



1

PLANT SCHEDULE DISPOSITION

TREES	QTY	BOTANICAL / COMMON NAME	NATIVE	REMARKS
BB-E	2	Bucida buceras / Black Olive	NON-NATIVE	EXISTING TO REMAIN
FA-X	2	Ficus aurea / Strangler Fig	NATIVE	REMOVE
FE-X	1	Ficus elastica / Rubber Tree	NON-NATIVE	REMOVE
NE-X	1	Noronia emarginata / Madagascar Olive	NON-NATIVE	REMOVE
SA-X	1	Scheffera actinophylla / Umbrella Tree	INVASIVE	REMOVE
ST-X	2	Schinus terebinthifolius / Brazilian Pepper	INVASIVE	REMOVE
SS-X	1	Sideroxylon foetidissimum / Wild Mastic	NATIVE	REMOVE
PALM TREES	QTY	BOTANICAL / COMMON NAME	NATIVE	REMARKS
PE-X	1	Ptychosperma elegans / Solitaire Palm	NON-NATIVE	REMOVE
RE-X	1	Roystonea elata / Florida Royal Palm	NATIVE	REMOVE
SP-X	4	Sabal palmetto / Cabbage Palmetto	NATIVE	REMOVE
TR-X	2	Thrinax radiata / Florida Thatch Palm	NATIVE	REMOVE

ISSUED FOR:

1. ISSUED	09/28/23
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2

EXISTING TREE/PALM CHART

Tree ID	Common Name	Botanical Name	DBH (in)	Spread (ft)	Disposition	Canopy Removed
87	Black Olive	Bucida buceras	24	35	REMAIN	0
88	Black Olive	Bucida buceras	24	19	REMAIN	0
89	Rubber Tree	Ficus elastica	24	10	REMOVE	78.5
140	Cabbage Palm	Sabal palmetto	10	10	REMOVE	78.5
141	Wild Mastic	Sideroxylon foetidissimum	12	18	REMOVE	254.34
142	Strangler Fig	Ficus aurea	52	25	REMOVE	490.625
143	Cabbage Palm	Sabal palmetto	12	10	REMOVE	78.5
144	Royal Palm	Roystonea elata	16	18	REMOVE	254.34
145	Florida Thatch Palm	Thrinax radiata	8	8	REMOVE	50.24
146	Florida Thatch Palm	Thrinax radiata	8	8	REMOVE	50.24
147	Cabbage Palm	Sabal palmetto	8	10	REMOVE	78.5
148	Cabbage Palm	Sabal palmetto	6	10	REMOVE	78.5
149	Brazilian Pepper	Schinus terebinthifolius	6	12	REMOVE	113.04
150	Solitaire Palm	Ptychosperma elegans	6	4	REMOVE	12.56
155	Brazilian Pepper	Schinus terebinthifolius	12	22	REMOVE	379.94
166	Madagascar Olive	Noronia emarginata	2,2,3	6	REMOVE	28.26
167	Strangler Fig	Ficus Aurea	20	16	REMOVE	200.96
168	Umbrella Tree	Scheffera actinophylla	4	4	REMOVE	12.56

TOTAL SQUARE FEET OF CANOPY REMOVED	2,240
TOTAL SQUARE FEET OF CANOPY REPLACED	2,850

CANOPY REPLACEMENT BREAKDOWN	
* 13 CAT III TREES PROVIDED AT	150
** 18 CAT IV PALMS PROVIDED AT	900

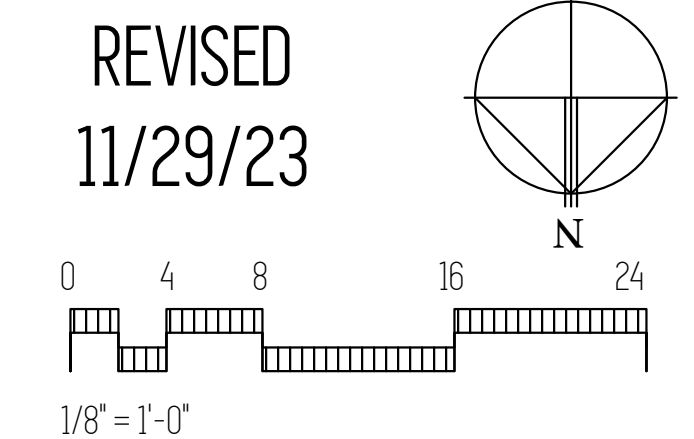
*CATEGORY II TREES: 6 PIGEON PLUMS + 2 SILVER BUTTONWOODS + 5 ORANGE GEIGERS
 **CATEGORY IV PALMS: 2 MEDJOOUL DATE PALMS + 7 SABAL PALMS + 7 CHRISTMAS PALMS + 2 FOXTAIL PALMS

Borshchukov Residence
 8 Tahoe Lane
 Sea Ranch Lakes, Florida

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Stephanie Portus FL Reg LA 6667215
 project number 22-144
 drawn by SP/LC
 sheet name

LANDSCAPE DISPOSITION PLAN



sheet number **L-1**

NOTES

ENSURE THAT LANDSCAPE ADHERES TO SECTION 4.01.02 FOR LANDSCAPE MATERIAL AND STANDARDS.

TREES OR PALMS PLANTED IN SOD SHALL HAVE MULCH RINGS TO PROTECT THEM FROM LAWN MAINTENANCE EQUIPMENT AND STRING TRIMMERS.

ALL PLANT MATERIAL SHALL BE FLORIDA #1 OR BETTER, AS DESCRIBED IN GRADES AND STANDARDS FOR NURSERY PLANTS, STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, TALLAHASSEE FLORIDA, LATEST EDITION.

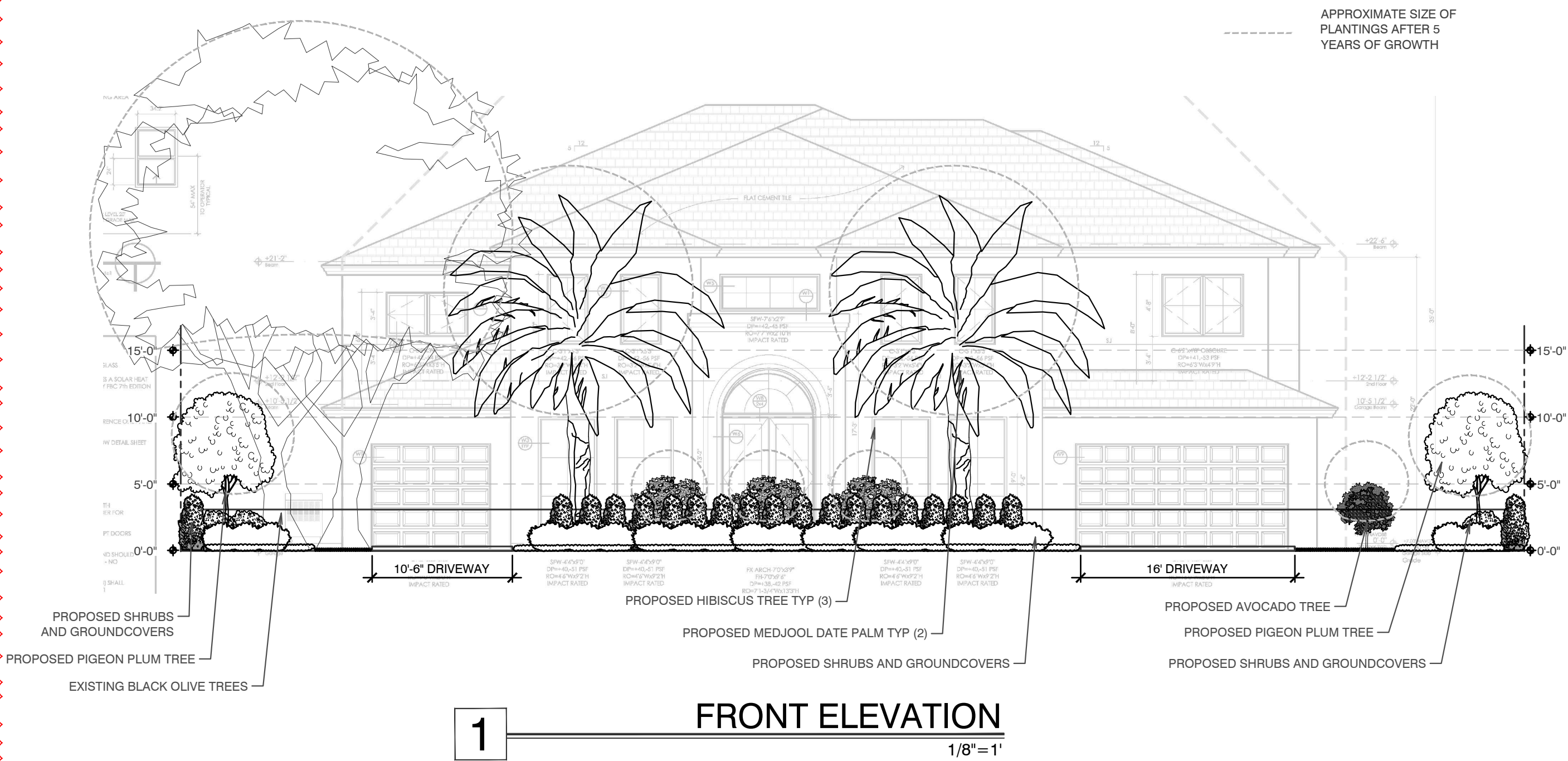
TO PROTECT AGAINST GANODERMA PALM FUNGUS, ALWAYS REMOVE ALL PALM STUMPS FROM PROPERTY.

PLA DESIGN STUDIO TO APPROVE STAKED LAYOUT OF ALL TREES AND PLANTING LAYOUT PRIOR TO INSTALLATION.

