

CODES & STANDARDS THE FOLLOWING CODES ARE USED IN THE DESIGNS AND SPECIFICATIONS FOR THIS PROJECT: FBC-B (2020) FLORIDA BUILDING CODE - 11TH EDITION - BUILDING SEI/ASCE 7-16 AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES ACI 318-14 AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE ACI 530-13 AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES ACI 530.1-13 AMERICAN CONCRETE INSTITUTE, SPECIFICATION FOR MASONRY STRUCTURES ANSI AWC NDS-2015 NATIONAL DESIGN STANDARD (NDS) FOR WOOD CONSTRUCTION WITH 2015 NDS SUPPLEMENT	
DESIGN CRITERIA	
1. WIND LOAD PER ASCE 7-16: 1.1. WIND VELOCITY, V = 115 MPH 1.2. BLDG. CAT. II 1.3. EXPOSURE C	
2. ROOF LOADS: 2.1. LIVE LOAD = 20 PSF 2.2. DEAD LOAD = 25 PSF	
3. FLOOR LOADS: 3.1. LIVE LOAD = 40 PSF 3.2. DEAD LOAD = 20 PSF	
4. BALCONIES: 4.1. LIVE LOAD = 60 PSF 4.2. DEAD LOAD = 20 PSF	
MATERIALS ALL MATERIALS SHALL BE NEW, FREE OF DEFECT OR DAMAGE, AND CONFORM TO THE FOLLOWING SPECIFICATIONS:	
3. NORMAL WT. CONCRETE - ACI 318-11, 28-DAY COMPRESSIVE STRENGTH AS FOLLOWS:	
4. FOOTINGS & GRADE BEAMS ----- 4,000 PSI	
5. SLABS ----- 4,000 PSI	
6. BEAMS ----- 4,000 PSI	
7. COLUMNS ----- 4,000 PSI	
8. ALL OTHER CONCRETE ----- 4,000 PSI	
9. REINFORCING STEEL - CARBON STEEL ACI 318-11, ASTM A 615, GR. 60	
10. CONCRETE MASONRY UNITS (CMU) - ASTM C90 & ACI 530-11 (1,500 PSI)	
11. HORIZONTAL MASONRY REINFORCEMENT - ASTM A82 (LADDER TYPE)	
12. MORTAR - ASTM C210 TYPE M OR S (2,500 PSI)	
13. GROUT - ASTM C460 (3,000 PSI) U.N.O.	
14. CEMENT PLASTER - ASTM C926	
15. LUMBER - SOUTHERN PINE, GRADE: NO. 1 (OR BETTER) PRESSURE TREATED AS REQ'D. (UNO)	
16. NAILS - HOT-DIPPED GALVANIZED, ZINC OR CADMIUM COATED	
17. ANCHOR BOLTS - ASTM A307	
SHOP DRAWING SUBMITTALS	
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER OF RECORD FOR REVIEW A MINIMUM OF TWO WEEKS BEFORE FABRICATION OR ERECTION OF ANY STRUCTURAL SYSTEM. ALL SHOP DRAWINGS MUST BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO ANY FABRICATION OR ERECTION.	
2. REVIEW OF SHOP DRAWINGS BY THE ENGINEER OF RECORD IS ONLY FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AS PRESENTED BY THE CONTRACT DOCUMENTS. THE REVIEW DOES NOT GUARANTEE IN ANY WAY THAT THE SHOP DRAWINGS ARE CORRECT NOR DOES IT IMPLY THAT THEY SUPERCEDE THE STRUCTURAL DRAWINGS. REVIEW WILL NOT INCLUDE CHECK OF DIMENSIONS OR QUANTITIES.	
3. REVIEW OF SHOP DRAWINGS IS NOT CONDUCTED FOR DETERMINING THE ACCURACY AND COMPLETENESS OF DETAILS OR FOR SUBSTANTIATING FABRICATION, INSTALLATION INSTRUCTIONS, OR PERFORMANCE, ALL OF WHICH SHALL REMAIN THE SOLE RESPONSIBILITY OF THE CONTRACTOR.	
