G E N E R A L   N O T E S

03300 CAST-IN-PLACE CONCRETE (CONT.):

CEMENT SHALL CONFORM TO ASTM C150, TYPE II. AGGREGATE PER ASTM C33. LIGHTWEIGHT AGGREGATE PER ASTM C330. DO NOT TAMP SLABS (USE ROLLER BUG, VIBRATING SCREED OR BULL FLOAT ONLY). PROVIDE AIR-ENTRAINING ADMIXTURE AT ALL EXPOSED CONCRETE AT A RATE ADEQUATE TO PROVIDE 5.0% AIR AT POINT OF PLACEMENT, TESTED IN ACCORDANCE WITH ASTM C233.

CONCRETE CONTAINING SUPERPLASTICIZING ADMIXTURE SHALL HAVE FIELD-VERIFIED 3" MAXIMUM SLUMP PRIOR TO ADDING ADMIXTURE AND 8" MAXIMUM SLUMP AT PLACEMENT. MIX DESIGNS SHALL BE DESIGNED BY THE CONCRETE PRODUCTION FACILITY IN ACCORDANCE WITH ACI 301 AND APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONSIDER THE USE OF SUPERPLASTICIZER WHERE CONGESTION OF REBAR IS LIKELY TO CAUSE ROCK POCKETS OR VOIDS. THE CEMENT FOR THE MIX SHALL BE TYPE II. THE RATE OF PLACING SUCH CONCRETE SHALL BE REDUCED OR THE FORM STRENGTH SHALL BE INCREASED TO SAFELY RESIST INCREASED PRESSURE AGAINST THE FORMS. DO NOT USE WITH COLORED CONCRETE.

FIBER MESH REINFORCEMENT IN SLABS ON GRADE (IF USED) SHALL CONFORM TO ASTM C 1116, TYPE III, SYNTHETIC FIBERS OF 100 PERCENT VIRGIN POLYPROPYLENE FIBRILLATED FIBERS CONTAINING NO REPROCESSED OLEFIN MATERIALS; 70 KSI. PROVIDE MINIMUM OF 1.5 POUNDS OF FIBERS PER CUBIC YARD OF CONCRETE USED.

NO CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE INSTALLED WITHOUT APPROVAL OF THE ENGINEER. PROVIDE 3/4" CHAMFER AT ALL CORNERS, U.N.O.

CONCRETE SHALL NOT BE DROPPED MORE THAN FIVE FEET VERTICALLY WITHOUT USE OF TREMIES.

CONCRETE FOOTINGS AND PADS MAY BE POURED AGAINST NEAT EXCAVATIONS PROVIDED THE REQUIRED CONCRETE COVERAGE FOR REINFORCING IS MAINTAINED. CONCRETE WALLS AND COLUMNS SHALL BE DOWELED FROM SUPPORTS WITH BARS OF THE SAME SIZE AND SPACING. SEE 'REINFORCING STEEL" FOR LAP REQUIREMENTS.

OPENINGS, POCKETS, BLOCKOUTS, ETC. SHALL NOT BE PLACED IN CONCRETE SLABS, DECKS, BEAMS, JOISTS, COLUMNS, WALLS ETC. UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS PREPARED BY OTHERS SHOW OPENINGS, POCKETS, BLOCKOUTS, ETC. THAT ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS. DO NOT PROCEED UNTIL DIRECTED BY THE ENGINEER IN WRITING.

PROVIDE 1/2" PREFORMED JOINT FILLER WHERE EXTERIOR SLABS ABUT VERTICAL SURFACES, TYPICAL U.N.O. COORDINATE WITH ARCHITECT.

MECHANICALLY VIBRATE ALL CONCRETE WHEN PLACED, EXCEPT THAT SLABS ON GRADE NEED BE VIBRATED ONLY AROUND EMBEDDED ITEMS AND UNDERFLOOR DUCTS, ETC. CAST CLOSURE POUR AROUND COLUMNS AFTER COLUMN DEAD LOAD IS APPLIED.

CONCRETE WHICH HAS CONTAINED WATER FOR MORE THAN 90 MINUTES (60 MINUTES IF AIR TEMPERATURE EXCEEDS 85°) SHALL NOT BE USED. RETEMPERING OF CONCRETE AFTER INITIAL SET HAS OCCURRED IS NOT PERMITTED.

CURE EXPOSED CONCRETE FOR A MINIMUM OF 7 DAYS IN ACCORDANCE WITH ACI 308, ACI 360 AND ACI 302.1 PROCEDURES IN ORDER TO PREVENT SHRINKAGE CRACKING. CURE WITH CURING AND SEALING COMPOUND, MOIST CURING, MOISTURE-RETAINING COVER CURING, OR COMBINATIONS THEREOF. IF CURING COMPOUND IS USED, APPLY AT A RATE SPECIFIED BY THE MANUFACTURER, BUT NOT LESS THAN I GALLON PER 200 SQUARE FEET OF SURFACE AREA.

