communications lines are hung from poles before being routed underground with the other utilities near the entrance to the campus. The gas and water lines split near the entrance with one branch feeding the



north cluster of cottages and the other branch running east to the Main Retreat House and the south cluster of cottages. Electricity runs directly to the Main House before branching to the north, south, and east to Bede's Building. A new service road from the new parking area could provide a route for services to the new buildings.

Sanitary waste is handled by five septic tanks: two for the north cluster of cottages, two for the south cluster of cottages, and one for the Main House. The effluent from the tanks is then routed to two sets of lateral lines and leach fields on the east edge of the campus. These areas need to be avoided for future development. Sanitary waste disposal is one of the more vexing of issues for the expansion of the Forest. Future buildings should be served by a central sewage treatment plant. Pre-packaged plants are available for this purpose.

A major concern at the Forest is the threat of fire. Water volume and pressure should be tested to measure the capacity for future expansion and fire control. New buildings should have sprinkler systems to protect persons and properties. Fire hydrants should be provided near the site entrance. If capacity is too low, a storage tank and fire pump should be considered.

The discussion in this section is necessarily conceptual. An engineering study of the existing utility condition and capacity has not been undertaken. No professional survey exists locating the site utilities. The map shown here was created from a hand drawn sketch provided by the Forest operations staff. The utility locations are believed to be approximately correct but must be verified before any further studies or construction can occur.

Sustainability

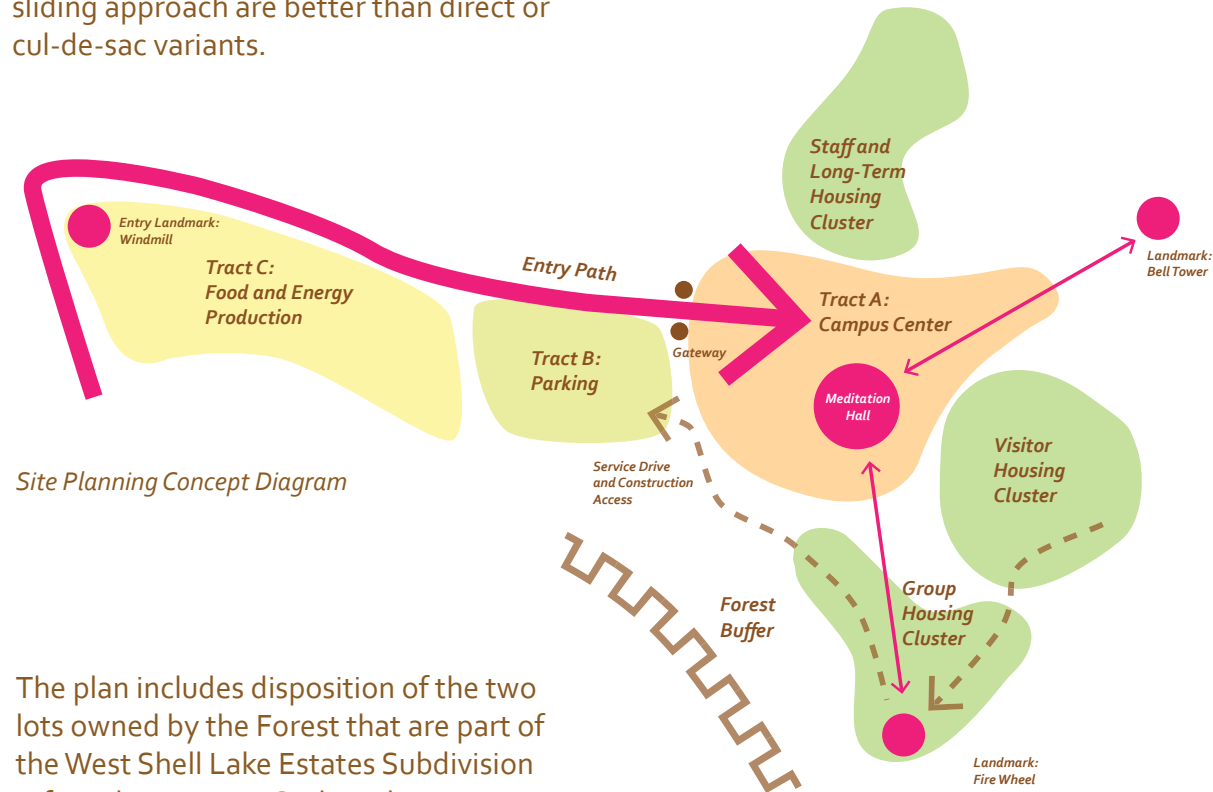
New infrastructure on the site should be sized and built with the capacity to provide for the total aggregate needs of the long-range plan. Creating sustainable development is important to the Forest. Some sustainable methods are more appropriate for the Forest than others. Due to the tree canopy, on-site power generation potential on Tract A, either by solar or wind, is low. However, geothermal heat pumps will work well if drilling is feasible, as would highly efficient building envelopes. Central heating and cooling for the campus would have high front-end costs but could reduce operational cost and eliminate noisy HVAC units.



Site Planning



The entry sequence into the Forest requires special design attention. Keeping cars and parking out of the Forest is desired. Having visitors walk into the Forest creates a sensory experience that is lost if visitors drive right under the trees. Drop-off zones that use an oblique or sliding approach are better than direct or cul-de-sac variants.



Site Planning Concept Diagram

The plan includes disposition of the two lots owned by the Forest that are part of the West Shell Lake Estates Subdivision referred to as Tract C. These lots are governed by restrictive covenants, but might be used for gardening, energy production, and other needs. The forest buffer between the existing houses and the campus is maintained in Tract A and Tract B.

The design concept tries to recognize the varying needs of the permanent residents and long-term visitors of the Forest with short-term needs of small or large groups. Maintaining the contemplative and intentional way of life in the Forest is essential.

There is an advantage to using a dense, clustered concept to help reduce the footprint and impact of building. Development is limited to the area above the 920' elevation around the existing buildings to avoid areas with steep slopes and rocky soils.

Site Design

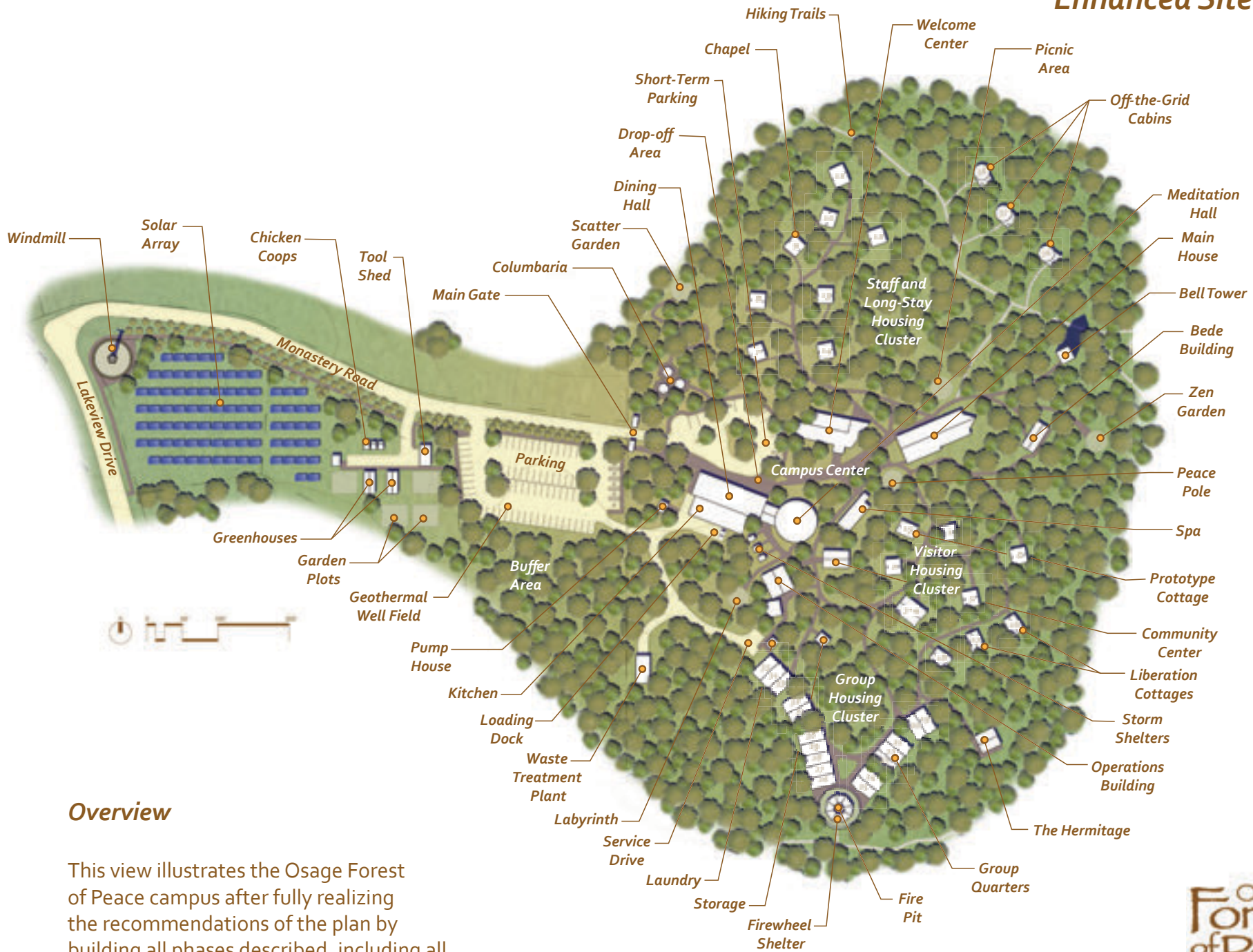
Site concepts that use formal geometries do not work well in the Forest. Grids, concentric circles, axes, and tile patterns are too rigid and are obscured by the isotropic views inside the Forest. They also do not respond to the significant topography and slopes in the Forest. More successful concepts focus on clustering features in an organic arrangement that create a sequence for visitors. Portals and landmarks are effective wayfinding devices.

Architecture

Simple architectural forms are preferred over complex ones. Simple structures are likely to cost less, be easier to build, and decrease the likelihood of leaks and other maintenance problems. Buildings with many floor levels present accessibility issues and limit flexibility. Given the multi-faith tradition of the Forest, architecture materials, details, and styles should not reflect any specific faith tradition. Building materials should be natural: wood and sandstone, that blend into the environment.



Enhanced Site Plan 15



Overview

This view illustrates the Osage Forest of Peace campus after fully realizing the recommendations of the plan by building all phases described, including all enhancements. The full buildout may take fifteen to twenty years.



Campus Master Plan

Strategies

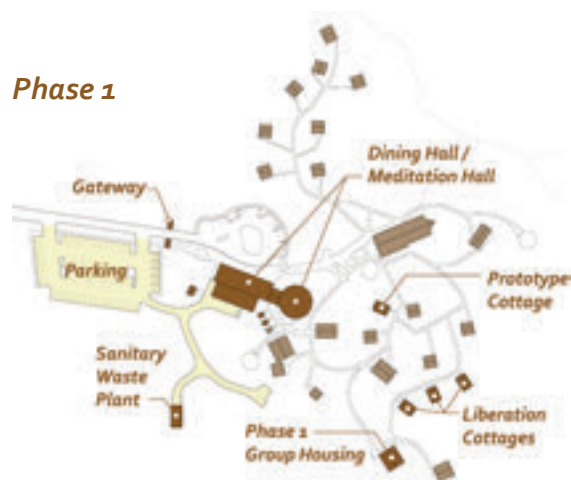
The proposed Dining Hall and Meditation Hall is a logical first phase. It is sized to accommodate large groups of up to 100 people. Completing this building first, will then allow renovation of the existing main building. Expansion of the existing campus needs to recognize and minimize impact on the normal, daily operations of the Forest.

Phasing of new housing should accommodate incremental growth. The proposed housing uses a backing out sequence to minimize disruption to the Forest.

New infrastructure on the site should be sized and built with the capacity to provide for the total aggregate needs of the long-range plan. Most new infrastructure is included in Phase 1.

Heavy construction activities should be scheduled in August when the Forest is closed or during other slow periods. Heavy equipment and trucks access should be limited. Noise, exhaust, and construction waste should be monitored and minimized.

Phase 1



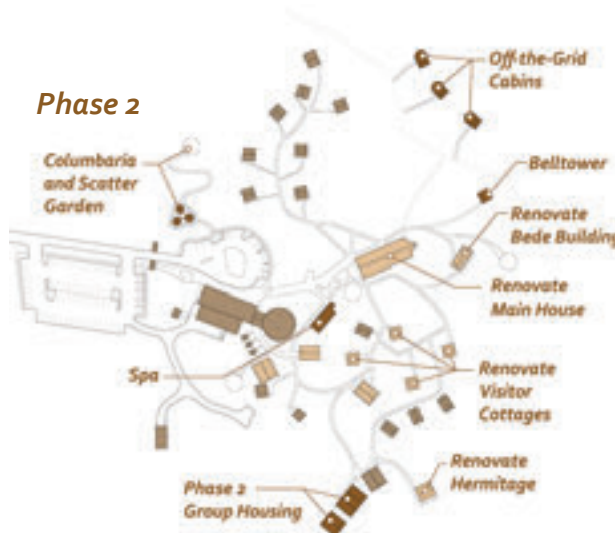
Phase 1 includes construction of the new Dining and Meditation Hall with associated Parking, and Sanitary Plant. New housing starts with a Prototype Cottage and continues with a series of 6 to 8 new housing units.

Phase 3



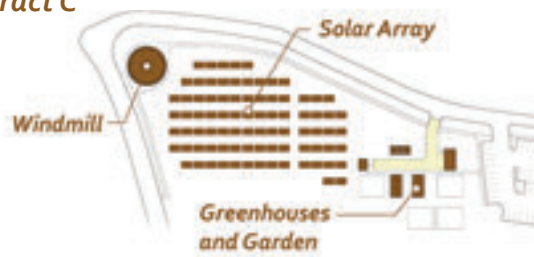
Phase 3 completes the Group Housing Cluster with another 5 to 10 units. The North Staff and Long-term Housing Cluster is renovated and the Welcome Center completes the Campus Center.

Phase 2



Phase 2 continues expansion of lodging capacity with 5 to 8 new units and renovation of the South Visitor Cottage Cluster. The Main Retreat House, Bede's Building, and Operations are also renovated. Several amenities are added. The Off-the-Grid Cabins and the Columbaria shown in the phase are independent projects that can be built at any time.

