

STAFF REPORT

DATE: November 3, 2022

RE: 1801 White Street (Landscape Sec 108 Review)

FROM: Karen DeMaria, City of Key West Urban Forestry Manager 

An application was submitted to the Planning Board for a major development plan review to construct a new structure. The new structure will be built in front of the existing structure so that the Key West Wildlife Center can remain in operation. Once the new structure has been built, the old structure will be demolished. The project is located on property that is an existing public park area called the Sonny McCoy Indigenous Park. This review is to verify compliance to Sec 108 of the City Code regarding landscaping and buffer requirements to help the Planning Board with their review.

This review is based on site and landscape plans submitted to the Urban Forestry Manager dated September 12, 2022.

Review of Section 108:

1. Sec 108-243, plans: Signed and sealed landscape plans have been submitted that include a tree protection plan. No formal irrigation plan has been submitted but notes on the landscape plan indicate a watering plan using watering bags and volunteers.
2. Sec 108-289, land clearing: The project requires the transplanting of 6-Thatch Palms (#5, #6, #11, #12, #18, & #19), 4-Coconut Palms (#1, #2, #2, & #10), 1-Latania Palm (#7), 2-Gumbo Limbo (#13 & #16), 2-Silver Buttonwood (#4 & #14), & 1-Green Buttonwood (#20). Two juvenile pigeon plum and a juvenile strangler fig tree growing on a rock will also be transplanted. All proposed transplants will be held in a staging area on site until ready to be planted in their new locations once construction and demolition has been completed. Existing canopy trees will also need to be trimmed prior to construction and demolition.

The proposed transplanting and conceptual landscape plan for this project was reviewed and approved by the Tree Commission on October 4, 2022.

This project is located on a large parcel called Indigenous Park and is located in the northwest corner of the park property. The park area will not be impacted by the proposed construction which will be occurring in front of the existing structure immediately next to an established parking lot area.

3. Sec 108-346, open space and exotic vegetation: The required open space is 20%. Information submitted indicates the open space will be 65% once this building is constructed and the old one demolished.

The property owner will need to agree to remove invasive exotic plant species, Australian Pine-Casuarina equisetifolia, Brazilian Pepper-Schinus terebinthifolia, Lead Tree-Leucaena leucocephala, and Seaside Mahoe-Thespesia populnea, from the lease area.

4. Sec 108-347, bufferyards: The existing use of the property is a public park (municipal). The entire parcel is bounded by single family residential to the north and streets to the east, south, and west (Stevens Avenue, Atlantic Blvd, and White Street).

Key West Wildlife Center leases a portion of the park. This lease area is bounded by the main park-tree area to the east, park-recreation to the south (bocce courts), a parking lot and White Street to the west, and single family residences to the north.

There is an existing bird rescue facility on the site. The proposed impact from the construction of this new building will be a medium impact due to the height of the structure and lighting to the residential area to the north.

Along the northern property-lease boundary area, City Code requires 37 plant units per 100 liner feet and an opaque fence, therefore, approximately 50 plant units are required to be planted in this buffer area. The proposed landscape plan proposes to plant (10) new Spanish stopper trees for a total of 50 plant units and there is an existing concrete fence/wall along this property line area. Any native or indigenous vegetation currently located in this area is to remain.

5. Sec 108-348, credit for existing plant vegetation and Sec 108-352, reducing landscape or buffer requirements: The main parcel is a public park with a significant amount of native and indigenous vegetation.
6. Sec 108-381, landscape plan: A landscape plan has been submitted that enhances the existing, immediate area and rescues/transplants existing indigenous and native trees.
7. Sec 108-411, landscape plan approval: The Tree Commission gave conceptual landscape plan approval for the project on October 4, 2022. If no significant changes are made to the plans, approval has been given by the Tree Commission for the urban forestry manager to review and give final landscape plan approval.
8. Sec 108-412, minimum landscape requirements: City code requires at least 20% of the area will be landscaped. At this time, the actual percentage of landscape area is not known but reviewing aerial photos, more than 50% of the property is covered in vegetation.

The proposed construction work area is currently a disturbed area. Minimal new landscaping is being installed to enhance the northern buffer and the front public entrance area. Existing indigenous trees and palms will be transplanted to other areas within the proposed work zone. The vegetation involved with the landscape plan does incorporate over 70% native vegetation. The existing lease with the Key West Wildlife Center requires maintenance of the vegetation in the lease area.

9. 108-413, landscape requirement along street frontages: The main parcel is surrounded by streets on the east and south side and a parking lot and street to the west. No buffer plantings are required for the east and south boundary areas as per section 108-348 and 352.1. The western lease area abuts an existing parking lot.
10. Sec 108-414, interior parking areas: Along the western property line there is a public parking area that incorporates trees, shrubs and an interior landscape strip.
11. Sec 108-415 perimeter parking areas: not applicable.

12. Sec 108-416, interior area landscaping. This section of code specifically looks at the planting of trees and requires that all areas not covered by buildings or hardscape will have grass, groundcover, shrubs or other landscaping materials.

The site is a current developed site and public park area. Numerous, canopy trees currently exist in the area. Non vegetative areas not covered with hardscape are proposed to have sod installed.

13. Sec 108-447, protection of plant material: The landscape plan does include a tree protection plan.
14. Sec 108-448, required coverage: It does appear that all landscape strips are covered with living material, mulch, or grass.
15. Sec 108-451, credit for existing trees: The larger parcel is a public park with a significant amount of existing trees. The lease area is a wildlife rescue area with numerous trees. Credit is being given for the existing conditions of the property.
16. Sec 108-515: A formal irrigation plan has not been submitted. A note on the landscape plans proposes the use of a tree gator watering bag system and the use of volunteers to water the installed and transplanted vegetation until they become established.

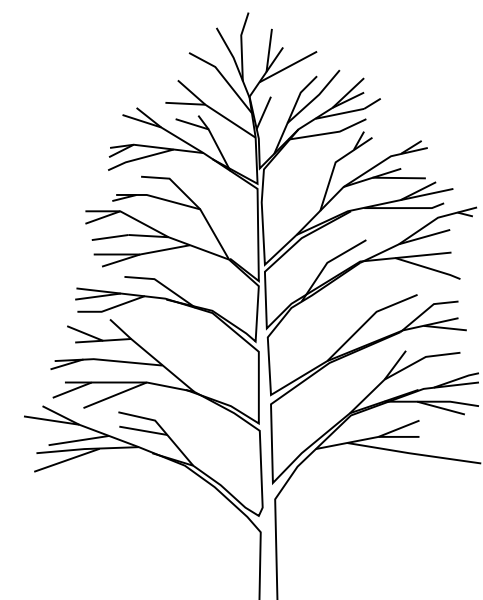
Waiver required

Conditions:

1. **Final Landscape Plan approval required from Urban Forestry Manager (memo into file).**
2. **Once a year, all listed invasive plant species (Australian Pine-Casuarina equisetifolia, Brazilian Pepper-Schinus terebinthifolia, Lead Tree-Leucaena leucocephala, and Seaside Mahoe (Thespesia populnea) shall be removed from the site. Stumps should be treated with an appropriate herbicide type treatment to prevent regrowth.**
3. **Permits to transplant the trees/palms will not be issued until applications have been submitted to the building department. At the same time, an application must be submitted with the appropriate fee to the urban forestry manager for processing of the tree permits.**



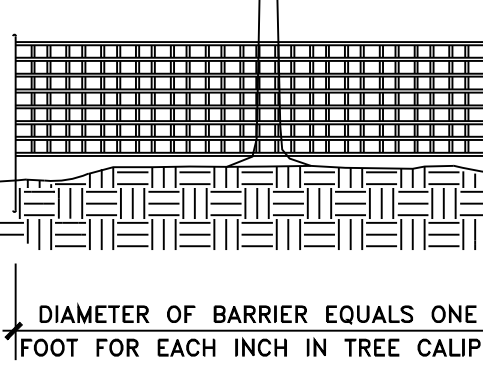
Karen DeMaria
Urban Forestry Manager
City of Key West