CONCRETE COMPRESSIVE STRENGTH AND SLUMP SHALL BE TESTED PER ASTM C31, C39 AND C172 AND IN ACCORDANCE WITH IBC SECTION 1905. FOR EACH CLASS OF CONCRETE USED PROVIDE 4 CYLINDERS PER TEST FOR EACH DAY'S CONCRETE PLACEMENT NOR LESS THAN ONE TEST FOR EACH 50 CUBIC YARDS OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5,000 SQUARE FEET OF SURFACE AREA FOR SLABS OR WALLS (NOTE: ALL CONCRETE EXCEPT CURBS AND SIDEWALKS SHALL BE TESTED). TEST ONE CYLINDER AT 7 DAYS AND TWO AT 28 DAYS, WITH ONE HELD. TESTING SHALL BE DONE BY A QUALIFIED TESTING LABORATORY.

ALL HOT WEATHER CONCRETING SHALL MEET THE REQUIREMENTS OF ACI 305; AND ACI 306 FOR COLD WEATHER CONCRETING.

AT MOISTURE SENSITIVE FLOORINGS, TO HELP RESIST BELOW-SLAB MOISTURE ENTERING THE SLAB, THE CONCRETE MIX SHALL HAVE A MAXIMUM 0.45 WATER TO CEMENT RATIO AND SHALL INCLUDE A WATER-REPELLENT ADMIXTURE (SUCH AS RHEOMIX 235 BY MASTER BUILDERS, DARAPEL BY GRACE PRODUCTS OR EQUIVALENT; WITH DOSAGE PER MANUFACTURER). DISCLAIMER: THE STRUCTURAL ENGINEER IS NOT AN EXPERT IN THE FIELD OF MOISTURE RETARDENT SLABS AND SYSTEMS THAT RELATE TO PREVENTING BELOW-SLAB MOISTURE PENETRATING THE SLAB AND IS THEREBY NOT RESPONSIBLE FOR ANY POSSIBLE MOISTURE THAT MAY PENETRATE THE SLAB (THE STRUCTURAL ENGINEER DOES NOT GUARANTEE THE WATER REPELLING ADMIXTURE WILL PREVENT ALL OR ANY BELOW-SLAB MOISTURE FROM ENTERING THE SLAB.

THE FLOOR SLAB SHALL BE PLACED WITH A VIBRATORY SCREED USING A LASER LEVEL TO ACCOMPLISH A FINISH WITH CLASS A TOLERANCE; HAVING TRUE PLANES WITHIN 1/4 INCH IN 10 FEET, AS DETERMINED BY A 10 FOOT STRAIGHTEDGE PLACED ANYWHERE ON THE SLAB IN ANY DIRECTION. BEFORE INSTALLING THE FLOOR COVERING, (MINIMUM OF 28 DAYS AFTER FLOOR SLAB IS PLACED) ALL JOINTS SHALL BE INSPECTED / MEASURED FOR SLAB CURL, AND JOINTS NOT MEETING SPECIFICATIONS SHALL BE GROUND FLAT, PRIOR TO ACCEPTANCE OF SLAB BY THE ARCHITECT. (NOTE: THE COST FOR GRINDING SHALL BE CARRIED AS AN ALLOWANCE BY THE GENERAL CONTRACTOR WITH THE GRINDING BEING PERFORMED UNDER THE DIRECTION OF THE SUB - CONTRACTOR).

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03610 ADHESION & EXPANSION ANCHORS

ANCHORING ADHESIVE SHALL BE A TWO COMPONENT 100 % SOLIDS EPOXY BASED SYSTEM SUPPLIED IN MANUFACTURER'S STANDARD SIDE-BY-SIDE CARTRIDGE AND DISPENSED THROUGH A STATIC-MIXING NOZZLE SUPPLIED BY THE MANUFACTURER. EPOXY SHALL MEET THE MINIMUM REQUIREMENTS OF ASTM C-881 SPECIFICATIONS FOR TYPE I, II, IV, AND V, GRADE 3, CLASS B AND C AND MUST DEVELOP A MINIMUM 12650 PSI COMPRESSIVE YIELD STRENGTH AFTER 7 DAYS CURE. ADHESIVE MUST HAVE DADE COUNTY NOTICE OF ACCEPTANCE. UNLESS OTHERWISE INDICATED ON DRAWING ANCHORS MUST BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. UNLESS OTHERWISE INDICATED ON DRAWINGS ANCHORS SPACING, AND EMBEDMENT EQUAL TO 9 TIMES THE ANCHOR DIAMETER, AND EDGE DISTANCE OF 1.5 TIMES THE EMBEDMENT MUST BE PROVIDED.