Tract C



The Tract C lots can be addressed independently from the other phases. These lots could be sold for working capital or used for two staff boarding houses. For the purposes of this plan, the east lot is home to the campus garden and the west lot is used for a photovoltaic array.





Gateway Entrance to the Campus Center



Bell Tower above the Trees

Creating a Sense of Arrival

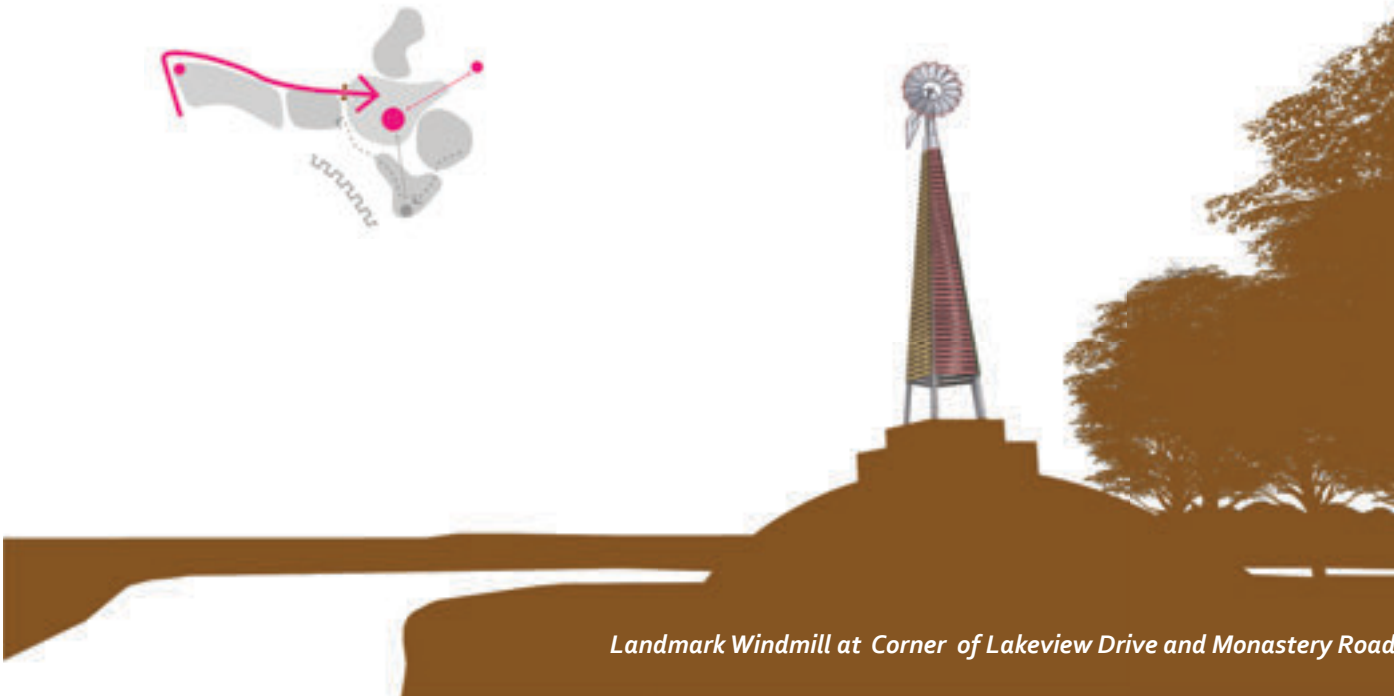
The long approach to the Forest of Peace does not give visitors an indication of their arrival. The plan calls for a landmark windmill or chorten at the sharp bend where Lakeside Drive turns into Monastery Road.

Leaving Behind the Mundane

Entering the Forest represents leaving quotidian concerns behind for an intentional experience. A new gateway at the entrance announces this shift in experience. While cars can pass if the gate is open, they will mostly be kept outside.

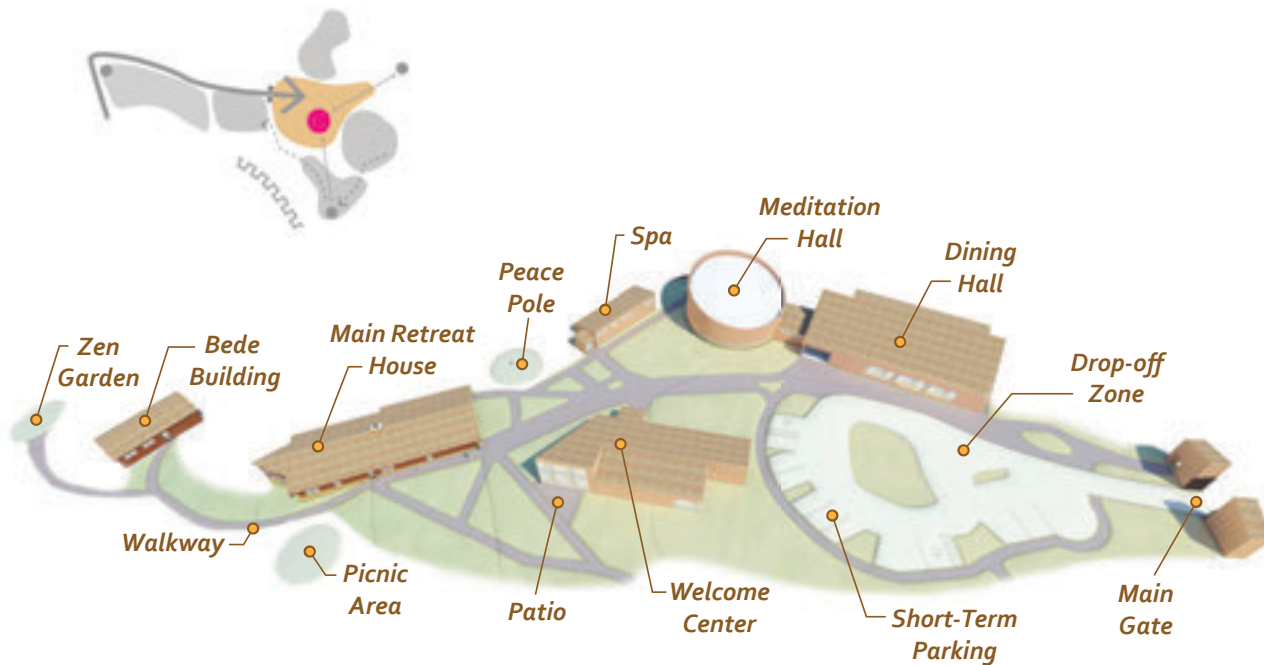
An Uplifting Gesture

A new bell tower with an observation deck above the treeline becomes an aspirational element that shows visitors the way into the deep woods.



Landmark Windmill at Corner of Lakeview Drive and Monastery Road





Campus Center (trees omitted for clarity)



Bird's Eye View of Campus Center looking Northeast

A Crossroads of Activity

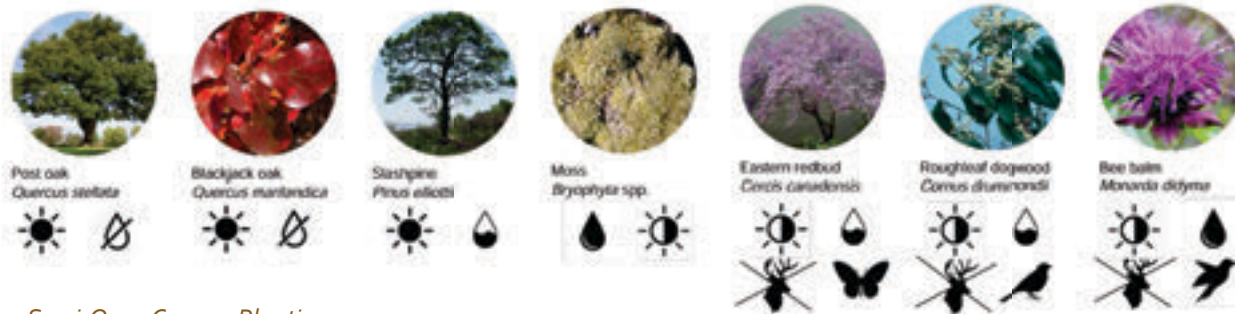
While the Forest is not organized around a formal geometric space, it does have a strong center, a crossroads to which all the paths lead. It is anchored by the communal activities of the campus: the Meeting and Dining Halls, the Welcome Center, and the Main Retreat House. A wide sinuous path connects all of the functions from the gatehouse and arrival zone through the campus center to the branches leading to the housing clusters, site features, and hiking trails.



Campus Walkway looking west with the Welcome Center on the right and the Meditation / Dining Hall on the left



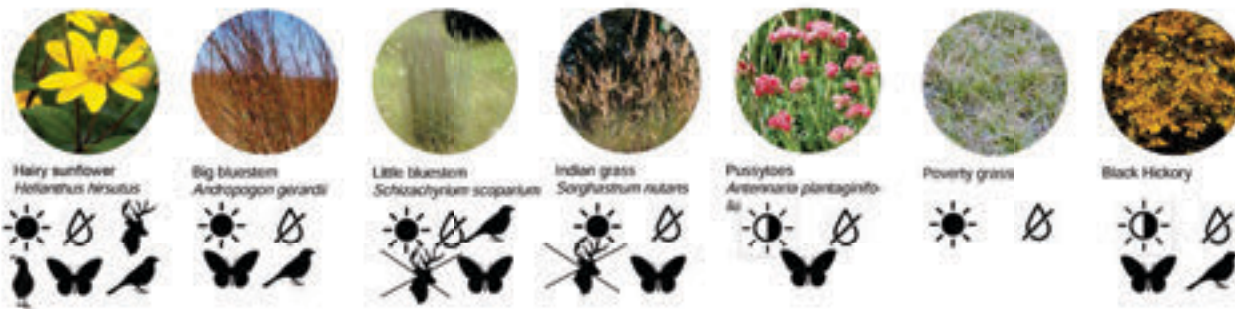
Dense Canopy Plantings



Semi-Open Canopy Plantings



Open Prairie Plantings



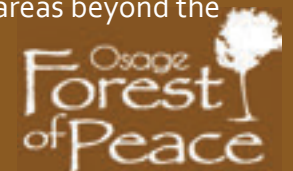
Regionally Appropriate Vegetation

The plantings in the Forest should be native perennial species like the ones shown here. Intensive and annual plantings should be avoided, except in a few key locations such as the Forest Gateway, the Columbaria and Scatter Garden. And at nodes along the walks and trails, where they may provide some seasonal color and attract birds or insects. Many thanks to Landscape Architecture student Kimberly White for compiling the vegetation list.

The Forest is located in the Cross Timbers Region, a sandy-loam savannah ecotype. It is an upland savannah dominated by oak and hickory trees with bedrock outcrops and narrow streams. The forest understory is populated by a variety of forbs and shrubs. Open areas give way to prairie grasses of long- and short-bluestem. The area has also been invaded by eastern red cedar, which if uncontrolled can overtake a site.

Management over Maintenance

Savannah communities require fire to prevent encroachment of woody species and build-up of leaf litter. Fire, however is a threat to buildings and inhabitants. To the extent possible, the Forest and its neighbors should follow best forest management practices. First, invasive species like red cedar should be removed from the forest. Removing the cedars promotes forest health and removes ladders for fires to reach the tree canopy. Second, areas within 200' of the buildings should be cleared regularly to create fire breaks in the understory. Lastly, controlled burns should be set periodically to consume litter and promote new healthy understory growth in areas beyond the fire breaks.

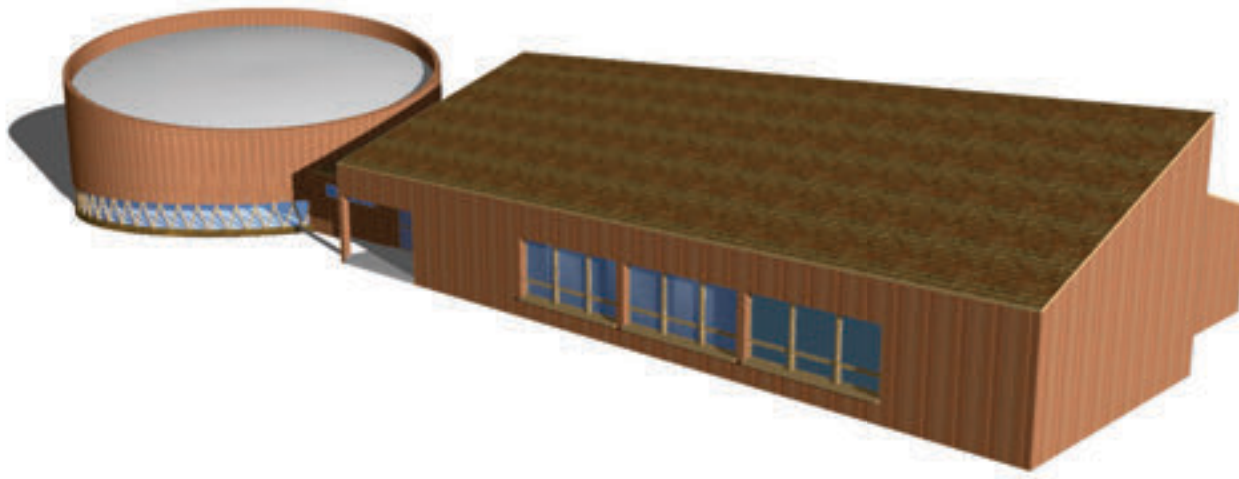


Building Program



Campus Master Plan

Dining and Meeting Halls 21



Massing Model

The simple masses of the rectangular Dining Hall and the truncated cone of the Meeting Hall are clearly visible in this view of the north elevation of the building. The two are linked together by a shared vestibule. The Dining Hall mass contains the attached kitchen and restroom facilities for both assembly spaces. The Meeting and Meditation Hall could be built simultaneously or added at a later time.



The proposed Dining and Meeting Halls are located near the main entrance of the Forest. This location makes them convenient for events and reduces their impact on Forest residents. It also reduces the environmental impact during construction. Designed as counterpoints to each other, the connected dining and meeting halls form the architectural centerpiece of the new campus plan. The 2,000 square foot Dining Hall can seat 120 at long tables or 100 banquet style. The accompanying 1,600 square foot commercial kitchen can be used for self-service or table service. The Meeting Hall is located near the center of campus. Its 56' diameter volume can seat 120 in row seating, 100 in the round, or up to 60 with yoga mats.

