

STRUCTURAL NOTES:

CAST IN PLACE CONCRETE

- 1. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 2500 PSI, A SLUMP OF 3" FOR FOOTINGS/FOUNDATIONS AND 4" FOR SLABS
- 2. ALL REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO ASTM A-615 GRADE 40.
- 3. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. WWF SHALL BE LAPPED AT LEAST 6" AND CONTAIN AT LEAST ONE CROSS WIRE WITHIN THE 6".
- 4. HOOKS SHALL BE PROVIDED AT DISCONTINUOUS ENDS OF ALL TOP BARS OF BEAMS.
- 5. HORIZONTAL FOOTING BARS SHALL HAVE 1'-0" HOOK LENGTH OR CORNER BARS WITH A 2'-1" LAP PROVIDED
- 6. MINIMUM LAP SPLICES ON ALL REINFORCING BAR SPLICES SHALL BE 40 BAR DIAMETERS TYP.
- 7. CONCRETE COVER MIN. 3" WHEN EXPOSED TO EARTH OR 1 1/2" TO FORM.

REINFORCING STEEL

ALL REINFORCING STEEL SHALL BE NEW DEFORMED BARS FREE FROM RUST, SCALE & OIL & SHALL MEET ASTM A-615 REINFORCING FOR FOOTING SHALL BE SUPPORTED ON PRE-CAST CONCRETE PADS, TOP REINFORCING SHALL BE POSITIVELY SUPPORTED BY TEMPORARY STRINGERS. DOWELS FOR COLUMNS & FILLED CELLS SHALL BE SECURED IN PLACE BY USING ADDITIONAL CROSS-REINFORCING TIED TO FOOTING REINFORCING. SPLICES IN REINFORCING WHERE PERMITTED SHALL BE THE FOLLOWING MINIMUM, UNLESS OTHERWISE INDICATED ON THE DRAWINGS:

FTGS, WALLS, COLUMNS, BEAMS, SLABS: 36 DIA. OR 2'-0" MIN.
FILLED CELL REINFORCING: 40 DIA. OR 2'-1" MIN.
TEMPERATURE REINFORCING: 20 DIA. OR 1'-0" MIN.
WELDED WIRE MESH: 8" LAP

MASONRY WALL CONST.

- 1. HOLLOW LOAD BEARING UNITS SHALL BE NORMAL WEIGHT, GRADE N, TYPE 2, CONFORMING TO ASTM C90, WITH A MINIMUM NET COMPRESSIVE STRENGTH OF 1900 PSI (f'm = 1500 PSI)
- 2. MORTAR SHALL BE TYPE "S", CONFORMING TO ASTM C270.
- 3. COARSE GROUT SHALL CONFORM TO ASTM C476 WITH A MAXIMUM AGGREGATE SIZE OF 3/8" AND A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 3000 PSI SLUMP 8" TO 11".
- 4. VERTICAL REINFORCEMENT SHALL BE AS NOTED ON THE DRAWINGS WITH THE CELLS FILLED WITH COARSE GROUT.
- 5. VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT THE TOP AND BOTTOM AND AT A MAXIMUM SPACING OF 192 BAR DIAMETERS. REINFORCEMENT SHALL BE PLACED IN THE CENTER OF THE MASONRY CELL TYPICAL UNLESS OTHERWISE NOTED.
- 6. REINFORCING STEEL SHALL BE LAPPED A MINIMUM OF 40 BAR DIAMETERS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 7. GROUT STOPS SHALL BE PROVIDED BELOW BOND BEAM. PLASTIC SCREEN, METAL LATH STRIP OR CAVITY CAPS MAY BE USED TO PREVENT THE FLOW GROUT INTO CELLS BELOW. THE USE OF FELT PAPER AS A STOP IS PROHIBITED.