DIAMETER OF HOLE SHALL BE 1/16 INCH LARGER THAN DIAMETER OF ANCHOR BOLT AND 1/8 INCH LARGER THAN DIAMETER OF REINFORCING BAR.

EXPANSION ANCHORS MUST BE A THREADED STUD WITH AN INTEGRAL CONE EXPANDER AND A SINGLE PIECE EXPANSION CLIP. THE STUD SHALL BE CARBON STEEL WITH A MINIMUM 70,000 PSI TENSILE STRENGTH, OR TYPE 303, 304 OR 316 STAINLESS STEEL, AS CALLED FOR ON THE DRAWINGS. ANCHORS SHALL MEET FEDERAL SPECIFICATION A-A-1923A,TYPE 4. UNLESS NOTED OTHERWISE ON DRAWINGS, EXPANSION BOLTS MUST BE KWIK BOLT FROM HILTI WITH DADE COUNTY NOTICE OF ACCEPTANCE #06-0810.13. FOLLOW ALL MANUFACTURER'S SPECIFICATIONS FOR INSTALLATION. UNLESS NOTED ON DRAWINGS THE EMBEDMENT MUST BE 9 TIMES THE ANCHOR DIAMETER, THE MINIMUM EDGE DISTANCE TO BE 12 ANCHOR DIAMETER AND THE CENTER TO CENTER SPACING OF ANCHORS MUST BE TWO TIMES THE EDGE DISTANCE.

IN ALL CASE, ANCHORS MUST HAVE LENGTH IDENTIFICATION HEAD MARKS.
CONTRACTOR MUST PROVIDE WITH LOAD PROOF INDICATOR KIT FOR VERIFICATION OF BOLTS CAPACITY. LOCATION AND QUANTITY OF BOLTS TO BE TESTED WILL BE AT THE INSPECTOR'S OPTION. IN NO CASE LESS THAN ONE BOLT PER SIZE, PER APPLICATION.

04220 CONCRETE MASONRY UNIT:

ALL MASONRY CONSTRUCTION TO BE IN ACCORDANCE WITH "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" ACI 530-11 AND STRUCTURES", ACI 530.1 AND ALL APPLICABLE LOCAL BUILDING CODE PROVISIONS. ALL MASONRY WALLS TO BE CONSTRUCTED ENTIRELY OF UNITS CONFORMING TO ASTM C 90, AND REINFORCED WITH #9 GAGE LADDER TRUSS TYPE HORIZONTAL MASONRY REINFORCING LOCATED AT 16" O.C.. FOR TIE-BEAM/TIE COLUMNS OR UNREINFORCED MASONRY, AND LADDER TYPE FOR REINFORCED MASONRY.

ALL MASONRY TO BE LAID IN TYPE "M" MORTAR (AVERAGE COMPRESSIVE STRENGTH AT 28 DAYS OF 2500 PSI ON THE JOB) WITH FULL HEAD AND BED JOINTS. ALL MASONRY CONSTRUCTION TO BE EITHER BOUND BY TIE BEAM, TIE COLUMN MEMBERS AND TIED TO FRAME BY EXTENDING HORIZONTAL JOINT REINFORCING A MINIMUM OF 4" INTO CONCRETE TIE-COLUMN. PROVIDE 12 GAGE GALVANIZED DOVETAIL TRIANGULAR TIES (BY DUR-O-WALL OR EQUIVALENT) AT 16" O.C. WHERE CONCRETE FRAME IS PLACED PRIOR TO MASONRY, UNLESS NOTED OTHERWISE IN DRAWINGS.

WHERE ANCHOR BOLTS ARE SET IN MASONRY WALL, FILL BLOCK CELLS WITH GROUT FOR BOLTED COURSE, ONE COURSE ABOVE AND TWO BELOW ANCHOR ELEVATION.

MASONRY COMPRESSIVE STRENGTH, F'm SHALL BE 2000 PSI.
NET AREA COMPRESSIVE STRENGTH OF CONCRETE UNITS SHALL BE 2800 PSI
VERIFICATION THROUGH TEST OF MASONRY COMPRESSIVE STRENGTH MUST BE PERFORMED PRIOR TO CONSTRUCTION AND EVERY 5000 SQUARE FEET DURING CONSTRUCTION.

