

- 1- ALL FLOORS AND WALLS OF POOL TO BE CONCRETE SHALL BE PLUMATICALLY PLACED (SHOTCRETE OR GUNITE) A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
- 2- ALL REINFORCING STEEL TO CONFORM TO ASTM A616 GRADE 60.
- 3- ALL POOL FLOOR FINISH SHALL BE SUEWELDO 1/4" PVC BEARING NIP APPROVAL WITH LOGO PRINTED. PLASTIC FIVE SUBJECT TO A PERIOD OF PROLONGED SUNLIGHT EXPOSURE SHALL BE COATED TO PROTECT IT FROM ULTRAVIOLET LIGHT DEGRADATION - 2023 FBC 8TH EDITION RA8016.05
- 4- FILTER BACKWASH SHALL COMPLY WITH CHAPTER RA8012.02 OF THE 2023 FBC 8TH EDITION.
- 5- POOL FLOOR OR SPA DECK SHALL BEAR ON ANY TYPE OF SOILS EXCEPT CLEAN SANDS OR ROCK WHICH SHALL BE CONFINED TO PROVIDE A SAFE BEARING CAPACITY OF 2,000 PSF. ANY ORGANICS, MARLS, OR OTHER TYPES OF DELETERIOUS MATERIALS ENCOUNTERED ON EXCAVATION SHALL BE REMOVED (DUMPED) IN THEIR ENTIRETY AND THE AREA SHALL BE REPAIRED TO MATCH THE EXISTING LOT AND REFINISHED TO MATCH THE EXISTING DECK. THE SOILS ARE TO BE CONFINED IN 2" THICK LAYERS WHERE THE CONTRACTOR CAN NOT REMOVE THE ORGANICS DUE TO WATERFAY CAUSED, THE POOL SHALL BE REDESIGN FOR PILING.
- 6- IN ALL CASES THE POOL CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO PROTECT EXISTING STRUCTURES FROM FAILURE BY SHORING, UNDERPINNING, OR OTHER MEANS. THE CONTRACTOR SHALL BE RESPONSIBLE. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE SAFETY OF EXISTING STRUCTURE.
- 7- THE DESIGN ENGINEER ASSUMES NO RESPONSIBILITY FOR POOL CONSTRUCTION IN ENCUMBERMENTS OR REQUIRED SETBACK AREAS. PLOT AREA SHALL BE RELEASED FROM ALL LEGAL SURVEYS OF THE EXISTING LOT AND RESIDENCE ARE SO INDICATED BY THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD AND ESTABLISH LOT LINES IF NECESSARY. CONTRACTOR AND / OR OWNER SHALL VERIFY LAYOUT SHOWN AND ALL DIMENSIONS PRIOR TO CONSTRUCTION.
- 8- CONTRACTOR SHALL ESTABLISH LOCATIONS OF UTILITIES AT THE SITE PRIOR TO EXCAVATION. UTILITIES TO BE HELD AND SHALL BE AS REQUIRED BY THE LOCAL REGULATORY AGENCY IN GENERAL HOLD A DISTANCE OF 10 FEET FROM OVERHEAD ELECTRIC LINES TO OPEN POOL WATER EDGE AND 5 FEET FROM UNDERGROUND ELECTRIC LINES.
- 9- POOL SLIDES TO BE INSTALLED IN ACCORDANCE WITH LATEST EDITION OF CONSUMER PRODUCTS SAFETY COMMISSION.
- 10- IN ALL CASES, THE CONTRACTOR SHALL RECORD AROUND ALL POOLS IN UNCREATED AREAS, COMPLY WITH CHAPTER RA801.01 OF THE 2023 FBC 8TH EDITION.