4. SHOP DRAWINGS REQUIRED TO BE SUBMITTED TO THE ENGINEER OF RECORD ARE AS FOLLOWS: 4.1. CONCRETE TEST REPORTS FOR CAST-IN-PLACE CONCRETE AS PER ACI 301 AND 318 4.2. REINFORCING STEEL SHOP DRAWINGS 4.3. PREFABRICATED WOOD AND/OR METAL FLOOR AND ROOF TRUSSES, ERECTION DRAWINGS, CALCULATIONS, AND DESIGN DATA 4.4. STRUCTURAL STEEL SHOP DRAWINGS AND ERECTION DRAWINGS AND CALCULATIONS AS REQ'D. 4.5. SHORING AND RESHORING SHOP DRAWINGS AND CALCULATIONS 4.6. STAIR, RAILING, AND GUARDRAIL SHOP DRAWINGS, CALCULATIONS, AND DESIGN DATA	
5. SHOP DRAWINGS REQUIRING ENGINEERING BY A DELEGATED ENGINEER (SPECIALTY ENGINEER) SHALL COMPLY WITH THE FOLLOWING: 5.1. THE SPECIALTY ENGINEER SHALL BE A FLORIDA LICENSED PROFESSIONAL ENGINEER. 5.2. 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 5.3. THE SPECIALTY ENGINEER SHALL BE AN EMPLOYEE OR OFFICER OF A FABRICATOR OR COMPANY SUPPLYING COMPONENTS TO THE FABRICATOR. 5.4. ALL SHOP DRAWINGS ARE AN AID FOR FIELD PLACEMENT AND ARE SUPERCEDED 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. 5.5. THE CONTRACTOR SHALL SUPPLY THE ENGINEER OF RECORD WITH THREE COPIES OF SHOP DRAWINGS A MINIMUM OF ONE WEEK PRIOR TO PLACEMENT. THESE STRUCTURAL DRAWINGS SHALL NOT BE USED TO PRODUCE SHOP DRAWINGS WITHOUT PRIOR EXPRESSED WRITTEN APPROVAL FROM THE ENGINEER OF RECORD. 5.6. 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.	
SPECIAL INSPECTIONS	
1. SPECIAL INSPECTIONS REQUIRED BY THE FLORIDA BUILDING CODE SHALL BE PERFORMED BY A LICENSED PROFESSIONAL ENGINEER.	
2. THE QUALIFICATIONS FOR THE SPECIAL INSPECTOR SHALL INCLUDE LICENSURE AS A PROFESSIONAL ENGINEER OR ARCHITECT, GRADUATION FROM AN ENGINEERING EDUCATION PROGRAM IN CIVIL OR STRUCTURAL ENGINEERING, GRADUATION FROM AN ARCHITECTURAL EDUCATION PROGRAM, SUCCESSFUL COMPLETION OF THE NCEES FUNDAMENTALS EXAMINATION, OR REGISTRATION AS BUILDING INSPECTOR OR GENERAL CONTRACTOR. SPECIAL INSPECTORS UTILIZING AUTHORIZED REPRESENTATIVES SHALL INSURE THE AUTHORIZED REPRESENTATIVE IS QUALIFIED BY EDUCATION AND LICENSURE TO PERFORM THE DUTIES ASSIGNED BY THE SPECIAL INSPECTOR.	
3. A SPECIAL INSPECTOR'S INSPECTION LOG MUST BE DISPLAYED IN A CONVENIENT LOCATION ON THE SITE FOR REFERENCE BY THE BUILDING INSPECTOR.	
4. ALL MANDATORY INSPECTIONS, AS REQUIRED BY THE FLORIDA BUILDING CODE, MUST BE PERFORMED BY THE COUNTY. THE INSPECTIONS FROM THE BUILDING DEPARTMENT MUST BE CALLED FOR ON ALL MANDATORY INSPECTIONS. INSPECTIONS PERFORMED BY THE SPECIAL INSPECTOR HIRED BY THE OWNER ARE IN ADDITION TO THE MANDATORY INSPECTIONS PERFORMED BY THE BUILDING DEPARTMENT.	
5. UPON COMPLETION OF THE WORK UNDER EACH BUILDING PERMIT, A COMPLETED INSPECTION LOG FORM AND SEALED STATEMENT OF COMPLIANCE TO THE BUILDING INSPECTOR SHALL BE SUBMITTED AT THE TIME OF FINAL INSPECTION AND BEFORE MAKING APPLICATION FOR CERTIFICATE OF OCCUPANCY. THE STATEMENT OF COMPLIANCE SHALL STATE THAT TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGMENT THAT PORTIONS OF THE PROJECT OUTLINED FOR THE SPECIAL INSPECTION MEETS WITH THE INTENT OF THE FLORIDA BUILDING CODE AND ARE COMPLETED IN SUBSTANTIAL ACCORDANCE WITH THE APPROVED PLANS.	
REINFORCING STEEL	
1. REINFORCING FABRICATOR SHALL PROVIDE SHOP DRAWINGS INDICATING STEEL FABRICATION IN CONFORMANCE WITH APPLICABLE ACI STANDARDS.	
2. REINFORCING STEEL SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 318.	
3. ALL TOP REINFORCING STEEL SHALL TERMINATE WITH STANDARD HOOKS AT DISCONTINUOUS EDGES OR ENDS.	
4. ALL BOTTOM BARS SHALL BEAR 6" MIN. OVER SUPPORTS U.N.O.	
5. ALL REINFORCING BARS MARKED CONTINUOUS SHALL BE LAPPED 30 DIA. AT SPLICES AND CORNERS U.N.O. LAP CONTINUOUS TOP BARS AT CENTER BETWEEN SUPPORTS AS REQUIRED. TERMINATE CONTINUOUS BARS AT NON-CONTINUOUS ENDS WITH STANDARD HOOKS U.N.O.	
