



STONE VALLEY
FACILITIES MASTER PLAN 2014

STONE VALLEY

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INTRODUCTION

This master planning exercise for Stone Valley has been supported for several reasons. The first is that Shaver's Creek Environmental Center has been growing out of their existing space. A 25% enrollment increase and the addition of support staff has justified the need to explore how future development can address their short-term needs and long-term goals. Also, the draining of Lake Perez and repairs to the dam have allowed a pause for reflection for the Stone Valley Recreation Area. While water sports were put on hold, the construction of high ropes obstacle courses for team-building have added a new dimension to their recreation programming. However, other aspects of their facilities were in need of a fresh look. Finally, the restoration of the lake in 2014 promises to breathe new life into the entire area and so these facility master plans seemed particularly timely as another means of helping to reinvigorate these valuable programs.

HISTORY

The Stone Valley Recreation Area was established in 1961, but the region has a deep history of early Native American culture, fur-trapping, iron ore production, and farming.

During the 1930s, the land was acquired by the United States Resettlement Administration and later came under the jurisdiction of the United States Forest Service. In 1940, The Pennsylvania State College (now "University") entered into agreement with State and Federal Agencies to use these forested lands, construct buildings, and develop roads for the College's educational programs. Subsequently, the Mineral Industries, Forestry and Civil Engineering Lodges were built to accommodate the summer field courses taught by these departments.

In 1954, the Federal government deeded the land over to the University, and in 1957 a Stone Valley Management Committee initiated plans to construct a dam across Shaver's Creek. With the completion of the dam in 1960, and the allocation of 574 acres of land in the Stone Valley Tract for recreational development, the Stone Valley Recreation Area was born. A year later, the Department of Civil Engineering, School of Forestry, and Department of Geology transferred their control of the facilities to the College of Health and Physical Education, now the Department of Intercollegiate Athletics.*

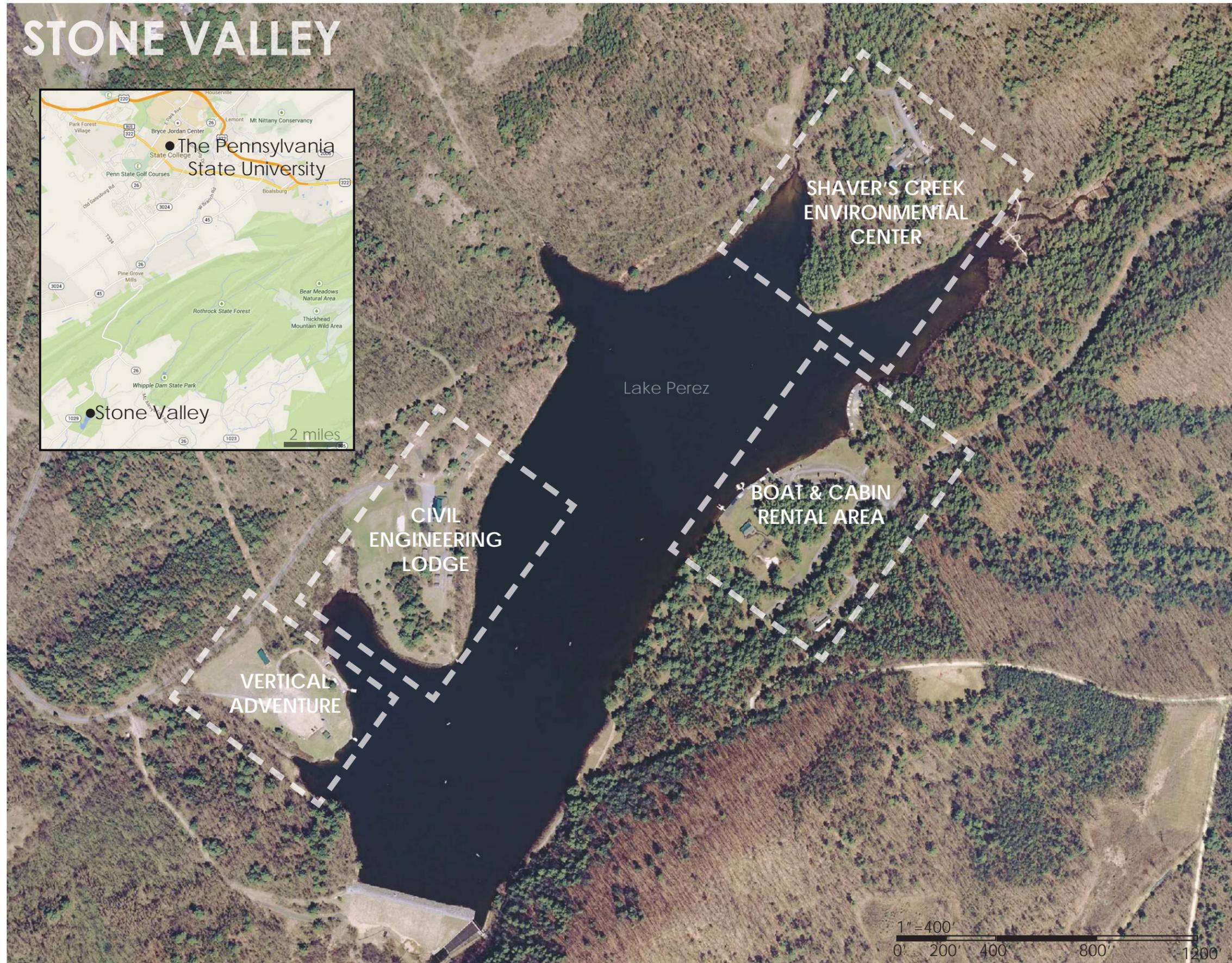
The Shaver's Creek Environmental Center was founded in 1976 as a community resource and as a field laboratory for Penn State students. The programs at the Environmental Center, Outdoor School, Raptor Center, and Team Development Center provide a mix of educational and recreational opportunities for families, schools, corporate groups, and Penn State students.

All of these facilities bordering Lake Perez are set within the Stone Valley Forest which is managed by the Penn State Forestland Management Office utilizing a 50 year management plan for the sustainable harvesting of timber. The forest's 6,775 acres provide educational opportunities for students, forestry professionals, and landowners while also being open to the public with 25 miles of maintained trails and 25 miles of roadway.

(*from Stone Valley Recreation Area website)