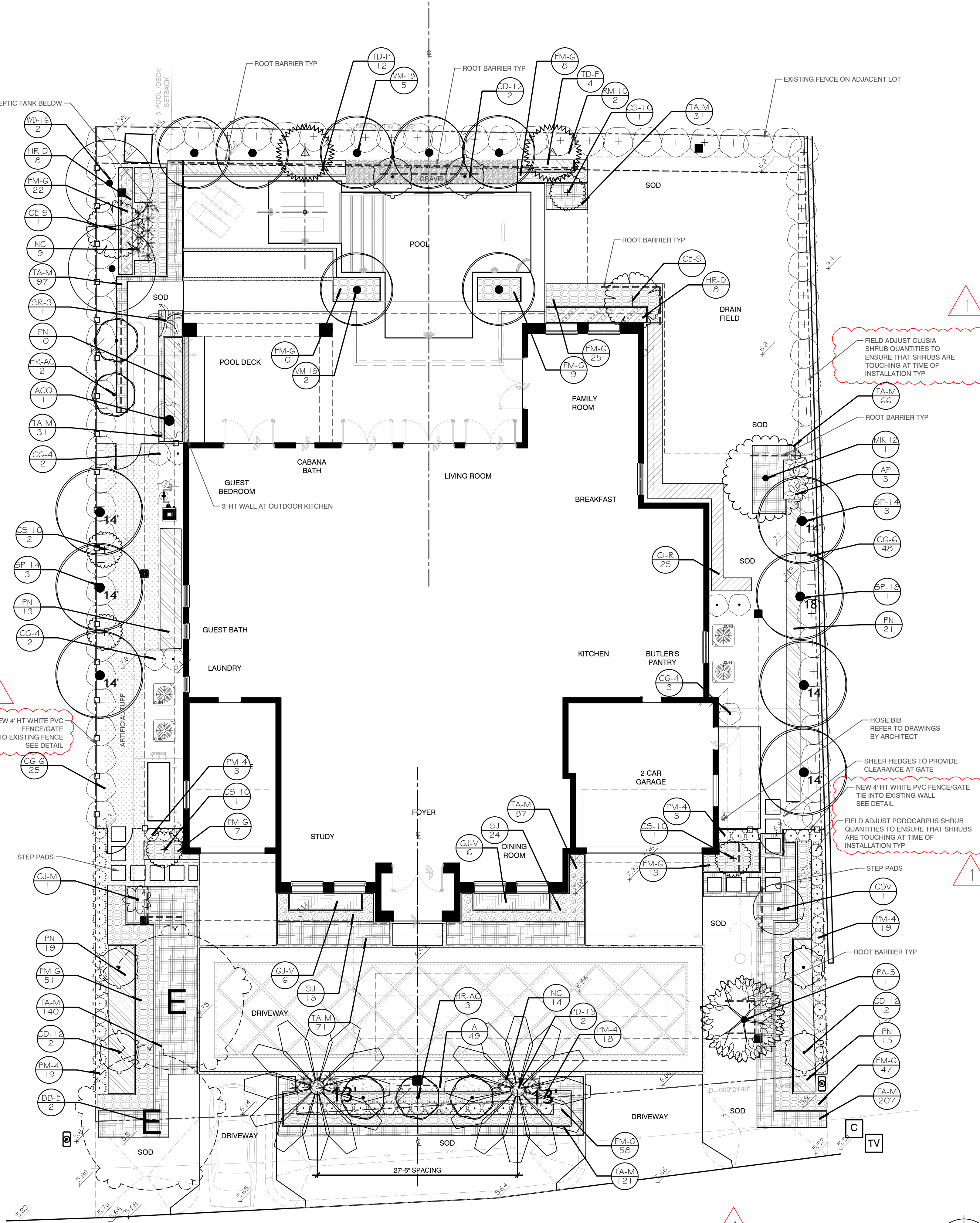
ALL IRRIGATION, IRRIGATION EQUIPMENT AND IRRIGATION BOXES TO BE CONCEALED.

ARTIFICIAL TURF NOTES PER SECTION 4.01.05(K)(1-8)

1. SYNTHETIC TURF SHALL COMPLY WITH RULE 64E-6 OF THE FLORIDA ADMINISTRATIVE CODE GOVERNING SEPTIC TANKS, AS MAY BE AMENDED, AND SHALL BE SUBJECT TO THE REQUIREMENTS AND PROCEDURES SET FORTH IN THIS SECTION.
2. SYNTHETIC TURF SHALL BE COUNTED TOWARDS THE MINIMUM REQUIRED LANDSCAPED AREAS, BUFFERS, FOUNDATION PLANTINGS OR LANDSCAPE ISLANDS.
3. SYNTHETIC TURF SHALL COMPLY WITH ALL OF THE FOLLOWING DESIGN STANDARDS AND SHALL:
 - A. SIMULATE THE APPEARANCE OF LIVE TURF, ORGANIC TURF, GRASS, SOD OR LAWN, AND SHALL HAVE A MINIMUM EIGHT-YEAR "NO FADE" WARRANTY.
 - B. BE OF A TYPE KNOWN AS CUT PILE INFILL WITH PILE FIBERS OF A MINIMUM HEIGHT OF 1.75 INCHES AND A MAXIMUM HEIGHT OF 2.5 INCHES.
 - C. HAVE A MINIMUM FACE WEIGHT OF 75 OUNCES PER SQUARE YARD.
 - D. BE MANUFACTURED FROM POLYETHYLENE MONOFILAMENT, AND DUAL YARN SYSTEM.
 - E. BE PERMEABLE.
 - F. BE LEAD FREE AND FLAME RETARDANT.
4. SYNTHETIC TURF SHALL COMPLY WITH ALL OF THE FOLLOWING INSTALLATION STANDARDS AND SHALL:
 - A. BE INSTALLED BY A STATE-LICENSED GENERAL CONTRACTOR OR SPECIALTY LICENSED CONTRACTOR IN A MANNER PRESCRIBED BY THE MANUFACTURER.
 - B. BE INSTALLED OVER A SUBGRADE PREPARED TO PROVIDE POSITIVE DRAINAGE AND AN EVENLY GRADED, POROUS CRUSHED ROCK AGGREGATE MATERIAL THAT IS A MINIMUM OF THREE INCHES IN DEPTH.
 - C. BE ANCHORED AT ALL EDGES AND SEAMS CONSISTENT WITH THE MANUFACTURER'S SPECIFICATIONS.
 - D. NOT HAVE VISIBLE SEAMS BETWEEN MULTIPLE PANELS.
 - E. HAVE SEAMS THAT ARE JOINED IN A TIGHT AND SECURE MANNER.
 - F. HAVE AN INFILL MEDIUM CONSISTING OF CLEAN SILICA SAND OR OTHER MIXTURE, PURSUANT TO THE MANUFACTURER'S SPECIFICATIONS THAT SHALL:
 1. BE BRUSHED INTO THE FIBERS TO ENSURE THAT THE FIBERS REMAIN IN AN UPRIGHT POSITION;
 2. PROVIDE BALLAST THAT WILL HELP HOLD THE TURF IN PLACE; AND
 3. PROVIDE A CUSHIONING EFFECT.
5. SYNTHETIC TURF SHALL COMPLY WITH ALL OF THE FOLLOWING ADDITIONAL STANDARDS:
 - A. AREAS OF LIVING PLANT MATERIAL SHALL BE INSTALLED AND/OR MAINTAINED IN CONJUNCTION WITH THE INSTALLATION OF SYNTHETIC TURF. LIVING PLANT MATERIAL SHALL BE PROVIDED PER THE MINIMUM CODE REQUIREMENTS.
 - B. SYNTHETIC TURF SHALL BE SEPARATED FROM PLANTER AREAS AND TREE WELLS BY A CONCRETE MOW STRIP, BENDER BOARD OR OTHER BARRIER TO PREVENT THE INTRUSION OF LIVING PLANT MATERIAL INTO THE SYNTHETIC TURF.
 - C. IRRIGATION SYSTEMS PROXIMATE TO THE SYNTHETIC TURF SHALL BE DIRECTED SO THAT NO IRRIGATION AFFECTS THE SYNTHETIC TURF.
6. SYNTHETIC TURF SHALL COMPLY WITH ALL OF THE FOLLOWING MAINTENANCE STANDARDS AND SHALL:
 - A. BE MAINTAINED IN AN ATTRACTIVE AND CLEAN CONDITION, AND SHALL NOT CONTAIN HOLES, TEARS, STAINS, DISCOLORATION, SEAM SEPARATIONS, UPLIFTED SURFACES OR EDGES, HEAT DEGRADATION OR EXCESSIVE WEAR.
 - B. BE MAINTAINED IN A GREEN FADE LESS CONDITION AND FREE OF WEEDS, DEBRIS, AND IMPRESSIONS.
7. THE FOLLOWING USES ARE PROHIBITED:
 - A. SYNTHETIC TURF IN THE PUBLIC RIGHTS-OF-WAY OR SWALES.
 - B. SYNTHETIC TURF SHALL NOT BE USED AS A SCREENING MATERIAL WHERE SCREENING IS REQUIRED BY THIS CODE.
8. ALL USES OF SYNTHETIC TURF SHALL REQUIRE A BUILDING PERMIT. THE BUILDING PERMIT APPLICATION SHALL INCLUDE, AT A MINIMUM, ALL OF THE FOLLOWING INFORMATION:
 - A. COMPLETE LANDSCAPE PLAN SHOWING THE AREA OF SYNTHETIC TURF, AREA OF LIVING PLANT MATERIAL, AND AREA AND METHOD OF SEPARATION BETWEEN THESE AREAS. MINIMUM LANDSCAPE REQUIREMENTS SHALL BE REQUIRED.
 - B. DETAILS REGARDING EXISTING OR PROPOSED IRRIGATION PROXIMATE TO THE SYNTHETIC TURF.
 - C. BRAND AND TYPE OF SYNTHETIC TURF, INCLUDING ALL MANUFACTURER SPECIFICATIONS AND WARRANTIES.
 - D. A SCALED CROSS SECTION AND DETAILS OF THE PROPOSED MATERIALS AND INSTALLATION, INCLUDING BUT NOT LIMITED TO SUBGRADE, DRAINAGE, BASE OR LEVELING LAYER, AND INFILL.
 - E. A SURVEY OF THE PROPERTY WITH A SIGNED AFFIDAVIT FROM THE PROPERTY OWNER THAT NO CHANGES HAVE OCCURRED SINCE THE DATE OF THE SURVEY.

