

STRUCTURAL NOTES

1. GENERAL
- ALL STRUCTURES HAVE BEEN DESIGNED IN ACCORDANCE WITH, AND SHALL COMPLY WITH, THE FLORIDA BUILDING CODE (2001 EDITION), AND ALL OTHER CODES THEREIN REFERENCED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL EXISTING CONDITIONS, INCLUDING DIMENSIONS, PERTAINING TO THE PROJECT, AND FOR PROVIDING IMMEDIATE NOTICE TO THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES FOUND BETWEEN THOSE AND THE INFORMATION PRESENTED WITHIN THE DRAWINGS. FIELD VERIFICATION SHALL BE PERFORMED PRIOR TO FABRICATION OF ANY STRUCTURAL ELEMENTS (CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REMEDIAL WORK, INCLUDING DESIGN FEES, INVOLVED IN THE CORRECTION OF ANY CONDITIONS RESULTING FROM LACK OF SUCH VERIFICATION). THE STRUCTURE WAS DESIGNED TO BE SELF-SUPPORTING AND STABLE FOLLOWING INSTALLATION OF ALL COMPONENTS AS INDICATED ON THE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE METHOD AND SEQUENCE OF ERECTION PROCEDURES (INCLUDING IMPLEMENTATION OF TEMPORARY SHORING, BRACING, ETC.) AND TO ENSURE SAFETY THROUGHOUT THE PERIOD OF CONSTRUCTION. THE CONTRACTOR SHALL USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS TO COORDINATE LOCATION OF DERESSED SLABS, SLOPES, DRAINS, OUTLETS, RECESSES, OPENINGS, REGLETS, BOLT SETTINGS, SLEEVES, DIMENSIONS, ETC.
- “DRAWINGS SHALL NOT BE SCALED.”
- DISCREPANCIES BETWEEN INFORMATION PRESENTED WITHIN PROJECT SPECIFICATIONS AND THAT WITHIN STRUCTURAL NOTES ON PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BY THE CONTRACTOR PRIOR TO PRESENTING HIS OR HER BID. IF SUCH A DISCREPANCY IS DISCOVERED SUBSEQUENT TO BIDDING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THE OPTION SUBSEQUENTLY SELECTED BY THE ENGINEER AT NO ADDITIONAL COST.
- THE CONTRACTOR AGREES TO HOLD THE OWNER, ARCHITECT, ENGINEER, AND/OR ANY OF THEIR EMPLOYEES OR AGENTS, HARMLESS FROM ANY AND ALL DAMAGE AND CLAIMS WHICH MAY ARISE BY A REASON OF ANY NEGLIGENCE ON THE PART OF THE CONTRACTOR, OR ANY OF HIS SUBCONTRACTORS, OR ANY MATERIAL AND EQUIPMENT SUPPLIERS, AND/OR ANY OF THEIR EMPLOYEES OR AGENTS, IN THE PERFORMANCE OF THIS CONTRACT. IN CASE ANY ACTION IS BROUGHT AGAINST THE OWNER, OR ARCHITECT, OR ENGINEER, OR ANY OF THEIR EMPLOYEES OR AGENTS, CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR DEFENSE THEREOF, TO THE FULL SATISFACTION SATISFACTION OF THE LATTER PARTY.
2. DESIGN LOADS
- THE FOLLOWING SUPERIMPOSED LOADS WERE USED:
- ROOF: DEAD LOAD = 25 PSF (flat) / 30PSF (sloped)
- LIVE LOAD = 30 PSF (flat) / 20 PSF (sloped)
- WIND LOADS AS PER ASCE 7-05: DESIGN WIND SPEED = 105 MPH
- IMPORTANCE FACTOR = 1.00
- EXPOSURE CATEGORY = C
- DIRECTIONALITY FACTOR = 0.85
- MEAN ROOF HEIGHT = 16 FT
3. FOUNDATIONS AND SOIL PREPARATION
- EXISTING UNDERLYING SOILS WERE ASSUMED TO CONSIST OF SAND WITH LIMESTONE AND OF LOOSELY CEMENTED LIMESTONE. ALLOWABLE SOIL BEARING CAPACITY HAS BEEN ASSUMED TO BE 2,000 PSF.
