

STRUCTURAL NOTES

1. CODES AND STANDARDS
- FLORIDA BUILDING CODE 2020 EDITION
 - NDS 2018 FOR WOOD CONSTRUCTION
 - ASTM A1064 WELDED WIRE FABRIC
 - ASTM C90-14 STANDARD SPECIFICATION FOR LOADBEARING CONCRETE MASONRY UNITS
 - ASTM C476-19 STANDARD SPECIFICATION FOR GROUT FOR MASONRY
 - ACI 318-14 REINFORCED CONCRETE
 - TMS 402/602-16 BUILDING CODE & SPECIFICATIONS FOR MASONRY STRUCTURES
 - ACI 347-14 SPECIFICATION CONCRETE FORMWORK
 - ACI 301-14 SPECIFICATIONS FOR STRUCTURAL CONCRETE
 - ASCE 07-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
 - AISC 360-16 SPECIFICATION FOR STRUCTURAL STEEL BUILDING,
2. WIND ANALYSIS DESIGN PARAMETERS
- A. WIND DESIGN HAS BEEN DONE IN ACCORDANCE WITH ASCE 7-16.
- B. EXPOSURE "C"
- C. INTERNAL PRESSURE COEFFICIENT, GCpi= :0.18.
- D. WIND VELOCITY, V= 175 MPH
- E. STRUCTURAL CATEGORY II
3. DESIGN LOADS GRAVITY
- GROUND:
- DL=25 PSF LL=40 PSF
- STAIR:
- DL=25 PSF LL=40 PSF BALCONY: DL=25 PSF LL=60 PSF
- FLOORS:
- DL=25 PSF LL=40 PSF ROOF: DL=25 PSF LL=30 PSF
- ROOF DECK:
- DL=25 PSF LL=100 PSF
- 3.1. RAIN DESIGN PARAMETERS
- RAIN INTENSITY= 5in/hr
- R=5.2(ds+dn)=26 PSF
4. GENERAL:
- A. ALL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH THE FLORIDA BUILDING CODE, 2020 EDITION, HVHZ, ASCE 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS, THE ACI 318-14 BUILDING CODE, AND ALL APPLICABLE FEDERAL, STATE AND LOCAL ORDINANCES.
- B. THESE DRAWINGS AND SPECIFICATIONS COMPLY, TO THE BEST OF MY KNOWLEDGE WITH THE FLORIDA BUILDING CODE, 2020 EDITION, HVHZ.
- C. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS OF EXISTING STRUCTURES AFFECTING NEW CONSTRUCTION BEFORE COMMENCING ANY WORK. ANY VARIATIONS IN ACTUAL FIELD CONDITIONS/DIMENSIONS FROM THOSE SHOWN IN THE CONTRACT DRAWINGS SHALL BE REPORTED TO THE ENGINEER FOR DETERMINING THE NEED OF REDESIGN PRIOR TO CONSTRUCTION.
- D. THESE DRAWINGS SHALL BE WORKED TOGETHER WITH ARCHITECTURAL, AIR CONDITIONING, MECHANICAL AND ELECTRICAL DRAWINGS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT/ENGINEER BEFORE PROCEEDING WITH THE WORK. ANY DISCREPANCIES, OMISSIONS OR VARIATIONS FOUND ON THE DRAWINGS OR IN THE SPECIFICATIONS DISCOVERED DURING THE BIDDING PHASE SHALL BE IMMEDIATELY COMMUNICATED TO ARCHITECT/ENGINEER.
- E. WHEN PERFORMING WORK BELOW GRADE, CARE SHALL BE TAKEN TO AVOID DAMAGING ANY EXISTING UTILITIES. ALL UNKNOWN UTILITIES DISCOVERED DURING CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER. ANY DAMAGE TO THE EXISTING UTILITIES SHALL BE REPORTED TO ALL AFFECTED PARTIES, INCLUDING THE ARCHITECT/ENGINEER.
- F. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR UPDATING HIS CONSTRUCTION DOCUMENTS WITH THE REVISED DRAWINGS AND SPECIFICATIONS, FIELD ORDERS, CHANGE ORDERS AND CLARIFICATION SKETCHES ISSUED DURING THE COURSE OF CONSTRUCTION.
- G. TYPICAL DETAILS AND NOTES ON THESE DRAWINGS SHALL APPLY UNLESS SPECIFICALLY NOTED OTHERWISE. CONSTRUCTION DETAILS AND SECTIONS NOT COMPLETELY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS AND SECTIONS SHOWN OR NOTED FOR SIMILAR CONDITIONS.
- H. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH THE LOCAL BUILDING DEPARTMENT.
- I. BACKFILL AROUND THE EXTERIOR PERIMETER OF WALLS SHALL NOT BE PLACED UNTIL AFTER THE WALLS ARE SUPPORTED BY THE COMPLETION OF INTERIOR FLOOR SYSTEMS. DO NOT PROCEED WITH BACKFILL UNTIL (7) DAYS AS A MINIMUM AFTER THE COMPLETION OF INTERIOR FLOOR SYSTEM UNLESS WALLS ARE ADEQUATELY BRACED. BACKFILL SHALL NOT BE PLACED UNTIL AFTER COMPLETION AND INSPECTION OF WATERPROOFING WHERE WATERPROOFING OCCUR.
- J. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF ALL ACCUMULATED WATER FROM EXCAVATIONS AND Dewatering OPERATIONS IN SUCH A WAY AS TO NOT CAUSE INCONVENIENCE TO THE WORK AND DAMAGE TO THE STRUCTURAL ELEMENTS.
