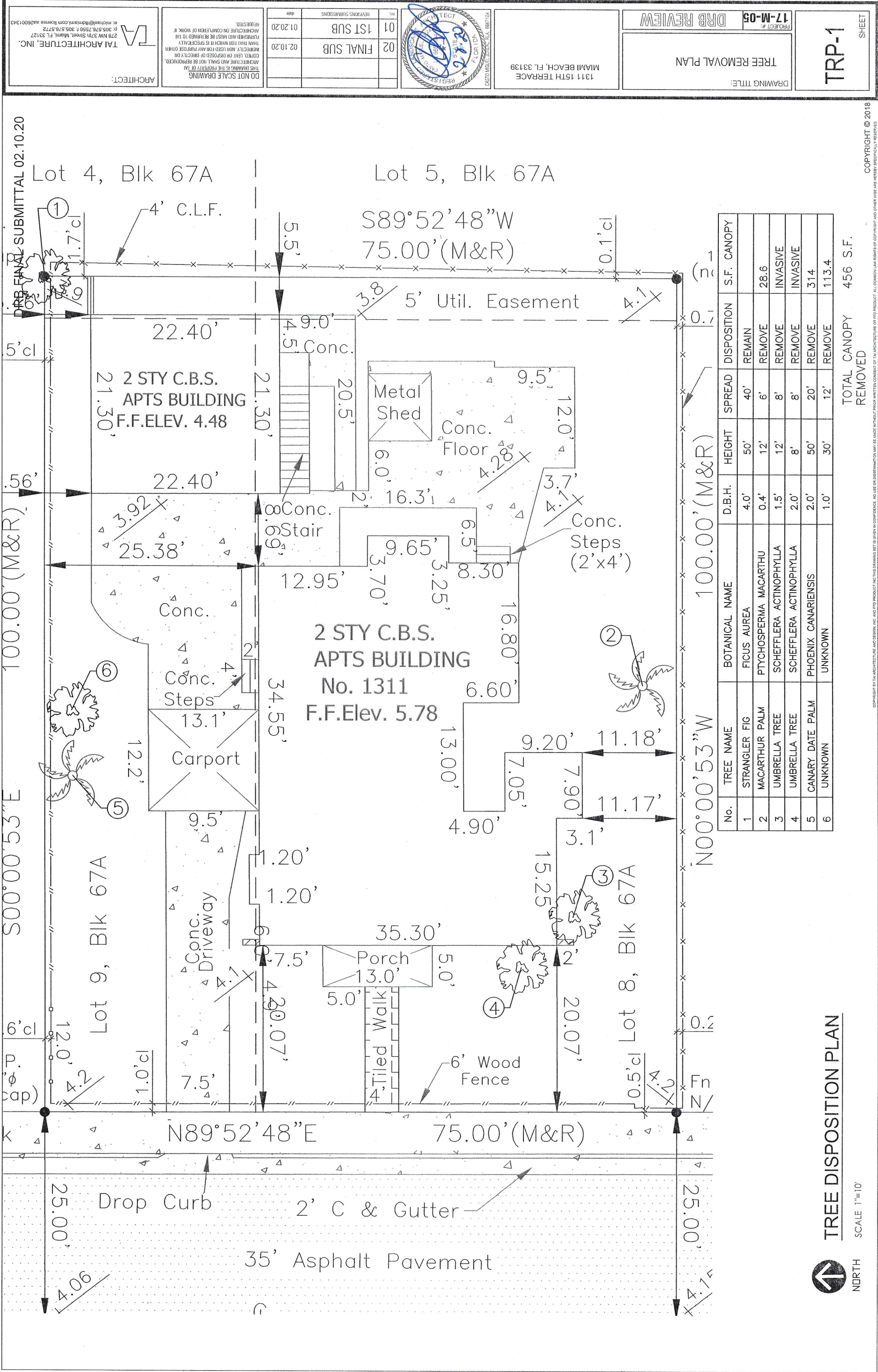




ARCHITECT:
TAI ARCHITECTURE, INC.
P: 305.576.7566 F: 305.576.5772
E: michael@taiarchitect.com license aa2601343

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NO.	REVISIONS SUBMISSIONS	DATE
01	1ST SUB	01.20.20
02	FINAL SUB	02.10.20



1311 15TH TERRACE
MIAMI BEACH, FL 33139

PROJECT #:
17-M-05

DRB REVIEW

DRAWING TITLE:
TREE REMOVAL PLAN

No.	TREE NAME	BOTANICAL NAME	D.B.H.	HEIGHT	SPREAD	DISPOSITION	S.F. CANOPY
1	STRANGLER FIG	FICUS AUREA	4.0'	50'	40'	REMAIN	
2	MACARTHUR PALM	PTYCHOSPERMA MACARTHUR	0.4'	12'	6'	REMOVE	28.6
3	UMBRELLA TREE	SCHEFFLERA ACTINOPHYLLA	1.5'	12'	8'	REMOVE	INVASIVE
4	UMBRELLA TREE	SCHEFFLERA ACTINOPHYLLA	2.0'	8'	8'	REMOVE	INVASIVE
5	CANARY DATE PALM	PHOENIX CANARIENSIS	2.0'	50'	20'	REMOVE	314
6	UNKNOWN	UNKNOWN	1.0'	30'	12'	REMOVE	113.4

TOTAL CANOPY REMOVED
456 S.F.

DRB FINAL SUBMITTAL 02.10.20

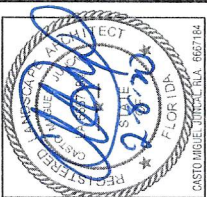
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TAI ARCHITECTURE, INC.

278 NW 37th Street, Miami, FL 33127
P: 305.576.7556 F: 305.576.5772
e: michael@taiarchitect.com license aa26001343

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1311 15TH TERRACE
MIAMI BEACH, FL 33139