- 11- WHERE POOLS ARE OR ARE PLACED NEARBY SEAWALLS OR BULKHEADS SPECIAL CARE SHALL BE EMPLOYED. THE WALLS SHALL BE IN GOOD CONDITIONS NOT PERMITTING ANY SHORING OR REMOVAL OR EXCAVATION OF THE EXISTING SOILS BEHIND THE WALLS. IF THE WALLS DO NOT FULLY CONTAIN THE SOILS BEHIND THEM THEY SHALL BE REPLACED OR REPAIRED. CONTINUAL MAINTENANCE OF THE WALLS IS REQUIRED OF THE PROPERTY OWNER WHEN EXCAVATING FOR THE POOL, THE SEAWALL, TIEBACKS SHALL NOT BE CUT. WHERE CONCRETE DRAIN-PIEN IS REQUIRED, THE CONTRACTOR SHALL PROVIDE THE TIEBACKS.
- 12- THE CONTRACTOR SHALL BACKFILL THE POOL SHELL WITH CAUTION. THE FLUMING SHALL NOT BE DISTURBED. BACKFILL SHALL BE ACCOMPLISHED WITH CLEAN SANDS FREE OF ORGANIC MATERIALS AND SHALL BE PLACED IN 2" THICK LAYERS. EACH LAYER SHALL BE CONFINED TO 90 % OF THE SOILS MAXIMUM DENSITY BY TAMPING OR ROLLING. SOILS BELOW THE PATIO SHALL BE PLACED IN A SIMILAR MANNER.
- 13- WHERE PATIOS ARE INDICATED BY OTHERS, THE PATIO DESIGN NOTES SHOWN ON THE TYPICAL WALL SECTION DO NOT APPLY. PATIO DESIGN SHALL BE BY OTHERS.
- 14- WARNINGS TO DIFTY POOL AFTER CONSTRUCTION FOR REPAIRS OR ANY OTHER REASON, THE HYDROSTATIC TEST PRESSURES BENEATH THE POOL MUST BE ELIMINATED TO PREVENT THE POOL FROM FLOATING UPWARD. THE OWNER MUST CONSULT POOL REPAIR CONTRACTOR EXPERIENCED IN ELIMINATING UPDIT PRESSURES.
- 15- THIS PLAN REMAINS THE PROPERTY OF THE DESIGN ENGINEER. IT IS NOT TO BE REPRODUCED OR COPIED BY ANY CONTRACTOR OR OTHER WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER AND TO THE BEST OF OUR PROFESSIONAL KNOWLEDGE AND BELIEF, THEY HAVE BEEN PREPARED IN COMPLIANCE WITH THE ANSI-ASPI-5-2003, 2023 FBC 8TH EDITION AND ALL APPLICABLE LOCAL CODES AND REGULATIONS.
- 16- CONCRETE POOL DECK SHALL BE PROVIDED W/ 1/4" WIDE SAUCIT CONTROL JOINTS. JOINTS SLOPED AT 45 DEGREE OR FOR AN EFFECTIVE CONCRETE AREA 150' X 150' CONCRETE JOINTS SHALL BE SAUCIT AT A DEPTH OF 1/2" BELOW.
- 17- SHORING MAY BE REQUIRED WHEN SOIL CONDITIONS EXHIBIT UNSTABLE ROCK FORMATION WHEN POOLS ARE LESS THAN 5' FROM STRUCTURE. IF UNSTABLE SOIL IS FOUND IT AT TIME OF EXCAVATION NOTIFY THE ENGINEER FOR SHORING.
- 18- THIS SET OF PLANS ARE IN COMPLIANCE WITH ANSI / NSPI-5 2011, IN REFERENCE TO FLOOR SLOPES, WALL, PLUMB, ENTRAPMENTS, ENTRY, EXIT, DECK, AND CIRCULATION SYSTEM OF PROPOSED POOL.