- K. STRUCTURAL NOTES SHALL BE USED IN CONJUNCTION WITH THE SPECIFICATIONS. IF A CONFLICT EXISTS, THE MORE STRINGENT GOVERNS.
- L. GENERAL CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITY LINES AND CONDUITS FROM DAMAGE. GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR DAMAGE OR INJURY DUE TO HIS ACT OR NEGLECT.
- M. GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SAFETY, MEANS AND METHODS OF CONSTRUCTION AND CONSTRUCTION PROCEDURES. DO NOT SCALE THESE DRAWINGS, USE DIMENSIONS NOTED, IF DIMENSIONS ARE MISSING CONSULT ARCHITECT/ENGINEER FOR ADVICE.
5. FOUNDATION:
- A. AS PER GEOTECHNICAL REPORT OF DYNATECH ENGINEERING CORP., DATED ON 04-21-2022, THE PROPOSED STRUCTURES BE DESIGNED ON FOUNDATION SYSTEM WITH A SOIL BEARING CAPACITY OF 2500 PSF. THE SITE MUST BE PREPARED AS INDICATED ON GEOTECHNICAL REPORT.
- B. ALL FOUNDATION EXCAVATIONS SHALL BE KEPT DRY. FOUNDATION CONCRETE SHALL BE POURED ONLY UNTIL EXCAVATIONS ARE COMPLETELY DRY. TAKE EVERY PRECAUTION DURING Dewatering OPERATIONS SO THAT EXISTING ADJACENT STRUCTURES, UTILITIES, PIPING, ETC. ARE NOT DAMAGED.
- C. CENTERS OF COLUMNS SHALL CONCOIDE WITH CENTERS OF FOOTINGS, UNLESS OTHERWISE NOTED IN FOUNDATION PLANS AND FOOTING DETAILS.
- D. TOP OF FOUNDATION ELEVATIONS SHOWN IN PLAN ARE BASED ON THE BEST AVAILABLE INFORMATION GATHERED FROM SOIL BORING LOADS SOIL CONDITIONS ENCOUNTERED DURING FOUNDATION EXCAVATIONS MIGHT DICTATE TOP OF FOUNDATION ELEVATION TO BE LOWERED IN ORDER TO EMBED FOUNDATIONS A MINIMUM OF 6 INCHES INTO THE EXISTING LIMEROCK BEARING STRATA.
- E. FOUNDATIONS MAY BE EARTH-FORMED IF SOIL CONDITIONS PERMIT. EXCAVATE TO EXACT FOUNDATION SIZES.
- G. FOUNDATION EXCAVATIONS SHALL BE INSPECTED BY ENGINEER OF RECORD AND GEOTECHNICAL ENGINEER AND NO FOUNDATIONS SHALL BE POURED UNTIL GEOTECHNICAL ENGINEER CERTIFIES THAT SOIL CONDITIONS ARE AS PER GEOTECHNICAL REPORT.
6. CONCRETE:
- A. ALL CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 318-14 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS."
- B. CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE AS FOLLOWS:
- FOOTINGS ----- 3000 PSI, MAX. W/C RATIO=0.40
- SLABS ON GRADE ----- 3000 PSI, MAX. W/C RATIO=0.40
- STRUCTURAL SLABS AND BEAMS ----- 5000 PSI, MAX. W/C RATIO=0.40
- WALLS AND COLUMNS ----- 5000 PSI, MAX. W/C RATIO=0.40
- ALL OTHER CONCRETE ----- 3000 PSI, MAX. W/C RATIO=0.40
- C. FORMWORK SHALL COMPLY WITH ACI 347-14, "RECOMMENDED PRACTICE FOR CONCRETE WORK."
- D. MIX DESIGNS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF ANY CONCRETE WORK. SUBMIT STATISTICAL DATA FOR EACH CLASS OF CONCRETE.
- E. NO WATER SHALL BE ADDED TO THE CONCRETE AT THE JOB SITE.
- F. TRANSPORTING, PLACING, CURING AND DEPOSITING OF CONCRETE SHALL COMPLY WITH ACI 318-14-SPECIFICATIONS FOR STRUCTURAL CONCRETE.
- G. CONSTRUCTION JOINTS IN STRUCTURAL SLABS AND BEAMS SHALL BE LOCATED AT 1/3 OF THE SPAN WITH REINFORCING CONTINUOUS ACROSS THE JOINT. PROVIDE A CONTINUOUS 2 X 4 SHEAR KEY AT SLABS AND A 1 1/2" INCH DEEP JOINT 4 INCHES SMALLER THAN THE BEAM SECTION. CONSTRUCTION JOINT LOCATIONS SHALL BE APPROVED BY STRUCTURAL ENGINEER OF RECORD BEFORE POUR.
- H. MAXIMUM WATER/CEMENT RATIO FOR CONCRETE CONTAINING A SUPERPLASTICIZING ADMIXTURE SHALL BE 0.40. SLUMP AFTER ADDITION OF SUPERPLASTICIZER SHALL BE 6" +/- 1".
- I. MINIMUM CONCRETE COVER FOR REINFORCEMENT:
- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
- CONCRETE EXPOSED TO EARTH OR WEATHER
- #6 BARS AND LARDER 2"
- #5 BAR AND SMOLDER 1 1/2"
- CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH:
- SLABS AND WALLS 3/4"
- BEAMS AND COLUMNS 1 1/2"
7. REINFORCING STEEL:
- A. REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 318-14.
