

DESIGN CRITERIA:

APPLICABLE CODES, REGULATIONS & STANDARDS:

1. THE 2023 FLORIDA BUILDING CODE 8TH EDITION, SPECIFICALLY CHAPTER 16 STRUCTURAL DESIGN, CH. 20 ALUM. & CH. 23 WOOD.
2. AA ASM 35 & SPECIFICATIONS FOR ALUMINUM STRUCTURES, PART 1-A OF THE ALUMINUM DESIGN MANUAL PREPARED BY THE ALUMINUM ASSOCIATION, INC. WASHINGTON D.C. 2005 ED.
3. ASCE 7-22 & SE17
4. NDS NATIONAL DESIGN SPECIFICATION FOR WOOD.
5. ACI318 CONCRETE REFERENCE MANUAL.

WIND LOADS:

1. BUILDING OCCUPANCY CATEGORY, PARAGRAPH 1604.5 & TABLE 1604.5: RISK CATEGORY: I
2. BASIC WIND SPEED, TABLE 1609C, STATE OF FLORIDA DEBRIS REGION & BASIC WIND SPEED, PARAGRAPH 1609.3.1 & TABLE 1609.3.1 EQUIVALENT BASIC WIND SPEED: 

120

MPH EXPOSURE CATEGORY, PARAGRAPH 1609.4.3:

C
3. WIND LOADS PER FBC TABLE 2002.4 (MWFRS)  
VULT = 120 MPH & EXPOSURE = C

FOR 20 X 20 X 0.013" MESH SCREEN  
HORIZONTAL PRESSURES ON WINDWARD SURFACES =  
HORIZONTAL PRESSURES ON LEEWARD SURFACES =  
VERTICAL PRESSURES ON SCREEN SURFACES =  
VERTICAL PRESSURES ON SOLID SURFACES =

25 PSF

19 PSF

7 PSF

25 PSF

FOR 18 X 14 X 0.013" MESH SCREEN, APPLIED FACTOR =  
FOR ALLOWABLE STRESS DESIGN, APPLIED FACTOR =

.88

.6

FOUNDATION DESIGN:

NO ADDITIONAL FOOTING OR FOUNDATION SYSTEM IS REQUIRED BY THE PROPOSED CONSTRUCTION IF A MINIMUM 4" CONCRETE SLAB IS PROVIDED IN SOUND CONDITION, FREE FROM STRUCTURAL CRACKING, SPALLING & OTHER DETERIORATION. EXISTING FOUNDATION/FOOTING UNDER CONCRETE SLAB MINIMUM 8"x8" w/ (1) #5 BAR TO BE VERIFIED BY CONTRACTOR. SEE TYPICAL FOOTING DETAILS FOR NEW FOOTING DESIGN MINIMUM REQUIREMENTS.

MISCELLANEOUS:

1. SCREENED ENCLOSURES CONTAINING SWIMMING POOLS SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF FBC R4501.17 RESIDENTIAL SWIMMING BARRIER REQUIREMENTS.
2. ALUMINUM ADDITIONS ARE NOT TO BE INSTALLED ON A MANUFACTURED HOME, TRAILER HOME, OR PRE-FAB HOME. IF THE EXISTING STRUCTURE IS ONE OF THESE, A SEPARATE 4TH WALL SUPPORT SYSTEM IS SO TO BE ENGINEERED SO THAT NO ADDITIONAL LOADING IS PLACED ON THE MANUFACTURED HOME.
3. THE ENGINEERING ON THESE PLANS IS SITE SPECIFIC FOR (1) STRUCTURE ONLY AT THE PROVIDED ADDRESS(ES).