STONE VALLEY



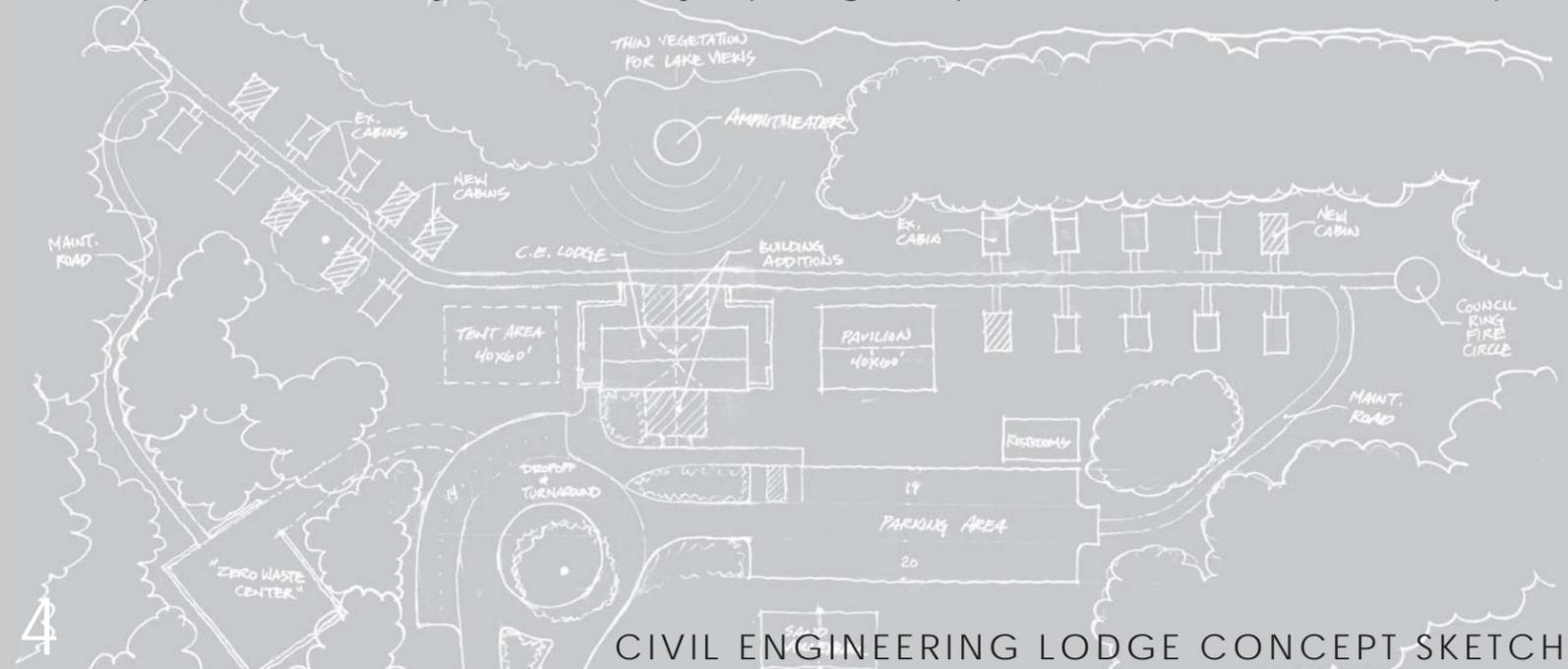
MASTER PLANNING PROCESS

KICKOFF

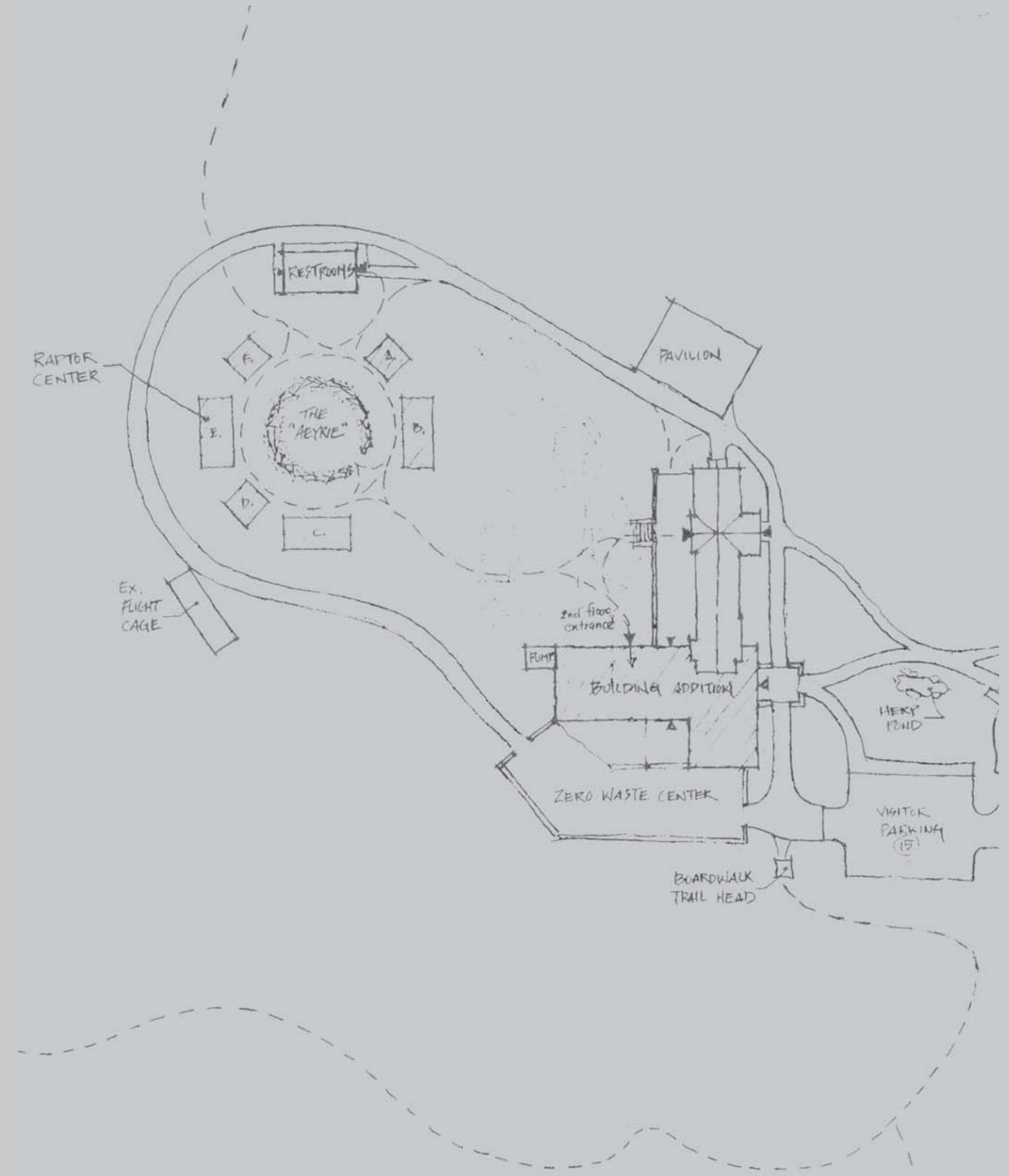
The fundamental value of a facility master plan is to establish a strategic vision for the future and illustrate opportunities for capital investment and fundraising. A master plan identifies current priorities, future opportunities, and long-term possibilities.

The Stone Valley master planning process began with a kickoff meeting that brought all stakeholders together to introduce their programs and facilities to the group. We discussed the current issues that may impact future growth and development, as well as the vision and goals of each facility. Some main points included:

- Development may be limited by ability to handle wastewater
- Duplication of facilities should be avoided (especially regarding maintenance)
- Similar aesthetic should be adopted by all facilities
- All programming and planning should be coordinated
- For rec areas, get back to the level of use preceding the draining of the lake
- Make students more aware of programming and amenities
- Improve accessibility to students by exploring transportation alternatives from campus



CIVIL ENGINEERING LODGE CONCEPT SKETCH



SHAVER'S CREEK ENVIRONMENTAL CENTER CONCEPT SKETCH

MASTER PLANNING PROCESS

FACILITIES TOUR & ASSESSMENT

Next our group met at Stone Valley to tour all four sites that share Lake Perez which include Shaver's Creek Environmental Center (former Forestry Lodge), Civil Engineering Lodge, Vertical Adventure Area (Boathouse), and the Boat & Cabin Rental Area (former Mineral Industries Lodge). These tours provided the team with a visual understanding of the opportunities and constraints of each site.

PROGRAMMING

We reconvened again as a group to discuss and outline the specific program needs for each facility. Stakeholders were asked to provide a succinct outline of program goals and the facilities needed to achieve these goals. These lists were to be categorized into immediate priorities, short-term needs, and long-term goals. These outlines combined with Campus Planning + Design's own facility assessment produced final program lists to guide each master plan. These lists will be provided alongside the respective master plans to follow.