WOOD CONSTRUCTION

- 1. WOOD CONSTRUCTION SHALL CONFORM TO THE NDS "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", 2018 EDITION.
- 2. ALL EXTERIOR WOOD STUD WALLS, BEARING WALLS, SHEAR WALLS AND GABLE END BRACING) SHALL BE EITHER SOUTHERN PINE, OR S.P.F. NUMBER 2 GRADE OR BETTER SHALL BE USED REGARDLESS OF SPECIES.
- 3. ANY WOOD FRAME INTERIOR BEARING WALL STUDS THAT HAVE HOLES IN THE CENTER OF THE STUD UP TO 1" DIA. SHALL HAVE STUD PROTECTION SHIELDS FOR ALL HOLES OVER 1" IN DIA. FOR PLUMBING LINES, ETC. SHALL BE REPAIRED WITH SIMPSON HSS2 STUD SHOES TYP., U.N.O.
- 4. FASTENERS FOR PRESSURE PRESERVATIVE AND FIRE-RETARDANT-TREATED WOOD SHALL BE OF HOT-DIPPED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER.

PREFABRICATED WOOD TRUSSES

- 1. ALL PREFABRICATED WOOD TRUSSES SHALL BE SECURELY FASTENED TO THEIR SUPPORTING WALLS OR BEAMS WITH HURRICANE CLIPS OR ANCHORS.
- 2. PREFABRICATED WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE "NATIONAL DESIGN SPECIFICATION FOR STRESS-GRADE LUMBER AND ITS FASTENERS" AS RECOMMENDED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION.
- 3. TRUSS MEMBERS AND CONNECTIONS SHALL BE PROPORTIONED (WITH A MAXIMUM ALLOWABLE STRESS INCREASE FOR LOAD DURATION OF 25%) TO WITHSTAND THE LIVE LOADS GIVEN IN THE NOTES AND TOTAL DEAD LOAD.
- 4. BRIDGING FOR PRE-ENGINEERED TRUSSES SHALL BE AS REQUIRED BY THE TRUSS MANUFACTURER UNLESS NOTED ON THE PLANS.
- 5. TRUSS ELEVATIONS AND SECTIONS ARE FOR GENERAL CONFIGURATION OF TRUSSES ONLY. WEB MEMBERS ARE NOT SHOWN, BUT SHALL BE DESIGNED BY THE TRUSS MANUFACTURER IN ACCORDANCE WITH THE FOLLOWING DESIGN LOADS:
- 6. DESIGN SPECIFICATIONS FOR LIGHT WEIGHT METAL PLATE CONNECTED WOOD TRUSSES PER THE TRUSS PLATE INSTITUTE TPI LATEST EDITION.
- 7. PRE-ENGINEERED WOOD TRUSSES SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH SPECIFIED LOADS AND GOVERNING CODES. SUBMITTALS SHALL INCLUDE TRUSS FRAMING PLANS AND DETAILS SHOWING MEMBER SIZES, BRACING, ANCHORAGE, CONNECTIONS, TRUSS LOCATIONS, AND PERMANENT BRACING AND/OR BRIDGING AS REQUIRED FOR ERECTION AND FOR THE PERMANENT STRUCTURE. EACH SUBMITTAL SHALL BE SIGNED AND SEALED BY A FLORIDA REGISTERED STRUCTURAL ENGINEER. SUBMIT 2 COPIES FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- 8. THE TRUSS MANUFACTURER SHALL DETERMINE ALL SPANS WORKING POINTS, BEARING POINTS, AND SIMILAR CONDITIONS. TRUSS SHOP DRAWINGS SHALL SHOW ALL TRUSSES, ALL BRACING MEMBERS, AND ALL TRUSS TO TRUSS HANGERS.

SOIL BEARING VALUE:

ASSUMED ALLOWABLE SOIL BEARING PRESSURE AFTER COMPACTION: 2000 PSF SEE SOILS REPORT AND SPECIFICATIONS FOR COMPACTION REQUIREMENTS IF SOIL CONDITIONS IN THE PROJECT DO NOT MEET OR EXCEED THE CAPACITY THE GENERAL CONTRACTOR SHALL CONTACT THE ENGINEER PRIOR TO FOUNDATION POUR FOR VERIFICATION OF FOUNDATION DESIGN. SOIL TO BE COMPACTED TO AT LEAST 95% OF MAX. DRY DENSITY AS DETERMINED BY ASTM - D1557

