DRC
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LANDSCAPE NOTES

PART I. GENERAL

I. DESCRIPTION OF WORK
A. PROVIDE ALL EXTERIOR PLANTING AS SHOWN ON THE DRAWINGS OR INFERABLE THEREFROM AND/OR AS SPECIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. LANDSCAPE PLANS PROVIDED INDICATE THE PROPOSED LOCATION OF LIVING PLANT MATERIAL ONLY. STRUCTURAL ELEMENTS AND HARDSCAPE FEATURES INDICATED ON THE LANDSCAPE PLANS ARE FOR INFORMATION PURPOSES ONLY. LANDSCAPE PLANS ARE NOT TO BE UTILIZED FOR STAKING AND LAYOUT OR LOCATION OF ANY STRUCTURAL SITE FEATURES INCLUDING BUT NOT LIMITED TO, BUILDINGS, SIGNAGE, PATHWAYS, EASEMENTS, UTILITIES OR ROADWAYS.
B. THESE SPECIFICATIONS INCLUDE STANDARDS NECESSARY FOR AND INCIDENTAL TO THE EXECUTION AND COMPLETION OF PLANTING AS INDICATED ON THE PREPARED DRAWINGS AND SPECIFIED HEREIN.
C. ALL APPLICABLE FEDERAL, STATE AND LOCAL PERMITS SHALL BE ATTAINED PRIOR TO THE REMOVAL, RELOCATION, OR INSTALLATION OF PLANT MATERIALS INDICATED WITHIN THE PLAN DOCUMENTS.
D. PROTECTION OF EXISTING FEATURES. DURING CONSTRUCTION, PROTECT ALL EXISTING TREES, SHRUBS, AND OTHER SPECIFIED VEGETATION, SITE FEATURES AND IMPROVEMENTS, STRUCTURES, AND UTILITIES SPECIFIED HEREIN AND/OR ON SUBMITTED DRAWINGS. REMOVAL OR DESTRUCTION OF EXISTING PLANTINGS IS PROHIBITED UNLESS SPECIFICALLY AUTHORIZED BY THE OWNER, AND WITH PERMIT AS REQUIRED BY ASSOCIATED FEDERAL, STATE AND LOCAL GOVERNMENT AGENCIES.

II. APPLICABLE STANDARDS
A. AMERICAN NATIONAL STANDARDS FOR TREE CARE OPERATIONS, ANSI A300, AMERICAN NATIONAL STANDARDS INSTITUTE, 11 WEST 42ND STREET, NEW YORK, N.Y. 10036.
B. AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1. AMERICAN NURSERY AND LANDSCAPE ASSOCIATION, 1250 EYE STREET, NW, SUITE 500, WASHINGTON, D.C. 20005.
C. HORTUS THIRD. THE STAFF OF THE L.H. BAILEY HORTORIUM. 1976. MACMILLAN PUBLISHING CO., NEW YORK.
D. FLORIDA DEPARTMENT OF AGRICULTURE "GRADES AND STANDARDS FOR NURSERY PLANTS", MOST RECENT ADDITION.
E. NATIONAL ARBORIST ASSOCIATION- PRUNING STANDARDS FOR SHADE TREES
F. ALL STANDARDS SHALL INCLUDE THE LATEST ADDITIONS AND AMENDMENTS AS OF THE DATE OF ADVERTISEMENT FOR BIDS

III. QUALIFICATIONS
A. LANDSCAPE PLANTING AND RELATED WORK SHALL BE PERFORMED BY A FIRM WITH A MINIMUM OF FIVE YEARS EXPERIENCE SPECIALIZING IN THIS TYPE OF WORK, ALL CONTRACTORS AND THEIR SUB-CONTRACTORS WHO WILL BE PERFORMING ANY LANDSCAPE WORK INCLUDED IN THIS SECTION OF THE SPECIFICATION SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.
B. LANDSCAPE CONTRACTOR SHALL BE LICENSED AND SHALL CARRY ANY NECESSARY INSURANCE AND SHALL PROTECT THE LANDSCAPE ARCHITECT AND OWNER AGAINST ALL LIABILITIES, CLAIMS OR DEMANDS FOR INJURIES OR DAMAGE TO ANY PERSON OR PROPERTY GROWING OUT OF THE PERFORMANCE OF THE WORK UNDER THIS CONTRACT. ALL WORKERS SHALL BE COVERED BY WORKMAN'S COMPENSATION INSURANCE.