LANDSCAPE PLAN

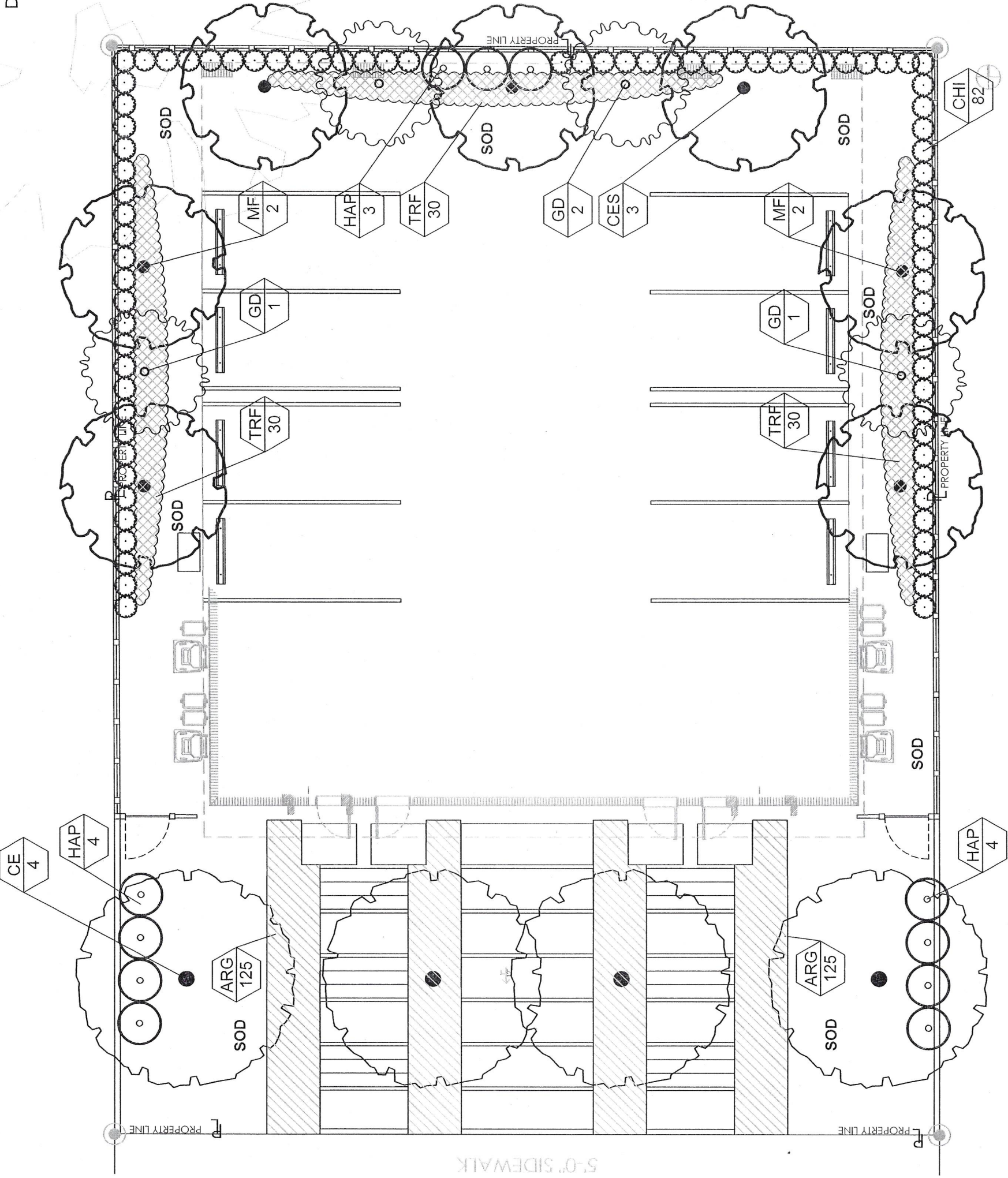
DRB REVIEW

PROJECT #:
17-M-05

DRAWING TITLE:

LNP-1

SHEET



PLANTING PLAN

SCALE 1"=10'



PLANT_SCHEDULE

TREES		QTY	BOTANICAL/COMMON NAME	CONT. SIZE/SPACING		DIMENSIONS	NATIVE	WATER USE	REMARKS
CODE									
CE	4		Conocarpus erectus / Green Buttonwood	B&B/ as shown	14' oah. 3"Ccal	14' oah. 3"Ccal	Yes	Low	Standard form, 4' min. c.t. min.
CES	3		Conocarpus erectus 'Serius' / Silver Buttonwood	B&B/ as shown	14' oah. 3"Ccal	14' oah. 3"Ccal	Yes	Low	Standard form, 4' min. c.t. min.
HP	11		Hamelia Patens / Firebush	B&B/ as shown	6' oah. 4' spr. 2"cal.	6' oah. 4' spr. 2"cal.	Yes	Low	min.Florida no. 1
MF	4		Myroianthes fragrans / Simpson's Stopper	B&B/ as shown	14' ht. 6'spr.3"cal.	14' ht. 6'spr.3"cal.	Yes	Low	4' min. c.t. min. Florida no. 1
GD	4		Guapira discolor / Blolly	B&B/ as shown	10' ht. 4'spr.2"cal.	10' ht. 4'spr.2"cal.	Yes	Low	4' min. c.t. min. Florida no. 1
SHRUB AREAS		QTY	BOTANICAL/COMMON NAME	CONT. SIZE/SPACING		DIMENSIONS	NATIVE	WATER USE	REMARKS
CODE									
CHI	80		Chrysobalanus icaco 'Red Tip' / Red Tip Cocoplum	3 gal @ 24"oc	30" ht. x 24" spr.	30" ht. x 24" spr.	Yes	Low	
TRF	60		Tripsacum floridanum Gamma Grass	3 gal @ 24"oc	18" ht. x 12" spr.	18" ht. x 12" spr.	Yes	Low	
ARG	250		Arachis glabrata/ Perennial Peanut	1 gal @ 18"oc	8" ht. x 12" spr.	8" ht. x 12" spr.	No	Mod	
GROUND COVERS / MISCELLANEOUS		QTY	BOTANICAL/COMMON	SIZE		DIMENSIONS			
CODE									
SOD			Stenotaphrum secundatum / St. Augustine Grass	S.F.					Contractor to verify qty.

CITY OF MIAMI BEACH

LANDSCAPE LEGEND

INFORMATION REQUIRED TO BE PERMANENTLY AFFIXED TO PLANS
Zoning District RM-1 Lot Area 7,500 s.f. Acres .17 ac.