REINFORCED MASONRY LEGEND

8 RM 6 24 EF
- EF — EACH FACE (WHERE APPLICABLE)
- 24 — MAXIMUM CENTER TO CENTER SPACING
- 6 — VERTICAL REINFORCING BAR SIZE
- RM — REINFORCED MASONRY
- 8 — NOMINAL MASONRY UNIT THICKNESS

04230 REINFORCED UNIT MASONRY:

ALL REINFORCED MASONRY CONSTRUCTION SHALL BE IN ACCORD WITH APPLICABLE PROVISIONS OF CONCRETE REINFORCEMENT, CAST-IN-PLACE CONCRETE, AND CONCRETE MASONRY. VERTICAL REINFORCING SHALL ANCHOR INTO SUPPORTING CONCRETE MEMBERS A TENSION LAP PER SECTION 3200 PLUS 3" OR FULL DEPTH PLUS A STANDARD HOOK. LAPS WITHIN REINFORCED MASONRY SHALL BE 48 BAR DIAMETERS. CONTRACTOR SHALL COORDINATE PLACING OF DOWELS TO ACCOMMODATE MODULE OF MASONRY UNITS. ALL VERTICAL CELLS AND BEAMS WITH REINFORCING SHALL BE FILLED WITH COARSE GROUT CONSISTING OF 3000 PSI CONCRETE WITH #8 COARSE AGGREGATE. GROUT SLUMP TO BE BETWEEN 8" AND 11". USE HIGH-SLUMP (SUPERPLASTICIZED) WHERE HEIGHT OF LIFT EXCEEDS 4'. WHERE HEIGHT OF OPEN CELL EXCEEDS 4', USE HIGH-LIFT GROUTING TECHNIQUE WHICH REQUIRES A CLEAN-OUT OPENING AT THE BOTTOM OF ALL REINFORCED CELLS AND PLACING THE GROUT IN MAXIMUM 4' LIFTS WITH A 30 TO 60 MINUTE DELAY BETWEEN LIFTS.
ALL WALL CORNERS SHALL BE MASONRY BONDED.
HORIZONTAL JOINT REINFORCEMENT FOR REINFORCED MASONRY SHALL BE LADDER TYPE #9 GAGE AT 16" O/C VERTICALLY. EXTENDED AT LEAST 4" INTO CONCRETE COLUMNS.

SEE DETAILS AND NOTES ON DRAWINGS FOR SIZE AND SPACING OF REINFORCING BARS (IN NO CASE SHALL WALLS HAVE LESS THAN #5 VERTICAL BARS AT 48 INCHES O.C. IN 8" CMU WALL,) LAP SPLICES OF REINFORCING IN MASONRY AS NOTED BELOW, UNLESS NOTED OTHERWISE.
TIE ALL VERTICAL BARS AT 5'-0" MAXIMUM VERTICALLY WITH SINGLE WIRE LOOP TIE BY A.A. PRODUCTS COMPANY. PROVIDE VERTICAL DOWELS FROM FOOTINGS CONTINUOUS THROUGH STEM WALLS INTO MASONRY ABOVE. DOWELS SHALL MATCH SIZE AND SPACING OF ALL VERTICAL REINFORCING.
BLACK DOTS ON MASONRY WALLS SHOWN ON PLAN DO NOT REPRESENT THE EXACT LOCATION AND/OR QUANTITY OF BARS, BUT RATHER A LEGEND FOR REINFORCED MASONRY. FOR EXACT VERTICAL BARS SPACING AND LOCATIONS SEE NOTES ON PLAN AND DETAILS.
VERTICAL WALL REINFORCEMENT AND COLUMN REINFORCEMENT SHALL PENETRATE INTO BOND BEAMS AND TERMINATE ONTO A STANDARD HOOK AT THE 2" FROM TOP OF WALLS. EXTEND ALL HORIZONTAL BOND BEAM REINFORCING IN MASONRY CONTINUOUS AROUND CORNERS AND INTERSECTIONS OR PROVIDE BENT CORNER BARS TO MATCH AND LAP HORIZONTAL BOND BEAM REINFORCING AT CORNERS AND INTERSECTIONS.

ALL REINFORCING IN MASONRY SHALL BE ACCURATELY LOCATED PRIOR TO GROUTING AND THE POSITION MAINTAINED DURING GROUTING. CONTRACTOR TO PROVIDE A 4" CLEAN OUT ON TOP OF FOOTING AND ON TOP OF BEAMS (AT SPLICES). IF WALL IS TALLER THAN 10' TO NEXT FLOOR OR BOND BEAM, THEN A 2" INSPECTION HOLE MUST BE PROVIDED AT MID-HEIGH. MINIMUM LAP SPLICES IN MASONRY SHALL BE AS FOLLOWS:

GRADE 60 BARS
- 1 BAR/CELL 48 BAR DIAMETER
- 2 BAR/CELL 63 BAR DIAMETER AT 8" CMU WALL
- 2 BAR/CELL 48 BAR DIAMETER AT 12" CMU WALL

VERTICAL BAR POSITIONER MUST BE PROVIDED TO ENSURE PROPER LOCATION OF THE REBAR AS INDICATED ON DRAWINGS, AS REQUIRED BY ACI 530-13. VERTICAL CELLS TO BE GROUTED SHALL PROVIDE VERTICAL ALIGNMENT, SUFFICIENT TO MANTAIN CLEAR UNOBSTRUCTED CONTINUOUS VERTICAL CORES MEASURING AT LEAST 2x3 INCHES. DO NOT INTERUPT GROUTING FOR MORE THAN ONE HOUR. MECHANICALLY VIBRATE GROUT IN VERTICAL SPACES IMMEDIATELY AFTER POURING AND AGAIN ABOUT 5 MINUTES LATER. RODDING OF GROUT IS NOT ACCEPTABLE.

