

GOVERNING CODES AND GENERAL NOTES:

2017 FLORIDA BUILDING CODE (F.B.C.) 6TH EDITION AND ALL OTHER CODES, RULES, REGULATIONS AND RESTRICTIONS HAVING JURISDICTION ON THE PROJECT SHALL GOVERN INCLUDING 2017 F.B.C. 6TH EDITION BUILDING, RESIDENTIAL, FUEL, GAS AND ENERGY CONSERVATION.

2017 F.B.C. 6TH EDITION ENERGY CONSERVATION R403.10, ANSI/APSP-14 AND C404, SERVICE WATER HEATING HAS BEEN MET ON THIS PROJECT.

2017 F.B.C. 6TH EDITION RESIDENTIAL CHAPTER 45: SWIMMING POOLS AND BUILDING CHAPTER 4/ SECTION 454 SWIMMING POOLS AND BATHING PLACES (PUBLIC AND PRIVATE) SHALL SPECIFICALLY GOVERN.

2017 F.B.C. 6TH EDITION R4501.6 ENGINEERING DESIGN HAS BEEN MET FOR THIS PROJECT, INCLUDING CODES AND REFERENCES SPECIFICALLY WITHIN AS R4501.6.1 CONFORMANCE STANDARD: DESIGN, CONSTRUCTION AND WORKMANSHIP SHALL BE IN CONFORMITY WITH THE REQUIREMENTS OF **ANSI/ APSP/ICC3; ANSI/APSP/ICC4; ANSI/APSP/ICC5; ANSI/APSP/ICC6 AND ANSI/APSP/ICC7.**

2017 F.B.C. 6TH EDITION BUILDING CHAPTER 4/ SECTION 454.1.6.5.10.4 IF THE AREA IS SUBJECT TO HIGH GROUND WATER, THE POOL SHALL BE DESIGNED TO WITHSTAND HYDRAULIC UPLIFT OR SHALL BE PROVIDED WITH HYDROSTATIC RELIEF DEVICES.

2017 F.B.C. 6TH EDITION R4501.21.4 HYDROSTATIC RELIEF DEVICE - IN AREAS OF ANTICIPATED WATER TABLE AN APPROVED HYDROSTATIC RELIEF DEVICE SHALL BE INSTALLED.

2017 F.B.C. 6TH EDITION R4501.6.3 WATER VELOCITY - POOL PIPING IS DESIGNED SO THE WATER VELOCITY WILL NOT EXCEED 10 FEET PER SECOND FOR PRESSURE PIPING AND 8 FEET PER SECOND FOR SUCTION PIPING. MAIN SUCTION OUTLET VELOCITY COMPLIES WITH **ANSI/APSP/ICC7**. EXCEPTION: JET INLET FITTINGS SHALL NOT BE DEEMED SUBJECT TO THIS REQUIREMENT.

CONCRETE SHALL CONFORM TO THE LATEST EDITION OF **ACI 301 AND ACI 318** AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 P.S.I. POOL CONCRETE CAN BE APPLIED PNEUMATICALLY AND SHALL CONFORM TO **ACI 506.2**.

REINFORCING STEEL SHALL CONFORM TO THE LATEST EDITION OF **ASTM A615, GRADE 60** AND HAVE A MINIMUM LAP DISTANCE OF 18" FOR TENSION AND COMPRESSION DEVELOPMENT AND SHALL MEET THE REQUIREMENTS OF **ACI 318**.

2017 F.B.C. 6TH EDITION BUILDING 1903.3 GLASS FIBER REINFORCED CONCRETE AND THE MATERIALS USED IN SUCH CONCRETE SHALL BE IN ACCORDANCE WITH THE **PCI MNL 128 STANDARD**, IF SHOWN ON THE DRAWINGS.

POOL PIPING SHALL BE **N.S.F.-APPROVED AND SCHEDULE 40**. THE ENGINEER IS NOT RESPONSIBLE FOR ANY ENCROACHMENT INTO EASEMENTS OR SETBACKS, EVEN IF APPROVED BY THE A.H.J.