FASTENER SPECIFICATIONS:

1. FASTENERS ARE REQUIRED TO BE SAE GRADE 2 OR BETTER ZINC PLATED. (CONCRETE ANCHORS ARE TO BE 410 S.S. TAPCONS OR BETTER, INSTALLED TO MFG. SPECIFICATIONS)
2. WHERE WOOD DECK IS PRESENT USE 1/4" X 3-1/2" GALV. LAG SCREWS IN LIEU OF MASONRY ANCHORS. UNLESS OTHERWISE SPECIFIED.
3. FOR 1"x2" NON-STRUCTURAL MEMBERS ATTACHED TO HOST
  - a. FOR MASONRY/CONCRETE APPLICATION USE GALVANIZED 1/4" X 2-3/4" TAPCONS 6" FROM ENDS & 24" CENTER TO CENETER.
  - b. FOR WOOD APPLICATION USE # 14 X 2-3/4" WOOD SCREW AT 6" FROM ENDS & 24" CENTER TO CENETER.
  - c. FOR ALUMINUM APPLICATION USE #10 X 1-1/2" SMS OR TEK 6" FROM ENDS & 24" CENTER TO CENETER..
  - d. WHERE 1"x2" INSTALLED THROUGHOUT AN "OPEN VIEW" SPACING SHALL BE REDUCED TO 6" FROM ENDS & 18" C.C.

RESPONSIBILITIES:

1. ALL SITE WORK SHALL BE PERFORMED BY A LICENSED CONTRACTOR IN ACCORDANCE WITH APPLICABLE BUILDING CODES, LOCAL ORDANANCES, AND THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
2. FOR FASTENERS WHICH ARE NOT VISIBLE AFTER INSTALLATION, THE CONTRACTOR SHALL VERIFY AND ENSURE INSTALLATION HAS BEEN ACCOMPLISHED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS AND IN ACCORDANCE WITH THE ATTACHED DETAILS.
3. CONTRACTOR TO PROVIDE NOA'S & INSTALL ALL MATERIALS AS PER MANUFACTURER'S SPECIFICATIONS.
4. INTEGRITY OF EXISTING/ HOST STRUCTURE SHALL NOT BE COMPROMISED WITH THE ATTACHMENT OF THE PROPOSED STRUCTURE.
5. IT IS THE OWNERS RESPONSIBILITY TO MAINTAIN THE SCREENS & FASTENERS TO MANUFACTURING SPECIFICATIONS.
6. METAL WITHIN 5FT OF THE WATERS EDGE REQUIRE A CONTINUOUS BOND PER NEC NFPA 70: NATIONAL ELECTRIC CODE 680.43(D)(4): ALL METAL SURFACES THAT ARE WITHIN 1.5M (5FT) OF THE INSIDE WALLS OF THE SPA OR HOT TUB AND THAT ARE NOT SEPERATED FROM THE SPA OR HOT TUB AREA BY A PERMANENT BARRIER SHALL BE BONDED TOGETHER.

ALUMINUM SPECIFICATIONS:

1. ALUMINUM EXTRUSIONS SHALL BE 6005 T5 ALLOY UNLESS OTHERWISE NOTED.
2. ALL SELF MATING BEAM SECTIONS ARE TO BE STITCHED WITH
  - a.#14 SCREWS 6" FROM ENDS & 24" CENTER TO CENTER.
  - b. #12 SCREWS 6" FROM ENDS & 18" CENTER TO CENTER.
  - c. #10 SCREW 6" FROM ENDS & 12" CENTER TO CENEIER.
3. ROOF BRACING SHALL BE A MINIMUM 2"x3"x.050".
4. THE MINIMUM NORMAL THICKNESS OF PROTECTOR PANELS (KICKPLATES) SHALL BE AN INDUSTRY STANDARD OF 0.024 INCHES.
5. SCREEN MATERIAL SHALL BE 18/14 SCREEN UNLESS APPROVED BY FLORIDA ENGINEERING LLC.
6. 1"x2" & 1"x3" NON-STRUCTURAL MEMBERS MAY BE USED INTERCHANGEABLY.
7. DOOR LOCATION MAY BE DETERMINED/ RELOCATED BY CONTRACTOR IN THE FIELD. NOT TO AFFECT DESIGN SPANS AND STRUCTURAL MEMEBRS SHOWN