The architecture of the building uses simple massing that expresses the spaces inside. Clad with natural materials of local stone and vertical wood siding, the buildings blend into the forest environment despite their somewhat imposing scale.

Meeting Hall

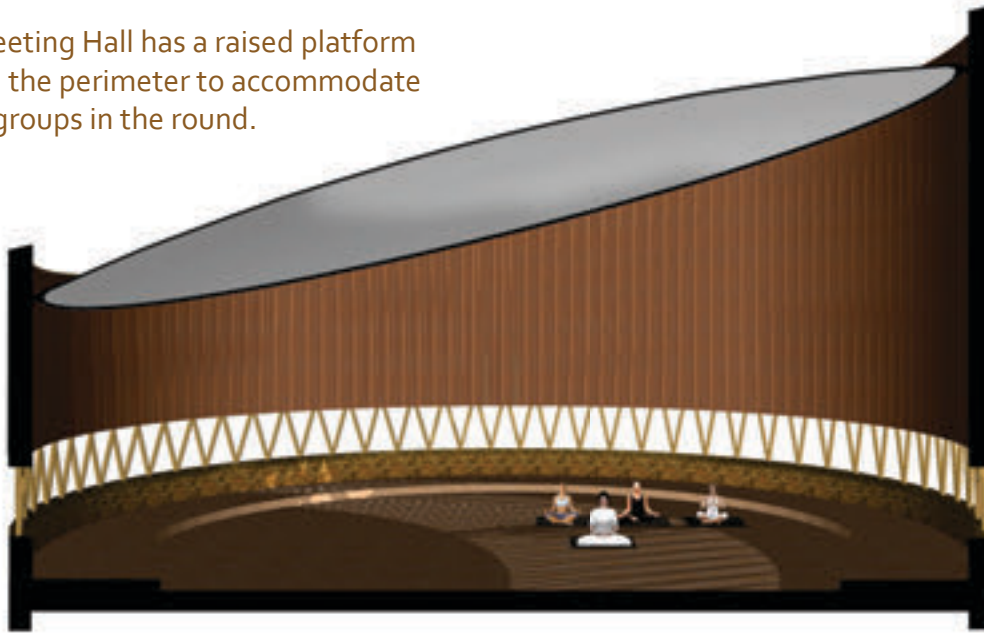
The Meeting Hall is a feminine, circular form with low windows around the base. Architecture student Daniel Kleypas originated the concept to place the windows low, which allows the room to be perceived as a completely enclosed space while standing, but allows an unobstructed 360 degree view of the forest when seated. Its shape is derived from a tree trunk engraving of Sister Pascaline's One Heart mantra. The structure resembles a yurt with a lattice wall truss of diagonal wood framing and a translucent roof.



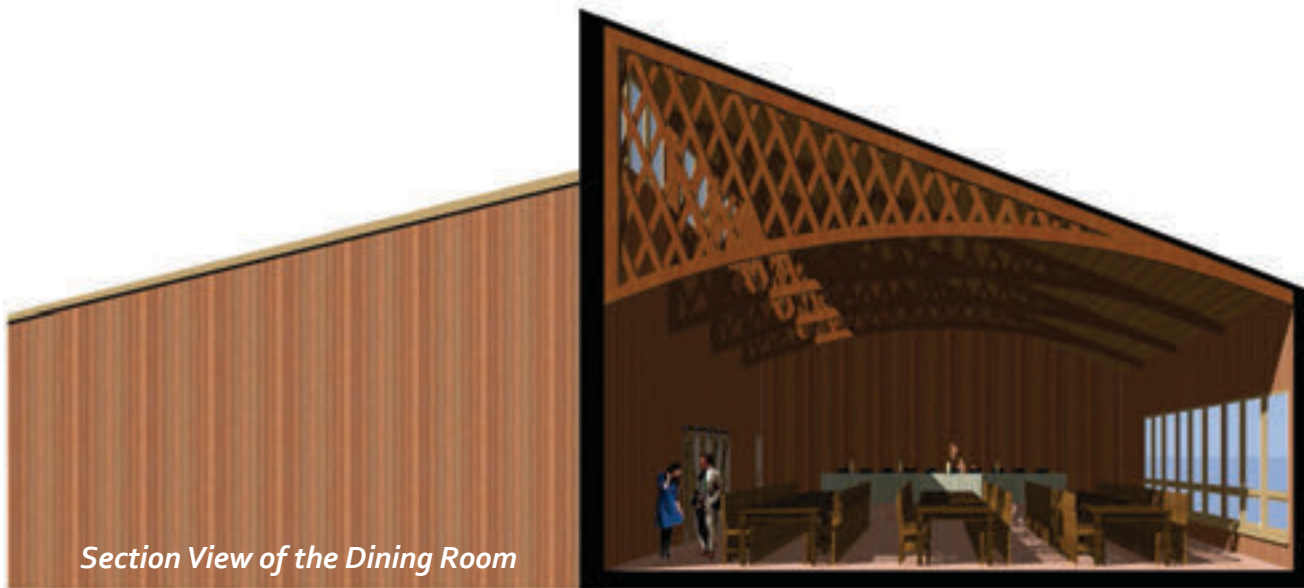
Dining Hall

The Dining Hall is a masculine, rectangular space lit from above by a row of clerestory windows facing south. In this space the lattice roof trusses are exposed overhead. Lattice trusses can be built from small dimension lumber and do not require heavy equipment to lift into place.

The Meeting Hall has a raised platform around the perimeter to accommodate larger groups in the round.



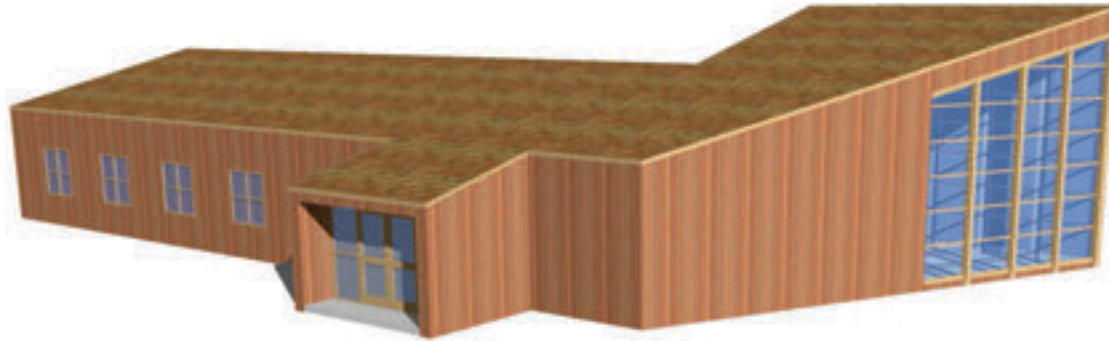
Section View of the Meditation Space



Section View of the Dining Room

The Dining Hall has a stage on the west end for presentations or for use as a banquet dais. The space could also be used for weddings and other events that use a processional format.





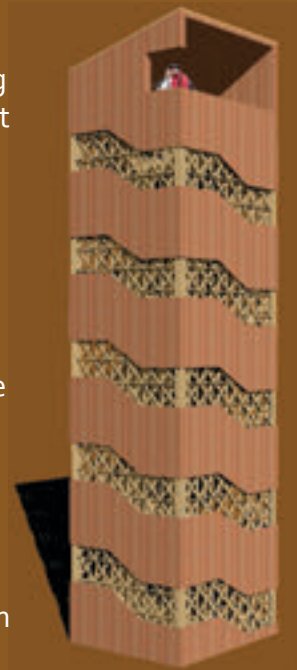
Massing Model

The Welcome Center is a rectangular mass with several additive modifications. The entry vestibule projects from the south side to announce its importance to visitors. The Executive Director's office extends to the west. A soaring, triangular prow, echoing the geometry of the Main Retreat House, extends the coffee shop into the forest.



Bell Tower

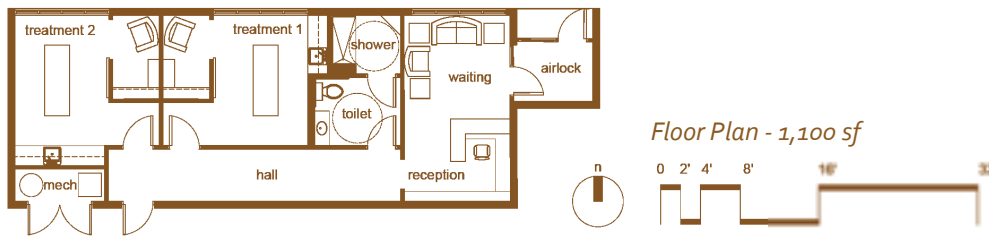
Another welcoming feature is the Forest Bell Tower. This vertical landmark greets guests visually and aurally. The 50' tower has an observation deck above the tree canopy with views of the surrounding woods, lakes, and skyline. Climbing the stairs and ringing the bells can also be a spiritual practice.





Massing Model

The Spa is a another simple rectangular building with a shed roof. The clerestory windows are kept high to admit north light into the treatment rooms, while providing privacy for guests. The entrance vestibule reverses its roof pitch for emphasis.



Floor Plan - 1,100 sf



Bedes Building - 840 sf

Physical wellness and healing are an important part of the Forest of Peace’s vision. The Forest currently offers limited spa treatments and wellness programs. Lack of facilities is one reason these services cannot be expanded and promoted.

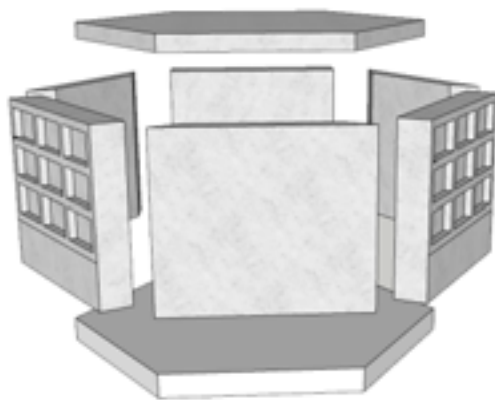
The existing Bedes Building is currently used as a flexible space for meetings, but is also converted to a dojo for small yoga classes or as a treatment room for Reiki. However, it lacks running water or a private changing room. The plan proposes a new Spa Building in the Campus Center. The example shown here is a modest building with two treatment rooms with private changing spaces. It could be used by staff or leased to contractors for massage or other spa services. The building is planned with a single loaded corridor, so more treatment rooms can be easily added later, if demand warrants it. Meanwhile, Bedes Building could be dedicated for group activities like yoga or tai chi. It could also be fitted with some fitness equipment for forest residents and visitors to use.



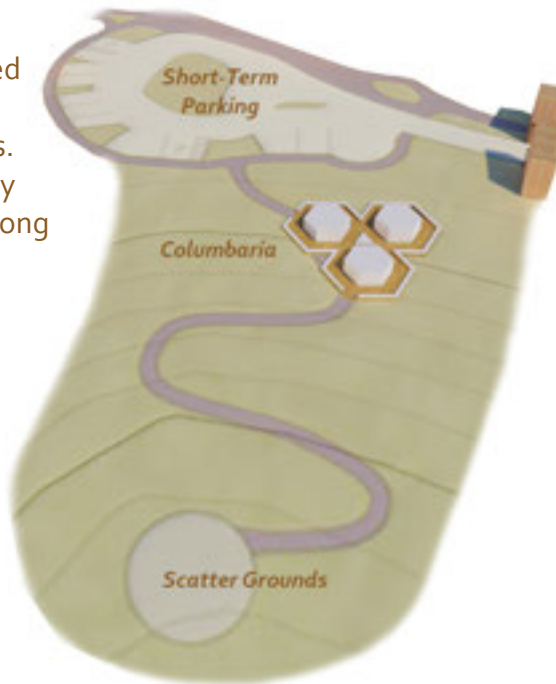


View of Columbaria from Above

The columbaria are based on the hexagonal geometry of Chinese pagodas. They are envisioned as modular precast concrete units consisting of standard grids of niches alternating with flat sides. These are attached to top and bottom slabs. Many thanks to Landscape Architecture student Yujie Dong for the design concept of the columbaria.



Columbarium - Exploded View



Memorial Garden Site Plan - (trees omitted for clarity)

The Osage Forest of Peace has received requests and is studying the requirements for storing and scattering cremated human remains in a Memorial Garden. The Memorial Garden would be located close to the Forest entrance and short-term parking area, but would be separated from the other campus functions. Located on the north side of the Campus Center, a short path leads to a series of columbaria where cinerary urns would be stored in niches. The columbaria are designed as modular units holding 27 to 48 urns each. Building in this fashion allows for the garden to expand naturally over time without a large initial investment in many unused niches. It also reduces the visual impact in the forest by eliminating a long horizontal line and keeping the height of the modular units below eye level. The tops of the columbaria could be used for flowers and remembrances. A scattering ground would also be provided deeper in the woods, at the end of a winding path that drops into a hollow. Perennial plantings and understory would shield and surround the Memorial Garden to promote a quiet and contemplative setting for ceremonies and visitation.





Main Retreat House - 4,150 sf

The Main Retreat House will continue to serve as the center of daily routines at the Forest. Renovation of the Main House will preserve the Meditation Room with its intimate view of the forest, Native Sundance Circle floor plan, and Buddhist Dharma Wheel chandelier. The library will be enlarged to provide more shelf space and accommodate meetings. The kitchen will be retained to serve small groups when the dining hall is in use for an event. The restrooms will be made accessible and the housekeeping spaces will be enlarged for improved laundry and linen service.