THESE DRAWINGS ARE THE PROPERTY OF WAYNE MARKHAM BENNETT, P.E. THE USE OF THESE DRAWINGS WITHOUT PERMISSION FROM THE ENGINEER IS PROHIBITED AND IN VIOLATION OF 2017 F.B.C. 6TH EDITION.

EXISTING CONDITIONS, DIMENSIONS AND QUANTITIES SHALL BE FIELD-VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. TYPICAL FIELD CONDITIONS ARE ASSUMED IN THE DESIGN. SHOULD ANYTHING DIFFER FROM THAT SPECIFIED HEREIN OR STANDARD FIELD CONDITIONS, ADDITIONAL ENGINEERING MAY BE REQUIRED AND THE ENGINEER SHALL BE CONTACTED TO PROVIDE DIRECTION.

CARE SHALL BE TAKEN BY THE CONTRACTOR IN ALL APPLICATIONS OF THESE DRAWINGS. THE EQUIPMENT AND PIPING PHYSICAL LOCATION MAY DIFFER IN THE FIELD DUE TO UNFORESEEN CONDITIONS OR OTHER FACTORS. THESE DRAWINGS SHALL NOT BE SCALED. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE ITEMS IN A LOCATION THAT MEETS ALL LOCAL CODES.

NOTE: A SILT FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION SURROUNDING THE WORK AREA MEETING THE REQUIREMENTS OF THE A.H.J.

THE CONTRACTOR SHALL BE RESPONSIBLE TO SECURE AND PROTECT ALL MATERIAL BROUGHT ON SITE, SHALL RESTORE ALL AREAS IMPACTED BY THE CONSTRUCTION WORK TO THE PREEXISTING CONDITION OR BETTER AND SHALL NOT IMPACT DRAINAGE/ LAKE OR ANY OTHER EASEMENTS WITHOUT THE OWNER'S CONSENT.

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FLOOD ZONE:

2017 F.B.C. 6TH EDITION RESIDENTIAL R322 FLOOD-RESISTANT CONSTRUCTION - STRUCTURES CONSTRUCTED WHOLE OR PART IN THE FLOOD HAZARD AREAS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF THIS SECTION, ESPECIALLY **R322.1.2 STRUCTURAL SYSTEMS, 322.1.3 FLOOD-RESISTANCE CONSTRUCTION AND R322.2.5 POOLS IN FLOOD HAZARD AREAS**. IF STRUCTURES CONSTRUCTED IN WHOLE OR PART IN FLOODWAYS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH **ASCE 24** AND THE CONSTRUCTION OF THIS POOL WILL NOT INCREASE THE DESIGN FLOOD ELEVATION AT ANY POINT WITHIN THE JURISDICTION.

SOIL BEARING AND FOUNDATION NOTES:

HELICAL PILING - IN ACCORDANCE WITH THE GEOTECHNICAL REPORT PREPARED BY DYNATECH ENGINEERING CORPORATION, DATED JUNE 28, 2019, THE POOL FOUNDATION HAS BEEN DESIGNED ASSUMING 3" DIAMETER HELICAL PILES, 20' DEEP, THAT SHOULD PROVIDE 12 TON COMPRESSION AND 6 TON TENSION PER PILE, PROVIDED THE GEOTECHNICAL REPORT RECOMMENDATIONS ARE FOLLOWED.

PILING REQUIREMENT IS A PERFORMANCE SPECIFICATION. THE PILE DESIGN AND INSTALLATION, INCLUDING MANUFACTURER OF THE HELICAL PILE IS THE RESPONSIBILITY OF THE PILING CONTRACTOR. PILE CAP PLAT SHALL BE WELDED TO THE PILE AND BE A MINIMUM OF 10" IN DIAMETER AND SET A MINIMUM 4" ENBEDMENT INTO THE POOL CAP OR FLOOR. PILE CAP PLATE SHALL HAVE A MINIMUM OF 2-#5 HOOKS OR EQUIVALENT SET INTO 3' x 3' MAT OF #4 @ 12" O.C.E.W. FOR TENSION AND COMPRESSION DEVELOPMENT AND MEET THE REQUIREMENTS OF ACI318.