- B. REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A 615/A 615M-14. (SI) GRADE 60.
- C. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 1064/1064M-16a.
- D. REINFORCING SHALL BE HELD SECURELY IN POSITION WITH STANDARD ACES- SORIES DURING PLACING OF CONCRETE, IN ACCORDANCE WITH CRSI "MANUAL OF STANDARD PRACTICE", 28th EDITION, 2009.
- E. ALL TOP REINFORCING SHALL TERMINATE WITH STANDARD HOOKS AT DISCONTINUOUS EDGES OR ENDS.
- F. ALL BOTTOM BARS SHALL BEAR 6" MINIMUM OVER SUPPORTS, U.O.N.
- G. ALL REINFORCING BARS MARKED CONTINUOUS SHALL BE LAPPED AS TENSION SPLICE ACCORDING TO ACI 318-14, UNLESS OTHERWISE NOTED. LAP CONTINUOUS TOP BARS AT CENTER BETWEEN SUPPORTS AS REQUIRED. TERMINATE CONTINUOUS BARS AT NON-CONTINUOUS ENDS WITH STANDARD HOOKS, U.O.N.
- H. SLAB TOP BARS ARE SHOWN IN PLAN AS SOLID LINES. SLAB BOTTOM BARS ARE SHOWN IN PLAN AS DASHED LINES.
- I. IN BEAMS WITH MULTIPLE LAYERS OF REINFORCING AT TOP OR BOTTOM SEPARATE LAYERS WITH #8 SPACER BARS FOR BAR SIZES UP TO #8 AND SAME SPACER BAR AS BAR SIZE FOR #9 BARS AND LARGER.
- J. IN BEAMS 8 INCHES WIDE PROVIDED MAXIMUM OF 2 BARS PER LAYER OF REINFORCING.
- K. BEAMS INTERMEDIATE BARS SHALL BE HOOKED AT DISCONTINUOUS ENDS AND SPLICED AT SUPPORTS WITH 30 BAR DIAMETER LAP SPLICES.
- L. ALL TOP AND BOTTOM AND ACCESSORY REINFORCING USED IN BALCONIES AND TERRACES SHALL BE GALVANIZED.
- M. FOR CLASS "B" TENSION LAP SPLICES FOLLOW CRSI "MANUAL OF STANDARD PRACTICE", 28th EDITION, 2009.
- N. FOR CONTINUOUS SPLICES IN REINFORCING BARS SHALL BE NOT LESS THAN 36 BAR DIAMETER AND REINFORCEMENT SHALL BE CONTINUOUS AROUND ALL CORNERS AND CHANGES IN DIRECTION. CONTINUITY SHALL BE PROVIDED AT CORNERS OR CHANGES IN DIRECTION BY BENDINGTHE LONGITUDINAL STEEL AROUND THE CORNER 48 BAR DIAMETER OR BY ADDING MATCHING REINFORCING STEELS, WHICHSHALL EXTEND 48 BAR DIAMETER FROM EACH CORNER OR CHANGE IN DIRECTION. WHEN THREE OR MORE BARS ARE REQUIRED, THE BARS SHALL BE HELD IN PLACE AND ALIGNED BY TRANSVERSE BARS SPACED NOT MORE THAN 4 FEET (1219mm) APART. FOR ALL OTHER SPLICES SEE SPECIFIC SECTION OR DETAIL AND TENSION LAP SPLICE SCHEDULE.
8. CONCRETE MASONRY WORK:
- A. CONCRETE MASONRY WALLS NOTED AS LOAD BEARING WALLS, SHALL BE IN PLACE BEFORE THE SLABS AND BEAMS SUPPORTED BY THEM ARE POURED AS WELL AS THE CONCRETE TIE COLUMNS FRAMING THEM.
- B. CONCRETE MASONRY WALLS NOTED AS NON-LOAD BEARING WALLS SHALL BE PLACED AFTER CONCRETE FRAME SUPPORTING THEM ARE 28 DAYS OLD AND ALL SHORING AND RE-SHORING IS COMPLETELY REMOVED FROM BELOW AND ABOVE. HOLD CLEAR OF CONCRETE ABOVE UNTIL ANTICIPATED DEAD LOAD DEFLECTION OF CONCRETE SLAB OR BEAM ABOVE HAS OCCURRED. FILL JOINT WITH MORTAR AND SEAL AS REQUIRED BY ARCHITECTURAL DRAWINGS TO PREVENT WATER INTRUSION.
- C. ALL CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C 90-14, "STANDARD SPECIFICATIONS FOR HOLLOW LOAD BEARING CONCRETE MASONRY UNITS", WITH A NET AREA COMPRESSIVE STRENGTH OF CONCRETE MASONRY UNITS OF 1900 PSI.
- D. MORTAR SHALL CONFORM TO ASTM C 270-14A, TYPE "M", WITH A MINIMUM AVERAGE STRENGTH OF 2500 PSI.
- E. CONCRETE MASONRY STRENGTH, f'm, SHALL BE A MINIMUM OF 1500 PSI.
- F. VERTICAL REINFORCING IN CMU CELLS SHALL BE SPLICED WITH 48 BAR DIA- METER LAP SPLICES. PROVIDE CLEAN OUT HOLES AT BASE OF FILLED CELLS FOR LAP INSPECTION AND VERIFYING THAT THE CELLS HAVE BEEN FILLED SOLID WITH GROUT.
- G. FILLED CELLS SHALL BE FILLED WITH 3000 PSI GROUT AS PER TMS 402/602-16. FILLING OF CELLS SHALL BE DONE IN FOUR FOOT LIFTS WITH A MAXIMUM POUR OF 12 FEET. USE MECHANICAL VIBRATION TO ACHIEVE GROUT-FILLED SOLID CELLS. GROUT SHALL CONFORM TO ASTM C476. HORIZONTAL REINFORCING SHALL BE BETWEEN 9" AND 12".