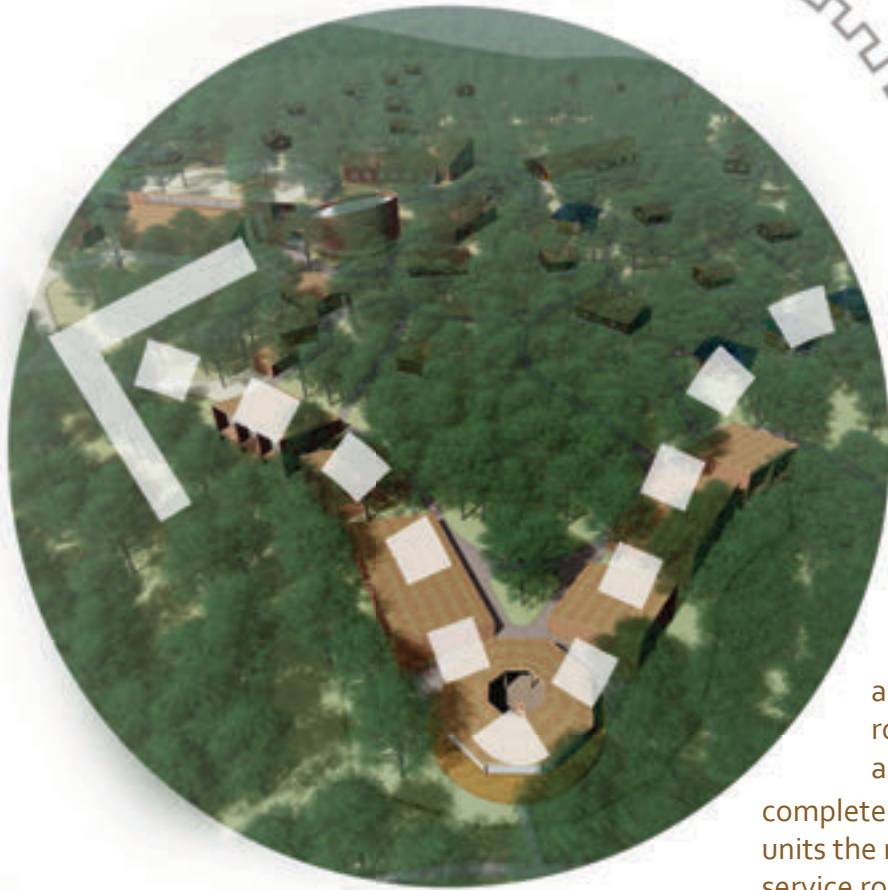
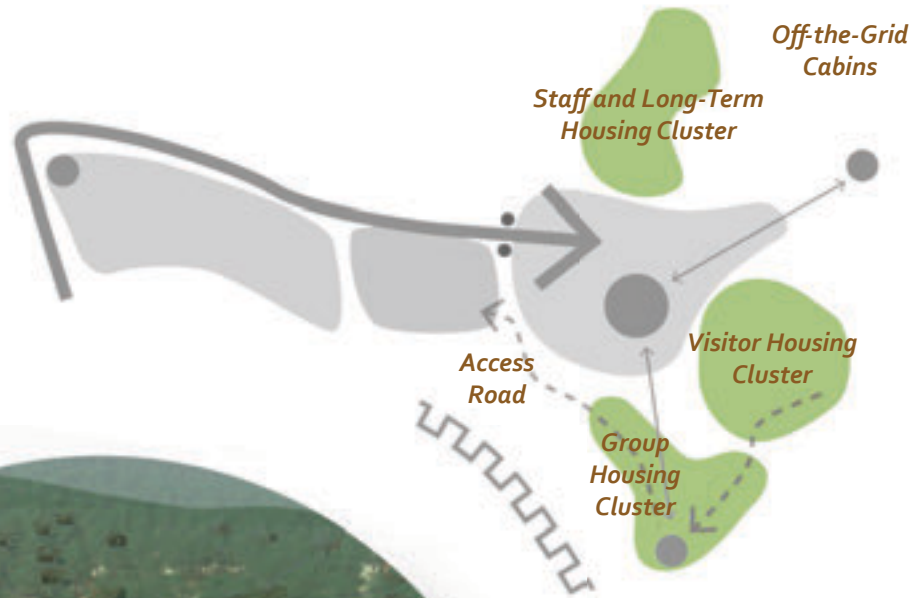
Meditation Room in the Main Retreat House

The existing buildings on the campus have been well-maintained, but with the completion of the new structures, a renovation program can begin to update them. After the completion of the Dining and Meditation Halls, the Main Retreat House can be remodeled. When the Executive Director moves into the Welcome Center, the Director's Office in the 1,200 square foot operations Building can be converted for the Building and Grounds Coordinator. The 900 square foot Community Center will also be redone and continued to be used for small groups.

The renovations will focus on needed maintenance, upgrades to mechanical, electrical, and plumbing systems, and energy efficiency improvements to meet the latest building and energy codes. The interior improvements will meet the American with Disabilities Act. Interior finishes and furnishings will also be updated.



Lodging at the Forest is grouped in clusters for staff and long-term sabbatical residents, cabins for short-term visitors, group housing clusters for short-term visitors, and off-the-grid units.

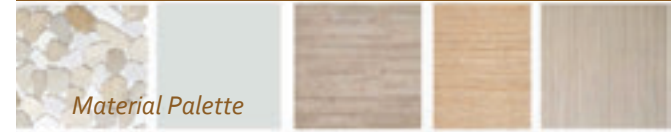


Housing Construction Sequence

New Liberation Cottages and group housing clusters will be built along a curved path following the 920' contour line on the south side of the Forest. The concept is to create a temporary access road to the Easternmost site for the Liberation Cottages. Construction will backtrack westward along this path, filling in the road and healing the forest as new housing units are completed. At the end of the housing units the road becomes a permanent service road for fire, maintenance, and utility access.

Providing for more overnight guests is a key part of the Osage Forest of Peace expansion. The construction of new lodging will proceed in phases, ultimately resulting in 35 to 40 housing units. The first phase will consist of adding four to eight new cabins, called Liberation Cottages, to the Visitor Housing Cluster. These might be added one by one in a partnership with the Christopher C. Gibbs College of Architecture Design Build Program through the Division of Construction Science. Once a few new cabins have been added, renovations can begin on the existing cabins, first in the Visitor Housing Cluster, then in the Staff and Long-Term Housing Cluster. Eight to eighteen group housing units will be added in a new Group Housing Cluster on the south end of the campus. The group housing would be equipped more like hotel suites than cabins. All of the new cabins and group housing clusters would be designed to meet the needs of guests with disabilities and would exceed ADA requirements. Renovated cabins would be adapted to provide for disabled guests to the extent feasible. Lastly, three to six Off-the-Grid Cabins or Treehouses would be built on the Eastern edge of the campus.





To explore design concepts for the Liberation Cottages, a design competition was staged for eight teams of students from the Christopher C. Gibbs College of Architecture. Each team consisted of Architecture, Interior Design, and Construction Science students. They were given a materials budget of \$25,000 to \$30,000 to design a 400 square foot, ADA accessible cabin. A version of the winning team's design is shown here.



The winning design team displays their trophies. From L to R: Rev. Don Chatfield Ph.D., Preston Couch, Katharine Adams, Raisul Islam, Ian Astorga, Heather Shue, Madison Blevins, and College of Architecture Dean Hans Butzer.

The Liberation Cottage shown here features at-grade construction, vertical wood siding, and a full-length entry porch. A small interactive Zen Garden greets guests. The whole composition is capped by a hipped roof. The first cottage will be a prototype built near the Main Retreat House as a model. Subsequent cottages will be built along the 920' contour per the lodging strategy. Cottages will face east or slightly southeast, like the existing cabins.



View of Meditation Area and Optional Kitchenette



Exterior View of Entrance Porch



View of Bathroom and Bedroom

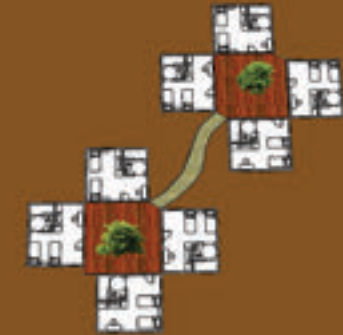


Floor Plan

The interior provides two twin beds for double occupancy, an accessible bathroom, writing desks, and closet storage. A folding partition divides a space for meditation from the sleeping area. One of the writing desks can be replaced with a small kitchenette.



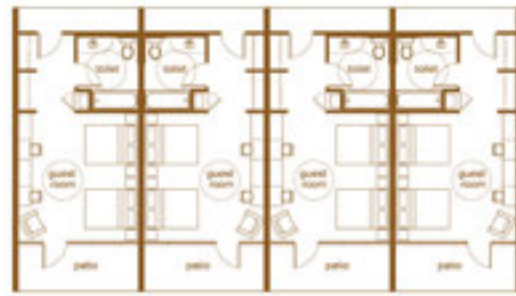
Liberation Cottage Clusters



Grouping lodging units reduces costs for infrastructure, lowers operations costs, and minimizes the impact on the forest environment. As developed by Landscape Architecture student Xiaoxiao Wei and Urban Design student Katie Wing, Liberation Cottages can be arranged as small courtyards around shared decks providing social space. Another option is to develop attached units with party walls. The Group Housing Cluster shown on the south side of the plan can accommodate 15 to 20 units. The Forest has the flexibility to choose and combine individual cottages, courtyard groups, or attached units in a variety of configurations. The units are clustered around a sheltered, outdoor fire pit that can be used for everything from morning prayers to evening camp fires.



The attached lodging units shown here are equipped like accessible hotel rooms. They are slightly larger than cottages to accommodate Queen-sized beds. They feature high ceilings and large window walls for views of the forest.



Floor Plan
450 sf per Unit



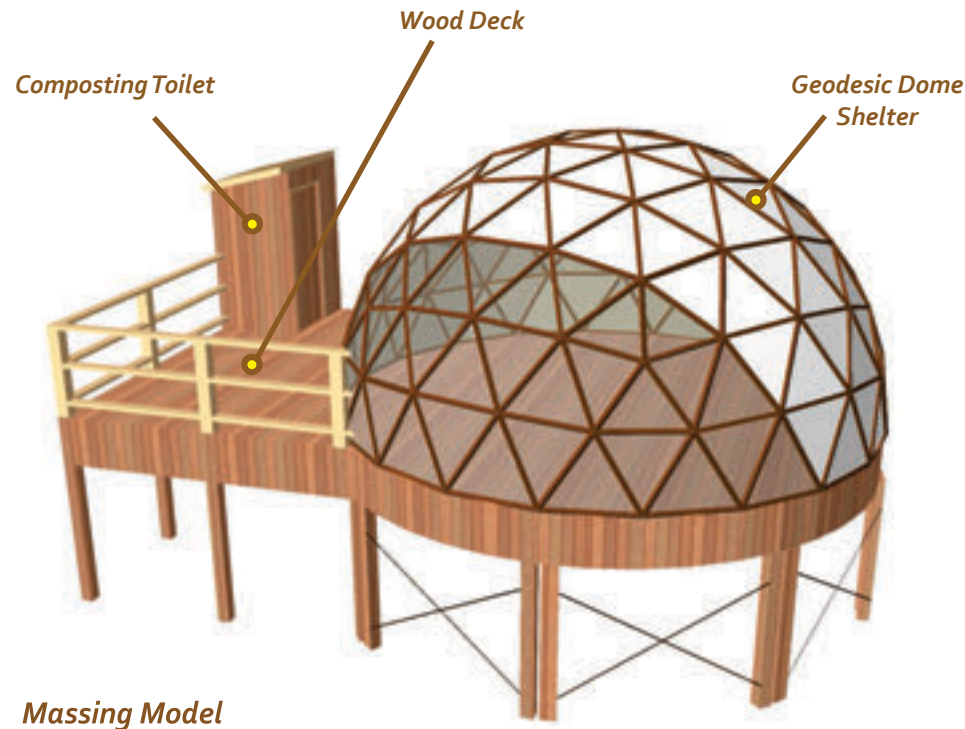
Section View of Group Housing



View of the Fire Wheel, the Focus of the Group Housing Cluster

Off-the-Grid Cabins 30

Some Osage Forest of Peace guests may be interested in a more secluded and unplugged lodging experience. For them, the plan includes Off-the-Grid Cabins. This housing type is located farther from the main encampment in remote settings accessed from the Forest's walking trails. The cabins consist of tents, treehouses or pre-fabricated domes, like the one shown here, that rest on top of wooden platforms. These units are seasonal and not intended for occupation in the harshest months of the year. Their superstructures might be disassembled when they are not in use. They are also not connected to the utility network. Except for small solar panels, there is no electricity. Sanitation is provided by a composting toilet located on the platform. Water and food must be packed in. In exchange for the lack of services, guests are rewarded with the quiet, natural rhythm of the Forest. The demand for these units is not immediately known. Three are shown in the plan for illustrative purposes, but the Forest has capacity for many more.



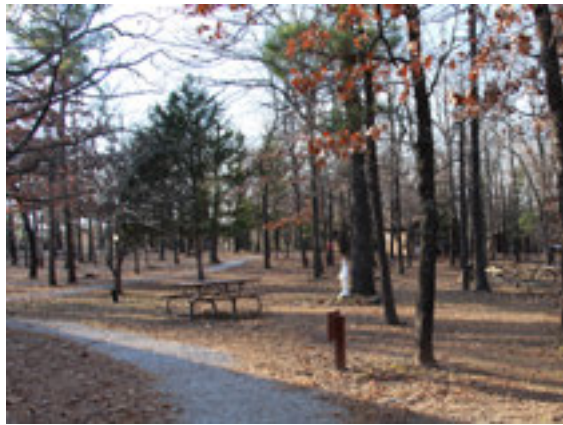
Massing Model



View of Off-the-Grid Cabins in the Forest

Cottage Upgrades 31

The fourteen existing cottages and the Executive Director's residence are all in need of upgrades. These modest dwellings were designed for ascetic nuns and clerics in single occupancy. While they served their original purpose well and have stood the test of time, they need some improvements to better serve permanent staff or visitors in double occupancy. The south cluster of visitor housing contains seven units, four single cabins, one duplex and the Executive Director's hermitage. The north cluster has eight cabins, including two that have been enlarged for staff and one used as a small chapel. The north cluster is envisioned to be an enclave that preserves the contemplative way of life for staff and long-term guests on sabbatical. During the renovations, the five smaller cabins in the north cluster may be enlarged to accommodate additional permanent staff. The chapel is somewhat of a shrine to Sister Pascaline and is still used for some Catholic services. The chapel is intended to remain and should be preserved intact.



The existing cottages will be largely rebuilt. To save energy they will have increased insulation, new windows and doors, and energy efficient HVAC units.