SWIMMING BARRIER REQUIREMENTS:

REMOVABLE BARRIER FENCE: FBC R4501.17.1.1, 2 AND 13: SHALL BE AT LEAST 48" HIGH AND HAVE A MAXIMUM VERTICAL CLEARANCE BETWEEN GRADE AND THE BOTTOM OF THE BARRIER OF 2 INCHES, BOTH MEASURED ON THE SIDE OF THE BARRIER WHICH FACES AWAY FROM THE SWIMMING POOL, SHALL NOT HAVE ANY GAPS THAT WOULD ALLOW A 4 INCH SPHERE TO PASS THROUGH, SHALL HAVE ONE END OF THE FENCE NOT TO BE REMOVABLE WITHOUT THE AID OF TOOLS AND IT SHALL BE LOCATED A MINIMUM OF 20 INCHES AWAY FROM THE WATER'S EDGE

SOLID BARRIERS: FBC R4501.17.1.1, 2, AND 3: SHALL BE AT LEAST 48" HIGH AND HAVE A MAXIMUM VERTICAL CLEARANCE BETWEEN GRADE AND THE BOTTOM OF THE BARRIER OF 2 INCHES, BOTH MEASURED ON THE SIDE OF THE BARRIER WHICH FACES AWAY FROM THE SWIMMING POOL, SHALL NOT HAVE ANY GAPS THAT WOULD ALLOW A 4 INCH SPHERE TO PASS THROUGH, SHALL NOT CONTAIN INDENTATIONS OR PROTRUSIONS EXCEPT FOR NORMAL CONSTRUCTION TOLERANCES AND TOOLED MASONRY JOINTS

FENCES WITH HORIZONTAL MEMBERS: FBC R4501.17.1.1, 2, 4, 5, 6 AND 7: SHALL BE AT LEAST 48" HIGH AND HAVE A MAXIMUM VERTICAL CLEARANCE BETWEEN GRADE AND THE BOTTOM OF THE BARRIER OF 2 INCHES, BOTH MEASURED ON THE SIDE OF THE BARRIER WHICH FACES AWAY FROM THE SWIMMING POOL, SHALL NOT HAVE ANY GAPS THAT WOULD ALLOW A 4 INCH SPHERE TO PASS THROUGH, WHERE THE TOP OF THE HORIZONTAL MEMBERS ARE LESS THAN 45 INCHES APART THE MEMBERS SHALL FACE THE POOL, VERTICAL MEMBER SPACING AND ANY CUTOUTS SHALL NOT EXCEED 1-3/4 INCHES, WHERE THE TOP OF THE HORIZONTAL MEMBERS ARE 45 INCHES AND GREATER, VERTICAL MEMBER SPACING SHALL NOT EXCEED 4 INCHES AND ANY CUTOUTS SHALL NOT EXCEED 1-3/4 INCHES, AND IF DIAGONAL MEMBERS ARE USED SPACING SHALL NOT EXCEED 1-3/4 INCHES AND IF CHAIN LINK THE MESH SIZE SHALL BE 2-1/4 INCH SQUARE UNLESS THE FENCE IS PROVIDED WITH SLATS FASTENED AT THE TOP OR BOTTOM WHICH REDUCE THE OPENINGS TO NO MORE THAN 1-3/4 INCHES

ACCESS GATES FBC R4501.17.1.1, 2, 4, 5 AND 7: MATERIAL SHALL COMPLY WITH FBC R4501.17.1 THROUGH 7, SHALL BE SELF-CLOSING, WITH SELF-LATCHING LOCKING DEVISE LOCATED ON THE POOL SIDE OF THE GATE, DEVISE RELEASE MECHANISM LOCATED AAT A MINIMUM HEIGHT OF 54 INCHES FROM THE BOTTOM OF THE GATE, SHALL OPEN OUTWARD AWAY FROM POOL AND HAVE NO OPENING OF 1/2 INCH OR MORE WITHIN 18 INCHES OF THE RELEASE MECHANISM

