

ERIC & SANDRA OLSEN RESIDENCE

SURFSIDE DRIVE + FT. PIERCE, FL

MAY 08, 2023

IRRIGATION PLAN

IRRIGATION SPECIFICATIONS

SYSTEM DESCRIPTION:

This is an automatic irrigation system. Water supply is a 3/4" Municipal Water meter (shown on plans). The system consists of seven (7) zones. Flow rate is a minimum of 30 GPM to the valves, which the Contractor shall verify with the City.

WATER SOURCE:

Shall be a 3/4" Municipal Water Meter - with 3/4" PVB. Back flow device shall be code compliant. Contractor is responsible for Code requirements.

SYSTEM PIPE:

All pipe shall be Class 200 PVC or heavier. System Main shall be Sch.40 PVC pipe. All fittings shall be solvent weld Sch.40 fittings unless otherwise indicated in these specifications. Do not use SxMIP adapters except for shrub risers. Class 200 PVC main line pipe. Main shall be pressure tested with all valves in place and prior to backfilling. Test shall be 100 PSI for one hour. Loss of 10 PSI within the hour shall constitute failure. Solvent weld fittings and pipe ends shall be cleaned with an all purpose PVC Pipe cleaner prior to applying glue. Main shall have a minimum of 24" of cover. All other pipe, laterals, etc. shall have a minimum 12" of cover. Backfill shall be free of debris and sharp objects. No rock larger than 3/4" shall be in contact with PVC pipe anywhere. All pipe above ground, with the exception of shrub risers, shall be galvanized, copper, bronze or ductile iron, and shall be painted with a flat black epoxy water proof paint. Shrub risers shall be Sch.40 or Sch.80 PVC and shall be painted with flat black epoxy paint.

1. Assembly for Solvent Weld PVC pipe:

- a. Cut square with PVC cutter, and deburr the cut prior to assembly.
- b. Clean PVC pipe with PVC cleaner prior to assembly.
- c. Use gray, heavy bodied, slow drying, high strength glue.
- d. Keep out of service for the length of time as specified by the Manufacturer of the PVC glue.

SLEEVES:

All pipe under paving (walks, planter walls and drives, etc.) shall be sleeved with Sch. 40 PVC or Galvanized Pipe as noted on plans. Sleeves shall extend beyond the edge of pavement and shall be marked. The water line shall be installed in sleeve prior to installation of the sleeve. Cap ends of water line during construction to prevent debris from entering. Sleeves under roads shall have a minimum cover of 18 inches.

SPRINKLERS:

All sprinklers shall be the type referred to in the Irrigation Key and shall be attached to the lateral with either flexible line (swing pipe) or a PVC swing joint such as those manufactured by Lasco, Rainbird or Dura Industries, specifically for irrigation use, being constructed with components utilizing Acme threads and o-ring seals. Pressure rating shall be 200 PSI, or greater, as stated by the manufacturer. Sprinklers using more than 4 GPM shall be connected utilizing PVC swing joints. Barbed fittings shall be same size as sprinkler inlet. Sprinklers shall be set flush with final grade and absolutely vertical. Use Stainless Steel risers on all rotor heads.

1. Spray heads shall be Rainbird 1806, 6" pop-up heads with Rainbird MPR series 5, 8,10 or 15 nozzles, unless otherwise specified in these drawings.

2. Spray heads in shrub beds shall be shrub adapters on Sch.40 risers. Height to be established by landscape architect. This plan requires 18" risers. Risers shall NOT be used next to paved areas and pedestrian walks where they are exposed to damage. In these areas use 12" pop-ups. Paint shrub risers with water proof black epoxy paint.

CONTROLLER:

RAINBIRD ESP-TM2 - 8 station controller to operate 7 sections + master valve. Controller shall be located in the main building (garage) where specified by the Owner. Grounding shall be equal to - or better than the manufacturer's recommendation. It shall also comply with the National Electrical Code. Both of these requirements preclude using the building or electrical supply line for grounding purposes. UL approved Ground Rod shall be utilized unless otherwise specified, or if the minimum resistance reading cannot be made. If minimum grounding cannot be made, utilize grounding plates until specified resistance is met.