- OWNER SHALL BE RESPONSIBLE FOR RETAINING SERVICES OF A GEOTECHNICAL ENGINEER TO PROVIDE SOIL TESTING AND FOUNDATION RECOMMENDATIONS PRIOR TO OBTAINING THE PERMIT.
- GENERAL CONTRACTOR SHALL PERFORM ALL SITE PREPARATION AND EXCAVATION WORK IN ACCORDANCE WITH THE RECOMMENDATIONS PRESENTED IN THE SUBSURFACE EXPLORATION REPORT PREPARED BY SAID ENGINEER.
- STRIP FOOTING REINFORCEMENT SHALL BE CONTINUOUS THROUGH PAD FOOTINGS.
- CORNER BARS (MIN. LAP SPLICE OF 48 BAR DIAMETERS) SHALL BE PROVIDED AT ALL STRIP FOOTING CORNERS AND INTERSECTIONS, UNLESS SPECIFICALLY NOTED OTHERWISE. FOOTINGS SHALL BE CENTERED ON WALLS AND COLUMNS.
- COMPACTED FILL SHALL EXTEND A MINIMUM OF 5 FEET PAST THE FOOTPRINT OF THE BUILDING.
4. DEWATERING
- THE CONTRACTOR SHALL REMOVE ALL WATER FROM FORMWORK/EXCAVATIONS, FOLLOWING DEWATERING AND PRIOR TO PLACEMENT OF CONCRETE. FORMS AND REINFORCEMENT MUST BE RINSED OFF AND CLEANED AS WELL, OF DELETERIOUS/ LOOSE MATERIAL REMOVED FROM EXCAVATIONS.
5. EXCAVATIONS
- EXCAVATIONS FOR UTILITIES SHALL BE COMPLETED PRIOR TO OR CONCURRENTLY WITH EXCAVATIONS FOR NEW STRUCTURES. LOCATION OF ALL UTILITIES SHALL BE COORDINATED WITH STRUCTURAL DRAWINGS. POTENTIAL CONFLICTS/UNDERMINING SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER PRIOR TO COMMENCEMENT OF WORK.
6. SLABS ON FILL
- FILL AND BACKFILL TO BE COMPACTED TO 95% OF ITS MODIFIED PROCTOR DENSITY (ASTM D-1557). THICKNESS OF COMPACTION LAYERS (LOOSE MATERIAL) SHALL NOT EXCEED 12". BACKFILL MATERIAL SHALL BE APPROVED BY GEOTECHNICAL ENGINEER. PROVIDE 10-MIL, POLYETHYLENE VAPOR BARRIER BELOW ALL SLABS ON FILL (LAP SHEETS MINIMUM OF 6' AND SEAL WITH MANUFACTURER'S SPECIFIED TAPE TAPE ALL PENETRATIONS).
7. PROTECTION AGAINST TERMITES
- PROVIDE SOIL TREATMENT FOR PROTECTION AGAINST TERMITES AS PER FBC 1816.17 PERFORMED BY A LICENSED PEST CONTROL COMPANY. FOLLOWING COMPLETION OF WORK, THE COMPANY SHALL SUBMIT TO THE BUILDING OFFICIAL A LETTER STATING: "THE BUILDING HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. TREATMENT IS IN ACCORDANCE WITH THE RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES".
8. CONCRETE
- CAST-IN-PLACE CONCRETE TO ATTAIN THE MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI.
- AGGREGATES TO BE CLEAN AND WELL GRADED WITH A MAXIMUM SIZE OF 1".
- CONCRETE SLUMP SHALL BE 3" MINIMUM TO 6" MAXIMUM. MAXIMUM TIME ALLOWED FROM BATCHING TO PLACEMENT OF CONCRETE SHALL NOT BE ALLOWED TO EXCEED 15 HOURS.
- MINOR CRACKS IN CONCRETE ARE TO BE ANTICIPATED. CONTRACTOR SHALL BE RESPONSIBLE FOR FILLING-IN AND SEALING OF ALL CRACKS. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING INDICATING LAYOUT AND LOCATION OF CRACKS AS WELL AS THE PREFERRED REPAIR METHOD (INCLUDING SPECIFICATIONS OF ALL MATERIALS).
9. CONCRETE TESTING
- AN INDEPENDENT TESTING LABORATORY, RETAINED BY THE OWNER, SHALL PERFORM THE FOLLOWING TESTS ON CAST-IN-PLACE CONCRETE:
- ASTM C 143 "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE"
- ASTM C 39 "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS".