IV. REQUIREMENTS OF REGULATORY AGENCIES
A. CERTIFICATES OF INSPECTION SHALL ACCOMPANY THE INVOICE FOR EACH SHIPMENT OF PLANTS AS MAY BE REQUIRED BY LAW FOR TRANSPORTATION. FILE CERTIFICATES WITH THE LANDSCAPE ARCHITECT PRIOR TO ACCEPTANCE OF THE MATERIAL. INSPECTION BY FEDERAL OR STATE AUTHORITIES AT PLACE OF GROWTH DOES NOT PRECLUDE REJECTION OF THE PLANTS AT THE SITE.

V. SUBMITTALS
A. MANUFACTURER'S DATA: SUBMIT COPIES OF THE MANUFACTURER'S AND/OR SOURCE DATA FOR ALL MATERIALS SPECIFIED, INCLUDING SOILS, SOIL AMENDMENTS AND FERTILIZER MATERIALS. COMPLY WITH REGULATIONS APPLICABLE TO LANDSCAPE MATERIALS.
B. SAMPLES: SUBMIT SAMPLES OF ALL TOPSOIL, SOIL MIXES, MULCHES, AND ORGANIC MATERIALS. SAMPLES SHALL WEIGH 1 KG (2 LB) AND BE PACKAGED IN PLASTIC BAGS. SAMPLES SHALL BE TYPICAL OF THE LOT OF MATERIAL TO BE DELIVERED TO THE SITE AND PROVIDE AN ACCURATE INDICATION OF COLOR, TEXTURE, AND ORGANIC MAKEUP OF THE MATERIAL.
C. NURSERY SOURCES: SUBMIT A LIST OF ALL NURSERIES THAT WILL SUPPLY PLANTS, ALONG WITH A LIST OF THE PLANTS THEY WILL PROVIDE AND THE LOCATION OF THE NURSERY.
D. SOIL TEST: SUBMIT SOIL TEST ANALYSIS REPORT FOR EACH SAMPLE OF TOPSOIL AND PLANTING MIX FROM A SOIL TESTING LABORATORY APPROVED BY THE LANDSCAPE ARCHITECT.
1. PROVIDE A PARTICLE SIZE ANALYSIS, INCLUDING THE FOLLOWING GRADIENT OF MINERAL CONTENT:

USDA DESIGNATION	SIZE IN MM
GRAVEL	+2 MM
VERY COURSE SAND	1-2 MM
COARSE SAND	0.5-1 MM
MEDIUM SAND	0.25-0.5 MM
FINE SAND	0.1-0.25 MM
VERY FINE SAND	0.05-0.1 MM
SILT	0.002-0.05 MM
CLAY	SMALLER THAN 0.002

2. PROVIDE A CHEMICAL ANALYSIS, INCLUDING THE FOLLOWING:
a. PH AND BUFFER PH
b. PERCENTAGE OF ORGANIC CONTENT BY OVEN-DRIED WEIGHT.
c. NUTRIENT LEVELS BY PARTS PER MILLION, INCLUDING PHOSPHORUS, POTASSIUM MAGNESIUM, MANGANESE, IRON, ZINC, AND CALCIUM. NUTRIENT TEST SHALL INCLUDE THE TESTING LABORATORY RECOMMENDATIONS FOR SUPPLEMENTAL ADDITIONS TO THE SOIL BASED ON THE REQUIREMENTS OF HORTICULTURAL PLANTS.
d. SOLUBLE SALT BY ELECTRICAL CONDUCTIVITY OF A 1:2, SOIL: WATER, SAMPLE MEASURED IN MILLIMHO PER CM.
e. CATION EXCHANGE CAPACITY (CEC).
E. MATERIAL TESTING: SUBMIT THE MANUFACTURERS PARTICLE SIZE ANALYSIS, AND THE PH ANALYSIS AND PROVIDE A DESCRIPTION AND SOURCE LOCATION FOR THE CONTENT MATERIAL OF ALL ORGANIC MATERIALS.
F. MAINTENANCE INSTRUCTIONS: PRIOR TO THE END OF MAINTENANCE PERIOD, LANDSCAPE CONTRACTOR SHALL FURNISH THREE COPIES OF WRITTEN MAINTENANCE INSTRUCTIONS TO THE LANDSCAPE ARCHITECT FOR TRANSMITTAL TO THE OWNER FOR MAINTENANCE AND CARE OF INSTALLED PLANTS THROUGH THEIR FULL GROWING SEASON.

VI. UTILITY VERIFICATION
A. THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITY COMPANIES FOR VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITY LINES IN THE AREA OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM NEGLECT OR FAILURE TO COMPLY WITH THIS REQUIREMENT.

