



Facilities Management  
 1161 West Samford Avenue  
 Auburn University, AL 36849  
 Phone: (334) 844-4810  
 Fax: (334) 844-9458  
*Safety is our first priority.  
 Think Safety. Act Safely.*

No.	Revision	Date



JMR+H  
 Architecture, PC  
 445 Dexter Avenue  
 Suite 6050  
 Montgomery, AL 36104  
 Phone (334) 420-6672  
 Fax (334) 420-6662  
 JMR+H Project Number: 19-968  
 Drawn By: DT

Auburn University Building  
 Ham Wilson Arena  
 Renovations  
 Project Number 19-451

SHEET TITLE:  
 GENERAL NOTES

DRAWN BY:  
 BRH  
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**S1.0**  
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**GN. GENERAL**

GN.1 THE STRUCTURAL DRAWINGS AND SPECIFICATIONS ARE A PORTION OF THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR AND SUBCONTRACTORS SHALL REFERENCE AND COORDINATE WITH ALL OTHER DISCIPLINES' DRAWINGS. ANY DISCREPANCIES OR OMISSIONS SHALL BE REPORTED TO THE STRUCTURAL ENGINEER AND ARCHITECT.

**GN.2 DESIGN CRITERIA:**

- A. CODES AND SPECIFICATIONS:**
- GENERAL BUILDING CODE: INTERNATIONAL BUILDING CODE, 2015 EDITION.
  - DESIGN LOAD CRITERIA: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, AMERICAN SOCIETY OF CIVIL ENGINEERS, ASCE 7
  - CONCRETE: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, AMERICAN CONCRETE INSTITUTE, ACI 318.
  - STEEL DECK: STEEL DECK INSTITUTE DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, ROOF DECKS AND CELLULAR METAL FLOOR DECK WITH ELECTRICAL DISTRIBUTION.
  - COLD-FORMED METAL FRAMING: NORTH AMERICAN SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, AMERICAN IRON AND STEEL INSTITUTE.
  - MASONRY: BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, TMS 402/ACI 530/ASCE 5. SPECIFICATION FOR MASONRY STRUCTURES, TMS 602/ACI 530.1/ASCE 6.
- B. DESIGN LOADS (PSF):**
- DEAD LOADS: ANY CHANGES IN CONSTRUCTION MATERIALS FROM THOSE SHOWN ON THE ARCHITECTURAL OR STRUCTURAL DRAWINGS SHALL BE REPORTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER FOR VERIFICATION OF LOAD-CARRYING CAPACITY OF THE STRUCTURE.
  - LIVE LOADS: CLASSROOMS-----40+15  
 LIVE LOAD REDUCTIONS HAVE BEEN APPLIED IN ACCORDANCE WITH THE BUILDING CODE, UNLESS NOTED.  
 PARTITION LIVE LOAD OF 15 PSF HAS BEEN ADDED WHERE NOTED "+15" ABOVE.

**GN.3 EXISTING CONDITIONS:**

- A.** CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS AND SITE CONDITIONS PRIOR TO FABRICATION/CONSTRUCTION. NOTIFY STRUCTURAL ENGINEER AND ARCHITECT OF ANY DISCREPANCIES PRIOR TO FABRICATION/CONSTRUCTION.
- B.** PROVIDE SUPPLEMENTAL FRAMING AT NEW OPENINGS AS REQUIRED. SUPPLEMENTAL FRAMING TO INCLUDE NEW JAMBS, HEADERS, AND OTHER MISCELLANEOUS MATERIALS. WHERE THE EXISTING BUILDING PRIMARY STRUCTURAL ELEMENTS MUST BE ALTERED TO INSTALL NEW OPENINGS, NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER.

