

SECTION NO. 1 COVER LETTER

MIAMI-DADE DEPARTMENT OF HEALTH
O.S.T.D.S. PROGRAM
MIAMI DADE COUNTY BUILDING
11805 S.W. 26TH ST.
MIAMI, FL 33175

ENGINEER OF RECORD:

AMARILIS RODRIGUEZ, P.E.
FLORIDA STATE LICENSED ENGINEER, LLC
NO. 60236
ARPE ENGINEERING
2020 PONCE DE LEON, SUITE 1002
CORAL GABLES, FL 33134

REFERENCE:

NEW 3-STORY RESIDENCE
1155 NE 89TH STREET
MIAMI, FL 33138

PROPERTY I.D.:

30-3205-002-0161

WE ARE HEREBY REQUESTING APPROVAL OF A PERFORMANCE-BASED TREATMENT SYSTEM (PBTS) DESIGNED FOR, AND TO BE INSTALLED UPON, THE PROPERTY BEING DEALT WITH. THE ENGINEER OF RECORD, THE CERTIFIED INSTALLMENT ENTITY (SARIMA BATISTA, REGISTERED SEPTIC TANK CONTACTOR AND/OR PERSONNEL UNDER THEIR SUPERVISION), THE PERFORMANCE-BASED TREATMENT UNITS PROVIDERS AND WARRANTORS IN THE STATE OF FLORIDA (SB ENGINEERING, INC) AND THE PRIMARY MANUFACTURER (HOOT) WILL BE INVOLVED IN ALL NECESSARY ACTIVITIES TO WARRANTY THE COMPLETE INSTALLATION AS WELL AS THE MAINTENANCE THEREOF.

PBTS OPERATION, MAINTENANCE, & INSPECTION SPECIFICATIONS

OPERATION:

TOTAL HOLDING CAPACITY OF THE SYSTEM SHALL PROVIDE A MINIMUM OF 60 HOUR RETENTION OF THE DAILY FLOW. THE PRETREATMENT CHAMBER SHALL PROVIDE AT LEAST 18 HOUR RETENTION, THE EXTENDED AERATION CHAMBER SHALL PROVIDE AT LEAST 24 HOUR RETENTION, THE CLARIFICATION CHAMBER SHALL PROVIDE AT LEAST 6 HOUR RETENTION AND THE HYDRO-KINETIC BIO-FILM REACTOR SHALL PROVIDE AT LEAST 12 HOUR RETENTION.

THE NON-MECHANICAL FLOW EQUALIZATION DEVICE SHALL INCREASE RETENTION TIME IN DIRECT PROPORTION TO LOADING.

DESIGN OF THE SYSTEM SHALL INSURE SUCCESSFUL TREATMENT PERFORMANCE WITHOUT UPSET EVEN WHEN THE SIGNIFICANT RUNOFF PERIOD IS SIX HOURS.

HYDRAULIC DESIGN CONSIDERATIONS SHALL BE SUCH THAT INTERMITTENT PEAK FLOW FACTORS AS HIGH AS FOUR SHALL NOT UPSET HYDRAULIC RELIABILITY WITHIN THE SYSTEM.

ALL ACCESS OPENINGS SHALL HAVE THE ABILITY TO BE EQUIPPED WITH A SAFETY DEVICE TO PREVENT ACCIDENTAL ENTRY.

POWER SUPPLY TO ALL ELECTRIC COMPONENTS MUST REMAIN CONSTANT AT ALL TIMES. IT IS NOT ACCEPTABLE TO DISCONNECT POWER FROM THE SYSTEM AT ANY TIME EXCEPT UNDER THE DIRECTION OF THE MAINTENANCE ENTITY OR IN CASE OF EMERGENCY.

HOMEOWNER IS NOT TO POWER OFF ELECTRICAL COMPONENTS DURING EXTENDED ABSENCES FROM HOME, VACATIONS, OR OTHERWISE. LIQUID WASTE TREATMENT ADDITIVES SHALL NOT BE USED. IF A PERIOD OF INTERMITTENT USE OR AN EXTENDED PERIOD OF NON-USE OF THE SYSTEM IS ANTICIPATED, MAINTENANCE ENTITY SHALL BE CONTACTED FOR FURTHER INSTRUCTIONS & COORDINATION.