PART 2. MATERIALS

I. PLANTS
A. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY SPECIFIED AND NURSERY-GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST TWO YEARS. THEY SHALL HAVE BEEN FRESHLY DUG.
1. ALL PLANT NAMES AND DESCRIPTIONS SHALL BE AS DEFINED IN HORTUS THIRD.
2. ALL PLANTS SHALL BE GROWN AND HARVESTED IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK AND FLORIDA DEPARTMENT OF AGRICULTURE GRADES AND STANDARDS FOR NURSERY PLANTS.
3. UNLESS APPROVED BY THE LANDSCAPE ARCHITECT, PLANTS SHALL HAVE BEEN GROWN AT A LATITUDE NOT MORE THAN 325 KM (200 MILES) NORTH OR SOUTH OF THE LATITUDE OF THE PROJECT UNLESS THE PROVENANCE OF THE PLANT CAN BE DOCUMENTED TO BE COMPATIBLE WITH THE LATITUDE AND COLD HARDINESS ZONE OF THE PLANTING LOCATION.
B. UNLESS SPECIFICALLY NOTED, ALL PLANTS SHALL BE EXCEPTIONALLY HEAVY, SYMMETRICAL, AND SO TRAINED OR FAVORED IN DEVELOPMENT AND APPEARANCE AS TO BE UNQUESTIONABLY AND OUTSTANDINGLY SUPERIOR IN FORM, COMPACTNESS, AND SYMMETRY. THEY SHALL BE SOUND, HEALTHY, VIGOROUS, WELL BRANCHED, AND DENSELY FOLIATED WHEN IN LEAF; FREE OF DISEASE AND INSECTS, EGGS, OR LARVAE; AND SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS. THEY SHALL BE FREE FROM PHYSICAL DAMAGE OR OTHER CONDITIONS THAT WOULD PREVENT VIGOROUS GROWTH.
1. TREES WITH MULTIPLE LEADERS, UNLESS SPECIFIED, WILL BE REJECTED. TREES WITH A DAMAGED OR CROOKED LEADER, BARK ABRASIONS, SUNSCALD, DISFIGURING KNOTS, INSECT DAMAGE, OR CUTS OF LIMBS OVER 20 MM (3/4 IN.) IN DIAMETER THAT ARE NOT COMPLETELY CLOSED WILL BE REJECTED.
C. PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED, EXCEPT THAT PLANTS LARGER THAN THOSE SPECIFIED MAY BE USED IF APPROVED BY THE LANDSCAPE ARCHITECT. USE OF LARGER PLANTS SHALL NOT INCREASE THE CONTRACT PRICE, IF LARGER PLANTS ARE APPROVED, THE ROOT BALL SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.
1. CALIPER MEASUREMENTS SHALL BE TAKEN ON THE TRUNK 150 MM (6 IN.) ABOVE THE NATURAL GROUND LINE FOR TREES UP TO AND INCLUDING 100 MM (4 IN.) IN CALIPER, AND 300 MM (12 IN.) ABOVE THE NATURAL GROUND LINE FOR TREES OVER 100 MM (4 IN.) IN CALIPER. HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO THE MAIN BODY OF THE PLANT AND NOT FROM BRANCH TIP TO BRANCH TIP. PLANTS SHALL BE MEASURED WHEN BRANCHES ARE IN THEIR NORMAL POSITION. IF A RANGE OF SIZES IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE, AND NO LESS THAN 50 PERCENT OF THE PLANTS SHALL BE AS LARGE AS THE MAXIMUM SIZE SPECIFIED. MEASUREMENTS SPECIFIED ARE MINIMUM SIZES ACCEPTABLE AFTER PRUNING. WHERE PRUNING IS REQUIRED, PLANTS THAT MEET MEASUREMENTS BUT DO NOT POSSESS A STANDARD RELATIONSHIP BETWEEN HEIGHT AND SPREAD, ACCORDING TO THE FLORIDA DEPARTMENT OF AGRICULTURE GRADES AND STANDARDS FOR NURSERY PLANTS, SHALL BE REJECTED.
D. SUBSTITUTIONS OF PLANT MATERIALS WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE LANDSCAPE ARCHITECT. IF PROOF IS SUBMITTED IN WRITING THAT A PLANT SPECIFIED IS NOT OBTAINABLE, CONSIDERATION WILL BE GIVEN TO THE NEAREST AVAILABLE SIZE OR SIMILAR VARIETY, WITH A CORRESPONDING ADJUSTMENT OF THE CONTRACT PRICE.
E. THE PLANT SCHEDULE PROVIDED AT THE END OF THIS SECTION, OR ON THE DRAWING, IS FOR THE CONTRACTOR'S INFORMATION ONLY, AND NO GUARANTEE IS EXPRESSED OR IMPLIED THAT QUANTITIES THEREIN ARE CORRECT OR THAT THE LIST IS COMPLETE. THE CONTRACTOR SHALL ENSURE THAT ALL PLANT MATERIALS SHOWN ON THE DRAWINGS ARE INCLUDED IN HIS OR HER BID.
F. ALL PLANTS SHALL BE LABELED BY PLANT NAME. LABELS SHALL BE ATTACHED SECURELY TO ALL PLANTS, BUNDLES, AND CONTAINERS OF PLANT MATERIALS WHEN DELIVERED. PLANT LABELS SHALL BE DURABLE AND LEGIBLE, WITH INFORMATION GIVEN IN WEATHER-RESISTANT INK OR EMBOSSED PROCESS LETTERING.
G. SELECTION AND TAGGING
1. PLANTS SHALL BE SUBJECT TO INSPECTION FOR CONFORMITY TO SPECIFICATION REQUIREMENTS AND APPROVAL BY THE LANDSCAPE ARCHITECT AT THEIR PLACE OF GROWTH AND UPON DELIVERY. SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION DURING PROGRESS OF THE WORK.
2. A WRITTEN REQUEST FOR THE INSPECTION OF PLANT MATERIAL AT THEIR PLACE OF GROWTH SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT AT LEAST TEN CALENDAR DAYS PRIOR TO DIGGING. THIS REQUEST SHALL STATE THE PLACE OF GROWTH AND THE QUANTITY OF PLANTS TO BE INSPECTED. THE LANDSCAPE ARCHITECT MAY REFUSE INSPECTION AT THIS TIME IF, IN HIS OR HER JUDGMENT, SUFFICIENT QUANTITIES OF PLANTS ARE NOT AVAILABLE FOR INSPECTION OR LANDSCAPE ARCHITECT DEEMS INSPECTION IS NOT REQUIRED.
3. ALL FIELD GROWN DECIDUOUS TREES SHALL BE MARKED TO INDICATE THE TREES NORTH ORIENTATION IN THE NURSERY. PLACE A 1-IN. DIAMETER SPOT OF WHITE PAINT ONTO THE NORTH SIDE OF THE TREE TRUNK WITHIN THE BOTTOM 12 INCHES OF THE TRUNK.
H. ANTI-DESICCANTS
1. ANTI-DESICCANTS, IF SPECIFIED, ARE TO BE APPLIED TO PLANTS IN FULL LEAF IMMEDIATELY BEFORE DIGGING OR AS REQUIRED BY THE LANDSCAPE ARCHITECT. ANTI-DESICCANTS ARE TO BE SPRAYED SO THAT ALL LEAVES AND BRANCHES ARE COVERED WITH A CONTINUOUS PROTECTIVE FILM.
I. BALLED AND BURLAPPED (B&B) PLANT MATERIALS