6. BEAM INTERMEDIATE BARS SHALL BE HOOKED AT DISCONTINUOUS ENDS AND SPICED AT SUPPORTS WITH 30 BAR DIA. LAP SPLICES.	
7. ALL REINFORCING STEEL SHALL BE FREE FROM LOOSE RUST AND SCALE.	
8. ALL ACCESSORIES SHALL HAVE PLASTIC TIPPED UPTURNED LEGS. PLASTIC OR GALVANIZED CHAIRS ARE TO BE USED TO SUPPORT AREAS EXPOSED TO WEATHER.	
9. ALL REINFORCING STEEL SHALL BE ACCURATELY LOCATED AND FIRMLY HELD IN PLACE BEFORE AND DURING THE PLACEMENT OF CONCRETE.	
10. SUPPORT BARS SHALL BE PROVIDED IN ADDITION TO REINFORCING SHOWN OR CALLED FOR IN THESE PLANS. BARS SHALL NOT BE SPACED MORE THAN 4'-0" O.C. A MINIMUM OF 3 SUPPORT BARS AND 3 INDIVIDUAL HIGH CHAIRS FOR EACH SUPPORT BAR SHALL BE PROVIDED FOR ALL TOP REINFORCING.	
11. PLASTIC TIPPED SLAB BOLSTERS SHALL BE PROVIDED ON 4 SIDES FOR VERTICAL COLUMN REINFORCING 90 AS TO MAINTAIN MINIMUM CLEARANCE TO TIES.	
12. THE CONTRACTOR SHALL PROVIDE 5 TONS OF STEEL REINFORCING FOR THE ENGINEER TO USE AT HIS DISCRETION DURING CONSTRUCTION. THE CONTRACTOR SHALL GIVE CREDIT TO THE OWNER FOR ANY UNUSED PORTION OF THE ALLOWANCE AT THE END OF THE PROJECT. THIS REINFORCING IS IN ADDITION TO ANY REINFORCEMENT USED IN THE PLANS.	
CONCRETE	
1. MIX DESIGNS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO COMMENCEMENT OF ANY CONCRETE WORK. SUBMIT STATISTICAL DATA FOR EACH CLASS OF CONCRETE INCLUDING, BUT NOT LIMITED TO, MODULUS OF ELASTICITY, MATERIALS, AND ADMIXTURES USED.	
2. WATER/CEMENT RATIO SHALL BE 0.40 U.N.O. NO WATER SHALL BE ADDED TO CONCRETE AT THE JOB SITE.	
3. MAXIMUM WATER/CEMENT RATIO FOR CONCRETE CONTAINING A SUPERPLASTICIZER MIXTURE SHALL BE 0.42. SLUMP AFTER ADDITION OF SUPERPLASTICIZER SHALL BE 6"± 1".	

4. FORMWORK SHALL COMPLY WITH ACI 347. ALL FORMWORK SHALL BE SPRAYED WITH CLEAN POTABLE WATER PRIOR TO PLACING CONCRETE. CARE SHALL BE TAKEN SO AS NOT TO CREATE PUDDLES OF WATER.	
5. ALL SURFACES SHALL BE CLEANED BY MEANS OF COMPRESSED AIR SO AS TO REMOVE ALL SAWDUST, DIRT, TIE WIRES, AND DEBRIS PRIOR TO PLACING CONCRETE.	
6. THE OWNER SHALL CONTRACT AN INDEPENDENT TESTING LABORATORY TO PERFORM CONCRETE CYLINDER TESTS AS FOLLOWS: SIX CYLINDER TESTS FOR ANY 50 CY OF CONCRETE POURED, OR FRACTION THEREOF FOR EACH CLASS OF CONCRETE POURED EACH DAY. ONE CYLINDER SHALL BE TESTED AT 3 DAYS AND 1 DAY, THREE AT 28 DAYS, AND ONE RESERVED TO BE TESTED AT 56 DAYS IF REQUIRED. FOLLOW ASTM STANDARDS FOR SAMPLING AND TESTING. ONE SLUMP TEST SHALL BE TAKEN FOR EACH SET OF TEST CYLINDERS CAST. SLUMP TEST SHALL CONFORM WITH ASTM C 143. NO CONCRETE TEST WILL BE ACCEPTED IF CONCRETE IS TAMPERED WITH IN ANY WAY AFTER SAID TEST IS PERFORMED. REPEAT TEST IF WATER IS ADDED AFTER INITIAL SAMPLING.	