- H. ALL CMU WALLS SHALL BE SLUMP-REINFORCED WITH STANDARD NO. 9 LADDER-TYPE GALVANIZED STEEL REINFORCING EVERY SECOND COURSE. EXTEND REINFORCING A MINIMUM OF 4 INCHES INTO THE COLUMNS.
- I. PROVIDE GALVANIZED STEEL DOVETAIL ANCHORS EVERY OTHER COURSE CONNECTING NON LOAD-BEARING WALLS TO CONCRETE COLUMNS AND SHEAR WALLS.
- J. REINFORCING BARS IN GROUTED CELLS SHALL BE SECURED IN PLACE AT BASE OF BAR AND ABOVE BEFORE GROUTING OF CELL.
- K. REINFORCING BARS BE SHALL CENTERED IN THE BLOCK CELL. DOWELS NOT LINED UP WITH THE BLOCK CELL SHALL NOT BE SLOPED MORE THAN 1 IN 6. HORIZONTAL DISTANCE BETWEEN DOWEL AND REINFORCING BAR MAY BE UP TO 8"(ONE BLOCK CELL APART).
- L. ANCHOR BOLTS SHALL BE EMBEDDED IN WALLS IN GROUTED CELLS.
- M. GROUTED CELLS WHERE WEDGE ANCHORS ARE TO BE INSTALLED SHALL HAVE THE BLOCK SHELL REMOVED SO THAT WEDGE ANCHOR IS EMBEDDED IN SOLID CONCRETE GROUT. FILL ONE COURSE BELOW AND ABOVE ANCHOR LOCATION.
- N. ALL CONCRETE MASONRY WORK HAS BEEN DESIGNED AND DETAILED ASSUMING CONCRETE MASONRY WORK WILL BE COMPLETELY INSPECTED BY SPECIAL OR THRESHOLD INSPECTORS.
- O. REINFORCING BARS SHALL BE LOCATED AS INDICATED IN PLAN OR CALLED OUT BY NOTES IN PLANS. WHERE PLANS AND NOTES DISAGREE, CONSULT ENGINEER OF RECORD FOR CLARIFICATION.
- P. LAY MASONRY UNITS IN RUNNING BOND.
- Q. PROVIDE 30 LBS. FELT PAPER TO ISOLATE WOOD FROM MASONRY WALLS. USE PRESSURE TREATED WOOD FOR LEDGERS IN CONTACT WITH MASONRY WALL.
9. WOOD NOTES:
- A. ALL STRUCTURAL WOOD MEMBERS OTHER THAN TRUSSES TO BE SOUTHERN PINE GRADE NO. 2 UNLESS OTHERWISE NOTED.
- B. ALL WOOD MEMBERS TO BE FREE OF ALL IMPERFECTIONS AS: SPLITS, CHECKS, OR EXCESSIVE KNOTS. UNSATISFACTORY MATERIALS TO BE REPLACED AT NO COST TO OWNER. ALL WOOD MEMBERS EXPOSED TO THE WEATHER OR IN CONTACT WITH CONCRETE OR MASONRY TO BE PRESSURE TREATED.
- C. MOISTURE CONTENT SHALL BE 19% OR LESS.
- D. ALL BOLTED CONNECTIONS TO BE COMPLETED WITH A325 GALVANIZED STEEL BOLTS WITH WASHERS AT EACH END. FABRICATION, ERECTION, AND CONNECTIONS TO BE AS PER RECOMMENDATIONS OF THE A.I.T.C. (AMERICAN INSTITUTE OF TIMBER CONSTRUCTION), LATEST EDITION.
- E. PLYWOOD SHEATHING CLASSIFICATION SHALL BE "C" OR BETTER AND THE EXPOSURE SHALL BE APA RATED EXTERIOR.
- F. INSTALL PANELS WITH STRENGTH DIRECTION PERPENDICULAR TO TRUSSES OR JOISTS.
- G. PLYWOOD SHEATHING CLASSIFICATION SHALL BE "C" OR BETTER AND THE EXPOSURE SHALL BE APA RATED EXTERIOR.
- H. PROVIDE 5/8" STRUCTURAL PLYWOOD ROOF DECKING AS PER SPECIFICATIONS. EACH PANEL SHALL BE IDENTIFIED WITH THE GRADE TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION (APA) AND SHALL MET THE REQUIREMENTS OF THE MOST CURRENT APA PRODUCT STANDARD PS 1. APPLICATION AND NAILING OF PLYWOOD PANEL SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN PLYWOOD ASSOCIATION UNLESS REQUIREMENTS NOTED ON THESE CONTRACT DOCUMENTS ARE MORE STRICT.
- I. WALL SHEATHING SHALL BE PLYWOOD, OR PRODUCT APPROVED STRUCTURAL PANEL, RATED EXPOSURE 1 WITH A MINIMUM THICKNESS OF 19/32 INCH AND SHALL BE APPLIED TO STUDS SPACED NOT MORE THAN 16-INCHES ON CENTER. WALL SHEATHING SHALL BE CONTINUOUS OVER THREE OR MORE SUPPORTS AND SHALL BE NAILED TO SUCH SUPPORTS WITH 100 RING SHANK NAILS. NAIL SPACING SHALL NOT EXCEED 6- INCHES ON CENTER AT PANEL EDGES AND ALL INTERMEDIATE SUPPORTS. NAIL SPACING SHALL BE 4-INCHES ON CENTER AT CORNER STUDS, IN ALL CASES.
- K. PLYWOOD ROOF PANELS SHALL BE ORIENTED WITH FACE GRAIN PERPENDICULAR TO SUPPORT TRUSSES.
- L. WOOD CONSTRUCTION, UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE "CONVENTIONAL CONSTRUCTION PROVISIONS," INTERNATIONAL BUILDING CODE. ALL NAILING SHALL CONFORM TO TABLE 2304.9.1 "NAILING SCHEDULE" OF THE INTERNATIONAL BUILDING CODE. UNLESS OTHER REQUIREMENTS NOTED ON THE DRAWINGS ARE MORE STRICT.
