

Copyright © 1999 David W. Johnston Associates, Inc. and may not be reproduced or otherwise used without the express written permission of David W. Johnston Associates, Inc.

DIVISION 2 - SITE WORK
SECTION 0221
FINISH GRADING

- I. GENERAL
1. SCOPE
- Furnish all labor, material, and equipment necessary to shape, mold, and finish grade all features of the project.
 - Include all killing removal of vegetative growth and hand work necessary to establish finish grade including under any existing trees.
 - Kill and eliminate any and all unwanted vegetative growth from topsoil and subsoil by approved means, and before planting.
 - Construct berms to elevations shown, and perform all grading, including rough grading (2" +/-) before irrigation installation, and finished grading prior to planting.
 - Lightly scarify topsoil into surface of subgrade. Remove extraneous matter measuring one inch (1") or larger in any dimension.
 - Material shall include fill and topsoil appropriately throughout the project.
- II. EXECUTION
2. Berms and Graded Areas
- All berms and graded areas shall be built in accordance with the Site Development Plans and details. Finish grading operations shall bring all berms and graded areas to a final grade position so as not to inhibit positive drainage.
 - The Site Development Plans show earth berm locations. The Contractor shall supply sufficient second cut clean fill material to provide a finish grade as represented on the plans. Quantities of soil given represent approximate finish volumes compacted in place.
 - Berms shall be so shaped that their lines and slopes will blend with the surrounding contours. The mounds and valleys of the berms shall be sculptured into smooth undulating shapes without "bird-baths".
 - In order to develop aesthetically pleasing berms, the Architect reserves the right to make minor adjustments in shape and contouring at any time during construction.
 - Finish grading of berms shall be done by a wheel tractor and shall involve the pushing and back-blding of small amounts of material in a repetitive operation.
 - Uniformly fine grade areas within grading limits including transition areas. Smooth finished surface with specified tolerance (minimum 3% slope), compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.
 - Obtain approval of finished grades before proceeding with grading and planting operations. Eliminate irregularities and ponding. Leave grade 1/2" below curb or walk.
 - If planting and mulching is not commenced immediately, protect stockpiled or spread topsoil from erosion by force of wind, water, or other force, re-establish eroded, rutted, or settled grades to proper finished grade.
 - Landscape contractor is responsible for repairing, re-grading, and re-seeding any areas compacted by the General Contractor which are disturbed by the work of this contract.
 - The tiled areas shall be settled, fine graded, and tamped to meet approved finished grade. Coarse soil lumps, rocks, roots, weeds and debris not passing through a hand rake shall be removed from the surface. The surface shall be smooth, firm, and of fine texture immediately before sodding.
- III. INSPECTION AND APPROVAL
1. Inspection
- All finish grading operations shall be subject to regular inspections by the Architect. Because the contouring of the project is essential to an aesthetically pleasing development the Architect may make minor alterations during the finish grading operations.
2. Approval
- All finish grading operations shall be subject to the approval of the Architect prior to beginning the installation of the irrigation system. Positive drainage is a function of finish grading and will be guaranteed by the Contractor. Following the installation and backfilling of the irrigation system a drainage check may be conducted by natural or man made circumstances. Any positive drainage faults will be corrected and a new finish grade established.

