

**CITY OF TALLAHASSEE
LANDSCAPE INSTALLATION SPECIFICATIONS
(Updated 4-17-2023)**

LS-1 Description.

Install, establish, and maintain landscaping as indicated in the Contract Documents, as defined in the City of Tallahassee Supplemental Specifications.

LS-2 Materials.

LS-2.1 Plants:

LS-2.1.1 Grade Standards and Conformity with Type and Species: Only use nursery grown plant materials that comply with all required inspection, grading standards, and plant regulations in accordance with the latest edition of the Florida Department of Agriculture's "Grades and Standards for Nursery Plants."

Unless otherwise specified, minimum grade for all plants is Florida No. 1 or better. All plants must be the specified size and grade at the time of delivery to the site and the minimum grade maintained throughout the project construction period and plant establishment period.

Use only plants that are true to type and species and ensure that the plants not specifically covered by Florida Department of Agriculture's "Grades and Standards for Nursery Plants" conform in type and species with the standards and designations in general acceptance by Florida nurseries.

A minimum of two plants of each species on each shipment must be shipped with tags stating the botanical nomenclature and common name of the plant. Should discrepancies between botanical nomenclature and common name arise, the botanical name will take precedence. Documentation shall be provided specifying the location where the landscape plants and trees were grown to facilitate tracing of invasive pathogens, plants, and pests.

LS-2.1.2 Inspection and Transporting: Move nursery stock in accordance with all Federal and State regulations and accompany each shipment with the required inspection certificates for filing with the Engineer.

LS-2.2 Water: Meet the requirements of Landscape Technical Maintenance Plan.

LS-2.3 Mulching:

LS-2.3.1-Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:

Type: Pine Bark, Pine Straw (See limitations in Section LS-3.6)

Size Range: Pine Bark 2-4 inches, Pine Straw 6-17 inches

Color: Natural

LS-2.4 Soils: Landscape soil must be sandy loam or loamy sand with properties of AASHTO classification A-2-4 or A-4. The soil must have an organic matter content of 3 to 10% using the loss on ignition (LOI) test in accordance with FM 1-T267 and a pH value of 5.5 or greater and less than or equal to 7.0 as determined in accordance with FM 5-550 from a soil testing laboratory approved in accordance with 105-7. Soil must be free of litter and deleterious substance such as trash, construction materials, landscape debris, particles greater than 0.50 inches, and rinsate containing lime or toxic materials.

Landscape soil depth shall be a minimum of 6" for areas planted with turf and all tree and shrub areas shall be a minimum depth of 24".

For trees planted within constrained spaces, there shall be a minimum 1200 cubic feet of landscape soil at a 24" depth around the planting space.

Soil must be free of noxious plants or propagules of plants listed in Florida Rule 5B-57.007, and invasive exotic plants listed under Category I Florida Exotic Plant Pest Council.

Where shown in the landscape plans or when approved by the Engineer, existing soil may be amended with compost or biosolids to meet the requirements of this Section. Use compost in accordance with FDEP Rule 62.709.550 and 62.709.600. Use biosolids in accordance with Florida Rule 62.640.850.

LS-2.5 Inorganic Soil Amendments:

Lime: ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:

Class: T, with a minimum of 99 percent passing through No. 8 sieve and a minimum of 75 percent passing through No. 60 sieve.

Class: O, with a minimum of 95 percent passing through No. 8 sieve and a minimum of 55 percent passing through No. 60 sieve.

Provide lime in form of ground dolomitic limestone.

Sulfur: Granular, biodegradable, and containing a minimum of 90 percent sulfur, with a minimum of 99 percent passing through No. 60 sieve and a maximum of 10 percent passing through No. 40 sieve.

Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.

Aluminum Sulfate: Commercial grade, unadulterated.

Perlite: Horticultural perlite, soil amendment grade.

Agricultural Gypsum: Minimum 90 percent calcium sulfate, finely ground with 90 percent passing through No. 50 sieve.

Sand: Clean, washed, natural or manufactured, and free of toxic materials.