1. TREES DESIGNATED B&B SHALL BE PROPERLY DUG WITH FIRM, NATURAL BALLS OF SOIL RETAINING AS MANY FIBROUS ROOTS AS POSSIBLE, IN SIZES AND SHAPES AS SPECIFIED IN THE FLORIDA DEPARTMENT OF AGRICULTURE GRADES AND STANDARDS FOR NURSERY PLANTS. BALLS SHALL BE FIRMLY WRAPPED WITH SYNTHETIC, NATURAL, OR TREATED BURLAP, AND/OR WIRE. ALL SYNTHETIC FABRIC SHOULD BE REMOVED FROM THE ROOTBALL PRIOR TO PLANTING. TRUE BIODEGRADABLE BURLAP CAN BE LEFT AROUND THE ROOT BALL. THE ROOT COLLAR SHALL BE APPARENT AT SURFACE OF BALL. TREES WITH LOOSE, BROKEN, PROCESSED, OR MANUFACTURED ROOT BALLS WILL NOT BE ACCEPTED, EXCEPT WITH SPECIAL WRITTEN APPROVAL BEFORE PLANTING.
J. CONTAINER PLANTS
1. PLANTS GROWN IN CONTAINERS SHALL BE OF APPROPRIATE SIZE FOR THE CONTAINER AS SPECIFIED IN THE MOST RECENT EDITION OF THE FLORIDA DEPARTMENT OF AGRICULTURE GRADES AND STANDARDS FOR NURSERY PLANTS AND BE FREE OF CIRCLING ROOTS ON THE EXTERIOR AND INTERIOR OF THE ROOT BALL.
2. CONTAINER PLANTS SHALL HAVE BEEN GROWN IN THE CONTAINER LONG ENOUGH TO HAVE ESTABLISHED ROOTS THROUGHOUT THE GROWING MEDIUM.
K. BAREROOT AND COLLECTED PLANTS
1. PLANTS DESIGNATED AS BAREROOT OR COLLECTED PLANTS SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK.
2. BAREROOT MATERIAL SHALL NOT BE DUG OR INSTALLED AFTER BUD BREAK OR BEFORE DORMANCY.
3. COLLECTED PLANT MATERIAL THAT HAS NOT BEEN TAKEN FROM ACTIVE NURSERY OPERATIONS SHALL BE DUG WITH A ROOT BALL SPREAD AT LEAST 1/3 GREATER THAN NURSERY GROWN PLANTS. WHEN SPECIFIED OR APPROVED, SHALL BE IN GOOD HEALTH, FREE FROM DISEASE, INSECT OR WEED INFESTATION AND SHALL NOT BE PLANTED BEFORE INSPECTION AND ACCEPTANCE AT THE SITE. TESTING MAY BE REQUIRED AT THE DISCRETION OF THE LANDSCAPE ARCHITECT AND/OR THE OWNER AND SHALL BE PROVIDED AT NO ADDITIONAL COST.
L. SPECIMEN MATERIAL: PLANT MATERIAL SPECIFIED AS SPECIMENS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT BEFORE BEING BROUGHT TO THE SITE. UNLESS OTHERWISE NOTED ON THE DRAWINGS, THESE PLANTS SHALL BE FLORIDA FANCY.
M. PALMS
1. COCONUT PALMS SHALL BE GROWN FROM A CERTIFIED SEED.
2. ALL PALM SPECIES EXCEPT SABAL PALMETTO SHALL HAVE ROOTS ADEQUATELY WRAPPED BEFORE TRANSPORTING.
3. SABAL PALMS SHALL HAVE A HURRICANE CUT. SABAL PALMS SHALL BE INSTALLED ON SITE AT THE EARLIEST OPPORTUNITY IN THE CONSTRUCTION PROCESS. ALL SABAL PALMS SHALL BE FROM BROWARD COUNTY OR OTHER SANDY SOILS. ALL SABAL PALMS SHALL BE FLORIDA FANCY.
4. FOR BOOTED TRUNK PALMS, TRUNKS SHALL HAVE CLEAN INTACT BOOTS FIRMLY ATTACHED TO THE PALM TRUNK. FOR SLICK TRUNK PALMS, TRUNK SHALL BE CLEAR AND FREE FROM DEFECT AND SCARS.
5. THE CONTRACTOR SHALL TREAT ALL PALMS AS REQUIRED TO PREVENT INFESTATION BY THE PALMETTO WEEVIL.
N. SOD
1. SOD SHALL BE GRADED #1 OR BETTER. SOD SHALL BE LOAM OR MUCK GROWN WITH A FIRM, FULL TEXTURE AND GOOD ROOT DEVELOPMENT. SOD SHALL BE THICK, HEALTHY AND FREE FROM DEFECTS AND DEBRIS INCLUDING BUT NOT LIMITED TO DEAD THATCH, INSECTS, FUNGUS, DISEASES AND CONTAMINATION BY WEEDS, OTHER GRASS VARIETIES OR OBJECTIONABLE PLANT MATERIAL.
2. SOD SHALL BE SUFFICIENTLY THICK TO INSURE A DENSE STAND OF LIVE GRASS. SOD SHALL BE LIVE, FRESH, AND UNINJURED AT THE TIME OF PLANTING. PLANT SOD WITHIN 48 HOURS AFTER HARVESTING.
3. SOD AREA SHALL BE ALL AREAS NOT OTHERWISE IDENTIFIED AND SHALL INCLUDE THE AREA BEYOND THE PROPERTY LINE TO THE EDGE OF PAVEMENT AND/OR EDGE OF WATER.
O. IMMEDIATELY AFTER HARVESTING PLANTS, PROTECT FROM DRYING AND DAMAGE UNTIL SHIPPED AND DELIVERED TO THE PLANTING SITE. ROOTBALLS SHALL BE CHECKED REGULARLY AND WATERED SUFFICIENTLY TO MAINTAIN ROOT VIABILITY.
P. TRANSPORTATION AND STORAGE OF PLANT MATERIAL
1. BRANCHES SHALL BE TIED WITH ROPE OR TWINE ONLY, AND IN SUCH A MANNER THAT NO DAMAGE WILL OCCUR TO THE BARK OR BRANCHES.
2. DURING TRANSPORTATION OF PLANT MATERIAL, THE CONTRACTOR SHALL EXERCISE CARE TO PREVENT INJURY AND DRYING OUT OF THE TREES. SHOULD THE ROOTS BE DRIED OUT, LARGE BRANCHES BROKEN, BALLS OF EARTH BROKEN OR LOOSENED, OR AREAS OF BARK TORN, THE LANDSCAPE ARCHITECT MAY REJECT THE INJURED TREE(S) AND ORDER THEM REPLACED AT NO ADDITIONAL COST TO THE OWNER. ALL LOADS OF PLANTS SHALL BE COVERED AT ALL TIMES WITH TARPAULIN OR CANVAS. LOADS THAT ARE NOT PROTECTED WILL BE REJECTED.
3. ALL BAREROOT STOCK SENT FROM THE STORAGE FACILITY SHALL BE ADEQUATELY COVERED WITH WET SOIL, SAWDUST, WOODCHIPS, MOSS, PEAT, STRAW, HAY, OR OTHER ACCEPTABLE MOISTURE-HOLDING MEDIUM, AND SHALL BE COVERED WITH A TARPAULIN OR CANVAS, LOADS THAT ARE NOT PROTECTED IN THE ABOVE MANNER MAY BE REJECTED.
4. PLANTS MUST BE PROTECTED AT ALL TIMES FROM SUN OR DRYING WINDS. THOSE THAT CANNOT BE PLANTED IMMEDIATELY ON DELIVERY SHALL BE KEPT IN THE SHADE, WELL PROTECTED WITH SOIL, WET MULCH, OR OTHER ACCEPTABLE MATERIAL, AND KEPT WELL WATERED. PLANTS SHALL NOT REMAIN UNPLANTED ANY LONGER THAN THREE DAYS AFTER DELIVERY. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE LIFTED AND HANDLED WITH SUITABLE SUPPORT OF THE SOIL BALL TO AVOID DAMAGING IT.
Q. MECHANIZED TREE SPADE REQUIREMENTS
TREES MAY BE MOVED AND PLANTED WITH AN APPROVED MECHANICAL TREE SPADE. THE TREE SPADE SHALL MOVE TREES LIMITED TO THE MAXIMUM SIZE ALLOWED FOR A SIMILAR B&B ROOT-BALL DIAMETER ACCORDING TO THE AMERICAN STANDARD FOR NURSERY STOCK OR THE MANUFACTURER'S MAXIMUM SIZE RECOMMENDATION FOR THE TREE SPADE BEING USED, WHICHEVER IS SMALLER. THE MACHINE SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO USE, TREES SHALL BE PLANTED AT THE DESIGNATED LOCATIONS IN THE MANNER SHOWN IN THE PLANS AND IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE SPECIFICATIONS.