END SECTION 2-0221

DIVISION 2 - SITE WORK
SECTION 0270
LANDSCAPE - GENERAL

- I. SCOPE
1. The work embraced under this contract includes supplying and placing of all materials as listed in the specifications and on the plans in accordance with sound industry practice. All labor, equipment, tools, plant material and miscellaneous items called for here or required for satisfactory completion of the work, shall be furnished and installed by the Landscape or Irrigation subcontractor.
2. Contractors shall be responsible for securing all necessary licenses and permits, and shall comply in all ways with Federal, State and local codes.
- II. INVESTIGATION OF SITE:
- All bidders shall PERSONALLY examine the site and fully acquaint themselves with all existing conditions in order that no misunderstanding may arise as to the character or as to the extent of the work to be done, and likewise, in order to advise and acquaint themselves with all precautions to be taken in order to avoid injury to persons and property.
 - The Contractor shall determine by site investigation any necessary work not specifically called for, but, necessary to satisfactorily complete the work. No additional compensation will be granted because of any difficulties which may be encountered on the site in the execution or maintenance of any portion of the work.
 - Any damages to underground or above ground utilities or to any property of the Owner or other Contractor shall be repaired or replaced immediately at the responsible Contractor's expense.
 - Any damage caused to underground installations of another Contractor shall be back-charged to that Contractor if such installations are not located in accordance with plans.
- III. QUALIFICATIONS:
- All Landscape and Irrigation Contractors wishing to bid the project shall have a minimum of five years experience specializing in this type of work in this location. Individuals or Corporations not able to meet this requirement may submit their qualifications to the Landscape Architect during the bidding period for review and possible qualification.
- IV. PERFORMANCE STANDARDS:
- All work shall be performed by competent and skilled craftsmen. Labor crews shall be under the direct control of a single foreman designated at the beginning of the work and skilled in reading blueprints and coordination between office and job. While labor crews may change, the same foreman will be in charge throughout the job. Contractor shall review plans throughout the job. Contractor shall review plans and specifications with the job foreman to insure complete understanding of the project.
 - Tools shall not be left on the job site in an unsafe or unprotected condition.
 - All open excavations shall be properly barricaded and lighted at night.
 - The Contractor shall at all times keep the premises free from accumulation of waste material, soil, and/or rubbish caused by his employees or work. The Contractor shall clean behind his work immediately and shall take necessary precautions to keep concrete, brick and other paving material clean of soil. This shall include the use of drop-cloths, etc. Damage to grades or lawns shall be repaired immediately and all debris and excess soil removed by raking.
 - All staking and layout of physical features shall be approved by the Landscape Architect before construction or planting is started. The same shall apply to the establishment of proper grades and levels. All planting beds shall be accurately staked in accordance with the plans. Changes necessitated by building changes, etc., shall be in keeping with the overall concepts of the design. Any beds developed without the approval of the Architect shall, if they do not accurately represent the plan and/or the design concept, be redeveloped without additional expense to the Owner.
 - Material such as ground covers, mulch or gravel shall be spread in the specified quantity to cover the area designed. No additional materials shall be used in such areas without the approval of the Architect and/or Owner.
 - The Contractor shall in good workmanlike manner, do and perform all work and furnish all supplies and materials, machinery, equipment, facilities and means, except as otherwise expressly specified herein, necessary or proper to perform and complete all the work required by this contract, within the time specified herein, in accordance with the provisions of this contract and said specifications and in accordance with the plans, and in accordance with the directions of the Architect as given from time to time during the progress of the work.

