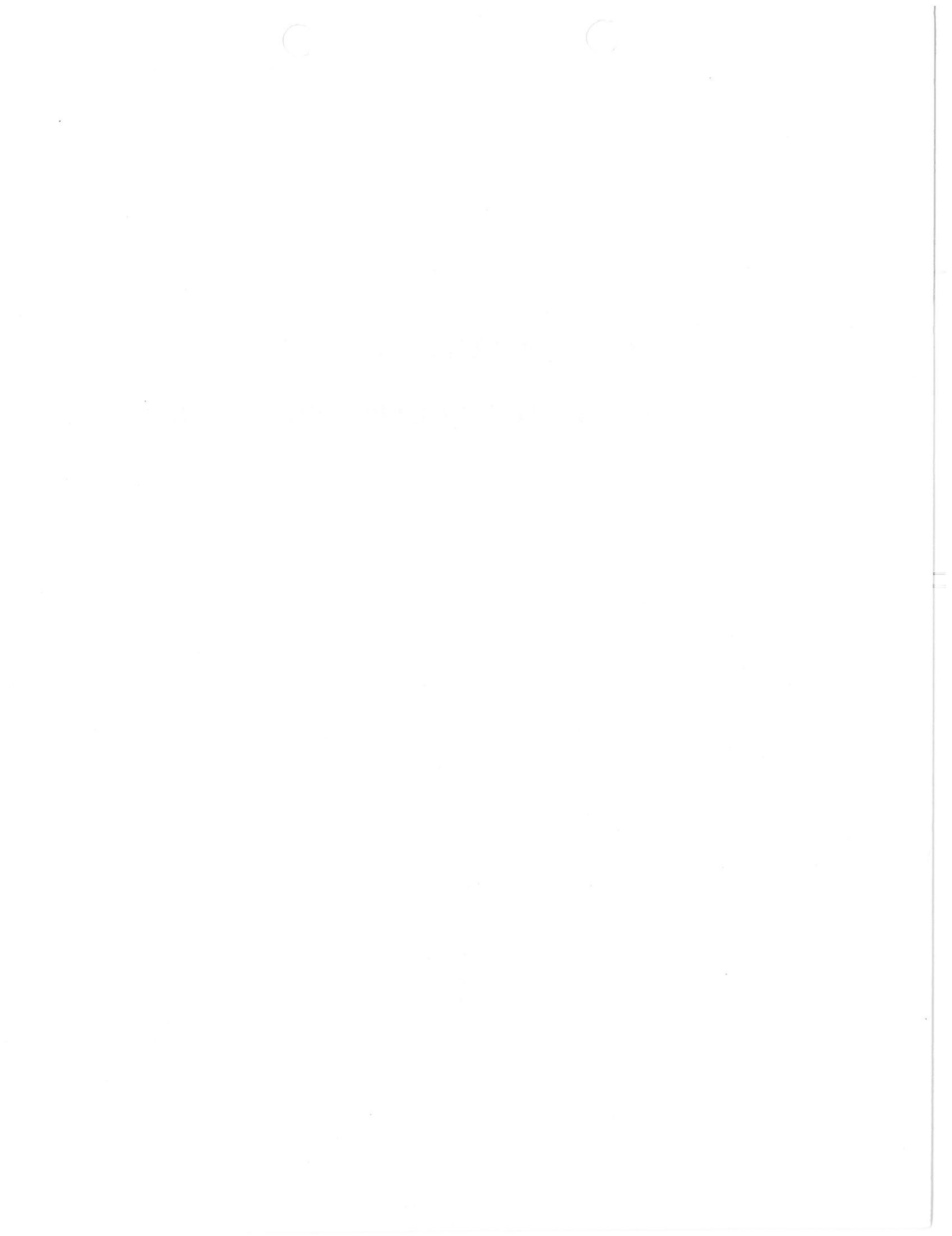


TOWN OF BELLEAIR, FLORIDA
GROUNDS MAINTENANCE SPECIFICATIONS

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REFERENCES

TOWN OF BELLEAIR, FLORIDA

GROUNDS MAINTENANCE SPECIFICATIONS

I. STATEMENT OF INTENT

The Town of Belleair is one of the premier residential communities in Florida. This waterfront community offers a high quality of life in a park like setting for its residents. An in-depth approach to landscape management is necessary to assure the high standards for appearance and grounds maintenance desired by the Town.

This specification is provided as a technical support and reference document to the Town of Belleair Ordinance No. 370 and Resolution No. 97-6 governing the design and policy of Town parks and public areas.

The term Grounds Maintenance Personnel used throughout this specification can be defined as a grounds maintenance firm, arborist, chemical applicator, etc. contracted by the Town to provide various grounds maintenance services or Town of Belleair staff personnel employed by the Town to provide similar services. The Grounds Maintenance Specifications is designed to be a technical specification support document to a Grounds Maintenance Agreement contracted with a grounds maintenance firm, but will also serve as the maintenance specifications for Town staff personnel engaged in grounds maintenance activities.

This specification has been prepared to guide the Grounds Maintenance Personnel and his trained representatives in the execution of a complete and comprehensive maintenance program for the parks and public lands of the Town of Belleair. All work to be performed such as mowing, edging, pruning, trimming, fertilization, weeding, chemical applications, aerating, mulching, plant replacement and clean-up shall be strictly managed, and executed by experienced personnel. The Grounds Maintenance Personnel shall be responsible for the complete care of all planted trees, shrubs, ground covers, flowers, and lawn areas within the boundaries of the Town of Belleair. The Town shall be insured that the quality of the landscape does not deteriorate, but maintains vitality and healthy growth for the duration of the Grounds Maintenance Agreement. All elements of this specification, unless expressly stated otherwise herein, shall become part of the services required by the Grounds Maintenance Agreement.

II. GENERAL REQUIREMENTS

- A. Unit costs for mulch, replacement plants, and labor per hour for irrigation repairs shall be furnished by the Contractor at time of Bid (for landscape installation, refer to the Town of Belleair Master Plan Details, Notes, and Specifications). These approved unit prices will become part of the Contract Documents and shall be used as the basis for billing of all such items. Adjustments to these unit costs must be approved and authorized in writing by the Town.
- B. Estimates will be provided to the Town for any remedial landscape or irrigation work requested. The estimates will include unit costs for additional materials and labor (i.e., mulch, fertilizer, conditioners, plants, soils, irrigation parts, etc.) and shall be presented to the Town for approval and authorization prior to commencement of any work.
- C. The Grounds Maintenance Personnel before commencing the Work under this Agreement shall assure the Town (by furnishing Certificates of Insurance) that the following kinds and amounts of insurance are in full force and are maintained in force at all times for the life of the Grounds Maintenance Agreement and as required by law on the Contractor's operators and employees and require same of any sub-Contractors and provide proof of same to the Town:
1. Workman's Compensation Insurance, including Employers Liability Insurance, for a limit of not less than \$1,000,000.00.
 2. Comprehensive General Liability Insurance for protection of the Grounds Maintenance Personnel during performance of the Work and all operations incidental thereto, subject to bodily injury liability limits of not less than \$300,000.00 for an accident involving any number of persons and subject to a property damage liability limit of not less than \$100,000.00 per accident.
 3. Automobile Liability Insurance for the protection of the Grounds Maintenance Personnel in connection with the operation and use of owned, non-owned, hired or leased automotive equipment in the performance of the Work hereunder, subject to Bodily Injury Liability limits of not less than \$100,000.00 for an accident involving any one person and not less than \$300,000.00 for an accident involving two or more persons, and subject to a Property Damage Liability limit of not less than \$100,000.00 per accident.
- D. The Grounds Maintenance Personnel is responsible for obtaining any licenses and/or permits required by law for activities on Town property.
- E. The Grounds Maintenance Personnel shall be responsible for any damage due to operations of equipment in performing the contract, damage to any plant material due to improper

horticultural practices or carelessness, improper replacement or retrofitting of irrigation components, and injury to non-target organisms in application of pesticides. Damage or neglect to any areas of the Town by the Contractor's crews or their machinery, shall be promptly resolved through repair or reimbursement.

- F. The Grounds Maintenance Personnel is responsible for contacting "Sunshine" and the Town of Belleair to verify all existing utility locations prior to any excavations.
- G. Equipment: The Grounds Maintenance Personnel will furnish and maintain, all mowing and trimming equipment, including fuel. This equipment includes all tractors, decks, sweepers, edgers, hand mowers and reel-type mowers. A list of this equipment owned by the Contractor and required for this contract should accompany the Bid.
- H. Manager: A full-time, on-site manager will be assigned by the Grounds Maintenance Personnel to schedule, assign, and supervise duties. This person will coordinate all services with the Town of Belleair, Director of Public Works, or his assign.
- I. Grounds Maintenance Personnel: All personnel will be skilled in the field in which they work; that is, no minimum-wage, unskilled laborers will perform the work. The Grounds Maintenance Personnel will provide a list to the Director of Public Works containing the number of people assigned to various tasks. All grounds maintenance crews will be appropriately dressed, in full uniform, at all times while on Town of Belleair public property.
- J. Any damage done to the site by Acts of Nature, such as drought, fire, storms, severe freeze, vandalism, flooding, etc. shall not be the responsibility of the Grounds Maintenance Personnel.
- K. Any complaints by the Town of Belleair or the Grounds Maintenance Personnel shall be addressed in writing and shall be acted upon promptly.
- L. The Grounds Maintenance Agreement shall be a contract renewable annually with termination by either party with thirty (30) days written notice at any time during the contract period.
- M. The Contract has been divided into 3 areas: AREA LEVEL 1 - includes the entries and high visibility areas, AREA LEVEL 2 - includes other public areas of lower visibility as well as the athletic fields, and AREA LEVEL 3 - includes several small pocket parks (see appendix for list of parks).
- N. On a daily basis, the Grounds Maintenance Personnel is responsible for leaving the job in a clean, orderly, and safe condition. The Grounds Maintenance Personnel shall be responsible for cleaning any stains from pavement, walls, or buildings caused by his operation, by irrigation or by pest control measures.

- O. The Grounds Maintenance Personnel or his representative will meet with the Town of Belleair Director of Public Works or his representative once per month for a complete inspection of the maintained grounds.
- P. A representative of the Park and Tree Board may meet when required with the Public Works Director or his designee to identify diseased and/or dying plant materials to consider their replacement.

III. LAWN GRASS MAINTENANCE

A. Mowing, Edging, and Trimming

1. Town grass areas shall be mowed once every five (5) working days at all times during the year, with the exception of the Town Hall (north and west sides of the building up to the parking lot only) which shall be mowed twice every five (5) working days. The Athletic fields are comprised primarily of Bermuda "Tifway 419" grass. Bermuda "Tifway 419" must be mowed with a reel mower according to proper maintenance practices and at heights stated herein.

