

Nalley Brown Nature Park

Grounds and Outdoor Maintenance

2 people (Grounds Manager and Assistant) + Seasonal and/or Temporary Help

I. Grounds Maintenance: Trees, Shrubs, Perennials, Trails

A. Fertilization:

- Shrubs, trees, and perennials planted less than three years shall be fertilized no more than four times per year or as needed. Applications shall be made between the months of February and July.
- Shrubs, trees, and perennials more than three years old shall be fertilized no more than two times a year or as needed between the months of February and July.
- All-Organic fertilizer will be used including mixes of compost, blood meal and bone meal. No synthetic fertilizers will be used.
- Beneficial mycorrhizal fungi will be added with any new plantings and added as needed to existing plants to ensure overall health of root systems.
- Fertilizer applied to shrubs and trees planted in beds shall be broadcast over area falling within drip line of plant. Fertilizer may be punched into soil on berms and slopes, or applied in liquid form as a soak.
- Nutrient deficiencies shall be treated with supplemental applications of the specific lacking nutrient. If needed a soil sample will be sent to the Clemson University Cooperative extension service.

B. Pest Management:

- Maintenance Coordinator shall practice Integrated Pest Management to control insects, diseases, and weeds on and around perennials, shrubs, vines and trees. This will include frequent monitoring and spot treatment as necessary using all-natural, organic pest control products.
- All spraying will be performed when temperatures are below 90 F and when wind drift is negligible.
- First choice will be insecticidal soaps, horticultural oils and biological controls such as *Bacillus thuringiensis* (Bt) formulations.
- Weeds in beds or mulched areas will usually be removed mechanically or by hand. Upon client approval, organic herbicides may be employed for heavy weed

infestations. Initial site cleanup and ongoing invasive weed management may require glyphosphate or 2-4-D application.

C. Pruning:

- Pruning and maintaining the plants immediately in the vicinity of the building and accompanying structures is time-consuming and laborious. It is recommended that this function be performed up to four times a year and should be calculated as a subcontracted expense (see below).
- Shrubs will be pruned with hand shears as needed to enhance the natural form of the plant, to remove dead wood, to remove over aggressive shoots and suckers, and to encourage flowering.
- Tree pruning will be done once per year and is limited to branches below 15 feet in height. All litter will be removed by the contractor. No trees under utility lines will be pruned and no pruning will be done during or immediately following growth flushes. Branches will be pruned just outside the branch collar. Pruning paint will not be applied. Sucker growth will be removed by hand from the base of trees. No herbicide will be used for this purpose. It is recommended that this function be performed twice a year, more if storm damage occurs, and should be calculated as a subcontracted expense (see below).
- Perennials will be dead headed and cut back seasonally to encourage longer blooming and keep the garden in a neat and clean condition.

D. Trail Maintenance:

- Trails shall be regularly inspected for downed trees, limbs, erosion issues, and other obstacles.
- Debris shall be removed to ensure clear and safe passage.

II. Additional services

A. Annual Flowers:

- Installation of annuals will be done twice each year and replaced as needed to maintain a healthy, attractive appearance. Major renovation of annual beds shall be accomplished once per year in April. Annuals will be fertilized upon planting with an all organic slow-release fertilizer. Annual replacement expenses will be determined upon completion of final design.

B. Irrigation Systems:

- The maintenance coordinator shall inspect and test all components and zones in the irrigation system monthly and shall reset zone times according to seasonal conditions and plant requirements. Minor adjustments and repairs shall be made by the coordinator with the client billed for parts. During weekly maintenance, the contractor will note and report to administrator any symptoms of inadequate or excessive irrigation that may require outside servicing.

C. Water features:

- The coordinator shall inspect the water feature weekly for leaks or other problems, remove debris, and clean filters as needed to maintain optimum appearance and performance.
- Monthly treatments will be made to control large scale algae blooms.
- Barley bales will be installed regularly to naturally maintain water clarity.

D. Waste Management:

- Grounds maintenance will be responsible for emptying trash cans and recycling bins located outside the buildings, and near all shelters, parking areas, and trails. Litter and other foreign debris removal will also need to be collected and removed, inspected as needed on a daily or weekly basis.

III.. Building Maintenance

A. Existing Buildings

- Grounds Manager shall be responsible for maintaining existing buildings including but not limited to the observation tower, picnic shelters, educational kiosks, and bridges over ravines. Tasks such as replacing old,rotten, and/or broken decking boards, repairing roofing, or painting qualify as maintenance.

IV. Equipment Recommendations

- Small Multi-Purpose Utility Tractor
- Tractor Attachments: Leaf Blower, Bush Hog, Forklift, and Bucket
- Diesel Gator Utility Vehicle and Dump Trailer
- Backpack Sprayer
- Chainsaws (2)
- Wood Chipper
- Radio Communicators and Chargers
- Hoses, Irrigation Repair Supplies

V. Proposed Budget

A. Up Front Costs

- Approximately \$35,000 for above equipment and storage, plus additional hand tools.

B. Annual Costs

- Grounds Manager: \$25,000 to \$35,000 dependent upon experience
- Assistant Groundskeeper: \$20,000 to \$30,000 dependent upon experiences
- Seasonal/Temporary Help: \$10,000
- Fuel/Equipment maintenance: \$5,000