END SECTION 2-0270

DIVISION 2 - SITE WORK
SECTION 0280
LANDSCAPE DEVELOPMENT

- I. GENERAL
- Staking and Layout: All staking and layout of physical features shall be approved by the Landscape Architect before construction of planting is started. The same shall apply to the establishment of proper grades and levels. All planting beds shall be accurately staked in accordance with the plans. Changes necessitated by building changes, etc., shall be in keeping with the overall concepts of the design. Any beds developed without the approval of the Landscape Architect shall, if they do not accurately represent the plan and/or the design concept, be re-developed without additional expense to the Owner.
 - Commencement of work: Work under this contract shall commence not less than ten (10) days after notice to proceed and shall be complete in an orderly business like fashion. Once work is begun on consecutive working days until work is completed. Sundays, Saturdays, holidays and stoppages due to foul weather or delays caused by the Owner or building contractor shall be excluded. Unnecessary delays in work may result in forfeiture of Performance Bond when required. It shall be the Contractor's responsibility to immediately notify the Landscape Architect in writing, of any stoppages in work due to circumstances beyond his control and to state the time duration of such stoppage.
 - Maintenance: The Contractor is entirely responsible for the work until final acceptance. Once material is planted, it shall receive water each day from time of planting until final inspection - not to include Sundays. Watering shall be done in accordance with sound nursery practice. Water shall be supplied by the Owner, hoses, etc. by the Contractor, unless otherwise specified for specific job conditions. Maintenance of turf areas shall also include mowing to maintain a healthy condition and for aesthetic purposes.
 - Coordination of work: The Contractor shall be responsible for complete coordination of planting operations with the other Contractors on the job. Repair of damage to plants, grades, lawns, etc., during installation shall not be considered as an extra, and shall not be chargeable to the Owner. Damage caused by other Contractors will be the responsibility of said Contractor.
 - Right to reject: The Owner shall have the right, at any stage of the work, to reject any and all work and materials which, in his opinion, may not meet the requirements of these specifications. Rejected material shall be immediately removed from the site and acceptable material substituted in its place.
 - Underground debris: Should any objectionable material such as concrete, bricks, roots or other debris be encountered during landscape installation, they shall be removed from the site by the Contractor. All open excavations shall be properly barricaded, and lighted at night.
 - All plant material furnished by the Contractor, unless otherwise specified, shall be Florida #1 or better in accordance with GRADES AND STANDARDS FOR NURSERY PLANTS, State Plant Board of Florida. The Landscape Architect reserves all rights to determine acceptability of plant material submitted for planting.
 - Substitutions: Substitutions will be permitted only upon submission of sufficient proof that any plant is not obtainable and upon authorization of the Landscape Architect. Under no circumstances shall unauthorized substitutions be included in the Bid Proposal and Breakdown.
 - Clean-up: The Contractor shall at all times keep the premises free from accumulation of waste material, soil, and/or rubbish caused by his employees or work. Contractor shall clean behind his work immediately and shall take necessary precautions to keep concrete, brick and paving material clean of soil. This shall include the use of drop-cloths, etc. Damage to grades or lawns shall be repaired immediately and all debris and excess soil removed. Should the Contractor fail to keep the premises in a clean satisfactory condition, the owner reserves the right to hire appropriate personnel to perform clean-up work and back charge the Contractor for all costs incurred.
 - Abbreviations:

c.w.	clear wood
cl.	clear trunk
cl. (s)	clump (s)
dbl.	double
o.o.	over all (height & width the same)
o.s.h.	over all height
sp.	spread
stems	stems
stg. hts.	staggered heights
hd. (s)	head (s)
std.	standard
f.o.w.	fan on wall
f.o.f.	fan on fence
tr.	trunk
esp.	esp. root cuttings
r.c.	root cuttings
u.r.c.	un-rooted cuttings
o.c.	on center
- * NOTE: (f.o.w. & f.o.f) Fan on Wall and Fan on Fence shall mean providing all necessary hooks, masonry plugs, etc., and tying as required to begin spreading all specified.
11. Completion and acceptance:
- Completion of the work shall mean the full and exact compliance and conformity with the provisions requiring or implied in the drawings and specifications, and associated change order as approved by the Landscape Architect.
 - Final inspection shall be made by the Landscape Architect at the request of the Contractor, and shall be prior to final request for payment. All requirements of the specifications shall apply until final acceptance of the work by the Owner or his representative.
 - The acceptability of all material, workmanship, labor and compliance with the specifications, grades and standards shall be solely determined by the Landscape Architect.
12. GENERAL GUARANTEE: Neither the final certificate of payment nor any provision of the contract documents nor partial or entire occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the contract documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty material and/or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of one year from the date of final acceptance of the work unless a longer period is specified.
- The guaranty period shall commence at such time as the Landscape Architect certifies that the project has been completed in substantial compliance with the contract documents. In certain instances limited, defined areas of the project may be released by the Landscape Architect for maintenance purposes only and/or for commencement of the guaranty period. Such partial releases shall be at the sole discretion of the Landscape Architect.
- Responsibilities of the Owner throughout the guaranty period shall be as follows:
- Maintain a regular inspection schedule of all materials and workmanship included within the scope of the contracted work.
 - Establish normal, regularly scheduled maintenance procedures for all areas of work undertaken by the Contractor. Such maintenance procedures and frequency shall be in keeping with normal industry standards for the scope and nature of the work involved.
 - Maintain a written record of the maintenance procedures undertaken including the frequency of all maintenance performed, record of problems encountered and solutions.
 - Monitor all plant materials for proper soil moisture content and the uniformity of water application over time, as compensated for seasonal variation and local climate. Apply localized hand watering as necessary to ensure proper moisture levels for the establishment of larger plant materials and plants in unique micro-environments.
 - Provide written notification to the Contractor and the Landscape Architect of any material and/or workmanship that is believed to be at a level of quality and/or performance below that which was specified within the contract documents and subject to the Contractor's guaranty. Such notice shall be delivered to the Contractor and the Landscape Architect via mail to their last known address.
- Responsibilities of the Contractor throughout the guaranty period shall include the following:
- Prior to final acceptance, the Contractor shall provide the Owner with a written maintenance schedule which addresses all aspects of the work scope as completed under this contract.