OPEN SPACE

- A. Square feet of required Open Space as indicated on site plan:
Lot Area = 7,500 s.f. x 50 % = 3,750 s.f.
REQUIRED/ ALLOWED PROVIDED
3,750 2,257
- B. Square feet of parking lot open space required as indicated on site plan:
Number of parking spaces 8 x 10 s.f. parking space =
80 80
REQUIRED/ ALLOWED PROVIDED
3,830 2,337
- C. Total square feet of landscaped open space required: A+B=

LAWN AREA CALCULATION

- A. Square feet of landscaped open space required
B. Maximum lawn area (sod) permitted= 50 % x 3,750 s.f.
1,875 1,722

TREES

- A. Number of trees required per lot or net lot acre, less existing number of trees meeting minimum requirements=
28 trees x .17 net lot acres - number of existing trees=
7 7
- B. % Natives required: Number of trees provided x 30% =
2 7
- C. % Low maintenance / drought and salt tolerant required:
Number of trees provided x 50%=
3 7
- D. Street Trees (maximum average spacing of 20' o.c.)
75 linear feet along street divided by 20' =
4 4
- E. Street tree species allowed directly beneath power lines:
(maximum average spacing of 20' o.c.):
linear feet along street divided by 20' = n/a n/a

SHRUBS

- A. Number of shrubs required: Sum of lot and street trees required x 12=
108 204
- B. % Native shrubs required: Number of shrubs provided x 50%=
54 102

LARGE SHRUBS OR SMALL TREES

- A. Number of large shrubs or small trees required: Number of required shrubs x 10%=
11 11
- B. % Native large shrubs or small trees required: Number of large shrubs or small trees provided x 50%=
6 11

456 S.F. OF MITIGATION MET WITH THE USE OF 4
CATEGORY 2 GD @ 150 S.F. EACH.

ARCHITECT:
TAI ARCHITECTURE, INC.
278 NW 37th Street, Miami, FL 33127
P: 305.576.7558 F: 305.576.5772
e: michael@taidmiami.com license aa26001343

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01 1ST SUB	01.20.20



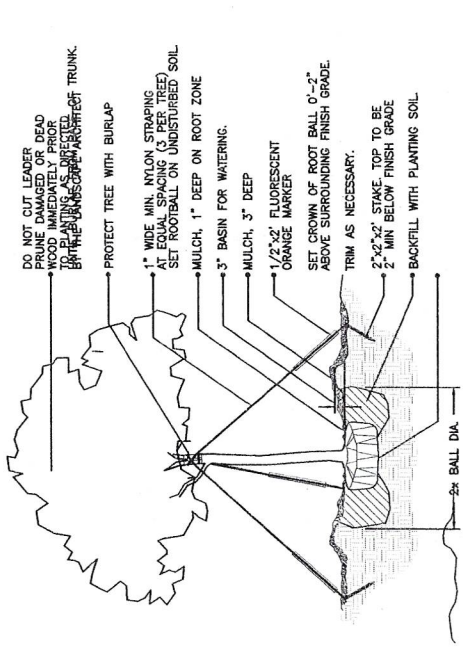
1311 15TH TERRACE
MIAMI BEACH, FL 33139

LANDSCAPE PLAN
DRAWING TITLE:
PROJECT #: 17-M-05
DRB REVIEW

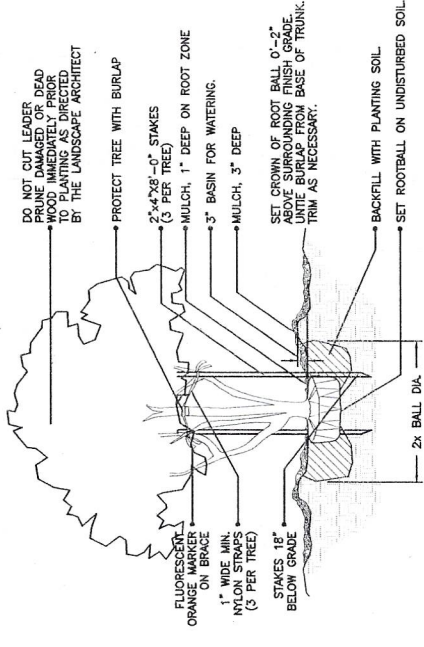
LNP-2
SHEET

GENERAL NOTES:

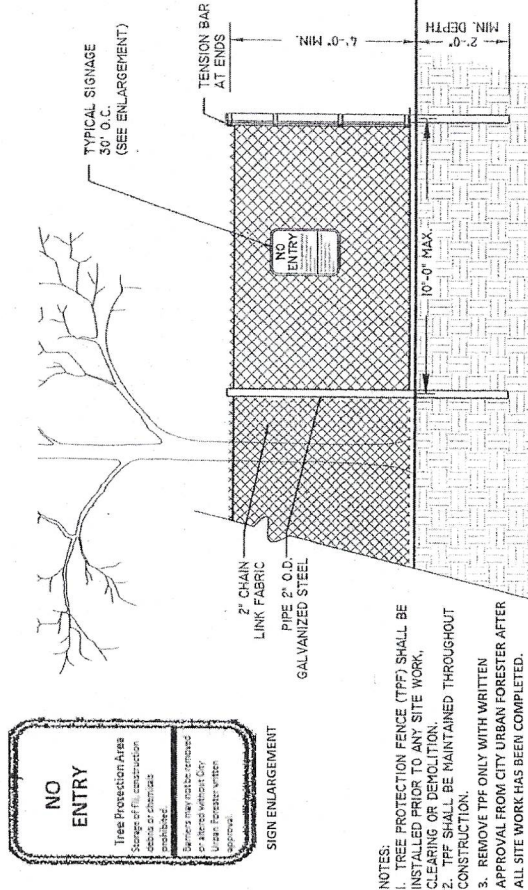
1. PLANT MATERIAL: All plant material shall be Florida #1 or better as established by "Grades and Standards for Nursery Plants" of the state of Florida, Department of Agriculture.
2. All trees, shrubs and groundcovers shall be of the sizes as specified in the Plant List.
3. Quantities listed on the the Plant List are for estimating purposes. Contractor shall verify all quantities. Mulch, topsoil, fertilizer, etc. shall be included in the unit cost of the plants.
4. Where there is a discrepancy either in quantities, plant names, sizes or specifications between the plan or plant list, the plant takes precedence.
5. All planting beds and water basins for trees shall be covered with a 3" minimum depth of shredded eucalyptus or florimulch grade 'B' or better.
6. The Planting Plan shall be installed in compliance with all existing codes and applicable deed restrictions.
7. SOD: All areas not used for buildings, vehicular use areas, walks or planting beds shall be grassed. Grassing shall extend to any abutting street pavement edge and to the mean waterline of any abutting canal, lake or waterway.
8. PLANTING SOIL: All trees and shrubs shall be planted with a minimum of 12" topsoil around and beneath the rootball. Minimum topsoil shall be 6" for groundcover areas and 2" for sodded grass areas.
9. Planting soil to be a weed-free mixture of 50% sand, 40% muck, and 10% Canadian peat. All plant material to receive planting soil as per details.
10. Contractor is responsible for determining all utility locations and installing facilities so as to not conflict. All damage to existing utilities or improvements caused by Contractor shall be repaired at no additional cost to the Owner.
11. Contractor to notify "Sunshine" at 1-800-638-4097 Two Full Business Days prior to digging for underground utility locations.
12. Contractor shall be responsible for providing final grading of all associated planting areas.
13. After final grade, area to be raked to 6" depth and all rock and foreign inorganic materials removed and disposed of properly off-site.
14. All planting holes to be hand dug except where machine dug holes will not adversely affect or damage utilities or improvements (see note 8).
15. No plunging of any tree or palm will be accepted. All plants to be planted at the nursery grade or slightly higher.
16. Contractor shall stake & guy all trees and palms at time of planting as per the appropriate detail. Contractor is responsible for the maintenance and/or repair of all staking and guying during warranty period and removal & disposal of staking after establishment period.
17. Fertilizer for grass areas shall be NPK 16-4-8 @ 12.5 lbs/1000 s.f. or 545 lbs/acre. Nitrogen 50% slow release form & fertilizer to include secondary micronutrients.
18. SUBSTITUTIONS AND CHANGES: All substitutions and changes shall be approved in writing prior to installation. Any discrepancies between plans, site and specifications shall be brought to the immediate attention of the Landscape Architect, the owner and governing municipality.
19. WATERING: All plant material shall be watered in at time of planting in accordance with standard nursery practices. In addition, Contractor will continue watering of plant material until substantial completion and as needed thereafter for a period of 2 months.
20. All new plant material shall be guaranteed for 1 year from time of final acceptance of project. Any plant material not in a healthy growing condition will be replaced by the Contractor at no additional cost to the Owner within 10 days of notification. For all replacement plant material, the warranty period shall be extended an additional 45 days beyond the original warranty period. All trees that lean or are blown over, caused by winds less than 75 mph, will be re-set and braced by the Contractor at no additional cost to the Owner.
21. The successful bidder shall furnish to the Owner a unit price breakdown for all materials. The Owner may, at its discretion, add or delete from the materials utilizing the unit price breakdown submitted.
22. No plant material will be accepted showing evidence of cable, chain marks, equipment scars, or otherwise damaged.
23. Plant material will not be accepted when the ball of earth surrounding its roots has been cracked, broken or otherwise damaged.
24. Root-prune all trees a minimum of (8) weeks prior to planting.
25. All landscaped areas will be irrigated by an underground, automatic, rust-free irrigation system providing 100% coverage and 100% spray overlap. The system shall be maintained in good working order and designed to minimize water on impervious services and not overspray walkways. A rain sensor device shall be installed to override the irrigation cycle of the system when adequate rainfall has occurred.
26. All plant material planted within the sight distance triangle areas (see plan) shall provide unobstructed cross-visibility at a horizontal level between 30 inches and 8 feet above adjacent street grade.
27. No canopy trees shall be planted within 12 feet of a light pole. No palm species shall be planted within 6 feet of a light pole.
28. Ground cover plantings shall provide not less than 50 percent coverage immediately upon planting and 100 percent coverage within 6 months after planting.
29. Tree protection barricades shall be provided by Landscape Contractor around existing trees that may be impacted by the proposed construction. Prior to any construction a tree protection barricade inspection shall be conducted by the landscape architect, owner or governing municipality. Refer to landscape detail for tree preservation barricade fencing.
30. In all pedestrian areas, all trees and palms shall be maintained to allow for clear passage at an 8 foot clear trunk.
31. All landscape material shall be setback a minimum of 10' from any Fire Hydrant.
32. Tree support materials are to be removed from each tree once it is 'established.' This is to be done SIX MONTHS for shade trees and ONE YEAR for Palms.



(2" cal. and over)
LARGE TREE PLANTING DETAIL
NTA



MULTI- TRUNK AND SMALL TREE
(2" cal. and under) PLANTING DETAIL
NTA



- NOTES:
1. TREE PROTECTION FENCE (TPF) SHALL BE INSTALLED PRIOR TO ANY SITE WORK, CLEARING OR DEMOLITION.
 2. TPF SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
 3. REMOVE TPF ONLY WITH WRITTEN APPROVAL FROM CITY URBAN FORESTER AFTER ALL SITE WORK HAS BEEN COMPLETED.
 4. NO CONSTRUCTION ACTIVITIES PERMITTED WITHIN TPF WITHOUT URBAN FORESTER APPROVAL

4' CHAIN LINK TREE PROTECTION FENCE
ELEVATION

ARCHITECT:
TAI ARCHITECTURE, INC.
2705 W. 57th Avenue, Suite 100, Fort Lauderdale, FL 33322
e: michael@taiarchitect.com license aa28091343

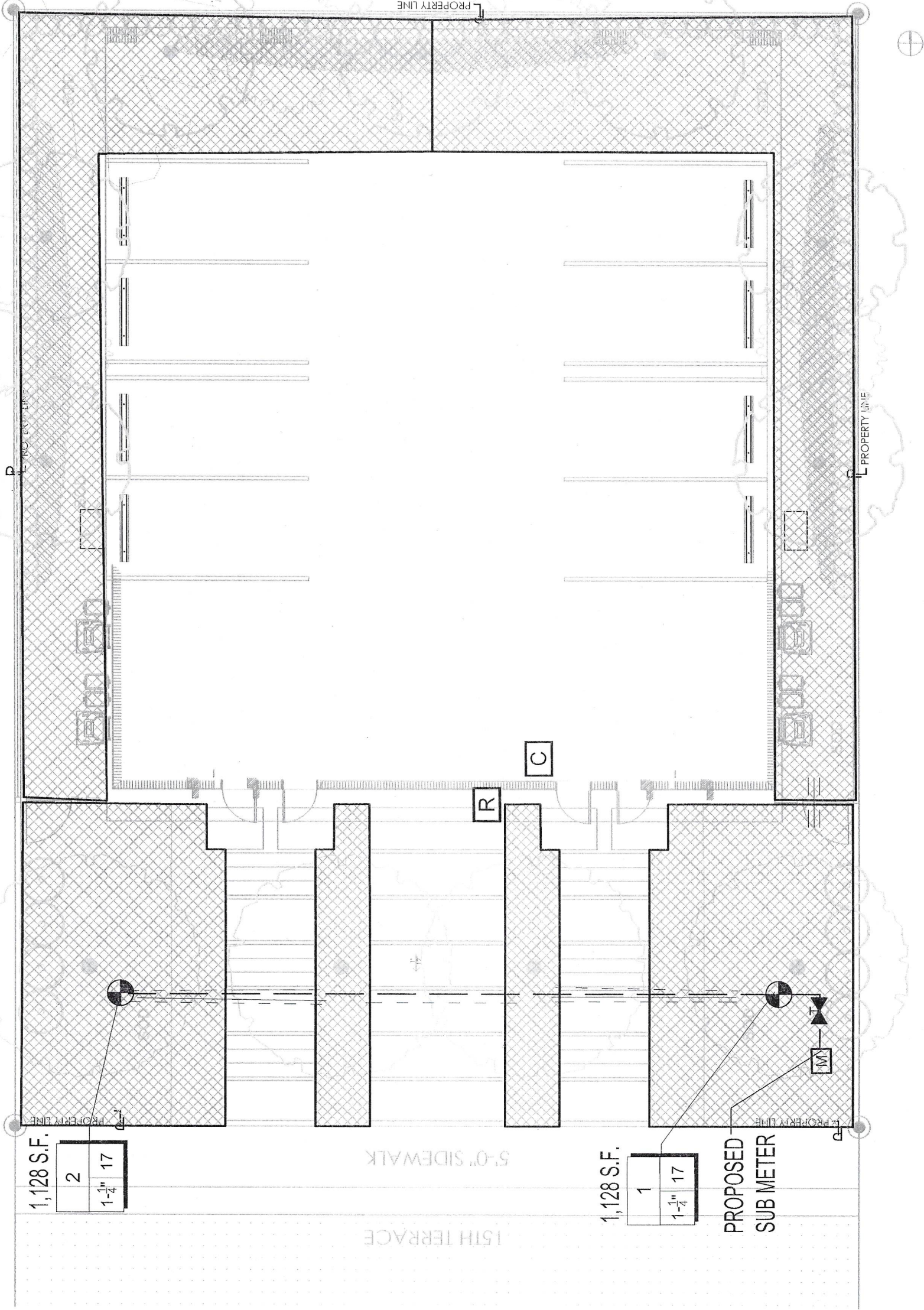
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1311 15TH TERRACE
MIAMI BEACH, FL 33139