CONTRACTOR IS RESPONSIBLE FOR BRACING OF WALLS DURING CONSTRUCTION SINCE WALLS ARE NOT STABLE UNTIL FLOORS OR ROOFS HAD BEEN COMPLETED. GROUT AND MORTAR MUST BE TESTED PER ACI 530-13; ACI 530.1 ;ASCE 6 AND TMS 602.

UNLESS NOTED OTHERWISE ON THE DRAWINGS, PROVIDE VERTICAL MASONRY CONTROL JOINTS SUCH THAT NO STRAIGHT RUN OF WALL EXCEEDS 24'-0". COORDINATE LOCATIONS WITH ARCHITECT.

CONTRACTOR SHALL PROVIDE LINTELS AS REQUIRED AT ALL OPENINGS. REFER TO TYPICAL DETAILS AND LINTEL SCHEDULES. NOTE: ALL WALL OPENINGS MAY NOT BE SHOWN ON STRUCTURAL DRAWINGS REFER TO ARCHITECTURAL DRAWINGS. MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL OPENINGS SIZE AND LOCATIONS.

05055 WELDING:

ALL WELDING TO BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) "STRUCTURAL WELDING CODE-STEEL;" D1.1 - 2010 AND AS INDICATED ON THE STRUCTURAL DRAWINGS. WELDING ELECTRODES, WELDING PROCESS, MINIMUM PREHEAT AND INTERPOSE TEMPERATURES TO BE IN ACCORDANCE WITH THE A.W.S. SPECIFICATIONS. ANY STRUCTURAL STEEL DAMAGED IN WELDING TO BE REPLACED OR ACCEPTABLY REINFORCED. ALL FULL PENETRATION GROOVE WELDS TO BE SUBJECT TO RADIOGRAPHIC, MAGNETIC PARTICLE, ULTRASONIC, AND LIQUID PENETRATE INSPECTION CONDUCTED BY AN INDEPENDENT TESTING AGENCY PAID BY THE OWNER.
ONE HUNDRED PER CENT OF ALL FIELD WELDS MUST BE VISUALLY INSPECTED BY AN INDEPENDENT LABORATORY, AND A REPORT SUBMITTED TO SEOR. A MINIMUM OF 20% OF ALL WELDS MUST BE TESTED BY ANY AISC APPROVED METHOD, OTHER THAN VISUAL.

WELDING ELECTRODES SHALL CONFORM TO AWS D1.1, GRADE E70XX. E90 SERIES ELECTRODES SHALL BE USED FOR ASTM A706 REINFORCING BARS. ALL WELDING SHALL BE DONE BY WELDERS HOLDING VALID CERTIFICATES ISSUED BY AN ACCEPTED TESTING AGENCY AND HAVING CURRENT EXPERIENCE IN TYPE OF WELDS SHOWN ON THE DRAWINGS OR NOTES. ALL WELDING PER AMERICAN WELDING SOCIETY STANDARDS. ALL WELDS ON DRAWINGS ARE SHOWN AS SHOP WELDS. CONTRACTOR MAY SHOP WELD OR FIELD WELD AT THEIR DISCRETION. SHOP WELDS OR FIELD WELDS SHALL BE SHOWN ON SHOP DRAWINGS.

ALL WELDS SHALL BE PRE QUALIFIED AND ALL WELDERS AND INSPECTORS SHALL BE INSTRUCTED IN THE WPS AND SHALL RETAIN A COPY.

WPS, AS A MINIMUM, SHALL STATE THE WELD POSITION, ELECTRODE TYPE AND SIZE, TRAVEL SPEED, ELECTRODE STICK-OUT, VOLTAGE AND AMPERAGE WITH ACCEPTABLE LIMITS, BEAD SIZE, WELD SEQUENCE, STRESS RELIEVING, AND OTHER RELEVANT DATA.

WELDERS SHALL BE QUALIFIED FOR THE WORK THEY ARE DOING WITH A CURRENT CERTIFICATION ACCORDING TO THE CHAPTER 5, PART C.