RAIN SHUT-OFF DEVICE

Install a rain shut-off device out of the range of the sprinklers as per State DER requirements. Use Rainbird WR2 Series Wireless Sensor. Submit manufacturers equipment sheet prior to installation of any such device.

ELECTRIC CONTROL VALVES:

RAINBIRD PGA 24V electric control valves. All valves shall be housed in 16" x 12" rectangular Carson 1419B valve boxes or larger, and installed as per details. Control Valve shall be rated at 150 PSI or higher. Use bottom inlet whenever possible.

CONTROL WIRE:

Control wire shall be UL approved, solid core, PE or PVC covered irrigation control wire. SIZE: Use a minimum of 14 gage control and 12 gage bond wire. All splices and connections shall be made at pull boxes or valve boxes. (No field splices). Communication wire shall be as recommended by manufacturer. All splices shall be made with 3M brand DBY - 6 Direct Burial Splice Kit. All wire to be encased in UL approved PVC conduit. All wire to be brought back to controller. Wire pull boxes shall be 10" round Ametek or other approved boxes. Wire which is not rated for direct burial shall be installed in water tight conduit with water tight junction boxes.

MAINTENANCE:

It is the contractors responsibility to maintain the system, repairing leaks, repairing broken heads, adjusting sprinkler heads, flushing system, etc. until final acceptance by the Owner. Contractor shall instruct Owner maintenance personnel as to maintenance requirements for this irrigation system. Site shall be cleaned daily of trash and debris.

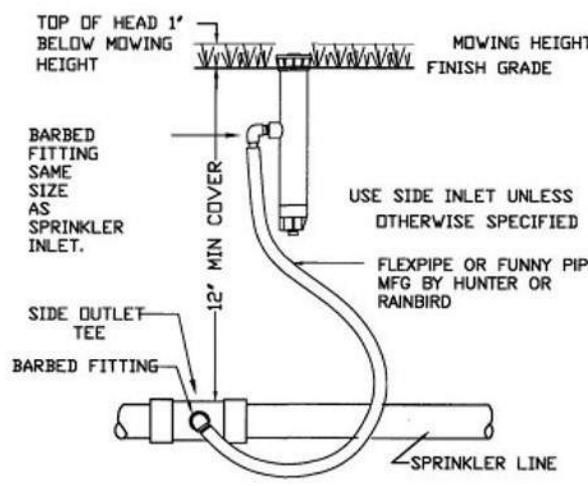
AS-BUILT DRAWINGS:

Contractor shall provide "as-built" drawings showing all changes. All valves and changes of direction on the main line shall have GPS coordinates noted on the as-built drawings. Controller program shall be part of this submission.

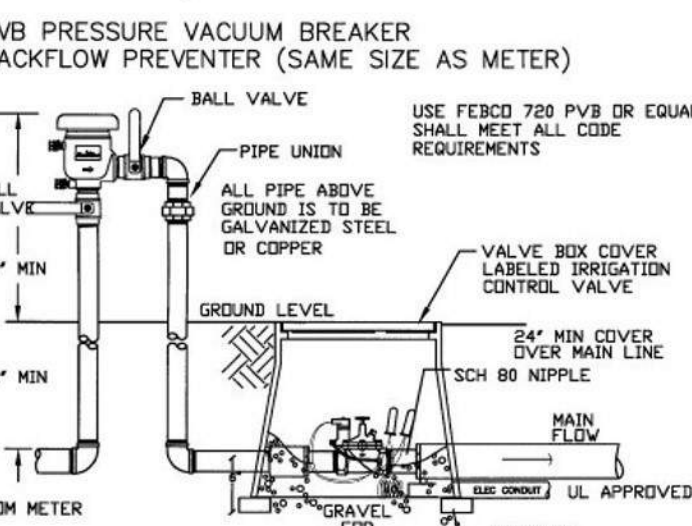
GUARANTEE:

The entire system shall be guaranteed for a period on one year from the time of final acceptance. All manufacturers written warranties and guarantees, as well as "as-built" drawings, maintenance and operational information, shall be turned over to the Owner prior to, and is a condition of final acceptance. Guarantee period shall not commence until all of the documents have been turned over to the Owners representative.