FENCE: BARRIER FENCING TO BE 4" SAFETY ORANGE COPOLYMER OR CHAIN LINK WITH WIRE TIES TO POSTS

POST: RANGE GRADE 6" T-POST, MAX. 6' BETWEEN POSTS

BARRIER TO BE EQUAL ON ALL SIDES OF TREE UNLESS NOTED OTHERWISE



BARRIER TO REMAIN COMPLETELY INTACT AND IN PLACE THROUGH ALL PHASES OF CONSTRUCTION

BARRIER TO BE NO LESS THAN 6" FROM THE TRUNK OF THE PROTECTED TREE

DIAMETER OF BARRIER EQUALS ONE FOOT FOR EACH INCH IN TREE CALIPER

NOTE: NO MATERIALS, TRAILERS, EQUIPMENT OR CHEMICALS SHALL BE STORED, OPERATED DUMPED, BURIED OR BURNED WITHIN THE PROTECTED AREAS.

TREE PROTECTION DETAIL

GENERAL NOTES:
ALL EXISTING TREES / PALMS FLAGGED TO REMAIN ARE TO BE PROTECTED WITH TREE PROTECTION BARRICADES DURING THE FULL DURATION OF CONSTRUCTION. (SEE DETAIL).

LIMITS OF CONSTRUCTION ARE SOLELY WITHIN THE PROPERTY LINE BOUNDARIES OF THE PROJECT PROPERTY AND AS DEFINED BY THE CIVIL PLANS.

DRAINAGE: SEE CIVIL PLANS.

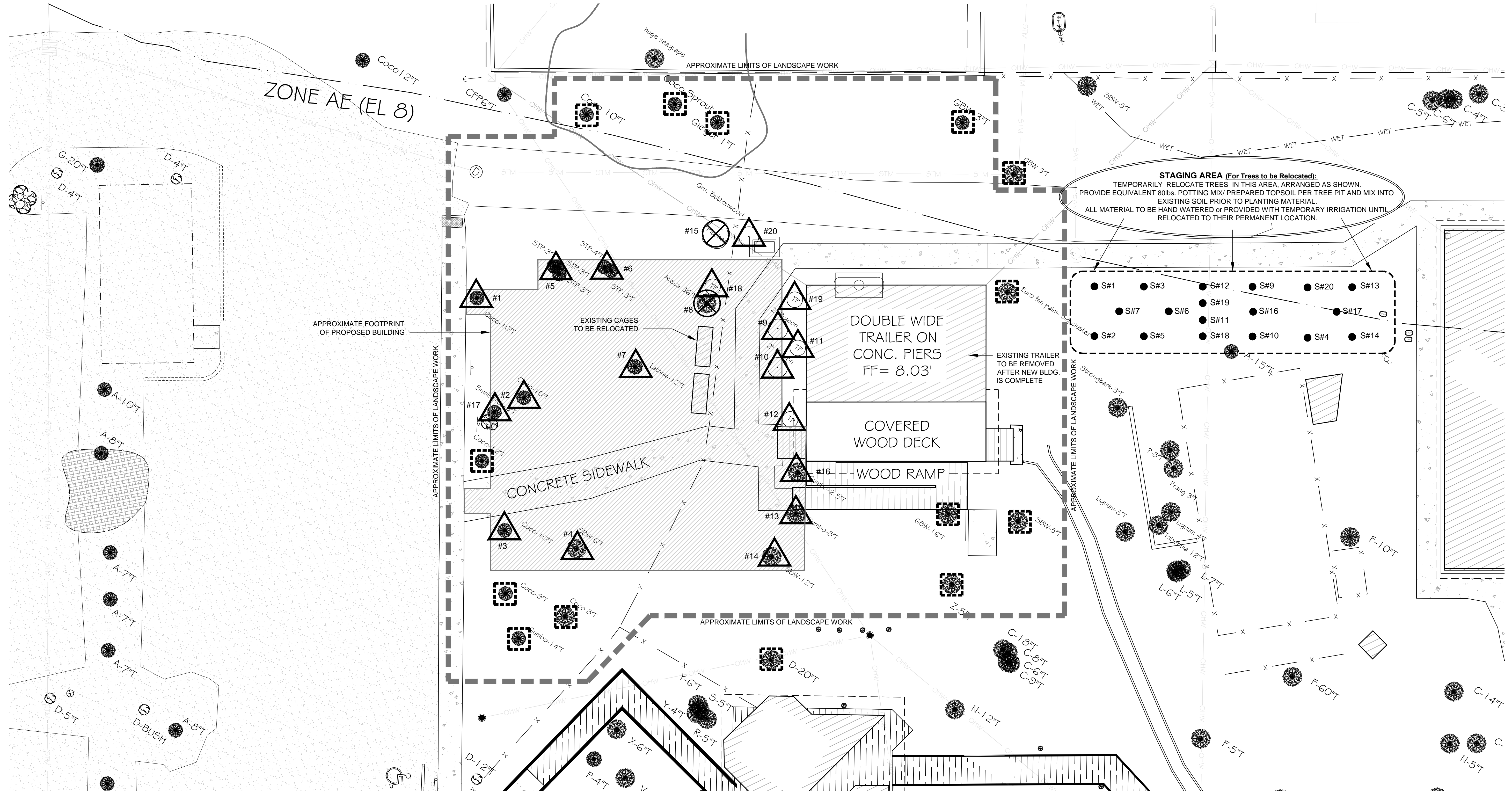
TREE / PALM REMOVAL

- 12" TREE EXISTING TREE
- ⊗ 12" TREE TREE TO BE REMOVED
- △ 12" TREE EXISTING TREE TO BE RELOCATED
- ⊠ 12" TREE TREE TO REMAIN WITH BARRICADE SEE DETAIL THIS PAGE



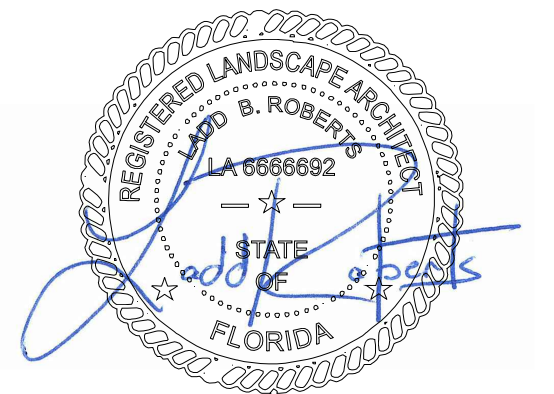
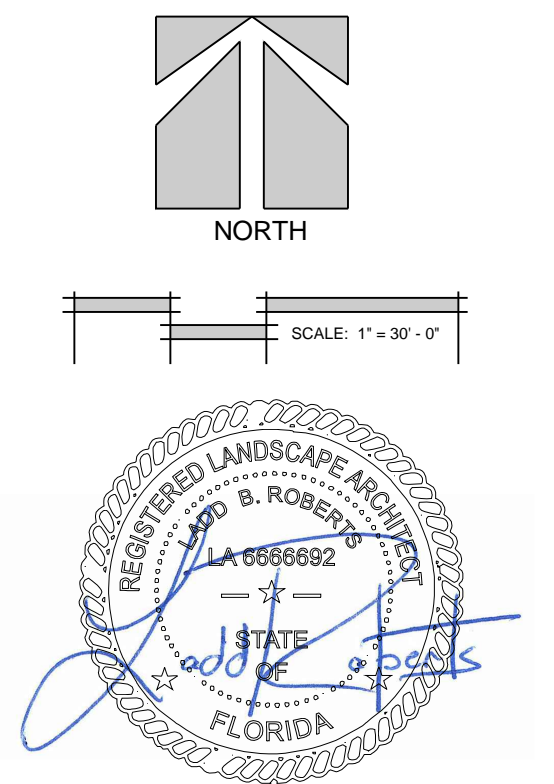
ALL TREES TO REMAIN IN THE LIMITS OF LANDSCAPE AREA ARE TO BE PROTECTED WITH TREE PROTECTION FENCING PER DETAIL AND OR LOCAL CODE.