II MATERIALS FOR PLANTING
A. MULCH: EXCEPT AS OTHERWISE SPECIFIED, MULCH SHALL BE SHREDDED MELALEUCA MULCH - GRADE "A". ALL MELALEUCA MULCH SHALL BE MADE ENTIRELY FROM THE WOOD AND BARK OF THE MELALEUCA QUINQUINERVA TREE. IT SHALL NOT CONTAIN MORE THAN 10% BARK (BY VOLUME). SHREDS AND CHIPS SHALL NOT BE LARGER THE ¾" DIAMETER AND 1½" IN LENGTH. MULCH SHALL BE FREE OF WEEDS, SEEDS, AND ANY OTHER ORGANIC OR INORGANIC MATERIAL OTHER THAN MELALEUCA WOOD AND BARK. IT SHALL NOT CONTAIN STONES OR OTHER FOREIGN MATERIAL THAT WILL PREVENT ITS EVENTUAL DECAY. THIS SHALL BE APPLIED TO ALL PLANTED AREAS WHERE INDICATED SO THAT, AFTER INSTALLATION, THE MULCH THICKNESS WILL NOT BE LESS THAN 3". SUBMIT SAMPLE FOR APPROVAL.
B. PEAT: SHALL BE HORTICULTURAL PEAT COMPOSED OF NOT LESS THAN 60% DECOMPOSED ORGANIC MATTER BY WEIGHT, ON AN OVEN DRIED BASIS, PEAT SHALL BE DELIVERED TO THE SITE IN A WORKABLE CONDITION FREE FROM LUMPS.
C. GRAVEL MULCH: USE ONLY WHERE SPECIFICALLY INDICATED ON THE PLANS OF THE SIZE AND TYPE SHOWN. UNLESS OTHERWISE SPECIFIED IT SHALL BE WATER-WORN, HARD DURABLE GRAVEL, WASHED FREE OF LOAM, SAND, CLAY AND OTHER FOREIGN SUBSTANCES. IT SHALL BE A MINIMUM OF 3" DEEP AND SHALL BE CONTAINED WITH EDGING OR OTHER APPROVED GRAVEL STOP AS INDICATED ON THE PLANS. IT SHALL BE A MAXIMUM OF 1 1/2", A MINIMUM OF 3/4" AND OF A READILY-AVAILABLE NATURAL GRAVEL COLOR RANGE. PROVIDE GEOTEXTILE FILTER FABRIC BELOW AGGREGATE ROCK. SUBMIT SAMPLE FOR APPROVAL.
D. ROOT BARRIER: WHERE SPECIFIED, ROOT BARRIERS SHALL BE INSTALLED ON ALL TREE AND PALM MATERIAL IN ACCORDANCE WITH THE ROOT BARRIER DETAIL PROVIDED WITHIN THE PLAN DRAWINGS. ROOT BARRIERS SHALL COMPLY WITH ALL REQUIREMENTS OF THE MUNICIPALITY WITHIN WHICH THEY ARE LOCATED AS WELL AS WITH ANY UTILITY HOLDER REQUIREMENTS OF ANY AFFECTED UTILITIES. IN THE EVENT THAT CONFLICTING REQUIREMENTS EXIST BETWEEN THE ROOT BARRIER DETAIL PROVIDED WITHIN THE PLAN DOCUMENTS AND THE MUNICIPALITY/UTILITY HOLDER REQUIREMENTS, THE MORE STRINGENT OF THE REQUIREMENTS SHALL BE APPLICABLE.
E. PLANTER EDGING: USE ONLY WHERE SPECIFICALLY INDICATED ON PLANS. EDGING SHALL BE THE COLOR BLACK.
F. ANTI-DESICCANT: SHALL BE AN EMULSION SPECIFICALLY MANUFACTURED FOR AGRICULTURAL USE, WHICH PROVIDES A PROTECTIVE FILM OVER PLANT SURFACES. ANTI-DESICCANTS SHALL BE DELIVERED IN CONTAINERS OF THE MANUFACTURER AND SHALL BE MIXED ACCORDING TO THE MANUFACTURER'S DIRECTIONS. SUBMIT MANUFACTURER LITERATURE FOR APPROVAL.