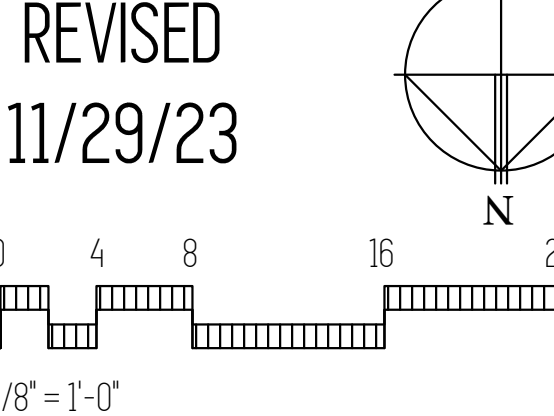


1 FRONT ELEVATION
1/8"=1'



LANDSCAPE REQUIREMENTS PER SECTION 5.01.01 (4)

PROVIDED AREA BETWEEN STRUCTURE AND PROPERTY LINES	8,621 SF
MINIMUM AREA TO BE SODDED OR LANDSCAPE	30% OR 2,586 MINIMUM SF
PROVIDED SODDED OR LANDSCAPE AREA	57% OR 4,946 SF



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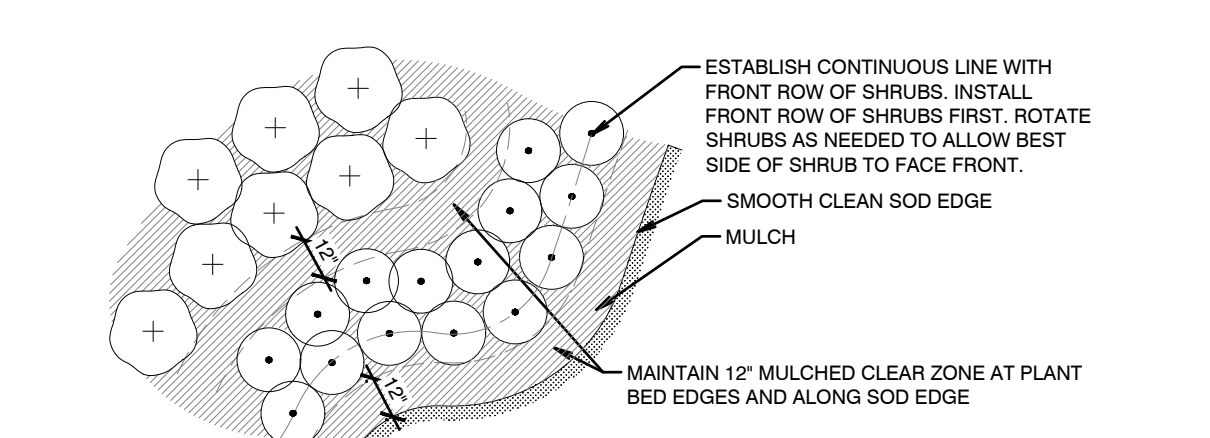
LANDSCAPE PLAN
sheet number L-2

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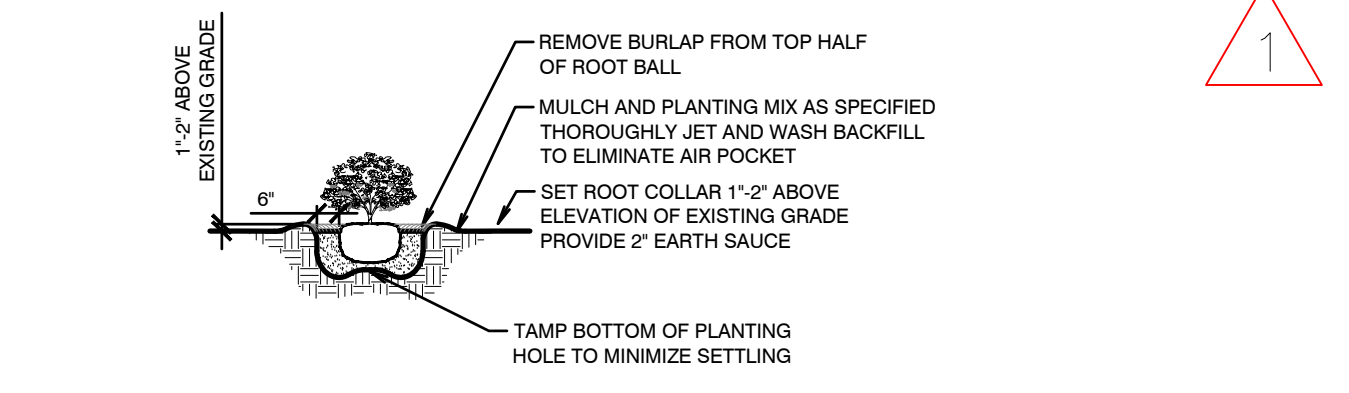
PLANT SCHEDULE PROPOSED LANDSCAPE

TREES	QTY	BOTANICAL / COMMON NAME	NATIVE / NON-NATIVE	CONTAINER	HEIGHT	SPREAD	CALIPER	REMARKS
BB-E	2	Bucida buceras / Black Olive	NON-NATIVE					EXISTING TO REMAIN
CSV	1	Citrus x sinensis variety / Fruit Cocktail Tree	NON-NATIVE	45G/28"	5' HT	3'-4' SPD		STANDARD, GRAFTED WITH VARIOUS CITRUS FRUITS, SYMMETRICAL CANOPY, VERIFY SELECTION WITH CLIENT AND LANDSCAPE ARCHITECT
CD-12	6	Coccoloba diversifolia / Pigeon Plum	NATIVE	45G/28"	12' HT	4' SPD	2" CAL	STANDARD, GRADE #1, DENSE, SYMMETRICAL CANOPY. MATCHING-AVAILABLE FROM BECKER TREE FARM. SUBMIT PHOTO
CE-S	2	Conocarpus erectus 'Sericeus' / Silver Buttonwood	NATIVE	25G/21"	10' HT	3' SPD	2" CAL	SINGLE LEADER STANDARD, FULL, DENSE, SYMMETRICAL CANOPY. STRAIGHT, UNSCARRED TRUNK, MATCHING
CS-10	5	Cordia sebestena / Orange Geiger Tree	NATIVE	45G/28"	10'-12' HT	5'-6' SPD	2" CAL	GRADE #1, SINGLE LEADER, SYMMETRICAL CANOPY, GOOD COLOR.
HR-AC	5	Hibiscus rosa sinensis 'Anderson Crape' / Anderson Crape Hibiscus	FLORIDA FRIENDLY	25G/21"	6' HT	3'-4' SPD	1.5" CAL	STANDARD, FULL, DENSE SYMMETRICAL FOLIAGE, STRAIGHT TRUNK, MATCHING
MIK-12	1	Mangifera 'Kent' / Kent Mango Tree	FLORIDA FRIENDLY	45G/28"	12' HT	8'-10' SPD	2.5" CAL	GRAFTED, VERIFY SELECTION WITH CLIENT AND LA
PA-5	1	Persea americana 'Super Hass' / Super Hass Avocado	FLORIDA FRIENDLY	2.5" CAL	5' HT	5'-6' SPD		GRAFTED FROM FRUITING TREE. SUBMIT PHOTO TO LANDSCAPE ARCHITECT FOR APPROVAL. AVAILABLE FROM EXCALIBUR FRUIT TREES LLC
RM-10	2	Ravenala madagascariensis / Traveler's Tree	FLORIDA FRIENDLY	25G/21"	10' HT	6'-7' SPD		FULL, INTACT LEAVES, GOOD COLOR.
PALM TREES	QTY	BOTANICAL / COMMON NAME	NATIVE / FLORIDA FRIENDLY	CONTAINER	HEIGHT	SPREAD	CALIPER	REMARKS
PD-13	2	Phoenix dactylifera 'Medjool' / Medjool Date Palm	FLORIDA FRIENDLY	B&B	13' CT	20' SPD		FULL HEAD, HEAVY CALIPER, STRAIGHT TRUNK, MATCHING
SP-14	6	Sabal palmetto / Cabbage Palmetto	NATIVE	FEILD GROWN	20' HT			FLORIDA FANCY, SLICK-MATCHING. SUBMIT PHOTO TO LA FOR APPROVAL, 14' C.T.
SP-18	1	Sabal palmetto / Cabbage Palmetto	NATIVE	FIELD GROWN	24' HT			FLORIDA FANCY, SLICK-MATCHING. SUBMIT PHOTO TO LA FOR APPROVAL, 18' C.T.
VM-18	7	Veitchia merillii / Christmas Palm	FLORIDA FRIENDLY		18' HT	10'-12' SPD		SINGLE, GRADE #1, MATCHING.SUBMIT PHOTO.
WB-16	2	Wodyetia bifurcata / Foxtail Palm	FLORIDA FRIENDLY	B&B	16' HT	12' SPD		SINGLE, FLORIDA FANCY, HEAVY CALIPER. STRAIGHT UNSCARRED TRUNK, GOOD COLOR. MATCHING
SHRUBS	QTY	BOTANICAL / COMMON NAME	NATIVE / FLORIDA FRIENDLY	CONTAINER	HEIGHT	WIDTH		REMARKS
ACO	1	Alocasia 'Calidora' / Calidora Elephant Ear	FLORIDA FRIENDLY	15G	8' HT	4'-5' W		FULL, GOOD COLOR
AP	3	Alpinia purpurata / Red Ginger	FLORIDA FRIENDLY	3G/10"	30" HT	24" W		GRADE #1, FULL, DENE POT. GOOD COLOR, INTACT LEAVES
CG-6	73	Clusia guttifera / Small-Leaf Clusia	FLORIDA FRIENDLY	25G/21"	6' HT	4' W		FULL TO BASE, LOW BRANCHING, DENSE INTACT FOLIAGE, NO VOIDS
CG-4	7	Clusia guttifera / Small-Leaf Clusia	NON-NATIVE	7G/14"	4' HT	30" W		FULL TO BASE, LOW BRANCHING, DENSE INTACT FOLIAGE, NO VOIDS
GJ-M	1	Gardenia jasminoides 'Miami Supreme' / Gardenia	FLORIDA FRIENDLY	25G/21"	6' HT	3'-4' W		FLORIDA FANCY, HEAVY, STANDARD. DENSE SYMMETRICAL HEAD, GOOD COLOR. MATCHING
PM-4	62	Podocarpus macrophyllus maki / Shrubby Yew	FLORIDA FRIENDLY	7G/14"	4' HT	24" W		FULL, DENSE FOLIAGE TO BASE, SHEAR TO 3' HT
SR-3	1	Streptitza reginae / Orange Bird Of Paradise	FLORIDA FRIENDLY	7G/14"	3' HT	2'-3' W		FULL, DENSE FOLIAGE, INTACT LEAVES, 3-5 PPP
SHRUB AREAS	QTY	BOTANICAL / COMMON NAME	NATIVE	CONTAINER	HEIGHT	WIDTH	SPACING	REMARKS
PN	78	Psychotria nervosa / Wild Coffee	NATIVE	3G/10"	24" HT	24" W	24" o.c.	FULL, DENSE FOLIAGE TO BASE
SJ	37	Serissa japonica / Snowrose	FLORIDA FRIENDLY	3G/10"	24" HT	18" W	18" o.c.	FULL, DENSE FOLIAGE. GOOD COLOR.
GROUND COVER	QTY	BOTANICAL / COMMON NAME	NATIVE / FLORIDA FRIENDLY	CONTAINER	HEIGHT	WIDTH		REMARKS
NC	23	Neomarica caerulea 'Regina' / Walking Iris	FLORIDA FRIENDLY	3G/10"	24" HT	24" W		DENSE FULL POT, INTACT LEAVES, GOOD COLOR
GROUND COVER AREAS	QTY	BOTANICAL / COMMON NAME	NATIVE / NON-NATIVE	CONTAINER	HEIGHT	WIDTH	SPACING	REMARKS
A	49	Annuals / Annuals TBS	NON-NATIVE	4" POT	10" HT		12" o.c.	FULL POTS, BLOOMING. TO BE SELECTED BY OWNER AT TIME OF INSTALL
CI-R	25	Chrysobalanus icaco 'Red Tip' / Red Tip Cocoplum	NATIVE	3G/10"	18" HT	24" W	24" o.c.	FULL, DENSE FOLIAGE TO BASE
FM-G	246	Ficus microcarpa 'Green Island' / Green Island Ficus	FLORIDA FRIENDLY	3G/10"	16" HT	14" W	18" o.c.	FULL, DENSE FOLIAGE, GOOD COLOR
GJ-V	12	Gardenia jasminoides 'Vietnam Snowflake' / Gardenia Vietnam Snowflake	FLORIDA FRIENDLY	3G/10"	14" HT	14" W	24" o.c.	DENSE, SYMMETRICAL FOLIAGE. NO VOIDS
HR-D	34	Hibiscus rosa-sinensis 'Double Peach' / Double Peach Tropical Hibiscus	FLORIDA FRIENDLY	3G/10"	16" HT	14" W	24" o.c.	FULL DENSE FOLIAGE, FULL TO BASE. GOOD COLOR.
TA-M	1,030	Trachelospermum asiaticum 'Minima' / Minima Jasmine	FLORIDA FRIENDLY	1G/6"	6"-8" HT	10" W	10" o.c.	FULL POT, DENSE FOLIAGE
TD-P	16	Tabernaemontana divaricata 'Pinwheel Jasmine' / Pinwheel Jasmine	FLORIDA FRIENDLY	3G/10"	18" HT	18" W	24" o.c.	FULL, DENSE FOLIAGE. FULL TO BASE, GOOD COLOR