7. TRANSPORTING, PLACING, CURING, AND DEPOSITING OF CONCRETE SHALL COMPLY WITH ACI 301 AND 318, LATEST EDITION.	
8. FOR CAST-IN-PLACE (NON-PRESTRESSED) CONCRETE THE MINIMUM CONCRETE COVER FOR REINFORCING SHALL BE AS FOLLOWS: A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3" B. CONCRETE EXPOSED TO EARTH OR WEATHER B.1. NO. 6 THROUGH NO. 18 BARS 2" B.2. NO. 5 BARS, W31 OR D31 WIRE, AND SMALLER 1 1/2" C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: C.1. SLABS, WALLS, JOISTS: C.1.1. NO. 14 & NO. 18 BARS 1 1/2" C.1.2. NO. 11 BARS AND SMALLER 3/4" C.2. BEAMS, COLUMNS: C.2.1. PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS 1 1/2" C.3. SHELLS, FOLDED LATE MEMBERS: C.3.1. NO. 6 BAR AND LARGER 3/4" C.3.2. NO. 5 BAR, W31 OR D31 WIRE, AND SMALLER 1/2"	
9. ALL CONCRETE SHALL BE COMPACTED BY MECHANICAL VIBRATION.	
10. CONTROL JOINTS SHALL BE PLACED IN ACCORDANCE WITH ACI 224.3 AND ACI 318.	
11. 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 2X4 SHEAR KEY AT SLABS AND A 1'-1/2" DEEP JOINT 4 INCHES SMALLER THAN THE BEAM SECTION. CONSTRUCTION JOINT LOCATIONS SHALL BE APPROVED BY STRUCTURAL ENGINEER OF RECORD BEFORE CONCRETE POUR.	
12. APPLY ANTI-CORROSION AND BONDING AGENT AT ALL CONSTRUCTION JOINTS PRIOR TO PLACEMENT OF NEW CONCRETE.	
13. ALL SLEEVES, PENETRATIONS, BLOCKOUTS, DEPRESSIONS, ETC. MISPLACED IN BEAMS OR SLABS SHALL BE APPROVAL FOR RELOCATION FROM THE ENGINEER OF RECORD PRIOR TO DRILLING OR CHIPPING.	
FORMING, SHORING AND RESHORING	
1. FORMING, SHORING AND RESHORING DRAWINGS SHALL BE PREPARED BY A STATE OF FLORIDA REGISTERED SPECIALTY ENGINEER WITH EXPERIENCE IN SHORING AND RESHORING DESIGN AND DETAILING.	
2. SHORING AND RESHORING DRAWINGS SHALL INCLUDE AT LEAST THE FOLLOWING ITEMS: 2.1. LOCATION, SIZE, TYPE, AND CAPACITY OF ALL SHORING. 2.2. LOCATION, SIZE, TYPE, AND CAPACITY OF ALL RESHORING. 2.3. LOCATION, SIZE, AND TYPE OF ALL MUDSILLS, BLOCKING, TEMPORARY LATERAL BRACING AND OTHER ACCESSORIES REQUIRED TO ADEQUATELY AND SAFELY SUPPORT AND BRACE THE STRUCTURE DURING CONSTRUCTION. 2.4. INSTALLATION PROCEDURE, SEQUENCE OF INSTALLATION, LOAD RELIEF AND REMOVAL OF ALL SHORING AND RESHORING.	
3. 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.	
4. DESIGN, DETAIL, AND ERECT FORMS, SHORING AND RESHORING SHALL BE IN COMPLIANCE WITH ACI 347, PROJECT SPECIFICATIONS, AND THESE VIDEOS.	
5. 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.	
6. PRIOR TO EACH CONCRETE PLACEMENT, THE SHORING AND RESHORING SHALL BE INSPECTED AND CERTIFIED IN WRITING BY THE SPECIALTY ENGINEER OR HIS AUTHORIZED REPRESENTATIVE TO ENSURE COMPLIANCE WITH THE DESIGN.	
7. NO LOAD SHALL BE APPLIED TO ANY MEMBER UNTIL THE CONCRETE IS A MINIMUM OF 14 DAYS OLD AND THE 1 DAY STRENGTH IS AT LEAST 10% OF THE SPECIFIED 28 DAY STRENGTH.	
8. FORMS MAY BE REMOVED 12 HOURS AFTER CONCRETE POUR PROVIDED THAT THE CONCRETE STRENGTH IS 10% OF THE SPECIFIED 28 DAY STRENGTH AND NOT LESS THAN 10% OF THE SPECIFIED 28 DAY STRENGTH. RESHORE EACH FAY 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 MANNER AS TO NOT DAMAGE THE STRUCTURE, ENSURE SAFETY, AND PREVENT CREEP DEFLECTION OF STRUCTURAL MEMBERS.	
PREFABRICATED WOOD TRUSSES AND GIRDERS	
1. TRUSS MANUFACTURER IS RESPONSIBLE FOR THE DESIGN AND FABRICATION OF TRUSSES, GIRDERS, AND THEIR CONNECTIONS TO EACH OTHER.	
2. DESIGN OF BRACING FOR INDIVIDUAL TRUSS TO GIRDER MEMBERS TO RESIST LATERAL BUCKLING UNDER GRAVITY OR WIND LOADS IS THE RESPONSIBILITY OF THE TRUSS MANUFACTURER.	
