Tree Resource Evaluation for Proposed Miami Beach convention Center Hotel Site

Prepared for:

ArquitectonicaGeo

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January 6, 2019

Summary

I performed a tree resource evaluation on the property located to the north of 17th Street and east of Convention Center Drive in Miami Beach also known as the Proposed Miami Beach Convention Center Hotel Site on January 3, 2019. The approximate locations of these trees and palms can be found on the schematic in Appendix B.

The evaluation in Appendix A includes tree and palm measurements, condition rating and recommended radius of the tree protection zone (TPZ) for each tree and palm.

I rated the trees and palms in accordance with ANSI A300 (Part 5) – 2005, Annex A, Management Report Information. Trees and palms are rated Good, Moderate or Poor, see Appendix C. I recommend the removal of trees and palms that I rate as Poor.

I also followed the Levels and Scope of Tree Risk Assessment from the ANSI A300 Part 9- 2017: Levels of tree risk assessment; Level 1 limited visual tree risk assessment, Level 2 basic tree risk assessment, and Level 3 advanced tree risk assessment. The scope of this report/evaluation was limited to a Level 2 Assessment for all trees onsite.

To perform all measurements I used a forestry diameter measuring tape and a measuring wheel. I rounded-off to the nearest inch when measuring trunk diameter, heights and canopy diameters are approximate.

Protective barriers must be placed and maintained around remaining trees and palms during construction. A schematic for tree protection during construction from the Miami-Dade County Landscape Manuel can be found in Appendix D.

Appendix E contains the ANSI A300 definitions of Tree Protection Zone (TPZ) and Critical Root Zone (CRZ). The TPZs that I have assigned to the trees and palms on this site are sufficient to maintain CRZs for these trees and palms as well as the TPZs. The TPZ and CRZ for trees and palms will be adjusted on the sides that are adjacent to roadway with curbs and sidewalks, to the outer edges

of those curbs and sidewalks nearest the tree or palm. There is no adjustment when asphalt without a concrete curb is adjacent to the tree or palm.

Any trees to remain onsite or in the right-of-way should have their canopies cleared of dead wood and hazardous branches by an ISA Certified Arborist.

The majority of trees on this site are in very root restricting planters at grade. If the tree is rated in poor condition, I recommend its removal.

Photos below

The color and brightness on some photos has been adjusted to provide contrast and clarity to the subject matter. This follows the Basic section on Enhancement Techniques found in Section 11, Best Practices for Documenting Image Enhancement in a document produced by SWGIT Scientific Working Group Imaging Technology, www.SWGIT.org.

Photo 1 above is palm 1 and tree 2 viewed from the east. Palm 1 has only a single trunk. Tree 2 as indicated by the circle has a very weak trunk/main branch connection.

Photo 2 above is tree 2 and as indicated by the circle has a very weak trunk/main branch connection.

Photo 3 above is palm 3 viewed from the west. Palm 1 appears to have been damaged and had trunks removed.

Photo 4 above is tree 4 with the circle indicating a very weak trunk/main branch connection, and tree 5 viewed from the west.

Photo 5 above is tree 6 viewed from the west.

Photo 6 above is tree 6 viewed from the south.

Photo 7 above is trees 7 & 8 viewed from the west.

Photo 8 above is tree 9 viewed from the east. There is some small branch die-back in the canopy.

Photo 9 above is tree 10 viewed from the south.

Photo 10 above is palm 11 viewed from the north.

Photo 11 above is tree 12 viewed from the west.

Photo 12 above is palm 13 viewed from the north.

Photo 13 above is palms 14 & 15 viewed from the north.

Photo 14 above is palms 15 & 17 and tree 16 viewed from the north.

Photo 15 above is a closer view of tree 16 from the east. This tree is developing a severe nutrient deficiency.

Photo 16 above is tree 18 viewed from the south.

Photo 17 above is tree 19 viewed from the north. This tree has poor branch structure.

Photo 18 above is trees 20 & 21 viewed from the southwest.


22

Photo 19 above is tree 22 viewed from the south. The circle indicates significant damage and decay to the trunk. See following photo. This tree should be removed immediately.

Photo 20 above is a closer view of the damaged and decaying trunk of tree 22. This tree should be removed immediately.

Photo 21 above is trees 22, 23 & 24 with small branch die-back and a weak trunk/main branch connection on tree 24.

Photo 22 above is trees 25 & 26 viewed from the west.

Photo 23 above is tree 27 viewed from the west.

Photo 24 above is tree 28 with a weak trunk/main branch structure indicated via the circle. There is also small branch die-back in the canopy of this tree.

Photo 25 above is Crape myrtles 29 & 30. Both trees appear to have dropped their foliage although they are not dead. Tree 30 has its trunks wrapped with burlap. I rated these trees as moderate since they dropped their foliage but will most likely regrow new foliage.