END SECTION 2-0280

DIVISION 2 - SITE WORK
SECTION 0281
TOPSOIL AND FERTILIZERS

- I. GENERAL
- Topsoil: Topsoil is defined as 95% sand with not more than 2% clay and the balance loam material. Sand is defined as material which passes through number 20 and number 10 sieve. Topsoil shall be free from hard clods, stiff clay, horizon, roots, large stones, lime, cement, bricks, coal ashes, chert, slag, concrete, tar or its residue, rotted paper, boards, chips, sticks or other objectionable material. Topsoil shall contain no more than 5% loam or silt and shall be weed free.
 - The Contractor is responsible for performing percolation to determine percolation rates for areas of the site to receive landscaping, beds, hedge rows and all tree locations less than 6" per hour the drainage container shall install sumps to provide drainage at 6" per hour sump shall be a minimum of 8" in diameter, shall be 36" deep or break through conforming layer which ever is greater and backfilled with clean builders sand.
 - Rough grades to be furnished by others shall be ascertained by site inspection prior to bidding.
 - Peat Moss - Peat moss shall consist of coarse, partially decomposed vegetable matter of natural occurrence. It shall be medium brown in color, clean, low in content of mineral and woody material, and mildly acid, and shall be shredded and free from all stones and twigs.
 - Sand - Clean, coarse, ungraded, meeting ASTM C33-55 requirement for concrete sand.
 - Bonemeal - Commercial bonemeal shall be finely ground and have a minimum analysis of 4% nitrogen and 20% phosphoric acid.
 - Natural Organic Fertilizer - Shall be a commercially natural organic fertilizer 6-3-0 (Active sludge), such as Milorganite, produced by the Sewerage Commission, Milwaukee, Wisconsin.
 - Fertilizer and Lime Materials
1. Fertilizers: All fertilizers shall be uniform in composition free flowing and suitable for application by mechanical spreader equipment. Fertilizers shall be delivered to the site fully labeled according to applicable State Fertilizer laws. The following information shall be shown on the fertilizer bag or package or on a tag:
- Name and address of manufacturer.
 - Name, brand or trade mark.
 - Number of net pounds of ready mixed material in the package.
 - Chemical composition or analysis.
 - Guarantee of analysis.
- If a brand or grade of fertilizer is delivered in the bulk, a written statement having the above listed information must accompany each load.
2. Custom Mixed Fertilizers shall have a written statement containing the following information with each load:
- Weight of each commercial fertilizer used in the custom mixing.
 - The guaranteed analysis of each commercial fertilizer used in the custom mixing.
 - Total weight of fertilizer delivered in each load.
 - The manufacturer of each of the commercial fertilizers.
 - Guaranteed analysis of each load to be stated as follows:
 - % of total Nitrogen.
 - % of total available Phosphoric Acid.
 - % of total Soluble Potash.
 - Name and address of the person selling the fertilizer.
3. Fertilizer Application Rates shall be determined by soil test. (Under unusual circumstances where there is insufficient time for a complete soil test, 30 pounds Milorganite Fertilizer per 1000 sq. ft. can be applied.)
4. Lime: Lime material shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Ground limestone shall be ground to such fineness that at least 50% will pass through a 100-mesh sieve and 95% to 100% will pass through a mesh sieve.
5. Application rates for liming materials shall be determined by soil tests. (Under unusual circumstances where there is insufficient time for a complete soil test, lime shall be applied at a minimum rate of 50 pounds of ground limestone of its equivalent per 1000 sq. ft.). Lime shall be distributed uniformly over the entire area to be sodded.
6. pH of all topsoil shall be between 5.0 and 6.5. A soil analysis shall be supplied by the Contractor indicating pH and necessary to amend soil to proper pH.
- III. EXECUTION
- Topsoil shall be placed in all planting pits 6" below and to the side of Plant Root System.
 - All fertilizers and soil amendments shall be spread prior to beginning work under paragraph 3 below.
 - Lawn Areas - In those instances that topsoil is called on the drawings in lawn areas it shall be placed four inches (4") deep and diked or roto-tilled an additional four inches (4") into the existing grade. A smooth tractor blade finish plus one inch (1") below sod finish grade shall then be established.