2. Lawn mower blades shall be kept sharp and well-adjusted to provide a clean cut.

3. Town grass areas shall be maintained at the appropriate height indicated below:

<u>TURF GRASS</u>	<u>MOWING HEIGHT</u>
St. Augustine (Floritam, Bitter Blue, FX 10)	3.0-4.0"
Bahia	3.0-4.0"
Bermuda (Hybrids: Tifway)	1.0-1.5"

4. No more than 1/3 of the total grass blade shall be removed per mowing. Cutting grass too closely (scalping) shall be avoided.

5. All extraneous leaves, weeds, trash, limbs and debris shall be removed from the lawn prior to mowing so that it will not shred or otherwise adversely affect the appearance of the mowed turf.

6. Mowing patterns shall be changed regularly to avoid rutting. Mow entire extent of large areas in one operation if possible. Use small mowers for difficult or tight areas where commercial mowers cannot maneuver.

7. Edging with blade and line trimmers shall be performed at the same frequency as mowing and shall include walks, drives, curbs, planting bed perimeters, and tree wells. No edging around the base of trees shall be performed without a tree protection

guard. Isolated trees and shrubs growing in lawn areas will require a mulched area around them (minimum 2-foot diameter) to avoid bark injury from mowers and filament line trimmers and to reduce root competition from grass. Grass abutting buildings, poles, benches, etc. that cannot be cut by normal mowing procedures, shall be regularly trimmed using a line trimmer to eliminate uneven edges. Grass adjacent to all sprinkler heads, valve boxes and quick couplers shall be trimmed weekly to maintain a clean appearance and good irrigation coverage. Chemical defoliant or herbicides shall not be used as an "edger", unless approved in writing by the Town.

8. Mowing shall be done optimally when the grass is dry; however, mowing wet turf is acceptable. Grass clippings can be left on the grass so long as no readily visible clumps remain on the grass surface after mowing. If clippings are excessive or diseased, they shall be removed after mowing to enhance overall turf appearance and to prevent matting, clumping and thatch buildup. In the case of fungal disease outbreaks, clippings will be collected until the disease is controlled. Grounds Maintenance Personnel will clean all clippings, dirt and debris from sidewalks, curbs, and roadways immediately after mowing and/or edging. Clippings will not be swept, blown or otherwise disposed of in sewer drains, catch basins, drain pipes, storm drains and open culverts of storm sewers. The final appearance after mowing shall present a neat appearance.
9. In the event that the grass becomes sparse or barren due to neglect by the Grounds Maintenance Personnel, he shall repair or replace sod to meet its previous healthy condition at no additional cost to the Town. Grassed areas shall be kept as green and healthy as possible at all times in all areas to maintain a high level of appearance.
10. Care shall be taken when mowing to avoid obstructions such as trees, shrubs, utility boxes, signage, buildings, etc. Grounds Maintenance Personnel shall be responsible for damage caused by its mowing activities.
11. Dethatching of Bahia and Bermuda grassed areas will be performed, when necessary, with the approval of the Town. The Grounds Maintenance Personnel shall provide the Town with a written cost estimate of the work to be performed. The estimate shall then be approved by the Town in writing prior to commencement of services.
12. All reseeding or resodding not required by this specification and at an additional charge to the contract must be approved by the Town in writing.
13. See Section VIII. for Fertilization and Section IX. for Diseases and Pests

B. Thatch Removal

(Optional Program: Do not bid in basic services contract. Grounds Maintenance Personnel to provide estimate each time work is required).

1. Removal of thatch (spongy, build-up of dead and living grass shoots, stems, and roots) should be considered when thatch thickness exceeds one inch. The best time for thatch removal is March through August when the turf grass is rapidly growing.
2. If the lawn has excessive thatch, dethatch with a power vertical mower or power rake. Verticutting using a vertical mower is the recommended method of removing thatch from Bermuda and St. Augustine. Blade spacing shall be 3 inches for St. Augustine and Bahia grass, and 1 to 2 inches for Bermuda grass. Rake the turf of all debris as a result of the dethatching. Mow and irrigate remaining turf. Fertilization with a soluble nitrogen source at 1 pound nitrogen per 1000 square feet will be applied one week after dethatching. Scalping (close mowing) is not a substitute for vertical mowing.

C. Rye Grass Seeding and Maintenance

1. For winter color, all lawns will be overseeded with rye grass seed, except predominantly healthy St. Augustine lawns, as the rye grass will contribute to thatch, unless otherwise directed by the Town.
2. Mow the sod to the closest (shortest) recommended height for the predominant variety of sod in the area. Bag the clippings or rake the grass afterwards.
3. To prepare the lawn for overseeding, rake all debris from the turf.
4. The more soil surface exposed, the better the contact of the seed with the soil, and the germination rate.
5. Rye grass seed will be fungicide-treated seed. Put out seed no later than mid-November. Use a mechanical drop seeder at a rate of 10-20 pounds per 1000 square feet to distribute the rye grass seed in one direction, then spread the remaining seed at right angles, taking care not to sow seed in landscaped beds or tree rings. After seeding, rake the ground with a stiff broom to ensure the seed gets through the grass and is in contact with the soil. Irrigate rye seed the same day it has been sown. Re-sow rye seed to fill in gaps in lawn as required throughout the winter months.
6. Where automatic irrigation exists, apply water lightly to moisten the top of the soil once per day for the first 30 days or as needed. Afterward irrigate or hand water once per week on the Town designated watering day as needed. Do not over water, as this can result in seed washing out or clumping in low areas or encouraging disease, usually fungus.
7. Begin mowing when the grass is around 1 to 2 inches tall. After turf has been mowed several times, water only on an "as-needed" basis.

6. The Grounds Maintenance Personnel shall exercise care during pruning to ensure that branches or trimmings do not endanger traffic or cause damage to property. Any damage resulting from the Grounds Maintenance Personnel's negligence shall be repaired or replaced at no cost to the Town.

B. Storm Damage

1. In the event of storm damage, the Grounds Maintenance Personnel shall remove all minor felled or broken tree branches, and secure same from causing property damage. This work shall be provided for in the Grounds Maintenance Agreement. All litter will be disposed of by the Grounds Maintenance Personnel.
2. Major damage such as large felled trees or limbs shall be negotiated with the Town and the Grounds Maintenance Personnel on a per incidence basis.

C. Tree Cavity Work

1. When necessary, tree cavity work necessitated by disease, damage or deterioration will be performed by a licensed arborist. Decayed or diseased wood shall be removed to expose healthy tissue. Cavities shall be shaped to provide drainage. Exposed cambium layers around cavities shall be painted with appropriate tree wound dressing. This shall be additional work, approved and authorized by the Town, outside of the Grounds Maintenance Agreement.

V. PALM MAINTENANCE

A. Pruning

1. Regularly remove sucker growth to provide an attractive and clean trunk as characteristic of each particular palm species.
2. Remove dead or unsightly fronds and seed heads from palms. No green palm fronds shall be removed unless the foliage is interfering with an access for pedestrians, bike riders, or vehicular traffic. Trimming and shucking shall be done one time per year in March/April. During the balance of the year, dead, yellowing or unsightly fronds should be removed as needed in routine maintenance. The objective is to retain the arching form of the fronds. Care shall be taken not to cause trauma or damage to the bud of the palm during trimming.
3. Canary Island Date Palms should never have any frond removed above 30 degrees from horizontal.

8. Follow all pertinent turf specifications as listed in Section III. Lawn Grass Maintenance.
9. Do not over fertilize the turf. Monitor the turf for Pythium outbreaks and *treat immediately*, as the disease can kill an entire winter lawn in 24 to 48 hours.
10. To reestablish the permanent lawn during the transition period in late spring, discontinue the rye grass fertilization program in February and water as infrequently as possible.

IV. TREE MAINTENANCE

A. Pruning

1. Trees shall be pruned, trimmed and shaped (see appendix) as needed to encourage intended growth, maintain a pleasing natural appearance and to prevent obstruction of curbs, sidewalks, parking areas, roadways, street lights and signs. Trees shall not be trimmed into balled forms unless specifically required by the landscape design. Trees will be pruned as necessary to develop proper branching, and to remove any dead or damaged branches. All sucker growth, defined as shoots that sprout out around the base of a tree trunk, shall be removed by hand taking care not to damage the trunk. No herbicides will be used for this purpose.
2. Tree trimming will be done once every three (3) years and is limited to trimming below 20 feet in height to remove all dead and damaged limbs, crossing branches, and to maintain their natural shape and form without disrupting their growth pattern. Good pruning techniques, such as heading back and thinning out will be used to maintain proper balance of foliage. Major tree trimming operations will be done preferably between mid-November to mid-December. If not complete, tree trimming will continue during the winter months and be completed by the end of February. No trees will be pruned during or immediately following growth flushes.
3. All pruning cuts shall be made with sharp instruments, and shall be pruned just outside the branch collar. Pruning paint will not be applied. "Headback" cuts at right angles to line of growth shall be permitted. Trees shall not be poled or the leader removed.
4. Any trimming above 20 feet in height will be additional work to the Contract. A written proposal and cost estimate will be provided to the Town for approval and authorization prior to commencement of the work.
5. Trimmings shall be removed from the site by the Grounds Maintenance Personnel on the same day that the work is done.

4. No spikes or sharp objects are to be used that would penetrate the trunks of the palms during trimming of fronds. Ladders or "cherry picker" type vehicles shall be used to accomplish this task.
5. All dead and/or trimmed fronds, seeds, seed heads, and suckers are to be removed from the site the same day by the Grounds Maintenance Personnel.

VI. SHRUB AND GROUND COVER MAINTENANCE

A. Pruning and Trimming

1. Definitions: PRUNING is the selective elimination of branches to maintain or improve the size or shape of a plant. TRIMMING, as defined for shrubs and ground cover, is cutting of the overall tips of a plant to give a smooth, squared, hedge-like appearance (see appendix). The growth characteristics of some plant species require pruning; others require trimming to look their best. All plant materials shall be maintained in a neat, well-manicured fashion at all times.
2. All shrubs and ground covers shall be pruned to maintain the suitable size and character of the plant. Maintained height of shrubs shall be determined by the Town at the monthly maintenance inspection.
3. Plants that have a naturally "unpruned" form should be pruned very little except for removal of dead or damaged branches and leaves, or to maintain a certain height required by the plant material usage. These shrubs will be pruned with hand shears as needed to provide an informal shape, fullness, and bloom. Examples of these types of plants are parson's juniper, bird-of-paradise, crinum lily, cardboard palm, king sago, heavenly bamboo, split-leaf philodendron, red fountain grass, schefflera, and plumbago.
4. For azaleas, prune once annually back to desired heights the last two weeks of May or after flowering. Later prunings will result in less bloom in the coming year.
5. Plants used as hedges or borders should be trimmed squarely with top of hedge slightly narrower than the bottom to facilitate exposure to sun and prevent heavy shading of lower foliage. Use a "rounding" method when the hedge forms the bordering edge of a serpentine bed design, in which case round only vertical faces of border. As new foliage fills in, remove excessively long branches to encourage fullness and good shape. Examples of these types of plants are pittosporum, podocarpus, silverthorn, oleander, boxthorn, viburnum, and india hawthorn.