DOORS AND WINDOWS IN HOMES FBC R4501.17.9: PROVIDING DIRECT ACCESS FROM THE HOME TO THE POOL SHALL BE EQUIPPED WITH AN EXIT ALARM COMPLYING WITH UL2017, MINIMUM SOUND PRESSURE RATING OF 85 DBA ART 10 FEET WITH ANY DEACTIVATION SWITCH LOCATED A MINIMUM OF 54 INCHES ABOVE THE THRESHOLD OF THE ACCESS. DOORS SHALL BE EQUIPPED WITH A SELF-CLOSING, WITH SELF-LATCHING DEVICE WITH POSITIVE MECHANICAL LATCHING/LOCKING INSTALLED A MINIMUM OF 54 INCHES (1372 MM) ABOVE THE THRESHOLD

DWELLING OR NON-DWELLING FBC R4501.17.13: DWELLING OR NON-DWELLING WALLS INCLUDING SCREEN ENCLOSURES, WHEN USED AS PART OR ALL OF THE "BARRIER" AND MEETING THE OTHER BARRIER REQUIREMENTS, MAY BE AS CLOSE TO THE WATER'S EDGE AS PERMITTED BY THIS CODE.

ZONING DATA - RS-4							
	REQUIRED	PROVIDED		REQUIRED	PROVIDED		
LOT AREA	6,000 SQ. FT. MINIMUM	7,320 SQ. FT.	POOL REAR SETBACK	7'-6"	4'-0" *		
LOT WIDTH	50' MINIMUM	60'	POOL INTERIOR (S.W.) SIDE SETBACK	9'-0"	12'-0"		
LOT COVERAGE (EXISTING/ PROPOSED)	3,360 SQ. FT. (@ 50% OF LOT AREA)	2,800 SQ. FT.	POOL INTERIOR (N.E.) SIDE SETBACK	9'-0"	6'-0" *		
			POOL FRONT SETBACK	20'-0"	107'-9"		
SCOPE OF WORK - FIRST SUBMITTAL			DECK REAR SETBACK	6'-0"	3'-6" *		
			DECK INTERIOR (S.W.) SIDE SETBACK	7'-6"	6'-10" *		
			DECK INTERIOR (N.E.) SIDE SETBACK	7'-6"	3'-9" *		
			DECK FRONT SETBACK	20'-0"	101'-8"		
			EQUIPMENT SETBACK	5'-0"	8'-6"		

STORM WATER RETENTION CALCULATIONS * PER APPROVED VARIANCE

IMPERVIOUS AREA OF POOL AND DECK = 1,033 SQ. FT. (339 + 694)

RAINFALL = 8.75"

WATER TABLE = 0.51" N.A.V.D.

SWALE REQUIRED = 1,033 SQ. FT. x (8.75"/ 12") = 753 C.FT.

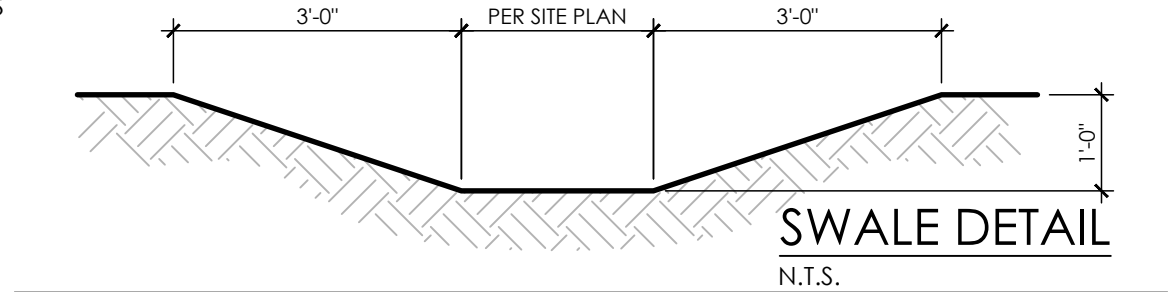
SWALE VOLUME

VOLUME OF SWALE #1 = (0.5 x (36" x 12") + (2.83' x 12") + 0.5 x (36" x 12")) x 65' = 379 C. FT.