- M. FOUNDATION PLATES FOR LOAD BEARING WALLS ON CONCRETE OR MASONRY WALLS SHALL BE PRESSURE TREATED LUMBER, #2 GRADE MINIMUM. SILLS SHALL BE ANCHORED TO CONCRETE OR MASONRY WITH 1/2" X 9" ANCHOR BOLTS SPACED 48" O.C. MAXIMUM. THERE SHALL BE A MINIMUM OF THREE BOLTS PER PIECE WITH ONE BOLT LOCATED WITHIN 8" OF EACH END OF EACH PIECE. THERE SHALL BE NO SILL SPLICE UNDER ANY POST OR MULLION.
- N. POSTS AND BEAMS CONSTRUCTED OF MULTIPLE LAMINATED VENEER LUMBER MEMBERS SHALL BE FASTENED TOGETHER ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- O. ALL JOISTS, ROOF BEAMS AND ORDERS SHALL HAVE FULL HORIZONTAL BEARING OF THE MEMBER OVER SUPPORT UNLESS OTHERWISE SHOWN. DO NOT OVERCUT.
- P. PLYWOOD USED ON EXTERIOR BUILDING AND FORMS SHALL BE EXTERIOR GRADE.
- Q. USE NON-CORROSIVE, NON-STAINING ROUGH HARDWARE FOR EXTERIOR APPLICATIONS.
- R. ALL BEAMS AND JOIST NOT BEARING ON SUPPORTING MEMBERS SHALL BE CONNECTED WITH "USP STRUCTURAL CONNECTORS" OR EQUIVALENT "SIMPSON" HANGERS.
- S. BOTTOM PLATES OF ALL FIRST FLOOR NON-LOAD BEARING PARTITIONS SHALL BE ANCHORED USING #8 CONCRETE NAILS AT 32" O.C. (OR EQUAL).
- T. ALL LAG SCREWS SHALL BE PRE-DRILLED AS REQUIRED BY PROVISIONS OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (AF & PA, 1997), PART 9.
- U. ALL BEARING STUD WALLS AND SHEAR WALLS SHALL HAVE A CONTINUOUS DOUBLE TOP PLATE LAP SPLICE TOP PLATES MINIMUM 4'-0". FASTEN TOGETHER WITH MINIMUM (2) ROWS OF 10d NAILS AT 4" O.C., STAGGERED AT LAP SPLICE. FASTEN REMAINING TOP PLATES TOGETHER WITH MINIMUM (2) ROWS OF 10d NAILS AT 8" O.C., STAGGERED.
- V. BOLT HOLES SHALL BE MAXIMUM 1/16" LARGER THAN BOLT HOLE DIAMETER. BOLTS SHALL NOT BE FORBIDLY DRIVEN. BOLT HEADS AND NUTS SHALL NOT BE COUNTERSUNK WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
- W. TENSION ALL BOLTS 1/4 TURN BEYOND SNUG-TIGHT. SPOIL THREADS TO PREVENT BACK OFF OF NUT AFTER INSTALLATION.
- X. PROVIDE 5/32" DIAMETER LEAD HOLES THROUGH FIRST LAMINATION FOR ALL NAILS LARGER THAN 16d.
- Y. ALL WOOD CONNECTORS SHALL BE BY "USP STRUCTURAL CONNECTORS" OR "SIMPSON STRONG-TIE". ALL JOISTS AND BEAMS NOT BEARING ON A SUPPORTING MEMBER SHALL BE FRAMED WITH AN APPROPRIATE WOOD CONNECTOR.
10. WINDOWS/DOORS:
- WINDOWS/DOORS WITH CONNECTIONS TO THE STRUCTURE SHALL BE DESIGNED FOR LOADS AS PER FLORIDA BUILDING CODE OR SELECTED WITH A PRODUCT APPROVAL CERTIFICATE AND BE BASED ON LAYOUT AND CONFIGURATION AS SHOWN ON ARCHITECTURAL DRAWINGS. IF DESIGNED, SHOP DRAWING SUBMITTAL, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA (WITH CALCULATIONS SHALL INCLUDE PLANS AND DETAILS CLEARLY INDICATING DESIGN LOADS, MATERIALS USED, FINISHES AND FASTENERS.
11. METAL STUD:
- SHALL CONFORM TO THE AMERICAN IRON AND STEEL INSTITUTE (LATEST EDITION) AS FOR FABRICATION, ERECTION AND DETAILING. STEEL STUDS TO BE HOT DIPPED GALVANIZED, WITH G-90 GALVANIZING, AS PROVIDED BY DALE INDUSTRIES. PROVIDE Fy= 33 KSI MINIMUM YIELD STRESS FOR 18, 20, 22 AND 25 GAUGES. PROVIDE Fy=50 KSI MINIMUM YIELD STRESS FOR 16, 14 AND 12 GAUGES. SUBMIT MILL REPORTS AND SHOP DRAWINGS FOR APPROVAL BEFORE FABRICATION. PROVIDE MINIMUM 20 GAUGE METAL CEE-STUDS (1-5/8"X 3-5/8") SPACED AT 16"C/C, FOR ALL INTERIOR PARTITIONS, AS INDICATED IN THE ARCHITECTURE. NOTE, IF ARCHITECTURE DENOTES A HEAVIER GAUGE OR CLOSER SPACING, THAN USE THE HEAVIER GAUGE AND CLOSER SPACNG.
12. FASTENERS:
- A. FASTENERS SHALL OF THE TYPE AND SIZE INDICATED IN THIS DRAWINGS.
- B. ALL FASTENERS INCLUDING EXPANSION ANCHORS, SLEEVE ANCHORS, STRAPS, NAILS, SCREWS, ETC SHALL BE GALVANIZED (U.O.N)
13. EXPANSION ANCHORS:
- THE CONTRACTOR SHALL USE ONE OF THE FOLLOWING: POWER-STUD BY "POWERS/RAWL", KWIK BOLT BY "HILTI", THRU BOLT WEDGE BY "RAMSET/REDHEAD" OR AN ENGINEER APPROVED SUBSTITUTE. INSTALLATION OF ANCHORS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS.