DRAWING TITLE:
LANDSCAPE NOTES & DETAILS
PROJECT #:
17-M-05
DRB REVIEW



IRRIGATION PLAN

SCALE 1"=10'



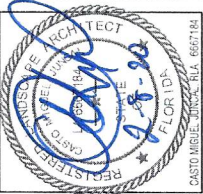
IRR-1

SHEET

ARCHITECT:
TAI ARCHITECTURE, INC.
278 NW 37th Street, Miami, FL 33127
P: 305.576.7556 F: 305.576.5722
E: mitchael@taidrhn.com license aa26001343

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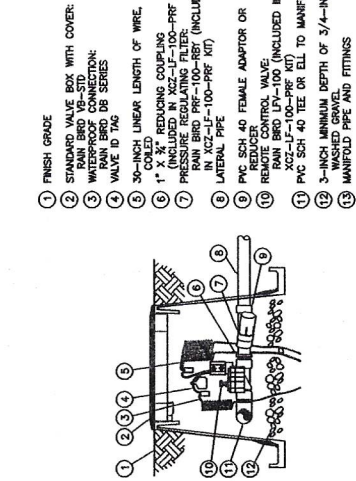


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MIAMI BEACH, FL 33139

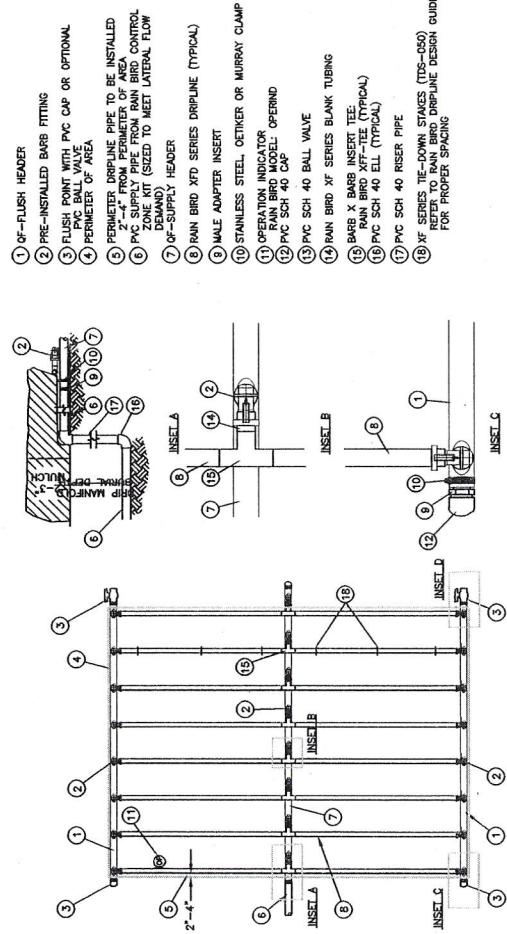
DRAWING TITLE:
IRRIGATION PLAN

PROJECT #
17-M-05

DRB REVIEW

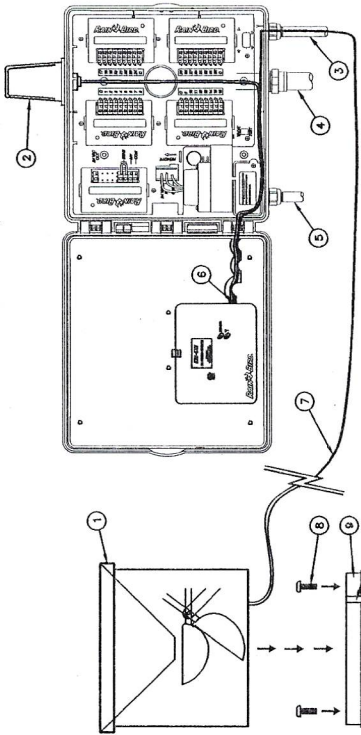


XZCZ-LF-100-PRF 1\"/>



NOTES:
1. DISTANCE BETWEEN LATERAL ROWS AND EMITTER SPACING TO BE BASED ON SOIL TYPE, PLANT MATERIALS AND CHANGES IN ELEVATION. SEE THE RAINBIRD WEBSITE FOR SUGGESTED SPACING.
2. LENGTH OF LONGEST DRIPLINE LATERAL SHOULD NOT EXCEED THE MAXIMUM SPACING SHOWN IN THE ACCOMPANYING TABLE.