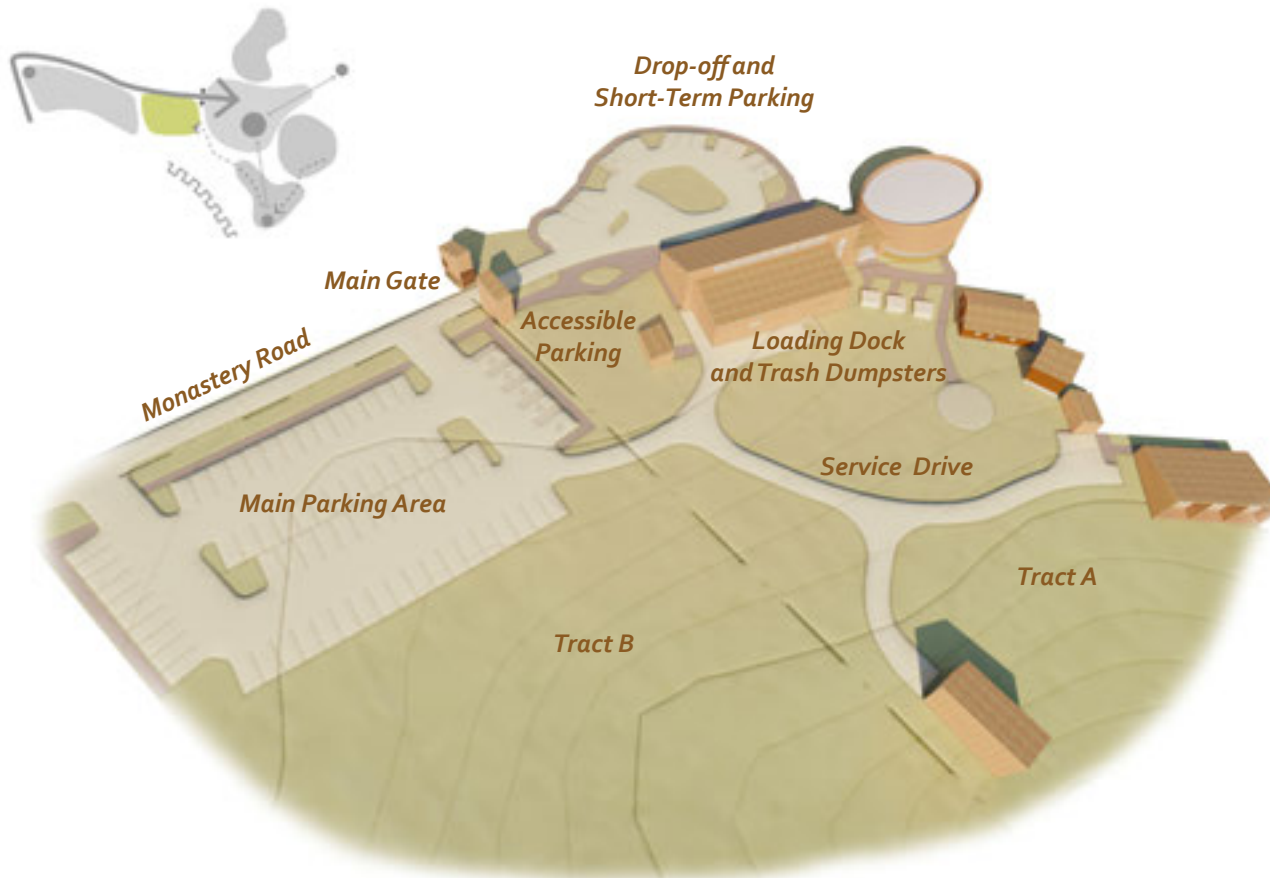
With the overall number of cabins and guests increasing, the need for greater storm shelter capacity will be addressed with two or three additional underground shelters near the cabins. Like the Cave of the Mothers, these can also be used as meditation chambers.



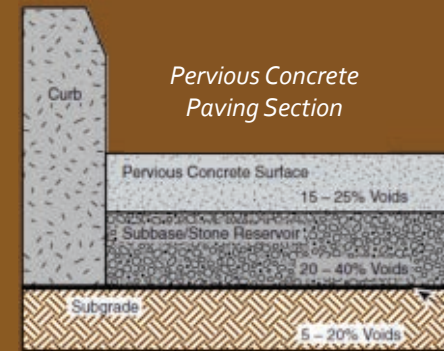
The interiors will receive new finishes and furnishings. Clever storage solutions will better accommodate guest luggage and belongings. Bathrooms will receive new fittings and fixtures. Natural and artificial lighting will be addressed with larger windows and new luminaires. The



Interior View of the Storm Shelter

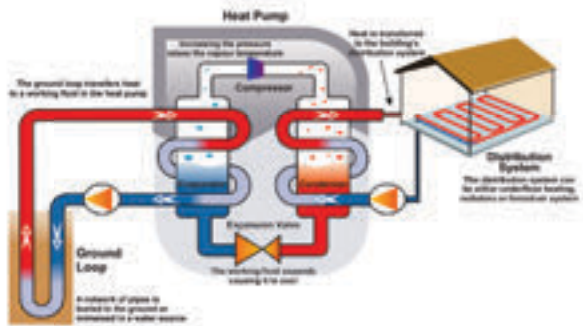


Access and Parking (trees omitted for clarity)



Primary access to the Forest will continue to be from Monastery Road. The existing drop-off and turnaround will remain with short-term parking for 12 cars, including three accessible spaces. A gate will be added to control access. Tract B was selected for the main parking area to keep cars out of the Forest and allow visitors to enter with all of their senses engaged. It is already a cleared area that is relatively flat with good drainage. Pervious concrete paving is recommended to prevent excess stormwater run-off from the 73-space lot. Five accessible parking spaces are provided on the east side near the entrance. A service drive extends from the main parking area to the loading and trash dock of the Kitchen, the Sanitary Waste Plant, and the Operations Building. This drive will also provide construction and fire access to the site.

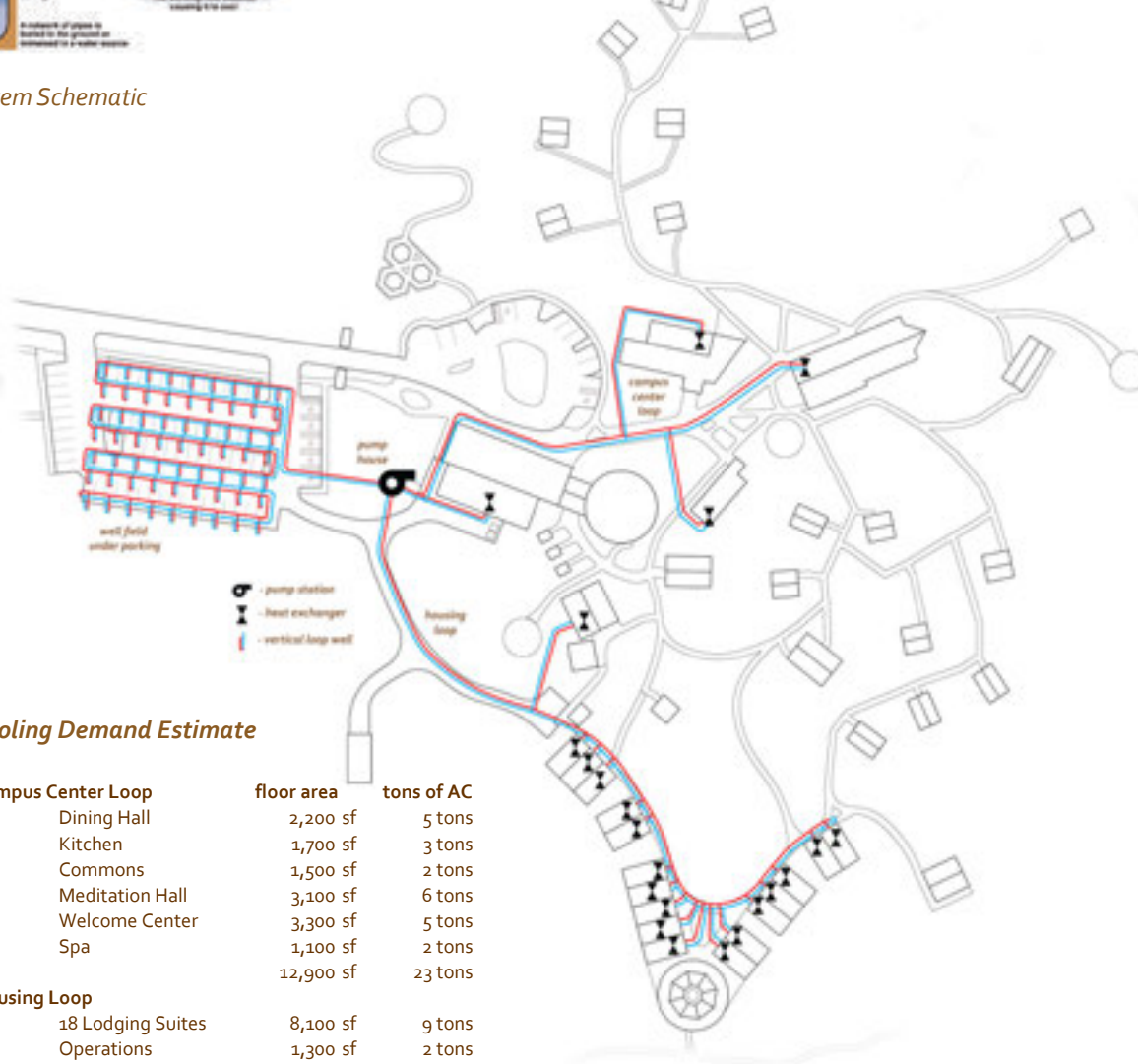




System Schematic

Estimated Installation Cost

Component	Unit Cost	Cost	
Heat Pumps	34 tons	\$2,500 per ton	\$85,000
Wells	3 per ton	\$1,500 per ton	\$51,000
Heat Exchangers	25	\$2,500 each	\$62,500
Piping	5000 lf	\$15 per lf	\$75,000
Pumps	4	\$2,500 each	\$10,000
Pumphouse	200 sf	\$100 per sf	\$20,000
Total			\$303,500



Distribution System Diagram

Cooling Demand Estimate

	floor area	tons of AC
Campus Center Loop		
Dining Hall	2,200 sf	5 tons
Kitchen	1,700 sf	3 tons
Commons	1,500 sf	2 tons
Meditation Hall	3,100 sf	6 tons
Welcome Center	3,300 sf	5 tons
Spa	1,100 sf	2 tons
	12,900 sf	23 tons
Housing Loop		
18 Lodging Suites	8,100 sf	9 tons
Operations	1,300 sf	2 tons
	9,400 sf	11 tons
Total		34 tons

Creating energy-efficient development is important to the Forest. Geothermal energy might provide central heating and cooling for the campus that would have significant front-end costs but could reduce operational and maintenance costs and eliminate noisy HVAC units. Geothermal energy can reduce energy costs from 20% to 50%. The system would consist of three components: 1.) a vertical, closed-loop system of underground wells drilled 100' to 300' deep, spaced 15' apart, 2.) a campus distribution system, and 3.) heat exchangers and reversible heat pumps located in the buildings. A glycol and water solution is circulated through system to allow for heat exchange with the soil and absorb or reject heat from the buildings. A central pump house west of the Dining Hall recirculates the heat transfer fluid through a 2,500' long well field loop and two loops supplying the buildings, a 800' long loop for the Campus Center and another 1,200' long loop for the new housing. The vertical wells can be drilled and installed during the construction of the parking lot.

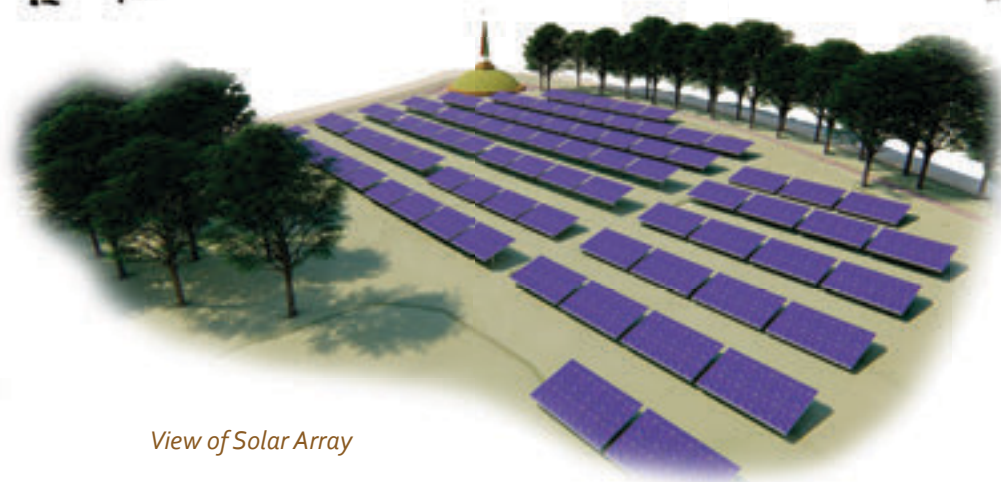


Estimated Annual Electricity Consumption

Building	floor area	electric loads/sf	electricity consumption
Existing Campus	based on utility expenses		53,333 kWh/yr
Dining Hall / Kitchen	5,600 sf	15 kWh/yr/sf	84,000 kWh/yr
Meditation Hall	3,100 sf	5.5 kWh/yr/sf	17,050 kWh/yr
Welcome Center	3,300 sf	9.5 kWh/yr/sf	31,350 kWh/yr
Spa	1,100 sf	14 kWh/yr/sf	14,850 kWh/yr
Liberation Cottages	2,400 sf	10 kWh/yr/sf	24,000 kWh/yr
Group Lodging Units	7,200 sf	10 kWh/yr/sf	72,000 kWh/yr
Total			296,583 kWh/yr

Estimated Annual Electricity Cost

$$296,583 \text{ kWh/yr} \times \$0.12 /\text{kWh} = \$35,590$$



View of Solar Array

The lots of Tract C are relatively flat and open. They could be used for an array of photovoltaic panels to generate clean and quiet electricity for the Osage Forest of Peace. The estimated electricity demand for the Forest at the completion of the plan is approximately 300,000 kWh/yr. The solar panel array shown in the plan consists of 672 - 20 sf crystalline silicon photovoltaic panels each with a 300W capacity. The estimated power production for this array is 332,800 kWh/yr, which would allow for 10% excess capacity to ensure it meets the anticipated demand. At an average cost of \$3.00 per watt, the estimated installation cost of the array would be \$768,000. At current utility rates, the payback period would be 21.5 years. If utility rates increase at a 1.5% annual rate of inflation, the payback period would be 19 years. The projections included here are rough and based on initial estimates. They should be confirmed by a detailed analysis performed by a qualified engineer and through consultations with an experienced solar energy contractor and the utility company before proceeding.