III. MATERIALS FOR SOIL AMENDMENT
A. PINE BARK: HORTICULTURAL-GRADE MILLED PINE BARK, WITH 80 PERCENT OF THE MATERIAL BY VOLUME SIZED BETWEEN 0.1 AND 15.0 MM.
1. PINE BARK SHALL BE AGED SUFFICIENTLY TO BREAK DOWN ALL WOODY MATERIAL. PINE BARK SHALL BE SCREENED.
2. PH SHALL RANGE BETWEEN 4 AND 7.0.
3. SUBMIT MANUFACTURER LITERATURE FOR APPROVAL.
B. ORGANIC MATTER: LEAF MATTER AND YARD WASTE COMPOSTED SUFFICIENTLY TO BREAK DOWN ALL WOODY FIBERS, SEEDS, AND LEAF STRUCTURES, AND FREE OF TOXIC AND NON-ORGANIC MATTER. ORGANIC MATTER SHALL BE COMMERCIALLY PREPARED COMPOST. SUBMIT 0.5 KG (1 LB) SAMPLE AND SUPPLIERS LITERATURE FOR APPROVAL.
C. COURSE SAND: COURSE CONCRETE SAND, ASTM C-33 FINE AGGREGATE, WITH A FINES MODULUS INDEX OF 2.75 OR GREATER.
1. SANDS SHALL BE CLEAN, SHARP, NATURAL SANDS FREE OF LIMESTONE, SHALE AND SLATE PARTICLES.
2. PROVIDE THE FOLLOWING PARTICLE SIZE DISTRIBUTION:

SIEVE	PERCENTAGE PASSING
3/8 IN (9,5 MM)	100
NO. 4 (4,75 MM)	95-100
NO. 8 (2.36 MM)	80-100
NO. 16 (1.18 MM)	50-85
NO. 30 (0.600 MM)	25-60
NO. 50 (0.30 MM)	10-30
NO. 100 (0.15 MM)	2-10

D. LIME: SHALL BE GROUND, PALLETIZED, OR PULVERIZED LIME MANUFACTURED TO MEET AGRICULTURAL STANDARDS AND CONTAIN A MAXIMUM OF 60 PERCENT OXIDE (I.E. CALCIUM OXIDE PLUS MAGNESIUM OXIDE). SUBMIT MANUFACTURER LITERATURE FOR APPROVAL.
E. SULFUR: SHALL BE FLOWERS OF SULFUR, PELLETIZED OR GRANULAR SULFUR, OR IRON SULFATE. SUBMIT MANUFACTURER LITERATURE FOR APPROVAL.
F. FERTILIZER: AGRICULTURAL FERTILIZER OF A FORMULA INDICATED BY THE SOIL TEST. FERTILIZERS SHALL BE ORGANIC, SLOW-RELEASE COMPOSITIONS WHENEVER APPLICABLE. SUBMIT MANUFACTURER LITERATURE FOR APPROVAL.