14. SCREW ANCHORS:
- THE CONTRACTOR SHALL USE ONE OF THE FOLLOWING: TAPPER BY "POWERS/RAWL", KWIK CON BY "HILTI", TAPCON BY TIO "RAMSET/REDHEAD" OR AN ENGINEER APPROVED SUBSTITUTE. INSTALLATION OF ANCHORS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS.
15. STRUCTURAL STEEL:
- A. STRUCTURAL STEEL HAS BEEN DESIGNED IN ACCORDANCE WITH THE FBC AND AISC SPECIFICATIONS.
- B. STRUCTURAL STEEL SHALL MEET THE FOLLOWING REQUIREMENTS UNLESS NOTED OTHERWISE ON THE DRAWINGS:
- | TYPE | ASTM | GRADE | Fy |
|------------------------------|-----------|-------|-------|
| WIDE FLANGE (W SHAPE) | A992 | - | 50KSI |
| C, S & M SHAPES | A36 | - | 36KSI |
| ANGLES & PLATES | A36 | B | 48KSI |
| SQUARE & RECTANGULAR HSS, TS | A500 | B | 42KSI |
| ROUND HSS | A500 | B | 42KSI |
| STEEL PIPE | A53 Gr. B | - | 36KSI |
| STRUCTURAL BOLTS | F3125 | A325 | 92KSI |
| ANCHOR BOLTS--THREADED RODS | F1554 | 36 | 36KSI |
- C. ALL STRUCTURAL STEEL THAT IS EXPOSED TO THE WEATHER SHALL BE TREATED WITH 2 COATS OF ANTI-CORROSIVE PAINT.
- D. ALL CONNECTIONS NOT DETAILED OR OTHERWISE NOTED SHALL BE DESIGNED BY THE FABRICATOR. SHOP DRAWINGS AND CONNECTION CALCULATIONS SHALL BE SUBMITTED BEARING THE SEAL OF AN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.
- E. BEAM SHEAR CONNECTIONS DESIGN SHALL BE BASED ON BEARING TYPE BOLTED CONNECTIONS WITH BOLTS "SNUG TIGHT" PER AISC.
- F. ALL EXTERIOR STEEL SHAPES, PLATES, NUTS, BOLTS, WASHERS SHALL BE HOT-DIPPED GALVANIZED.
- G. ALL EXTERIOR STEEL SHAPES, PLATES, NUTS, BOLTS, WASHERS SHALL BE HOT-DIPPED GALVANIZED.
- H. SPLICING OF STEEL MEMBERS IS NOT ALLOWED, UNLESS SPECIFIED IN STRUCTURAL DRAWINGS OR APPROVED BY ENGINEER OF RECORD.
- I. ALL BOLTS, NUTS AND WASHERS SHALL BE NEW, RUST-FREE, CLEAN AND WELL LUBRICATED.
- J. BOLT HOLES THROUGH STEEL MEMBERS SHALL BE SHOP-DRILLED, CUT OR PUNCHED. DO NOT USE TORCH OR FLAME TO CUT OR ENLARGE HOLES.
- K. ALL STRUCTURAL STEEL TUBE OR PIPE COLUMNS SHALL BE FILLED WITH 5000 PSI CONCRETE GROUT. PROVIDE 1/4" DIAMETER WEEP HOLES EACH SIDE "3" FROM TOP AND BOTTOM OF COLUMN.
- L. DO NOT PAINT PARTS OF STEEL MEMBERS TO BE EMBEDDED IN CONCRETE AND SURFACES TO BE IN CONTACT WITH CONCRETE.
- M. FOR FIREPRMOFING OF STRUCTURAL STEEL MEMBERS SEE ARCHITECTURAL DRAWINGS.
- N. SEE ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS FOR ADDITIONAL MISCELLANEOUS STRUCTURAL STEEL NOT SHOWN IN STRUCTURAL DRAWINGS.
- O. FOR PAINTING OF NON-GALVANIZED STRUCTURAL STEEL SEE STRUCTURAL STEEL PROJECT SPECIFICATIONS.
- P. WELDING SHALL BE DONE WITH E-70 ELECTRODES, UNLESS OTHERWISE NOTED, CONFORMING TO AWS D1.1.
- Q. ALL SHOP AND FIELD WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 STRUCTURAL WELDING CODE, LATEST EDITION.
- ALL WELDERS SHALL BE AWS-CERTIFIED. SUBMIT WELDER CERTIFICATES TO ARCHITECT/ENGINEER FOR APPROVAL BEFORE ANY SHOP OR FIELD-WELDING IS STARTED.
16. SHORING AND RESHORING:
- A. SHORING AND RESHORING DRAWINGS SHALL BE PREPARED BY A STATE OF FLORIDA REGISTERED SPECIALTY ENGINEER WITH A MINIMUM OF TEN YEARS OF EXPERIENCE IN SHORING AND RESHORING DESIGN AND DETAILING.
- B. SHORING AND RESHORING DRAWINGS SHALL INCLUDE AT LEAST THE FOLLOWING ITEMS:
- 1.) LOCATION, SIZE, TYPE AND CAPACITY OF ALL SHORING.
 - 2.) LOCATION, SIZE, TYPE, AND CAPACITY OF ALL RESHORING.
 - 3.) LOCATION, SIZE, AND TYPE OF ALL BLOCKING, MUD SILLS, TEMPORARY LATERAL BRACING AND OTHER ACCESSORIES REQUIRED TO ADEQUATELY AND SAFELY SUPPORT AND BRACE THE STRUCTURE DURING CONSTRUCTION.
 - 4.) INSTALLATION PROCEDURE, SEQUENCE OF INSTALLATION, LOAD RELIEF AND REMOVAL OF ALL SHORING AND RESHORING.