TREE #	LOCAL NAME	BOTANICAL NAME	NOTES	APPRX. DSH	HEIGHT	SPREAD	Relocate	Remove
1	COCONUT PALM	Cocos nucifera	non-native - relocate	10	10'-18'	14'	X	
2	COCONUT PALM	Cocos nucifera	non-native - relocate	10	10'-18'	14'	X	
3	COCONUT PALM	Cocos nucifera	non-native - relocate	10	10'-18'	14'	X	
4	SILVER BUTTWOOD	Conocarpus erectus var. sericeus	native - Relocate	6	14'	10'	X	
5	THATCH PALM x3	Thrinax Radiata	native - 3 trunk, Beautiful - relocate	9	10'-18'	8'	X	
6	THATCH PALM x2	Thrinax Radiata	native - 2 trunk, Beautiful - relocate	7	10'-18'	8'	X	
7	LATANIA PALM	Lantania loddigesii	non-native - beautiful - relocate	12	14'-18'	12'	X	
8	ARECA PALM	Pycnis lutescens	non-native - poor condition	6	4'-8'	4'-6'		X
9	SMALL TREE	Pigeon Plum	planted by volunteers, relocate	1	4'	2'	X	
10	SMALL TREE	Pigeon Plum	planted by volunteers, relocate	1	4'	2'	X	
11	THATCH PALM x1	Thrinax Radiata	native - volunteer - relocate - less than 12" trunk	4	2'-4'	3'-4'	X	
12	THATCH PALM x1	Thrinax Radiata	native - volunteer - relocate - less than 12" trunk	4	2'-4'	3'-4'	X	
13	GUMBO LIMBO	Bursera simaruba	native - okay condition	8	12'-14'	8'-10'	X	
14	SILVER BUTTWOOD	Conocarpus erectus var. sericeus	native - relocate	12	12'-16'	10'-14'	X	
15	BUSHY FLEABANE	Pluchea carolinensis	NN - shrub - volunteers not protected	0	2'-5'	2'-3'		X
16	GUMBO LIMBO	Bursera simaruba	native - okay condition - Volunteer under deck	2.5	10'-12'	5'-7'	X	
17	STRANGLER FIG	Ficus aurea	growing on rock-staff planted - nice	3	6'	3'-4'	X	
18	THATCH PALM x1	Thrinax Radiata	native - volunteer - relocate - less than 12" trunk	4	2'-4'	3'-4'	X	
19	THATCH PALM x1	Thrinax Radiata	native - volunteer - relocate - less than 12" trunk	4	2'-4'	3'-4'	X	
20	GREEN BUTTWOOD	Conocarpus erectus	native - relocate	4	10'-12'	5'-6'	X	



STAGING AREA (For Trees to be Relocated):
TEMPORARILY RELOCATE TREES IN THIS AREA, ARRANGED AS SHOWN. PROVIDE EQUIVALENT 80lbs. POTTING MIX/ PREPARED TOPSOIL PER TREE PIT AND MIX INTO EXISTING SOIL PRIOR TO PLANTING MATERIAL. ALL MATERIAL TO BE HAND WATERED OR PROVIDED WITH TEMPORARY IRRIGATION UNTIL RELOCATED TO THEIR PERMANENT LOCATION.

KEY WEST WILDLIFE CENTER
INDIGINOUS PARK, KEY WEST



RELOCATION TREE STAGING

DATE: 9.12.22

REVISIONS:

No.	Date	Notes

PERMIT DOCUMENTS

SHEET NUMBER:
L-1

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COORDINATION NOTES:
 LANDSCAPE CONTRACTOR TO VERIFY LOGISTICS ASSOCIATED WITH REMOVING AND ERECTING THE NEW MODULAR BUILDING. SOME TREES TO BE RELOCATED MAY NEED TO BE STAGED ON SITE UNTIL THE NEW MODULAR BUILDING IS IN PLACE AND THEN THE STAGED TREES CAN BE MOVED TO THEIR FINAL LOCATION.

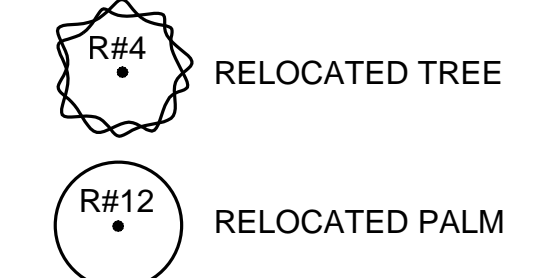
PROVIDE ALL TREES WITH TREE GATOR SLOW RELEASE WATERING BAGS DURING ESTABLISHMENT PERIOD. ALL PROPOSED TREES AND PALMS TO BE HAND WATERED UNTIL ESTABLISHED BY WILDLIFE CENTER STAFF and/or LANDSCAPE CONTRACTOR.

100% OF ALL CODE REQUIRED PLANTS SHALL BE NATIVE.

COORDINATE ALL MATERIAL SUBSTITUTIONS WITH LANDSCAPE ARCHITECT/OWNER PRIOR TO INSTALLATION.

COORDINATE ALL SITE/PLAN DISCREPANCIES WITH LANDSCAPE ARCHITECT.

VERIFY ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.