- ONE TEST SHALL BE PERFORMED ON EACH CLASS OF CONCRETE PER EVERY 50 CUBIC YARDS, OR FRACTION THEREOF, PLACED PER DAY, PER EACH TYPE OF CONCRETE MIX. A SET OF FIVE CYLINDERS SHALL BE TAKEN, THE SAMPLES SHALL BE TESTED AT THE AGE OF 3 DAYS (ONE), 7 DAYS (ONE), 28 DAYS (TWO) AND 56 DAYS (REMAINING SAMPLE SHALL BE TESTED ONLY IF 28-DAY OLD CONCRETE FAILED TO ATTAIN ITS SPECIFIED DESIGN STRENGTH).
10. REINFORCING STEEL
- SHALL BE NEW HIGH STRENGTH STEEL DEFORMED AS PER ASTM A 305, AND CONFORMING TO ASTM A 615, GRADE 60 (OR ASTM A 106 GRADE 60 WHERE WELDING IS ANTICIPATED). ALL REINFORCEMENT SHALL BE FREE OF SCALE, RUST OR OIL. REINFORCING STEEL SHALL BE DETAILED AND FABRICATED IN ACCORDANCE WITH "MANUAL OF STANDARD PRACTICE OF DETAILING REINFORCING CONCRETE STRUCTURES" AND THE A.C.I. WELDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE. ACI 318, LATEST EDITION. MECHANICAL OR WELDED SPLICES SHALL DEVELOP A MINIMUM OF 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF REINFORCEMENT.
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| ** REQUIRED CLEAR CONCRETE COVER TO REINFORCEMENT ** | | | |
| | BOTTOM | TOP | SIDES |
| FOOTINGS | 3" | 2" | 3" |
| BEAMS, WALLS, COLUMNS | 1.5" | 1.5" | 1.5" |
| INTERIOR SLABS-ON-GRADE | - | 0.75" | - |
| EXTERIOR SLABS-ON-GRADE | - | 1.5" | - |
- ALL REINFORCEMENT SHALL BE SUPPORTED ON CHAIRS (SLAB-ON-GRADE, FOOTING OR FILE CAP REINFORCEMENT MAY BE SUPPORTED ON CONCRETE BRICKS), PROVIDE FULL TENSION SPLICE AT ALL REINFORCEMENT NOTED ON DRAWINGS AS CONTINUOUS.
11. WELDED WIRE FABRIC
- SHALL CONFORM TO ASTM A 185 AND BE FREE OF SCALE, RUST OR OIL. SPLICE SHEETS ONE-AND-A-HALF SPACE LENGTHS (MINIMUM).
12. PENETRATIONS
- UNLESS CLEARLY SHOWN ON STRUCTURAL DRAWINGS, NO PENETRATIONS SHALL BE MADE IN ANY STRUCTURAL MEMBER WITHOUT A PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO IDENTIFY SUCH PENETRATIONS BASED ON INFORMATION PROVIDED BY ALL SUBCONTRACTORS AND TO SUBMIT DETAILED AND DIMENSIONED FLOOR PLANS TO THE STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY LABOR AND MATERIALS ASSOCIATED WITH ADDITIONAL REFORCEMENT OF STRUCTURAL MEMBERS RESULTING FROM INTRODUCTION OF SUCH PENETRATIONS.
13. MASONRY
- UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS OR SPECIFIED WITHIN THE FLORIDA BUILDING CODE, ALL MASONRY CONSTRUCTION SHALL CONFORM TO REQUIREMENTS OF ACI 530-95 AND ACI 530J-95.
- A. ALL CONCRETE BLOCK SHALL CONFORM TO ASTM C 90 WITH A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 1900 PSI (FRISM STRENGTH OF MASONRY WALL 1500 PSI). MORTAR SHALL CONFORM TO ASTM C 270 TYPE M, WITH A MIN. 28-DAY COMPRESSIVE STRENGTH OF 2500 PSI (USE PORTLAND TYPE CEMENT). GROUT SHALL CONFORM TO ASTM C 416 WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2000 PSI. GROUT SLUMP SHALL BE BETWEEN 8 AND 10 INCHES.
- B. ALTERNATE HORIZONTAL JOINTS WITHIN MASONRY WALLS SHALL BE REINFORCED WITH 3 GAUGE PRE-FABRICATED DEFORMED STEEL REINFORCEMENT (DUR-O-WALL OR APPROVED SUBSTITUTE - LADDER TYPE (REINFORCED MASONRY) OR TRUSS TYPE (UNREINFORCED MASONRY)), GALVANIZED AS PER ACI 530J-95 2.4.3.2.