- C. SHORING AND RESHORING SUBMITTAL FOR APPROVAL SHALL INCLUDE AT LEAST TWO COPIES FOR THE BUILDING DEPARTMENT, ONE FOR THE ENGINEER OF RECORD, ONE FOR THE THRESHOLD INSPECTOR, AND ONE FOR THE ARCHITECT.
- D. DESIGN, DETAIL, AND ERECT FORMS, SHORING AND RESHORING IN COMPLIANCE WITH ACI 347R-04, PROJECT SPECIFICATIONS, AND THESE NOTES, FORMS, SHORING AND RESHORING SHALL BE DESIGNED FOR THE WEIGHT OF THE FLOOR OR ROOF, A CONSTRUCTION LOAD OF 50 PSF, AND FOR THE CUMULATIVE LOADS OF THE SUPPORTED HORIZONTAL CONCRETE MEMBERS. USE A DESIGN FACTOR OF SAFETY OF 3 FOR WOOD SHORES AND 2 FOR METAL SHORES.
- E. THE MAXIMUM SUPERIMPOSED CONSTRUCTION LOAD APPLIED TO FLOORS SUPPORTING SHORES OR RESHORES SHALL NOT EXCEED 75% OF THE DESIGN LIVE LOAD SPECIFIED FOR SLABS (AND JOISTS WHERE APPLICABLE) AND 60% OF THE LIVE LOAD SPECIFIED FOR BEAMS. NO CONSTRUCTION LOAD SHALL BE APPLIED TO ANY MEMBER UNTIL THE CONCRETE IS A MINIMUM OF 14 DAYS OLD AND THE 7 DAY STRENGTH THIS 70% OF THE SPECIFIED 28 DAY STRENGTH.
- F. FORMS MAY BE REMOVED 72 HOURS AFTER CONCRETE POUR PROVIDED THAT CONCRETE STRENGTH IS 70% OF THE SPECIFIED 28 DAY STRENGTH AND NOT LESS THAN 3500 PSI. RESHORE EACH BAY IMMEDIATELY AFTER FORMS ARE STRIPPED AND REMOVED. REMOVAL OF FORMS IS THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. REMOVAL OF FORMS SHALL BE CARRIED OUT IN SUCH A WAY AS TO NOT DAMAGE THE STRUCTURE, INSURE SAFETY AND PREVENT CREEP DEFLECTION OF STRUCTURAL MEMBERS.
17. SHOP DRAWINGS SUBMITTALS:
- I. CONCRETE TEST REPORTS FOR CAST-IN-PLACE CONCRETE AS PER ACI 318-14.
 - II. REINFORCING STEEL SHOP DRAWINGS.
 - III. PREFABRICATED WOOD AND/OR METAL ROOF TRUSSES, ERECTION DRAWINGS, AND DESIGN DATA.
 - IV. STRUCTURAL STEEL SHOP DRAWINGS AND ERECTION DRAWINGS.
 - V. SHOP DRAWINGS REQUIRING ENGINEERING BY A SPECIALTY ENGINEER SHALL COMPLY WITH THE FOLLOWING:
 - I. THE SPECIALTY ENGINEER SHALL BE A FLORIDA REGISTERED PROFESSIONAL.
 - II. THE SPECIALTY ENGINEER SHALL HAVE AT LEAST FIVE YEARS OF SOLID PROFESSIONAL DESIGN EXPERIENCE IN THE DESIGN AND DETAILING OF THE STRUCTURAL COMPONENT AND/OR STRUCTURAL SYSTEM BEING SUBMITTED FOR APPROVAL.
 - III. THE SPECIALTY ENGINEER SHALL BE AN EMPLOYEE OR OFFICER OF A FABRICATOR, AN EMPLOYEE OR OFFICER OF ANOTHER COMPANY SUPPLYING COMPONENTS TO THE FABRICATOR.
 - IV. THE SPECIALTY ENGINEER SHALL BE AN AID FOR FIELD PLACEMENT AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE CERTAIN THAT ALL CONSTRUCTION IS IN FULL AGREEMENT WITH THE LATEST STRUCTURAL DRAWINGS.
 - VI. THE CONTRACTOR SHALL SUPPLY THE ENGINEER THREE COPIES OF SHOP DRAWINGS A MINIMUM OF ONE WEEK PRIOR TO PLACEMENT. THE REVIEW OF SHOP DRAWINGS BY THE ENGINEER IS ONLY FOR GENERAL COMPLIANCE WITH THE STRUCTURAL DRAWINGS AND SPECIFICATIONS. THE REVIEW DOES NOT GUARANTEE IN ANY WAY THAT THE SHOP DRAWINGS ARE CORRECT NOR DOES IT INFER THAT THEY SUPERSEDE THE STRUCTURAL DRAWINGS. REVIEW WILL NOT INCLUDE CHECK OF DIMENSIONS, LENGTHS OR QUANTITIES.
 - VII. THESE STRUCTURAL DRAWINGS SHALL NOT BE USED TO PRODUCE SHOP DRAWINGS WITHOUT PRIOR EXPRESSED WRITTEN APPROVAL FROM THE STRUCTURE ENGINEER OF RECORD.
 - VIII. SHOP DRAWINGS RE-SUBMITTED FOR APPROVAL SHALL BE CLEARLY CLOUDED AND NOTED. RE-REVIEW SHALL BE LIMITED TO THOSE ITEMS WHICH CAUSED THE RE-SUBMITTAL.
 - IX. DEFERRAL OF ANY SUBMITTAL ITEMS SHALL HAVE THE PRIOR APPROVAL OF THE BUILDING OFFICIAL. THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE SHALL LIST THE DEFERRED SUBMITTALS ON THE CONSTRUCTION DOCUMENTS FOR REVIEW BY THE BUILDING OFFICIAL. DOCUMENTS FOR DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE WHO SHALL REVIEW THEM AND FORWARD THEM TO THE BUILDING OFFICIAL WITH A NOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING. THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