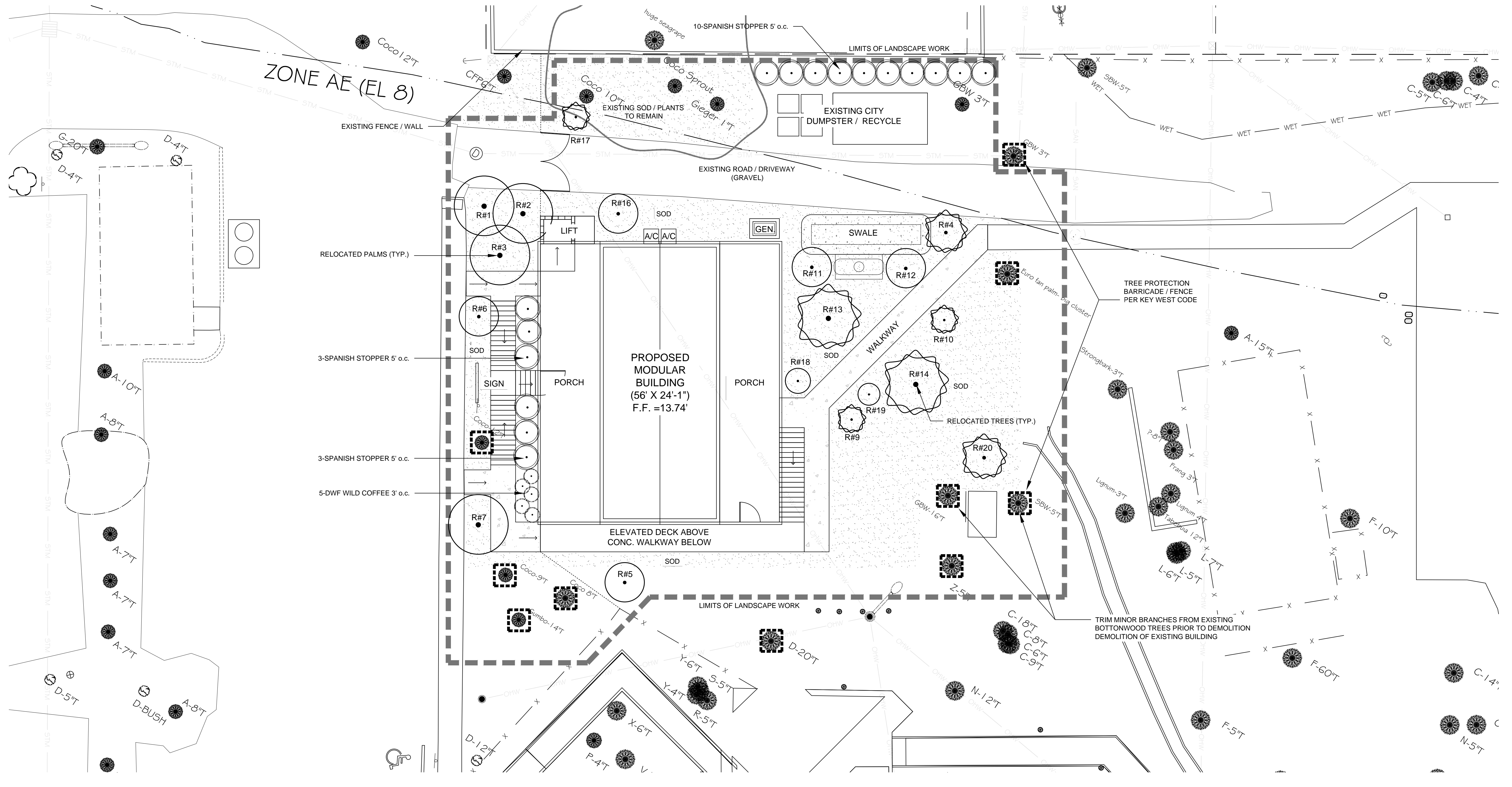
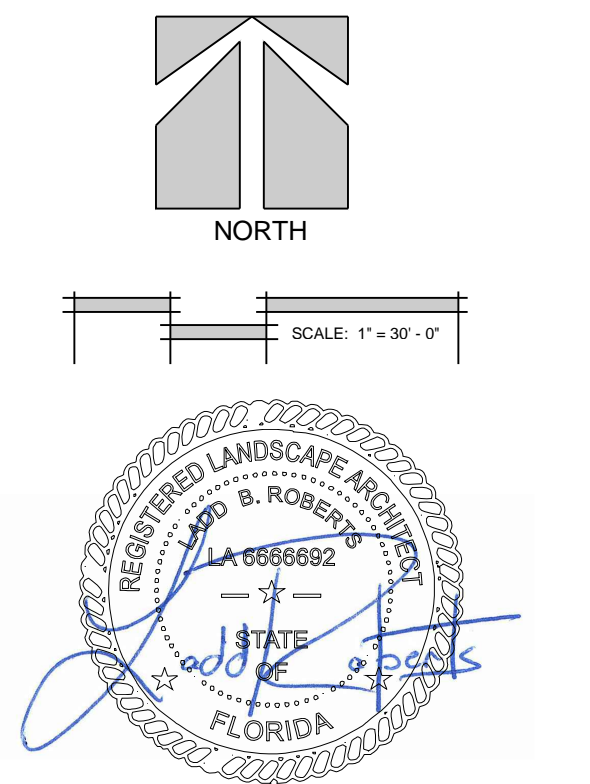


TREE MITIGATION CALCULATIONS		DSH INCHES REMOVED
TREES IMPACTED		
PROTECTED TREES IMPACTED		0"
MITIGATION REQUIRED		0"
DSH INCHES PROVIDED (4" DSH MIN. TREES)		0"

PLANT SCHEDULE					
QTY.	COMMON NAME	BOTANICAL NAME	SIZE	NOTE	NATIVE
TREES					
N/A					
PALMS					
N/A					
SHRUBS and GROUNDCOVERS					
16	SPANISH STOPPER	<i>Eugenia foetida</i>	15g., 4'-5' planted height	FL #1	Native
5	DWARF WILD COFFEE	<i>Psychotria ligustrifolia</i>	7 gal., full	FL #1	Native
SOD					
3,500 SF +/-	BAHIA	CONTRACTOR TO VERIFY QUANTITY	SOD DISTURBED AREAS DUE TO PROJECT IMPROVEMENTS		

KEY WEST WILDLIFE CENTER

INDIGINOUS PARK, KEY WEST



LANDSCAPE PLAN

DATE: 9.12.22

REVISIONS:		
No.	Date	Notes

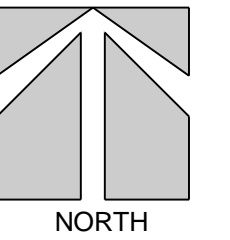
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SHEET NUMBER:
L-2

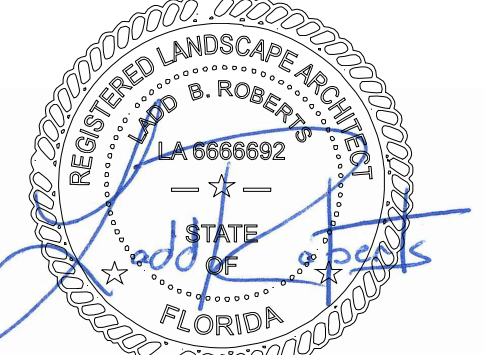
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SCALE: 1" = 30'-0"



DATE: 9.12.22

REVISIONS:

No.	Date	Notes

PERMIT DOCUMENTS

SHEET NUMBER: **L-3**

JOB #: 19006 DRAWN BY: LBR

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- C. Set container ground stock as specified for balled and burrapped stock, except cut cans on two sides with approved cut cutter. Remove sides of wooden boxes after partial backfilling so as not to damage root balls.
- D. Ditch top of planting soil mixture to allow for mulching.
- E. Mulch pits, trenches and planted areas. Provide not less than the following thickness of mulch and work into top of planting soil mixture and finish level with adjacent.
 - 1. Provide 3 inch thickness of mulch.
- F. Apply anti-desiccant using power spray to provide an adequate film over trunks, branches, stems, twigs and foliage:
 - 1. If deciduous trees or shrubs are moved in full-bud, spray with anti-desiccant at nursery before moving and again two weeks after planting.
 - 2. Do not prune except to remove damaged branches or as directed by landscape architect.
- H. Remove and replace excessively pruned or malformed stock resulting from improper pruning. Issue. Use paint which is waterproof, antiseptic, adhesive, elastic and free of kerosene, oil, tar, creosote, and other substances harmful to plants. Do not use shellac.
- J. Guy and stake trees immediately after planting, as indicated.

- 3.23 PLANTING PALMS**
 - A. Set stock as indicated in note. Stake palms as necessary to maintain plumb or at angle shown. Back with three 2" x 6" wood braces bolted to three 2" x 6" x 24" batens which are securely banded at two points to palm at a point 2/3 trunk height. Pad trunk with 20 layers of burlap under batens. Place braces 120 degrees apart and secure underground by 2" x 4" x 24" stakes.
 - B. Water palm thoroughly immediately after planting.
 - C. Set Date palms a minimum of 4" in the ground. Aerial roots may not extend more than 6 inches above the final finished grade of the palm.