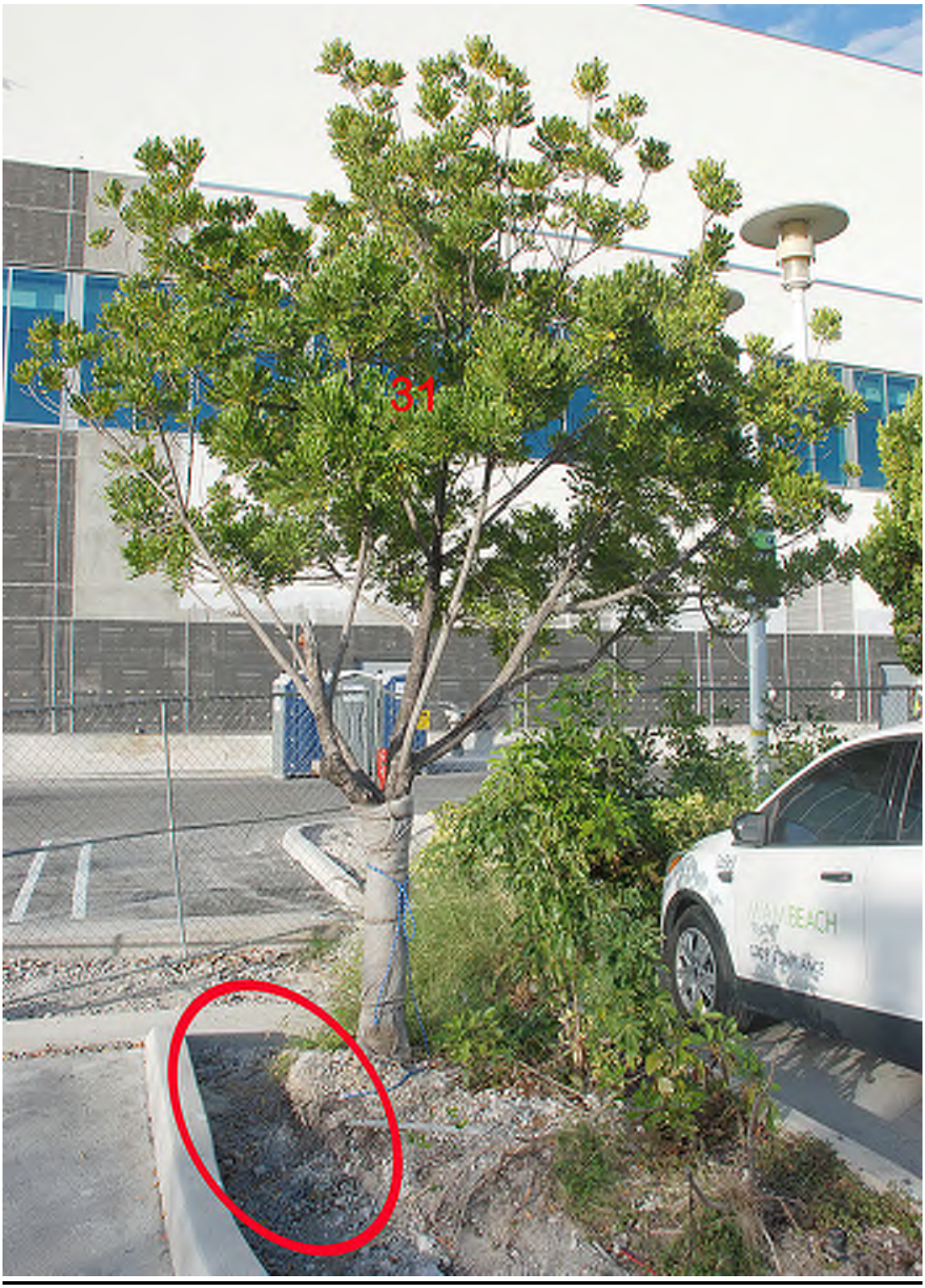


Photo 26 above is tree 31 viewed from south. A significant number of roots have been removed and left to dry-out.

Photo 27 above is trees 32 & 33 viewed from the south.

Photo 28 above is tree 34 viewed from the south.

Photo 29 above is tree 35 with what appears to be normal seasonal canopy foliage loss.

Photo 30 above is tree 36 with apparent soil compaction damage from construction, and sparse foliage.

Photo 31 above is trees 37 & 42 with what appears to be normal seasonal canopy foliage loss, and tree 38.

Photo 32 above is tree 39 viewed from the south.

Photo 33 above is trees 40 & 41 viewed from the south.

Photo 34 above is tree 42 with what appears to be normal seasonal canopy foliage loss.

Photo 35 above is tree 43 viewed from the north. See following photo.