6. Ground cover shall be confined within the perimeter of a planting bed with little pruning required other than to cut long branches growing outside of the planting bed. Examples of these types of plants are confederate jasmine, lantana, liriope, aztec grass, ivy, and mondo grass. Wedelia and dune sunflower are exceptions, and must be mowed down to approximately 4" once a year in early spring. Supplemental top shearing may be required to present a neat appearance during the remainder of the year.
7. During the growing season (April-October), all high and moderate maintenance shrubs/hedges shall be trimmed once every 2 weeks; all low maintenance shrubs/hedges will be trimmed as needed (usually once every 4 to 6 weeks.) During the dormant season, all shrubs and hedges shall be trimmed as needed to maintain a neat appearance.
8. Do not prune shrubs into individual shapes or balls unless specifically requested by the Town for a particular plant. Allow shrubs to form a dense mass of plants at the height determined by the Town.

VII. FLOWERS

A. Preparation and Installation

1. Annuals will be planted 3 times per year at the Town entrance from Mehlenbacher Road/Indian Rocks Road to South Magnolia Park. The Grounds Maintenance Personnel shall be responsible for the installation and full care of all seasonal color plantings on a weekly basis (including watering, border mulching, spraying, drenching, fertilization, pruning, pinching spent blooms, etc.). The Town shall be guaranteed that every annual/perennial planting mass is maintained in a healthy, vigorous, continually blooming environment, and is the finest quality color planting possible. (See Appendix for Annual Bed Preparation/Planting Detail).
2. Annuals planted at the south entrance to the Town shall be installed in October, March and July. The Park and Tree Board shall be consulted on the selection of flowers to be planted after proposals have been submitted. The quantity of annuals to be planted each season shall be determined by the Town and shall become a part of the Ground Maintenance Agreement. Other areas to be planted with seasonal color shall be recommended by the Park and Tree Board after reviewing proposals for design and planting.
3. Annual flower installation and cost will be part of the Grounds Maintenance Agreement. Size of annuals will be 4 inch pots. Smaller sizes may not be used.

4. The Grounds Maintenance Personnel shall remove all old flowers at the end of the growing season. Within 4 months of starting the contracted maintenance work, the Grounds Maintenance Personnel shall fully excavate 6 inches of existing soil from the planting bed prior to new installation, adding 8 to 10 inches of an approved, prepared soil mix (blended specifically for annual flowers) back into the bed above a well-drained subgrade. Prepare subgrade by rototilling, or loosening by use of hand methods. At each change of annuals the Grounds Maintenance Personnel shall install additional planting soil as needed to fulfill the requirements as specified in this section on flowers. All annual beds will be "crowned" to insure that surface drainage, percolation, and aeration occur at rapid rates.
5. Annuals in 4" pots, at least 3" in height, shall be installed in an orderly fashion with staggered spacing, 8" on center. Leggy plant material or plants which require staking to remain upright will be rejected. Install annuals which have a full head of buds but with a minimum of or no open blooms; annuals should be selected so that blooms will open within 1 week after installation. The goal shall be the growth within several weeks of a solid tightly massed bed of flowers, in one color only, planted so that none of the planting soil is visible. Skippy flower beds will not be acceptable. The Grounds Maintenance Personnel will warranty until bed replacement all flowers upon installation.
6. Top-dress the annual bed with a time release fertilizer such as Osmocote 18-18-18 or equal at each rotation of annuals. Follow manufacturer's directions for application rates.

B. Maintenance

1. Flower beds shall be inspected weekly and dead flowers removed by "pinching back" to produce a longer blooming cycle. Hand weeding will be done as necessary to keep flower beds weed free. A 12 inch-wide mulch border will be replenished and maintained as necessary. The mulch band shall not come in contact with flower bed.
2. Any flowers damaged or destroyed due to pests or the negligence of the Grounds Maintenance Personnel will be replaced with the same species and color at no additional charge to the Town. Where a bed of established annuals has reached a mature height, the Grounds Maintenance Personnel will replace the dead annuals with full 6 inch baskets at the appropriate spacing to create a tight planting without gaps at the time of installation at no addition charge to the Town.
3. The Grounds Maintenance Personnel will provide a written proposal and cost estimate for replacement of stolen or vandalized annuals (4 inch and 6 inch pots) to the Town for approval and authorization prior to replacement.

VIII. FERTILIZATION

A. General Requirements

1. Fertilizer shall be adjusted for xeriscape areas of the landscape, with ratios kept low and number of applications kept to a minimum.
2. Established trees (palms not included) and shrubs 3 years and older exposed to lawn fertilization will not be fertilized supplementally. Fertilizer applied to trees planted in landscape beds shall be broadcast over the entire plant bed.
3. Fertilizer shall be applied when the leaves are dry and shall be properly and thoroughly watered-in after application. After fertilization, all plant materials must be thoroughly watered with a minimum of 1/4 inch of water applied by the Grounds Maintenance Personnel. Fertilization operations must be scheduled with the Town.
4. All fertilizer to be evenly distributed by a hand-held mechanical broadcast spreader or by a hand-propelled broadcast spreader, with no fertilizer left on leaves or branches of plant material. No fertilizer shall be placed within 6 inches of the trunk.
5. Fertilizer shall not be applied during windy weather conditions.
6. Fertilizer shall be swept from all paved surfaces and back into planting beds or lawns following application.
7. Fertilizer may be pressed into the soil on berms and slopes where runoff is likely.
8. As required and with Town approval, the Grounds Maintenance Personnel may obtain soil samples to be analyzed by an approved laboratory to evaluate soil conditions. Results shall be reported to the Town and shall include analysis of test results and amount and type of materials required to accomplish recommended curative program. The cost of all soil or other testing analyses will be the responsibility of the Grounds Maintenance Personnel.
9. Nutrient deficiencies shall be treated with supplemental applications of the specific lacking nutrient according to University of Florida Cooperative Extension Service recommendations.

B. Fertilization: Turf

1. The Grounds Maintenance Personnel shall be responsible for regularly-scheduled fertilizer applications on all grassed areas. All turf areas shall be fertilized 3 times per year in February/March, June/July, and October.

2. A complete fertilizer shall be applied on Bahia and St. Augustine grass at the rate of one (1) pound of nitrogen per one thousand (1,000) square feet. Fertilizer shall be commercial grade, mixed granules, with 30%- 50% of the nitrogen being in slow or controlled release form. The ratio of nitrogen to potash will be 1:1 or 2:1 for complete fertilizer formulations. Phosphorus shall be no more than 1/4 the nitrogen level. They shall also contain magnesium and micronutrients (i.e. manganese, iron, zinc, copper, etc.).
3. On the athletic fields, Bermuda "Tifway 419" shall be fertilized with a 100% organic 6-6-6 fertilizer. The application rate shall be twenty-five (25) pounds per one thousand (1000) square feet of lawn.
4. If requested by the Town, provide a proposal and cost estimate to fertilize the rye grass after the second mowing with 0.5 pound nitrogen per 1000 square feet using a complete fertilizer such as 16-4-8, or 6-6-6. Thereafter, use a nitrogen fertilizer such as ammonium sulfate or ammonium nitrate every 4 weeks at 0.5 pound nitrogen per 1000 square feet.

C. Fertilization: Trees

1. The following services shall be provided as part of the Maintenance Agreement: Trees in planting beds less than 3 years old shall be fertilized 3 times per year. Applications shall be made during the months of February, April, and October.
2. All fertilizers shall be commercial grade, mixed granules, containing equal amounts of nitrogen and potassium and at least 30% of both elements should be available to slow release form as required for each species. The fertilizer should also contain a complete micro-nutrient amendment. The fertilizer analysis shall be similar to 8-2-8, 10-5-10, and 12-4-12 of which not less than 50-60% of the total nitrogen is slowly soluble. The application rate will be 1 pound of nitrogen per 1,000 square feet per application.

D. Fertilization: Palms

1. All fertilizer shall be a complete, granular, balanced fertilizer formulated for palms ("Palm Special") and should have 10-20% nitrogen, 5% phosphorus, 10-20% potassium (equal to the % of nitrogen), 1-3% magnesium, and 0.5% of manganese and iron, with the nitrogen, potassium and magnesium in controlled release forms such as resin or sulfur coated. The fertilizer should contain sulfur, minor elements of manganese, magnesium, and iron, and trace amounts of zinc, copper, and boron.
2. Palms shall be closely monitored for any sign of nutritional deficiency, especially concerning the following elements: nitrogen, potassium, magnesium, manganese, and

iron. Palms shall be closely monitored for any sign of rot, smut, or spotting. Diagnosis and correction of the deficiency or condition should begin following notification to the Town.

3. Mature palms (sabal palm not included) shall be fertilized 2 times per year at a rate of 1/2 pound per 2 feet of height (2-5 pounds for palms under 8 feet height), and 5 to 15 pounds for large palms. Palms under 8 feet tall will receive 2 to 5 pounds per application. Applications shall be made during the months of April/May and September/October. Fertilizers should be broadcast or banded under the canopy of the palm, but should not be placed up against the trunk.

E. Fertilization: Shrubs and Ground Covers

1. Shrubs and ground cover less than 3 years old shall be fertilized 4 times per year. Applications shall be made during the months of February, April, June, and October. Shrubs and ground cover more than 3 years old in the landscape shall be fertilized 2 times per year in March and September. The application rate will be 1 pound of nitrogen per 1,000 square feet per application.
2. All fertilizers shall be commercial grade, mixed granules, containing equal amounts of nitrogen and potassium and at least 30% of both elements should be available to slow release form. The fertilizer should also contain magnesium and a complete micro-nutrient amendment. The fertilizer analysis shall be similar to 8-2-8, 10-5-10, and 12-4-12.
3. All *flowering* shrubs and ground cover shall be fertilized with "Bloom Master" or similar product with a ratio such as 6-10-10. The product shall be 50-60% organic to provide slow release and less potential to burn plants.
4. For azaleas, gardenias, and camellias, use a "Special" formulation with iron and manganese.

F. Fertilization: Annual Flowers

1. In addition to a top-dressing of Osmocote 18-18-18 with each rotation of annuals, flowers may require supplemental fertilization, at least once every other month, with a "Bloom Special" (or similar product) granulated fertilizer mix, to keep flowers in an attractive, healthy and thriving condition.
2. Fertilizer shall be carefully applied around base of flowers and shall not be allowed to remain on or damage blooms or leaves.