MAINTENANCE & INSPECTION 2/YEAR CONTRACT:

INSPECTIONS: EFFLUENT MONITORING AND PREVENTATIVE MAINTENANCE SHALL BE PERFORMED AS REQUIRED BY 62.6 PART 1, FAC.

FIRST INSPECTION: AT SYSTEM INSTALLATION BY ENGINEER AND CERTIFIED SEPTIC ENGINEER/CONTRACTOR.

SECOND INSPECTION: AFTER SYSTEM HAS BEEN INSTALLED IN OPERATION A TOTAL OF 6 MONTHS BY MAINTENANCE ENTITY

THEREAFTER: EVERY SIX MONTHS, AS PART OF MAINTENANCE ENTITY INSPECTION. MAINTENANCE ENTITY INSPECTION TO INCLUDE:

*SOLIDS: CHECK ACCUMULATION (EXPECT PUMP-OUT EVERY 3 TO 5 YEARS)

*AERATOR: CONFIRM PROPER OPERATION, CLEAN AIR FILTER, AS REQUIRED.

*ALARMS: TRIP ALL ALARMS MANUALLY TO CONFIRM EFFECTIVE OPERATION.

*FILTERS: REMOVE, CLEAN, AND REINSTALL AS REQUIRED.

*PUMP: CHECK OPERATION BY MANUALLY TRIPPING FLOAT SWITCH. OPERATE EACH PUMP MANUALLY AT CONTROL PANEL.

MONITORING TO BE CONDUCTED SEMI-ANNUALLY

MONITORING/SAMPLING TO BE CONDUCTED AT SAMPLING PORT. POLLUTANTS TO BE CHECKED SHALL BE AS FOLLOWS:

*BOD $\leq 10\%$ MG/L

*TSS $\leq 10\%$ MG/L

*TN $\geq 50\%$ REDUCTION

*TP $\leq 10\%$ MG/L

*FECAL COLIFORM ≤ 200 FC COL/100 ML

CONTINGENCY:

AT THE HIGH WATER LEVEL, THE SYSTEM ALARM SHALL SOUND, THE OWNER MUST CONTACT THE MAINTENANCE ENTITY WITHIN 24 HOURS OF ALARM.

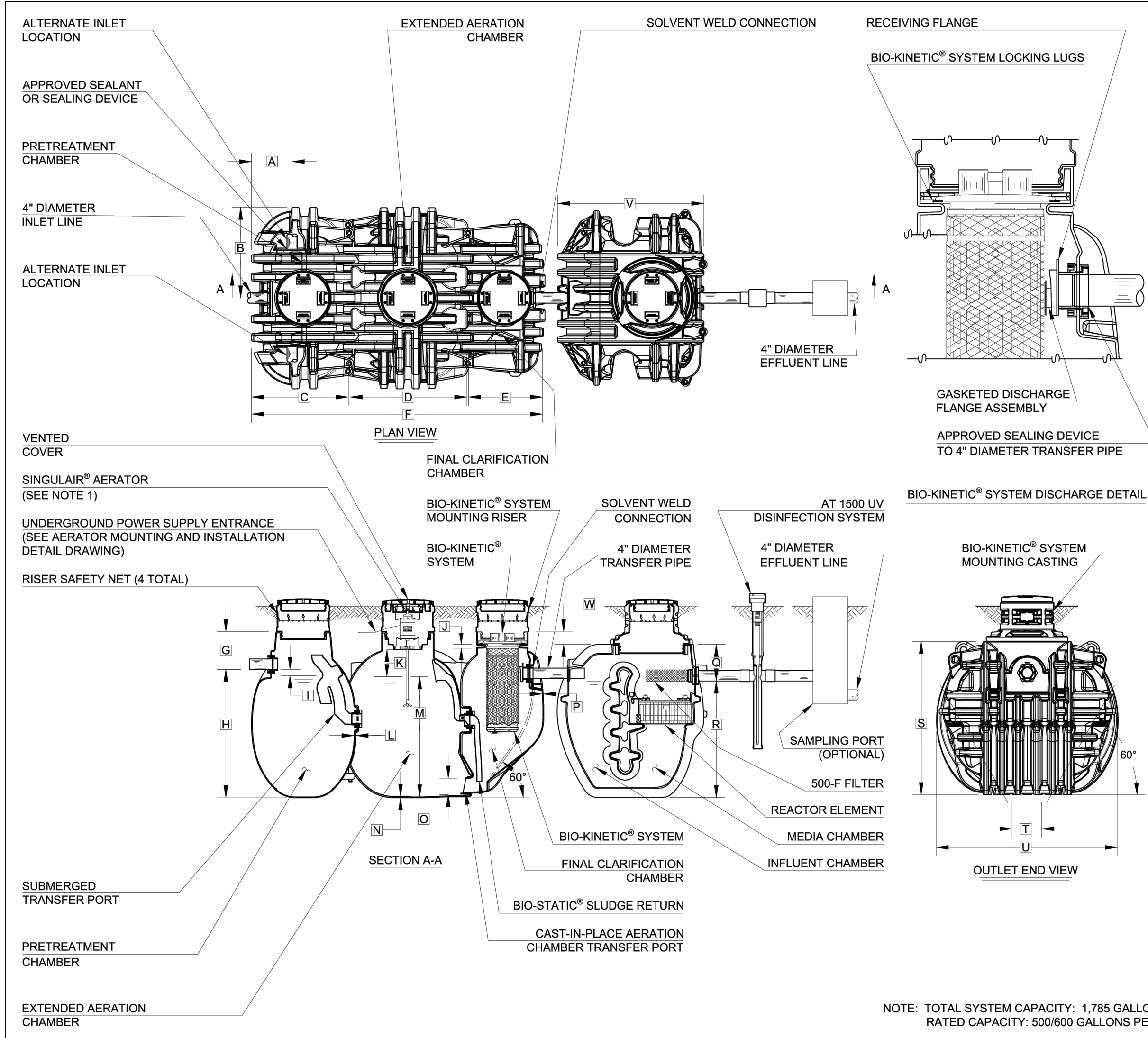
MAINTENANCE ENTITY PERSONNEL WILL INSPECT THE SYSTEM AND ORDER A REPAIR ON THE PROBLEM AS NECESSARY WITHIN 36 HOURS AS SPECIFIED IN 62-6.012(4)(b).