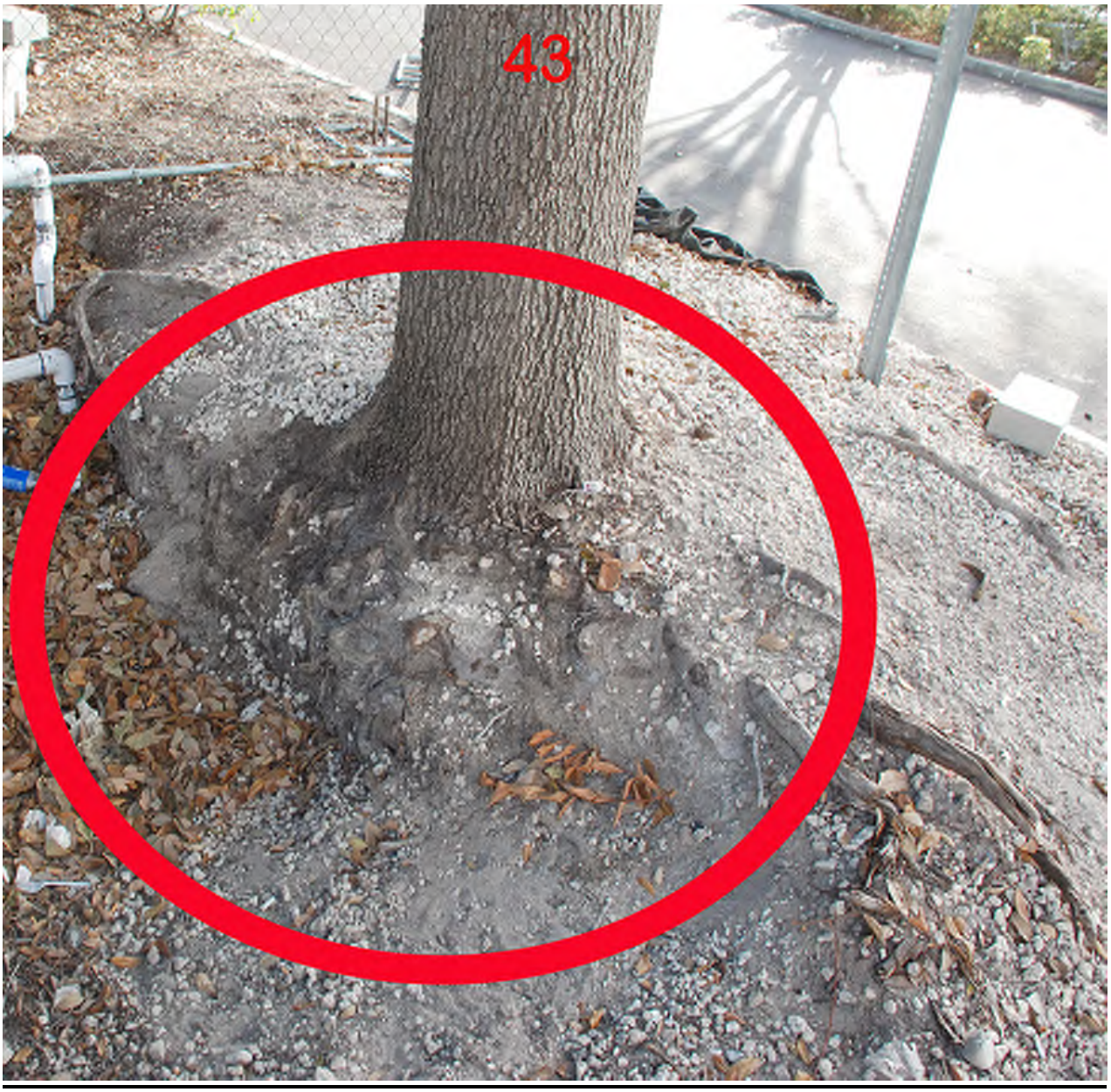


Photo 36 above shows where the entire root mass of tree 43 to the east of the trunk was removed. This tree should be immediately stabilized, and is not a good candidate for relocation.

Photo 37 above is tree 44 viewed from the southwest.

Photo 32 above is tree 45 showing signs of canopy die-back, and is not a good candidate for relocation. Tree 46 appears to be in good condition.

Photo 33 above is a group of areca palms with all their trunks over-pruned. All are in poor condition.

Photo 34 above is a group of areca palms with their trunks over-pruned. All are in poor condition.

Photo 35 above is a group of mostly Thrinax palms or hybrids. All are in good condition.

Photo 36 above is a group of mostly Thrinax palms or hybrids. All are in good condition.

Photo 37 above is a view of palms 67 & 68.

Photo 38 above is tree 69 viewed from the west.

Photo 39 above is the trunk and main structural branches of tree 69 viewed from the northwest.

Photo 40 above is tree 70 viewed from the northwest.

Photo 41 above is the trunk and main structural branches of tree 70 viewed from the west. The arrow indicates where a branch had torn-off.

Photo 42 above is palms 71, 72 & 73.