3. Flowers or leaves damaged or burnt by fertilizer shall be replaced at no cost to the Town.

IX. DISEASES AND PESTS

A. General Requirements (Grounds Maintenance Personnel only)

1. The Grounds Maintenance Personnel shall practice Integrated Pest Management (I.P.M.) to control insects, diseases, and weeds around trees. First choice will be insecticidal soaps, horticultural oils, and biological controls such as *Bacillus thuringiensis* (Bt) formulations.
2. Upon confirmation of a specific problem requiring treatment, pesticides will be reported immediately to the Town, and with its authorization treatment applied on a spot treatment basis using the least toxic, effective pesticide. No pesticide will be applied to plant material areas without the express approval and authorization of the Town. This includes "weed and feed" formulations.
3. Specific diagnosis of plant diseases and/or pests shall be the responsibility of the Grounds Maintenance Personnel or his consultant. Records will be kept on pests identified and treatment(s) rendered for control. Approved insecticides or biological controls shall be prescribed and applied by State of Florida Licensed Applicators only, according to manufacturer's recommendations and in compliance with the Federal Insecticide, Fungicide and Rodenticide Act.
4. Grounds Maintenance Personnel warrants and represents that every chemical substance delivered hereunder shall be on the list of chemical substances, or have been submitted for inclusion on such list, as compiled by the Environmental Protection Agency pursuant to the Toxic Substances Control Act.
5. Pesticide applications will be made in accordance with the rules and regulations governing use of pesticides in Florida. Posting and notification of pesticide sensitive persons will be done. The pest control applicator will be operating under License #_____. Expiration Date_____. (Numbers to be provided by the Grounds Maintenance Personnel).
6. All spraying of pesticides will be performed when temperatures are below 90 degrees Fahrenheit and wind drift is negligible.
7. A continuing effort shall be made to abate all gophers, mole crickets, and other lawn/vegetation damaging rodents in a timely manner to minimize damage. Fire ants, bees, and wasps, as well as any other damaging or health-endangering pest, will be treated promptly so as not to present a hazard.

8. All damage occurring from improper or careless application of chemicals shall be the responsibility of the Grounds Maintenance Personnel.

B. General Requirements (Town of Belleair only)

1. The Town shall practice Integrated Pest Management (I.P.M.) to control insects, diseases, and weeds around trees. First choice will be insecticidal soaps, horticultural oils, biological controls such as *Bacillus thuringiensis* (Bt) formulations, and "over-the-counter" products which do not require the pest control applicator to work with restricted chemicals or operate under licensing regulations.

C. Diseases and Pests: Turf

1. The Grounds Maintenance Personnel shall inspect lawn areas each visit for indications of pest infestation and to provide prompt attention to any diseases or pests. Any brown or questionable-looking areas of grass shall be reported immediately to the Town by the Grounds Maintenance Personnel.

D. Diseases and Pests: Trees, Shrubs, and Ground Covers

1. Trees shall be routinely checked during each maintenance visit for abnormal conditions such as insects, borers, scale, caterpillars, milky spore disease, web worms, red spider mites, lace bugs, Japanese beetles, etc. Treat the effected plant material as required.

E. Diseases and Pests: Palms

1. Routinely check palms for signs of distress or disease in the trunks, buds, or fronds. Any evidence of disease affecting the palms is to be reported to the Town at once. With Town authorization, the Grounds Maintenance Personnel shall make arrangements for proper evaluation and treatment of the problem. Inspect all palms, especially the Phoenix varieties during the month of March for infestation of Palmetto Weevil. As required, apply a bud drench as recommended by the University of Florida Cooperative Extension Service.
2. The Grounds Maintenance Personnel shall monitor those palms which are susceptible to Ganoderma butt rot. Should this disease be found on any palm, the Town shall be notified in writing. Every precaution will be made to contain the disease and keep it from spreading to other palms. Proper care and procedures with equipment and maintenance around Ganoderma infected palms will be followed in accord with Cooperative Extension Service recommendations.

F. Diseases and Pests: Annual Flowers

1. During each weekly maintenance visit, all flowers shall be inspected for pests and treated as required for pest and disease control. Preventative measures shall be taken to minimize pests and disease.

X. WEED CONTROL

A. Weeding Bed Areas

1. Weeding shall be done in conjunction with mowing as a regular duty. All planting beds and tree wells are to be kept weed free throughout the year to avoid competition with desirable plants for water and fertilizer, as well as to enhance the appearance of the overall design. At no time shall any weed exceed the height of 4" prior to removal.
2. Weeds may be removed by hand, or chemically killed and removed with products approved by the EPA for weed control, such as Monsanto's "Round-Up" or a pre-emergent product, used according to manufacturer's recommendations. Should any plant material in the same, or adjacent beds, be damaged by these chemicals, the same size, quantity and quality of plants shall be immediately replaced by the Grounds Maintenance Personnel at no cost to the Town.
3. "Volunteers", i.e., invasive plants created by seeds dropped by birds or spread by wind, which take root in a planting bed and are not of the same species, shall be removed like a weed.
4. Care shall be taken not to disturb soil around shallow rooted shrub material.
5. All weeds removed from beds shall be removed from the site on the same day by the Grounds Maintenance Personnel.

XI. MULCHING

A. Planting Beds

1. All planting beds shall be weed-free prior to mulching. All curb, roadway, and bed line edges will be "trenched" to help contain the applied mulch. Mulch will not be placed against the trunks of plant materials or foundations of buildings. Maintain a minimum 6 inches of clearance.

2. Type of mulch used shall be as follows: In Area Level 1 landscapes, use Cypress mulch Grade "B" or better as a 1 inch top-dressing *over* 1 inch of recycled mulch. 100% recycled mulch shall be used in all Area Level 2 and Area Level 3 landscapes. The Town reserves the right to use all recycled mulch at any future time, whereby the Grounds Maintenance Personnel will provide a credit for the unused Cypress mulch. The Town also reserves the right to discontinue using the recycled mulch or to use any other mulch it deems desirable, at which time the Grounds Maintenance Personnel will provide a proposal for any additional costs or credits due the Town. "Alternative" mulches (pine needles, eucalyptus, melaleuca, etc.) could be considered.
3. Mulch in all planting beds shall be *maintained* at a level of 2 inches thick, *after compaction*. Planting beds shall be periodically checked for sufficient mulch coverage in order to retard weed growth and retain soil moisture.
4. Mulch should be top-dressed to maintain a 2 inch overall coverage at least once per year, preferably during the winter months (November through February).
5. The Grounds Maintenance Personnel is responsible for the maintenance and mulching of all existing Town landscaped beds.
6. Annual flower beds shall not be mulched, except for the 12" wide border in front of annuals.

B. Trees and Palms

1. A mulch ring will be constructed and maintained around individual trees and palms in turf areas. The mulch ring shall be a minimum of 12 inches wide from the trunk of the tree.

XII. SOIL pH MONITORING

A. Testing

1. The Grounds Maintenance Personnel shall take soil samples as needed in turf areas and landscaped beds to determine the pH level at least once per year. The pH level should be maintained between 5.5 and 6.5 for optimum growing conditions in turf and most shrubs and trees. Add necessary soil amendments of sulfur to lower the pH or lime to raise the pH according to the county agricultural extension service recommendations.
2. Testing may be done at any time by the Grounds Maintenance Personnel at the Grounds Maintenance Personnel's expense.

XIII. TRANSPLANTING PLANT MATERIAL

- A. The Town may request that certain trees, palms, specimen plants, or shrubs be transplanted from Town property to a new location on Town property. The Grounds Maintenance Personnel shall provide an estimate every time work is requested by the Town.
- B. In general, trees and palms under 6 feet height may be moved by Town personnel. Palms over 6 feet height will be moved by a licensed and insured contractor upon written approval of the Town. All necessary permits, fees, transportation, utility location, and other relevant activities will be the responsibility of the Contractor to secure prior to relocation of the plant material. Large palms should be hand-dug, moved, and relocated with the proper equipment. A tree spade can be used for appropriately-sized palms.
- C. Single and multi-trunked trees shall be moved with a tree spade or by the pin/dowel method as follows: 1-4 inch caliper will be moved with a 60 inch tree spade, and 4-8 inch caliper will be moved with an 85 inch tree spade. 10 inch caliper and larger trees shall be moved by the pin/dowel method. (Caliper is measured at about 4 feet above grade).
- D. Trees shall be transplanted during the dormant winter months (November through January) whenever possible.
- E. The minimum width of the root ball shall be at least 10 inches of ball diameter for each 1 inch of trunk diameter at 1 foot above the ground.. The minimum depth of the root ball shall be 18 to 20 inches. Allow for a larger root ball when soil fractures easily to ensure an adequate amount of dirt retained on the root ball. (See the following chart).

<u>Tree diameter</u> (in inches)	<u>Root ball size</u> (in feet)	<u>Root ball depth</u> (in inches)
5	4	30
6	5	32
7	6	34
8	7	36
9	7-1/2	36
10	8	38
11	9	40
12	10	40

- F. Wrap root ball with burlap or plastic shrunk wrap. Place root ball in a wire basket and securely fasten to the basket with biodegradable ties. At planting, remove the burlap or plastic shrink wrap from the top 4 inches of the root ball.

- G. Pruning of existing branches will be limited to removal of damaged, dead, crossed, or broken branches. Do not thin tree of excess branches. (See Section IV.A. Tree Maintenance for specifications on Pruning).
- H. All transplanted plant materials shall be fertilized with Agriform 20-10-5 planting tablets (or approved equal) at the time of transplanting, and prior to completion of pit backfilling. Agriform planting tablets shall be placed uniformly around the root mass at a depth that is between the middle and the bottom of the root mass. Place tablets in the planting hole according to the following application rates:

<u>Plant material size</u>	<u>Number of tablets</u>
1 gallon	1 - 21 gram tablet
3 gallon	2 - 21 gram tablet
5 gallon	3 - 21 gram tablet
7 gallon	4 - 21 gram tablet
Trees	3 tablets each 1/2 inch caliper

- I. Fertilize all palms with a "Palm Special" granular fertilizer according to the manufacturers directions. (See Section VIII.D. Fertilization: Palms for specifications).
- J. Install drip irrigation on all newly transplanted trees and palms. Run drip irrigation for 2 to 4 months, or until plant is established. A watering truck may be used in lieu of an irrigation system. Grounds Maintenance Personnel to provide water quantities and frequency of watering as stated in Section XIII. for tree establishment.
- K. Transplanted material shall be moved, relocated, and planted using current accepted nursery practices (See Tree and Shrub Planting Details in the Appendix).

XIV. ESTABLISHMENT WATERING PERIOD

- A. New and transplanted plant materials shall be provided with adequate water until established based on the following 13-week watering schedule. Watering may be provided by an automatic or manual irrigation system or by watering truck.

WATERING SCHEDULE

<u>Description/Quantity</u>	<u>Time Period</u>	<u>Number of Waterings/ Week</u>
1 gallon plants 2 gallons/watering	first 4 weeks	3 waterings/week
3 gallon plants 5 gallons/watering	next 4 weeks	2 waterings/week
30 gallon, B&B trees 20 gallons/watering	next 5 weeks	1 watering/week

- B. For water conservation purposes, reclaimed water (effluent water) should be used whenever possible.