05120 STRUCTURAL STEEL:

ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS". STRUCTURAL STEEL TO CONFORM TO:

- SHAPES ____ ASTM A992
- PLATES ____ ASTM A36
- PIPE ____ ASTM A 53 GRADE B
- TUBES ____ ASTM A 500 GRADE B

ALL SHOP AND FIELD CONNECTIONS SHALL BE MADE WITH WELDING.
ANCHOR RODS (ANCHOR BOLTS) SHALL BE ASTM F1554 GRADE 36 (FY = 36 KSI). ALL ANCHOR BOLTS IN CONCRETE OR CMU SHALL BE TIED IN PLACE PRIOR TO ANY REQURIED INSPECTION.
BOLTS, ANCHOR RODS, EXPANSION BOLTS, ETC., SHALL BE INSTALLED WITH STEEL WASHERS AND TIGHTENED NUTS.
INSPECTION OF CONNECTED PARTS MUST BE AS PER AISC, BUT NOT LESS THAN 100% OF ALL CONNECTED PARTS.

ALL WELDING ELECTRODES SHALL CONSIST OF THE E70-XX TYPE. ANY CONNECTION NOT SPECIFICALLY DETAILED SHALL BE DESIGNED BY THE SPECIALTY ENGINEER FOR THE FORCES SHOWN ON THE STRUCTURAL CONSTRUCTION DOCUMENTS.
WHERE FORCES ARE NOT PROVIDED DESIGN SHALL BE BASED ON THE MAXIMUM LOAD CAPACITIES OF THE CONNECTING MEMBERS.
ALL STRUCTURAL SUBMITTALS REQUIRING ENGINEERING INPUT SHALL BE ACCOMPANIED BY DESIGN CALCULATIONS AND BE SIGNED AND SEALED BY THE SPECIALTY ENGINEER.
ALL STEEL AT AND BELOW FINISHED GRADE TO BE FIELD PAINTED AND COVERED WITH A MINIMUM OF 2" CONCRETE. PROVIDE FABRICATOR'S STANDARD RUST-INHIBITING PRIMER SHOP PAINT FOR ALL STEEL SURFACES THAT WOULD BE EXPOSED TO WEATHER AT ITS FINAL INSTALLATION. SURFACES PERMANENTLY PROTECTED FROM THE WEATHER, ENCASED IN CONCRETE, OR TO RECEIVE SPRAY-APPLIED FIREPROOFING SHALL NOT BE SHOP PAINTED.
DEFORMED BAR ANCHOR STUDS SHALL BE NELSON D2L ASTM A-496 GRANULAR FLUX-FILLED REBAR STUDS OR APPROVED EQUAL MADE FROM LOW CARBON COLD ROLLED STEEL WITH A MINIMUM TENSILE STRENGTH OF 70,000 PSI. STUD WELDING INSPECTION AND TESTING SHALL CONFORM TO AWS D1.1.

06410 PRE-MANUFACTURED PEDESTRIAN GUARDRAILS / HANDRAILS:

THE RAILING MANUFACTURER SHALL BE RESPONSIBLE FOR THE COMPLETE DESIGN AND FABRICATION OF THE RAILS. THE MANUFACTURER SHALL SUBMIT DESIGN CALCULATIONS AND SHOP DRAWINGS FOR ALL GUARDRAILS AND HANDRAILS FOR REVIEW PRIOR TO MANUFACTURE. CALCULATIONS AND SHOP DRAWINGS SHALL BE SEALED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF THE LOCAL JURISDICTION. ALL SHOP MADE ASSEMBLIES SHALL USE STRUCTURAL STEEL PIPES OR TUBES. USE ALL WELDED CONSTRUCTION.

RAILING SHALL BE DESIGNED FOR DEAD, WIND, AND SEISMIC LOADS, AND THE FOLLOWING LIVE LOADS:

HANDRAILS, GUARDRAILS AND VERTICAL RAILS: DESIGNED TO RESIST A UNIFORM LOAD OF 50 PLF APPLIED IN ANY DIRECTION OR A CONCENTRATED LOAD OF 200 POUNDS APPLIED IN ANY DIRECTION. THESE TWO SEPARATE LOADING CASES (UNIFORM AND CONCENTRATED) NEED NOT BE ASSUMED TO ACT CONCURRENTLY. LOADS FROM RAILS SHALL TRANSFER TO THE MAIN BUILDING STRUCTURE
FOR RAIL DIMENSIONS, SEE ARCHITECTURAL DRAWINGS.

THIS SET OF STRUCTURAL DOCUMENTS MUST BE SUBMITTED TO BUILDING DEPARTMENT FOR APPROVAL BEFORE CONSTRUCTION.
THIS SET IS NOT IN ITS FINAL FORM UNTIL IT BEARS THE APPROVAL SEAL FROM THE CORRESPONDING AUTHORITIES AS REQUIRED BY THE BUILDING CODE.
THIS SET OF PLANS IS NOT VALID UNLESS SIGNED AND SEALED BY THE SEOR.