Photo 43 above is tree 74 viewed from the west.

Photo 44 above is the west side of the trunk of tree 74 with cavities and some decay indicated. This tree is likely missing substantial root mass on the north side of the tree due to the adjacent sidewalk which shows no significant signs of uplift due to root activity.

Photo 45 above is tree 74 & palm 74a viewed from the northeast.

Photo 46 above is palm 75 viewed from the west.

Photo 47 above is tree 70 and a group of Thrinax palms viewed from the south. Palms 76 & 80 have double trunks.

Photo 48 above is tree 81 viewed from the west. See following photo for close-up of trunk damage.

Photo 49 above is a closer view of the damaged trunk of tree 81. This tree should be removed.

Photo 50 above is tree 82 viewed from the east.

Photo 51 above is palm 83 and tree 82 viewed from the west.

Photo 52 above is a clump of pygmy date palms viewed from the west.

Photo 53 above is a clump of pygmy date palms viewed from the east.

Photo 54 above is tree 92 viewed from the west. This is a good candidate for relocation.

Photo 55 above is tree 93 viewed from the west. This tree is a good candidate for relocation.

Photo 56 above is the trunk and main structural branches of tree 93 viewed from the east.

Photo 57 above is tree 94 viewed from the west. This tree is in poor condition and should be removed.

Photo 58 above is tree 95 viewed from the west.