FINAL MASTER PLANS

The following master plans were developed following a review and comment period from all stakeholders. Each area was studied in the context of their program needs to identify renewal and renovation needs, site new structures, improve circulation systems, manage traffic flow, improve parking areas, improve physical identity and aesthetics, as well as propose more sustainable landscape design and maintenance strategies.



SHAVER'S CREEK ENVIRONMENTAL CENTER (FORMER FORESTRY LODGE)

CURRENT CONDITIONS

Shaver's Creek Environmental Center occupies the original Forestry Lodge from the 1930s which still serves as the primary building on site, along with the original workshop and pump house building. As the program grew over time, other ancillary structures were added including six birdcage structures that make up the Raptor Center, a classroom trailer, an office trailer, a flight cage structure, numerous office and equipment sheds, and more recently a modern restroom building with attached animal care facility along with a large outdoor pavilion and smaller lakeside pavilion. Service and staff access to the main lodge occurs at the east end of the building along with a large material and equipment storage area with piles of gravel, mulch, and firewood along with compost and recycling containers.

The main entrance drive is paved but eventually narrows and makes a one-way, clockwise loop leading first to a single-sided paved parking area near the main building. A bus pull off is near the entrance to the parking lot and the loop road continues past overflow gravel parking spaces carved into the woods before returning to the two-way entrance drive. Gravel paths lead from the overflow parking across the loop road and connect with other paths leading to the main lodge and various nature trails. An event lawn in front of the lodge accommodates large groups and is focused on an outdoor stage. From the lawn and main parking area, the site slopes gradually uphill moving past the lodge and pavilion, past the Raptor Center and restroom building, and finally to the classroom trailer and flight cage which are at the high point of the site overlooking Lake Perez through the forest.



ENVIRONMENTAL CENTER

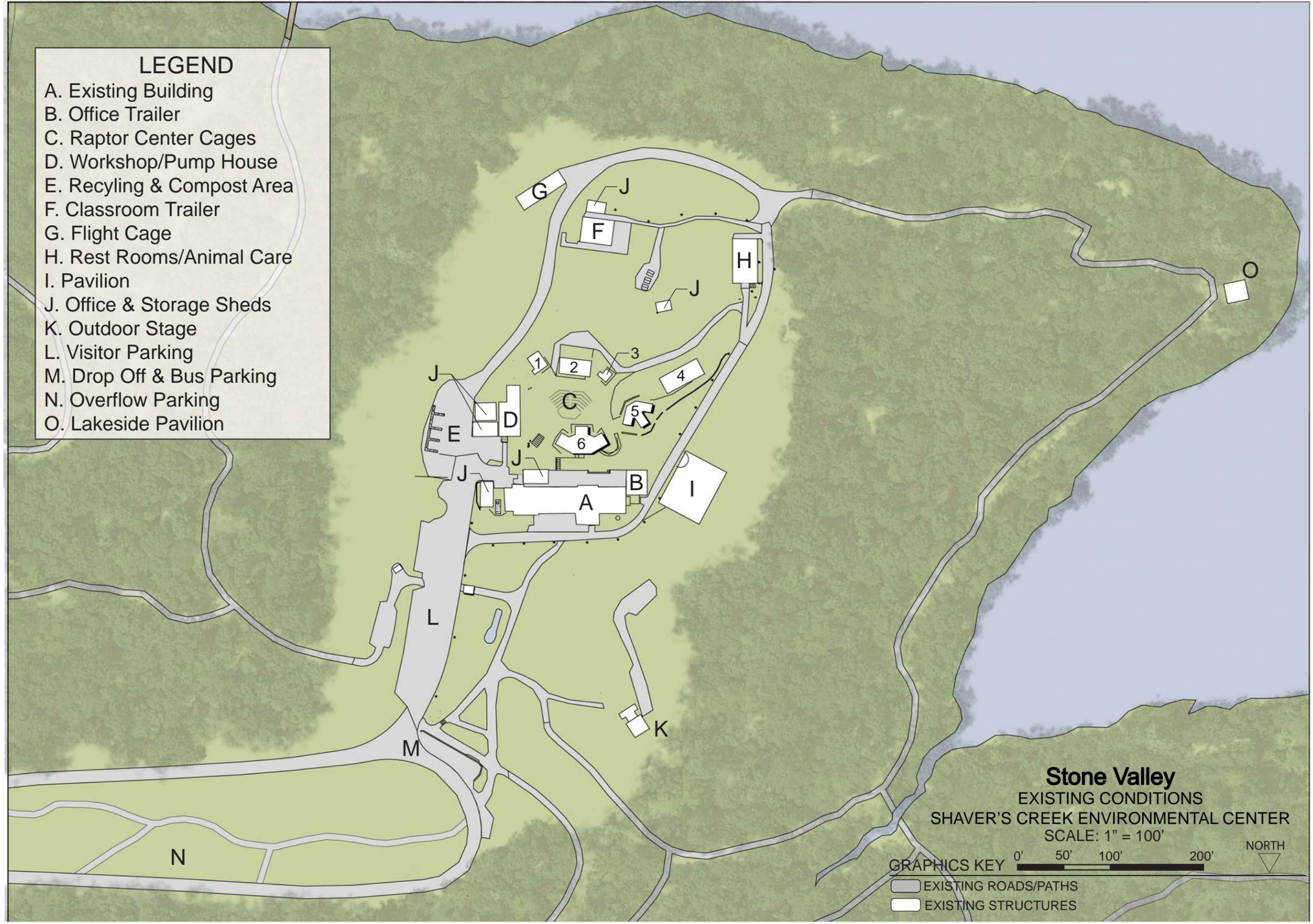


RAPTOR CENTER

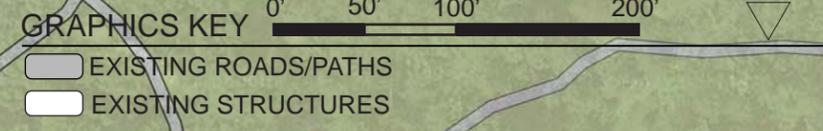


OFFICE SETUP

- LEGEND**
- A. Existing Building
 - B. Office Trailer
 - C. Raptor Center Cages
 - D. Workshop/Pump House
 - E. Recycling & Compost Area
 - F. Classroom Trailer
 - G. Flight Cage
 - H. Rest Rooms/Animal Care
 - I. Pavilion
 - J. Office & Storage Sheds
 - K. Outdoor Stage
 - L. Visitor Parking
 - M. Drop Off & Bus Parking
 - N. Overflow Parking
 - O. Lakeside Pavilion



Stone Valley
 EXISTING CONDITIONS
 SHAVER'S CREEK ENVIRONMENTAL CENTER
 SCALE: 1" = 100'



SHAVER'S CREEK ENVIRONMENTAL CENTER

PROGRAM OUTLINE

1. **Building Addition & Consolidation**
 - a. Multi-purpose indoor classroom (2500 sf)
 - b. Office and support space (1000 sf)
 - c. Public restrooms
 - d. Adjacent outdoor classroom/meeting space
 - e. Storage
 - f. New building mechanical systems
 - g. Removal of temporary structures (i.e. trailers & sheds)
2. **Raptor Center Remodel or Relocation**
 - a. Consider a better layout that doesn't compromise security
3. **Parking & Service Plan**
 - a. Formalize and organize the "Zero Waste Center"
 - b. Consider making existing asphalt lot double-sided
 - c. Improve main entrance drive and add turnaround/drop-off area
4. **Land Management Plan**
 - a. "Reflections Garden"
 - b. Invasive plant removal
 - c. Forest rehabilitation
 - d. Lakeshore Restoration
5. **Residential Facility with Dining Hall/Reception Hall (long-term)**
 - a. Evaluate creating new facility versus improvements to CE Lodge.