STRUCTURAL INDEX

DWGS. No	DESCRIPTION
S-0	STRUCTURAL NOTES & INDEX
S-1	FOUNDATION PLAN
S-2	SECOND FLOOR FRAMING PLAN
S-3	ROOF FRAMING PLAN
S-4	SCHEDULES & TYPICAL DETAILS
S-5	TYPICAL DETAILS
S-6	SECTIONS
S-7	SECTIONS
S-8	WINDOWS & DOORS PRESSURES ELEVATIONS
S-9	WINDOWS & DOORS PRESSURES ELEVATIONS

TERMITE TREATMENTS SOIL:

CONTRACTOR MUST PROVIDE TERMITE TREATMENT & FUMIGATOR CERTIFICATION REPORT. TERMITE TREATMENT OF SOILS UNDER SLAB ON GRADE SHALL BE PERFORMED BEFORE POURING SLAB. TERMITE PROTECTION SHALL BE PROVIDED BY REGISTERED TERMICIDES OR OTHER APPROVED METHODS OF TERMITE PROTECTION LABELED AS A PREVENTIVE TREATMENT TO NEW CONSTRUCTION.

STRUCTURAL NOTES & INDEX

REVIEWS									

FIDANZA'S FAMILY HOUSE

11041 SW 77TH AVE, PINECREST, FL 33156

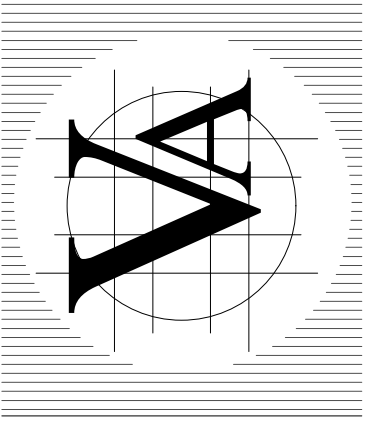
Corporation Licence
#AA0003589

Architectural Seal

JORGE L VILLALVENCIO
NC. AR012110

VILLA & ASSOCIATES INC.
ARCHITECTURE - PLANNING - INTERIOR DESIGN
5801 SW 69 AVENUE - MIAMI, FLORIDA 33155
TEL. 305-613-0865 - E-Mail: jvillalvencio@gmail.com

CONSULTANT : ARCHI-TEK STUDIO CORP.
TEL. 305-799-8016 - E-Mail: maguilar@architekstudio.com



DATE:

SCALE:
AS
SHOWN

PROJECT NO:

DRAWING NO :

S-0

ALAYM AGUILAR, PROFESSIONAL ENGINEER,
STATE OF FLORIDA, LICENSE NO. 92154
THIS ITEM HAS BEEN DIGITALLY SIGNED
AND SEALED BY ALAYM AGUILAR, PE, ON
DATE THAT APPEAR IN THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE
NOT CONSIDERED SIGNED AND SEALED AND
THE SIGNATURE MUST BE VERIFIED ON ANY
ELECTRONIC COPIES.