UPLIFT CONNECTORS

- 1. UPLIFT CONNECTORS SUCH AS HURRICANE CLIPS, TRUSS ANCHORS AND ANCHOR BOLTS ARE ONLY REQUIRED ON MEMBERS IN WALLS THAT ARE EXPOSED TO UPLIFT FORCES. INTERIOR LOAD BEARING WALLS ARE NOT ALWAYS EXPOSED TO UPLIFT FORCES. THE MEMBERS OF THESE WALLS WOULD NOT NEED TO HAVE CONNECTORS APPLIED. PLEASE CONSULT THE TRUSS ENGINEERING FOR THE LOCATION OF THESE WALLS.

FIELD REPAIR NOTES

- 1. MISSED "J" BOLTS FOR WOOD BEARING WALLS MAY BE SUBSTITUTED W/ 1/2" DIA. EPOXY ANCHORS WITH 6" EMBEDMENT. SIMPSON "SET" EPOXY ADHESIVE BINDER FOLLOWING ALL MANUFACTURERS RECOMMENDATIONS. SEE PLAN FOR EMBEDMENT DEPTH AT FLOOR STEPS.
- 2. FOR MISSED VERT. DOWELS DRILL A 3/4" DIAMETER HOLE 6" DEEP AT THE LOCATION OF THE OMITTED REBAR, AND INSTALL A 32" LONG #5 BAR INTO THE EPOXY FILLED HOLE. USE A TWO PART EMBEDMENT EPOXY (SIMPSON "SET", EPOXY), MIXED PER MANUFACTURER'S INSTRUCTIONS. ASSURE THAT ALL DUST AND DEBRIS FROM DRILLING ARE REMOVED FROM THE HOLE BY BRUSHING AND AND USING COMPRESSED AIR PRIOR TO APPLYING THE EPOXY. ALLOW THE EPOXY TO CURE TO MANUFACTURER'S SPECIFICATIONS, THEN FILL THE CELL IN THE NORMAL WAY DURING BOND BEAM POUR.
- 3. FOR MORTAR JOINTS LESS THAN 1/4", PROVIDE (1) #5 VERT. IN CONC. FILLED CELL EACH SIDE OF THE JOINT (BAR DOES NOT HAVE TO BE CONT. TO FOOTING).
- 4. MISSED LINTEL STRAPS FOR MASONRY CONSTRUCTION MAY BE SUBSTITUTED WITH (1) SIMPSON MTSM16 TWIST STRAP W/ (4) 1/4" X 2 1/4" TITENS TO MASONRY AND (7)-10d NAILS TO TRUSS FOR UPLIFTS LESS THAN 860 LBS (USE (2) MTSM16 FOR UPLIFTS LESS THAN 1720#). NO MORE THAN 10 STRAPS MAY BE SUBSTITUTED OR NO MORE THAN 3 IN A ROW. IF GIRDER TRUSS CONNECTIONS ARE MISSED CONTACT ENGINEER OF RECORD FOR SUBSTITUTION.

TERMITE SPECIFICATIONS:

SECTION R318 PROTECTION AGAINST TERMITES

TERMITE PROTECTION SHALL BE PROVIDED BY REGISTERED TERMITICIDES, INCLUDING SOIL APPLIED PESTICIDES, BAITING SYSTEMS, AND PESTICIDES APPLIED TO WOOD, OR OTHER APPROVED METHODS OF TERMITE PROTECTION LABELED FOR USE A PREVENTIVE TREATMENT TO NEW CONSTRUCTION (SEE SECTION 202, REGISTERED TERMITICIDE). UPON COMPLETION OF THE APPLICATION OF THE TERMITE PROTECTIVE TREATMENT, A CERTIFICATE OF COMPLIANCE SHALL BE ISSUED TO THE BUILDING DEPARTMENT BY THE LICENSED PEST CONTROL COMPANY THAT CONTAINS THE FOLLOWING STATEMENT: "THE BUILDING HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. TREATMENT IS IN ACCORDANCE WITH RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES."