XFD Dripline Maximum Lateral Lengths (feet)				
Net Pressure psi	12\"/>	12\"/>	24\"/>	24\"/>
	Normal Flow (gph)	Normal Flow (gph)	Normal Flow (gph)	Normal Flow (gph)
60	8.9	8.8	8.8	8.5
50	11.0	10.7	10.7	10.2
40	13.1	12.7	12.7	12.1
30	15.2	14.7	14.7	13.9
20	17.3	16.7	16.7	15.8
15	19.4	18.8	18.8	17.7
10	21.5	20.9	20.9	19.6
5	23.6	23.0	23.0	21.5



ESPLXM OUTDOOR CONTROLLER WITH ETM-LXM AND ETM-RG

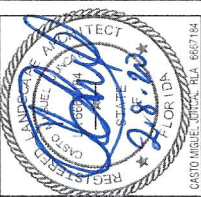
- RAIN BIRD ET MANAGER TIPPING RAIN GAUGE: RAIN BIRD ETM-RG (DIMENSIONS 3 1/8\"/>
- RAIN BIRD ESP-LX MODULAR CONTROLLER WITH ET MANAGER CARTRIDGE
- 1-1/2-INCH PVC SCH 40 CONDUIT AND FITTINGS
- 1 1/2-INCH PVC SCH 40 CONDUIT AND FITTINGS
- 1-1/2-INCH PVC SCH 40 CONDUIT TO POWER SUPPLY
- CONNECT TIPPING RAIN GAUGE TO ET MANAGER CARTRIDGE
- 30' LENGTH OF WIRE TO TIPPING RAIN GAUGE (INCLUDED). CUT TO REQUIRED LENGTH. IF EXCESS WIRE IS AVAILABLE, THE RAIN GAUGE CAN HAVE A MAXIMUM CABLE RUN OF 500'. USE 18 AWG AS A MINIMUM WIRE SIZE FOR ADDITIONAL CABLE.
- MOUNTING SCREWS (NOT INCLUDED)
- MOUNTING PLATE WITH 2 MOUNTING HOLES
- WIRE NOTCH
- RAIN DRAINAGE HOLES
- LEVEL SURFACE OR BRACKET

3\"/>

ARCHITECT:
T&A ARCHITECTURE, INC.
278 NW 37th Street, Miami, FL 33127
P: 305.576.7556 F: 305.576.7572
e: mitchell@tandaa.com license aa26001343

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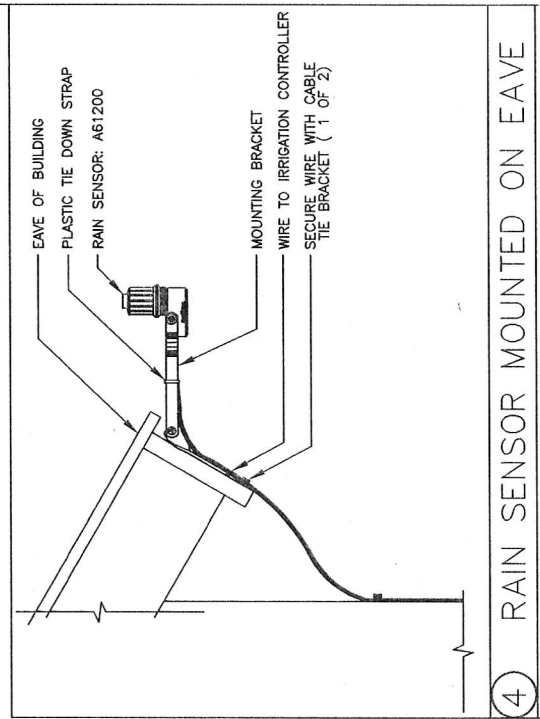
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02	FINAL SUB	02.10.20



1311 15TH TERRACE
MIAMI BEACH, FL 33139

IRRIGATION DETAILS
17-M-05
PROJECT #

IRR-2
SHEET



4 RAIN SENSOR MOUNTED ON EAVE

NOTES:
1. MUST USE RECTANGULAR BOX TO ACCOMMODATE BOTH THE SUB-METER AND SHUT-OFF VALVE.
2. MUST HAVE SHUT-OFF VALVE ON INLET SIDE BEFORE METER.
3. MUST PLACE SUB-METER BOX WITHIN 5 FEET OF MAIN METER, EASILY ACCESSIBLE TO METER READER.
4. MUST CALL METER SHOP AT 305-673-7681 WHEN INSTALLATION IS COMPLETED FOR FINAL INSPECTION IN ORDER TO OBTAIN SEWER CREDIT.
5. SUB-METER CANNOT BE LARGER THAN THE DOMESTIC METER WATER SERVICE LINE.

SUB-METER INSTALLATION DETAIL
N.T.S.

WS37
WATER DETAILS NO. 5
SUB-METER INSTALLATION DETAIL

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL
	Rain Bird xcz-lf-100-prf 1" control zone kit
	FABCO Series LF860 - 1" Reduced Pressure Zone Assemblies, lead free cast copper. install 12" (305mm) above highest downstream outlet and the highest point in the downstream piping.
	Rain Bird ESP-24SITE-W
	Rain Sensor
	Meter
	Valve Callout # Valve Number # Valve Flow # Valve Size
	Irrigation Lateral Line:XFD-09-12-100
	Irrigation Mainline: PVC Schedule 40
	Sleeving
	Area to receive drip irrigation

IRRIGATION NOTES & SPECIFICATIONS

The system has been designed to conform with the requirements of all applicable codes. Should any conflict exist, the requirements of the codes shall prevail. It is the responsibility of the owner/installation contractor to insure the entire system is installed according to all applicable laws, rules, regulations and conventions. Irrigation contractor is responsible for obtaining all required permits according to federal, state and local laws.

The scope of work is shown on the plans, notes and details. The Irrigation Contractor shall be certified as a CERTIFIED IRRIGATION CONTRACTOR by the Irrigation Association. The certification shall be current and in good standing.

SCOPE OF WORK

The work specified in this section consists of furnishing all components necessary for the installation, testing, and delivery of a complete, fully functional automatic landscape irrigation system that completely complies with the 100% IRRIGATION PLANS, specifications, notes, details and all applicable laws, regulations, codes and ordinances. This work shall include, but not be limited to, the providing of all required material (pipes, valves, fittings, controllers, wire, primer, glue, etc.), layout, protection of the public, excavation, assembly, installation, back filling, compacting, repair of road surfaces, controller and low voltage feeds to valves, cleanup, maintenance, guarantee and as-built plans.

All irrigated areas shall provide 100% head-to-head coverage from a fully automatic irrigation system with a rain sensor as shown. The rain sensor shall be installed to prevent its activation by adjacent heads. All watering procedures shall conform to local codes, as well as this project's regional Water Management District restrictions and regulations. Zones are prioritized first by public safety and then by hydraulic concerns. This sequencing will be a mandatory punch list item.

Contractor shall verify the location of all underground utilities 72 hours prior to commencement of work.