3. PREFABRICATED WOOD TRUSSES AND GIRDERS SHALL BE DESIGNED, FABRICATED, AND ERECTED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, 2020 FOR THE LOADS INDICATED ABOVE.	
4. TRUSSES AND GIRDERS SHALL BE DESIGNED BY A FLORIDA REGISTERED ENGINEER, THE DELEGATED ENGINEER.	
5. COMPLETE DESIGN CALCULATIONS AND SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY THE DELEGATED ENGINEER AND SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW.	
6. REVIEW BY THE ENGINEER OF RECORD WILL BE FOR COMPLIANCE WITH THE DESIGN CONCEPT ONLY.	
7. TRUSSES SHALL BE INSPECTED BY A SPECIAL INSPECTOR AS PER THE FLORIDA BUILDING CODE 2020.	
REINFORCED MASONRY	
1. REINFORCED MASONRY SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 530-11 AND ACI 530.1-11.	
2. MASONRY UNITS SHALL CONFORM TO ASTM C90, STANDARD SPECIFICATION FOR LOAD BEARING CONCRETE MASONRY UNITS.	
3. LOAD BEARING CONCRETE MASONRY WALLS SHALL BE IN PLACE BEFORE THE SLABS AND BEAMS SUPPORTED BY THEM ARE POURED AS WELL AS THE CONCRETE COLUMNS FRAMING THEM.	
4. ALL MASONRY UNITS SHALL BE LAID IN RUNNING BOND WITH OPEN-END UNITS. USE ONLY MASONRY UNITS THAT ARE A MINIMUM OF 90% SOLID VERTICAL CONTINUITY OF THE CELLS SHALL BE UNOBSSTRUCTED.	
5. CMU WALL MORTAR SHALL COMPLY WITH ASTM C210, TYPE M (2500 PSI). MORTAR JOINTS SHALL BE 3/8" FOR ALL MASONRY. MORTAR ALL HEAD JOINTS, THE FACE SHELLS OF ALL BED JOINTS, AND THE BED JOINTS OF WEBS ADJACENT TO CELLS ARE TO BE GROUTED.	
6. VERTICAL CELLS TO BE GROUTED SHALL BE ALIGNED AND UNOBSSTRUCTED. ANY MORTAR PROTRUDING INTO CELL CAVITIES THAT ARE TO BE GROUTED SHALL BE REMOVED. ALLOW A MINIMUM OF 24 HOURS FOR MORTAR TO CURE BEFORE PLACING GROUT.	
7. ALL GROUT SHALL BE FINE MASONRY GROUT IN ACCORDANCE WITH ASTM C416 WITH A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS AND TESTED IN ACCORDANCE WITH ASTM C39 WITH SLUMP OF 9" TO 11". TESTS SHALL BE TAKEN EVERY 30 CUBIC YARDS AT A MINIMUM OF EACH DAY OF GROUTING.	
8. IN HIGH LIFT GROUTING USE A MAXIMUM LIFT OF 4'-0" WITH NOT LESS THAN 30 MINUTES OR MORE THAN ONE HOUR BETWEEN LIFTS. MECHANICALLY VIBRATE EACH LIFT AND RECONSOLIDATE THE PREVIOUS LIFT AFTER PLACING THE NEXT LIFT.	
9. THE BOTTOM OF ALL GROUTED CELLS SHALL HAVE A CLEANOUT OPENING PROVIDED. BARS SHALL BE TIED AND ALL MORTAR AND DIRT SHALL BE REMOVED PRIOR TO PLACING GROUT.	
10. ALL REINFORCING BARS IN GROUTED CELLS SHALL HAVE A PLASTIC CENTRALIZER ATTACHED TO EACH BAR SPACED AT EVERY 4TH COURSE AND BE SECURED AT THE BASE.	
11. MORTAR TESTING SHALL BE IN ACCORDANCE WITH ASTM C210. AT A MINIMUM, ONE SET OF THREE SAMPLES SHALL BE TESTED FOR EVERY 3000 SQ. FT. OF WALL AREA OF ONE SET FOR EACH DAY OF WORK.	
12. MORTAR PLASTICITY AND PRESSURE SHALL BE SUFFICIENT TO EXTRUDE MORTAR FROM THE JOINT AND PRODUCE A TIGHT JOINT.	
13. REFER TO TYPICAL REINFORCEMENT PLACEMENT DETAILS FOR WINDOW OPENINGS ALONG WITH CORNER DETAILS FOR ADDITIONAL CMU REINFORCING.	
14. PROVIDE PRECAST CONCRETE LINTELS AT ALL MASONRY OPENINGS WITH MINIMUM 8" BEARING ON MASONRY BLOCK.	
15. ALL FOOTING DOVEL BARS SHALL BE THE SAME SIZE AS WALL STEEL, SHALL HAVE A STANDARD 90-DEGREE HOOK, AND SHALL BE EMBEDDED A MINIMUM OF 6". DOVEL BARS SHALL LAP VERTICAL WALL REINFORCEMENT A MINIMUM OF 30".	