RADON:

WHERE PROJECT IS TO BE LOCATED IN KNOWN RADON GAS PREVALENT AREAS, APPENDIX "F" OF THE 2017 FLORIDA RESIDENTIAL BUILDING CODE IS TO BE IMPLEMENTED. CONCRETE STRENGTH IN THESE AREAS ARE TO BE A MINIMUM OF 3000 P.S.I.. THEREFORE, ANY AND ALL NOTES ON THESE PLANS THAT INDICATE 2500 PSI SHALL BE REPLACED WITH 3000 P.S.I. FOR THE CONCRETE STRENGTH.

STRUCTURAL DESIGN CRITERIA

CODES:

2020 FLORIDA BUILDING CODE RESIDENTIAL
2020 FLORIDA FIRE PREVENTION CODE
2020 FLORIDA ACCESSIBILITY CODE
NEC NFPA 70 & FCEB
ACI 318-19 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
ACI 301-19 SPECIFICATIONS FOR STRUCTURAL CONCRETE BUILDINGS
ACI 530-19 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
2018 NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION
2018 WOOD FRAMED CONSTRUCTION MANUAL
APA PLYWOOD DESIGN SPECIFICATION
ASCE/SEI 7-16 AMERICAN SOCIETY OF CIVIL ENGINEERS

LIVE LOADS:

ROOF 20 PSF (REDUCIBLE)
RESIDENTIAL FLOOR, UNLESS OTHERWISE INDICATED 40 PSF
BALCONIES 60 PSF
STAIRS 40 PSF
LIGHT PARTITIONS (DEAD LOAD), U.N.O. 20 PSF
10 PSF ATTIC L.L.

CONCRETE STRENGTH @ 28 DAYS

ALL CONCRETE UNLESS OTHERWISE INDICATED
PEA GRAVEL CONCRETE FOR MASONRY CELLS ONLY (DO NOT USE FOR CONCRETE COLUMNS OR TIE BEAMS)

2500 PSI
3000 PSI

REINFORCING:

WELDED WIRE FABRIC SHALL CONFORM TO ALL REINFORCING BARS
ALL STIRRUPS AND TIES
POLYPROPYLENE FIBERS FOR SLABS ON GRADE

ASTM A1064/A1064M
ASTM A615-40 40,000 PSI
ASTM A615-40 40,000 PSI
MINIMUM 1.5 LBS. OF FIBERS PER CUBIC YARD

CONCRETE MASONRY UNITS:

ASTM C90-01, STANDARD WEIGHT UNITS, fm=1500 PSI
MORTAR TYPE "S" 1800 PSI
CONCRETE GROUT 3000 PSI
CONTINUOUS MASONRY INSPECTION IS REQUIRED DURING CONSTRUCTION

STRUCTURAL STEEL:

ALL STRUCTURAL AND MISCELLANEOUS STEEL A36 36,000 PSI, U.N.O
SHOP AND FIELD WELDS: E70XX ELECTRODES
ALL BOLTS CAST IN CONCRETE: ASTM A36 OR ASTM A-307

WOOD FRAMING:

BEAMS, RAFTERS, JOIST, PLATES, ETC. U.N.O.
NO. 2 SOUTHERN YELLOW PINE (19% M.C.)
ROOF DECK: PLYWOOD C-C/C-D, EXTERIOR, OR OSB
FLOOR SHEATHING: T&G A-C GROUP 1 APA RATED (48/24)
WALL SHEATHING: PLYWOOD C-C/C-D, EXTERIOR OR OSB
VERSA LAM BEAM Fb = 2900 PSI (2.0E)
WOOD COLS. PARALLAM 2.0E U.N.O.

WOOD ROOF TRUSSES:

DESIGN LOADS: SHINGLE ROOF:
TOP CHORD LIVE LOAD: 20 PSF
TOP CHORD DEAD LOAD: 10 PSF
BOTTOM CHORD DEAD LOAD: 10 PSF
40 PSF
BOTTOM CHORD ATTIC LIVE LOAD: 10 PSF

SEE DRAWINGS FOR SPECIAL CONCENTRATED LOADS. DESIGN FOR NEW WIND UPLIFT AS PER SPECIFIED CODES, DEDUCTING A MAXIMUM OF 5 P.S.F. DEAD LOAD, BUT NOT EXCEEDING ACTUAL DEAD LOAD.