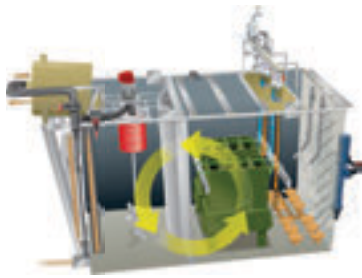


Sanitation

The current set of septic systems are inadequate for the proposed growth of the Forest. To accommodate the expansion, a new package sanitation treatment plant is proposed on the west side of the site more than 100' horizontally from any buildings and downslope to allow for gravity flow from the building sewer outlets. Projected wastewater flow is estimated to be approximately 15,000 gallons per day. Extended aeration and sequencing batch reactors plants are both available for this flow rate. Both have a similar cost. A qualified sanitation engineer can assist the Forest to select and size the appropriate system.

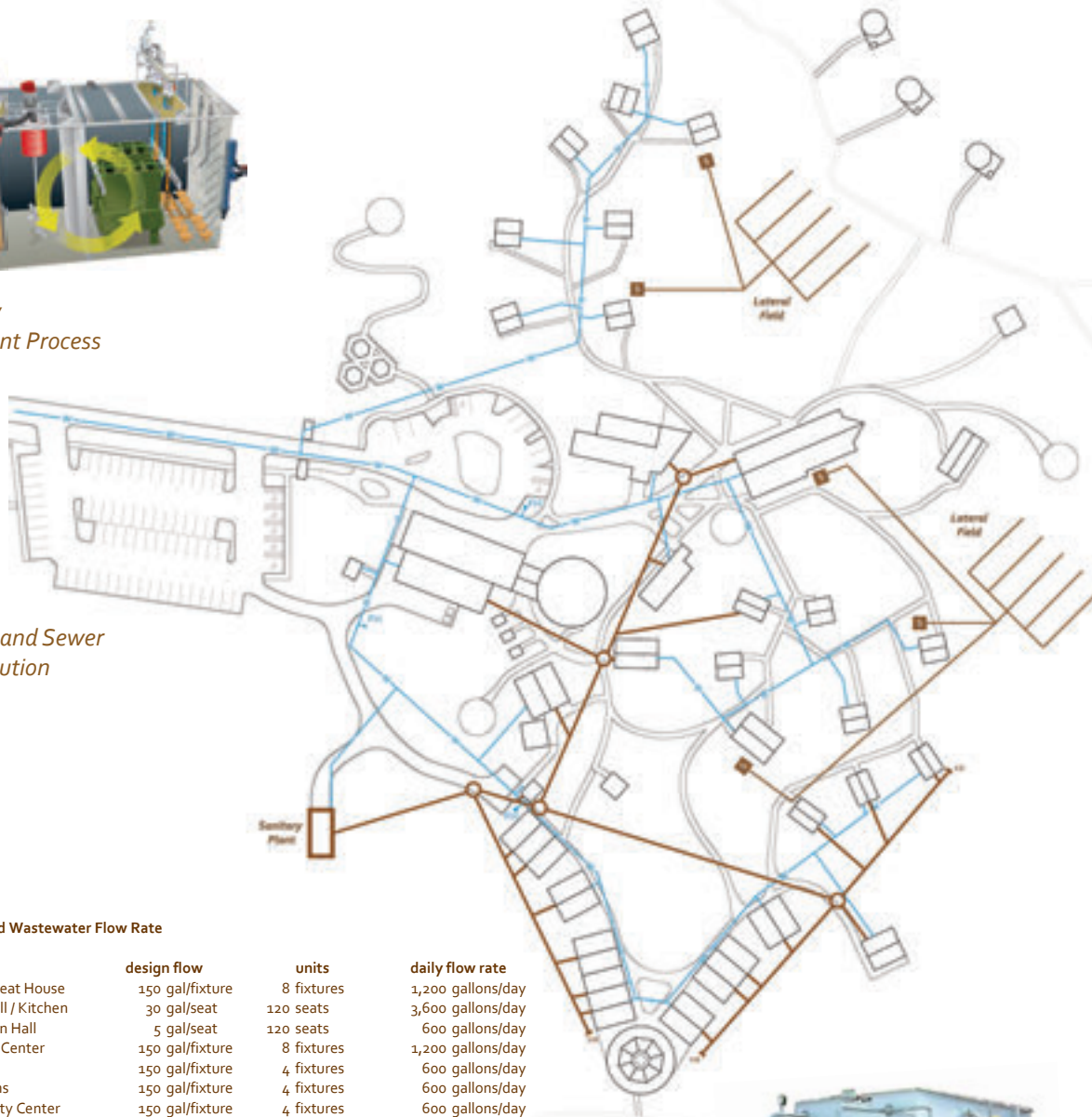
Water

New water mains are added to supply the new development. For fire protection, several fire hydrants are installed near the access roads. A fire protection engineer can help determine if a fire pump is needed to provide adequate pressure.



Sanitary Treatment Process

Water and Sewer Distribution



Estimated Wastewater Flow Rate

Building	design flow	units	daily flow rate
Main Retreat House	150 gal/fixture	8 fixtures	1,200 gallons/day
Dining Hall / Kitchen	30 gal/seat	120 seats	3,600 gallons/day
Meditation Hall	5 gal/seat	120 seats	600 gallons/day
Welcome Center	150 gal/fixture	8 fixtures	1,200 gallons/day
Spa	150 gal/fixture	4 fixtures	600 gallons/day
Operations	150 gal/fixture	4 fixtures	600 gallons/day
Community Center	150 gal/fixture	4 fixtures	600 gallons/day
Laundry	500 gal/machine	4 machines	2,000 gallons/day
Liberation Cottages	200 gal/cabin	5 cottages	1,000 gallons/day
Group Lodging Units	200 gal/unit	16 units	3,200 gallons/day

Total 14,600 gallons/day

Estimated Installation Cost

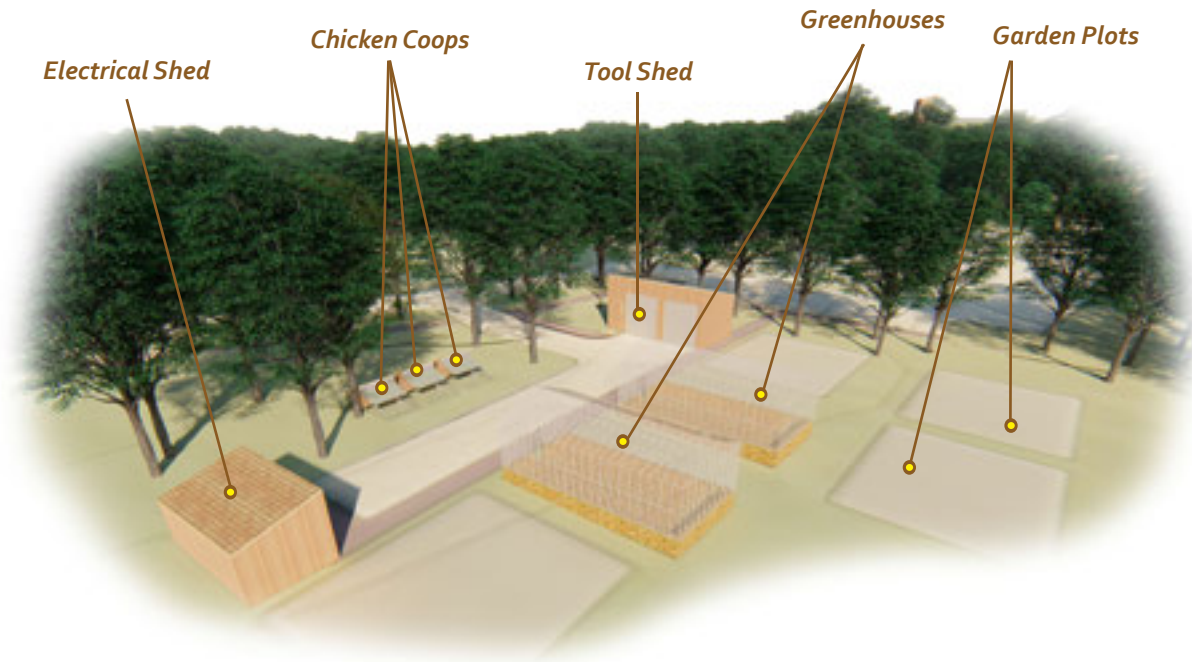
Sanitary Treatment Package Plant	\$5 /gal	\$73,000
400 sf Treatment Building	\$100 /sf	\$40,000
1800 lf Sewer Mains	\$31 /lf	\$55,800
5 Manholes	\$6,000 ea	\$30,000

Total \$198,800



Package Sanitary Treatment Plant





Overview of Garden Center



View of the Osage Forest of Peace Garden Center

The Osage Forest of Peace has a small garden located on Tract B where the new parking area is designated to go. A new garden could be established on one of the lots of Tract C. Tract C is relatively flat with good drainage and has few trees to block the sun. Garden plots and greenhouses could be used to grow fresh fruits, vegetables, and cut flowers for the Forest Dining Hall and perhaps support a neighborhood garden stand. While not large enough for commercial production, the half-acre of garden land is enough to grow up to \$7,500 of organic produce annually. The plan also shows chicken coops for producing eggs and raising free range poultry for the table. The fowl would also produce fertilizer for the crops. An apiary is another possibility with hives for producing honey. The Forest's landscape equipment and tools would also be stored here in a tool shed adjacent to the garden plots.



Pro Formas

Phase One Capital Improvements Budget

Building Construction	Floor Area	Cost/Unit	Subtotals
Dining Hall / Kitchen	5,600 sf	\$178 /sf	\$996,800
Meditation Hall	3,100 sf	\$190 /sf	\$589,000
4- Liberation Cottages*	400 sf/cabin	\$40,000 ea	\$160,000
4- Group Lodging Units	450 sf/unit	\$124 /sf	\$223,200
Total			\$1,969,000
Site Development		Cost/Unit	Subtotals
Access Roads	650 lf	\$350 /lf	\$227,500
Parking	85 spaces	\$1,500 space	\$127,500
Site Preparation	2.0 % of Building Cost		\$39,380
Drainage	1.5 % of Building Cost		\$29,535
Hardscape	3.0 % of Building Cost		\$59,070
Landscaping	1.5 % of Building Cost		\$29,535
Lighting	0.5 % of Building Cost		\$9,845
Main Gate			\$20,000
Sanitary Sewer Plant			\$113,000
Sanitary Sewer Mains	1,800 lf		\$85,800
Water Main Extensions	1,800 lf		\$55,800
Electrical Utilities	2,000 lf	\$70 /lf	\$140,000
Geothermal Energy System			\$303,500
Total			\$1,240,465
Furniture, Fixtures and Equipment			Subtotals
Fixed Equipment	5.0 % of Building Cost		\$98,450
Movable Equipment	1.5 % of Building Cost		\$29,535
Furnishings	2.5 % of Building Cost		\$49,225
Kitchen Equipment			\$15,000
Total			\$192,210
Soft Costs			Subtotals
Professional Fees	6.0 % of Construction Cost		\$204,101
Administrative Costs	1.0 % of Construction Cost		\$34,017
Construction Financing	10.0 % of Construction Cost		\$340,168
Contingencies	5.0 % of Construction Cost		\$170,084
Total			\$748,369
Phase One Total			\$4,150,044

This section consists of a series of pro formas estimating the financial aspects of the Osage Forest of Peace Campus Master Plan. These tables are rough estimates and should be used with caution. They are no substitute for detailed construction estimates provided by builders or financial statements prepared by accountants. This plan is intended to guide the development of the Forest for the next 15 to 20 years, but all of the costs are presented in 2019 dollars, which mean they will need to be adjusted for inflation as the plan ages.

The first pro formas are estimates of construction costs for buildings, site development, infrastructure, and furniture, fixtures, and equipment. Together they form a Capital Improvements Plan for the Forest. Costs have been separated by phase. Phase 1 includes the bulk of the infrastructure costs for site access and utilities. Construction cost estimates include contractor overhead and profit. Soft costs for professional fees and construction financing are also included. A 5% contingency has been added for unforeseen conditions on the site.



Phase Two Capital Improvements Budget

Building Construction	Floor Area	Cost/Unit	Subtotals
Renovate Main Retreat House	4,150 sf	\$84 /sf	\$348,600
Renovate Bede's Building	840 sf	\$84 /sf	\$70,560
Renovate Operations	1,295 sf	\$84 /sf	\$108,780
Renovate Community Center	925 sf	\$64 /sf	\$59,200
Renovate Hermitage	820 sf	\$64 /sf	\$52,480
6- Renovate South Cottages	424 sf/cabin	\$64 /sf	\$162,816
2- Liberation Cottages*	400 sf/cabin	\$40,000 ea	\$80,000
4- Group Lodging Units	450 sf/unit	\$124 /sf	\$223,200
3- Off-the-Grid Cabins	450 sf/unit	\$50 /sf	\$67,500
Columbaria			\$50,000
Bell Tower			\$190,000
Total			\$1,413,136
Site Development			Subtotals
Site Preparation	2.0 % of Building Cost		\$28,263
Drainage	1.5 % of Building Cost		\$21,197
Hardscape	3.0 % of Building Cost		\$42,394
Landscaping	1.5 % of Building Cost		\$21,197
Lighting	0.5 % of Building Cost		\$7,066
Total			\$120,117
Furniture, Fixtures and Equipment			Subtotals
Fixed Equipment	5.0 % of Building Cost		\$70,657
Movable Equipment	1.5 % of Building Cost		\$21,197
Furnishings	2.5 % of Building Cost		\$35,328
Total			\$127,182
Soft Costs			Subtotals
Professional Fees	6.0 % of Construction Cost		\$99,626
Administrative Costs	1.0 % of Construction Cost		\$16,604
Construction Financing	10.0 % of Construction Cost		\$166,043
Contingencies	5.0 % of Construction Cost		\$83,022
Total			\$365,296
Phase Two Total			\$2,025,730

The building construction costs are calculated on a square foot basis using data from R.S. Means Company's *Assembly Cost Data* and the Building Journal's web-based building cost calculator. The type of construction is assumed to be Type V - Light Wood Framing. Site development and soft costs are calculated using percentages suggested by *Problem Seeking: An Architectural Programming Primer* by William Pena and Steven Parshall.

* - The cost of the Liberation Cottages assumes using student labor from the Christopher C. Gibbs College of Architecture; therefore the cost is for materials and licensed subcontractors only.