- C. ALL VERTICAL REINFORCEMENT, AS SPECIFIED ON PLANS, SHALL BE PLACED IN FULLY GROUTED CELLS. DOUGS SHALL BE PROVIDED TO ENSURE CONTINUITY OF REINFORCEMENT AT THE STRUCTURE ABOVE AND BELOW. ALL LAPS SHALL BE SPLICED MINIMUM 48 BAR DIAMETERS. ADDITIONAL VERTICAL WALL REINFORCEMENT SHALL BE PROVIDED AT ALL WALL ENDS, CORNERS, INTERSECTIONS AND AT ALL WALL OPENINGS NOT BOUND BY CONCRETE COLUMNS. PROVIDE CLEANOUT HOLES IN REINFORCED WALL CELLS AT BOTTOM OF EACH FOUR CLEAN CELLS FREE OF MORTAR AND DEBRIS. TIE VERTICAL REINFORCEMENT. MAXIMUM LIFT OF EACH FOUR SHALL NOT EXCEED 4 FEET WITH A MINIMUM OF ONE HOUR INTERVAL BETWEEN SUBSEQUENT LIFTS. MAXIMUM VERTICAL DROP FOR GROUTING SHALL NOT EXCEED 12 FEET. GROUT SHALL BE CONSOLIDATED BETWEEN LIFTS BY RODDING OR MECHANICAL VIBRATION. VERTICAL REINFORCEMENT WITHIN TERMINATING WALLS SHALL EXTEND TO 1 1/2' BELOW TOP OF CONCRETE CAP/TIE BEAM ABOVE.
- D. PROVIDE FULL MORTAR BED AT THE FIRST COURSE OF BLOCK WALLS (ABOVE SUPPORTING SLAB, BEAM OR FOOTING) AND AT ALL COURSES OF PIERS, COLUMNS AND PILASTERS. MORTAR ALL FACE SHELLS AND HEAD JOINTS (MATCHING THE WIDTH OF FACE SHELL) OF REMAINING COURSES OF BLOCK WALLS. PROVIDE MORTAR AT ALL WEBS ADJACENT TO GROUTED CELLS.
- E. ALL MASONRY WALLS SHALL BE PLACED IN RUNNING BOND WITH 50 PERCENT OVERLAP BETWEEN COURSES.
- F. UNLESS SPECIFICALLY NOTED OTHERWISE, ALL PARTIAL-HEIGHT MASONRY WALLS (WALLS NOT TERMINATING ON THE UNDERSIDE OF SLAB OR BEAM) SHALL BE FINISHED WITH AN 8'X8' CONCRETE CAP REINFORCED WITH (1/4 E.F. (CONT.). VERTICAL REINFORCEMENT WITHIN SUCH WALLS SHALL EXTEND TO 1 1/2' BELOW TOP OF CONCRETE CAP.
- G. A FLORIDA REGISTERED ARCHITECT OR PROFESSIONAL ENGINEER RETAINED BY THE OWNER SHALL FURNISH INSPECTION OF ALL REINFORCED MASONRY (INSPECTION OF ALL REINFORCED CELLS PRIOR TO GROUTING). IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE EARLY NOTIFICATION OF THE IMPENDING INSPECTION TO THE ARCHITECT/ENGINEER.
14. CONCRETE TIE COLUMNS
- TIE COLUMNS SHALL BE CAST AGAINST PRE-ERECTED MASONRY WALLS. HORIZONTAL WALL REINFORCEMENT SHALL EXTEND 4' INTO CONCRETE TIE COLUMNS, UNLESS SHOWN OTHERWISE. ALL TIE COLUMNS SHALL EXTEND TO THE UNDERSIDE OF SLAB/ BEAM OF THE FLOOR ABOVE (DO NOT TERMINATE AT INTERMEDIATE CONCRETE BEAMS OR TIE BEAMS AND SPLICE VERTICAL REINFORCEMENT 62 BAR DIAMETERS IF DISCONTINUED) WITH VERTICAL REINFORCEMENT CONTINUOUS THROUGH OR DEVELOPED INTO THE SLAB/BEAM.
15. CONCRETE TIE BEAMS
- TIE BEAMS SHALL BE CAST ON TOP OF PRE-ERECTED MASONRY WALLS. CORNER BARS SHALL BE PROVIDED AT ALL CORNERS AND INTERSECTIONS OF TIE BEAMS (MINIMUM LAP SPLICE 48 BAR DIA.). ALL LONGITUDINAL TIE BEAM REINFORCEMENT SHALL BE CONTINUOUS THRU INTERMEDIATE TIE COLUMNS (MINIMUM SPLICE 62 BAR DIAMETERS) OR HOOK AT FAR FACE OF END TIE COLUMNS. WHERE TIE BEAM TERMINATES AT CONCRETE COLUMN OR WALL, PROVIDE ONE #6 BAR X 4'-6" BETWEEN EACH PAIR OF LONGITUDINAL BARS (EPOXY 4.5' INTO CONCRETE AND ROUGHEN FACE OF CONCRETE TO 1/4" AMPLITUDE PRIOR TO PLACEMENT OF CONCRETE). WHERE REQUIRED, BOTTOM OF TIE BEAM MAY BE DROPPED TO SERVE AS A LINTEL WITH ADDITIONAL #5 HORIZONTAL BARS AT 12" C/C VERTICAL SPACING PROVIDED AT EACH FACE OF THE BEAM AND #3 @ 12" DOUBLE U-BAR STIRRUPS (MIN. SPLICE 12").
16. SILLS
- UNLESS NOTED OTHERWISE ON THE DRAWINGS, BOTTOM OF EACH OPENING WITHIN MASONRY WALL SHALL RECEIVE AN 8'X8' CAST-IN-PLACE CONCRETE SILL REINFORCED WITH (1/4 E.F. AT MID-DEPTH, EACH END OF SILL AT OPENINGS EXCEEDING 5'-0" IN WIDTH SHALL HAVE A (1/8" X 2'-6" CENTER DOWEL (EPOXY 4' INTO ADJACENT MASONRY OR CONCRETE).