XV. EMBANKMENT/SLOPE MAINTENANCE AT HALLETT PARK

- A. The Grounds Maintenance Personnel shall mow the existing slope vegetation of the Hallett Park embankment with a 12 to 15 foot reach sickle bar mower. Mowing frequency will be as soon as the vegetation within the reach of the mower blade is 2 feet above the top of the slope. More frequent mowings may occur at the direction of the Town to maintain a clear "view shed" of the waterway. The mowing shall be at an angle of - 30 degrees to the top of the slope to minimize mowing frequency. Maintenance of the "view" shall include the full length of the linear park and any other peripheral areas as directed by the Town.
- B. Regular maintenance will be restricted to mowing or trimming vegetation other than desirable trees and shrubs or protected species at the top 12 - 15 feet of the embankment only. Trimming of any protected species shall be done at direction of the Town and only after all proper permits have been acquired. No work on the slope of the embankment, other than routine maintenance operations, shall be undertaken without the express direction from the Public Works Director and the Town Engineer.
- C. The Town may engage in special maintenance operations for the slope itself consisting of, but not limited to: invasive plant removal or trimming, planting of approved species for erosion control, trimming or thinning of existing trees, repair or stabilization of slope through approved non-organic means, and trimming of protected species with proper permitting and within legal limits. This work may be done by Town personnel or by contract. In either case, the Town will provide a specific scope of work in collaboration with the Town Engineer.

It is recommended that the slope should be intruded upon as little as possible to limit activity that would be detrimental to the slope's stability. Removal of invasive plants must be coordinated with a replanting program so as not to leave the slope exposed to further erosion due to bare soil. Slope and intertidal planting should be attempted only after close scrutiny of the resulting impact and with full consensus of the appropriate professionals.

- D. Bamboo clumps present on the slopes shall be confined. Dead canes shall be routinely removed. No mature canes shall be topped unless they are diseased or broken.
- E. At the direction and approval of the Town, intertidal planting of *Spartina alterniflora* (smooth cordgrass) shall be installed per recommendations of the Ad Hoc Committee and Rich Paul's reports.
- F. No trees are to be planted on the slopes. Before removal of any tree that grows through natural means, it will be evaluated for its species type, growth characteristics, and relative value to slope stability.
- G. Trimming of mangroves shall comply with Florida State Law and any County or local ordinances applicable at the time of trimming for this species. When in compliance with said laws and regulations mangroves that grow in excess of 2 feet above the horizontal line of the top of the slope at any point may be trimmed to 2 feet below the top of the slope or to a height as legally allowed at the time of trimming, whichever is less.
- H. Mangroves shall be planted in the intertidal areas as authorized by Ordinance No. 370.

XVI. WATERFRONTS, DRAINAGE EASEMENTS, LAKES, AND PONDS

(Optional Program: Do not bid in basic services contract. Grounds Maintenance Personnel to provide estimate each time work is requested by the Town).

- A. Maintenance
 - 1. An annual program of aquatic weed controls will be provided for all waterfront areas, lakes, retention ponds, and drainage easements at the request of the Town. This will include monthly applications of EPA approved aquatic herbicides and pesticides to control algae and noxious weeds.
 - 2. These weed controls will be determined by the Town and priced by the Grounds Maintenance Personnel for the Town's approval.

3. In the event of a fish kill, the removal of dead fish, and their burial, will be covered under the Grounds Maintenance Agreement.

XVII. PARKING LOT/PAVEMENT AREAS

A. Maintenance

1. During each scheduled maintenance visit, cleaning of the entire grounds shall be performed as part of regular maintenance. All paper, trash, leaves, twigs, branches, dead plants, trimmings, prunings, and other objectionable materials shall be picked up and removed from all planted areas, and adjacent parking lots, driveways, sidewalks, walkways, and entrances. All sand, gravel, dirt and mud shall be thoroughly swept from all pavement adjacent to maintenance areas and disposed of off-site.
2. Grounds Maintenance Personnel shall not allow landscape debris and trash to accumulate in any area. All waste materials generated by Grounds Maintenance Personnel's operations will be disposed of off-site by the Grounds Maintenance Personnel. Under no circumstances will trash or debris be swept in or disposed of in catch basins, drain pipes, storm drains and open culverts of storm sewers.
3. Weeds in walkways, parking lots, pavement cracks, and any other paved areas, including rights-of-ways and adjacent work areas within the contract limits shall be removed by hand or chemically killed and removed on a regular basis.
4. Removal of heavy accumulations of trash and debris such as roadside dumping or homeowner refuse will not be the responsibility of the Grounds Maintenance Personnel.

XVIII. ATHLETIC FIELD MAINTENANCE

A. Soccer Field

1. The Athletic fields are to be comprised primarily of Bermuda "Tifway 419" grass. Bermuda "Tifway 419" must be mowed with a reel mower according to proper maintenance practices (see Section III. Lawn Grass Maintenance).
2. Aeration of the athletic playing fields shall take place once a year. Aeration should be scheduled to minimize its effect on play. Aeration should occur immediately after the playing season has ended. Aeration operations are to be coordinated with the Town.

3. Dethatching of Bahia and Bermuda grassed areas will be performed, when necessary, in the Spring with the approval of the Town (see Section III. B.). The Grounds Maintenance Personnel shall provide the Town with a written cost estimate of the work to be performed. The estimate shall then be approved by the Town in writing prior to commencement of services.
4. All sprigging or resodding at an additional charge to the contract must be approved by the Town.
5. Athletic field lawn areas should receive one inch of water per week. Care should be taken during the rainy season to ensure that the fields are not watered excessively when they are receiving substantial water through rainfall.

XIX. IRRIGATION MAINTENANCE

A. Inspections

1. Within ten (10) days of Grounds Maintenance Agreement start date, the Grounds Maintenance Personnel shall perform a complete inspection of the entire irrigation system including controllers and note in detail any deficiencies that must be corrected to make the system fully operational. This list of deficiencies, along with associated costs to repair them, will be promptly submitted to the Town which will be responsible to authorize corrective action.
2. The Grounds Maintenance Personnel shall inspect and test all components and zones in the irrigation system *monthly* and shall *reset zone times according to seasonal changes or governing regulations*. This will consist of checking the controller, valves and irrigation heads to ensure that the proper amount of water is being provided to all plant material. Drainage problems noted on site, in planted or paved areas, shall be reported to the Town. Any corrective measures will be promptly reported.
3. Irrigation frequency of use depends on rainfall, time (season) of year, and age of the landscape. In general, as per Town regulations, irrigation may be turned on one day per week. During weekly inspections, the Grounds Maintenance Personnel will note and report to the Town inadequate or excessive irrigation, drainage problems, or if plant material appears to be damaged by too much water.
4. Replacement irrigation products shall be of the same or equal in size, quality, and brand/manufacturer as the original product(s) being replaced and as approved by the Town. Should a controller be temporarily removed for repairs, a replacement controller shall be installed in its place until the original is re-installed.

5. Irrigation heads in athletic fields shall be inspected on a regular basis to insure they are not excessively exposed in the closed position creating a safety hazard.

B. Repair

1. The Grounds Maintenance Personnel will make all repairs and adjustments to the Town irrigation system. Minor adjustments and repairs such as head/emitter cleaning or replacement, filter cleaning, small leaks, and timer adjustments shall be made by the Grounds Maintenance Personnel at no charge. This includes piping, sprinkler heads, and valves. Heights of risers, pop-up, and rotor heads shall be adjusted to maintain an operational height in relation to maturing plant material and turf.
2. All breaks will be immediately reported to the Superintendent of Parks and Street Maintenance and/or the Director of Public Works, and repairs made as quickly as possible.
3. Excessive repairs beyond the scope of work listed above will be charged to the Town at an hourly rate per man plus parts and must be approved and authorized by the Town prior to carrying out the work. The Grounds Maintenance Personnel will provide the hourly rate per man for irrigation repair along with the maintenance bid.

XX. EXTRA DUTIES INCLUDED IN GROUNDS MAINTENANCE CONTRACT

A. Trash Receptacles

1. Trash receptacles will be emptied of litter twice per week with a new plastic liner installed at least once per week. Trash receptacles will be pressure-washed inside and outside a minimum of once per month.
2. Trash receptacles which are in need of painting or new decals, or which have been vandalized will be reported to the Town.

B. Nature Park (Trails)

1. The Grounds Maintenance Personnel shall remove loose trash and debris along the nature trails and remove vegetation which is restricting the walkways or causing a hazard.

C. Undesirable Plant Materials

1. Trees and/or shrubs which appear on Town property by means of natural succession or by other means, and are not shown on the Landscape Master Plan shall be removed

or relocated at the discretion of the Town. A contractor shall provide a cost estimate prior to commencement of the work each time work is requested, and must be approved by the Town.

D. Public Property

1. The Grounds Maintenance Personnel will assist the Town in reporting vandalism, damage, or need of repair/refurbishing of public property; for example, traffic signs, buildings, fences, utilities, and paving.

E. Special Situations

1. The Grounds Maintenance Personnel will be responsive to special conditions or unexpected problems that may occur during the course of the maintenance agreement. The Town expects the full cooperation and prompt response by the Grounds Maintenance Personnel.

XXI. MEMORIAL TREES

- A. The Town, through review and coordination of the Park and Tree Board, shall designate and record certain trees within the parks and public areas as memorial trees. These trees shall be of a species and location as shown on the Master Plan and shall receive regular maintenance as stated within this document. In addition, memorial trees shall be given special consideration by receiving timely maintenance attention when disease or damage is observed or reported and these trees shall be replaced immediately upon major decline or death.

XXII. DEFINITIONS AND ABBREVIATIONS

- A. The following information is provided for clarification of terms and abbreviations used within this specification:

1. Abbreviations

O.A. or HT.: The over-all height of the plant from the ground.
C.T.: Clear trunk, no foliage from ground to specified height.
SPR.: Spread, branches measured in natural untied position.
ST. TR.: Straight trunk without staking or guying.
MIN.: Minimum.
GAL.: Gallon container size, for example 1 gal., 3 gal., etc.
PLT.: Plant
O.C.: On center, distance between plant centers.

C.C.:	Center to center, as above.
DIA.:	Diameter.
LVS.:	Leaves.
D.B.H.:	Diameter of plant or tree as measured at breast height (approximately 4 feet).
CAL.:	Caliper, the outside diameter of up to four inch tree is measured six inches above the ground line, trees of a larger size are measured at 12 inches above ground line.
B&B:	Balled and burlapped in accordance with horticultural standards of the American Association of Nurserymen.
TREE-FORM:	A large shrub that is propagated or pruned to the shape of a tree. This shrub can have a single or multi trunk

2. Definitions

Town: The Public Works Director, Parks Director or other person designated by the Town Manager to administer Town maintenance operations. This term may also apply to the Town Commission when overall Town policy decisions are required with regard to parks and public lands.