16. IF BOND IS BROKEN AFTER INITIAL PLACEMENT, MASONRY UNIT MUST BE RELAI IN FRESH MORTAR.	
17. HOLLOW MASONRY UNIT HEAD AND BED MORTAR JOINTS SHALL NOT BE LESS THAN THE THICKNESS OF THE FACE SHELL.	
18. THE ENDS OF WALL TIES SHALL BE EMBEDDED IN MORTAR JOINTS.	
19. HEAD AND BED JOINTS SHALL BE 3/8" THICK, EXCEPT THAT THE THICKNESS OF THE BED JOINT OF THE STARTING COURSE PLACED OVER FOUNDATIONS SHALL NOT BE LESS THAN 1/4" AND NOT MORE THAN 3/4".	
20. CELLS SHALL BE GROUTED AT EACH INTERSECTING WALL, AT CORNERS, AND WITH VERTICAL REINFORCEMENT PER PLAN.	
21. SEE FLOOR PLAN FOR CMU VERTICAL REINFORCING. LAP REINFORCING 30" MIN. U.N.O.	
22. PROVIDE 20 GA HOT DIPPED GALVANIZED DOVETAIL ANCHOR SLOTS VERTICALLY IN STRUCTURAL COLUMNS AND TIE COLUMNS NOT PLACED INTEGRALLY WITH CMU WALLS THAT ARE ABUTTED BY NON-LOAD BEARING MASONRY WALLS. CMU UNITS SHALL BE TIED INTO COLUMNS WITH 8" x 16 GA CORRUGATED HOT DIPPED GALVANIZED DOVETAIL ANCHORS.	
23. LAP DOVETAIL ANCHORS WITH STANDARD HOT-DIPPED GALVANIZED NO.3 GAUGE LADDER-TYPE HORIZONTAL REINFORCEMENT WITH CROSS RODS PLACED AT 16" O.C. FOR REINFORCED MASONRY WALLS. PLACE DOVETAIL ANCHOR EVERY OTHER COURSE. OVERLAP DISCONTINUOUS ENDS A MINIMUM OF 12". EXTEND REINFORCING A MINIMUM OF 4" INTO COLUMNS.	
24. DROP CONCRETE BEAMS AT ALL MASONRY OPENINGS AND ADD 2 #5 BARS FOR EACH 12" OF DROP OR PROVIDE PRECAST CONCRETE LINTELS.	
25. TIE COLUMNS SHALL BE REQUIRED AT ALL CORNERS, AT INTERVALS NOT TO EXCEED 16 FEET CENTER-TO-CENTER OF COLUMNS, ADJACENT TO ANY CORNER OPENING EXCEEDING 4 FEET IN WIDTH, AND AT THE ENDS OF FREE-STANDING WALLS.	
26. TIE COLUMNS SHALL BE NOT LESS THAN 12" IN WIDTH AND HALL BE REINFORCED WITH NOT LESS THAN (4) #5 VERTICAL BARS DOVELED TO THE FOOTING AND INTO THE BEAMS. REBAR SPLICES SHALL BE LAPPED 30 BAR DIAMETERS.	
27. COLUMNS SHALL BE TIED WITH #2 HOOPS SPACED NOT MORE THAN 12 INCHES APART BEAMS INDICATED WITH THE PREFIX 'TB' SHALL HAVE 2 #5 BARS TOP AND BOTTOM MIN. U.N.O. AND HAVE TIES AT 48" O.C. U.N.O. CONTINUITY SHALL BE	

28. PROVIDED AT CORNERS BY BENDING 2 BARS FROM EACH DIRECTION AROUND THE CORNERS FOR 30" OR BY ADDING 2 #5 BENT BARS WHICH EXTEND 30" EACH WAY. CONTINUITY AT COLUMNS SHALL BE PROVIDED BY CONTINUING HORIZONTAL REINFORCING THRU COLUMNS OR BENDING HORIZONTAL REINFORCEMENT 18" INTO COLUMN. REINFORCED MASONRY SHALL BE INSPECTED BY A SPECIAL INSPECTOR AS PER THE FLORIDA BUILDING CODE 2020.	
STRUCTURAL LUMBER	
1. ALL WOOD FRAMING MEMBERS AND PRE-FAB WOOD TRUSSES SHALL BE FABRICATED IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATIONS (NDS) FOR WOOD CONSTRUCTION, LATEST ADDITION.	
2. WOOD SIZES SHOWN ARE NOMINAL U.N.O.	
3. MOISTURE CONTENT SHALL BE 19% OR LESS.	
4. ALL MEMBERS SHALL BE FREE OF CRACKS, SPLITS, KNOTS, AND OTHER DEFORMATIONS.	
5. ALL LUMBER EXPOSED TO WEATHER AND IN DIRECT CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED WITH AN APPROVED PROCESS IN ACCORDANCE WITH AMERICAN WOOD PROTECTION ASSOCIATION STANDARDS.	