Appendix – A – Measurements and condition rating

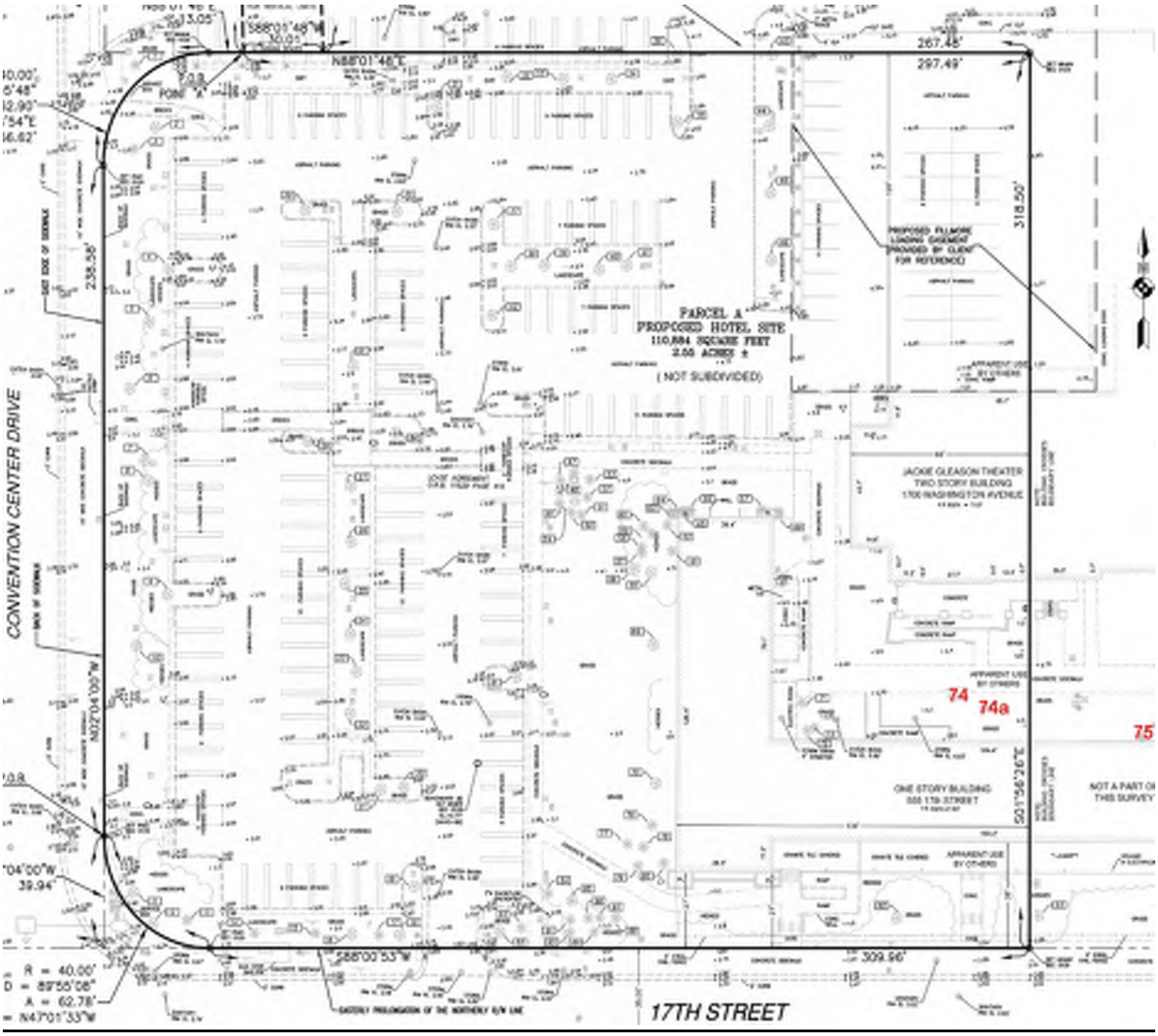
	Scientific name	Common name	DBH	H/Ct	Canopy	Condition	TPZ
1	Phoenix reclinata	Senegal date palm	5"	18'	12'	Moderate	5'
2	Chrysophyllum oliviforme	Satin leaf	7"	14'	14'	Poor	
3	Phoenix reclinata	Senegal date palm	37"	20'	25'	Good	5'
4	Bulnesia arborea	Verawood	17"	20'	20'	Moderate	8'
5	Bulnesia arborea	Verawood	11"	18'	15'	Good	5'
6	Tabebuia chrysantha	Yellow tabebuia	18"	18'	40'	Good	15'
7	Bulnesia arborea	Verawood	6"	18'	15'	Moderate	4'
8	Tabebuia heterophylla	Pink trumpet tree	7"	20'	15'	Moderate	4'
9	Bulnesia arborea	Verawood	8"	14'	15'	Moderate	4'
10	Bulnesia arborea	Verawood	10"	20'	20'	Good	4'
11	Phoenix reclinata	Senegal date palm	28"	18'	25'	Good	4'
12	Plumeria rubra	Frangipani	5"	14'	12'	Good	4'
13	Phoenix reclinata	Senegal date palm	27"	14'	28'	Good	4'
14	Roystonea regia	Royal palm	20"	25'	20'	Good	4'
15	Roystonea regia	Royal palm	18"	28'	22'	Good	4'
16	Ilex cassine	Dahoon holly	22"	14'	15'	Moderate	6'
17	Roystonea regia	Royal palm	18"	22'	22'	Good	4'
18	Ilex cassine	Dahoon holly	10"	14'	20'	Moderate	4'
19	Filicium decipiens	Japanese fern tree	13"	18'	20'	Moderate	4'
20	Filicium decipiens	Japanese fern tree	8"	15'	15'	Moderate	4'
21	Filicium decipiens	Japanese fern tree	12"	12'	15'	Moderate	4'
22	Bulnesia arborea	Verawood	10"	28'	25'	Poor	
23	Bulnesia arborea	Verawood	4"	12'	10'	Good	3'
24	Bulnesia arborea	Verawood	3"	10'	9'	Poor	
25	Tabebuia heterophylla	Pink trumpet tree	9"	25'	18'	Good	4'
26	Tabebuia heterophylla	Pink trumpet tree	8"	22'	18'	Moderate	4'
27	Tabebuia heterophylla	Pink trumpet tree	8"	22'	20'	Moderate	4'
28	Filicium decipiens	Japanese fern tree	26"	14'	24'	Poor	
29	Lagerstroemia indica	Crape myrtle	28"	20'	20'	Good	6'
30	Lagerstroemia indica	Crape myrtle	31"	20'	20'	Good	6'
31	Filicium decipiens	Japanese fern tree	11"	15'	16'	Poor	
32	Coccoloba diversifolia	Pigeon plum	21"	18'	18'	Good	6'
33	Coccoloba diversifolia	Pigeon plum	7"	15'	15'	Good	4'
34	Coccoloba diversifolia	Pigeon plum	5"	15'	12'	Good	4'
35	Lagerstroemia indica	Crape myrtle	42"	22'	18'	Good	6'
36	Filicium decipiens	Japanese fern tree	15"	15'	15'	Poor	
37	Lagerstroemia indica	Crape myrtle	38"	18'	22'	Good	6'
38	Ilex cassine	Dahoon holly	11"	15'	12'	Poor	