Volunteer tree or shrub: Vegetation that grows within Town parks or public areas that has been created by seeds dropped by birds or spread by wind, and/or takes root in a planting area and are not of the same species, and/or are not designated on the Master Landscape Plan. This material may be a tree or a shrub and is to be treated as an invasive plant and shall be removed like a weed. An exception to this description are mangrove species which are encouraged to grow through natural succession in the intertidal areas and which are protected by Florida State Law. There also may be instances when a "volunteer" may be a desirable tree or shrub for a given location. In such cases the Public Works Director in consultation with the Town Arborist will determine whether to remove or retain the plant.

Mature tree: A tree that 6" minimum caliper measured at 1' above grade. Mature Palms should have at least 3 feet of clear trunk for dwarf species and 8 foot of clear trunk for large-growing species. These trees must be reviewed by Town Staff and Park Board members prior to removal or relocation.

Unauthorized tree or shrub: This plant may be a volunteer or a plant installed that was not specified or properly located per the Master Landscape Plan. In such cases the Public Works Director may engage a specialist to assist him in deciding in making a determination for the plant.

TOWN OF BELLEAIR, FLORIDA
GROUNDS MAINTENANCE SPECIFICATIONS

APPENDIX

Town of Belleair

LANDSCAPE MAINTENANCE

AREAS LOCATION AND PRIORITY LEVEL

GROUND MAINTENANCE SPECIFICATIONS

Key: Level 1
Level 2
Level 3

Level 1
Level 2
Level 3

Level 1
Level 2
Level 3

Level 1
Level 2
Level 3

Level 1
Level 2
Level 3

Level 1
Level 2
Level 3

Level 1
Level 2
Level 3

Level 1
Level 2
Level 3

No.	Level	Description
1	1	Waterfall West Park
2	2	Fairview Park
3	2	Palmetto Park
4	2	Palm View Avenue - North
5	2	Palm View Avenue - South
6	2	Gardenia Parks
7	1	Heater Park and the Mall - North
8	1	The Mall - South
9	2	Rex Beach Park
10	2	Pinellas Park
11	2	DeSoto Park
12	1	Park Avenue - North
13	1	Park Avenue - South
14	2	Fountain Square and Sunny Lane Parks
15	2	Sunset Bay Drive, Winston Drive, and North Pine Circle (col de sac)
16	2	Winston Park
17	2	Magnolia Parks (2)
18	1	Entrance to the Town from Mehlensbacher Road/Indian Rocks Road to South Magnolia Park
19	2	Ponce de Leon Boulevard
20	2	Ponce de Leon Boulevard
21	2	Ponce de Leon Boulevard
22	2	Ponce de Leon Boulevard
23	2	Ponce de Leon Boulevard
24	2	Town Hall and Entrance to the Town from the Pinellas County Trail to Indian Rocks Road
25	1	
26	1	Entrance to the Town from the Pinellas County Trail to Indian Rocks Road, Tennis Court Grounds, Soccer Field (practice), and Brewster Field
27	1	Entrance to the Town from the Pinellas County Trail to Indian Rocks Road and Town Garage Grounds
28	1	Town Entrance Gateways
29	2	Nature Park (Waterfall East)
30	1	Hallett Park
31	3	Garden Circle
32	3	Rosary Road
33	3	Water Plant Grounds
34	3	Barbara Circle
35	3	Alexander Road
36	3	Coe Road
37	3	Overbrook Drive Bridge
38	3	Indian Rocks Road Bridge
39	3	Belleair Creek, Fairview Road
40	3	Ibiscus Road
41	3	Eastleigh Drive
42	3	Belleair Creek, North Roebling Road

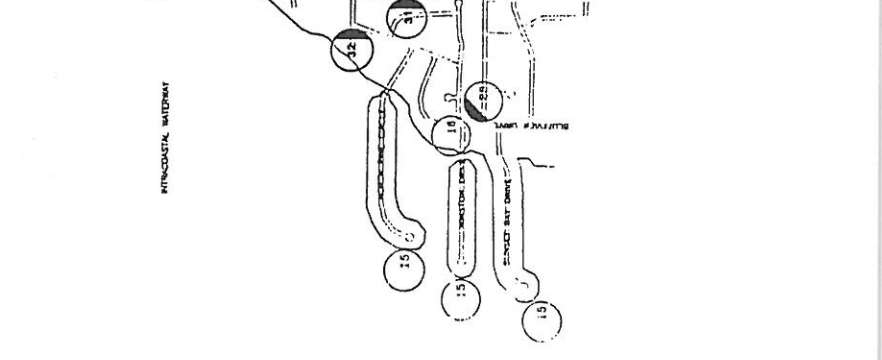
Parks are listed from Level 1 to Level 3. Level 1 parks have highest priority.

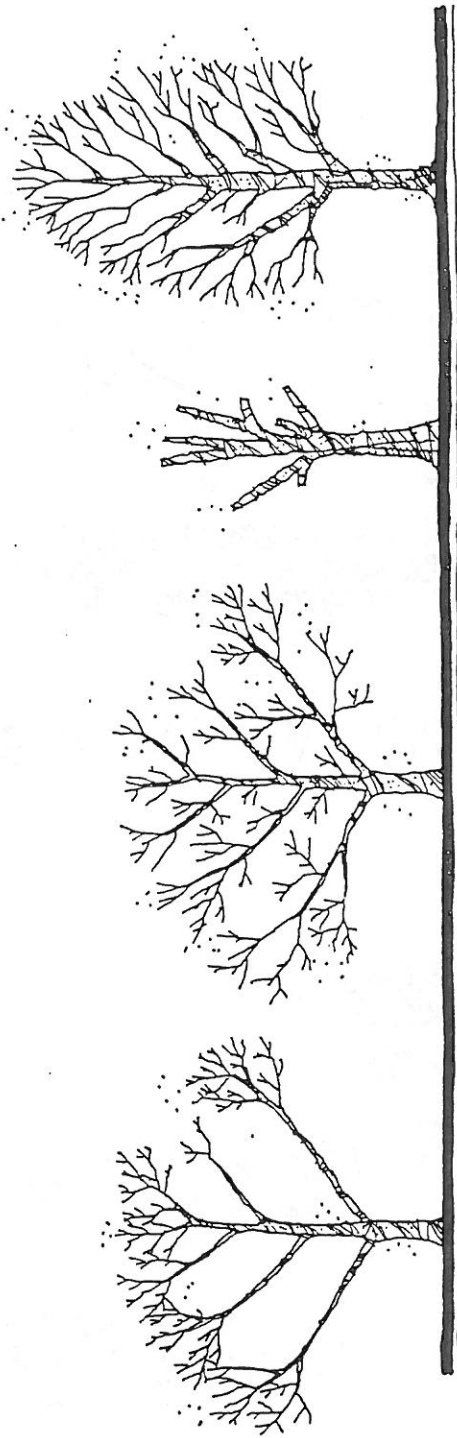
LEGEND
Level 1
Level 2
Level 3

The Design Offices of
Phil Graham & Company, P.A.
Landscape Architects

436 Second Street North • St. Petersburg, FL 33701 • (813) 821-5225

LOCATION PLAN





INCORRECT

CORRECT

INCORRECT

CORRECT

THINNING

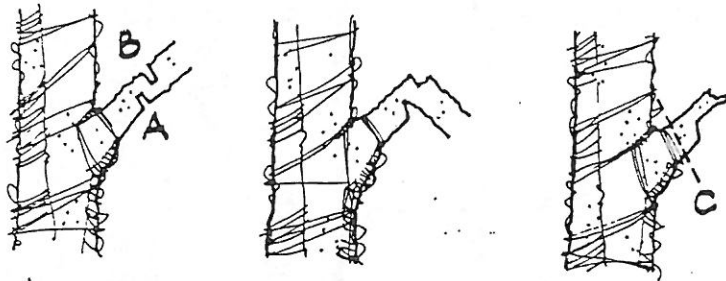
PROPER THINNING REMOVES OR REDUCES THE LENGTH OF SOME BRANCHES FROM ALONG THE MAIN BRANCHES. IMPROPER THINNING REMOVES ALL INTERIOR BRANCHES.

PRUNING

NEVER TOP A TREE. PRUNE IT TO RETAIN ITS NATURAL SHAPE.

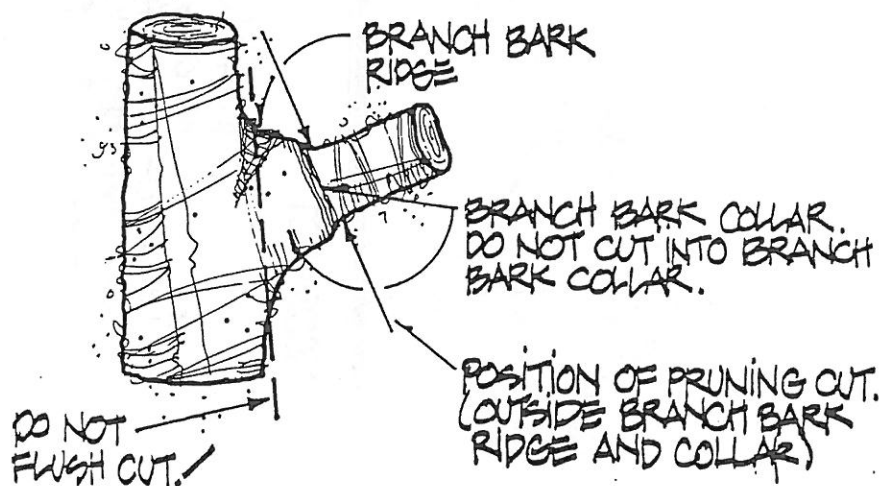
NOTE: ORNAMENTAL OR SPECIAL PRUNING, IF SPECIFIED, IS TO BE AT THE DIRECTION OF THE L.A.