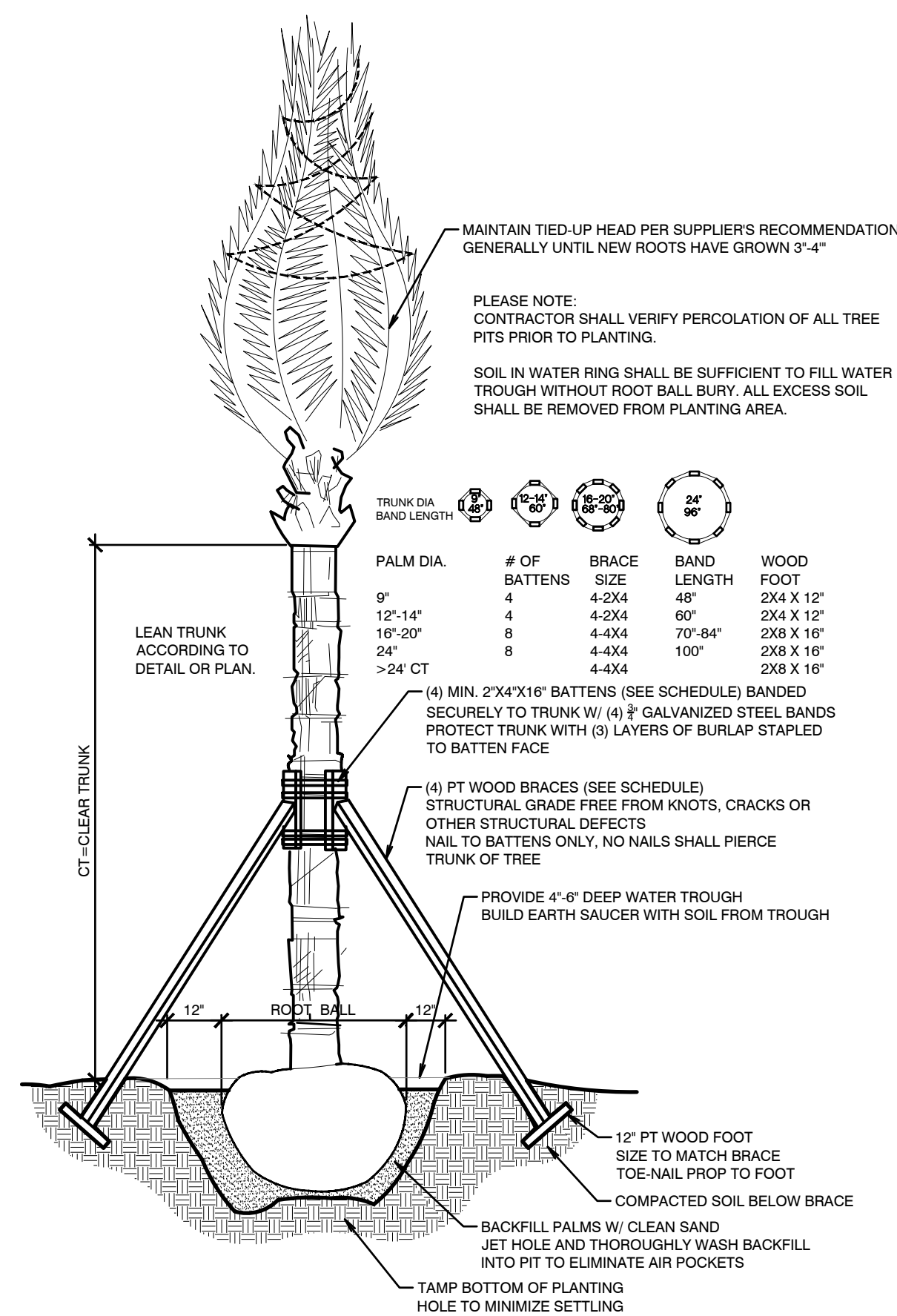
MISC	BOTANICAL NAME / COMMON NAME	QTY	REMARKS
BIO	Bio Barrier-Typar or equal	Verify LF in field	PROVIDE BIO BARRIER ROOT CONTROL AT ROOTBALLS AS REQUIRED BY UTILITIES
GRAVEL	Selected by client	Verify quantity in field	PROVIDE MIN. 2" THICK APPLICATION PROVIDE OPTIONAL BLACK ALUMINUM EDGING ALONG LANDSCAPE BEDS-PERMALOC 'CLEAN LINE' OR EQUAL
MULCH	Grade B+ Cypress Mulch	Verify quantity in field	MINIMUM 3" DEPTH
SOD	'Empire' Zoysia	1,635 SF/ Verify SF in field	MINIMUM 16"x24" PIECES. GRADED #1 OR BETTER. SEE LANDSCAPE SPECIFICATIONS SHEET