6. ALL LUMBER IN CONTACT WITH THE GROUND SHALL BE APPROVED PRESERVATIVE TREATED WOOD SUITABLE FOR GROUND CONDITIONS.	
7. FOR PRESURE TREATED LUMBER, CUT ENDS OF LUMBER SHALL BE FIELD TREATED WITH AN APPROVED PRESERVATIVE SUCH AS COPPER NAPHTHENATE.	
8. PILOT HOLES SHALL BE DRILLED WHERE SCREWS ARE TO BE INSTALLED NEAR EDGES OF WOOD TO AVOID SPLITTING.	
9. FASTENERS AND CONNECTORS EXPOSED TO SALT WATER OR LOCATED WITHIN 300 FEET OF SALT WATER SHORELINE SHALL BE STAINLESS STEEL GRADE 304 OR 316.	
10. ALL EXTERIOR WOOD CONNECTORS SHALL BE HOT DIPPED GALVANIZED U.N.O.	
11. BEAM SPLICES SHALL OCCUR AT THE CENTERLINE OF SUPPORT LOCATIONS.	
12. EACH SEGMENT OF DECKING MUST BEAR ON A MINIMUM OF FOUR SUPPORT MEMBERS.	
FOUNDATION	
1. GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SHORING, SHEATHING AND BRACING OF EXCAVATIONS.	
2. IN NO CASE SHALL TRUCKS, BULLDOZERS OR OTHER HEAVY EQUIPMENT BE PERMITTED WITHIN 8'-0" FROM ANY FOUNDATION WALL UNLESS APPROVED BY THE ENGINEER OF RECORD.	
3. ALL FOUNDATION EXCAVATIONS SHALL B BE KEPT DRY. FOUNDATION CONCRETE SHALL BE POURED ONLY UNTIL EXCAVATIONS ARE COMPLETELY DRY.	
4. CENTERS OF COLUMNS SHALL COINCIDE WITH CENTERS OF FOOTINGS UNLESS OTHERWISE NOTED IN FOUNDATION PLANS AND FLOORING DETAILS.	
5. TOP OF FOUNDATION ELEVATIONS SHOWN IN PLAN ARE BASED ON THE BEST AVAILABLE INFORMATION GATHERED FROM SOIL BORINGS. SOIL CONDITIONS ENCOUNTERED DURING FOUNDATION EXCAVATION MIGHT INDICATE TOP OF FOUNDATION ELEVATION TO BE LOWERED IN ORDER TO EMBED FOUNDATIONS INTO SUPPORTING SOILS.	
6. FOUNDATIONS MAY BE EARTH-FORMED IF SOIL CONDITIONS PERMIT. EXCAVATE TO EXACT FOUNDATION SIZES.	
7. FOUNDATION EXCAVATIONS SHALL BE INSPECTED BY THE ENGINEER OF RECORD AND GEOTECHNICAL ENGINEER AND NO FOUNDATION SHALL BE POURED UNTIL GEOTECHNICAL ENGINEER CERTIFIES THAT SOIL CONDITIONS ARE AS PER GEOTECHNICAL REPORT.	
8. TERRAIN SURROUNDING FOUNDATION WALLS SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.	
EARTHWORK	
1. CONTRACTOR SHALL VERIFY LOCATION OF ALL BURIED UTILITIES PRIOR TO EXCAVATION AND NOTIFY THE ENGINEER OF RECORD OF THE LOCATION OF ALL UNKNOWN UTILITIES DISCOVERED DURING CONSTRUCTION.	
2. CONTRACTOR SHALL DEWATER SITE AS NECESSARY SO THAT ALL CONCRETE CAN BE PLACED IN THE DRY. ALL BACKFILL SHALL BE ACCOMPLISHED USING MATERIAL CONSISTING OF CRUSHED STONE AND/OR MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER. THE BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557.	
3. NO BACKFILL MATERIAL SHALL BE PLACED AGAINST ANY WALLS WHICH DO NOT HAVE PERMANENT FLOORS AT THE TOP AND BOTTOM WITHOUT PROVISIONS FOR ADEQUATE TEMPORARY BRACING OF THOSE WALLS.	
4. PROVIDE EXCAVATION SHORING, SHEATHING, AND BRACING IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER RECOMMENDATIONS.	
5. PROVIDE ANY BRACING OR SHORING AS REQUIRED IN ORDER TO PREVENT SETTLEMENT OR DISPLACEMENT OF ADJACENT EXISTING FOUNDATIONS AND/OR STRUCTURES.	
6. CONSTRUCTION SHALL NOT BE PLACED ON EXPANSIVE SOIL (EXPANSION INDEX GREATER THAN 20), LIQUEFIABLE SOILS OR OTHER QUESTIONABLE SOILS, UNLESS THE SOIL HAS BEEN SPECIALLY PREPARED IN ACCORDANCE WITH RECOMMENDATIONS BY A CIVIL OR GEOTECHNICAL ENGINEER.	