Phase 3 - Capital Budget 40

The summary capital budget by phase is presented below:

Phase 1 - Year 1 to Year 5:	\$4,150,044
Phase 2 - Year 5 to Year 10:	\$2,025,730
Phase 3 - Year 10 to Year 15:	\$1,750,750
Tract C Lots - Optional:	\$1,101,062

Total Capital Budget: \$9,050,336

Phase Three Capital Improvements Budget

Building Construction	Floor Area	Cost/Unit	Subtotals
Welcome Center	3,300 sf	\$116 /sf	\$382,800
Spa	1,100 sf	\$116 /sf	\$127,600
Firewheel	1,136 sf	\$38 /sf	\$43,168
8- Renovate North Cottages	424 sf/cabin	\$64 /sf	\$217,088
8- Group Lodging Units	450 sf/unit	\$124 /sf	\$446,400
Total			\$1,217,056
Site Development			Subtotals
Site Preparation	2.0 % of Building Cost		\$24,341
Drainage	1.5 % of Building Cost		\$18,256
Hardscape	3.0 % of Building Cost		\$36,512
Landscaping	1.5 % of Building Cost		\$18,256
Lighting	0.5 % of Building Cost		\$6,085
Total			\$103,450
Furniture, Fixtures and Equipment			Subtotals
Fixed Equipment	5.0 % of Building Cost		\$60,853
Movable Equipment	1.5 % of Building Cost		\$18,256
Furnishings	2.5 % of Building Cost		\$30,426
Kitchen Equipment			\$5,000
Total			\$114,535
Soft Costs			Subtotals
Professional Fees	6.0 % of Construction Cost		\$86,102
Administrative Costs	1.0 % of Construction Cost		\$14,350
Construction Financing	10.0 % of Construction Cost		\$143,504
Contingencies	5.0 % of Construction Cost		\$71,752
Total			\$315,709
Phase Three Total			\$1,750,750



Campus Master Plan

Tract C - Capital Budget 41

Tract C Capital Improvements Budget

Building Construction	Floor Area	Cost/Unit	Subtotals
Garden Sheds	892 sf	\$74 /sf	\$66,008
2- Greenhouses	512 sf	\$30 /sf	\$30,720
Windmill			\$25,000
Total			\$121,728
Site Development		Cost/Unit	Subtotals
Access Roads	150 lf	\$350 /lf	\$52,500
Site Preparation	2.0 % of Building Cost		\$2,435
Drainage	1.5 % of Building Cost		\$1,826
Hardscape	3.0 % of Building Cost		\$3,652
Landscaping	1.5 % of Building Cost		\$1,826
Lighting	0.5 % of Building Cost		\$609
Solar Array			\$768,000
Total			\$778,347
Furniture, Fixtures and Equipment			Subtotals
Fixed Equipment	1.0 % of Building Cost		\$1,217
Movable Equipment	1.0 % of Building Cost		\$1,217
Total			\$2,435
Soft Costs			Subtotals
Professional Fees	6.0 % of Construction Cost		\$54,151
Administrative Costs	1.0 % of Construction Cost		\$9,025
Construction Financing	10.0 % of Construction Cost		\$90,251
Contingencies	5.0 % of Construction Cost		\$45,125
Total			\$198,552
Tract C Total			\$1,101,062

Costs for Tract C are presented separately, as the development of these lots may proceed independently of the phased buildout of the campus. The two main items for Tract C are the Forest of Peace Garden and the Solar Array for on-site power generation. The solar array is a costly item, but if installed it could pay for itself over a twenty year payback period while providing the forest with carbon neutral electricity.



Campus Master Plan

Lodging Enterprise Budget

Expenses

Labor	Unit Wages	Total Wages	Benefits	Taxes	Subtotals
1 Lodging Manager	\$40,860	\$40,860	\$12,258	\$6,129	\$59,247
4 Front Desk Personnel	\$20,020	\$80,080	\$24,024	\$12,012	\$116,116
1 Housekeeping Manager	\$33,950	\$33,950	\$10,185	\$5,093	\$49,228
3 Housekeepers	\$20,800	\$62,400	\$18,720	\$9,360	\$90,480
0.5 Maintenance Personnel	\$29,310	\$14,655	\$4,397	\$2,198	\$21,250
0.5 Groundskeeper	\$26,130	\$13,065	\$3,920	\$1,960	\$18,944

Total **\$355,265**

Operations	Cost/Unit	Units	Subtotals
Cleaning and Consumables	\$0.45 /room/day	8,928 room days	\$4,018
Linens and Laundry	\$0.95 /room/day	8,928 room days	\$8,482
Electricity	\$1.50 /room/day	12,800 room days	\$19,200
Water and Sewer	\$2.40 /room/day	8,928 room days	\$21,427
Telecommunications	\$0.65 /room/day	12,800 room days	\$8,320
Maintenance	\$1.50 /room/day	12,800 room days	\$19,200
Refurbishment Allocation	\$3.00 /room/day	12,800 room days	\$38,400
Marketing / Booking Fees	\$2.00 /room/day	12,800 room days	\$25,600

Total **\$144,646**

Fixed Expenses	Cost/Unit	Units	Subtotals
Insurance	\$2.39 /room/day	12,800 room days	\$30,592
Property Taxes	\$0.00 /room/day	12,800 room days	\$0

Total **\$30,592**

Expenses Total **\$41.45 /room/day** 12,800 room days **\$530,503**

Revenue

Number of Booking Days: 320

Room Type	No. of Rooms	Room Rate	Occupancy Rate	Subtotal
Liberation Cottages	12	\$85	70%	\$228,480
Group Housing	17	\$100	60%	\$326,400
Off-the Grid Cabins	3	\$50	60%	\$28,800
Long-Term Rental	2	\$20	90%	\$11,520
Staff Housing	6	\$20	95%	\$36,480

Revenue Total **\$49.35 /room/day** 8,928 room days **\$631,680**

Net Income/Loss **\$101,177**

The next group of pro formas explore the proposed budgets of several revenue generating enterprises at the Osage Forest of Peace. The first budget shown here is for for the lodging enterprise. Each housing type's revenue generating capacity is estimated using several factors. The pro forma assumes that the housing units are available for rental 320 days a year (the Forest is closed during the hot month of August.) Each unit has a rental rate and occupancy estimate. Staff housing rates are included, although they might be used for compensation packages in lieu of wages.

The expense side of the ledger includes labor, operations, and fixed expenses. Wage and salary data for all pro formas come from the *2017 National Occupational Employment and Wage Estimates* published by the U.S. Department of Labor, Bureau of Labor Statistics for the State of Oklahoma. Operational data comes from a variety of sources, including the *2017 HOST Almanac* by STR and the *Hotel Investments Handbook* by HVS. In the scenario presented, lodging would produce a net income of **\$101,177** per year.



Educational Program Enterprise Budget

Expenses

Labor	Unit Wages	Total Wages	Benefits	Taxes	Subtotals
1 Program Director	\$35,000	\$35,000	\$10,500	\$5,250	\$50,750
0.5 Instructors (3 Part-time)	\$19,985	\$9,993	\$2,998	\$1,499	\$14,489

Total **\$65,239**

Operations	Cost/Unit	Units	Subtotals
Cleaning and Consumables	\$0.25 /sf	5,815 sf	\$1,454
Energy	\$0.87 /sf	5,815 sf	\$5,059
Water and Sewer	\$0.95 /sf	5,815 sf	\$5,524
Maintenance and Repairs	\$1.25 /sf	5,815 sf	\$7,269
Refurbishment Allocation	\$1.00 /sf	5,815 sf	\$5,815
Marketing / Booking Fees	\$0.50 /sf	5,815 sf	\$2,908

Total **\$28,028**

Fixed Expenses	Cost/Unit	Units	Subtotals
Insurance	\$0.50 /sf	5,815 sf	\$2,908
Property Taxes	\$0.00 /sf	5,815 sf	\$0

Total **\$2,908**

Expenses Total **\$96,175**

Revenue

Instruction	No. of Events	Participants	Tuition	Subtotal
Retreats	20	75	\$100	\$150,000
School of Spiritual Direction	9	30	\$860	\$25,800
Workshops / Conferences	40	10	\$25	\$10,000
Weddings/ Memorials	10	100		\$1,000
Spiritual Direction				\$2,000

Revenue Total **\$188,800**

Net Income/Loss **\$92,625**

The educational and spiritual programs at the Forest are at the core of its mission. These programs include retreats, workshops, and conferences delivered by both in-house staff and outside partners. A special program is the School for Spiritual Direction, which is a core program of the program enterprise. The events listed in this pro forma are all produced in-house. The events listed in the facility rental pro forma that follows includes both types.

In-house instructional staff includes the Executive Director, Program Director, and part-time instructors who have specialized knowledge in meditation, yoga, mental health, dependency and addiction, or other topics. In-house staff will also perform marriage and memorial ceremonies and offer counseling services.

The expenses for this section include maintenance and operations costs for the Main Retreat House, the Community Center, and Bede's Building. The projected annual programming income is: **\$92,625**.



Facility Rental Enterprise Budget

Expenses

Labor	Unit Wages	Total Wages	Benefits	Taxes	Subtotals
1 Facilities Manager	\$35,950	\$35,950	\$10,785	\$5,393	\$52,128
1 Events Manager / Planner	\$25,000	\$25,000	\$7,500	\$3,750	\$36,250
1 Housekeeper	\$20,800	\$20,800	\$6,240	\$3,120	\$30,160
0.5 Maintenance Personnel	\$29,310	\$14,655	\$4,397	\$2,198	\$21,250
0.25 Groundskeeper	\$26,130	\$6,533	\$1,960	\$980	\$9,472

Total **\$97,132**

Operations	Cost/Unit	Units	Subtotals
Cleaning and Consumables	\$0.35 /sf	6,700 sf	\$2,345
Linens and Laundry	\$0.25 /sf	6,700 sf	\$1,675
Energy	\$0.87 /sf	6,700 sf	\$5,829
Water and Sewer	\$0.95 /sf	6,700 sf	\$6,365
Maintenance and Repairs	\$1.25 /sf	6,700 sf	\$8,375
Refurbishment Allocation	\$1.00 /sf	6,700 sf	\$6,700
Marketing / Booking Fees	\$0.50 /sf	6,700 sf	\$3,350

Total **\$34,639**

Fixed Expenses	Cost/Unit	Units	Subtotals
Insurance	\$0.50 /sf	6,700 sf	\$3,350
Property Taxes	\$0.00 /sf	6,700 sf	\$0

Total **\$3,350**

Expenses Total **\$135,121**

Revenue

Rental Space	Event Days	Daily Room Rate	Subtotal
Dining Hall	60	\$1,000	\$60,000
Meditation Hall	60	\$1,000	\$60,000
Main Retreat House	30	\$500	\$15,000
Community Center	20	\$200	\$4,000
Outdoor Event	10	\$500	\$5,000

Revenue Total **\$144,000**

Net Income/Loss **\$8,879**

Facility rentals by themselves do not produce a significant net income, but they are needed for the events that generate the demand for programming, lodging, catering, and other services offered at the Osage Forest of Peace. The new Dining and Meditation Halls allows the Forest to host larger events, but require more events to get the utility required from these facilities. The pro forma assumes 60 event days: 2 week long retreats, 20 weekend retreats, and 10 single day events like weddings or memorial services. The Main Retreat House and Community Center could be used for weekly programs, smaller workshops, conferences, and breakout sessions. The rental rates are comparable to similar spaces in the Tulsa market.

Expenses include an Event Planner who will manage the calendar, work with clients to plan their events, and coordinate each event. Other expenses are primarily utilities and maintenance for the Dining and Meditation Halls. This scenario results in a small annual income of **\$8,879**.



Catering Enterprise Budget

Expenses

Labor	Unit Wages	Total Wages	Benefits	Taxes	Subtotals
1 Chef	\$41,090	\$41,090	\$12,327	\$6,164	\$59,581
2 Cooks	\$20,800	\$41,600	\$12,480	\$6,240	\$60,320
1.5 Dishwasher	\$19,470	\$29,205	\$8,762	\$4,381	\$42,347
1 Wait Staff (4 Part-time)	\$20,080	\$20,080	\$6,024	\$3,012	\$29,116

Total **\$191,364**

Operations	Cost/Unit	Units	Subtotals
Food and Beverage	\$1.55 /meal	41,312 meals	\$64,034
Supplies	\$0.25 /meal	41,312 meals	\$10,328
Energy	\$1.80 /sf	2,000 sf	\$3,600
Water and Sewer	\$1.20 /sf	2,000 sf	\$2,400
Trash Service			\$750
Maintenance and Repairs	\$2.50 /sf	2,000 sf	\$5,000
Marketing / Booking Fees	\$1.00 /meal	2,000 meals	\$2,000

Total **\$88,112**

Fixed Expenses	Cost/Unit	Units	Subtotals
Insurance	\$0.08 /meal	41,312 meals	\$3,305
Property Taxes	\$0.00 /sf	2,000 sf	\$0

Total **\$3,305**

Expenses Total **\$282,780**

Revenue

Meals	Room/ Event Days	No. of Guests	Price/Meal	Subtotal
Breakfast	8,928	1.25	\$6.00	\$66,960
Lunch	8,928	1.25	\$7.50	\$83,700
Dinner	8,928	1.5	\$10.25	\$137,268
Catering - On Site	40	50	\$15.00	\$30,000
Catering - Off-Site	20	100	\$20.00	\$40,000
Catering - Prepared Food	320	5	\$7.50	\$12,000

Revenue Total **\$369,928**

Net Income/Loss **\$87,148**

Food and beverage service includes daily meals for Forest guests and residents, on-site catering, and off-site catering to achieve better utilization of the kitchen facilities. Off-site catering could be provided by the Forest's catering staff or through rental of the kitchen space (though the latter introduces a variety of complications.) The plan recommends hiring an Executive Chef to oversee the catering operation and staff. Daily meals would be served buffet style, but a part-time wait staff would be employed for plated meals at catered events.

The target cost per meal for daily meals is between \$6.00 and \$7.00 per plate, including waste. This is similar to comparable meal programs like the ones at local retirement communities or universities. These costs are backstopped by the *Meal Cost Analysis* done in 2015 by the Mathematica Foundation for Older Americans. Suggested meal prices are in line with the American School and University *Maintenance and Operations Cost Study from 2009*. The Catering Enterprise generates a projected net income of **\$87,148**. Food and beverage sales at the Gift Shop Cafe are not included.