Diatomaceous Earth: Calcined, 90 percent silica, with approximately 140 percent water absorption capacity by weight.

Zeolites: Mineral clinoptilolite with at least 60 percent water absorption by weight.

LS-2.6 Organic Soil Amendments:

Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 3/4-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:

Organic Matter Content: 50 to 60 percent of dry weight.

Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.

Sphagnum Peat: Partially decomposed sphagnum peat moss, finely divided or granular texture, with a pH range of 3.4 to 4.8.

Muck Peat: Partially decomposed moss peat, native peat, or reed-sedge peat, finely divided or of granular texture, with a pH range of 6 to 7.5, and having a water-absorbing capacity of 1100 to 2000 percent.

Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture and free of chips, stones, sticks, soil, or toxic materials.

Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, debris, and material harmful to plant growth.

LS-2.7 Fertilizers:

Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 4 percent nitrogen and 20 percent phosphoric acid.

Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.

Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:

Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil

reports from a qualified soil-testing laboratory.

LS-2.8 Pesticides

LS-2.8.1-General: Pesticide registered and approved by EPA, acceptable to authorities having jurisdiction, of type recommended by manufacturer for each specific problem and as required for Project conditions and application, and in accordance with the Contract Documents. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

LS-2.8.2-Pre-Emergent Herbicide (Selective and Non-Selective): Refer to requirements in the Landscape Technical Maintenance Plan within the project landscape plan.

LS-2.8.3-Post-Emergent Herbicide (Selective and Non-Selective): Refer to requirements in the Landscape Technical Maintenance Plan within the project landscape plan

LS-3 Planting Requirements.

LS-3.1 Delivery: All materials must be available for inspection before installation and will be subject to approval or rejection.

LS-3.2 Layout: Mark proposed planting beds and individual locations of trees and palms as shown in the Contract Documents for Engineer's review, prior to excavation or planting. The Engineer may request to review all proposed construction and maintenance practices before the start of the operations.

Make no changes to the layout, materials, or any variations of plant materials from the Contract Documents without the Engineer's written approval.

LS-3.3 Soil Drainage: All planting holes and beds must drain sufficiently prior to installing any plants. The bottom of the planting holes must completely drain into the subsoil within 24 hours to comply with this section. Immediately notify the Engineer of drainage or percolation problems before plant installation. Aggregate sumps may not be used to comply with this section.

Where shown in the landscape plans and approved by the Engineer, identified planting areas shall have an approved underdrain installed.

LS 3.4 Root Barrier: For tree plantings within 10 feet of impervious surfaces such as curbs, paths, sidewalks, and trails or any underground utility such as water, sewer, stormwater pipe, gas, or electric; an approved root barrier shall be installed to prevent future root damage to this infrastructure.

LS-3.5 Installation of Plants: For installation of the plants as identified in the Contract Documents, comply with the requirements of the City of Tallahassee Landscape planting detail.

Personnel performing these services are under the sole responsibility and supervision of the Contractor and must be competent, experienced, and skilled in all aspects of the required landscape installation and establishment practices.

LS-3.6 Contractor's Responsibility for Condition of the Plantings: Begin maintenance of all plants immediately after each planting. Keep all plants watered, fertilized, mulched, pruned, and staked and guyed as necessary to assure specified minimum grade of Florida No. 1 throughout the duration of the project construction period and establishment period. During the establishment period, keep the individual planting locations and planting beds free of litter and undesirable vegetation. Ensure that the plants are maintained so that they are healthy, vigorous, and undamaged throughout the duration of the project construction period and establishment period. For the duration of the establishment period, operate and maintain in good operating condition, all components of any irrigation system installed in compliance with the Contract Documents.

Pine Straw mulch may be used as noted by the Engineer, in planting spaces on slopes greater than 3:1, and for plantings within stormwater management facilities.

During the establishment period, replace any plants that fall below specified minimum grade. Use replacement plants of the same species, size and planting medium as the plant being

replaced and as specified in the Contract Documents.