THINNING AND PRUNING TREES



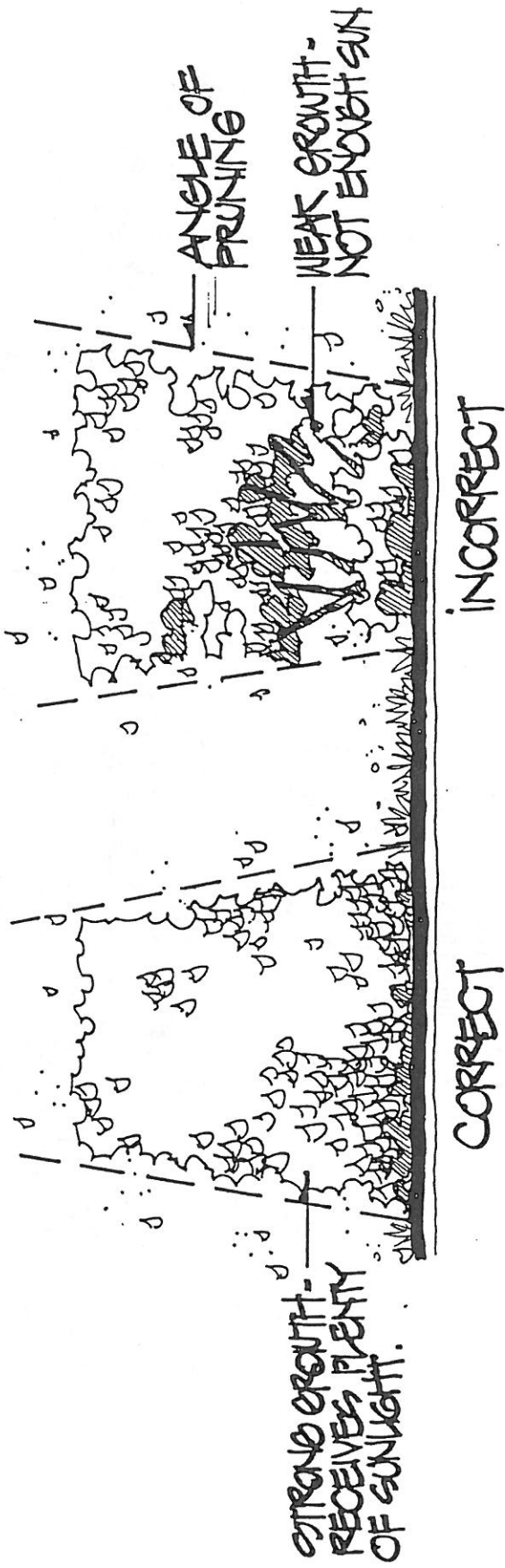
FIRST CUT AT "A" UNTIL SAW BINDS, THEN CUT AT "B" 2"-4" (50-100mm) BEYOND "A" UNTIL THE BRANCH FALLS, THEN CUT AT "C", OUTSIDE OF THE BRANCH COLLAR.

REMOVING A BRANCH OVER 40mm DIAMETER

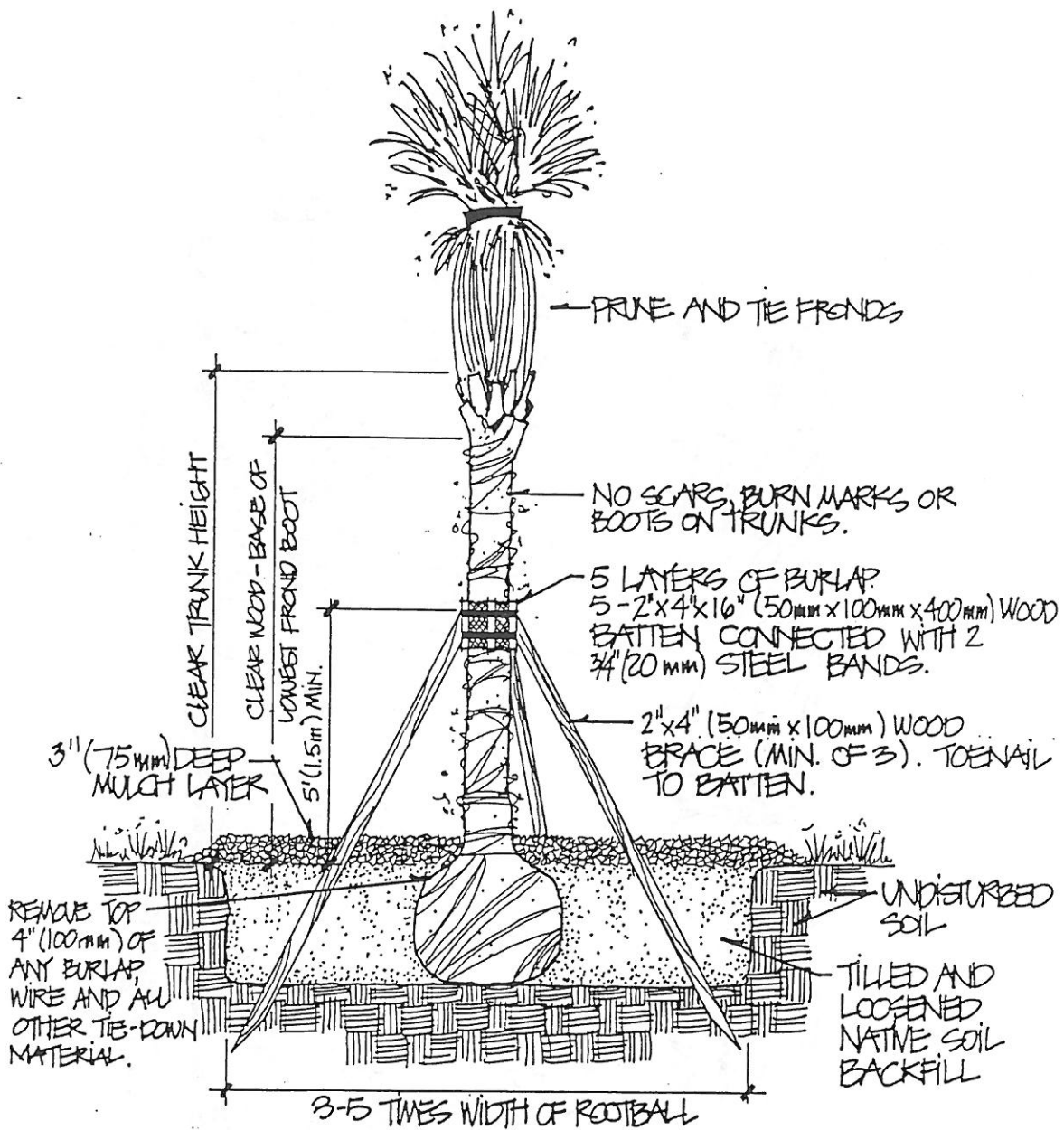


TREE BRANCH PRUNING

WHERE MAXIMUM SCREENING IS DESIRED,
 HEDGE SHOULD BE PRUNED WIDER AT THE
 BASE THAN AT THE TOP. THIS ALLOWS MORE
 SUNLIGHT TO REACH THE BASE OF THE PLANT

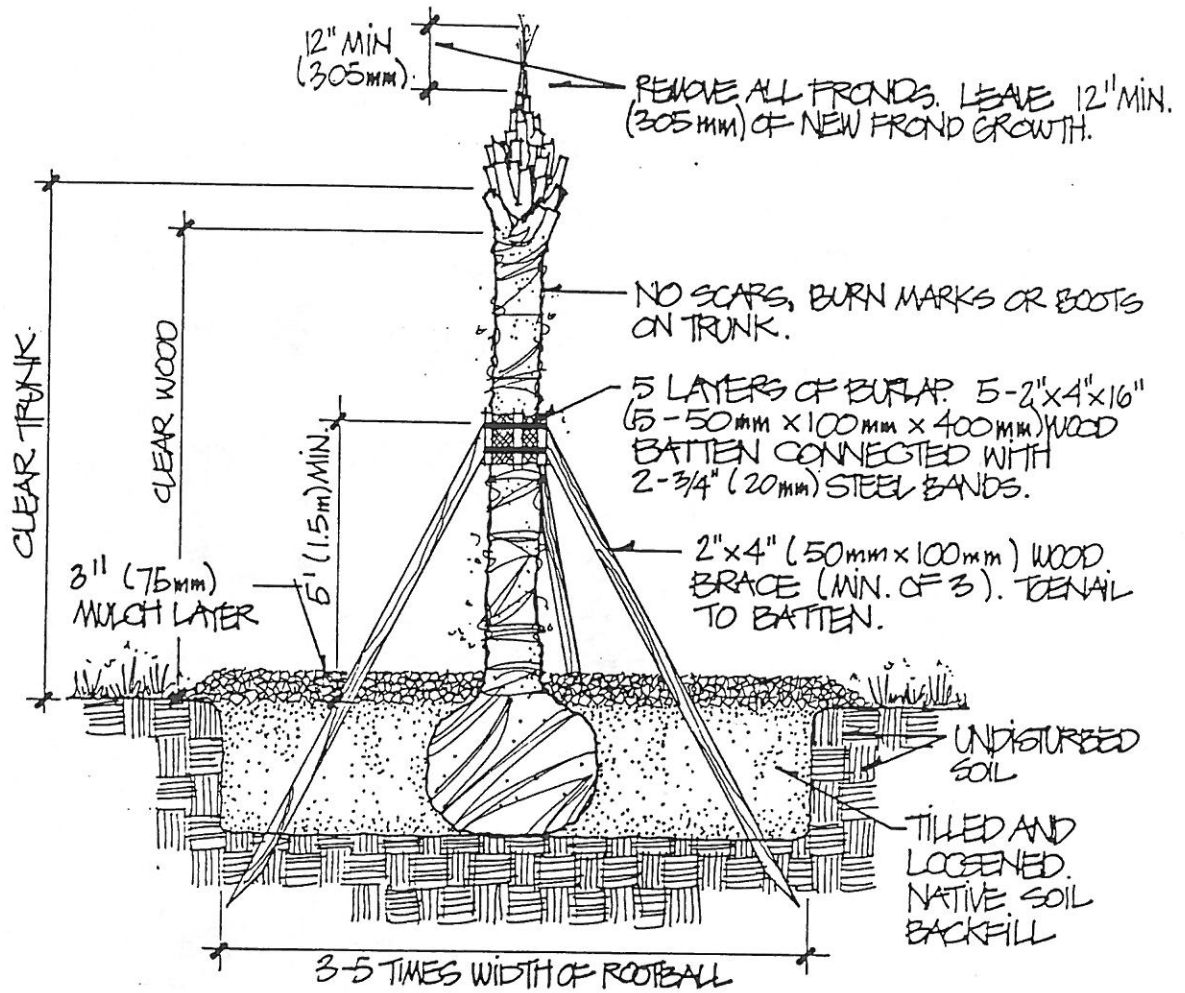


HEDGE PRUNING



NOTE: STAKE ONLY THE FOLLOWING: ① PALMS REQUIRING SUPPORT TO MAINTAIN A PLUMB POSITION. ② PALMS IN A POTENTIALLY HAZARDOUS SITUATION.

PALM PLANTING DETAIL (EXCEPT FOR SABAL PALMS)



NOTE: STAKE ONLY THE FOLLOWING: ① PALMS REQUIRING SUPPORT TO MAINTAIN A PLUMB POSITION. ② PALMS IN A POTENTIALLY HAZARDOUS SITUATION.