TERMITE PROTECTION.

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 AS A PREVENTATIVE TREATMENT TO NEW CONSTRUCTION. SEE SECTION FBC 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." REFER TO FBC SECTION 1816, CHAPTER 18 FOR ALL TERMITE APPLICATION RELATED INFORMATION AS WELL AS ARCHITECTURAL DRAWINGS..

06190 WOOD TRUSSES:

THIS IS A SYSTEM OF CUSTOM ENGINEERED COMPONENTS AND CONNECTIONS IN ACCORD WITH ALL APPLICABLE STANDARDS OF TRUSS PLATE INSTITUTE, INCLUDING BUT NOT LIMITED TO ANSI/TPI-1 "DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES" AND "INTERIM GUIDELINES", CSP "RECOMMENDED CODE OF STANDARD PRACTICE," HET "HANDLING AND ERECTING WOOD TRUSSES", BWT "BRACING WOOD TRUSSES", QCM "QUALITY CONTROL MANUAL" AND THE DEPARTMENT OF PROFESSIONAL REGULATIONS GUIDELINES. THE ENTIRE SYSTEM INCLUDING ALL TRUSSES, CONNECTORS BETWEEN TRUSSES, BRIDGING, TEMPORARY BRACING FOR ERECTION, SHALL BE DESIGNED BY A SPECIALTY ENGINEER. THE REVIEW OF CALCULATIONS ,TRUSS LAYOUT, CUT SHEETS, AND ALL STRUCTURAL SUBMITTALS BY THE STRUCTURAL ENGINEER OF RECORD SHALL BE TO INSURE THAT HIS INTENT HAS BEEN UNDERSTOOD AND THAT THE SPECIFIED CRITERIA HAVE BEEN USED. TRUSS CALCULATIONS, COMPONENT DRAWINGS, WOOD TO WOOD CONNECTOR CALCULATIONS, AND ERECTION PLANS SHALL BE SIGNED AND SEALED BY TRUSS ENGINEER AND SUBMITTED TO LOCAL BUILDING OFFICIAL FOR APPROVAL. TRUSSES SHALL BE DESIGNED BY SPECIALTY ENGINEER FOR THE LOADS INDICATED ON PLAN AND AN ADDITIONAL CONCENTRATED LOAD OF 200 LBS. AT ANY BOTTOM CHORD PANEL POINT. IN THE ABSENCE OF LOADS, USE APPLICABLE LOCAL CODE FOR LIVE LOAD AND ACTUAL WEIGHT OF BUILDING MATERIALS FOR DEAD LOAD. APPLY NET WIND UPLIFT ON ROOFS WHEN APPLICABLE USING COMPONENTS AND CLADDING COEFFICIENTS. CONNECTORS TO CONCRETE OR STEEL SUPPORT MEMBERS AS WELL AS CONNECTIONS TO LEDGER MUST BE AS SPECIFIED ON STRUCTURAL DRAWINGS. ALL WOOD TO WOOD CONNECTORS MUST BE DESIGNED FOR GRAVITY AND UPLIFT LOADS USING COMPONENTS AND CLADDING COEFFICIENTS AND NOT MWFRS. ALL MEMBERS, INCLUDING JACKS MUST BE CONNECTED BY METAL CLIPS OR HANGERS, NAILING ALONE IS NOT PERMITTED REGARDLESS OF LOADING MAGNITUDE. FOR TRUSS GIRDERS, MINIMUM NUMBER OF PLIES MUST BE AS INDICATED ON THIS SET OF STRUCTURAL DRAWINGS REGARDLESS OF TRUSS DESIGN. ANY ADDITIONAL CONNECTOR INDICATED ON STRUCTURAL DRAWINGS MUST BE PROVIDED REGARDLESS OF LOADING REQUIREMENT ON TRUSS SHOP DRAWINGS.SPECIFIC TRUSS MEMBERS SIZES MIGHT BE REQUIRED FOR CONNECTION PURPOSES. REFER TO DETAILS. TOTAL TRUSS LOADING INDICATED ON BUILDING CODE, ARE MINIMUM LOADS,HOWEVER TRUSSES MUST BE DESIGNED FOR LOADS INDICATED ON THIS FULL SET OF DRAWINGS INCLUDING ARCHITECTURAL , PLUMBING AND MECHANICAL DRAWINGS. TRUSS TOP CHORDS SHALL BE GROUP II SPECIES LUMBER. EXPOSED TO VIEW TRUSSES SHALL BE OF SELECT STRUCTURAL GRADE. ALL OTHER GRADE AND SPECIES SELECTION IS THE DISCRETION OF THE SUPPLIER. COORDINATE ALL TRUSS DETAILS WITH ARCHITECTURAL DRAWINGS. FOR CONCEALED TO VIEW TRUSSES, WEB CONFIGURATIONS WHERE SHOWN ARE SUGGESTIONS AND MAY BE MODIFIED BY THE SUPPLIER FOR ECONOMY. PROVIDE 60 DUROMETER 1/4" THICK NEOPRENE PADS BETWEEN TRUSSES AND CONCRETE OR MASONRY BEARING SURFACES. PROVIDE GALVANIZED HURRICANE ANCHORS DESIGNED FOR NET WIND UPLIFT AT ALL BEARINGS. TRUSS LAYOUT SHOWN ON STRUCTURAL DRAWINGS INCLUDING ALL GIRDERS MAY NOT BE MODIFIED, SINCE ANY VARIATION FROM THESE DRAWINGS WILL REQUIRED RESUBMITTAL OF REVISED STRUCTURAL DRAWINGS. IF SPECIALTY ENGINEER / TRUSS MANUFACTURER DETERMINES THAT A DIFFERENT LAYOUT COULD BE MORE ECONOMICAL, THIS MUST BE COMMUNICATED IN WRITING WITH PRELIMINARY DRAWINGS TO ARCHITECT / ENGINEER BEFORE PROCEEDING WITH PREPARATION OF SHOP DRAWINGS. ANY CHANGES TO STRUCTURAL DRAWINGS MUST BE RESUBMITTED TO BUILDING DEPARTMENT FOR APPROVAL PRIOR TO TRUSSES INSTALLATION. COST FOR MODIFYING GFCE'S DRAWINGS TO BE CARRIED BY CONTRACTOR. WOOD TRUSS MANUFACTURER MUST ENSURE THAT CHORDS AND HEEL SIZES OF ALL TRUSSES CAN ACCOMMODATE THE STRAPS FOR THE AMOUNT OF NAILS INDICATED ON THESE DRAWINGS FOR THE UPLIFT & GRAVITY LOADS SPECIFIED ON THESE DRAWINGS. ERECTION SHALL BE IN ACCORDANCE WITH TPI/WTCA BCSI-1 IN ADDITION TO ANY OTHER REQUIREMENTS INDICATED ON APPROVED PERMIT DOCUMENTS.