17. STRUCTURAL STEEL
- MISCELLANEOUS STEEL MEMBERS SHALL CONFORM TO ASTM A 36. STAINLESS STEEL MEMBERS, IF SPECIFIED, SHALL CONFORM TO ASTM A 666 TYPE 304. STRUCTURAL TUBE SECTIONS SHALL CONFORM TO ASTM A 500, GRADE 'B' (FY= 46 KSI). STRUCTURAL PIPE SECTIONS SHALL CONFORM TO ASTM A 53, GRADE 'B' (FY= 35 KSI). BOLTS SHALL CONFORM TO ASTM A 325 OR ASTM A490. ANCHOR BOLTS SHALL CONFORM TO ASTM A 307 OR ASTM A 36 (THREADED ROD) (U.O.N.). ALL STEEL ASSEMBLIES REMAINING EXPOSED TO THE ELEMENTS THROUGHOUT THE LIFE OF THE STRUCTURE SHALL BE HOT-DIP GALVANIZED FOLLOWING FABRICATION (FASTENERS SHALL BE MECHANICALLY GALVANIZED). ALL FIELD WEBS AT GALVANIZED STEEL MEMBERS TO BE COATED WITH ZINC PAINT (ASTM A1780).
18. WELDING
- ALL WELDING TO BE DONE BY CERTIFIED WELDERS HOLDING CURRENT WELDING CERTIFICATES. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AWS. 'STRUCTURAL WELDING CODE - STEEL' (ANSI/AWS D11).
19. DETAILS AND SECTIONS
- ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL (WHETHER OR NOT NOTED AS SUCH) AND SHALL BE ASSUMED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, UNLESS A DIFFERENT DETAIL, OR A SECTION, IS SHOWN.
20. RAILINGS/CANOPIES/TRELLISES ETC.
- FRAMING OF THE SPECIALTY ENGINEER ITEMS AS WELL AS THEIR CONNECTIONS TO THE STRUCTURE SHALL BE DESIGNED FOR LOADS AS PER FLORIDA BUILDING CODE AND BE BASED ON LAYOUT AND CONFIGURATION AS SHOWN ON ARCHITECTURAL DRAWINGS. SHOP DRAWING SUBMITTAL, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA (INCLUDING CALCULATIONS) SHALL INCLUDE PLANS AND DETAILS CLEARLY INDICATING DESIGN LOADS, MATERIALS USED, FINISHES, FASTENERS AS WELL AS LOADS IMPOSED BY THE SPECIALTY ENGINEER ITEM ON THE STRUCTURE.
21. WINDOWS/DOORS
- WINDOWS/DOORS WITH CONNECTIONS TO THE STRUCTURE SHALL BE SELECTED WITH A PRODUCT APPROVAL CERTIFICATE AS BASED ON LAYOUT AND CONFIGURATION SHOWN ON ARCHITECTURAL DRAWINGS.
22. SHEAR STUDS
- SHALL BE TYPE 'B' HEADED STUDS WITH TENSILE STRENGTH OF 60 KSI OF STEEL. CORROSION RESISTANT TO 108. WELDING OF STUDS SHALL BE IN ACCORDANCE WITH ANSI/AWS D11 'STRUCTURAL WELDING CODE - STEEL' SECTION T - STUD WELDING.
23. WOOD
- STRUCTURAL WOOD MEMBERS NOT EXPOSED TO THE ELEMENTS SHALL BE OF SOUTHERN PINE NO2 OR BETTER, AS PER NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION' 1935 EDITION. WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PROTECTED OR PRESSURE TREATED IN ACCORDANCE WITH F.B.C.). ALL BOLTED CONNECTIONS SHALL UTILIZE A307 GALVANIZED STEEL BOLTS WITH WASHERS. FABRICATION, ERECTION AND CONNECTIONS SHALL BE AS PER RECOMMENDATIONS OF THE A.I.T.C. (AMERICAN INSTITUTE OF TIMBER CONSTRUCTION), LATEST EDITION.
24. WOOD FRAMING CONNECTORS AND FASTENERS
- ALL CONNECTORS AND FASTENERS SHALL BE GALVANIZED AND OF THE TYPE AND MANUFACTURER AS INDICATED ON THE DRAWINGS. ALTERNATIVE CONNECTORS MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION (CONTRACTOR SHALL SUBMIT COPIES OF MIAMI-DADE PRODUCT APPROVAL SHEETS FOR REVIEW).
25. PLYWOOD SHEATHING
- SHALL BE EXTERIOR GRADE, CDX STRUCTURAL PLYWOOD AS RATED BY THE A.P.A., UNLESS NOTED OTHERWISE ON PLANS. ADJACENT ROWS OF SHEATHING SHALL BE INSTALLED STAGGERED 50 PERCENT.