- 3.24 PLANTING GROUND COVER**
 - A. Space plants as shown or scheduled.
 - B. Work planting soil mixture around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water. Water thoroughly after planting, taking care not to cover crowns of plants with wet soil.
 - C. Much areas between ground cover plants, place not less than 2 inches thick.
- 3.25 TRANSPLANTING EXISTING TREES, PALMS AND SHRUBS**
 - A. Refer to Article entitled, PLANTING TREES AND SHRUBS.
 - B. Pruning: Prior to transplanting operations, prune existing branches back 1/3 on trees and shrubs. On existing palms, prune back existing fronds to a minimum of four fronds around central growth point area.
 - C. Handle plants so that roots are adequately protected at all times.
 - D. Plant shall not be bound with rope or wire, at any time, that would damage bark, break branches, or destroy its natural shape.
 - E. Plant transplanted plants immediately after digging.
 - F. Plants shall be moved with firm, natural balls of soil with minimum ball size conforming to requirements of ANSI Z60.1 Standard for Nursery Stock.
 - G. Underground Obstruction: If underground construction, utilities or obstructions are encountered in excavation of planting areas or pits, other locations for plant material will be selected by Architect. Changes in locations shall be made without additional cost to Owner.

- 3.26 WATERING**
 - A. General: Water plants sufficiently to keep roots moist, but not saturated and as needed for the healthy growth and to prevent wilting. (The Agriculture Extension Service recommends watering daily for at least one month after installation during the growing season when there is no rain) Following rainfall, delay watering until all free moisture has drained from the soil.
 - B. After initial watering, where plants are not covered by an automatic irrigation system, provide temporary watering using water bags and/or a temporary irrigation system / hose sets that will provide to each plant, during each watering, the volume of water shown in Tables 1 and 2.
 - C. If water bags are used to water trees and palms, place water bag around the trunk and fill with water in accordance with manufacturer's instructions to provide a slow water drip of at least 4 hours. Fill water bag with each subsequent watering. Water bags shall be Tree Guard Original or equal.
 - D. If a temporary irrigation system is used, connect the system to a water truck or other water source and pump water until the specified volume of water in Tables 1 and 2 is delivered to each plant. Apply at a rate that will allow the water to soak into the root ball without runoff.
 - E. Maintain each water bag or temporary irrigation system in working condition throughout the installation and maintenance period and until final acceptance. Immediately repair or replace each water bag or temporary irrigation system that is damaged, stolen or malfunctioning.
 - F. Apply the volume of water shown in Table 1, each time trees and palms are watered (3 gallons/colper inch minimum). The Contractor shall be responsible for monitoring and adjusting hydration and hydration duration as necessary to assure optimum growing conditions.

- 3.27 MAINTENANCE**
 - A. Begin maintenance immediately after planting. Maintain trees, shrubs and other plants until final acceptance but in no case less than 30 days after planting.
 - B. Maintain trees, shrubs and other plants by pruning, cultivating and weeding as required for healthy growth. Restore planting saucers. Tighten and repair stakes and guy supports and reset trees and shrubs to proper grades or vertical position as required. Restore or replace damaged wrappings. Spray as required to keep trees and shrubs free of insects and disease.
 - C. Verify watering of trees, plants and ground cover beds within the first 24 hours of initial planting and not less than twice per week until final acceptance.
 - D. For Date Palms, drench the root zone 2-4 times for the first 4 months after planting with a fungicide labeled for landscape use on soil borne root fungal pathogens. Apply a light surface application of a slow-release "palm special" granular fertilizer at the margins of the root ball 3 months after planting. Apply a foliar spray of soluble micronutrients. When new leaves are evident from the crown, begin a maintenance program for fertilization 3 times a year.

- 3.28 CLEANING AND PROTECTION**
 - A. During landscape work, store materials and equipment where directed.
 - B. Keep pavements clean and work area in an orderly condition.
 - C. Protect landscape work and materials from damage due to landscape operations, operations by other contractors, trades and trespassers. Maintain protection during installation and maintenance periods. Trench, repair or replace damaged landscape work.
- 3.29 INSPECTION AND ACCEPTANCE**
 - A. When landscape work is completed, including maintenance, upon request Architect will make an inspection to determine acceptance.
 - B. Landscape work may be inspected for acceptance in parts agreeable to Architect, provided work offered for inspection is complete including maintenance and area comprises one complete unit or area of substantial size.
 - C. Where inspected landscape work does not comply with requirements, replace rejected work and continue specified maintenance until reinspected by Architect and found to be acceptable. Remove rejected plants and materials promptly from project site.

END OF SECTION

- 1.07 WARRANTY**
 - A. Warranty trees and shrubs, for a period of one year after date of acceptance, against defects including death and unsatisfactory growth except for defects resulting from neglect by Owner, abuse or damage by others, or unusual phenomena or incidents which are beyond Contractor's control.
 - B. Warranty shall not include damage to tops of trees, plants or ground covers caused by fires, floods, severe freezes not typical to the region, winds over 75 mph or acts of vandalism.
 - C. Remove and replace trees, shrubs, or other plants found to be dead or in unhealthy condition during warranty period. Plant missing trees, shrubs and ground covers. Make replacements during growth season following end of warranty period. Furnish and plant replacements which comply with requirements shown and specified. Also, replace trees and shrubs which are in doubtful condition at end of warranty period. Only one replacement shall be required at end of warranty period, except for losses or replacements due to failure to comply with specified requirements.

- PART 2 PRODUCTS**
 - 2.08 TOPSOIL**
 - A. Topsoil for landscape work is not available at site and shall be furnished as specified.
 - B. Provide new topsoil which is fertile, friable, natural loam, surface soil, reasonably free of subsoil, clay lumps, trash, weeds and other fiber and tree root stumps, stones larger than 1/2 inches in any dimension, and other extraneous or toxic matter harmful to plant growth.
 - 1. Obtain topsoil from local sources or from areas having similar soil characteristics to that found at project site.
 - 2. Obtain topsoil only from naturally well-drained sites where topsoil occurs to a depth of not less than four inches, do not obtain from logs or marshes.

- 2.09 SOIL AMENDMENTS**
 - A. Lime: Natural limestone containing not less than 85 percent of total carbonates, ground so that not less than 90 percent passes a 10 mesh sieve and not less than 50 percent passes a 100 mesh sieve.
 - B. Peat Humus: FS QP-168 and with texture and pH range suitable for intended use, or Florida muck.
 - C. Bone Meal: Commercial, raw, finely ground; 4 percent nitrogen and 20 percent phosphoric acid.
 - D. Superphosphate: Soluble mixture of treated minerals; 20 percent available phosphoric acid.
 - E. Commercial Fertilizer: Complete fertilizer of neutral character with some elements derived from organic sources and containing following percentages of available plant nutrients:
 - 1. Trees and Shrubs: Minimum 10 percent available phosphoric acid, from 3 percent to 5 percent total nitrogen, and from 3 percent to 5 percent soluble potash.
 - 2. Lawns: Minimum 4 percent phosphoric acid, minimum 2 percent potassium, and percentage of nitrogen required to provide not less than one pound of actual nitrogen per 1,000 sq. ft. of lawn area. Provide nitrogen in a form that will be available to lawn during initial period of growth.
 - 3. Palm Fertilizer - Slow release "Palm Special" granular fertilizer which includes trace elements of iron, magnesium and manganese.
 - F. Sand: Clean, washed builders sand free of salt, weeds, sticks and other debris.
 - G. Organic Soil Amendment: Pinebark chunks smaller in size but not greater than 3/4 inches in diameter.