20203 BUILDING FBC 8th Edition
102043 Placement of backfill.

The excavation outside the foundation shall be backfilled with soil that is free of organic material, construction debris, cobbles or boulders or with a low strength (< 100 lb/ft³) CLSM. The backfill shall be placed in lifts and compacted in a manner that does not damage the foundation or the waterproofing and damp proofing material.

Exception: CLSM need not be compacted.

102044 Site grading.

The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than one unit vertical in 20 units horizontal (5 percent slope) to a minimum distance of 10 feet (3048 mm) measured perpendicular to the face of the wall. If physical obstructions or lot lines prohibit 10 feet (3048 mm) of horizontal distance, a 5-percent slope shall be provided to an approved alternative method of diverting water from the foundation. Swales used for this purpose shall be sloped a minimum of 2 percent where located within 10 feet (3048 mm) of the building foundation. Impervious surfaces within 10 feet (3048 mm) of the building foundation shall be sloped away from the building at a minimum of 5 percent slope. Exception: Section 102010.3 and 102013.3.

Exception: Where climatic or soil conditions warrant, the slope of the ground away from the building foundation shall be permitted to be reduced to not less than one unit vertical in 48 units horizontal (2-percent slope).

- ANSI / APSP / ICC 3-14
- ANSI / APSP / ICC 4-12
- ANSI / APSP / ICC 5-11
- ANSI / APSP / ICC 6-13
- ANSI / APSP / ICC 7-13
- 2023 FBC BUILDING 8th EDITION
- 2023 FBC EXISTING BUILDING 8th EDITION
- 2023 FBC ACCESSIBILITY 8th EDITION
- 2023 FBC RESIDENTIAL 8th EDITION
- 68026 N.E.C. 2020 EDITION

R4501.0 Residential swimming barrier requirement.

R4501.1 Residential swimming pools shall comply with Sections R4501.1.1 through R4501.1.14.

Exception: A swimming pool with an approved safety pool cover complying with ASTM F3346.

R4501.1.1 Outdoor swimming pools.

Outdoor swimming pools shall be provided with a barrier complying with R4501.1.1 through R4501.1.14.

R4501.1.1.1

The top of the barrier shall be at least 48 inches (1219 mm) above grade measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier which faces away from the swimming pool. Where the top of the pool structure is above grade the barrier may be at grade level or mounted on top of the pool or structure. Where the barrier is united on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).

R4501.1.1.2

The barrier may not have any gaps, openings, indentations, protrusions, or structural components that could allow a person to crawl under, squeeze through, or climb over the barrier as herein described below. One end of a removable child barrier shall not be removable without the aid of tools. Openings in any barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.

R4501.1.1.3

Solid barriers which do not have openings shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

R4501.1.1.4

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the barrier. The spacing between vertical members shall not be more than 3/4 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 3/4 inches (44 mm) in width.

R4501.1.1.5

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 3/4 inches (44 mm) in width.

R4501.1.1.6

Maximum mesh size for chain link fences shall be a 2 1/4-inch square (51 mm) unless the fence is provided with slats or fabrications on the top or bottom which reduce the openings to no more than 3/4 inches (44 mm).

R4501.1.1.7

Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be no more than 3/4 inches (44 mm).

R4501.1.1.8

Access gates, when provided, shall be self-closing and shall comply with the requirements of Sections R4501.1.1 through R4501.1.1.11 and shall be equipped with a self-latching locking device located on the pool side of the gate. Where the device release is located no less than 54 inches (1372 mm) from the bottom of the gate, the device release mechanism may be located on either side of the gate and so placed that it cannot be reached by a young child. Where the device release is located on the outside, Gates that provide access to the swimming pool must open outward away from the pool. The gates and barrier shall have no opening greater than 1/2 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

1. ALL POOL CONCRETE SHALL DEVELOP A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF $f_c = 4,000$ PSI.
2. ALL REINFORCING SHALL BE IN CONFORMANCE WITH 2023 BEC SECTION 1801 AND ACI 318-19, 318-14, 2018 EDITION, AND ASTM C314-18A AND PROPORTIONED FOR STRENGTH AND QUALITY REQUIREMENTS IN ACCORDANCE WITH ACI 318, SECTION 4.3 "PROPORTIONING ON THE BASIS OF FIELD EXPERIENCE."
3. ALL REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF $f_y = 60,000$ PSI.
4. ALL DECK CONCRETE (WHEN INSTALLED UNDER THESE PLANS) SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF $f_c = 2,500$ PSI.
5. THE DESIGN OF THIS PROJECT HAS INCORPORATED A RATIONAL DESIGN APPROACH BASED ON ACCEPTED ENGINEERING PRACTICES.
6. ALL REINFORCING SPLICES SHALL BE 18" IN LENGTH UNLESS OTHERWISE INDICATED ON THESE PLANS.