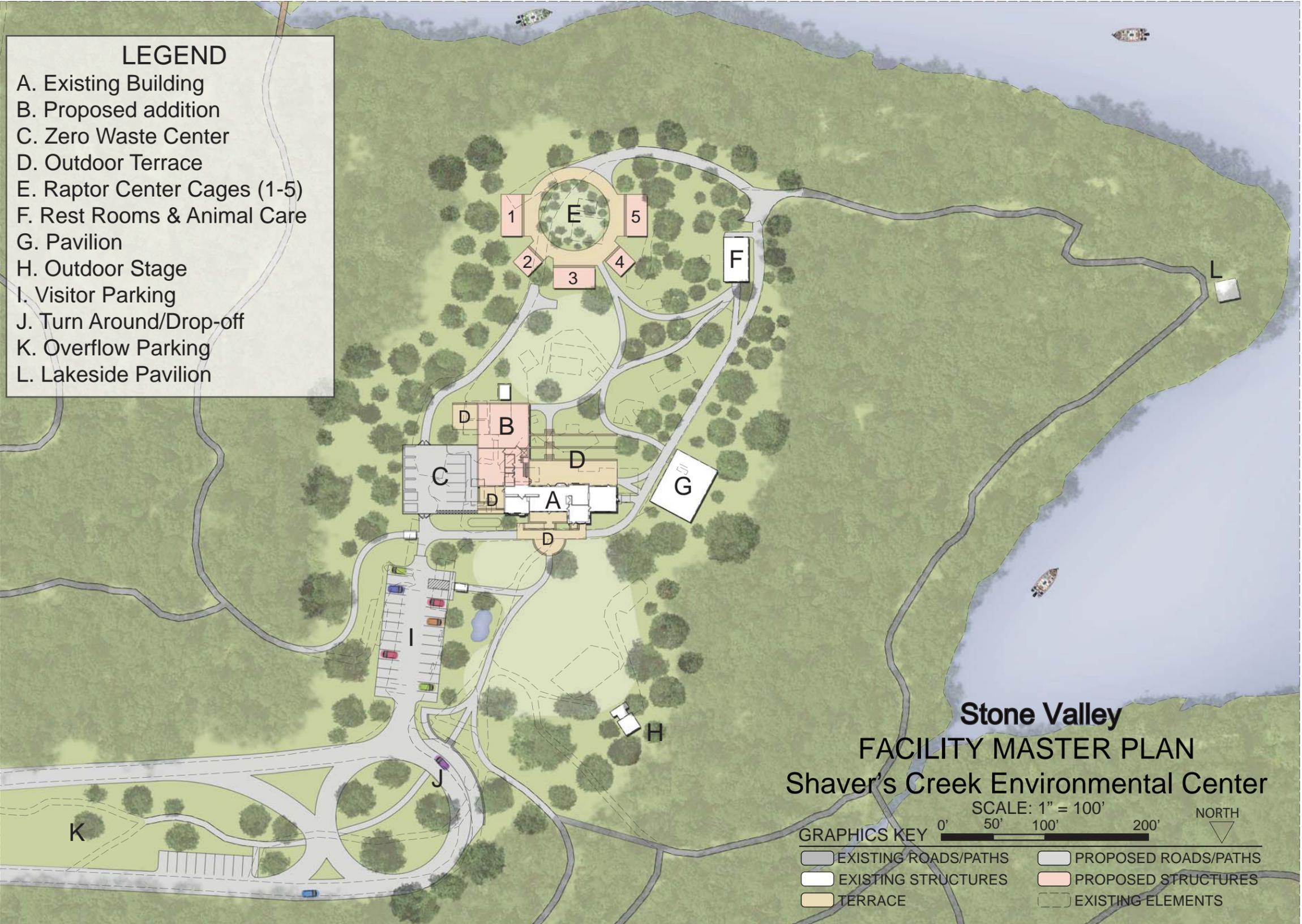
PROPOSED IMPROVEMENTS

Short-term improvements are focused on a major capital project for a two-story, 8000 square foot addition to the main lodge shown off the southeast corner of the existing building. This addition would provide classrooms and restrooms on the first floor with staff offices and meeting space on the second floor. The basement would provide a workshop, storage, and mechanical space. To the east of the addition, the "Zero Waste Center" would provide a more structured setting for the composting and recycling program as well as service access and staff vehicle parking. This area would be screened from the general public but accessible as part of educational programming. Also, outdoor terraces are planned adjacent to both the lodge and the addition to support programming.

It is important to mention that the building addition will also be a consolidation that allows various outbuildings such as the classroom trailer, office trailer, flight cage, and other sheds to be demolished or moved off site.

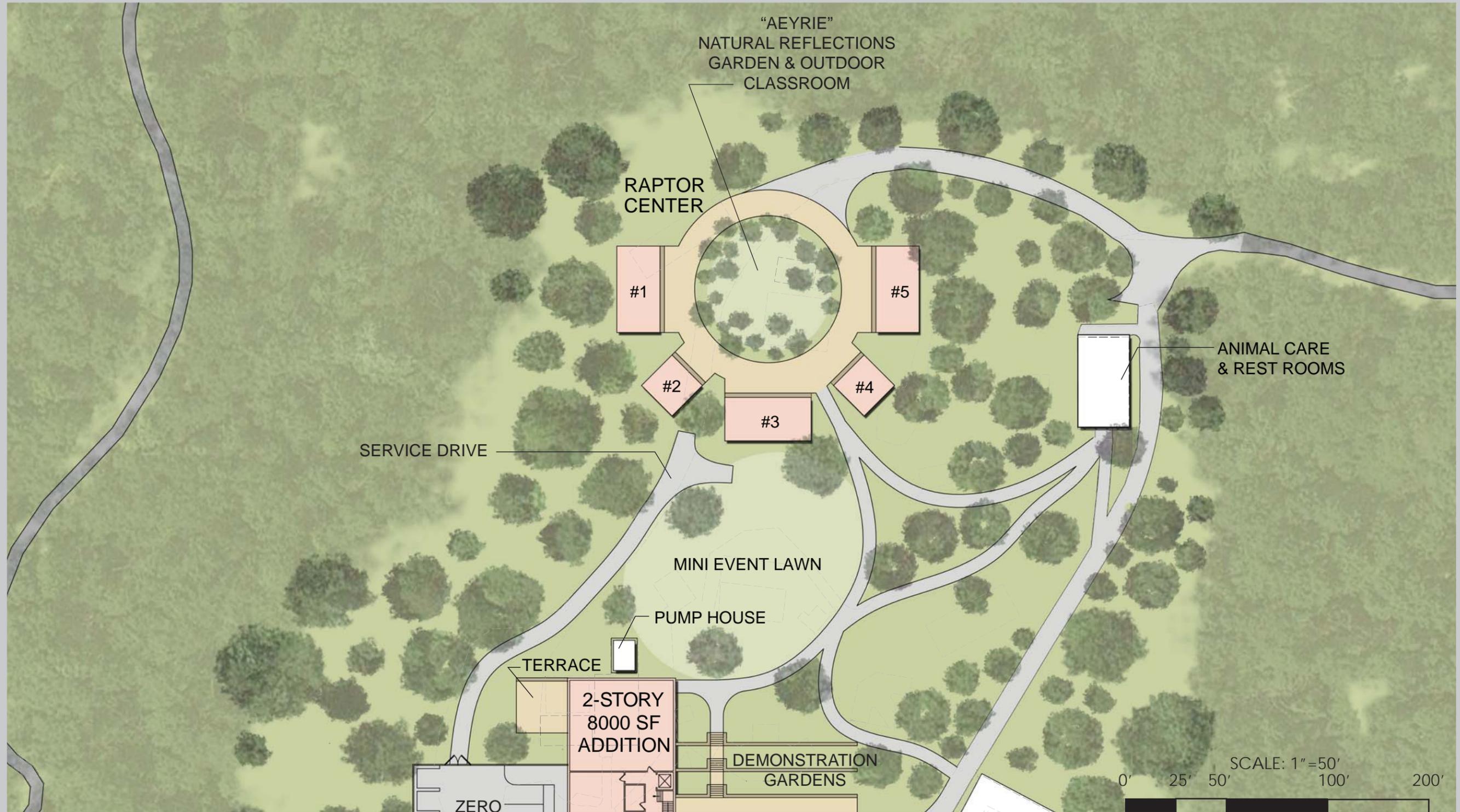
Another potential short-term improvement would be to replace and relocate the Raptor Center. The current structures are still serviceable but aging and their close placement to the main lodge and ill-defined layout is awkward. With the removal of other structures, a new location at the highpoint of the site allows for a more legible arrangement, provides some breathing space from the main facility, and is symbolic as an overlook for raptors. A central open space defined by the cage structures could then be used as an outdoor classroom and themed garden space.