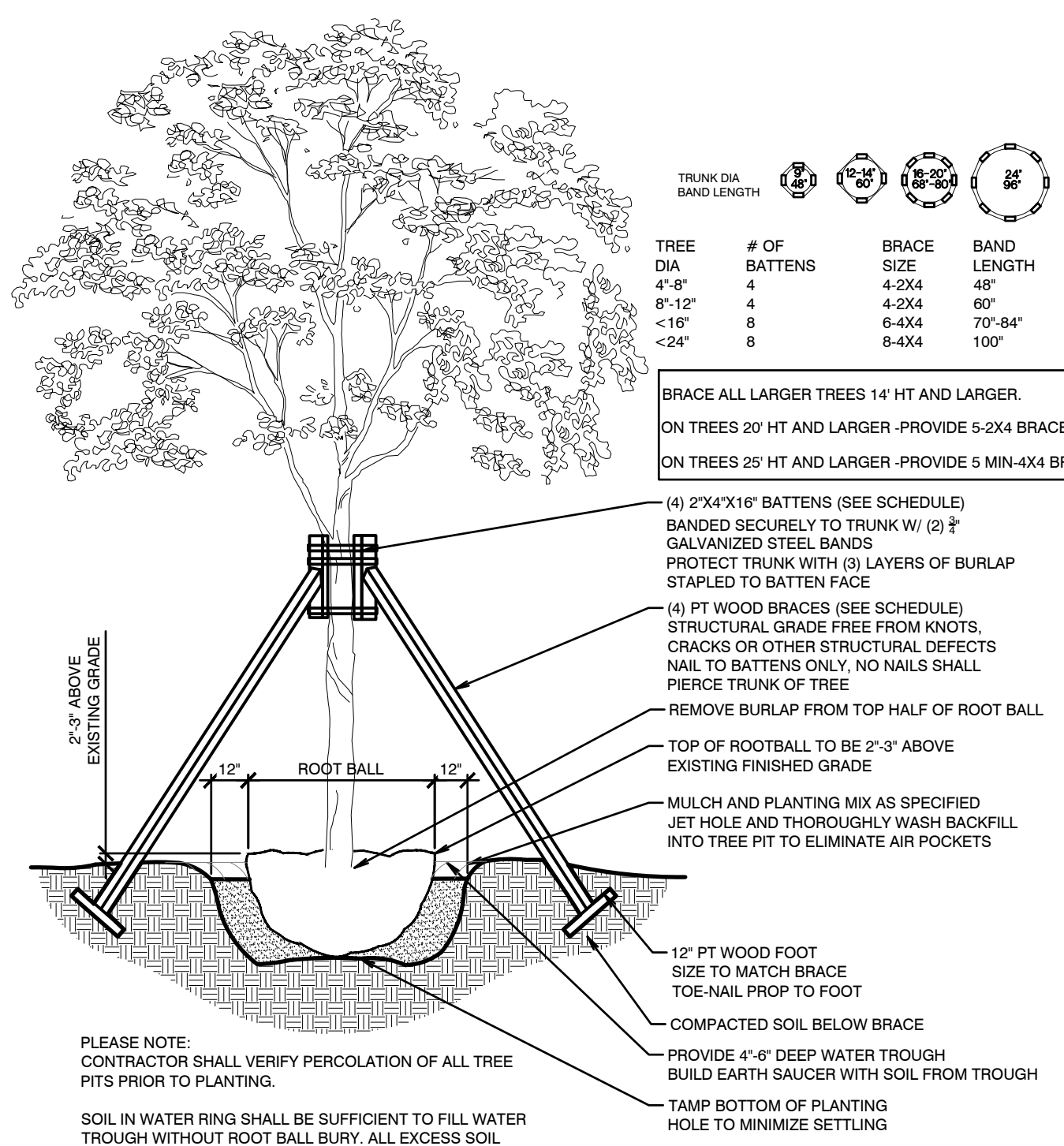
SHRUB/ GROUND COVER LAYOUT



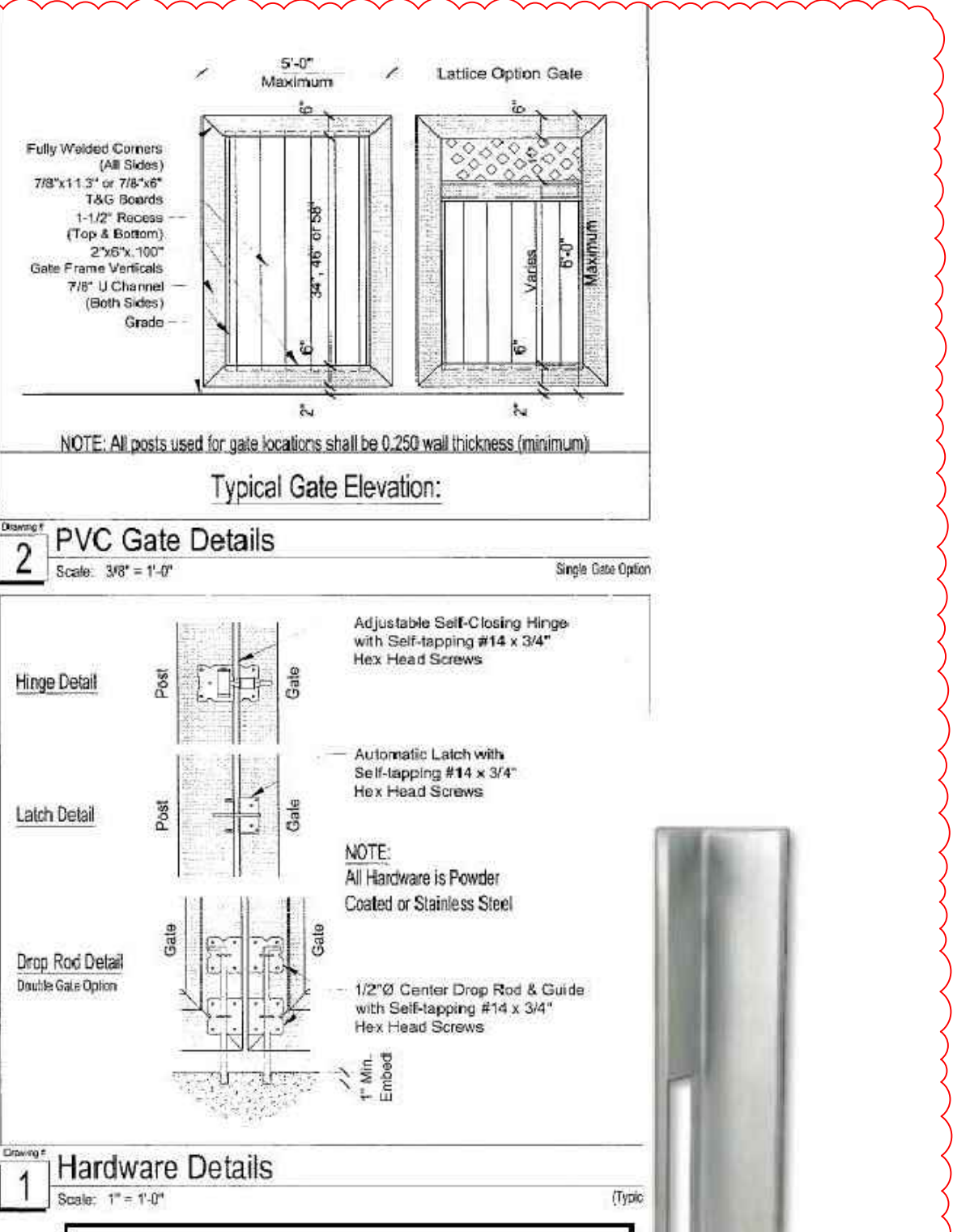
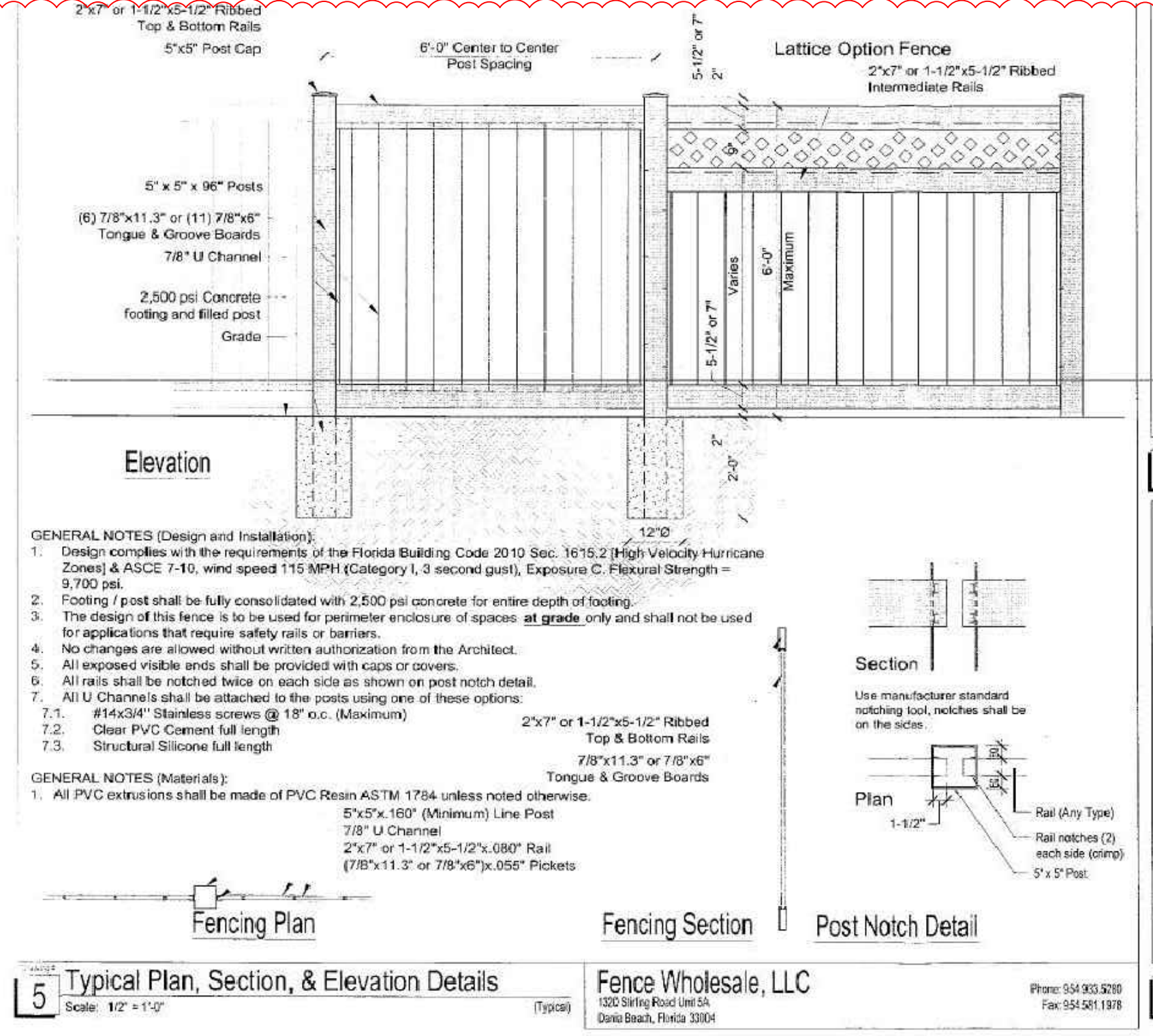
SHRUB/ GROUND COVER DETAIL



PALM PLANTING / BRACING DETAIL



TREE PLANTING BRACING DETAIL



4'-6' TALL TYPICAL PVC PRIVACY FENCE & GATE ELEVATION Construction Exhibit

OPTIONAL RAILING POST SUPPORT ZINC PLATED STEEL 4-5/8" X 4-5/8" X 20" X .110" (4) 1/2" TAPCONS WITH MIN 1-3/4" EMBED INTO POURED CONCRETE SLAB

NATIVE PLANT BREAKDOWN

TREES: 72% OF TREES ARE NATIVE	OR 18 NATIVE / 25 TOTAL
PALMS: 39% OF PALMS ARE NATIVE	OR 7 NATIVE / 18 TOTAL
SHRUBS: 30% OF SHRUBS ARE NATIVE	OR 78 NATIVE / 263 TOTAL
GROUND COVER: 2% OF GROUNDCOVERS ARE NATIVE	OR 25 NATIVE / 1,435 TOTAL

NOTES
TREES OR PALMS PLANTED IN SOD SHALL HAVE MULCH RINGS TO PROTECT THEM FROM LAWN MAINTENANCE EQUIPMENT AND STRING TRIMMERS.

ALL PLANT MATERIAL SHALL BE FLORIDA #1 OR BETTER, AS DESCRIBED IN GRADES AND STANDARDS FOR NURSERY PLANTS, STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, TALLAHASSEE FLORIDA, LATEST EDITION.

TO PROTECT AGAINST GANODERMA PALM FUNGUS, ALWAYS REMOVE ALL PALM STUMPS FROM PROPERTY.

PLA DESIGN STUDIO TO APPROVE STAKED LAYOUT OF ALL TREES AND PLANTING LAYOUT PRIOR TO INSTALLATION.

ALL IRRIGATION, IRRIGATION EQUIPMENT AND IRRIGATION BOXES TO BE CONCEALED.

GROUND COVER AREAS AT THE TIME OF INSTALLATION SHALL BE PLANTED WITH A MINIMUM OF SEVENTY-FIVE (75) PERCENT COVERAGE WITH ONE HUNDRED (100) PERCENT COVERAGE OCCURRING WITHIN THREE (3) MONTHS OF INSTALLATION. SEE PLANTING PLAN WITH PLANTING SPECIFICATIONS.