39	Ilex cassine	Dahoon holly	8"	16'	18'	Moderate	4'
40	Ilex cassine	Dahoon holly	17"	18'	15'	Moderate	6'
41	Ilex cassine	Dahoon holly	9"	20'	13'	Good	6'
42	Lagerstroemia indica	Crape myrtle	34"	16'	20'	Good	6'
43	Quercus virginiana	Live oak	16"	25'	35'	Poor	
44	Quercus virginiana	Live oak	16"	28'	30'	Good	10'
45	Quercus virginiana	Live oak	10"	25'	25'	Moderate	8'
46	Quercus virginiana	Live oak	14"	28'	35'	Good	10'
47	Dypsis lutescens	Areca palm	35"	10'	16'	Poor	
48	Dypsis lutescens	Areca palm	6"	12'	0'	Dead	
49	Dypsis lutescens	Areca palm	33"	14'	15'	Poor	
50	Dypsis lutescens	Areca palm	8"	15'	10'	Poor	
51	Dypsis lutescens	Areca palm	18"	15'	10'	Poor	
52	Dypsis lutescens	Areca palm	36"	17'	18'	Poor	
53	Dypsis lutescens	Areca palm	16"	14'	12'	Poor	
54	Not onsite						
55	Thrinax radiata	Thatch palm	5"	10'	12'	Good	3'
56	Thrinax radiata	Thatch palm	4"	22'	6'	Good	3'
57	Thrinax radiata	Thatch palm	3"	8'	8'	Good	3'
58	Thrinax radiata	Thatch palm	5"	8'	8'	Good	3'
59	Thrinax radiata	Thatch palm	6"	12'	10'	Good	3'
60	Thrinax radiata	Thatch palm	5"	10'	8'	Good	3'
61	Thrinax radiata	Thatch palm	5"	22'	6'	Good	3'
62	Thrinax radiata	Thatch palm	5"	22'	5'	Good	3'
63	Cocothrinax species		5"	6'	4'	Good	3'
64	Thrinax radiata	Thatch palm	3"	22'	4'	Good	3'
65	Thrinax radiata	Thatch palm	3"	22'	4'	Good	3'
66	Thrinax radiata	Thatch palm	3"	22'	4'	Good	3'
67	Thrinax radiata	Thatch palm	6"	12'	10'	Good	3'
68	Thrinax radiata	Thatch palm	5"	7'	8'	Good	3'
69	Calophyllum inophyllum	Beauty leaf	54"	35'	70'	Good	25'
70	Calophyllum inophyllum	Beauty leaf	45"	35'	60'	Good	25'
71	Ptychosperma elegans	Solitare palm	3"	15'	10'	Good	3'
72	Ptychosperma elegans	Solitare palm	2"	18'	6'	Good	3'
73	Ptychosperma macarthurii	Macarthur palm	21"	22'	18'	Good	3'
74	Coccoloba uvifera	Seagrape	42"	30'	45'	Moderate	18'
74a	Adonidia merrillii	Christmas palm	6"	22'	8'	Good	3'
75	Adonidia merrillii	Christmas palm	5"	12'	8'	Good	3'
76	Thrinax radiata	Thatch palm	6"	15'	12'	Good	**3'**
77	Thrinax radiata	Thatch palm	3"	18'	10'	Good	3'
78	Thrinax radiata	Thatch palm	4"	18'	10'	Good	3'

79	Thrinax radiata	Thatch palm	4"	18'	8'	Good	3'
80	Thrinax radiata	Thatch palm	7"	15'	14'	Good	3'
81	Capparis cynophallophora	Jamaican caper	10"	14'	14'	Poor	
82	Ilex cassine	Dahoon holly	10"	15'	12'	Moderate	5'
83	Roystonea regia	Royal palm	17"	25'	22'	Good	5'
84	Phoenix roebelenii	Pygmy date palm	3"	8'	6'	Good	3'
85	Phoenix roebelenii	Pygmy date palm	4"	8'	8'	Good	3'
86	Phoenix roebelenii	Pygmy date palm	4"	8'	8'	Good	3'
87	Phoenix roebelenii	Pygmy date palm	4"	8'	8'	Good	3'
88	Phoenix roebelenii	Pygmy date palm	5"	7'	10'	Good	3'
89	Phoenix roebelenii	Pygmy date palm	4"	6'	8'	Good	3'
90	Phoenix roebelenii	Pygmy date palm	4"	8'	8'	Good	3'
91	Phoenix roebelenii	Pygmy date palm	4"	9'	6'	Good	3'
92	Swietenia mahagoni	Mahogany	10"	28'	28'	Good	15'
93	Swietenia mahagoni	Mahogany	25"	35'	55'	Good	18'
94	Quercus virginiana	Live oak	8"	24'	25'	Poor	
95	Tabebuia heterophylla	Pink trumpet tree	10"	28'	16'	Good	8'

- **TPZ is the radius of the tree protection zone. The measurement is from the outside of the trunk.**
- **The TPZs that I have assigned to the trees on this site are sufficient to maintain CRZs for these trees as well as the TPZs.**
- **I recommend the removal of trees and palms that I rated to be in poor condition.**
- **Canopy diameter is measured in one direction**
- **The "H/Ct" column denotes approximate overall height for trees and approximate clear trunk or gray wood for palms.**

Appendix – B - Approximate locations of trees and palms onsite.