IV. PLANTING MIX
A. PLANTING MIX
1. PLANTING MIX FOR TREES, SHRUBS, GROUNDCOVERS AND VINES: CHECK WITH LANDSCAPE ARCHITECT FOR APPROPRIATE MIXTURE.
2. PLANTING MIX FOR PALMS: MIXTURE OF COURSE SAND AND PEAT MIXED TO THE FOLLOWING PROPORTION:

COMPONENT	PERCENT BY VOLUME
COARSE SAND	75%
PEAT	25%

B. PLANTING MIX SHALL BE THOROUGHLY MIXED, SCREENED, AND SHREDDED.
C. PRIOR TO BEGINNING THE MIXING PROCESS, SUBMIT A 1-KG (2-LB) SAMPLE OF THE PROPOSED MIX WITH SOIL TEST RESULTS THAT INDICATE THE MIX RATIO AND THE RESULTS ACHIEVED.
D. DURING THE MIXING PROCESS BUT PRIOR TO INSTALLING THE MIX, SUBMIT A 1-KG (2-LB) SAMPLE FOR EACH 200 CUBIC METERS (250 CUBIC YARDS) OF PLANTING MIX, TAKEN RANDOMLY FROM THE FINISHED SOIL MIX, WITH SOIL TEST RESULTS FOR APPROVAL. IN THE EVENT THAT THE TEST RESULTS DO NOT MEET THE REQUIRED PARTICLE SIZE DISTRIBUTION, REMIX AND RESUBMIT A REVISED PLANTING MIX.
E. MAKE ALL AMENDMENTS OF LIME/SULFUR AND FERTILIZER INDICATED BY THE SOIL TEST RESULTS AT THE TIME OF MIXING.
F. ALL MIXING SHALL TAKE PLACE IN THE CONTRACTORS YARD, USING COMMERCIAL MIXING EQUIPMENT SUFFICIENT TO THOROUGHLY MIX ALL COMPONENTS UNIFORMLY
G. PROTECT THE PLANTING MIX FROM EROSION PRIOR TO INSTALLATION.

PART 3. EXECUTION

I. EXCAVATION OF PLANTED AREAS
A. LOCATIONS FOR PLANTS AND/OR OUTLINES OF AREAS TO BE PLANTED ARE TO BE STAKED OUT AT THE SITE. LOCATE AND MARK ALL SUBSURFACE UTILITY LINES. APPROVAL OF THE STAKEOUT BY THE LANDSCAPE ARCHITECT IS REQUIRED BEFORE EXCAVATION BEGINS.
B. TREE, SHRUB, AND GROUNDCOVER BEDS ARE TO BE EXCAVATED TO THE DEPTH AND WIDTHS INDICATED ON THE LANDSCAPE PLAN DETAIL DRAWINGS. IF THE PLANTING AREA UNDER ANY TREE IS INITIALLY DUG TOO DEEP, THE SOIL ADDED TO BRING IT UP TO THE CORRECT LEVEL SHOULD BE THOROUGHLY TAMPED.
1. THE SIDES OF THE EXCAVATION OF ALL PLANTING AREAS SHALL BE SLOPED AT A 45 DEGREES. THE BOTTOM OF ALL BEDS SHALL SLOPE PARALLEL TO THE PROPOSED GRADES OR TOWARD ANY SUBSURFACE DRAIN LINES WITHIN THE PLANTING BED. THE BOTTOM OF THE PLANTING BED DIRECTLY UNDER ANY TREE SHALL BE HORIZONTAL SUCH THAT THE TREE SITS PLUMB.
2. MAINTAIN ALL REQUIRED ANGLES OF REPOSE OF THE ADJACENT MATERIALS AS SHOWN ON THE DRAWINGS. DO NOT EXCAVATE COMPACTED SUBGRADES OF ADJACENT PAVEMENT OR STRUCTURES.
3. SUBGRADE SOILS SHALL BE SEPARATED FROM THE TOPSOIL, REMOVED FROM THE AREA, AND NOT USED AS BACKFILL IN ANY PLANTED OR LAWN AREA. EXCAVATIONS SHALL NOT BE LEFT UNCOVERED OR UNPROTECTED OVERNIGHT.
C. FOR TREES AND SHRUBS PLANTED IN INDIVIDUAL HOLES IN AREAS OF GOOD SOIL THAT IS TO REMAIN IN PLACE AND/OR TO RECEIVE AMENDMENT IN THE TOP 150-MM (6 IN.) LAYER, EXCAVATE THE HOLE TO THE DEPTH OF THE ROOT BALL AND TO WIDTHS SHOWN ON THE DRAWING. SLOPE THE SIDES OF THE EXCAVATION AT A 45 DEGREE ANGLE UP AND AWAY FROM THE BOTTOM OF THE EXCAVATION.
1. IN AREAS OF SLOWLY DRAINING SOILS, THE ROOT BALL MAY BE SET UP TO 75 MM (3 IN.) OR 1/8 OF THE DEPTH OF THE ROOT BALL ABO