INDEX OF DRAWINGS

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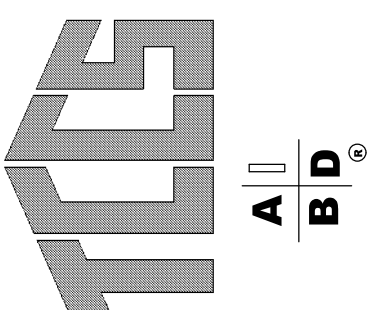
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COVER SHEET
FLOOR PLAN
ELEVATIONS
FOUNDATION PLAN
ELECTRICAL PLAN
TRUSS LAYOUT
DETAILS

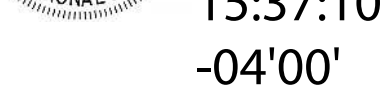
S-1

Residential Design
1431 E. Wade Street
Trenton, FL 32693
352-274-3006
tchdesigns@gmail.com
CUSTOM DESIGNS



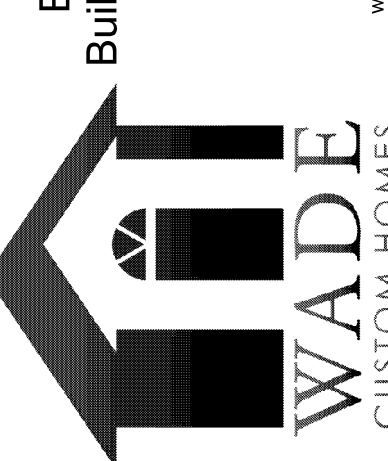
RANDOLPH WIGGINS, P.E.
1431 E. Wade Street, Suite B Trenton, FL 32693
STRUCTURAL DESIGNER IS IN ACCORDANCE WITH THE FLORIDA BOARD OF PROFESSIONAL ENGINEERS
SIGNATURE SEAL AND SHEET NO. VALID ONLY FOR THE FUNCTIONAL DESIGN
RANDOLPH WIGGINS, P.E. # 15721
DATE: July 02, 2022

Randolph Wiggins
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PROJECT:

Wright Residence
319 SW Healan Ct
Ft White, FL
Columbia County
LAST PLOT DATE: May 02, 2022

03:34 PM

WIND LOADING CRITERIA

WIND SPEED (ULTIMATE) 130 MPH
WIND SPEED (ALLOWABLE) 101 MPH
EXPOSURE CATEGORY B
BUILDING CATEGORY II
BUILDING TYPE V
ENCLOSURE CLASSIFICATION ENCLOSED
INTERNAL PRESSURE COEFFICIENT +/- 0.18

NOTICE TO BUILDER

THIS DRAWING AND DESIGN IS VALID FOR 12 MONTHS AFTER THE DATE IT IS SIGNED AND SEALED OR WHILE CURRENT CODE IS VALID

IT IS THE INTENT OF THIS DESIGNER THAT THESE PLANS ARE ACCURATE AND ARE CLEAR ENOUGH FOR THE LICENSED PROFESSIONAL TO CONSTRUCT THIS PROJECT. IN THE EVENT THAT SOMETHING IS UNCLEAR OR NEEDS CLARIFICATION..STOP..AND CALL THE DESIGNER LISTED IN THIS TITLE PAGE. IT IS THE RESPONSIBILITY OF THE LICENSED PROFESSIONAL THAT IS CONSTRUCTING THIS PROJECT TO FULLY REVIEW THESE DOCUMENTS BEFORE CONSTRUCTION BEGINS AND ANY AND ALL CORRECTIONS, IF NEEDED, TO BE MADE BEFORE ANY WORK IS DONE. *DO NOT SCALE DRAWINGS FOR CRITICAL DIMENSIONS INSTEAD CALL THE DESIGNER LISTED IN TITLE PAGE*

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