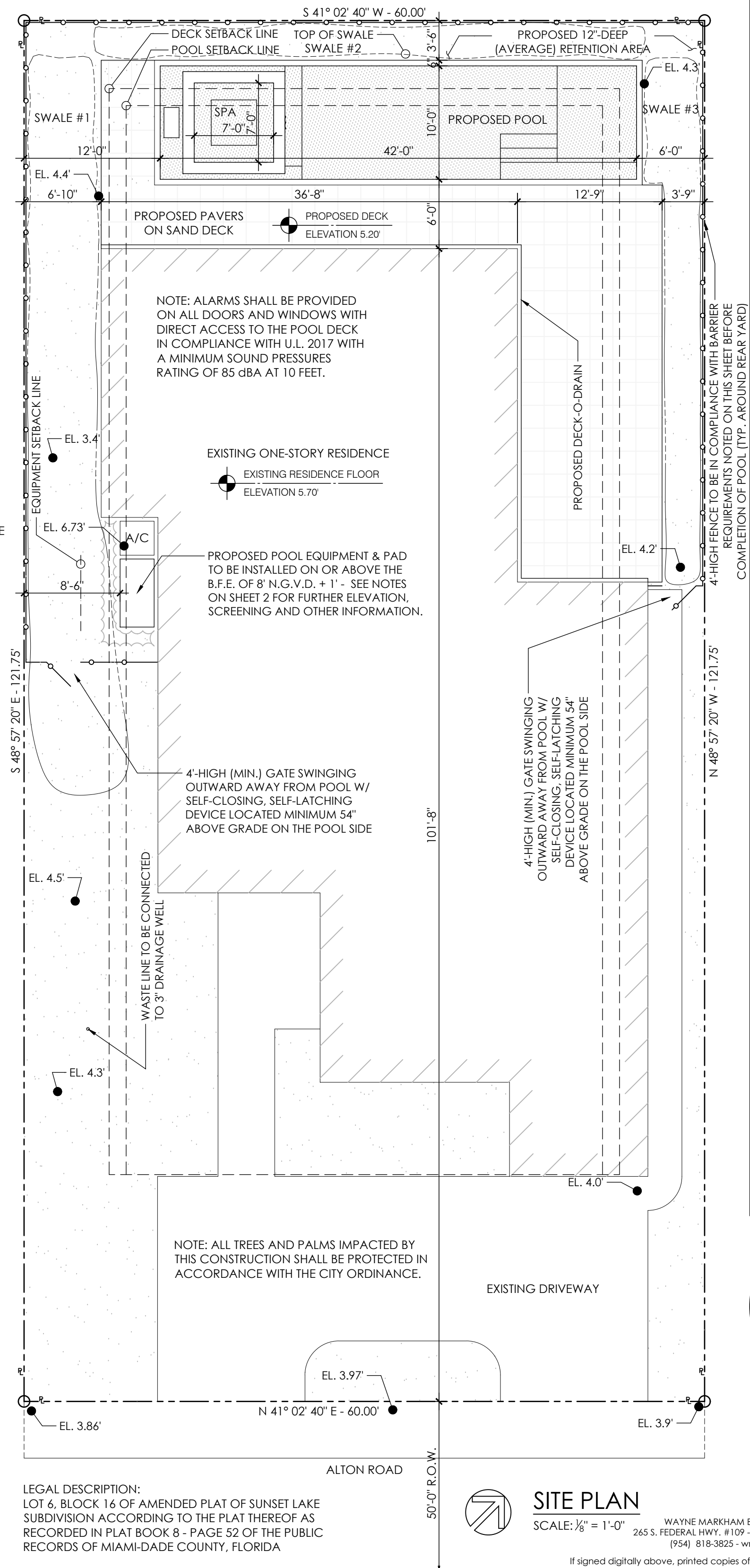
VOLUME OF SWALE #2 = (0.5 x (36" x 12") + (0.50' x 12") + 0.5 x (36" x 12")) x 44' = 154 C. FT.