It is the responsibility of the irrigation contractor to familiarize themselves with all grade differences, location of walls, retaining walls, structures and utilities. Do not willfully install the sprinkler system as shown on the drawings when it is obvious in the field that unknown obstruction, grade differences or differences in the area dimensions exist that might not have been considered in the design. Such obstructions, or differences, should be brought to the attention of the owner/authorized representative. In the event this notification is not performed, the irrigation contractor shall assume full responsibility for any revisions necessary.

Irrigation contractor shall repair or replace all existing site items damaged by their work. Irrigation contractor shall coordinate their work with other contractors for the location and installation of pipe sleeves and laterals through walls, under roadways and paving, etc.

The contractor shall take immediate steps to repair, replace, or restore all services to any utilities which are disrupted due to their operations. All costs involved in disruption of service and repairs due to negligence on the part of the contractor shall be the contractor's responsibility.

POINT OF CONNECTION (P.O.C.)

The P.O.C. is a potable source. The P.O.C. must be capable of delivering a minimum of 35 G.P.M. at 30 PSI. Contractor shall verify these minimum conditions can be met prior to beginning irrigation system installation.

If the conditions can not be met, the contractor must notify the designer prior to proceeding with the work. If the contractor does not do so, the contractor proceeds at their own risk and becomes responsible for any future work required to make the system perform as required.

PIPING

Pipe locations shown on the plan are schematic and shall be adjusted in the field. When laying out mainlines place a maximum of 18" away from either the back of curb, front of walk, back of walk, or other hardscape to allow for ease in locating and protection from physical damage. Install all lateral pipe near edges of pavement or against buildings whenever possible to allow space for plant root balls. Always install piping inside project property boundary.

Pipes shall always be placed in planting beds. If it is necessary to have piping under hardscapes, such as roads, walks, and patios, the pipes must be sleeved using Sch. 40 PVC with the sleeve diameter being twice the size of the pipe it is carrying with a minimum sleeve size of 2".

Pipe sizes shall conform to those shown on the drawings. No substitutions of smaller pipe sizes shall be permitted, but substitutions of larger sizes may be approved. All damaged and rejected pipe shall be removed from the site at the time of said rejection.

Mainline shall be Schedule 40 gasketed "O" ring PVC with ductile iron fittings (sized per plans).

Contractor to ensure all mainline piping is properly restrained using mechanical joint fittings, restraining collars, threaded rods, thrust blocks, etc., as and where required. Contractor shall refer to pipe manufacturer's recommended installation practices for further direction.

PVC pipe joint compound and primer: slow-drying, heavy duty cement and lined (purple) primer that is compatible with the cement. The PVC cement shall be Weld-On 2711 grey and the primer shall be Weld-On P70 purple primer, or approved equals.

ELECTRICAL POWER SUPPLY

Electrical supply for controller to be provided by others.

All electrical installation to comply with the National Electrical Code and any and all other applicable electrical codes, laws and regulations. A licensed electrician shall perform all electrical hook-ups. Power for the controller shall be 120 volt, 20 amp.

WIRING

Irrigation control wire shall be thermoplastic solid copper, single conductor, low voltage irrigation controller wire suitable for direct burial and continuous operation at rated voltages.

Tape and bundle control wires every 10' and run adjacent to the mainline. At all turns in direction make a 2' coil of wire. At all valve boxes coil wire around a 3/4" piece of PVC pipe to make a coil using 30 linear inches of wire. Make electrical connections with 3M-DVE-D58 connectors.

Number all wires using an electrical book of numbers according to the plans. Number wires in all valve boxes, junction boxes and at the controller.

Wire sized, numbered and colored as follows:

- #1/4 white for common
- #1/4 spare black common
- #1/4 red for hot wires
- #1/4 spare yellow hot wire

CONTROLLER GROUNDING

Contractor to utilize 4"X3/8" copper grounding plates, 5/8"X10" copper clad grounding rods, "One Strike" CAD wells at all connection points, #6 bare copper wire, and earth contact material. Install these and other required components as outlined in the detail. Contractor to verify that the earth to ground resistance does not exceed 10 ohms. Contractor shall provide a written certification on a licensed electrical contractor's letter head showing the date of the test, controller location, and test results. Each controller shall be so grounded and tested.

LAYOUT

Lay out irrigation system mainlines and lateral lines. Make the necessary adjustments as required to take into account all site obstructions and limitations prior to excavating trenches.

Stake all sprinkler head locations. Adjust location and make the necessary modifications to nozzle types, etc. required to insure 100% head to head coverage. Refer to the Edge of Pavement Detail on the Irrigation Detail Sheet.

Spray heads shall be installed 4" from sidewalks or curbed roadways and 12" from uncurbed roadways and building foundations. Rotors shall be installed 4" from sidewalks or curbed roadways, 12" from building foundations, and 36" from uncurbed roadways.

Shrub heads shall be installed on 3/4" Sch. 40 PVC risers. The risers shall be set at a minimum of 18" off sidewalks, roadway curbing, building foundations, and/or any other hardscaped areas. Shrub heads shall be installed to a standard height of 4" below maintained height of plants and shall be installed within planted masses to be less visible and offer protection. Paint all shrub risers with flat black or forest green paint, unless irrigation system will be installed from a reuse water system with purple PVC risers.

Locate valves prior to excavation. Insure that their location provides for easy access and that there is no interference with physical structures, plants, trees, poles, etc. Valve boxes must be placed a minimum of 12" and a maximum of 15" from the edge of pavement, curbs, etc., and the top of the box must be 2" above finish grade. No valve boxes shall be installed in turf areas without approval by the irrigation designer, only in shrub beds. Never install valve boxes in sport field areas.

VALVES

Closest all valves so that the farthest valve from the P.O.C. operates first and the closest to the P.O.C. operates last. The closest valve to the P.O.C. should be the last valve in the programmed sequence.

Adjust the flow control on each RCV to ensure shut off in 10 seconds after deactivation by the irrigation controller.

Using 3" high number stencils, paint the valve number in white on the lid of each valve box.

EQUIPMENT

Bubblers shall be installed using Sch 80 nipples and shall be placed at the base of trees for low level watering.

All pop-up heads and shrub risers shall be pressure compensating. All pop-up heads shall be mounted on flex-type swing joints.

All sprinkler equipment not otherwise detailed or specified shall be installed as per manufacturer's recommendations and specifications, and in accordance with local and state laws.

SIGNAGE & MARKING

The water source is reclaimed water. All system components must comply with the law. Properly mark/identify all piping valves, sprinkler heads, valve boxes, controllers, and irrigated areas. Color code using Pantone Purple and properly sign irrigated areas, as required.