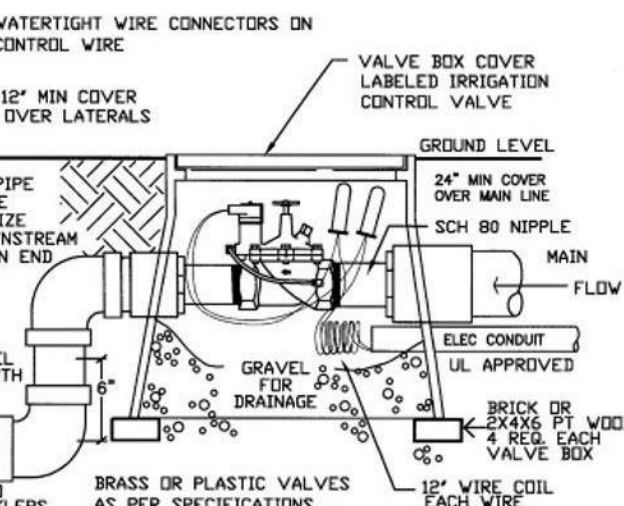
IRRIGATION DETAILS



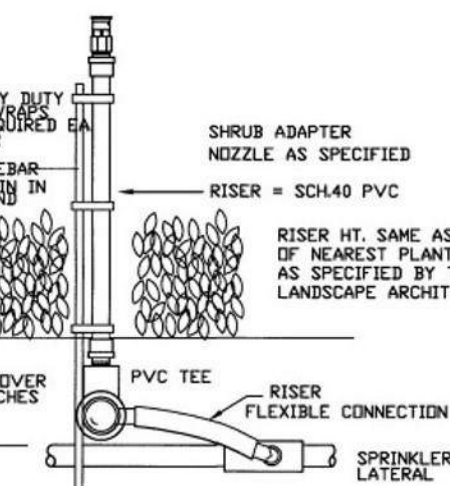
RAINBIRD 1806 POP-UP SPRAY



MASTER CONTROL VALVE WITH PVB and VALVE BOX



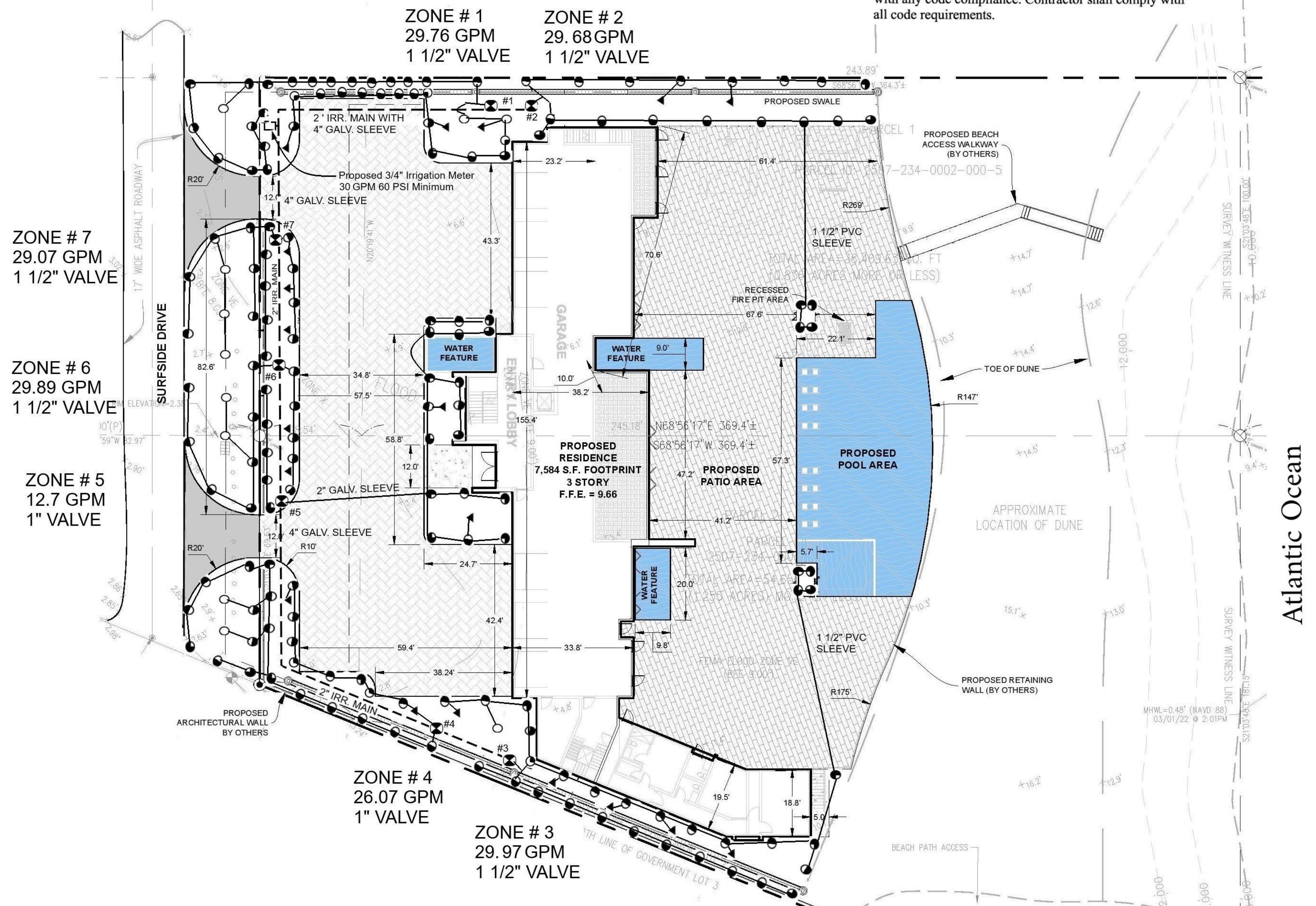
ELECTRIC REMOTE CONTROL VALVE WITH VALVE BOX



SHRUB SPRAY ON RISER



RAINBIRD ESP-TM2-8 CONTROLLER



ZONE # 7
29.07 GPM
1 1/2" VALVE

ZONE # 6
29.89 GPM
1 1/2" VALVE

ZONE # 5
12.7 GPM
1" VALVE

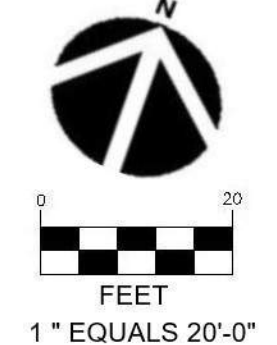
ZONE # 4
26.07 GPM
1" VALVE

ZONE # 3
29.97 GPM
1 1/2" VALVE

ZONE # 1
29.76 GPM
1 1/2" VALVE

ZONE # 2
29.68 GPM
1 1/2" VALVE

- #### IRRIGATION KEY
- POP-UP Rainbird 1806
Use with MPR Sprav Nozzles in arc and radius shown on plan:
Number designates radius of throw.
 - FULL CIRCLE Rainbird MPR 10
 - ◐ THREE QUARTER CIRCLE Rainbird MPR 5, 6 (8), 10, 15
 - ◑ HALF CIRCLE Rainbird MPR 5, 6 (8), 10, 15
 - ◒ QUARTER CIRCLE Rainbird MPR 5, 6 (8), 10, 15
 - BUBBLER Rainbird 1404 - 1 GPM
 - ⊗ 24 VOLT ELECTRIC CONTROL VALVE
 - Ⓢ CONTROLLER Rainbird ESP-TM2 - 6 Station with WR2 Series Wireless Rain Sensor.