SABAL PALM PLANTING DETAIL

NOTE: USE 2" x 2" (50mm x 50mm) STAKES FOR TREES 1" TO 2" (25mm TO 50mm) CALIPER

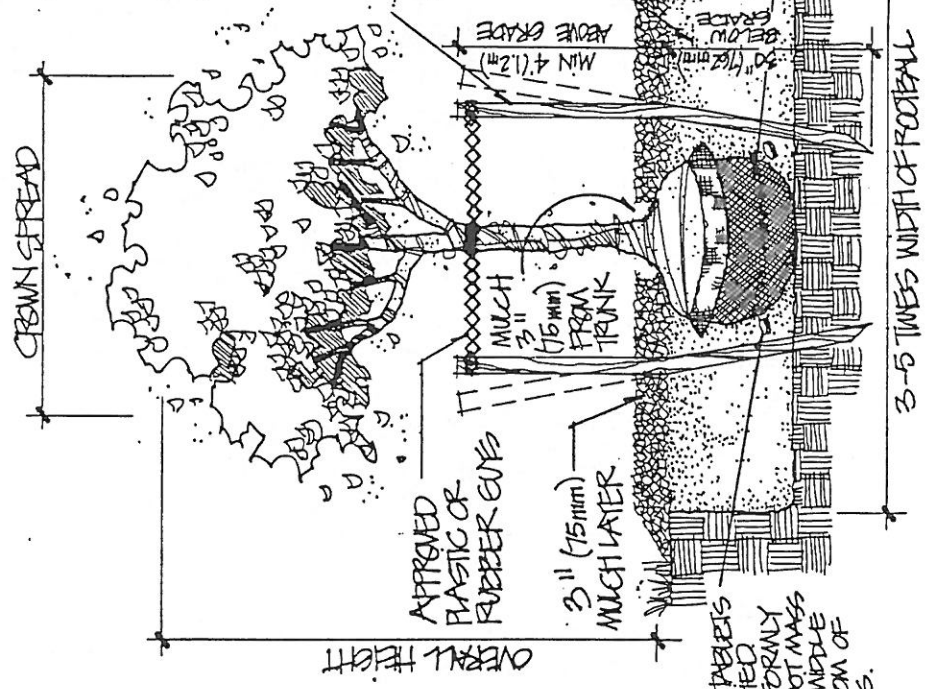
OTHER TREE STAKING SYSTEMS MAY BE ACCEPTABLE IF APPROVED

2" x 4" (50mm x 100mm) STAKES DRIVEN AT ANGLE THEN TIGHTENED TO VERTICAL. (MIN. 2 STAKES) (OPTIONAL 3 STAKES PLACED AT 120° ANGLE).

TILLED AND LOOSENED NATIVE SOIL BACKFILL

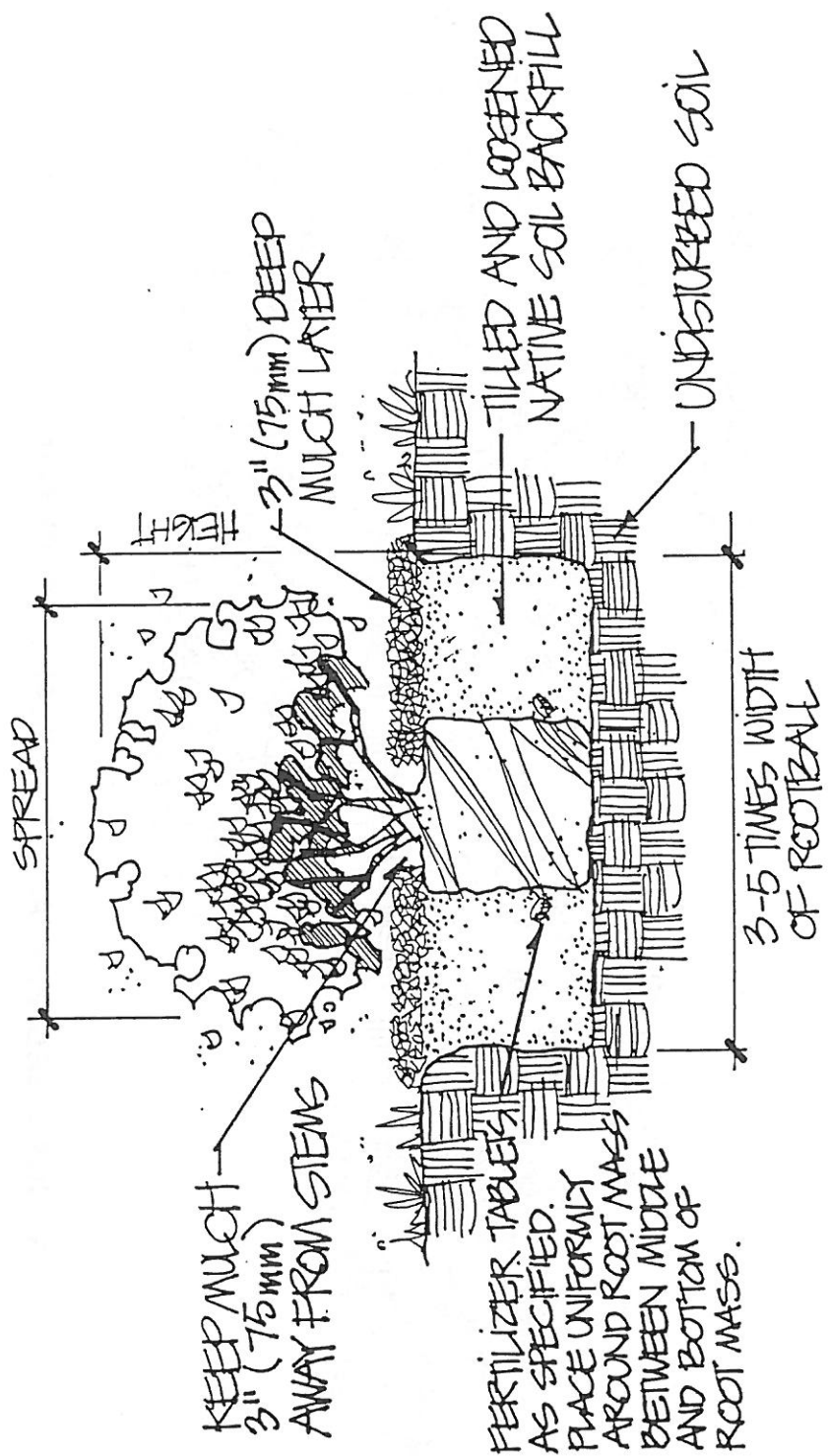
UNDISTURBED SOIL

CONTAINER GROWN OR B+B TREE. REMOVE TOP 4" (100mm) OF BURLAP, WIRE AND ALL OTHER TIE-DOWN MATERIAL.



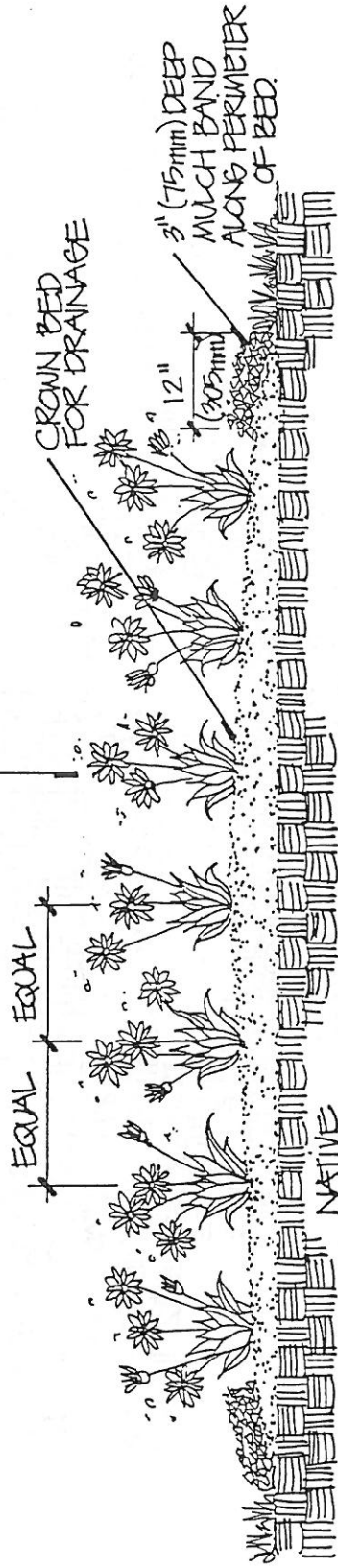
NOTE: STAKE ONLY THE FOLLOWING: (1) TREES REQUIRING SUPPORT TO MAINTAIN A PLUMB POSITION. (2) TREES IN A POTENTIALLY HAZARDOUS SITUATION.

TREE PLANTING DETAIL



SHRUB AND GROUND COVER PLANTING DETAIL

TRIANGULATE SPACINGS OF PLANTS
IN MASS PLANTINGS.



SPREAD 3" (75mm) OF FLORIDA PEAT OR OTHER APPROVED
ORGANIC SOIL AMENDMENT (SEE WRITTEN SPECIFICATIONS)
OVER FULL LENGTH AND WIDTH OF PLANTING AREA
FOR ANNUALS. ROTO-TIL ORGANIC LAYER 6"-8"
(150mm - 200mm) INTO NATIVE SOIL. ADD TIME-RELEASE
FERTILIZER AS SPECIFIED.

ANNUAL BED PREPARATION/PLANTING DETAIL

NOXIOUS PLANT MATERIALS

BOTANICAL NAME	COMMON NAME
<i>Acacia auriculiformis</i>	Earleaf acacia
<i>Albizia julibrissin</i>	Mimosa tree
<i>Albizia lebbek</i>	Woman's tongue
<i>Broussonetia papyrifera</i>	Paper mulberry
<i>Casuarina equisetifolia</i>	Australian pine
<i>Cinnamomum camphora</i>	Camphor tree
<i>Eucalyptus species</i>	Eucalyptus tree
<i>Ficus species</i>	Ficus tree
<i>Grevillea robusta</i>	Silk oak tree
<i>Hibiscus tiliaceus</i>	Mahoe
<i>Melaleuca quinquenervia</i>	Punk tree
<i>Melia azedarach</i>	Chinaberry
<i>Morus rubra</i>	American mulberry
<i>Sapium sebiferum</i>	Chinese tallow tree
<i>Schinus terebinthifolius</i>	Brazilian pepper tree
<i>Imperata cylindrica</i>	Cogon grass
<i>Eupatorium capillifolium</i>	Dog fennel

REFERENCES

Support documents that shall be consulted and referenced in the implementation of this specification are as follows:

1. Ordinance No. 370, Town of Belleair, Florida.
2. The Report of the Committee for Hallett Park/Master landscape Plan Review as approved by the Town Commission, November 2, 1995.
3. The "Concept of Proposed Maintenance and Erosion Control Berm in Hallett Park and Recommendations for Construction" as submitted on November 13, 1995 by James W. Macfarlane, P.E. as Belleair Town Engineer.
4. Rich Paul (Manager, National Audubon Society - Tampa Bay Sanctuaries) Reports of September 18 and 26, 1995 "Wildlife Protection, Shoreline Protection and Protection of Bluff Face at Hallett Park".
5. Dr. Brandt Henningsen letter of April, 1995.
6. Appropriate sections of "An Introduction to Planting and Maintaining Selected Common Coastal Plants in Florida", produced by The Florida Sea Grant Salt-Tolerant Vegetation Advisory Panel, May 1990.
7. State of Florida Mangrove Trimming and Preservation Act as amended.