CONCRETE SPECIFICATIONS:

THE FOLLOWING SPECIFICATIONS ARE APPLICABLE TO THIS PROJECT:

1. WHERE CONCRETE SPECIFICATIONS ARE REQUIRED, WHETHER IN THE SCREEN ENCLOSURE SCOPE OR NOT, BY ONE OR MORE REGULATORY AGENCIES, THE FOLLOWING SPECIFICATIONS ARE APPLICABLE:
  - a. CONCRETE SHALL CONFORM TO ASTM C94 FOR THE FOLLOWING COMPONENTS:
    - i. PORTLAND CEMENT TYPE 1 - ASTM C 150
    - ii AGGREGATES - LARGE AGGREGATE 3/4 MAX. - ASTM C 33
    - iii. AIR ENTRAINING +/- 1 % - ASTM C 260
    - iv. WATER REDUCING AGENT - ASTM C 494
    - v. CLEAN POTABLE WATER
    - vi. OTHER ADMIXTURES NOT PERMITTED
  - b. METAL ACCESSORIES SHALL CONFORM TO:
    - i. REINFORCING BARS - ASTM A615, GRADE 60
    - ii. WELDED WIRE FABRIC - ASTM A185
  - c. CONCRETE SLUMP AT DISCHARGE CHUTE NOT LESS THAN 3" OR MORE THAN 5". WATER ADDED AFTER BATCHING IS NOT PERMITTED.
  - d. PREPARE & PLACE CONCRETE PER AMERICAN CONCRETE INSTITUTE MANUAL OF STANDARD PRACTICE, PART 1, 2, & 3 INCLUDING HOT WEATHER RECOMMENDATIONS.
  - e. MOIST CURE OR POLYETHYLENE CURING PERMITTED.
  - f. PRIOR TO PLACING CONCRETE, TREAT THE ENTIRE SUBSURFACE AREA FOR TERMITES IN COMPLIANCE WITH THE FBC. FOR RISK CATEGORY II, III, & IV STRUCTURES ONLY.
  - g. CONCRETE SLAB SHALL BE PLACED OVER A POLYETHYLENE VAPOR BARRIER. (SLAB ONLY)
2. WHEN PAVERS ARE UNDER ALUMINUM MEMBERS, CONTRACTOR SHALL EPOXY TO DECK OR GROUT TO DECK w/ 2000 PSI GROUT WITH BONDING AGENT
3. WHEN APPLICABLE FOR NEW SLAB ADDITION TO ADJACENT DRILL & EPOXY #4 X 8" REBAR INTO EX. FOUNDATION EMBED 4" MIN W/ NON-SHRINKING SIMPSON EPOXY-TIE (OR EQUAL) 48" O.C. TYP. ALL LOCATIONS
4. WHEN APPLICABLE FOR NEW FOOTER TO EXISTING, DRILL & EPOXY NEW STEEL INTO EX. FOUNDATION WITH EMBED 6" MIN W/ NON-SHRINKING SIMPSON EPOXY-TIE (OR EQUAL) TYP. ALL LOCATIONS
5. WHERE PAVERS ARE UNDER ALUMINUM MEMBERS, CONTRACTOR SHALL EPOXY TO DECK OR GROUT TO DECK w/3000 PSI GROUT WITH BONDING AGENT.
6. MINIMUM CONCRETE STRENGTH 3000 PSI UNLESS OTHERWISE NOTED.

MASONRY SPECIFICATIONS:

1. CONCRETE MASONRY UNITS (CMU) SHALL BE STANDARD HOLLOW UNITS AND SHALL BE 1900 PSI MINIMUM BASED ON TYPE M OR S MORTAR.
2. ALL MORTAR SHALL BE TYPE M OR S.
3. ALL GROUT SHALL BE 1800 PSI MINIMUM AND HAVE MAXIMUM COARSE AGGREGATE SIZE OF 3/8".
4. PROVIDE CLEAN-OUTS FOR REINFORCED CELLS CONTAINING REINFORCEMENT WHEN GROUT POUR EXCEEDS 5'-0" IN HEIGHT.