OWNER SHALL HAVE TANKS PUMPED AS REQUIRED TO PREVENT THE CREATION OF SANITARY NUISANCE CONDITIONS UNTIL SUCH TIME AS REPAIRS ARE EFFECTED TO PREVENT SANITARY NUISANCE CONDITIONS.

CERTIFICATION OF DESIGN

I CERTIFY THAT THE ENGINEERING FEATURES OF THIS PERFORMANCE-BASED TREATMENT SYSTEM (PBTS) HAVE BEEN DESIGNED OR SPECIFIED BY ME AND CONFORM TO ENGINEERING PRINCIPLES APPLICABLE TO SUCH PROJECTS. IN MY PROFESSIONAL JUDGEMENT, THIS SYSTEM, WHEN PROPERLY CONSTRUCTED, OPERATED, AND MAINTAINED, WILL ACHIEVE THE ESTABLISHED PERFORMANCE STANDARD AND COMPLY WITH ALL APPLICABLE STATUS OF THE STATE OF FLORIDA AND RULES OF THE DEPARTMENT.

*THIS IS BASED ON AVERAGE TESTING PERFORMANCE DATA FOR COMPONENTS OF PBTS BY E. ROEDER FOR INNOVATIVE SYSTEM TESTING IN FLORIDA OR FROM TEST CENTERS FOR EVALUATION OF USE IN NUTRIENT AND FECAL COLIFORM REDUCING PBTS OR FROM TEST CENTERS FOR NSF CERTIFICATION AS AEROBIC TREATMENT UNITS (ATU).



- GENERAL NOTES:
- SINGULAR® AERATOR, AS TESTED AND ACCEPTED BY NAT.
 - FALL THROUGH SINGULAR® MODEL R3 SYSTEM FROM INLET INVERT TO OUTLET INVERT IS FIVE INCHES. INLET INVERT IS 16 INCHES BELOW THE RISER MOUNTING SURFACE.
 - ON DEEPER INSTALLATIONS, RISERS MUST BE USED TO EXTEND AERATOR MOUNTING RISER, BIO-FILM REACTOR RISER, AND BIO-KINETIC® SYSTEM MOUNTING CASTING TO GRADE. INSPECTION COVER ON PRETREATMENT CHAMBER MUST BE DEVELOPED TO WITHIN TWELVE INCHES OF GRADE.
 - REMOVABLE COVERS ON RISERS WEIGH IN EXCESS OF SEVENTY-FIVE POUNDS EACH TO PREVENT UNAUTHORIZED ACCESS.
 - CONTACT THE LOCAL LICENSED SINGULAR® DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.