26. PRE-FABRICATED WOOD TRUSSES (SHOP DRAWINGS REQUIRED)
- WOOD TRUSSES AND, WHERE REQUIRED, ASSOCIATED WOOD FRAMING (SUCH AS STRUCTURAL FASCIAS, BRACING ETC.) SHALL BE DESIGNED BY THE MANUFACTURER'S SPECIALTY ENGINEER FOLLOWING ROOF LAYOUT SHOWN ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. DESIGN OF TRUSSES SHALL FOLLOW METHODOLOGY OUTLINED IN SECTION C6.2 OF THE ASCE 7/02. WIND PRESSURE ON TRUSSES SHALL BE OBTAINED BY CONSIDERING AS 'COMPONENTS AND CLADDING'. SHOP DRAWING SUBMITTAL SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. PLANS SHALL INDICATE LINES OF ALL PERMANENT BRACING REQUIRED BY THE TRUSS SYSTEM (AT SPACES AS DEEP AS 10 FEET) AS WELL AS ALL TRUSS-TO-TRUSS AND TRUSS-TO-ASSOCIATED FRAMING CONNECTORS (INCLUDING DESIGN LOADS, RATED CAPACITIES AND MIAMI-DADE NOTICE OF ACCEPTANCE NUMBERS) AND ALL INDIVIDUALLY DESIGNED PLATE ASSEMBLIES USED. AT ALL TRUSSES WITHOUT BOTTOM CHORD SHEATHING, CONTRACTOR SHALL PROVIDE LINES OF PERMANENT CONTINUOUS HORIZONTAL 2X6 BRACING LOCATED AT PANEL POINTS AT A MAXIMUM SPACING OF 10'-0" C/C AND FASTENED TO EACH TRUSS WITH (2) 12d NAILS. ALL TRUSS CONNECTORS AND FASTENERS SHALL BE GALVANIZED. LATERAL BRACING OF TRUSS WEB MEMBERS FAILING IN BUCKLING, WHERE REQUIRED, SHALL BE ACHIEVED THROUGH SCABBING. BRACING DETAILED AS CROSS-MEMBERS BETWEEN TRUSSES WILL NOT BE ACCEPTED (ADDING SECTIONS SHALL BE CLEARLY DETAILED ON INDIVIDUAL TRUSS DRAWINGS). SOLID 2X6 WOOD BLOCKING SHALL BE PROVIDED AT ALL VALLEYS AND RIDGES NOT SUPPORTED BY TRUSS BELOW. PLYWOOD SHEATHING EACH SIDE SHALL BE NAILED TO BLOCKING WITH 10d NAILS AT 6" C/C. AT HIS/HER OWN EXPENSE, THE CONTRACTOR SHALL RETAIN SERVICES OF A PROFESSIONAL ENGINEER FOR INSPECTION OF ERECTION OF ALL TRUSSES IN EXCESS OF 35 FEET IN LENGTH OR 6 FEET IN DEPTH (FOLLOWING COMPLETION OF THE ERECTION PROCESS). THE ENGINEER SHALL ISSUE A SIGNED AND SEALED LETTER STATING THAT SUCH TRUSSES WERE INSTALLED IN ACCORDANCE WITH THE APPROVED DRAWINGS AND THAT NO DAMAGE TO TRUSSES WAS DONE DURING THE ERECTION PROCESS). ALLOWABLE STRESS INCREASE ON PLATE CONNECTORS SHALL BE 1/2 (STEEL PLATE) AND 1/3 (WOOD GRIP). REFER TO ARCHITECTURAL DRAWINGS FOR INFORMATION ON VAULTED CEILINGS AFFECTING BOTTOM PORTIONS OF TRUSSES.
27. EXPANSION ANCHORS
- THE CONTRACTOR SHALL USE ONE OF THE FOLLOWING: POWER-STUD BY 'POWERS/RAWL', KWIK-CON II BY 'HILTI', TRIBOLT WEDGE BY 'RAMSET/REDHEAD', OR A SUBSTITUTE APPROVED BY ENGINEER OF RECORD. INSTALLATION OF ANCHORS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS.
28. SLEEVE ANCHORS
- THE CONTRACTOR SHALL USE ONE OF THE FOLLOWING: LOK/BOLT BY 'POWERS/RAWL', HLC BY 'HILTI', DYNABOLT BY 'RAMSET/REDHEAD', OR A SUBSTITUTE APPROVED BY ENGINEER OF RECORD. INSTALLATION OF ANCHORS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS.
29. EPOXY ANCHORS
- THE CONTRACTOR SHALL USE A TWO-COMPONENT EPOXY BASED PRODUCT SUPPLIED AS A SIDE-BY-SIDE CARTRIDGE SYSTEM AND DISPENSED THROUGH A STATIC MIXING NOZZLE. THE CONTRACTOR MAY USE ONE OF THE FOLLOWING: POWER-FAST BY 'POWERS/RAWL', HSE 2421 BY 'HILTI', EPCON BY 'RAMSET/REDHEAD', ALLIED GOLD A-1000 BY 'ALLIED FASTENER AND TOOL', ET BY 'SIMPSON' OR A SUBSTITUTE