PREPARED BY:



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FL REG. # 0000422

NOTE:
IRRIGATION PLANS ARE SCHEMATIC IN NATURE
ALL VALVES AND PIPES SHALL BE LOCATED IN
LANDSCAPE AREAS EXCEPT AT ROAD/PAVING
CROSSINGS. All construction minimums shall be in
conformance to Plumbing section of the South Florida
Building Code, Appendix "F". They shall also be equal to,
or greater, than the "Standards" as set forth by the F.I.S.
FLORIDA IRRIGATION SOCIETY. Nothing herein or
contained in the specifications is intended to be in conflict
with any code compliance. Contractor shall comply with
all code requirements.

Atlantic Ocean

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5/8/2023
DocuSigned by:
George Botner
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SURFSIDE DRIVE + FT. PIERCE, FL

PLANTING PLAN

PLANT LIST

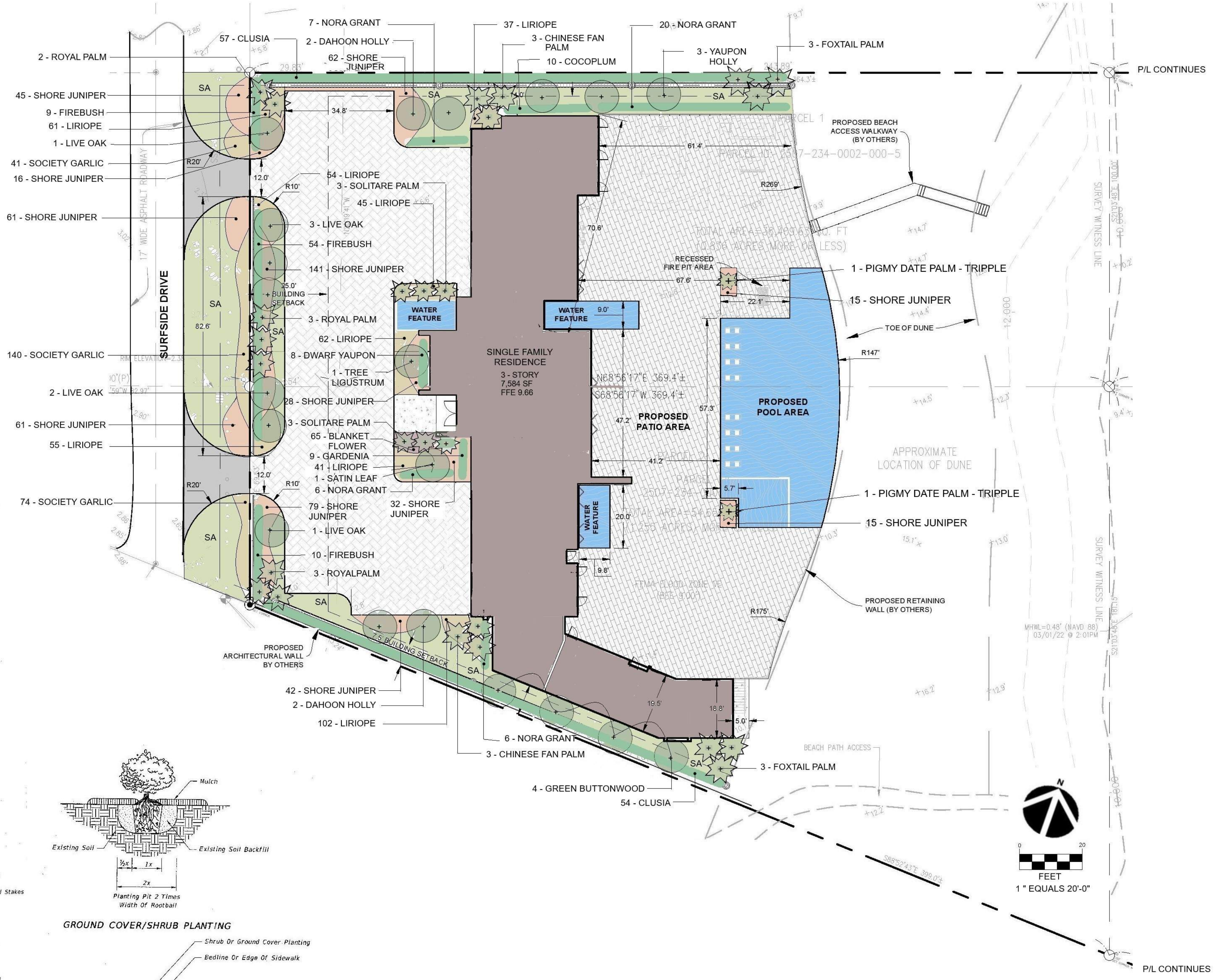
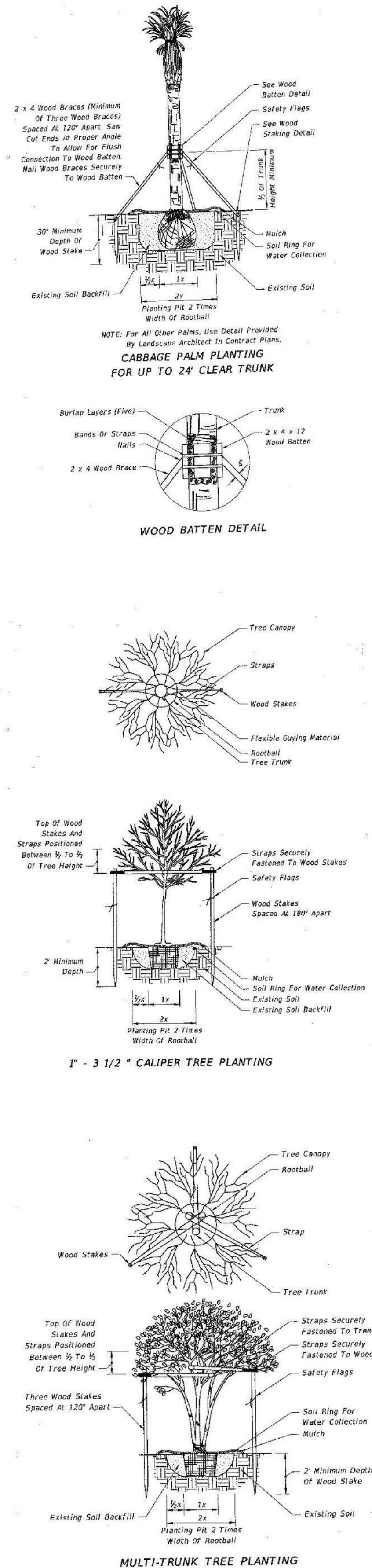
QTY	BOTANICAL NAME	COMMON NAME	N*	WW*	SIZE/SPECIFICATIONS
TREES					
3	Ilex vomitoria	Yaupon Holly	X	X	10' Ht., 2" DBH., 50 Gal.
7	Quercus virginiana	Live Oak	X	X	12' Ht., 2 1/2" DBH., 65 Gal.
4	Conocarpus erectus	Green Buttonwood	X	X	12' Ht., 2 1/2" DBH., 65 Gal.