Advisory signs designating the nature of the reuse project must be posted in areas where reuse is practiced. Advisory signs may be posted at entrances and access points where reclaimed water is used for landscape irrigation. Advisory signs must include the text: "Do not drink" in English and Spanish together with the equivalent standard international symbol.

Advisory signs posted adjacent to lakosponds or other decorative water features that use reclaimed water must also include the text: "Do not swim" in English and Spanish together with the equivalent standard international symbol.

All signs should be clearly legible, and enough signs should be posted to ensure reasonable notice is provided to the public per 62-610.468, F.A.C.

TRENCHING

Excavate straight and vertical trenches with smooth, flat or sloping bottoms. Trench width and depth should be sufficient to allow for the proper vertical and horizontal separation between piping as shown in the pipe installation detail on the detail sheet.

Protect existing landscaped areas. Remove and replace any damaged plant material upon job completion. The replacement material shall be the same genus, species, and size of the material it is replacing. The final determination as to what needs to be replaced and the acceptability of the replacement material shall be solely determined by the owner or owner's representative.

INSTALLATION

Cut all pipe square and deburr. Clean pipe and fittings of foreign material, then apply a small amount of primer while ensuring that any excess is wiped off immediately. Primer should not puddle or drip from pipe or fittings. Next apply a thin coat of PVC cement. First apply a thin layer to the pipe, then a thin layer inside the fitting, and finally another very thin layer on the pipe. Insert the pipe into the fitting. Insure that the pipe is inserted to the bottom of the fitting, then turn the pipe a 1/4 turn and hold for 10 seconds. Make sure that the pipe doesn't recede from the fitting. If the pipe isn't at the bottom of the fitting upon completion, the glue joint is unacceptable and must be discarded.

Pipes must cure a minimum of 30 minutes prior to handling and placing into trenches. A longer curing time may be required; refer to the manufacturer's specifications. The pipe must cure a minimum of 24 hours prior to filling with water.

BACKFILLING

The backfill 6" below and 6" above all piping shall be clean sand. At other trench backfill can be native material but shall not contain anything larger than 2" in diameter.

Main line pipe depth measured to the top of pipe shall be 24" minimum, 36" minimum at vehicular crossings.

Lateral line depths measured to top of pipe shall be 15" minimum, 30" minimum at vehicular crossings.

Contractor shall backfill all piping, both mainline and laterals, prior to performing any pressure tests. The pipe shall be backfilled with the exception of 2' on each side of every joint (bell fittings, 90's, tees, 45's, etc.). These joints shall not be backfilled until all piping has satisfactorily passed its appropriate pressure test as outlined below.

FLUSHING

Prior to the placement of heads, flush all lines for a minimum of 10 minutes or until lines are completely clean of debris, whichever is longer.

Use screens in heads and adjust heads for proper coverage avoiding excess water on walls, walks and paving.

TESTING

Remove all remote control valves and cap using a threaded cap. Fill mainline with water and pressurize the system to 125 PSI. Monitor the system pressure at two gauge locations; the gauge locations must be at opposite ends of the mainline. With the same respective pressures, monitor the gauges for two hours. There can be no loss in pressure at either gauge for solvent-welded pipe. Gasketed piping shall lose no more water than allowed per the Florida State Building Code, Volume II Plumbing, Part VI, Appendix "F". Refer to this section for the formula to be used to calculate the maximum allowable water loss during the testing time. If these parameters are exceeded, locate the problem, repair it, wait 24 hours and retest the test. This procedure must be followed until the mainline passes the test.

The lateral lines must be filled and visually checked for leaks. Any leaks detected must be repaired. No pressure test of the lateral lines is required.

Once the mainline and lateral lines have passed their respective tests and the system is completely operational, a coverage test and demonstration of the system is required. The irrigation contractor must demonstrate to the owner or higher representative that proper coverage is obtained and that the system works automatically from the controller. This demonstration requires that each zone be turned on in the proper sequence as shown on the plan from the controller. Each zone will be inspected for proper coverage and function. The determination of proper coverage and function will be solely determined by the owner or owner's representative.

Operational Testing - Upon completion of backfilling, finish grading and contouring, test the entire system for proper operation, including electrically actuating the remote control valves. Run each zone until water begins to puddle or run off. This will allow determination of the number of irrigation start times necessary to meet the weekly evapotranspiration requirements of the planting material in each zone. In sandy soils no puddling will occur. In these cases, calculate the required run times.

SUBMITTALS

The contractor must submit for approval, prior to installation, copies of the manufacturer's cut sheets/specifications for all components to be used in the irrigation system.

After project completion, and as a condition of final acceptance, the irrigation contractor shall provide the owner with a high quality, accurate, and legible set of as-built drawings. The as-builts must identify all remote control valves, gate valves, ball valves, splice boxes, controllers, mainline, sleeveing, and low voltage wiring. Each of these items is shall located using a submeter GPS system. The irrigation contractor must also provide accurate, informative, and easy to follow and understand operation and maintenance manuals for all components of the irrigation system.

Controller charts - Upon completion of "as-built", contractor shall prepare controller charts at one per controller. Indicate on each chart the area controlled by a remote control valve (using a different color for each zone). This chart shall be reduced to a size that will fit inside of the controller door. The reduction shall be hermetically sealed inside two 2mi pieces of clear plastic.

Contractor shall furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents. Include tools to service these products.

- Sprinkler Units: Five of each unit for each type and size installed, but no fewer than two units.
- Emitter Units: Five of each unit for each type and size installed, but no fewer than two units.

FINAL ACCEPTANCE

Final acceptance of the irrigation system will be given after the following documents and conditions have been completed and approved. Final payment will not be released until these conditions are satisfied.

- Final walk-thru and correction of all punch list items.
- Completion and acceptance of as-built drawings.
- Acceptance of required controller charts and placement inside of controller.
- Turnover of all required parts and tools as outlined in the project specifications.

GUARANTEE: The irrigation systems shall be guaranteed for a minimum of one calendar year from the time of final acceptance.

ARCHITECT:
T&A ARCHITECTURE, INC.
226 NW 37th Street, Miami, FL 33127
P: 305.575.7556 F: 305.576.5772
e: mtchase@tandamiami.com license aa260013243

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NO	REVISIONS/SUBMISSIONS	DATE
01	1ST SUB	01.20.20
02	FINAL SUB	02.10.20

REGISTERED PROFESSIONAL ARCHITECT
STATE OF FLORIDA
CASTO MORALES-ARCHITECT, P.A. 6667184
FLOOR 10th

1311 15TH TERRACE
MIAMI BEACH, FL 33139

DRAWING TITLE:
IRRIGATION NOTES
PROJECT #
17-M-05
DRB REVIEW

IRR-3
SHEET