- APPROVED BY ENGINEER OF RECORD. INSTALLATION OF DOWELS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS. ALL HOLES SHOULD BE BRUSHED WITH A NYLON BRUSH AND BLOWN WITH COMPRESSED AIR. ALL HOLES MUST BE OBSERVED BY THE PROJECT INSPECTOR PRIOR TO INSTALLATION OF EPOXY.
30. SCREW ANCHORS
- THE CONTRACTOR SHALL USE ONE OF THE FOLLOWING: TAPPER BY 'POWERS/RAWL', KWIK-CON BY 'HILTI', TAPCON BY 'RAMSET/REDHEAD' OR AN ENGINEER APPROVED SUBSTITUTE. INSTALLATION OF ANCHORS SHALL FOLLOW MANUFACTURER'S SPECIFICATIONS.
31. DELEGATED/SPECIALTY ENGINEER SUBMITTALS
- SUBMITTALS SHALL BE PREPARED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE AND THE FLORIDA STATUTES CHAPTER 61G5, ENGINEER'S NAME, LICENSE NUMBER AND BUSINESS ADDRESS SHAL BE LEGIBLY INDICATED ON ALL DOCUMENTS. SPECIALTY ENGINEER SHALL BE SOLELY RESPONSIBLE FOR DIRECT CONTACT WITH THE BUILDING DEPARTMENT WHILE OBTAINING BUILDING DEPARTMENT'S APPROVAL FOR HIS/HER PORTION OF WORK (INCLUDING PROVIDING RESPONSES TO REVIEW COMMENTS, SUPPLYING ADDITIONAL CALCULATIONS AND PLANS, ATTENDING MEETINGS, ETC.). DESIGN AND DETAILING OF CONNECTIONS BETWEEN ENGINEERED ITEM AND THE STRUCTURE SHALL BE BASED ON INFORMATION OBTAINED FROM STRUCTURAL DRAWINGS AND BE PRECEDED BY THE SPECIALTY ENGINEER'S PRIOR REVIEW OF THE CAPACITY OF THE PORTION OF STRUCTURE TO WHICH THE ITEM IS BEING FASTENED. MODIFICATIONS TO THE STRUCTURE RESULTING FROM REACTIONS IMPOSED AT THE CONNECTION POINTS (GROUTING OF MASONRY, ADDITIONAL BRACING OF STRUCTURAL MEMBERS, ADDITIONAL CONCRETE TIE COLUMNS WITHIN MASONRY WALLS, ETC.) SHALL BE DESIGNED AND CLEARLY DETAILED BY THE DELEGATED ENGINEER ON THE SHOP DRAWINGS AND SUBMITTED FOR REVIEW AS PART OF THE SHOP DRAWINGS. CONTRACTOR SHALL ASSUME ALL COSTS OF ADDITIONAL LABOR AND MATERIALS ASSOCIATED WITH IMPLEMENTATION OF SUCH MODIFICATIONS (IF MODIFICATIONS ARE NOT DETAILED BY THE DELEGATED ENGINEER ON HIS/HER DRAWINGS AND ARE TO BE PERFORMED BY THE ENGINEER OF RECORD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL WORK PERFORMED BY THE ENGINEER OF RECORD ON AN HOURLY CHARGE BASIS).
32. SHOP DRAWINGS