Appendix – C

ANSI A300 (Part 5) - 2005, Annex A

Management report information

Examples of suitability ratings

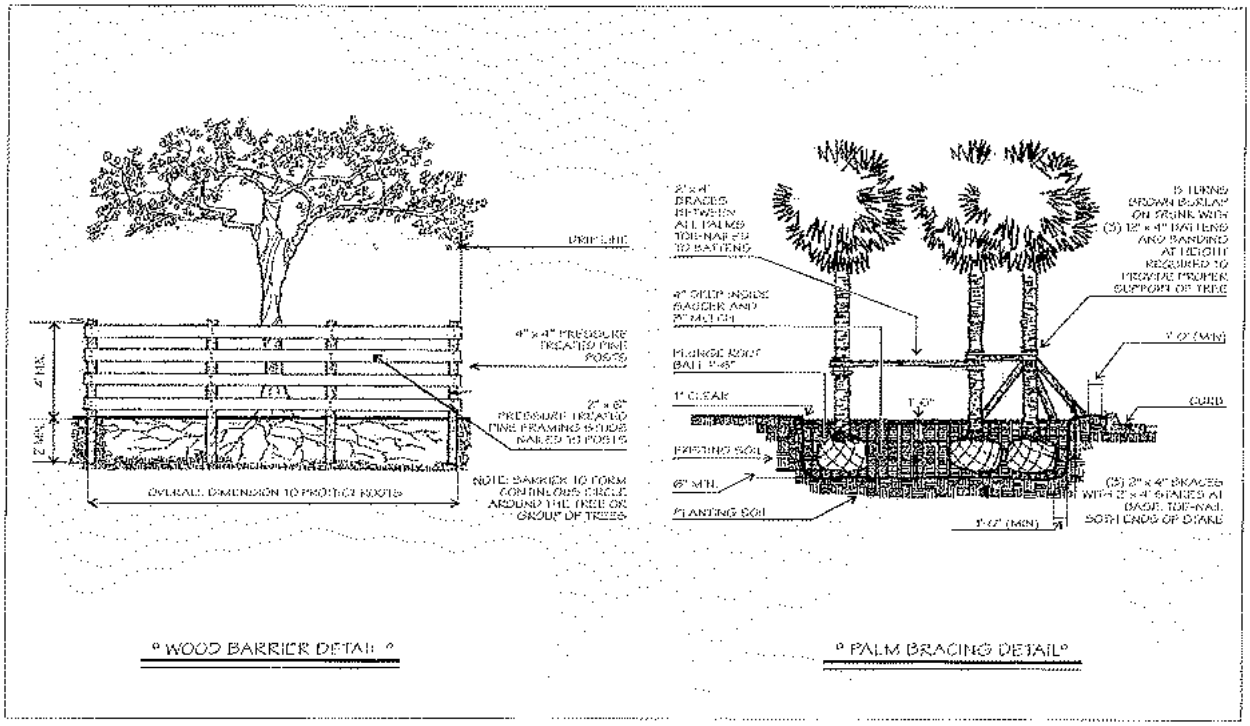
Good: These are trees with good health and structural stability that have the potential for longevity at the site.

Moderate: Trees in this category have fair health and/or structural defects that may be abated with treatment. Trees in this category require more intense management and monitoring, and may have shorter life-spans than those in the "good" category.

Poor: Trees in this category are in poor health or have significant defect s in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas.

Appendix – D –– Schematic for tree protection during construction from the Miami-Dade County Landscape Manuel

TREE PROTECTION AND SUPPORT



° WOOD BARRICK DETAIL °

° PALM BRACING DETAIL°

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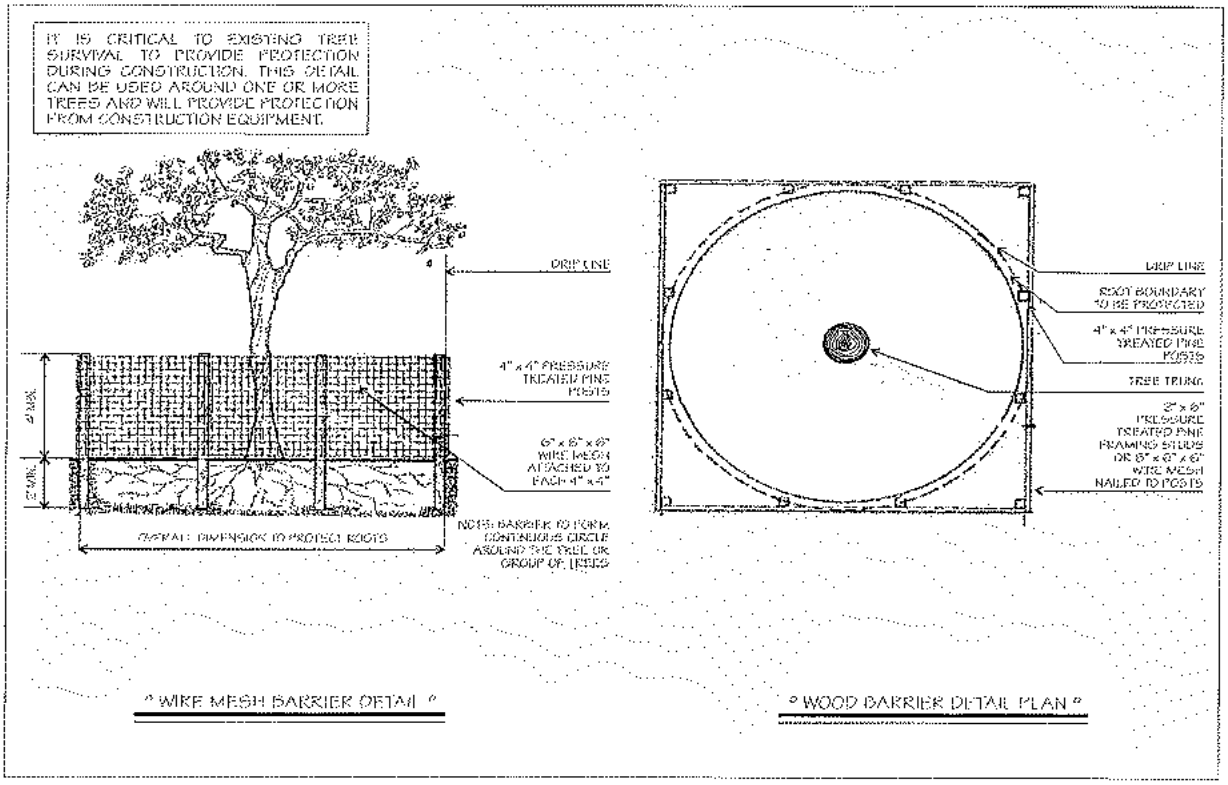
TREE PROTECTION AND SUPPORT