4	Ilex cassine	Dahoon Holly	X	X	12' Ht., 2 1/2" DBH., 65 Gal.
1	Ligustrum lucidum	Tree Ligustrum	X	X	8' Ht., 1 1/2" DBH., 50 Gal.
1	Chrysophyllum oliviforme	Satin Leaf	X	X	10' Ht., 2" DBH., 40 Gal.
PALMS					
6	Wodyetia bifurcata	Foxtail Palm	X	X	8' Ht. Grey Wood, Matched
6	Livistona chinensis	Chinese Fan Palm	X	X	8' Ht. Grey Wood, Matched
8	Roystonea regia	Florida Royal Palm	X	X	6' G.W., Matched
7	Ptychosperma elegans	Solitaire Palm	X	X	8' G.W., Matched
SHRUBS					
39	Ixora coccinea 'Nora Grant'	Nora Grant	X	X	3 Gal., 24" Ht.
10	Chrysobalanus icaco	Cocoplum 'Red Tip'	X	X	3 Gal., 24" Ht.
111	Clusia guttifera 'Dwarf'	Dwarf Clusia	X	X	3 Gal., 24" Ht.
73	Hamelia patens 'Dwarf'	Firebush, Dwarf	X	X	3 Gal., 24" Ht.
8	Ilex vomitoria 'Shillings'	Dwarf Yaupon Holly	X	X	3 Gal., 24" Ht.
9	Gardenia jasminoides	Gardenia 'Jubilation'	X	X	3 Gal., 24" Ht.
GROUNDCOVERS					
597	Juniperus conferta	Shore Juniper	X	X	1 Gal.
255	Gaillardia pulchella	Blanketflower	X	X	1 Gal.
457	Liriope Muscari 'Emerald Goddess'	Liriope Emerald Goddess	X	X	1 Gal.
255	Tulbaghia violacea	Society Garlic	X	X	1 Gal.
LAWN GRASS					
SA	per plan	Stenothrum secundatum	St. Augustine 'Floritam'		Solid sod