- 2.10 PLANT MATERIALS - GENERAL**
 - A. Name and Variety: Provide plant material to name and variety established by American Joint Committee on Horticultural Nomenclature, "Standardized Plant Names".
 - B. Quality: Provide trees, shrubs and other plants complying with recommendations and requirements of ANSI Z60.1 "Standard for Nursery Stock" and as further specified.
 - C. Provide plants typical of their species or variety with normal, densely developed branches and vigorous, fibrous root systems. Provide only sound, healthy, vigorous plants free from defects, disturbing knots, unscaled injuries, root cracks, abrasions of the bark, plant diseases, insect eggs, borers and all other forms of infestation. Plants shall have a fully developed form without voids and open spaces.
 - D. Dig balled and burrapped plants with firm, natural balls of earth sufficient in diameter and depth to encompass the fibrous and feeding root system necessary for full recovery of plant. Provide ball sizes complying with latest edition of American Standard for Nursery Stock. Checked or loose balls are not acceptable.
 - E. Provide tree species true to normal species, character and habit. Single trunk trees will not be acceptable with "Y" shape trunk in the main leader. Culls will not be acceptable.
 - F. Plants planted in rows shall be matched in form.
 - G. Plants larger than those specified in the plant list may be used and are acceptable in most instances, but should be verified by Owner.
 - H. The height of trees, measured from the crown of the ball to the top of the top branch, shall not be less than the minimum size designated in the plant list prior to topping and pruning.
 - I. Coniferous trees shall be branched to the ground.

- 2.11 CONTAINER GROWN STOCK**
 - A. Stock shall be grown in container for sufficient length of time for root system to have developed to hold its soil together, firm and whole.
 - B. No plants shall be loose in the container.
 - C. Container stock shall not be pot bound.
- 2.12 SHRUBS AND SMALL PLANTS**
 - A. Requirements for spread and height are indicated in plant list.
 - B. Measurements for height shall be taken from ground level to the average height of top of plant and not the longest branch.
 - C. Single stemmed or thin plants will not be acceptable.
 - D. Side branches shall be generous, well-tipped and, the plant as a whole, well-bushed to ground.
 - E. Plants shall be in moist, vigorous condition, free from dead wood, bruises or other root or branch injuries.
 - F. Provide plants established and well-rooted in removable containers or integral peat pots and with less than minimum number and length of runners required by ANSI Z60.1 for pot size shown or listed.
- 2.13 FERTILIZER**
 - A. Plant fertilizer Type A: commercial type, containing at least 12 percent nitrogen, 12 percent phosphoric acid, and 12 percent potash and whose composition is at least 50 percent organic so as to provide a continuous time release character.
 - 1. Preferred Types: Polystyrene or biodegradable forms, such as Agrifilm tablets for use in planting shrubs and trees on an individual basis.
 - 2. Granular Type A: to be incorporated into topsoil of planting beds, annual beds and ground cover beds.
- 2.14 MULCH**
 - A. For Use in Backfill Mixtures: Well-shredded pine bark or native hardwood not larger than 1/2 inch in width.



TREGGATOR® ORIGINAL SLOW RELEASE WATERING BAG FOR SHADE TREES

BENEFITS:

- Ideal for newly planted shade or street trees.
- Reduces transplant and drought shock.
- 100% water absorption with no run-off.
- Install and fill in minutes with no tools required.
- Deep water saturation with every fill.
- Fill just 1 to 2 times per week, or as needed.**
- Promotes deep root growth.
- Non-invasive design will not harm existing landscape.
- Can be used with nutrient / chemical additives.**
- Zip multiple bags together to accommodate large trees.
- Made in the U.S.A. with a 5-year limited warranty.

Table 1 Water Volume for New Trees and Palms			
Single Trunk	Multi-Trunk	Min. Water Volume per Application	
2' Cal.	8'-10'	6 Gal.	
3' Cal.	10'-12'	9 Gal.	
4' Cal.	12'-14'	12 Gal.	
5' Cal.	14'-16'	15 Gal.	
6' Cal.		18 Gal.	
Each Palm		12 Gal.	

Table 2 Water Volume for New Shrubs & Groundcovers		
Plant Size	Min. Water Volume per Application	
1 Gallon	1 quart	
3 Gallon	2 quarts	
7 Gallon	1 Gallon	
15 Gallon	2 Gallons	

NOTE: ALL PROPOSED LANDSCAPING SHALL BE WATERED BY HOSE BIBS, WATER TRUCK AND / OR WATERING BAGS AT VOLUMES SPECIFIED ABOVE.

MINIMUM 3 MONTH ESTABLISHMENT PERIOD SHALL REQUIRE WATERING EVERYDAY FOR THE FIRST MONTH, EVERY OTHER DAY FOR THE SECOND MONTH AND TWICE A WEEK FOR THE THIRD MONTH UNTIL ALL MATERIAL IS ESTABLISHED. SEE 3.26 WATERING.

- SECTION 02950 TREES, PLANTS AND GROUND COVERS**
 - PART 1 GENERAL**
 - 1.01 SECTION INCLUDES**
 - A. Extent of landscape development work is shown on drawings and in schedules.
 - B. Grading of areas disturbed during construction exclusive of paved areas.
 - C. Transplanting of existing trees, palms and plant material. (none are currently proposed for this project)
 - D. Prior to construction activities, all trees, palms and plant material to be relocated will be tagged by Architect. (none are currently proposed for this project)
 - E. Watering of planted materials

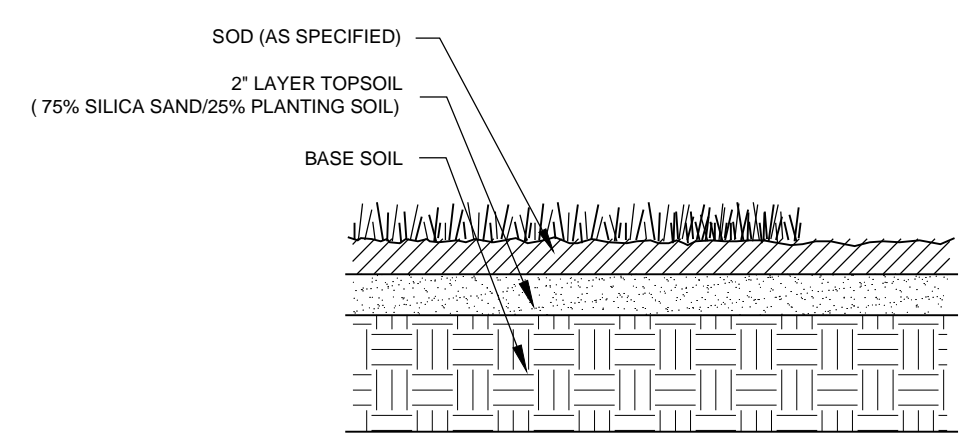
- 1.02 RELATED SECTIONS**
 - A. Section 02100 - Site Grading
 - B. Section 441 - Grassing (JEA Water & Wastewater Standards)
- 1.03 SUBMITTALS**
 - A. Comply with provisions of General Conditions
 - B. Certificates of inspection as required by governmental authorities and manufacturer's or vendor's certified analysis for soil amendments and fertilizer materials. Submit other data substantiating that materials comply with specified requirements.
 - C. Vendor's certified statement for each grass seed mixture required, stating botanical and common name, percentage by weight, and percentages of purity, germination, and weed seed for each grass seed species.
 - D. Soil test reports.
 - E. Maintenance Instructions: Typewritten instructions recommending procedures to be established by Owner for maintenance of landscape work for one full year. Submit prior to expiration of required maintenance periods.
 - F. Provide reproducible As-Built drawing after final acceptance by owner.

- 1.04 QUALITY ASSURANCE**
 - A. Landscape work shall be performed by a single firm specializing in landscape work.
 - B. Obtain agronomic soils tests for all planting areas. Tests shall be performed by an approved agronomic soils testing laboratory and shall include fertility and suitability analysis with written recommendations for soil amendments, fertilizer, and chemical conditioner application rates for soil preparation, planting backfill mix, and post maintenance fertilizer program. Submit a copy of soils test to Architect.
 - C. Obtain soil test from existing stockpiled topsoil. If any, to determine type and amount of amendments needed for areas that are to receive stockpiled topsoil.
 - D. Ship landscape materials with certificates of inspection as required by governmental authorities. Comply with governing regulations applicable to landscape materials.