SOIL CONDITION AT SITE BY VISUAL INSPECTION INDICATES AN ALLOWABLE BEARING CAPACITY OF 2000 P.S.F. (UNDISTURBED SAND AND/OR ROCK)

UPON EXCAVATION OF POOL, PRIOR TO THE INSTALLATION OF POOL FOUNDATION SYSTEM THE BUILDING OFFICIAL SHALL BE PROVIDED WITH A STATEMENT FROM AN ARCHITECT OR ENGINEER TO CERTIFY THE PRESUMPTIVE SOIL BEARING CAPACITY.

2023 F.B.C. 8th EDITION R4501T Residential swimming barrier requirement.	
BARRIER	DESCRIPTION
FENCE	SEE SITE PLAN FOR FENCE INFORMATION
ALARMS	ALL DOORS & WINDOWS PROVIDING DIRECT ACCESS TO POOL FROM OUTDOOR SWIMMING POOL MUST BE EQUIPPED WITH A SELF-LATCHING DOOR CLOSING W/ UL 201T W/ A MINIMUM SOUND PRESSURE RATING OF 85 DB AT 10 FEET, OR SHALL BE EQUIPPED W/ SELF-CLOSING, SELF-LATCHING DEVICE INSTALLED MIN. 54" ABOVE FLOOR PER R4501T/1.
	GATE ALARM MANUFACTURER - TECHKO MODEL- 8010 / ETL APPROVED UNDER UL 201 STANDARD, 9V BATTERY OPERATION, WATER/WEATHER RESISTANT, AUDIBLE ALARM- 110-115 db @ 10 FT. UNIT SHALL BE INSTALL AT A MINIMUM HEIGHT OF 54"; HIGH ENOUGH TO BE OUT OF REACH OF CHILDREN

Diagram illustrating a self-latching picket fence gate. The gate is shown closed, with a picket fence on either side. Annotations include:

- SELF LATCH AT 54" HIGH
- PROVIDE 5 1/4" x 6 1/4" ALUMINUM PICKET GATE WITH SELF CLOSER AND SELF LATCH
- NUM PICKET FENCE (JECT 4" SPHERE OTHERS)
- 4'-6"
- 4'-6"
- ALL TO (BY)
- GRADE
- MAX

(TO COMPLY WITH F.B.C. 2023 8th EDITION R450.17)

WALL THICKNESS	TOP	BOTTOM
PLACED CONCRETE	6'	6'
FLOOR THICKNESS	BOTTOM	
PLACED CONCRETE	6'	

WATER LEVEL ELEVATION (TOP OF WALL)	12.49'
POOL DEPTH (bottom of pool slab)	5.6'
LOW POINT POOL LEVEL	6.89'
BASE FLOOD ZONE "AH"	15'
B.F. DEPTH LEVEL	0.61'
LESS HYDROSTATIC (1/4" VALVE)	-1.20'
HYDROSTATIC UPLIFT	-1.39'

NEGATIVE UPLIFT THEREFORE USE A MINIMUM OF 6" CONCRETE SLAB

As min. = $0.002 \times t \times b$ (Slab thickness) $\times b$ (column of water)
As min. = $0.002 \times 6 \times 12 \times 14$
$\begin{aligned} \text{Elev} &= 3 + 1.20(1) \\ &= 4.20' \end{aligned} $
As min. = $0.18 \times 9'$
As min. = $1.62'$

THEREFORE USE 6" CONCRETE SLAB WITH 3 # 3" O.C. EACH WAY

A detailed cross-section diagram of a pool deck and pool structure. The diagram shows a sloped pool deck on the left, labeled 'SLOPE 1/4" MAX.' with an arrow pointing to the slope. The deck is composed of '6" WIDE CERAMIC TILES (SELECTED BY OWNER)'. Below the tiles is a layer of 'COFFING'. The pool structure is shown on the right, with a 'POOL FINISH (SELECTED BY OWNER)' label. The pool is filled with 'WELL COMPACTED FILL'. The pool deck is labeled 'WITH GRAY' and has a '30'-0"' dimension. The pool structure has a '0'-0"' dimension. The pool is labeled 'POOL' and 'POOL FINISH (SELECTED BY OWNER)'.