VOLUME OF SWALE #1 = (0.5 x (36" x 12") + (2.00' x 12") + 0.5 x (36" x 12")) x 46' = 230 C. FT.

TOTAL SWALES PROVIDED = 763 C. FT. (379 + 154 + 230)



SPECIFICATIONS			
POOL SIZE: 42' x 10'			
POOL AREA:	339 SQ. FT.	SPA AREA:	49 SQ. FT.
POOL PERIMETER:	104'	SPA PERIMETER:	28'
POOL DEPTH:	3.0' TO 5.0'	SPA DEPTH:	3.0'
POOL VOLUME:	10,144 GA.	SPA VOLUME:	1,103 GA.
POOL TURNOVER RATE:	1.30 HRS.	SPA TURNOVER RATE:	0.14 HRS.
STRUCTURE			
SPA ELEVATION:	FLUSH	TANNING LEDGE:	102 SQ. FT.
SWIMOUT:	18" WIDE x 10' LONG	SPA SPILLWAY:	14"-LONG
EQUIPMENT			
PUMPS:	2 H.P. DUAL SPEED	VACUUM:	1
FILTERS:	PENTAIR 150 SQ. FT.	CHLORINATOR:	SALT & FUSION
POOL RETURNS:	4	SPA PUMP SHARED:	YES
POOL FLOOR RETURNS:	2	SPA JETS:	4
POOL MAIN DRAINS RETURNS:	2	SPA RETURNS:	2
POOL SKIMMER:	1	SPA MAIN DRAINS:	2
L.E.D. LIGHTS:	1	SPA L.E.D. LIGHT:	1
HEAT PUMP/ CHILLER:	SQ 120R		
DECK			
DECK AREA:	694 SQ. FT.	DECO-O-DRAIN:	79'
DECK TYPE:	PAVERS ON SAND		
MISCELLANEOUS			
DECK AREA:	(11)-16" x 32" FLOATING STEP		
FINISH ITEMS			
COPING:	8 x 16 B.N./ 16 x 16	FINISH:	DURAZZO
TILE:	6"		
EXTRA FEATURES			
AUTOMATIC CONTROL:	JANDY PS-4	BARRIER:	DOOR/ WINDOW ALARMS



LEGAL DESCRIPTION:
LOT 6, BLOCK 16 OF AMENDED PLAT OF SUNSET LAKE SUBDIVISION ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 8 - PAGE 52 OF THE PUBLIC RECORDS OF MIAMI-DADE COUNTY, FLORIDA



SITE PLAN

SCALE: 1/8" = 1'-0"

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If signed digitally above, printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

SHEET 1 OF 4

SITE PLAN

CARVAJAL RESIDENCE

2034 ALTON ROAD
MIAMI BEACH, FLORIDA 33140

ESSIG POOLS INC

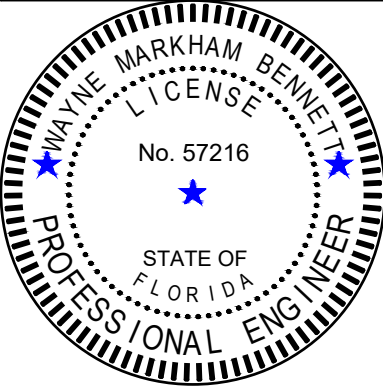
10111 BUSINESS DRIVE
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PROJECT NAME:

CONTRACTOR:

REVISIONS:

DRAWN BY: L.L.
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7/31/19