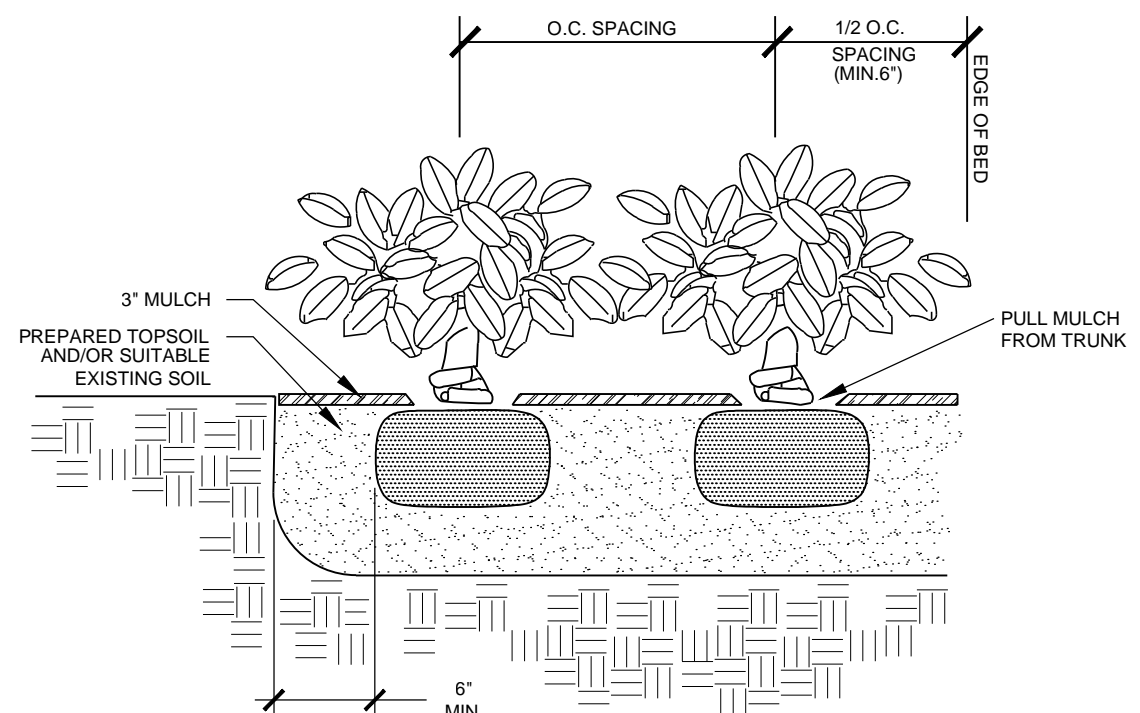
- E. Substitutions:** Do not make substitutions. If specified landscape material is not obtainable, submit proof of non-availability and proposal for use of equivalent material to Architect. When authorized, adjustment of contract amount will be made.
- F. Analysis and Standards:** Package standard products with manufacturer's certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agricultural Chemists, wherever applicable or as further specified.
- G. Topsoil:** Fine sand or loamy fine sand indigenous to the area suitable for plant growth that is free of weeds, roots, stumps, rocks larger than 1/4 inch diameter, organic muck, hard pan, toxic substances detrimental to plant growth, and construction debris such as limestock, concrete, and asphalt pieces. Delivered in normally moist condition, neither muddy nor wet.
- H. Trees and Shrubs:** Plant names indicated are to comply with "Standard Plant Names" as adopted by latest edition of American Joint Committee of Horticultural Nomenclature. Names of varieties not listed conform generally with names accepted by the nursery trade. Provide stock true to botanical name and lightly tagged. Provide healthy, vigorous stock grown under climatic conditions similar to conditions in vicinity of project; free of disease, insects, eggs, larvae and defects such as knots, sun-scald, injuries, abrasions or delimitation. **ALL PLANTS TO BE FLORIDA #1 OR BETTER.**
- I. Sizes:** Comply with sizing and grading standards of latest edition of American Standard for Nursery Stock. A plant shall be dimensional as it stands in its natural position. Stock furnished shall be at least minimum size indicated. Larger stock is acceptable at additional cost unless a written change order is issued.
- J. Inspection:** Landscape Architect reserves the right to inspect trees and shrubs either at place of growth or at site before planting for compliance with requirements for name, variety, size and quality.
 - 1. Such approval shall not impair the right of inspection and rejection upon delivery at the site during the progress of work.

- 1.05 DELIVERY, STORAGE AND HANDLING**
 - A. **Package Materials:** Deliver packaged materials in containers showing weight, analysis and name of manufacturer. Protect materials from desiccation during delivery and while stored at site.
 - B. **Trees and Shrubs:** Provide container grown or balled and burrapped trees and shrubs. Do not use trees or shrubs which have been in cold storage or heeled-in. Do not prune prior to delivery. Do not bend or break trees or shrubs in such manner as to damage bark, break branches or destroy natural shape. Provide protective covering during delivery.
 - C. **Deliver trees and shrubs after preparations for planting have been completed and plant immediately.** Cover plants transported on open vehicles with a protective covering to prevent wind burn. If planting is delayed more than six hours after delivery, set trees and shrubs in shade, protect from weather and mechanical damage, and keep roots moist.
 - D. Do not remove container grown stock from containers until planting time.
 - E. Label at least one tree and one shrub of each variety with a securely attached waterproof tag bearing legible designation of botanical and common name.

- 1.06 PROJECT REQUIREMENTS**
 - A. Proceed with and complete landscape work as rapidly as portions of site become available, working within seasonal limitations for each kind of landscape work required.
 - B. Utilities: Determine location of underground and above ground utilities and perform work in manner which will avoid possible damage. Hand excavate, as required, to minimize possibility of damage to underground utilities. Maintain grade stakes set by others until removed mutually agreed upon by all parties concerned.
 - C. Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions or obstructions, notify Architect before planting.
 - D. **Planting Schedule:** Prepare a proposed planting schedule. Schedule dates for each type of landscape work during normal seasons for such work in area of site. Correlate with specified maintenance periods to provide maintenance until final completion of work under contract.
 - E. **Coordination with Lawns:** Plant trees and shrubs after final grades are established and prior to planting of lawns, unless otherwise acceptable to Landscape Architect. If planting of trees and shrubs occurs after lawn work, protect lawn areas and promptly repair damage to lawns resulting from planting operations.

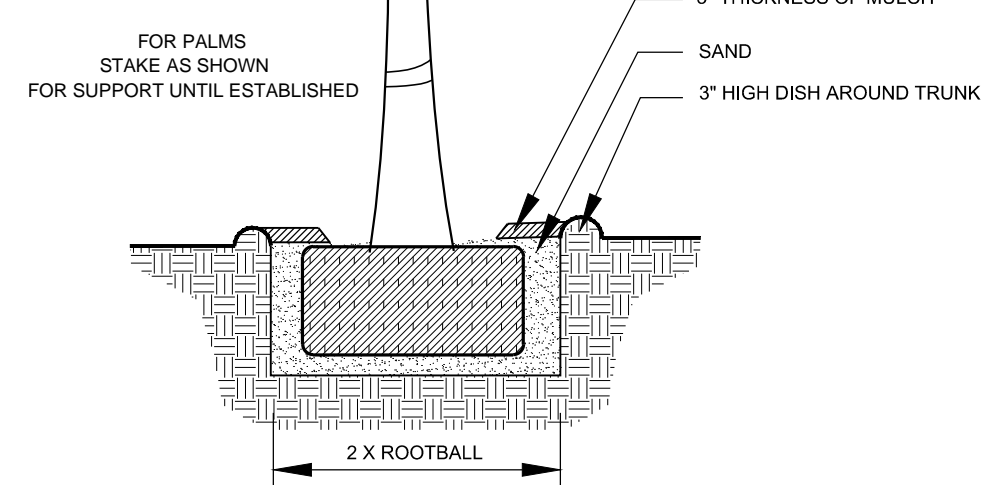


SODDING DETAIL
ALL AREAS TO BE SODDED TO RECEIVE 2" TOP LAYER OF SILICA SAND-PLANTING SOIL AS INDICATED.