Diagram illustrating a proposed driveway layout. The driveway is 6' wide. A 6' minimum high berm is required, with an elevation of +11.33' NGVD29'. The shoulder is 1' 6" wide. The property line is indicated, and the adjacent property is shown.

1. BERM TO BE CONSTRUCTED OF SUITABLE FILL MATERIAL, NO MUCK, OR OPEN GRADE SILICA, COMPACTED TO 92% DENSITY AND SODDED OR STABILIZED IN AN APPROVED METHOD TO PREVENT EROSION
2. GRADE ELEVATIONS ALONG EACH PROPERTY LINE SHALL MATCH EXISTING ADJACENT PROPERTY GRADE ELEVATIONS

(A) RISER HEIGHT MUST BE UNIFORM (12" MAX.) except top and bottom riser which may vary in height but shall not exceed 12"
(B) TREAD LENGTH 10" MINIMUM
(C) CONTRASTING TILE AT EDGE (OPTIONAL)
TREADS SHALL HAVE SLIP-RESISTANT SURFACES- AN6/AP6P-ICC-5 6.15.

This technical drawing illustrates the cross-section of a pool, detailing its construction and dimensions. The pool is shown with a coping at the top, a 6" wide ceramic tile finish, and a 6" concrete slab with 3" x 3" O.C. reinforcement. The pool is set into a well-compacted fill. The drawing includes labels for the top of the pool, the bottom of the pool at shallow and deep ends, and the pool finish. Dimensions are provided for the coping, the pool width, the pool depth, and the pool finish.

TOP OF POOL
 EL. + 12.49' NGVD.
 EL. ± 0'-0"

6" WIDE CERAMIC TILES
 (SELECTED BY OWNER)

POOL FINISH (SELECTED BY OWNER)

6" CONCRETE SLAB
 WITH 3" x 3" O.C.
 EACH WAY

BOTTOM OF POOL
 AT SHALLOW END
 EL. + 9.49' NGVD.
 EL. - 3'-0"

BOTTOM OF POOL
 AT DEEP END
 EL. + 1.49' NGVD.
 EL. - 5'-0"

COPING

WATER LEVEL

6"

3' 1/2"

3' 1/2"

12" RADIUS

12" MAXIMUM
 AT DEEP END

WELL COMPACTED FILL

FOR THICKNESS
 SEE SCHEDULE

6" CONCRETE WALL WITH
 3" x 3" O.C. EACH WAY
 (WALL FLUMES 1" MAXIMUM)

STEEL TEXT FOR #1
 OR KRAFT FOR #1

THE PROPOSED LOCATION OF SWIMMING POOL SHALL COMPLY WITH ALL OVERHEAD CONDUCTORS (POWER LINES, SERVICE DROP, AND LOW VOLTAGE LINES) PER N.E.C. - 680-9 (A) (B) (C) Overhead Conductor Clearances

CONCLUSIONS

Lot 6 of 'DIAGLES Subdivision', according to the plat thereof, as recorded in Plat Book 47, at Page 16, of the Public Record of Miami-Dade County, Florida.

Lot Size = 8,025 SqFt	
MINIMUM PERVIOUS AREA REQUIRED	
= 8,025 SqFt. x 25% = 2,006.25 SqFt.	
RESIDENCE	1,957.74 SqFt.
POOL & COPING	527.71 SqFt.
DRIVEWAY & WALKWAY	519.08 SqFt.
CONCRETE LANDING	12 SqFt.
A/C & POOL EQUIPMENT SLAB	21 SqFt.
TOTAL IMPERVIOUS AREA =	3,036.59 SqFt. = 31.84%
TOTAL PERVIOUS AREA = 4,988.41 SqFt. = 62.16%	

[illegible]

PROPOSED POOL PLAN FOR:

Michael Anthony Villanueva

LOCATED AT:

11115 5th Tenth Court Village of Pinecrest, FL 33156

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY OLGA V. CORDERO P.E. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED IN ANY ELECTRONIC COPIES.