Call Sunshine No-Cuts 48 hours before you dig. 1-800-432-4770

REVISED 11/29/23

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Stephanie Portus FL Reg LA 6667215
project number 22-144
sheet name SP/LC

LANDSCAPE SCHEDULE + DETAILS

sheet number L-3

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1.0 GENERAL

1.1 DESCRIPTION OF WORK:

A. Extent of landscape development work is shown on the Drawings and in the related Schedules.

B. The work consists of furnishing all plants, materials, equipment, necessary specialties and labor required for the installation of plant and other materials as shown on the Drawings and/or in the Specifications.

C. Excavation, filling and grading required to establish elevations shown on the Drawings are not specified in this Section. Refer to earthwork Section.

1.2 REFERENCE PUBLICATIONS:

The following standards form a part of the Specifications:

A. Florida Department of Agriculture "Grades and Standards for Nursery Plants", most recent edition.

B. American Joint Committee on Horticultural Nomenclature "Standardized Plant Names Dictionary"

C. The American Standard for Nursery Stock" (2004 edition).

D. American National Standards Institute-ANSI

-ANSI A300 and ANSI Z60.1-most recent edition

E. Florida Friendly Best Management Practices for Protection of Water Resources

by Green Industries, Florida Dept of Environmental Protection, Rev Dec 2008

F. IFAS -Institute of Food and Agricultural Sciences, University of Florida.

http://hort.ufl.edu/woody/index.html

1.3 INSTALLER - CONTRACTOR QUALIFICATIONS:

A. The Contractor shall be State licensed and regularly engaged in the installation of living plant material. Labor crews shall be controlled and directed by a landscape foreman professionally trained and well versed in landscape installation, plant materials, reading blueprints and coordination between the job and nursery and shall be able to communicate with the Owner and the Landscape Architect.

B. The 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 Workmen's Compensation Insurance.

1.4 **SUBMITTALS:** Refer to schedule of submittals.

1.5 COORDINATION:

A. Coordinate and cooperate with other trades and contractors to enable the work to proceed as rapidly and efficiently as possible.

B. Irrigation work shall normally precede plant installation. Install trees, large B&B material, shrubs, and ground cover plants before lawns are installed.

C. Commencement of Work: Landscape Contractor shall notify Landscape Architect at least 7 days in advance of scheduled commencement of work. Landscape Contractor shall review plans and/or field layouts with Landscape Architect at least 2 days prior to installation or on the site as needed

1.6 **INSPECTION OF SITE:** Prior to the award of the contract, the Contractor shall acquaint himself with all site conditions. Should utilities or other improvements not shown on the Drawings be found during excavations, Contractor shall promptly notify the Landscape Architect or Owner for instructions as to further action. Failure to do so will make Contractor liable for any and all damage arising from his operations subsequent to discovery of such utilities not shown on Drawings.

1.7 PROTECTION OF EXISTING PLANTS AND SITE CONDITIONS:

A. The Contractor shall provide, install and maintain the necessary precautions to protect all persons and property, including the general public from harm or injury due to the work.

B. The Contractor shall take precautions to protect existing site conditions. Should damage be incurred, the Contractor shall repair the damage to return the object or area to its original condition at no additional charge.

C. Utility Locates - Regardless of utilities that may or may not be shown on the drawings, the Contractor shall be responsible to have utilities located in the area of work before the work commences. The Contractor shall also verify and comply with any requirements or clearances to plant materials that may be required of any Utility company.

1.8 **CHANGES IN THE WORK:** The Owner reserves the right to substitute, add or delete any material or work as the work progresses. Adjustment to the Contract Sum shall be approved by the Owner by a written Change Order, prior to execution. The Owner shall be given (2) week notice for the opportunity to review and approve all plant materials delivered to the job site prior to installation. When unit prices have been established, they shall prevail for all Contract Additions. For Contract Reductions, the Owner shall receive full credit, based on unit pricing, if changes are implemented prior to delivery of plant materials. If Owner changes are made prior to installation, Owner shall receive a credit for labor to install plants, less costs associated with purchase and delivery. The Landscape Architect assumes no financial or material responsibility for any changes made by, or on behalf of the Owner.

1.9 OWNER'S OBSERVATION:

A. The Landscape Architect of Owner assumes no responsibility for the Contractor's means and methods in the execution of this contract beyond the observation to ensure, to the Owner's satisfaction, that the Design Intent of the Drawings and Specifications are being properly interpreted. This observation and checking will not relieve the Contractor of any responsibility for the performance of his work in accordance with the Drawings and the Specifications (including proper planting practices or other material or performance deficiencies).

B. The Landscape Architect and Owner reserve the right to reject any portion of the work, material or workmanship which does not conform to the Contract Documents and Standard set forth herein. Rejected work shall be removed and/or corrected by the Contractor, at his own expense, at the earliest possible time and prior to final payment.

1.10 PROJECT CONDITIONS:

A. Familiarization with Overall Project Requirements: The Contractor shall review and become familiar with the Design Intent and drawings prepared Work related to the Contractor's Work, including but not limited to: Civil engineering and Drainage Plans, Architectural layout of project area access, contractor equipment access, existing and proposed utility locations, Irrigation Plans, Outdoor Lighting Plans, Paving Plans, Project Sequence and Timing plans, Town/HOA/ neighborhood requirements, etc.

B. Obstructions: The Contractor shall exercise care in digging and other work so as not to damage existing work, including underground pipes, sprinklers, control cables and hydrants of watering systems. Should such overhead or underground obstruction be encountered which interferes with planting, the Landscape Architect shall be consulted for consideration for alternate installation of plants to clear such obstructions. The Contractor shall be responsible for the installation and repair of any damage caused by his work.

C. After notice to proceed, the Contractor shall complete landscape work in a timely manner, as portions of site become available. Actual planting shall be performed only when weather and soil conditions are suitable in accordance with locally accepted practice.

D. Contractor shall coordinate landscape and planting work with other trades, such as the irrigation (sprinkler) installer, electrician, lighting installer, paving installer, and sod installer; Landscape installer shall coordinate to ensure that no plantings will interfere with the proper functioning of the sprinkler system. The Contractor shall point out to the Irrigation installer situations where minor adjustment or relocation or addition of sprinkler heads may be most beneficial for the whole. The location of specimen plant materials, trees, palms and large shrubs shall prevail over irrigation head placement.

1.11 ACCEPTANCE:

A. At the discretion of the Owner, early acceptance of the work may be obtained for progress payment of approved phases; or when the time between commencement of the work and substantial completion exceeds 90 days (at no fault of the contractor). Early acceptance shall be contingent upon a satisfactory inspection of the completed landscape work by the Landscape Architect and/or the Owner.

B. Substantial Completion of the Work is the point in construction when the Work is sufficiently complete in accordance with the Contract Documents; all related clean-up has been performed; and the Landscape Architect's provides an opinion that the Owner can utilize the work as intended.

C. Final Completion is the completion of all work included in the Contract Documents except the Contractor's responsibility to correct the work to the satisfaction of the Owner and the Landscape Architect. The Warranty Period and Maintenance period shall commence upon Final Acceptance.

1.12 WARRANTY PERIOD AND CORRECTION OF THE WORK:

A. For a period of twelve months from the date of acceptance, all new plant materials except grass shall be alive and healthy, upright and in satisfactory growth for each specific kind of plant. There shall be no signs of nutrient deficiency, disease or insect infestations.

B. Dead plants which are rejected shall be replaced or corrected within two weeks of rejection. Replacement material shall be the same species, size and quality as called for in the Contract. A new correction of the work period of twelve (12) months shall begin upon replacement and acceptance by the Landscape Architect of all replacement plants, this includes plants which are discovered at any time to have been planted at an improper depth.

C. The installer shall repair damage to other plants or lawns that occurs during the plant replacement process at no cost to the Owner.

D. Plants which have been approved and subsequently die or are damaged by washout, wind storm, traffic, vandalism, or demonstrable failure of the Owner to maintain after Substantial Completion of the Work is not covered in this correction of the work provision

2.0 PRODUCTS

2.1 MATERIALS LIST:

A. Plant species and size shall conform with the Plant List and information noted on the Drawings.

B. The quantities given in the Plant List are intended for the convenience and as a guide for the bidder and does not relieve the bidder of his responsibility to do a comprehensive plant take off from the Drawings. Information on the drawings control.

2.2 PLANT MATERIALS:

A. All plant material shall be nursery grown unless otherwise noted. Plants shall be graded Florida No. 1 or better and shall be sized as outlined under Grades & Standards for Nursery Plants, State of Florida. Palm trees shall be grown from certified seed.

B. Collected material when specified or approved shall be in good health, free from disease, insect or weed infestation. Testing may be required at the discretion of the Landscape Architect and/or the Owner and shall be provided at no additional cost.

C. Plants materials must equal or exceed the measurements specified in the plant list, which are the minimum acceptable sizes. Those plants 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.

D. Height of plant materials shall be measured from the top of the ball to the top of the plant with branches (or fronds) in normal position. Their width shall be measured across the normal spread of the branches (or fronds). In cluster type palms the main trunk shall meet the height requirement and all other trunks shall be 3/4 or more of the required height unless otherwise noted on the drawings. Where symmetry is required, match plants used as nearly as possible to the satisfaction of the Landscape Architect.

E. Plants that meet the height requirements, specified, but do not have the normal balance of height and spread typical for the respective plant, shall not be accepted.

F. Abbreviations on the Drawings are as follows:

B&B - field grown plant "balled and burlapped".

Cal - caliper/diameter measured at (152.4 mm) above soil line. For trunks larger than 4" (88.4 mm) diameter, the caliper measurement shall be determined at 12" above soil line.

CT - clear trunk measurement from top of ball to first branching.

CW - clear wood, in palms the distance from soil line to lowest living frond leaf base. **DBH** - caliper or diameter measured 4 feet (1.22 meters) above soil line

OA - Greywood, in palms, mature trunk from ground to base of the green crown shaft.

GW - overall height from top of ball to top of current season's growth or last open frond in normal position in palms.

Spd - spread or average distance across the average diameter of plant branching structure.

G. Root packaging and Containers: Plant materials in containers shall have a well established root system and shall not be root bound. All plant materials not in containers shall be balled and burlapped and dug with a firm natural ball of earth. Balls shall be firmly wrapped with burlap or similar biodegradable materials and bound with twine, cord or wire mesh. The minimum ball sizes will be in accordance with "Grades & Standards for Nursery Plants". No plant shall be accepted if the root ball has been cracked or broken. All containers and root balls shall be kept moist at all times. All plants which cannot be planted immediately on delivery shall be kept moist and protected from drying winds and sun.