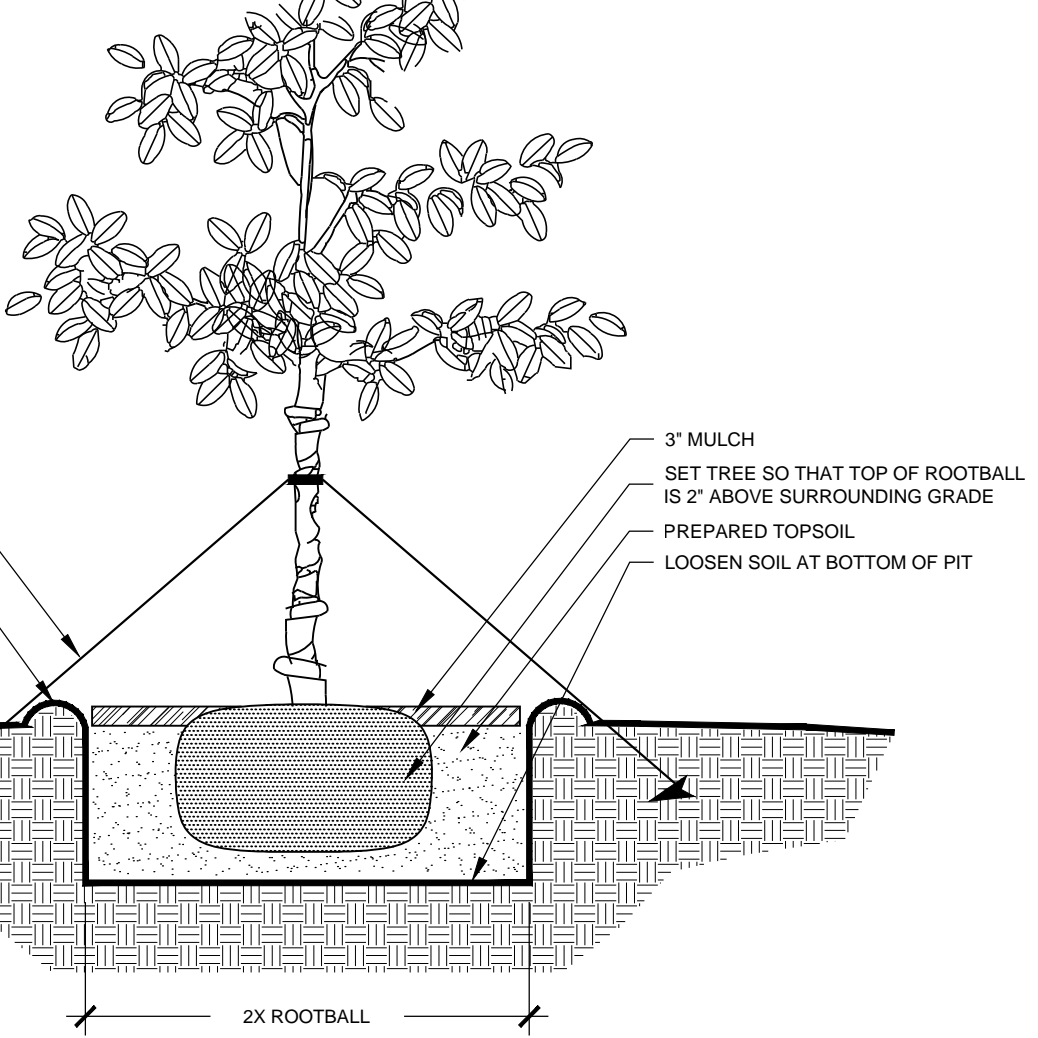
SHRUB PLANTING DETAIL

ALL SHRUBS ARE TO BE POSITIONED VERTICALLY REGARDLESS OF THE SLOPE OF THE GROUND IN WHICH THEY ARE PLANTED. WATER RINGS ARE TO BE CONSTRUCTED AT RIGHT ANGLES TO THE TREE OR SHRUB OR IN A MANNER IN WHICH THEY WILL MOST EFFECTIVELY SERVE THE PURPOSE OF RETAINING WATER AT THE BASE OF THE PLANT.



PALM PLANTING DETAIL

AMEND TREE PIT SOIL WITH BOBS. MINIMUM PLANTING MIX / PREPARED TOPSOIL AND THOROUGHLY INCORPORATE PLANTING MIX INTO EXISTING SOIL.



TREE PLANTING DETAIL

ALL TREES ARE TO BE POSITIONED VERTICALLY REGARDLESS OF THE SLOPE OF THE GROUND IN WHICH THEY ARE PLANTED. WATER RINGS ARE TO BE CONSTRUCTED AT RIGHT ANGLES TO THE TREE OR SHRUB OR IN A MANNER IN WHICH THEY WILL MOST EFFECTIVELY SERVE THE PURPOSE OF RETAINING WATER AT THE BASE OF THE PLANT.

THE ROOTBALL OF THE TREE SHOULD BE POSITIONED IN THE HOLE SO THAT THE FINISHED GRADE OF THE BACKFILL SOIL AND LANDSCAPE SOIL IS 2" LOWER THAN THE TOP OF THE ROOTBALL. MULCH SHOULD COVER THE EDGE OF THE ROOTBALL, DO NOT MULCH ON TOP OF ROOTBALL.



Aerial view of entire parcel-Indigenous Park.



Aerial view of proposed work area (Wildlife Rescue-Indigenous Park).



Photo of northern property line area. Palms to remain in place and be protected.



Looking toward northern property line, photo of main construction area. Palm #1, #5, & #6 in photos, to be transplanted.



Looking toward the east at the proposed work area, trees #17, #2, #7, and #4 to be transplanted. Coconut palm nearest sidewalk to remain and be protected.



Looking to the east at the proposed work area, trees #3 & #4 to be transplanted. Palms to the right are to remain and be protected.



Photo looking east at proposed work area, tree #18- Thatch Palm, and #20- Buttonwood, to be transplanted. Tree #15- Plucheia and #8-Areca Palm, to be removed.



Looking east, existing structure to demolished once new structure completed. Tree #13 & #16- Gumbo Limbos, to be transplanted.

WELCOME TO THE INDIGENOUS PARK	
Day	Hours
Monday	9-5
Tuesday	9-5
Wednesday	CLOSED
Wednesday 4:30-9:00 PM	
Thursday	9-5
Friday	9-5
Saturday	9-5
Sunday	9-5



Existing trees #12, #10, #11, #9, & #19 to be transplanted.



Tree #20- Buttonwood, to be transplanted.



Two photos showing the northeast corner of the proposed work area. Native vegetation to remain and be protected, invasive exotic vegetation to be removed. Spanish Stopper trees to be planted in this area.



Standing at the northeast corner of the proposed work area looking to the west, view 1.



Standing at the northeast corner of the proposed work area looking to the west, view 2. New building to be constructed in front of existing structure.



Photo looking west at the south side of the existing structure, area will need to be properly trimmed prior to construction and demo work.