NOTE: *N = Florida Native; WW = Water Wise Drought tolerant

PLANTING SPECIFICATIONS

- All plant materials shall be Florida Number 1 as provided in the most current edition of the "Grades and Standards for Nursery Plants, Parts I & II" prepared by the state Department of Agriculture and Consumer Services.
- All trees, shrubs and groundcovers shall be of the sizes as specified in the Plant List.
- Quantities listed on 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.
- Where there is a discrepancy either in quantities, plant names, sizes or specifications between the plan or Plant List, the plan takes precedence.
- All planting beds and water basins for trees shall be covered with a 3" minimum depth of shredded eucalyptus or Floramulch grade "B" or better. Refer to the Plant List for the specified mulch type. Alternative mulch material is required to be approved by Landscape Architect.
- The Planting Plan shall be installed in compliance with all existing codes and applicable deed restrictions.
- 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.
- Planting soil to be a weed-free mixture of 50% sand and 50% mulch or other organic planting material suitable to the Landscape Architect
- 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.
- Contractor shall be responsible for providing final grading of all associated planting areas.
- After final grade, area to be raked to 6" depth and all rock and foreign inorganic materials removed and disposed of properly off site.
- No plunging of any tree or palm will be accepted. All plants to be planted at the nursery grade or slightly higher.
- Contractor shall stake and 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 the Warranty Period and removal and disposal of staking after the establishment period.
- Fertilizer is required for plantings and shall be NPK 16-4-8 at 12.5 lbs/1000 s.f. or 345 lbs/acre. Nitrogen 50% slow release form and fertilizer to include secondary/minor micronutrients.
- 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.
- 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 and thereafter for a period of 2-months.
- All new plant material shall be guaranteed for 1-year from time of final acceptance of the 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.
- 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.
- No plant material will be accepted showing evidence of cable, chain marks, equipment scars, or otherwise damaged.
- Plant material will not be accepted when the ball of earth surrounding its roots has been cracked, broken or otherwise damaged.
- Root prune all field grown trees a minimum of 8-weeks prior to planting.

PLANTING DETAILS



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