Spa Enterprise Budget

Expenses

Labor	Unit Wages	Total Wages	Benefits	Taxes	Subtotals
1 Spa Manager / Therapist	\$30,100	\$30,100	\$9,030	\$4,515	\$43,645
1 Therapists (2 Part-time)	\$30,100	\$30,100	\$9,030	\$4,515	\$43,645

Total **\$87,290**

Operations	Cost/Unit	Units	Subtotals
Cleaning and Consumables	\$0.35 /sf	1,100 sf	\$385
Linens and Laundry	\$1.15 /sf	1,100 sf	\$1,265
Energy	\$0.87 /sf	1,100 sf	\$957
Water and Sewer	\$0.95 /sf	1,100 sf	\$1,045
Maintenance and Repairs	\$1.25 /sf	1,100 sf	\$1,375
Refurbishment Allocation	\$1.00 /sf	1,100 sf	\$1,100
Marketing / Booking Fees	\$0.50 /sf	1,100 sf	\$550

Total **\$6,677**

Fixed Expenses	Cost/Unit	Units	Subtotals
Insurance	\$0.50 /sf	1,100 sf	\$550
Property Taxes	\$0.00 /sf	1,100 sf	\$0

Total **\$550**

Expenses Total **\$94,517**

Revenue

Instruction	No. of Clients / Day	Days	Fee	Subtotal
Massage and Reiki Treatment	10	280	\$50	\$140,000

Revenue Total **\$140,000**

Net Income/Loss **\$45,483**

The Spa Enterprise will provide an attractive amenity for Forest guests and visitors. It could be operated in-house as described here or run as a concession by a vendor. Treatment services could include massage, reiki, acupuncture, and traditional spa services like facials or manicures. The pro forma included here is intentionally modest with ten spa visits per day. Even this level of traffic generates a significant net income of **\$45,483**. A spa run by an outside vendor would generate a much more modest monthly rent of \$800-\$1000 per month.



The Forest’s gift shop would be located in the Welcome Center. It is a combination gift shop, bookstore, and cafe. The assumption is that it would operate daily from 7:00 am to 3:00 pm. It produces a marginal income of **\$2,134** per year.

Gift Shop Enterprise Budget

Expenses

Labor	Unit Wages	Total Wages	Benefits	Taxes	Subtotals
1 Shop Manager	\$26,260	\$26,260	\$7,878	\$3,939	\$38,077
1 Barista	\$22,340	\$22,340	\$6,702	\$3,351	\$32,393
Total					\$70,470

Operations	Cost/Unit	Units	Subtotals
Cleaning and Consumables	\$0.35 /sf	800 sf	\$280
Food and Beverage	\$0.35 servings	12,800 servings	\$4,480
Café Supplies	\$0.15 servings	12,800 servings	\$1,920
Linens and Laundry	\$0.25 /sf	800 sf	\$200
Inventory (Books and Gifts)			\$16,000
Energy	\$0.87 /sf	800 sf	\$696
Water and Sewer	\$0.95 /sf	800 sf	\$760
Maintenance and Repairs	\$1.25 /sf	800 sf	\$1,000
Refurbishment Allocation	\$1.00 /sf	800 sf	\$800
Total			\$26,136

Fixed Expenses	Cost/Unit	Units	Subtotals
Insurance	\$0.50 /sf	800 sf	\$400
Property Taxes	\$0.00 /sf	800 sf	\$0
Total			\$400

Expenses Total \$97,006

Revenue

Retail Sales	Servings	Days	Price/ Serving	Subtotal
Food and Beverage Sales	40	320	\$5	\$64,000
Book Sales	8	320	\$10	\$25,600
Gift Sales	2	320	\$15	\$9,600

Revenue Total \$99,200

Net Income/Loss \$2,194



Memorial Enterprise Budget

Expenses

Operations

Maintenance and Repairs
 Refurbishment Allocation

Subtotals

\$1,000
 \$1,000

Total

\$2,000

Fixed Expenses

Insurance
 Property Taxes

Subtotals

\$500
 \$0

Total

\$500

Expenses Total

\$2,500

Revenue

	Number	Rate	Subtotal
Annual Niche Maintenance	48	\$100	\$4,800
Inurnment	5	\$750	\$3,750
Scatter Ceremonies	5	\$250	\$1,250

Revenue Total

\$9,800

The pro forma for the Columbaria and Scatter Garden includes five Inurnments and five Scatterings per year. The Annual Niche Maintenance fees for 48 cinerary urns is also calculated. Note that this is a very modest fee. Many nearby mausoleums charge from three to ten times as much, so this enterprise could produce significantly more revenue at little expense, if the Forest chooses to increase its charges. The budget presented here results in a **\$7,300** net income.



Garden Enterprise Budget

Expenses

Labor	Unit Wages	Total Wages	Benefits	Taxes	Subtotals
0.25 Groundskeeper	\$26,130	\$6,533	\$1,960	\$980	\$9,472
Total					\$9,472
Operations	Cost/Unit		Units		Subtotals
Garden Supplies					\$800
Feed					\$400
Energy	\$0.87 /sf		400 sf		\$348
Water and Sewer	\$1.20 /sf		400 sf		\$480
Maintenance and Repairs	\$1.25 /sf		400 sf		\$500
Total					\$2,528
Fixed Expenses					Subtotals
Insurance					\$500
Property Taxes					\$0
Total					\$500
Expenses Total					\$12,500
Revenue					
Fruits and Vegetables					\$7,500
Poultry and Eggs					\$1,000
Cut Flowers					\$4,000
Revenue Total					\$12,500
Net Income/Loss					\$0

The Garden at the Forest is not intended to generate income, but it is an important enterprise that provides healthy and nutritious food for the daily meals at the Forest. It can also provide cut flowers for events and services. Its greenhouses also support the gardening needs of the campus, particularly the Columbaria and Scatter Garden. The garden could also be used for instructional programs for guests and visitors.



Administrative Overhead 50

Administrative overhead not directly related to personnel costs, i.e. fringe benefits and payroll taxes, or indirect costs associated with the enterprises already discussed, amount to approximately 10 percent of the Forest's Operations Budget. The amount projected here is **\$147,138**. This includes the Executive Director, accounting staff and central expenses like bank charges, payroll, training, travel, and postage. The budget here is largely based on a the current budget, increased to accommodate expansion of the campus. A new campus van is the most significant new expense added to the pro forma. the vehicle expense is based on AAA's annual projected operating expenses for the Tulsa region.

Administrative Expenses					
Expenses					
Administrative Staff	Unit Wages	Total Wages	Benefits	Taxes	Subtotals
1 Executive Director	\$24,500	\$24,500	\$17,000	\$3,675	\$45,175
Accountant (Contract)					\$12,000
0.5 Bookkeeper	\$37,980	\$18,990	\$5,697	\$2,849	\$27,536
Total					\$84,711
Operations	Cost/Unit		Units		Subtotals
Cleaning and Consumables	\$0.15 /sf		3,700 sf		\$555
Energy	\$0.87 /sf		3,700 sf		\$3,219
Water and Sewer	\$0.95 /sf		3,700 sf		\$3,515
Telecommunications	\$1.25 /sf		3,700 sf		\$4,625
Maintenance and Repairs	\$1.25 /sf		3,700 sf		\$4,625
Insurance	\$0.50 /sf		3,700 sf		\$1,850
Property Taxes	\$0.00 /sf		3,700 sf		\$0
Bank Charges					\$5,000
Payroll Expense					\$6,000
Staff Development					\$5,000
Office Supplies					\$4,000
Postage and Freight					\$500
Travel					\$1,000
Dues and Subscriptions					\$4,000
Library and Media					\$750
Computer Expenses					\$5,000
Vehicle Expense					\$8,788
Board Expenses					\$4,000
Misc. Expenses					\$500
Total					\$62,427
Expenses Total					\$147,138
Net Income/Loss					-\$147,138



Campus Master Plan

Staffing Summary

Expenses

Administrative Staff	Unit Wages	Total Wages	Benefits	Taxes	Subtotals
1 Executive Director	\$24,500	\$24,500	\$17,000	\$3,675	\$45,175
Accountant (Contract)					\$12,000
0.5 Bookkeeper	\$37,980	\$18,990	\$5,697	\$2,849	\$27,536
Subtotal					\$84,711
Lodging Staff					
1 Lodging Manager	\$40,860	\$40,860	\$12,258	\$6,129	\$59,247
4 Front Desk Personnel	\$20,020	\$80,080	\$24,024	\$12,012	\$116,116
Subtotal					\$175,363
Food Services Staff					
1 Chef	\$41,090	\$41,090	\$12,327	\$6,164	\$59,581
2 Cooks	\$20,800	\$41,600	\$12,480	\$6,240	\$60,320
1.5 Dishwasher	\$19,470	\$29,205	\$8,762	\$4,381	\$42,347
1 Wait Staff (4 Part-time)	\$20,080	\$20,080	\$6,024	\$3,012	\$29,116
Subtotal					\$191,364
Programs Staff					
1 Program Director	\$35,000	\$35,000	\$10,500	\$5,250	\$50,750
1 Events Manager / Planner	\$25,000	\$25,000	\$7,500	\$3,750	\$36,250
0.5 Instructors (2 Part-time)	\$19,985	\$9,993	\$2,998	\$1,499	\$14,489
1 Spa Manager / Therapist	\$30,100	\$30,100	\$9,030	\$4,515	\$43,645
1 Therapists (2 Part-time)	\$30,100	\$30,100	\$9,030	\$4,515	\$43,645
1 Shop Manager	\$26,260	\$26,260	\$7,878	\$3,939	\$38,077
1 Barista	\$22,340	\$22,340	\$6,702	\$3,351	\$32,393
Subtotal					\$259,249
Facilities and Grounds Staff					
1 Facilities Manager	\$35,950	\$35,950	\$10,785	\$5,393	\$52,128
1 Maintenance Personnel	\$29,310	\$29,310	\$8,793	\$4,397	\$42,500
1 Groundskeepers	\$26,130	\$26,130	\$7,839	\$3,920	\$37,889
1 Housekeeping Manager	\$33,950	\$33,950	\$10,185	\$5,093	\$49,228
4 Housekeeper	\$20,800	\$83,200	\$24,960	\$12,480	\$120,640
Subtotal					\$250,256
26.5 Total		\$683,738	\$214,771	\$102,561	\$960,942

The size of the staff of the Osage Forest of Peace is shown here. At the completion of the expansion projected in the plan, the staff is expected to grow to 26.5 full-time equivalents with 30 to 35 people employed. The payroll, including benefits and taxes, would be approaching \$1 million per year. It is assumed here that the Executive Director and the line managers would provide the Human Resources function, but the staff size is almost large enough to justify hiring a Human Resources Director. Another position that might warrant a half-time appointment is a Marketing Coordinator. The Executive Director, Program Director, and Lodging Director share the marketing duties in the current model. Additional staff may be needed, if the enterprises grow beyond the projections in the pro formas presented previously.



Summary Operations Budget

Expenses

	Subtotals
Lodging Enterprise	\$530,503
Facility Rental Enterprise	\$135,121
Catering Enterprise	\$282,780
Programs Enterprise	\$96,175
Spa Enterprise	\$94,517
Gift Shop Enterprise	\$97,006
Memorial Enterprise	\$2,500
Garden Enterprise	\$12,500
Administrative Expenses	\$147,138

Total **\$1,398,240**

Revenue

	Subtotals
Lodging Enterprise	\$631,680
Facility Rental Enterprise	\$144,000
Catering Enterprise	\$369,928
Programs Enterprise	\$188,800
Spa Enterprise	\$140,000
Gift Shop Enterprise	\$99,200
Memorial Enterprise	\$9,800
Garden Enterprise	\$12,500

Total **\$1,595,908**

The summary Annual Operations Budget combines the previous budgets to show that the growth of the Forest and its enterprises looks to be economically sustainable. Of course, these results are predicated on assumptions that should be carefully considered by the Board of Directors and independent reviewers of this plan. It also will require a good deal of sustained effort over many years to reach this level.

Capital Financing Potential

The operations analysis produces an annual net surplus of **\$237,668**. Current annual gifts and donations to the Forest are approximately **\$120,000**. Using the current rate of giving and the operational surplus would allow the Forest to dedicate \$25,000 per month to service debt. This monthly payment would retire a debt of **\$3,353,125** over a 20 year term at 6.5% annual interest. Electricity savings could contribute **\$778,160** over the same period, which would largely fund the optional solar array project. That would leave a total budget goal of **\$4,919,131** to be raised in a Capital Fundraising Campaign.



OSAGE FOREST OF PEACE



Building Fund 2020

mighty oaks from little acorns grow

Funding Strategy 53

A \$5 million capital campaign is an ambitious, but achievable goal for the Osage Forest of Peace to begin its transformation. This amount will allow the Forest to complete all of Phase 1, including the new Dining and Meditation Halls, eight new lodging units, and much of the needed infrastructure expansion. It will also fund the renovation of the existing campus buildings in Phase 2 of the plan. Smaller, \$1 million fundraising drives in five, ten, and fifteen years could generate the necessary income to complete Phases 2 and 3. Alternatively, with the initial phase completed, the Forest might have the collateral and capacity to finance the remaining improvements, as discussed previously.

One of the strengths of the Forest is its nondenominational status and interfaith connections. The Foundation for New Monasticism and Interspirituality may be a source of grant funding. That said, there still may be funding opportunities available from old friends like the Benedictine Order or the Osage Tribe. There may also be unlikely benefactors to approach nearby, like the American Environmental Landfill, the Sand Springs Home, or the Pioneer Woman Mercantile.



Campus Master Plan



Reverend Don Chatfield, Executive Director of the Osage Forest of Peace instructs students from the Christopher C. Gibbs College of Architecture during their retreat at the Osage Forest of Peace.

OUUDS
The University of Oklahoma Urban Design Studio

In a world where people increasingly live in urban environments, we need a place to reconnect with nature. The Osage Forest of Peace is such a place. In a world divided by religion, politics, and conflict, we need a place for understanding and dialogue. The Osage Forest of Peace is such a place. In a world dominated by technology with never-ending demands and stress, we need a quiet place to calm our minds and nourish our bodies. The Osage Forest of Peace is such a place. The great challenge of this plan is to preserve these special qualities of the Forest during and after its transformation. The mantra for the Forest's growth must be:

New Trees, Same Forest.

The University of Oklahoma Urban Design Studio would like to take this opportunity to thank Reverend Don Chatfield and the Osage Forest of Peace for the opportunity to work with them on this rewarding and highly educational project. The Urban Design Studio is always looking for promising students and interesting community partners for its programs and projects. Please contact Shawn Schaefer at sschaefer@ou.edu or 918-660-3493, for more information.



Campus Master Plan