END SECTION 2-0281

DIVISION 2 - SITE WORK
SECTION 0283
PLANTING

- I. GENERAL
- Nomenclature: The names used conform to the names given in "Standardized Plant Names" except in cases not covered by that book, in which case, the names conform to the customs of the trade.
 - Summary of Materials Lists: An itemized list of plants is shown in the specifications and complete requirements for these plants are a part of this specification.
 - All plant material furnished by the contractor, unless otherwise specified, shall be Florida #1 or better, in accordance with GRADES AND STANDARDS FOR NURSERY PLANTS, State Plant Board of Florida. The Landscape Architect reserves all rights to determine acceptability of plant material submitted for planting. Plants must meet specifications contained herein, but need not necessarily be nursery grown stock.
- II. MATERIALS
- Trees and Palms: All trees must have a fully developed fibrous root system, be heavily branched, and in the case of palms, heavy fronds, free from all insects, fungus, and other diseases. All trees and palms except Cabbage Palms shall be balled and burlapped. Grow bag material is not acceptable. All trees and palms shall have a habit of growth that is normal for the species. In the case of trees named as Specimen Items, the Landscape Architect shall retain the right to reject them when they lack proper Landscape Architectural character as called for by its use on the plan. (This shall be determined prior to planting at the request of the Landscape Architect.)
 - Shrubs and Vines: All shrubs and vines shall have a fully developed root system, and shall still display the requirements for the species unless stated. Shrubs and vines shall be heavily conical and leafed (foliage to base and shall be free from insects, diseases and mutilations of any nature. Self-heading shall be planted in well rotted manure in pits twelve inches (12") greater in all dimensions than the ball of the plant. All Yuccas shall be rooted plants. All Azaleas shall be planted in pits twelve inches (12") greater than the ball of the plants. Domestic peat shall be used to fill the cavity between ball and pit. Soil amendments shall be added to insure proper acidic reaction of soil. When Azaleas are planted in masonry planters or planting areas the sides of area shall be lined with 200 polyethylenes to protect from alkaline nature of masonry.
 - Groundcovers: All Groundcovers shall have a sturdy fibrous root system, unless unusual cuttings are called for on the plans and/or Summary of Materials, shall be heavily leafed and must be free of all insects, diseases and injuries.
- III. EXECUTION
- Digging and Moving:
 - B & B Plants: No plant shall be accepted when the ball of earth surrounding its roots has been cracked or broken. The diameter of the ball must be sufficient to encompass the fibrous and feeding root system necessary for the maximum development of the plant.
 - Only a minimum of fronds shall be removed from the crown of palm trees to facilitate moving and handling. Clear trunk shall be as specified after the minimum of fronds has been removed.
 - Protection After Delivery: The balls of B & B plants which cannot be planted immediately shall be covered with moist soil or mulch, or equid protection from drying winds or sun, and kept moist.
 - Protection: Trees moved by winch or crane shall be thoroughly protected from chain marks, grinding or bark slippage by means of burlap, wood batten or approved material.
 - Preparation of Ground Planting:
 - No plant pit shall be dug or prepared until their locations have been staked on the ground and approved. All plant materials shall be subject to inspection at any time by the Owner to determine adherence to quality and size.
 - Circular pits with vertical sides shall be excavated for all plants. Diameter of pits for trees shall be at least two feet (2') greater than the diameter of the ball. The depth of pits for trees shall be enough to accommodate the ball when the plant is set to finish grade allowing for six inches (6") compacted planting soil in the bottom of the pit.
 - Planting Operations:
 - Setting Plants: All plants shall be planted in pits, centered and set on six inches (6") of compacted topsoil to such a depth that the finish grade level of the plant after settlement will be the same as that at which the plant was grown. All planting areas shall receive adequate fertilization with agrifilm tablets as per schedule in plans. Watering shall commence with backfilling to eliminate air pockets. No burlap shall be pulled out from under balls. Roots shall be spread in their normal position. If broken or frayed roots shall be cut off cleanly. Planting shall be set so that the final grade of ground around the plants must conform to the grading plan.
 - Coordination: The contractor shall be responsible for complete coordination of planting operations with the building contractor and any other contractor on the job. Repair of damage to plants, grades, lawns, etc., during installation shall not be considered as an extra and not chargeable to the Owner. Damage caused by other contractors will be the responsibility of said contractor.
 - Pruning:
 - The amount of pruning, unless otherwise directed, shall be limited to the minimum necessary to remove dead or injured twigs and branches and to compensate for the loss of roots as a result of transplanting operations. Pruning shall be done in such a manner as to not change the natural habit or shape of the plant. All cuts on one-half inch (1/2") in diameter shall be treated with an approved tree paint.
 - Watering:
 - All plant material shall be watered in at the time of planting, and not left to dry out until the end of the day. The automatic irrigation system, if specified, does not replace the need for handwatering. The Contractor shall be responsible for all watering to avoid transplant shock.
 - Contractors Responsibility for conditions of plantings:
 - The Contractor shall assure that the plants are kept adequately watered, that the guy wires are kept tight and the braces adjusted as necessary, that all planting areas and beds are kept free of weeds and undesirable plant growth and that the plants are fertilized as necessary so that they are healthy, vigorous and undamaged at the time of acceptance. His responsibility for protection against mechanical damage shall include the providing of protection from vehicles, including the posting of approved warning signs and barricades, as may be necessary. He shall repair, restore or replace any plants or planting areas which might become damaged as a result of any negligence with him in compliance with these requirements. As a specific requirement of these conditions, the Contractor shall be responsible for assuring that all plants at the time of final inspection, exhibit the characteristics and qualifications required for the Grade of plant as originally specified.