H. Container Grown Plants: Plants grown in containers will be accepted as "B&B", providing that all other specified requirements are met. Container grown plants shall meet plant sizes as specified on the drawings. Containers shall be of suitable size and variety. Minimum root balls of container grown material shall be no more than 95% less proportionately than that stated in latest edition of Florida "Grades & Standards" for nursery plants. Plants shall have been grown in the container for a max. of 2 years prior to installation and shall exhibit a fully developed root system throughout when removed from container. There shall be no girdling or circling roots exceeding 50% of the pot circumference.

I. Substitution: Plant substitution by the Contractor will be considered by Landscape Architect only upon submission of proof that the plant is not obtainable in the type and size specified. Should the specified plant indeed not be available, the Landscape Architect shall determine the nearest equivalent replacement in an obtainable size and variety. The unit price of the substitute item shall not exceed the bid item replaced, without owner approval.

2.3 **PLANTING SOIL:** Planting soil shall be free draining, sandy loam and shall contain a 5% minimum and a 15% maximum amount of decomposed organic matter. Planting soil shall be free of clay, stones, plants, roots, and other foreign materials which might be a hindrance to planting operations or be detrimental to good plant growth. It shall have a pH between 6.0 and 7.0. Soil shall be delivered in a loose friable condition and applied in accordance with the planting specifications.

2.4 **PEAT:** 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.

2.5 WATER:

A. Clean Water for planting will be available at the site and shall be provided by the Owner unless special provision is determined in the Contract Documents.

B. Contractor shall determine the source and suitability of the Owner's water. In the event the water source is not suitable, the Owner shall be given written notice of such at least two weeks prior to the commencement of Work.

2.6 SOIL TESTING:

A. Landscape Contractor shall provide testing of existing soils on Site for all soil types, including imported soils, in the planting area. No less than 2 representative samples shall be submitted to and tested by an independent professional testing lab for analysis and fertility recommendations.

B. Soil Testing Lab - Call for info, testing services, fees and Import permit. Micro-Macro International P 706-548-4557 F 706-548-4891 Web: www.mmilabs.com 183 Paradise Blvd, Suite 10B, Athens, Georgia, 30607

2.7 COMMERCIAL FERTILIZER AND PLANTING AMENDMENTS:

A. Fertilizer and fertilization rates for the project shall be provided and applied based on the results of the soils test. Follow all Manufacturer's Label Rates and application recommendations.

B. Commercial fertilizer shall be slow-release organic formulation containing nitrogen, phosphorus and potassium, not to exceed an analysis of 6-6-6. Nitrogen shall be not less than 50% of the total analysis. Organic nitrogen shall not be derived from the sodium form of nitrate. Iron shall be in the chelated form, not be less than 2% and magnesium shall not be less than 2%. Fertilizers shall be delivered to the site unopened in original containers, each bearing the manufacturer's ingredients and guaranteed analysis. Submit a copy of the Manufacturer's guaranteed analysis and proof of delivery to the Landscape Architect. Any fertilizer that becomes caked or otherwise damaged is unacceptable.

C. Microbial Additives: Mycorrhizal and microbial additives shall provided as specified in the Schedule of Soil amendments. Contractor shall submit a copy of the manufacturer's label/ product use instructions that include: all ingredients, guaranteed analysis and application rates. All supplements shall be supplied in fresh, unopened packaging prior to product expiration. Product that becomes caked or otherwise damaged is unacceptable and shall not be used.

2.8 MISCELLANEOUS LANDSCAPE MATERIALS:

A. Mulch: Shredded hardwood mulch-grade "A", vermic color. Mulch shall not contain chunks larger than 1 inch (25.4 mm) in diameter, branches, stones or other foreign material that will prevent its eventual decay.

Alternate Mulches: Pine Bark Nuggets - Jumbo size, Pine Straw

B. Gravel Mulch: Provide samples of all gravels to Landscape Architect for approval prior to ordering. Gravel shall be used 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 2" (44.2 mm) deep and shall be contained with gravel stops. It shall be a maximum of 1-1/2" (38.1 mm), a minimum of 3/4" (19 mm) and of a readily-available natural gravel color range.

C. Braces, Battens and Stakes-Provide braces, battens, stakes and deadman of sound new pressure-treated lumber, free of knot holes and other defects. Braces shall be pressure-treated 2x lumber (4x lumber where appropriate) and shall be secured to battens and stakes with a min of (2) -16D, db) head galv. forming nails. Battens shall be 2x4 pressure treated lumber and padded with burlap. Battens shall be secured to tree trunks with 3/4" Stainless steel or galvanized banding. Stakes shall be pressure-treated 2x lumber and shall be driven to within 2" of the surrounding grade.

D. All exposed ground-stakes shall be painted with a high-visibility, contrasting fluorescent paint until substantial completion. Braces and stakes shall be repainted a dark walnut brown stain unless otherwise noted. Stakes and braces shall be placed within mulch beads and oriented away from walking areas.

D. Guys and Anchors: Provide one of the following: 1) wire guys shall be two- strand, twisted, pliable galvanized iron wire not lighter than 12 gauge. Provide new hose cut to required lengths to protect tree trunks from damage by wires. Hose shall be not less than 1/2" (12.7 mm) dia. 2) Woven Polyethylene Webbing -shall be min 2" wide. Trunks and stems shall be wrapped at least twice and secured with adjustable knots. Stakes per Sec C, above.

E. Soil Mix for annual or seasonal color beds: 2 parts top soil, 1 part fine pine bark mulch 1/2" (12.7 mm) pieces, 1 part coarse sand and 50 pounds (1,8662 kg) composted cow manure per cubic yard (.76455 cubic meters). Mix in Osmocote fertilizer and micro-organisms at label rates, see 2.7C.

F. Planter Soil Mixture: a loose, friable blend consisting of: 5 parts coarse sand, 2 parts peat humus or bagged topsoil and 3 parts pinebark; Mix in Osmocote fertilizer and microorganisms at label rates, see 2.7C.

3.0 EXECUTION

3.1 PREPARATION, SITE WORK AND COORDINATION:

A. Grading: Contractor shall inspect the site to verify that finish grades (accurate within 2" (51 mm), have been established in accordance with Civil Engineer's Drainage Plan and the Landscape Architect's shaping and grading Plan or other job requirements prior to beginning any planting operations. Coordinate with Landscape Architect and General Contractor for release of areas before planting operations begin.

B. Rough Grading and Shaping - Rough grading and bulk filling of site shall be the general responsibility of the General Contractor unless otherwise noted. Rough grade shall include placement and distribution of bulk fill material sufficient to generally be within -4" of final grade for landscape and within -2" of final grade for sod areas. Rough grades shall conform with the general intent of the drainage and grading plans. Rough grades may be field adjusted to allow for fill as generated by planting activities.

C. Finish Grading - Finish and final grading shall be reviewed, approved and released by Landscape Architect or authorized Project Manager. Landscape Contractor shall notify LA Project Manager, in writing, 3 days before planting work in a given area is expected to commence. Finish Grades are the responsibility of the Landscape Contractor -including box blading and leveling of open sod areas

Finish grades of all planting areas shall be at 2" below pavement, after planting unless otherwise noted. Finish grades shall include any top soil and soil amendments as specified. If at any time the sub-grades as determined to be inadequate for proper design, the Project Manager should be given notification in writing.

D. Top soils -The supply, placement and grading of Top soils shall be the responsibility of the Landscape Contractor unless otherwise determined in the Construction Documents.

E. Irrigation-The Landscape Contractor shall closely coordinate with the Irrigation installer. Irrigation system shall be installed according to Irrigation Plans and Specifications with any necessary field adjustments to complement the Landscaping Plans. Spray zones for sod and planted areas as described shall have 105% head to head coverage, matched precipitation rates and uniform water distribution with equipment as outlined. Drip emitters shall be installed per schedule. Drip and spray irrigation shall be fully operational and accepted before any mulch, stone, mulch or ground covers are installed.

Landscape Architect and/or irrigation designer before areas will be released for finish planting and/or mulching as noted above. In the event of conflicts with landscaping and irrigation pipes or emitters, the location of trees, palms, large shrubs and specimens shall prevail. Pipes and emitters shall be relocated/adjusted to eliminate conflict and allow for the proper function of equipment.

F. Landscape Lighting - The Landscape Contractor shall closely coordinate with the Lighting installer. Outdoor and site lighting system shall be installed according to the Lighting Plans and Specifications with any necessary field adjustments to complement the Landscaping Plans. Landscape lighting conduit shall be coordinated and installed in conjunction with irrigation trenching where ever utility lines are present.

G. Lighting conduit shall be installed and/or adjust AFTER major trees and palms are installed and before shrubs/ground covers are installed. In-ground fixtures or other work requiring excavation, must be installed before sod, stone mulch and landscape mulch are installed. Lighting stub-ups/placements shall be reviewed approved and released by Landscape Architect before mulch, stone, ground covers or sod are installed.

G. Mulch, Edging and Stone Mulch-Before mulch of any kind is installed, Finish Grading, Operational Irrigation, Lighting conduit, in-ground fixtures and metal edging shall be in place and accepted and released by either Landscape Architect or General Contractor.

H. Sod - Before sod of any kind will be installed, Finish Grading, Operational Irrigation, Lighting conduit, in-ground fixtures, metal edging and mulch shall be in place and accepted and accepted by Landscape Architect. As noted above, landscape contractor is responsible for all fine grading subject to review and acceptance by Landscape Architect, before sod is installed.

I. Removal of Rubbish: Any objectionable materials, such as stones/construction debris be encountered during planting operations, they shall be promptly removed from the site by the landscape installer.

3.2 PROTECTION OF PLANTS:

A. Root Protection: All field grown trees, palms and plants shall be hand dug with sharp shovels or approved tree-spade. Backhoe-dug trees shall not be accepted. Roots shall be cleanly cut with sharp instruments. Balled and burlapped plants: plants designated "B&B" shall be dug with firm, moist earth. Lighting conduit shall be installed and/or adjust AFTER major trees and palms are installed and before shrubs/ground covers are installed. In-ground fixtures or other work requiring excavation, must be installed before sod, stone mulch and landscape mulch are installed. Lighting stub-ups/placements shall be reviewed approved and released by Landscape Architect before mulch, stone, ground covers or sod are installed.

B. Handling -containerized plants shall be handled by their container w/ proper support given to all parts of plant to prevent damage. Trees and palms shall only be handled w/ padded slings rated for 10x the weight of carried load. Trunks shall be wrapped min.2X prior to cinch loop. No chain, rope or padded webbing shall be used to handle trees and palms.