Long-term improvements include widening of the main entrance drive, creating a turnaround and better drop-off area, and improving the efficiency of the existing paved parking area by widening it to be double-sided. Also, demarcating the stalls in the overflow parking areas will greatly increase their capacity, which is particularly needed during major public events.

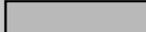
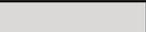
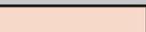


SHAVER'S CREEK ENVIRONMENTAL CENTER

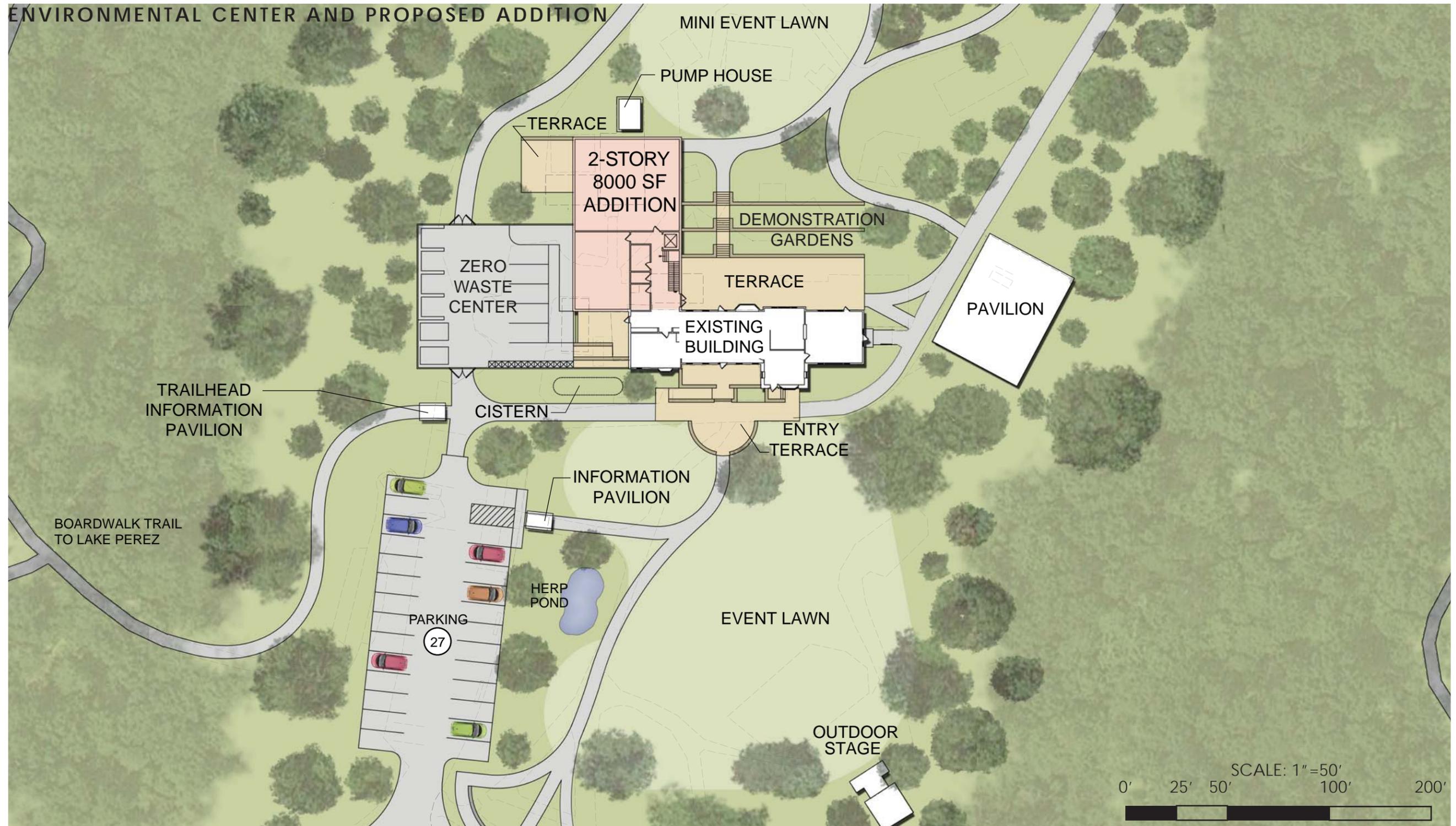
RAPTOR CENTER AND ANIMAL CARE



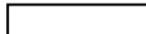
GRAPHICS KEY

- | | | | |
|---|----------------------|---|----------------------|
|  | EXISTING ROADS/PATHS |  | PROPOSED ROADS/PATHS |
|  | EXISTING STRUCTURES |  | PROPOSED STRUCTURES |
|  | TERRACE |  | EXISTING ELEMENTS |

SHAVER'S CREEK ENVIRONMENTAL CENTER



GRAPHICS KEY

- | | |
|--|--|
|  EXISTING ROADS/PATHS |  PROPOSED ROADS/PATHS |
|  EXISTING STRUCTURES |  PROPOSED STRUCTURES |
|  TERRACE |  EXISTING ELEMENTS |

CIVIL ENGINEERING LODGE

CURRENT CONDITIONS

The Civil Engineering Lodge is a two-story, wood-frame structure from the 1930s with a commanding view of Lake Perez to the east. It is currently used for event rentals such as weddings, youth camps, or group retreats. A deep porch wraps around three sides of the lodge and a large asphalt parking lot abuts the western wall of the building. The second story of the lodge is off limits to the public because of code issues regarding accessibility and fire safety.

To the north and south along the crest of the ridge are double-rows of cabins, twelve total, that each sleep six for a total of seventy-two beds. Both cabin areas have their own dedicated restroom/bathroom buildings. The septic drainage field and cleanout tanks lie down hill to the west of the lodge along with a sand volleyball court. Much of the site is mowed lawn sprinkled with trees. The south slope also overlooks the lake and an informal pathway leads to the Vertical Adventure high ropes course area to the southwest.