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Appendix – E – Critical Root Zone and Tree Protection Zone

ANSI A 300 (Part 5) – 2012 Management of Trees and Shrubs during Site Planning, Site Development and Construction

Critical Root Zone (CRZ): The minimum volume of roots necessary to have for tree health and stability.

Tree Protection Zone (TPZ): The area surrounding a tree defined by a specified distance, in which excavation and other construction – related activities should be avoided. The TPZ is variable depending on species, factors, age and health of the plant, soil conditions, and proposed construction. The zone may be accomplished by physical barriers or soil protection layers or treatments.

ANSI A300 (Part 5) – 2012 54.7

A tree protection zone (TPZ) shall be delineated around all trees to be protected during a project

- **54.7.1 The area and dimensions of the TPZ should be calculated on the basis of species tolerance, age, and health, root structure, rooting depth and soil conditions.**

Appendix – F – Assumptions and Limiting Conditions

Tropical Designs of Florida, Inc.
Arboricultural and Horticultural Consulting
Qualifications, Assumptions, and Limiting Conditions

Any legal description provided to the consultant is assumed to be correct. Any titles or ownership of properties are assumed to be good and marketable. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

All property is presumed to be in conformance with applicable codes, ordinances, statutes, or other regulations.

Care has been taken to obtain information from reliable sources. However, the consultant cannot be responsible for the accuracy of information provided by others.

The consultant shall not be required to give testimony or to attend meetings, hearings, conferences, mediations, arbitrations, or trials by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services.

This report and any appraisal value expressed herein represent the opinion of the consultant, and the consultant's fee is not contingent upon the reporting of a specified appraisal value, a stipulated result, or the occurrence of a subsequent event.

Sketches, drawings, and photographs in this report are intended for use as visual aids, are not necessarily to scale, and should not be construed as engineering or architectural reports or surveys. The reproduction of information generated by architects, engineers, or other consultants on any sketches, drawings, or photographs is only for coordination and ease of reference. Inclusion of said information with any drawings or other documents does not constitute a representation Tropical Designs of Florida, Inc. as to the sufficiency or accuracy of said information.

Unless otherwise expressed: a) this report covers only the examined items and their condition at the time of inspection: and b) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that structural problems or deficiencies of plants or property may not arise in the future.

Appendix – G - Certification of Performance

Tropical Designs of Florida, Inc.
Arboricultural and Horticultural Consulting

I, Jeff Shimonski, certify:

- That I have personally inspected the trees and/or the property referred to in this report, and have stated my findings accurately. The extent of the evaluation is stated in the attached report;
- That I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved;
- That the analysis, opinions, and conclusions stated herein are my own;
- That my analysis, opinions, and conclusions were developed and this report has been prepared according to commonly accepted arboricultural practices;
- That no one provided significant professional assistance to the consultant, except as indicated within the report;
- That my compensation is not contingent upon the reporting of a predetermined conclusion that favors the cause of the client or any other party.

I further certify that I am a member of the American Society of Consulting Arborists and acknowledge, accept, and adhere to the ASCA Standards of Professional Practice. I am an International Society of Arboriculture Certified Municipal Arborist FL-1052AM, am ISA Tree Risk Assessment Qualified and have been involved in the practice of arboriculture and the study of trees for over forty five years.

Signed: Jeff Shimonski

Dated: *January 6, 2019*