PROJECT ENGINEER'S APPROVAL:
I (WE) HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.

DATE:

NAME:

CONTRACTOR'S CERTIFICATION:
I (WE) HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.

DATE:

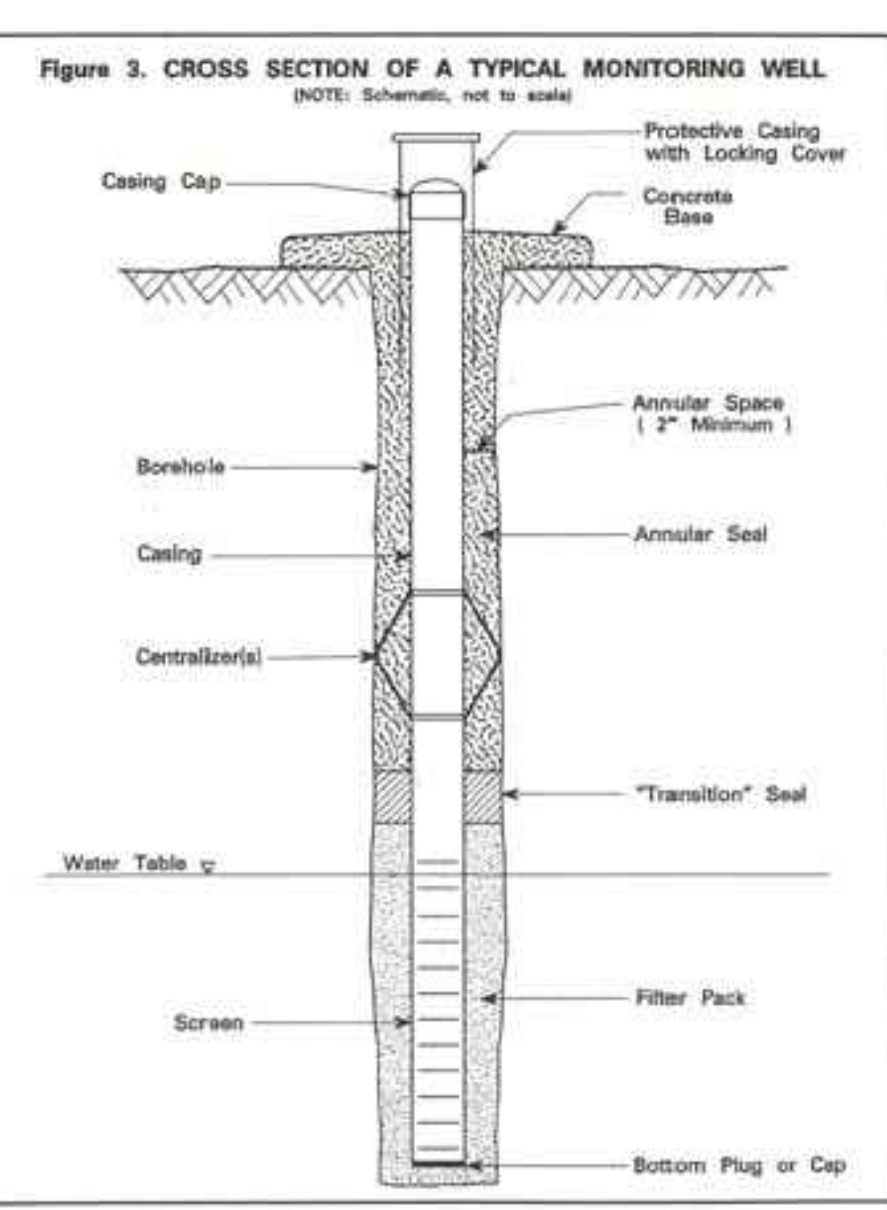
NAME:

CRITICAL DIMENSIONS			
A	1'-5 1/2"	N	0'-0 3/8"
B	3'-3"	O	0'-6"
C	3'-5 1/4"	P	0'-0 3/8"
D	4'-2 1/4"	Q	1'-3 1/2"
E	2'-8 3/4"	R	4'-2 1/2"
F	10'-6 1/2"	S	5'-6"
G	1'-4"	T	1'-4"
H	4'-7 1/2"	U	0'-6"
I	0'-3"	V	5'-5"
J	0'-1 1/2"	W	0'-5 1/2"
K	1'-0"	X	
L	0'-0 3/4"	Y	
M	4'-4"	Z	

U.S. AND FOREIGN PATENTS PENDING	norveco	05-12-2020	D
SINGULAR® GREEN WASTEWATER TREATMENT SYSTEM MODEL R3 - 500 GPD		03-28-2018	JMM
			NEB
			PC-S-1192

NOTE: TOTAL SYSTEM CAPACITY: 1,785 GALLONS
RATED CAPACITY: 500/600 GALLONS PER DAY

PLUMBING LOCATION PLAN
SCALE: 1/32"=1'-0"



This item has been digitally signed and sealed by Amarilis Rodriguez, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature shall be verified on any electronic copies.

JOB # 2308

Signature: [Signature]

Date: 2023.12.12

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Engineering Design
Mechanical - Electrical
Printing - File Preparation
www.arpe-eng.com

PROJECT NO: 2308

CLIENT:
RONALDO FLI, LLC
1200 BISCAYNE BLVD.
MIAMI, FLORIDA 33181

REVISIONS:

CFE ENGINEERING GROUP, INC.
STRUCTURAL ENGINEER
185 NW 108TH STREET
MIAMI SHORES, FLORIDA 33186

ARPE ENGINEERING, LLC
MEP ENGINEERING
2020 PONCE DE LEON BLVD, SUITE 1002
CORAL GABLES, FLORIDA 33134

ALL LANDSCAPE DATA, INC.
LANDSCAPE ARCHITECT
4459 NW 97TH COURT
CORAL, FLORIDA 33175

NEW LEAF ENVIRONMENTAL, LLC
ISA CERTIFIED ARBORIST
57 SILVER SPRINGS DRIVE
KEY LARGO, FLORIDA 33037

TERRA CIVIL ENGINEERING, LLC
CIVIL ENGINEERING
4011 WEST FLAGLER ST., SUITE 404
MIAMI, FLORIDA 33134

CASA OHAD
6000 SW 123RD TERRACE PINECREST, FLORIDA 33156

PROJECT DESCRIPTION:

SINGLE FAMILY RESIDENCE

FAO ARCHITECTURE, LLC

REVISIONS: 1. 05-12-2020, 2. 03-28-2018, 3. 03-28-2018, 4. 03-28-2018, 5. 03-28-2018, 6. 03-28-2018, 7. 03-28-2018, 8. 03-28-2018, 9. 03-28-2018, 10. 03-28-2018, 11. 03-28-2018, 12. 03-28-2018, 13. 03-28-2018, 14. 03-28-2018, 15. 03-28-2018, 16. 03-28-2018, 17. 03-28-2018, 18. 03-28-2018, 19. 03-28-2018, 20. 03-28-2018, 21. 03-28-2018, 22. 03-28-2018, 23. 03-28-2018, 24. 03-28-2018, 25. 03-28-2018, 26. 03-28-2018, 27. 03-28-2018, 28. 03-28-2018, 29. 03-28-2018, 30. 03-28-2018, 31. 03-28-2018, 32. 03-28-2018, 33. 03-28-2018, 34. 03-28-2018, 35. 03-28-2018, 36. 03-28-2018, 37. 03-28-2018, 38. 03-28-2018, 39. 03-28-2018, 40. 03-28-2018, 41. 03-28-2018, 42. 03-28-2018, 43. 03-28-2018, 44. 03-28-2018, 45. 03-28-2018, 46. 03-28-2018, 47. 03-28-2018, 48. 03-28-2018, 49. 03-28-2018, 50. 03-28-2018, 51. 03-28-2018, 52. 03-28-2018, 53. 03-28-2018, 54. 03-28-2018, 55. 03-28-2018, 56. 03-28-2018, 57. 03-28-2018, 58. 03-28-2018, 59. 03-28-2018, 60. 03-28-2018, 61. 03-28-2018, 62. 03-28-2018, 63. 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