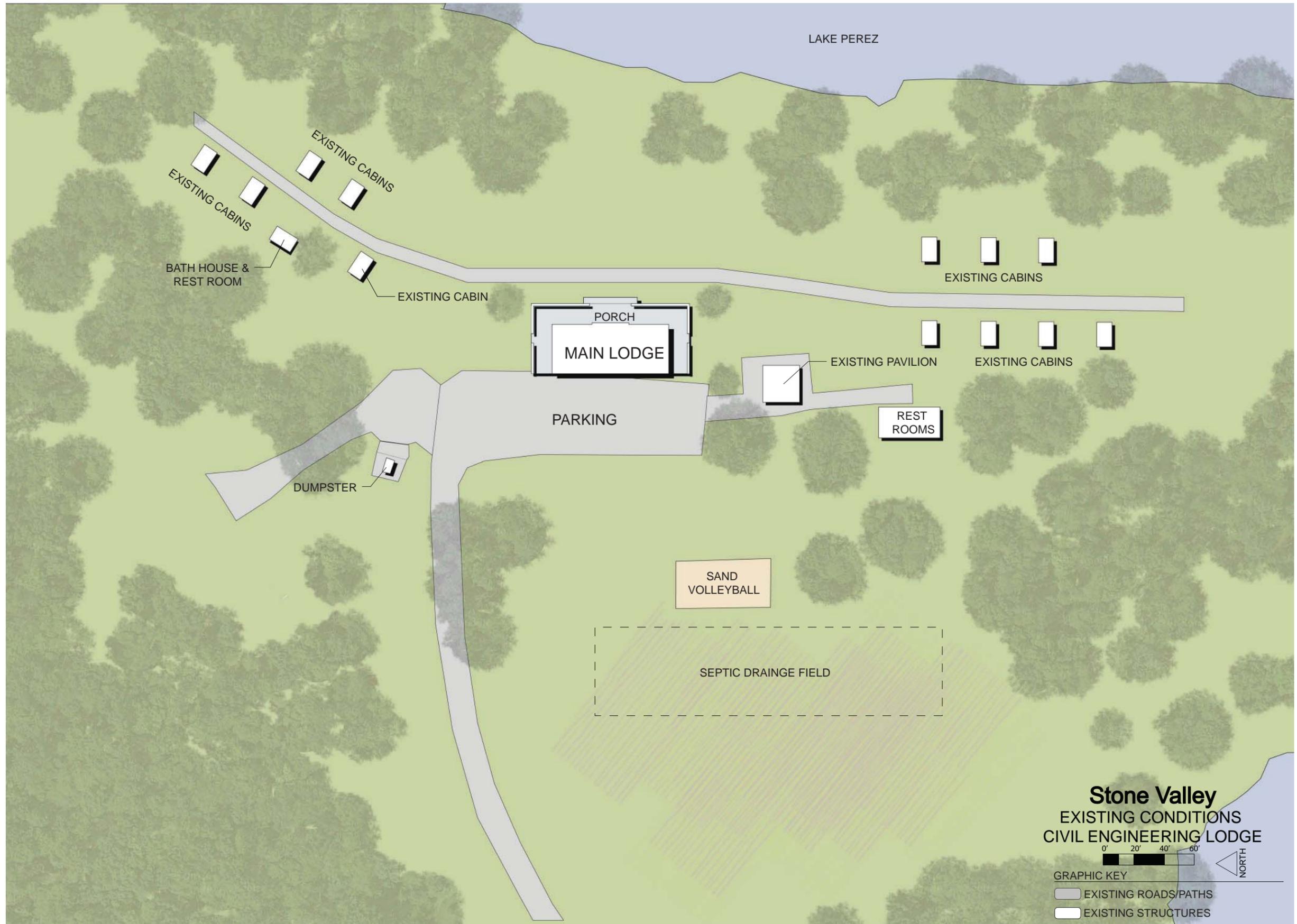
C.E. LODGE



VIEW THROUGH CABINS TO C.E. LODGE



C.E. PAVILION



CIVIL ENGINEERING LODGE

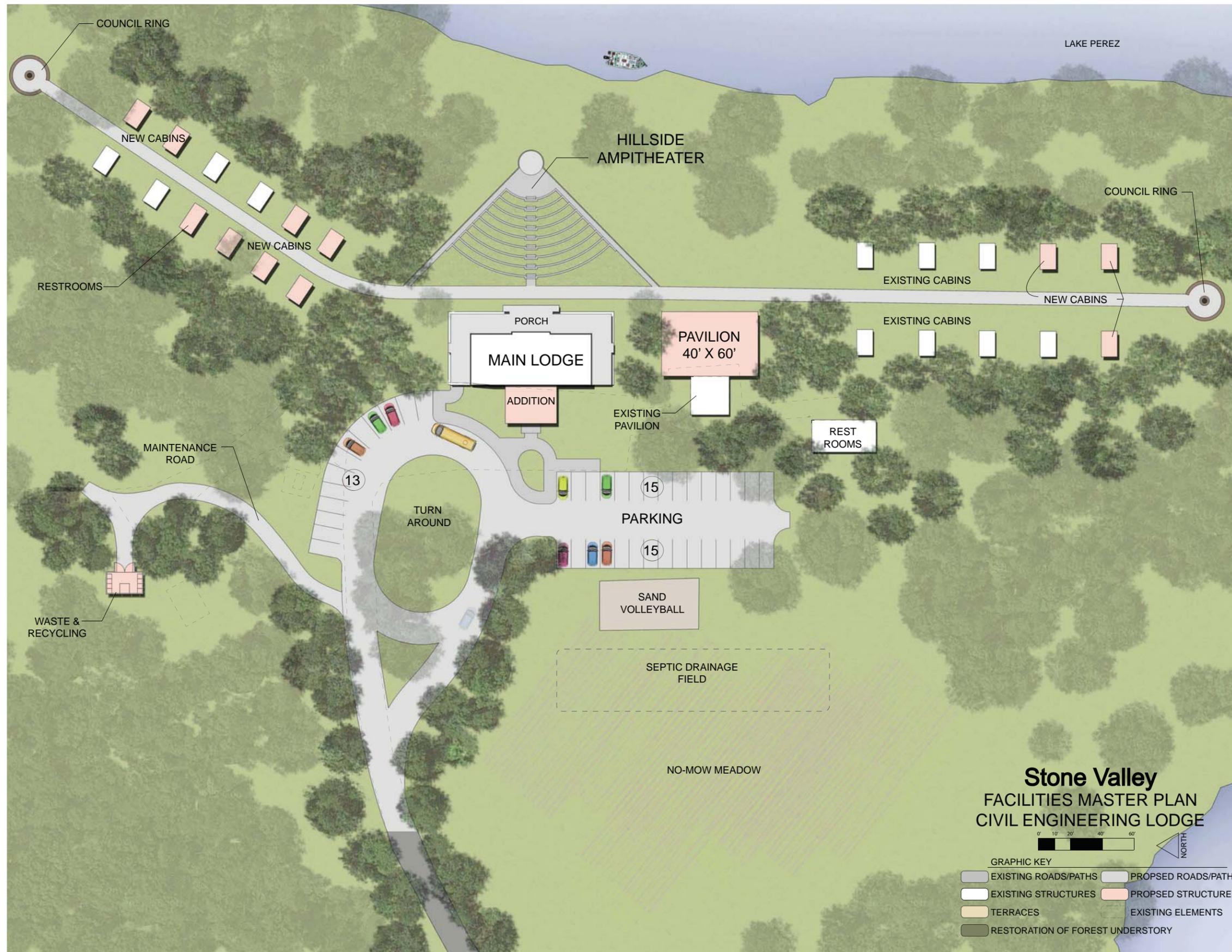
PROGRAM OUTLINE

1. Pavilion for events (40x60')
2. Ampitheatre/event/concert area
 - a. Improve views to lake
 - b. Accessible
3. Add cabins
4. Waste & recycling relocation
5. Land management plan
 - a. Reduce unnecessary mowing
 - b. New shade tree planting
6. Add turnaround/drop-off & relocate parking
7. Potential building addition with code updates for 2nd floor
8. Return of Outdoor School program -- facility needs? (long term)

PROPOSED IMPROVEMENTS

Short-term improvements identified by the user are focused on the lodge's primary use as a rental facility and include the addition of a large open pavilion for events and an area for tenting. Other short term improvements in the plan would be to formalize the area east of the lodge as an outdoor amphitheater for weddings and concerts. Also, additional cabins could be constructed on existing concrete pads and the relocation of the waste and recycling containers from the main approach to the building is recommended. Landscape improvements would include a substantial tree planting program and reduced frequency of mowing or elimination of mowing in certain areas.