LS-3.7 Inspection Requirements: Certify monthly, on a form provided by the City, that the plants, trees, and turf have been installed and are being maintained per the Landscape Technical Maintenance Plan. A Registered Landscape Architect or Registered Consulting Arborist acting as the Contractor's Landscape Quality Control representative will oversee the establishment period.

The Contractor's Landscape Quality Control representative must perform quarterly inspections of planting areas and submit findings in report form to the City. Information to be included in inspection report from the Contractor's Quality Control representative must include as a minimum the following:

- Date of inspection

- Description of project

- Location of inspection

- Weather conditions

- Condition of plants - identify by species, location, and number of plants that are no longer the specified minimum.

- Condition of planting beds (including mulching, mowing, weeding, fertilizing, watering, and staking and guying), if applicable

- Other comments

- Signature and seal of Contractor's Landscape Quality Control representative

Submit the certified inspection report to the Engineer within seven calendar days after performing the inspection. Any corrections to the inspection report must be revised/corrected and resubmitted within three calendar days after notification by the Engineer. Any deficiencies noted on the inspection report must be corrected within ten days of notification from the City.

Periodic, random verifications will be performed by the City to ensure the quality of the plants and correctness of the certified landscape inspection report.

LS-3.8 Pesticides: Apply pesticides and other chemical products and biological control agents in accordance with authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.

Pre-Emergent Herbicides (Selective and Non-Selective): Apply to tree, shrub, and ground-cover areas in accordance with manufacturer's written recommendations. Do not apply to seeded areas.

Post-Emergent Herbicides (Selective and Non-Selective): Apply only as necessary to treat already-germinated weeds and in accordance with manufacturer's written recommendations.

LS-4 Disposal of Surplus Materials and Debris.

Remove from the jobsite any surplus excavated material from plant holes unless otherwise directed by the Engineer. Surplus is defined as material not needed after installation of plants per Contract Documents. Upon commencement of the plant installation, remove daily all landscape installation debris from the landscape locations described in the Contract Documents. Remove all excess staking and guying materials from the jobsite.

LS-5 Plant Establishment Period and Contractor's Warranty.

Take responsibility for the proper maintenance, survival, and condition of all plants for a period of one year after the project's final acceptance in accordance with Contract Documents. This one-year period is defined as the establishment period.

Mowing as part of the landscape work will be identified in the Contract Documents. Continue any mowing of the landscape areas specified in the Contract Documents throughout the establishment period.

As a condition precedent to final acceptance in accordance with Contract Documents, provide

a Warranty/Maintenance Bond to the City of Tallahassee in the amount of the total sums bid for all landscape items as evidence of warranty during this plant establishment period. The cost of the bond will not be paid separately but will be included in the costs of other bid items.

In addition to satisfying the provisions of Section 287.0935, Florida Statutes, the bonding company is required to have an A.M. Best rating of "A" or better. If the bonding company drops below the "A" rating during the Warranty/Maintenance Bond period, provide a new Warranty/Maintenance Bond for the balance of the establishment period from a bonding company with an "A" or better rating. In such event, all costs of the premium for the new Warranty/Maintenance Bond will be at the Contractor's expense.

The Engineer may conduct interim inspections of all landscape items during the plant establishment period, as well as at the end of the plant establishment period. As part of the warranty to the City, and at no cost to the City, replace all plants found not to meet minimum specifications as shown in LS-2.1.1 and LS-3.6 within ten days after each inspection.

No later than 180 days after final acceptance and after suitable tree root establishment has been verified, remove all watering berms, staking and guying from the project.

At the end of the establishment period, the Engineer will release the Contractor from further warranty work and responsibility provided all plants are established and all previous warranty and remedial work, if any, has been completed to the satisfaction of the Engineer.

LS-6 Method of Measurement.

The quantities to be paid will be the items shown in the Contract Documents, completed and accepted.

LS-7 Basis of Payment.

Prices and payments will be full compensation for all work and materials specified in this Section.