C. Protection During Transporting: All plant material shall be protected from possible injury or breakage of branches. Provide all necessary splints, stakes, kraft paper wrapping and sleeves to secure and protect roots, stems and foliage of plant materials during shipment. All plants transported by open trucks or sea-containers shall be adequately covered to prevent windburn, drying or damage to plants.

D. Protection After Delivery: Plants which cannot be planted immediately on delivery to the site shall be kept moist at all times and provided protection from the drying of wind and sun. All plants shall be kept moist as necessary until planted. Storage period shall not exceed 72 hours. In plants cannot be installed within 48 hours, they shall be "heeled-in" earth trench rows and maintained in healthy, viable condition until installation.

E. Protection of Palms: A minimum number of fronds shall be removed from the crown of palm trees to facilitate moving/handling. Remaining fronds shall be tied and braced if required.

F. Protection During Planting: Trees moved by winch or crane shall be thoroughly protected from chain marks, girdling or bark slippage by means of burlap, padding, wood battens or other approved methods.

G. Plants that show symptoms of bark compression, girdling or bark slippage or other damage are unacceptable.

H. Special Treatment and Handling: Sabal Palms (Cabbage Palms) shall be "hurricane cut" in the field prior to transport. Clear trunk shall be as specified after the minimum number of fronds have been removed. Sabal Palms shall be taken from moist, "black" growing areas. All field dug palms, Sabal Palm trunks shall be removed. Collected or Field Dug Specimen Palms: All field dug palms, (except-Adonidia, Cocos, Phoenix, Washingtonia, Ptychosperma, Hypophorbe sp.) palms shall be root pruned for 2 months in advance of being lifted and moved. All palms shall be watered for tree week prior to digging in the field. Heads shall have the lower 50% of fronds removed or as otherwise determined by Supplier. Heads shall be securely tied and secured before transporting. Heads shall remain tied-up until new root growth is visible or as otherwise determined by Supplier. All Palms shall have heads tied and braced during shipping & handling. Canary Date Palms shall have heads securely stabilized with 4x wood splints

3.3 PLANTING OPERATIONS:

A. Layout: The location for plants and outlines of areas to be planted are indicated on the Drawings. All plant locations shall be laid out, painted/flagged in field by the Contractor, to the satisfaction of the Landscape Architect before planting operations commence. In general, all trees, palms and accent plants shall be laid out, planted and approved by the Landscape Architect prior to the layout of shrubs/ground covers. Notify Landscape Architect and Owner for directions if site conditions requires the addition of soil over existing roots or where construction or utilities below ground or overhead are encountered, or where changes have been made in the construction - DO NOT PROCEED - Any necessary adjustments will be directed by the Landscape Architect.

B. Clearances: Shrub/hedge material shall be planted a min. of 30" (0.75 m) away from wall or other obstructions (including parking stops). Groundcover (1 gal or less) material (except sod) shall be planted 16" (10.41 m) away from pavement or edging unless otherwise noted. Vines shall be attached with copper wire to brass screws in lead anchors to walls. Make minor adjustments as may be required.

C. All planting holes shall have straight, vertical sides and flat horizontal bottoms. The diameter of a hole shall not be less than twice the diameter of the root ball or 24 inches (609.6 mm) greater than the root ball, whichever is smaller. The depth of a hole shall not be deeper than the root ball. The bottoms of planting holes shall be tamped to minimize settling.

D. Contractor shall confirm that all planting holes are free draining and percolate water. If hardpan/compacted soils, clay or rock are encountered, immediately notify Landscape Architect to determine remedial measures.

E. Backfill and Soil Amendments-Backfill shall be clean, fine, granular loamy soil unless otherwise noted. All palms shall be backfilled w/ clean, washed, salt-free sand. Clumpy or rocky soils shall be screened or replaced w/ appropriate material prior to backfilling. Refer to soil report recommendation for fertilizer type/rates. Additionally, Mycorrhizae and soil bacteria shall be added at the manufacturer's recommended rates (see 2.7c). The following minimum rates of soil mix apply: 1/2 cubic yard per tree and 1 cubic yard per 50 shrubs.

F. All plants shall be handled and installed in accordance w/ the Construction Documents and best available horticultural practices. The soil surface of the Root Collar/root ball will be 1"-2" above the final grade. Verify adequate percolation of the planting hole. Set plants straight and plumb unless otherwise noted. Select trees, palms and accents shall be leaned, oriented or faced as determined by Landscape Architect or as shown on the drawings.

G. B&B plants are set with bottom 1/3 of planting pit backfilled w/ existing site soil. Remove burlap, rope, wires, etc. from any trunk and top surface of balls. Do not remove burlap from underneath. All remaining wrapping material shall be biodegradable. No material shall encircle the trunk. Complete backfilling w/ native soil (or specified soil mix) and water thoroughly to remove voids. After planting has been completed, form a rough ground cover around each plant extending to the limits of the pit. Some wire wrapping and bundling may remain to maintain the integrity of the root ball. Review removal requirements in advance with the Landscape Architect.

H. Container Grown Plants: Shall, when delivered, have sufficient root growth to hold earth intact when removed from container and shall not be root bound. Plant pits for container materials shall be formed flat on the bottom to avoid air pockets at the bottom of root balls. Containers shall be removed carefully to prevent damage to plant or root system.

3.0 EXECUTION CONT.

I. Remediation of Root Defects - The Contractor shall inspect all plant material for root defects including but not limited to: root-bound containers; circling roots; girdling roots; sub grade, embedded root collars; adventitious roots; etc. All Root Collars shall be exposed and visible at the time of planting. Plants with two (2) or more girdling roots; plants from root-bound containers; or plants with circling roots greater than 75% of the pot circumference shall be rejected and replaced at the Contractor's expense. Plants with minor root defects shall be trimmed with clean, sanitized, sharp tools according to proper horticultural practice prior to planting. Plants shall be well watered prior to, and after, root trimming procedures. Plants that die as a result of root pruning are considered excessively defective and shall be replaced at Contractor's expense.

External Circling Roots - shear off outer 1"-2" of rootball circumference. Internal Circling Roots - radial cuts to interrupt circle, remove 2" min. section of root. Girdling Roots-cut and remove the 2" min. section of the girdling root at the surface. Root Knots - trim or remove. For more information- refer to University of Florida- IFAS Website http://hort.ufl.edu/woody/index.html

For Root management -Refer to http://hort.ufl.edu/woody/roots.html

J. Setting Trees and Shrubs: Unless otherwise specified, all trees and shrubs shall be planted in pits, centered to such depths that the finished grade level of the Root Collar, after settlement, shall be the same as, or slightly above, that at which the plant was originally grown. They shall be planted upright and faced to give the best appearance or relationship to adjacent structures. The Contractor shall be responsible to raise and re-set all plant materials where root collars are found below finish grade at their own expense.

Along slopes, a soil terrace shall be formed so that the top of the Root Collar is level with existing grade on the up-slope side. No burlap shall be pulled out from under the balls. Tree boxes, platforms, wire, lifting loops and surplus binding from top and sides of the balls, shall be removed. Some wire or binding may remain if tight and necessary for rootball integrity. Any broken and frayed roots shall be cut off cleanly. Backfill soil shall be placed and tamped thoroughly and shall be settled by watering. No filling around trunks or on top of root balls will be permitted. After the backfill settles, additional soil shall be filled in to the level of the finished grade allowing for 2" (44.1 mm) of mulch. Form a shallow saucer around each plant by digging a trough of soil along the edge of the plant pit. This trough shall be 3"-4" (75 mm) diameter and covered with mulch. Root balls shall be equipped with supplemental irrigation (bubblers).

K. Setting Palms: All palms shall be planted in sand thoroughly washed in during planting operations and with a shallow saucer depression left at the soil line for future watering.

L. Backfilling: When the plant pit has been excavated as specified above and the plant has been set, the pit shall be backfilled with clean soil mix. All backfill shall be watered thoroughly to settle and consolidate soil and eliminate voids. Provide a shall trough around the outside of the rootball for water retention. Tops of all rootballs shall be left exposed and free of soil backfill materials. Do not distribute any excess soil in any existing planted bed.

M. Pruning: Remove dead/broken branches from all plant material. Thin out internal branching and prune to retain type, growth habit of individual species with as much height and spread as is practicable. Make all pruning cuts with a sharp instrument next to branch collar to ensure elimination of stubs. Headback" or "Hat Rack" cuts, right angle to line of growth, will not be permitted.

N. Guying and Staking: Guy and stake all trees, including palms, immediately after planting. Trees less than 1 1/2" (38.1 mm) in caliper shall be staked with vertical wood or metal stakes along the trunk. Stake shall be driven through the root ball and embed 12" min. into sub-grade. Attach tree trunk to the stake with 3/4" width elastic pruning tape. Double wrap trunk to avoid chaffing. Tie firmly, but not tightly to the stake. Stake shall be cut off at least 12" below the top of the plant. Trees 1 1/2" (38.1 mm) in caliper and greater but less than 12" OA shall be guyed in 3 directions with double strands of No.12 galvanized wire (or rated woven polyethylene webbing) attached to approved stakes or anchors driven into ground and secured with wire to trees, cover all wires which may come in contact with any part of tree with new rubber hose. Place guys and braces not less than 1/3 of the height of tree above finished grade and above substantial limbs 1 inch (25.4 mm) in diameter or more. Ground Stakes shall be clearly marked with high contrast fluorescent paint. Trees over 12' OA shall be braced with new lumber per staking detail. Provide stained where noted. Ground Stakes shall be clearly marked with high contrast fluorescent paint.

O. Staking and Bracing: When staking palms and broadleaf trees, no nails or fasteners shall directly penetrate the trunks. Wood battens: 12" -16" min (304-406 mm) min. length; separated from trunk by burlap; attached to the trunk of the trees with galvanized or stainless steel metal banding. Stakes and battens shall be sufficient diameter to support the weight of the tree. Alternate methods of guying or staking may be employed with the prior approval by Landscape Architect. Ground Stakes shall be clearly marked w/ high contrast fluorescent paint.

P. Mulching: All trees and shrub beds shall be mulched immediately after acceptance of the planting bed by the Landscape Architect. Mulch shall be applied to a 3" (76.2 mm) depth, with a mulch as specified. Prevent wind displacement of mulch by thoroughly wetting down. Do not apply any mulch against stems and trunks of plants.

Q. Annual/seasonal color beds: Remove 8" to 10" (254 mm) of soil and replace with planting soil mixture consisting of Annual Planting Soil Mix per Section