Long-term recommendations include a redesign of the drop-off, parking, and pedestrian approach to the building to remove unnecessary pavement, create more efficient parking, provide safer and more predictable vehicular circulation patterns, and enhance aesthetics. A building addition to the west would provide more usable interior space such as improved restrooms and entrance area, plus improve the front façade. Ultimately, this facility could be significantly expanded to support Shaver's Creek's Outdoor School and other residential programming primarily with the addition of a large dining facility, and improved housing amenities (i.e. cabins with restrooms).



VERTICAL ADVENTURE AREA (BOATHOUSE)

CURRENT CONDITIONS

This exposed site provides panoramic views of Lake Perez starting from the north-east, sweeping around to the southeast. Historically, this has been the home of the Penn State Crew Team with covered boat storage racks and other sheds with equipment, along with a shed that houses the sunfish sailboats used for sailing classes. A solitary cabin also sits near the end of a large amorphous gravel parking area. More recently, a high ropes course and other obstacle course equipment was added as part of the "Vertical Adventure" team-building programs now offered to camps and group retreats. The restrooms for this area consist of small outhouses on a sloped embankment.



HIGH ROPES COURSE & CREW BOATS



16
OUTHOUSE



EXISTING CABIN



HIGH ROPES COURSE & CREW BOATS



VERTICAL ADVENTURE AREA (BOATHOUSE)

PROGRAM OUTLINE

1. Restore boat docks
2. Add lakeside trail
3. Add pavilion
4. Land management plan
 - a. Reduce unnecessary mowing
 - b. Forest rehabilitation
 - c. New tree planting
 - d. Water's edge plantings
5. Parking & service plan
6. Consolidate program uses (i.e. crew team, obstacle courses)
7. Add large cabins
8. Add restrooms

PROPOSED IMPROVEMENTS

Short-term improvements to this site would be to restore separate boat docks for the crew team and for the public. A lakeside trail with picnic areas could be included as well. Also an open pavilion at the Vertical Adventure area, combined with the relocation of the equipment shed, would provide a designated check-in area and gathering spot both before and after using the equipment. Landscape improvements would include a substantial tree planting program and reduced frequency of mowing or elimination of mowing in certain areas.

Long-term plans include formalizing the parking and turnaround areas to increase capacity while providing a planted central island. This parking could also serve as overflow for the Civil Engineering Lodge. Obstacle course equipment would be consolidated with the high ropes course which would eliminate the need for participants to cross the access road. Also the crew boat storage structure and other sheds would be consolidated near the crew dock with a truck and trailer turnaround. In addition, more large cabins could be added overlooking the lake. Finally, an accessible public restroom would be added in a central location to all site uses.



BOAT & CABIN RENTAL AREA (FORMER MINING INDUSTRIES LODGE)

CURRENT CONDITIONS

Historically, this was the location of the Mining Industries Lodge built in the 1930s but was lost to fire. The site is still heavily used for camping in the original cabins as well as for boating. A new building was erected in 2003 that houses the rental office and staff office along with a storage building nearby for boating equipment overlooking the main docks. A large gravel parking area with room for vehicles with boat trailers serves most visitors with ready access to the public boat launch. Two linear groups of cabins south of the rental office include a restroom/bathhouse building as well as a waste & recycling area in-between. A maintenance building along the southern edge of the site serves all three recreation areas. Narrow asphalt roadways interconnect the cabins area with the boat rental area. A gravel road also extends to the west to the breast of the dam passing near a wooden climbing tower and ancillary pavilion. Another gravel road leads to a private boat storage and launch area to the northeast. In this area, a trail connection was recently made leading to Shaver's Creek.



BOAT RENTAL OFFICE



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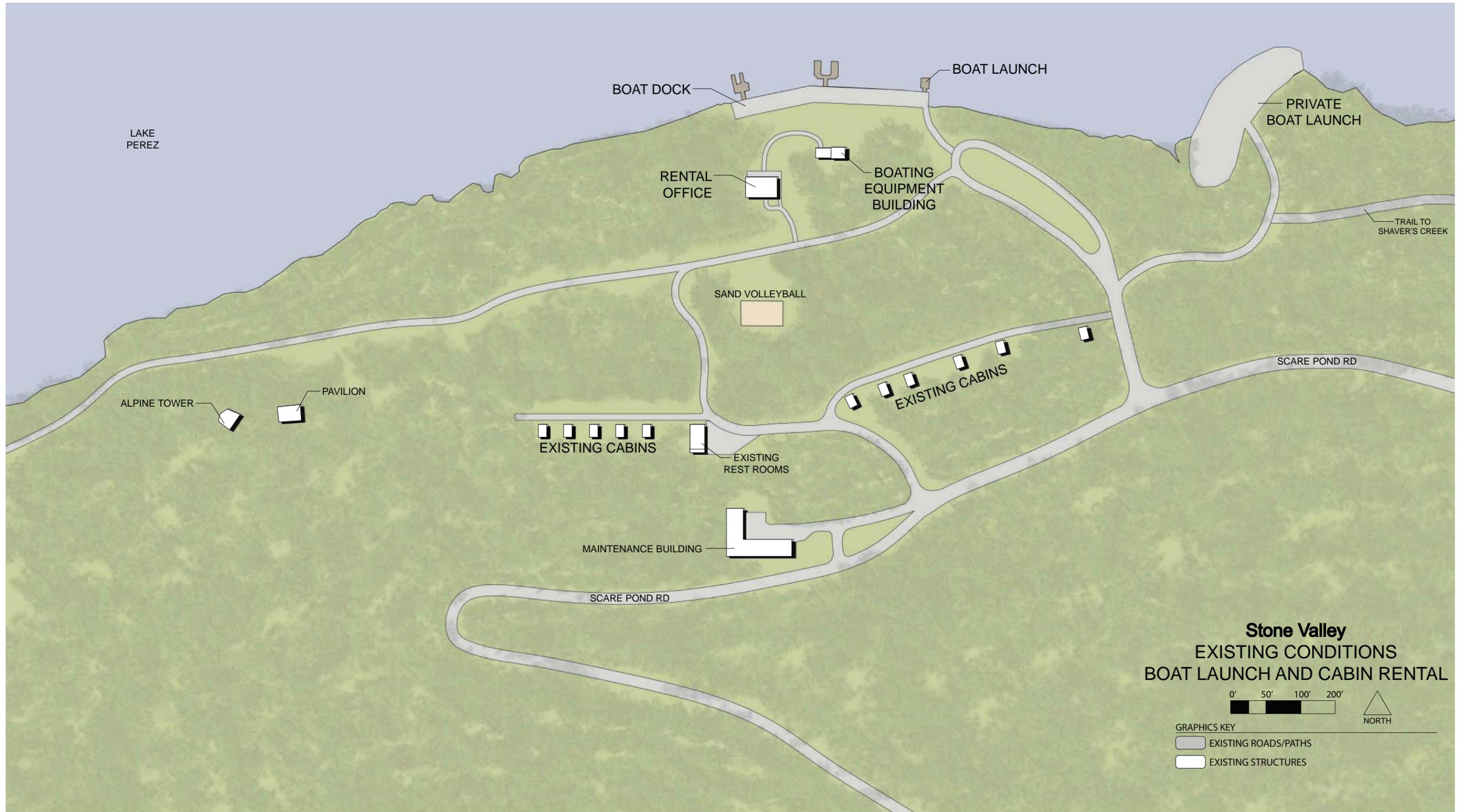
BOAT LAUNCH PARKING