END SECTION 2-0283

DIVISION 2 - SITE WORK
SECTION 0286
MISCELLANEOUS

- I. MULCH
- General:
 - All planting beds for ground covers, vines and shrubs shall be mulched.
 - Individual tree plantings shall not be mulched unless specified on plans.
 - Products & Materials:
 - Unless otherwise specified on the plans, all mulch shall be Cypress bark mulch, Grade B, as manufactured by American Wood Products or equal.
 - Installation:
 - Mulch shall be spread around all planting beds to a uniform depth.
 - Quantities specified shall be spread to cover.
- II. BOULDERS
- General: Boulders shall be located as shown on plans.
 - Products & Materials: Boulders shall be water washed sharp chert hard rock.
 - Installation:
 - The Contractor shall be responsible for scaling the boulder size as shown on the plans and providing boulders that meet the size drawn.
 - Boulders shall be set in place in a manner that allows them to appear as a natural element in the landscape. In some cases portions of a boulder may need to be buried to achieve this appearance.

END OF SECTION 0286

Phillip L. Smith 3/22/99
PHILLIP L. SMITH, RLA #1096

REVISED 3/22/99 PER L.B.K.
LANDSCAPE SPECIFICATIONS

dwja LANDSCAPE ARCHITECTS
DAVID W. JOHNSTON ASSOCIATES
1491 SECOND STREET SUITE B • SARASOTA, FL 34236 • (941) 366-3159

PROJECT NO.	99-10
SCALE	1"=20'-0"
DATE	3/15/99
DRAWN BY	MES
ISSUED	3/22/99

CENTER FOR THE ARTS
LONGBOAT KEY, FLORIDA
THOMPSON AND ROSE ARCHITECTS, INC.

SHEET NO.	
-----------	--