STRESS INCREASE IS ALLOWED IN THE DESIGN OF THE WOOD MEMBERS, HOWEVER NO STRESS INCREASE IS ALLOWED IN THE DESIGN OF THE TRUSS CONNECTING METAL PLATES.

06120 STRUCTURAL SHEATHING:

ALL PLYWOOD SHALL CONFORM TO CURRENT PRODUCT STANDARD PS1, OR APA PRP-108 AND HAVE AN EXTERIOR OR EXPOSURE 1 DURABILITY CLASSIFICATION, AND SHALL BEAR THE STAMP OF AN ICC APPROVED TESTING AGENCY. LAY UP SHEETS WITH LONG DIMENSION PERPENDICULAR TO SUPPORTS AND STAGGER JOINTS. ON ROOFS WHERE PLYWOOD IS LAID UP WITH THE LONG DIMENSION PARALLEL TO SUPPORTS, USE A MINIMUM OF 5-PLY PLYWOOD. AT ROOFS PROVIDE 2X WOOD BLOCKING AT ALL UNSUPPORTED EDGES. ALL NAILING SHALL BE WITH COMMON NAILS. ALL PLYWOOD SHALL BE OF THE MINIMUM THICKNESS INDICATED IN PLANS, AND SHALL BE NAILED PER PLAN.

ALL WOOD COMMON NAILS, RING SHANK NAILS, SPIKES OR SCREWS MUST COMPLY WITH ASTM F-1667 STANDARD FOR DRIVEN FASTENERS: NAILS,SPIKES.

INDEX TO STRUCTURALS DRAWINGS.

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NOTE: ALL DRAWINGS FOR THIS PROJECT ARE TO BE READ IN CONJUNCTION WITH EACH OTHER. THESE INCLUDE, BUT ARE NOT LIMITED TO: ARCHI- TECTURAL, SURVEYING, STRUCTURAL, CIVIL, MECHANICAL, ELECTRICAL, SPECIALITY DRAWINGS, & WRITTEN SPECIFICATIONS

THE G.C. IS TO VERIFY ALL EXISTING SITE CONDITIONS AND THOROUGHLY CHECK ELEVATIONS & DIMENSIONS BEFORE COMMENCING WORK. REPORT TO THE ARCHITECT OR ENGINEER ANY DISCREPANCIES, ERRORS OR CONDITIONS THAT WILL ALTER CONSTRUCTION AS INTENDED BY THESE DRAWINGS. ARCHITECT IS NOT RESPONSIBLE FOR ANY WORK AND/OR MATERIALS FURNISHED ON THE JOB.

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