CURRENT DOCK



BATHHOUSE AND CABINS



BOAT & CABIN RENTAL AREA (FORMER MINING INDUSTRIES LODGE)

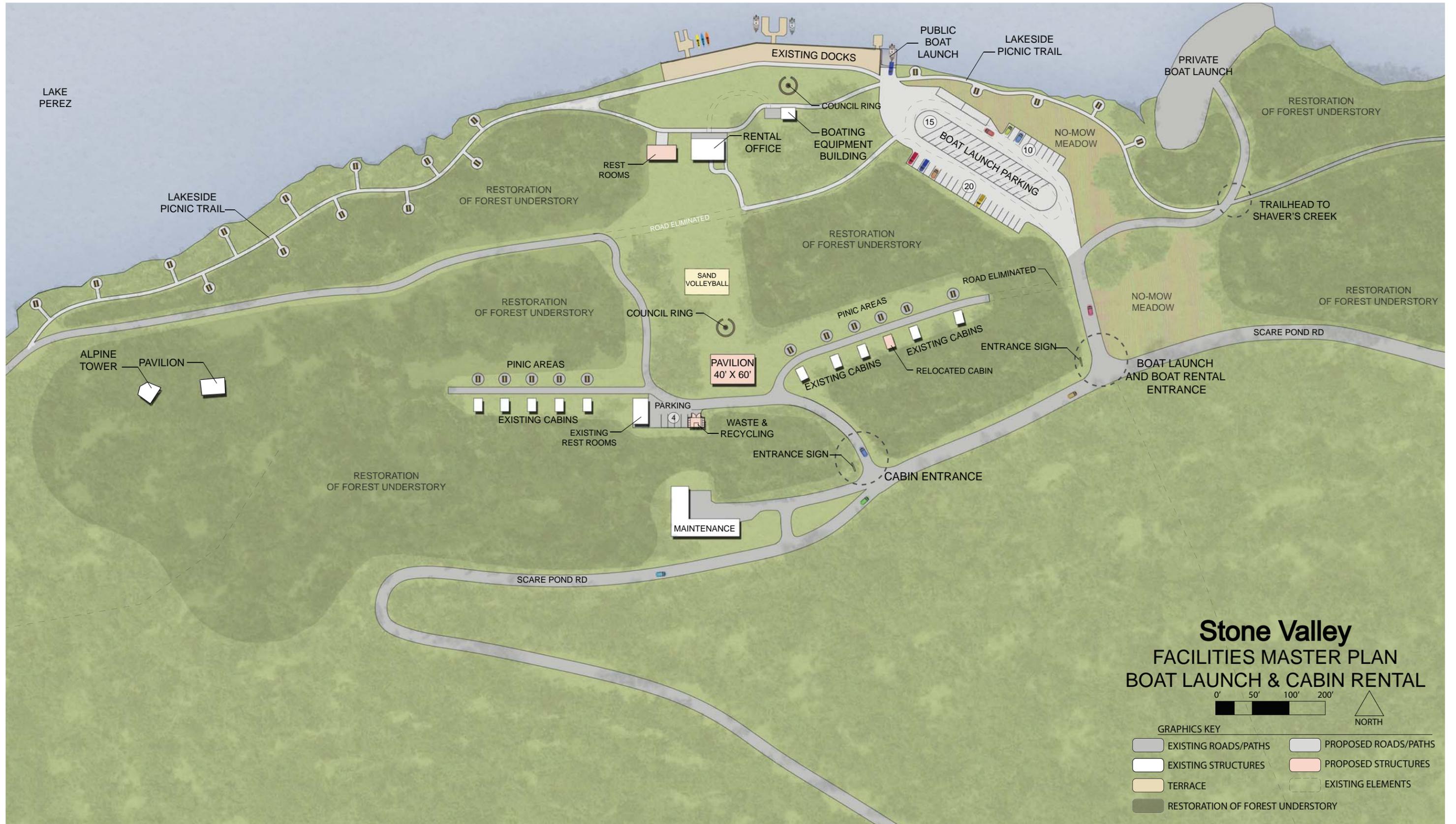
PROGRAM OUTLINE

1. Add lakeside trail & connect to Shaver's Creek
2. Separation of vehicular access to boat rental area and cabin rental area
3. Add pavilion to cabin area
4. Improve waste & recycling area
5. Land management plan
 - a. Reduce unnecessary mowing
 - b. Forest rehabilitation
 - c. New tree planting
 - d. Water's edge plantings
6. Public restrooms at boat rental area
7. Formalize boat launch parking area

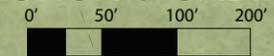
PROPOSED IMPROVEMENTS

Short-term recommendations include extending the trail from Shaver's Creek into the site, particularly along the lakeside, with picnic tables overlooking the water. Also, the plan recommends creating a more clear separation between the public boat rental area and the more private cabin rental area by eliminating two connecting roadways and providing new entrance signs for each area from the main road. In the eastern bank of cabins, a "stray" cabin farthest east would be relocated to fill a gap in the row while the roadway connection would be eliminated to reduce shortcutting of vehicles and provide a more secluded feel, similar to the western bank of cabins. In addition, a large open pavilion would provide another amenity for groups renting cabins and an enclosed waste and recycling area with designated bathhouse parking would improve the functionality and aesthetics of this commons area. Landscape improvements throughout would include a substantial tree planting program and reduced frequency of mowing or elimination of mowing in certain areas with the added opportunity to restore the woodland floor and understory layers beneath the existing tree canopy.

Long-term improvements include adding restrooms to the rental office or as a stand-alone building nearby that would serve boaters and picnickers, allowing the existing bathhouse to be dedicated to the cabins. Also, the parking area for the boat launch could be formalized to provide a more efficient layout for standard sized spaces as well as dedicated parking and pull-off areas for vehicles with boat trailers.



Stone Valley FACILITIES MASTER PLAN BOAT LAUNCH & CABIN RENTAL



GRAPHICS KEY

- | | |
|----------------------------------|----------------------|
| EXISTING ROADS/PATHS | PROPOSED ROADS/PATHS |
| EXISTING STRUCTURES | PROPOSED STRUCTURES |
| TERRACE | EXISTING ELEMENTS |
| RESTORATION OF FOREST UNDERSTORY | |

CONCLUSION

SHARED RESOURCES & COORDINATED APPROACH

These master plans are only a first step and should act as a guide or framework for thoughtful decision-making. The main idea is to adopt a comprehensive and coordinated approach among all facilities. A common theme moving forward should be about sharing resources. Facilities should not be duplicated but instead be complementary. For example, having two maintenance facilities with requisite equipment and material storage seems redundant.

Another goal should be a consistent architectural and landscape architectural aesthetic with coordinated signage, lighting, wall & paving systems, paint colors, native plantings, maintenance practices, etc. Even these detailed decisions contribute to and reinforce the message that is communicated to the visitor about Penn State's commitment to the natural environment and recreation.

Finally, a coordinated approach to planning can help to promote a holistic outdoor experience for visitors who can take advantage of Shaver's Creek's educational programming, all of the many lake activities, the Vertical Challenge courses, all while hosting an event in the Civil Engineering Lodge or camping in the cabins. This shared focus will hopefully attract more visitors, increase programming demand, generate more funding and donor interest, and further establish Stone Valley as a pre-eminent outdoor learning and recreation facility.