- SHOP DRAWINGS SHALL BE REVIEWED FOR COMPLIANCE WITH CONTRACT DOCUMENTS, CONSTRUCTION METHODS, DIMENSIONING AND OTHER TRADE REQUIREMENTS BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. DRAWINGS WITHOUT CONTRACTOR'S APPROVAL STAMP SHALL BE RETURNED WITHOUT ENGINEER'S REVIEW. IN CASES OF A CONFLICT, INFORMATION PRESENTED ON STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THAT WITHIN SHOP DRAWINGS, UNLESS SPECIFICALLY ADDRESSED BY THE ENGINEER IN WRITING. THROUGH THE PROCESS OF A CURSORY REVIEW, ENGINEER ASSUMES NO RESPONSIBILITY FOR DIMENSIONS, QUANTITIES, ERRORS OR OMISSIONS. ANY ERRORS OR OMISSIONS IRRESPECTIVE OF ENGINEER'S COMMENTS OR DURATION OF THE REVIEW SHALL BE THE RESPONSIBILITY OF AND MUST BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL SERVICES CHARGE EVEN IF SUCH WORK WAS DONE IN ACCORDANCE WITH THE SHOP DRAWINGS. THE ENGINEER RESERVES A TWO WEEK SHOP DRAWING REVIEW TIME (FROM THE DATE OF RECEIPT) IN CASES WHERE THE VOLUME OF SUBMITTED SHOP DRAWINGS IS VIEWED AS EXCESSIVE. THE ENGINEER RESERVES THE RIGHT TO NOTIFY THE OWNER, ARCHITECT AND THE CONTRACTOR OF ADDITIONAL TIME REQUIRED TO PERFORM A QUALITY REVIEW. THE NUMBER OF SETS WITHIN EACH INDIVIDUAL SHOP DRAWING SUBMITTAL SHALL BE LIMITED TO BETWEEN TWO AND FIVE WITH THE ENGINEER RESERVING THE RIGHT TO RETAIN A SINGLE COPY FOR HIS/HER RECORDS.
32. SUPPLEMENTAL SKETCHES/DRAWINGS
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FORWARD A COPY OF ALL CORRESPONDENCE AFFECTING THE STRUCTURE TO THE PROJECT'S INSPECTOR THROUGHOUT THE DURATION OF THE CONSTRUCTION.
33. REDESIGN/REVISIONS
- ANY REDESIGN/REVISIONS TO THE STRUCTURE AND DRAWINGS DUE TO FACILITATING OF CONSTRUCTION OR DUE TO CONTRACTOR'S PREFERENCES IN CONSTRUCTION SEQUENCE SHALL BE CONSIDERED AS ADDITIONAL SERVICES AND SHALL BE BILLED TO THE CONTRACTOR AT AN HOURLY RATE BASIS.
34. REQUESTS FOR INFORMATION
- ALL REQUESTS FOR INFORMATION SHALL BE COMMUNICATED BY THE CONTRACTOR IN WRITING AND FORWARDED TO THE ENGINEER THROUGH THE ARCHITECT'S OFFICE. THE CONTRACTOR SHALL ALLOW FOR SUFFICIENT RESPONSE TIME BY THE ENGINEER.

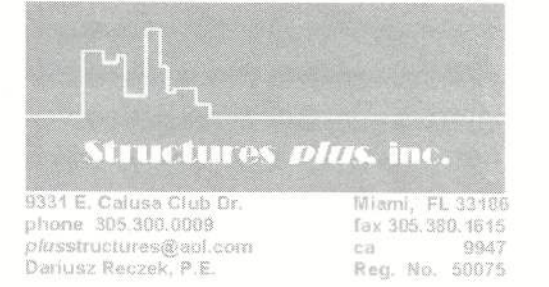


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New Residence for
Mr. & Mrs. Wade Schile
319 Singleton Terrace, Columbia County, Florida

Date: July 14, 2011

Project no.

Drawn: JRFP

Checked: JRFP

Revisions:

Sheet title:

STRUCTURAL NOTES

Sheet no.

S000