FOOTER SPECIFICATIONS:

1. PROVIDE 1-1/2" COVERAGE TOP, SIDES, BOTTOM AND 1" BETWEEN ADJACENT REBAR LAPS.
2. PROVIDE MIN. 3" COVERAGE OF REBAR FOR ALL CONCRETE IN CONTACT WITH THE EARTH.
3. FOOTING CONCRETE SHALL BE MIN. 3000 PSI AT 28 DAYS
4. FOOTING REINFORCEMENT SHALL BE MIN. GRADE 60
5. MINIMUM REBAR LAP SPLICE (40d) d= DIAMETER OF REBAR
6. PROVIDE POSITIVE DRAINAGE AWAY FROM STRUCTURE TO CITY / CO. REQUIREMENTS
7. PROVIDE 2500 PSF BEARING (TYPICAL) UNDER FOUNDATION
8. SEE GENERAL NOTES SHEET/01 FOR TYING INTO EXISTING FOUNDATIONS
9. SEE GENERAL NOTES SHEET/01 FOR ADDITIONAL CONCRETE INFORMATION & SPECS.

ALUMINUM MEMBERS DIMENSIONS:

HOLLOW SECTIONS  
2 x 2: 2" x 2" x 0.050"  
2 x 3: 2" x 3" x 0.050"  
2 x 4: 2" x 4" x 0.050"  
2 x 5: 2" x 5" x 0.050"

OPEN BACK SECTIONS  
1 x 2: 1" x 2" x 0.044"  
1 x 3: 1" x 3" x 0.045"

SNAP SECTIONS  
2 x 2 SNAP: 2" x 2" x 0.045"  
2 x 3 SNAP: 2" x 3" x 0.050"  
2 x 4 SNAP: 2" x 4" x 0.045"

SELF MATING (SMB)  
2 x 4 SMB: 2" x 4" x 0.046" x 0.100"  
2 x 5 SMB: 2" x 5" x 0.050" x 0.116"  
2 x 6 SMB: 2" x 6" x 0.050" x 0.120"  
2 x 7 SMB: 2" x 7" x 0.055" x 0.120"  
2 x 8 SMB: 2" x 8" x 0.072" x 0.224"  
2 x 9 SMB: 2" x 9" x 0.072" x 0.224"  
2 x 9(H) SMB: 2" x 9" x 0.082" x 0.306"  
2 x 10 SMB: 2" x 10" x 0.092" x 0.374"

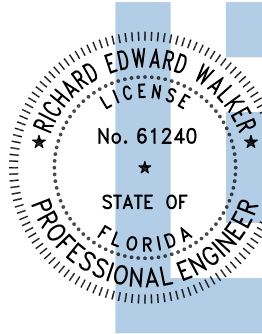
ALL MAY NOT APPLY

DETAIL "A" MEMEBR DIMENSIONS

SHEET NO.	DRAWING INDEX
S/01	GENERAL NOTES
S/02	PLAN/ ELEVATIONS
S/03	DETAILS
S/04	DETAILS
S/05	DETAILS

<b>DESIGN LOADS:</b> 1. DEAD LOADS = 2. LIVE LOADS a. PRIMARY MEMBERS = b. SECONDARY MEMBERS = c. SCREEN ROOF = d. SOLID ROOF =	<div>MEMBER SELF-WEIGHT</div> <div>300 LB. VERT. LOAD</div> <div>200 LB. VERT. LOAD</div> <div>5 PSF</div> <div>20 PSF</div>
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This item has been digitally signed and sealed by Richard E. Walker, P.E. on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



Digitally signed  
by Richard E Walker  
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PROJECT NO. 2435426

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DESIGN DATE:		12/26/2024	
REVISION 1:		DATE	
REVISION 2:		DATE	SHEET: <div>01</div>
DRAWN BY:		MBG	
SCALE:		NTS	