7. THE GEOTECHNICAL ENGINEER SHALL INSPECT ALL SUBGRADE PREPARATION WORK PRIOR TO THE PLACEMENT OF ANY REINFORCING STEEL OF CONCRETE AND SHALL PERFORM TESTS AS NECESSARY TO VERIFY THAT SUCH WORK IS IN CONFORMANCE WITH THE RECOMMENDATIONS PROVIDED IN THE SOILS REPORT.	
8. SOIL COMPACTION SHALL BE INSPECTED BY A SPECIAL INSPECTOR AS PER THE FLORIDA BUILDING CODE.	
SOIL STATEMENT	
1. THE SOILS AT THIS SITE ARE ASSUMED TO BE SAND AND ROCK WITH A MINIMUM 2,000 PSF ALLOWABLE SOIL BEARING CAPACITY. SHOULD OTHER CONDITIONS OR MATERIALS BE ENCOUNTERED, THE ENGINEER OF RECORD SHALL BE NOTIFIED. DESIGN PROFESSIONAL (EITHER THE AOR, THE EOR, OR A GEOTECHNICAL ENGINEER) WILL PROVIDE A SIGNED-AND-SEALED LETTER TO THE BUILDING OFFICIAL VERIFYING THAT THE IN-SITU SOIL CONDITIONS ARE ADEQUATE TO SUPPORT THE ASSUMED BEARING CAPACITY INDICATED ON THE DRAWINGS.	
TERMITE PROTECTION	
G.C. TO PROVIDE A CERTIFICATE OF COMPLIANCE FOR THE TREATMENT FOR THE PROTECTION OF SUBTERRANEAN TERMITES. CERTIFICATE TO BE BY A LICENSED PEST CONTROL COMPANY THAT CONTAINS THE FOLLOWING STATEMENT: "THE BLDG HAS RECEIVED A COMPLETE TREATMENT FOR THE PREVENTION OF SUBTERRANEAN TERMITES. TREATMENT IS IN ACCORDANCE WITH THE RULES AND LAWS ESTABLISHED BY THE FLORIDA DEPT. OF AGRICULTURE AND CONSUMER SERVICES." PROVIDE CERTIFICATE AT TIME OF SLAB INSPECTION. INSTALL PERMANENT SIGN AT ELEC PANEL LISTING TERMITE TREATMENT PROVIDER, RE-INSPECTION DATE AND CONTRACT RENEWAL.	
TOLERANCES	
1. ALL STRUCTURAL SURFACES SHALL BE BUILT TRUE AND PLUMB. CONSTRUCTION TOLERANCE SHALL CONFORM TO ACI STANDARDS AS SET FORTH IN THE MANUAL OF CONCRETE PRACTICE. MINIMUM	
TOLERANCE SHALL BE AS FOLLOWS:	
A. VARIATIONS FROM PLUMB:	
A.1 IN THE LINE SURFACES OF COLUMNS, PIERS, WALLS, AND IN AREAS AS FOLLOWS: IN ANY 10 FEET OF LENGTH 1/4 INCH MAXIMUM FOR ENTIRE LENGTH 1 INCH	
A.2 FOR EXPOSED CORNER COLUMNS, CONTROL JOINTS, GROOVES AND OTHER LINEIS: IN ANY 20 FEET OF LENGTH 1/4 INCH MAXIMUM FOR ENTIRE LENGTH 1 INCH	
B. VARIATION FROM THE LEVEL OR FROM THE GRADES INDICATED ON THE DRAWINGS:	
B.1 IN SLAB SOFFITS, CEILINGS, BEAM SOFFITS AND IN AREAS AS FOLLOWS: IN ANY 10 FEET OF LENGTH 1/4 INCH IN ANY BAY OR IN ANY 20 FEET OF LENGTH 3/8 INCH MAXIMUM FOR ENTIRE LENGTH 1 INCH	
B.2 IN EXPOSED LINTELS, SILLS, PARAPETS, HORIZONTAL GROOVES AND OTHER LINEIS: IN ANY 20 FEET OF LENGTH 1/4 INCH MAXIMUM FOR ENTIRE LENGTH 1/2 INCH	
2. CONCRETE MASONRY UNITS MORTAR JOINT THICKNESS A. BEDJOINT: + 1/8 INCH B. HEAD JOINT: -1/4 INCH, +3/8 INCH C. COLLAR JOINT: -1/4 INCH, +3/8 INCH	
DISCLAIMER	
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CASTRO RESIDENCE

STRUCTURAL NOTES

12715 ROLLING ROAD DRIVE
PINECREST, FL 33156

PREPARED BY: AA

CHECKED BY: NAC

REV	DATE	DESCRIPTION
0	10/03	BASED FOR BIDS COST REVIEW

SCALE: NTS

JOB NO.: 22-PRO-0020

SHEET NO:
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REV:
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