**GN.4 SPECIAL INSPECTIONS/STRUCTURAL ENGINEER'S SITE VISITS:**

- A.** SPECIAL INSPECTIONS ARE REQUIRED FOR THIS PROJECT IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE. REFER TO DRAWINGS.
- B. SITE VISITS BY STRUCTURAL ENGINEER:**
- STRUCTURAL ENGINEER'S SITE VISITS ARE FOR VISUAL OBSERVATION OF THE IN-PLACE STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT THE TIME OF THE OBSERVATION.
  - CONTRACTOR SHALL NOTIFY STRUCTURAL ENGINEER AND ARCHITECT, PER THE SCHEDULE STATED BELOW, WHEN SUCH ITEMS HAVE PROCEEDED TO THE POINT WHERE THEY WILL BE IN PLACE AND READY FOR REVIEW. FAILURE TO NOTIFY MAY REQUIRE REMOVAL OF COMPLETED CONSTRUCTION.
- | NOTIFY PRIOR TO THE FOLLOWING SCHEDULED TASKS | REQUIRED DAYS NOTIFICATION |
|---|----------------------------|
| FIRST FOUNDATION POUR-----                    | 2 DAYS                     |
| GROUTING MASONRY WALL CONSTRUCTION-----       | 2 DAYS                     |
| EACH ELEVATED SLAB POUR-----                  | 2 DAYS                     |
| SHEATHING LOAD BEARING METAL WALL STUDS-----  | 2 DAYS                     |
- C.** SITE VISITS BY THE STRUCTURAL ENGINEER'S OFFICE DO NOT REPLACE INSPECTIONS AND TESTING BY THE TESTING AGENCY OR SPECIAL INSPECTOR.

**GN.5 SUBMITTALS:**

- A.** REVIEW OF SHOP DRAWINGS AND OTHER SUBMITTALS BY THE STRUCTURAL ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO REVIEW AND CHECK SHOP DRAWINGS BEFORE SUBMITTING TO THE STRUCTURAL ENGINEER. THE CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS. ALL SHOP DRAWINGS MUST BE REVIEWED AND "APPROVED" BY THE CONTRACTOR PRIOR TO SUBMITTAL.
- C.** ELECTRONIC SHOP DRAWING SUBMITTALS: SUBMIT ALL ELECTRONIC SHOP DRAWINGS IN .PDF FORMAT. REVIEWED SHOP DRAWINGS WILL BE RETURNED IN .PDF FORMAT. ALL PRINTS REQUIRED BY THE CONTRACTOR ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MADE AFTER APPROVED SHOP DRAWINGS ARE RETURNED.
- D.** RESUBMITTED SHOP DRAWINGS: RESUBMITTED SHOP DRAWINGS SHALL HAVE ALL CHANGES SINCE THE PREVIOUS SUBMISSION IDENTIFIED BY CLOUDING OR OTHER CLEAR COMMUNICATION. RE-REVIEWED SHOP DRAWINGS WILL ONLY BE REVIEWED FOR IDENTIFIED CHANGES.
- E.** SHOP DRAWINGS: THE CONTRACTOR SHALL SUBMIT FOR STRUCTURAL ENGINEER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS. ITEMS MARKED (\*) SHALL HAVE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED. ITEMS MARKED (#) SHALL BE SUBMITTED FOR STRUCTURAL ENGINEER'S RECORD ONLY.
- CONCRETE MIX DESIGNS
  - CONCRETE REINFORCING
  - STEEL DECK
  - COLD-FORMED METAL FRAMING (\*)
  - MASONRY MORTAR MIX DESIGNS
  - MASONRY GROUT MIX DESIGNS
  - MASONRY REINFORCING

- GN.6 ALL DETAILS SHOWN ARE TYPICAL. SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS, UNLESS NOTED.
- GN.7 THE CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION.
- GN.8 CONSTRUCTION MATERIALS SHALL BE SPREAD OUT IF PLACED ON REMOVED FLOORS/ROOFS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT LOADS DO NOT EXCEED THE DESIGN LIVE LOAD.

**FD. FOUNDATION**

- FD.1 ASSUMED DESIGN BEARING PRESSURES (PSF)  
 CONTINUOUS WALL FOOTINGS-----2000
- FD.3 ALL FOUNDATION BEARING SURFACES SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO POURING CONCRETE TO ENSURE COMPLIANCE WITH PRESSURES NOTED. THE FINAL BEARING ELEVATIONS MAY VARY AS REQUIRED TO PROVIDE PROPER BEARING CAPACITY IN AN APPROVED BEARING STRATUM AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
- FD.4 FOOTINGS SHALL BE PLACED THE SAME DAY AS INSPECTION BY THE GEOTECHNICAL ENGINEER UNLESS EXTENDED TIME IS APPROVED BY THE GEOTECHNICAL ENGINEER.
- FD.5 FOOTINGS SHALL BE NEATLY EXCAVATED WHERE POSSIBLE WITH SIDES AND TOP EDGES FREE OF LOOSE OR WET MATERIALS. WHERE NEAT EXCAVATION IS NOT POSSIBLE, FOOTING EXCAVATION SHALL BE FILLED WITH CONCRETE TO THE TOP OF FOOTING. THE BOTTOM EXCAVATION SHALL BE CLEAN AND DRY WITH ALL LOOSE MATERIAL REMOVED FOR AN ESSENTIALLY FLAT BEARING SURFACE. WHERE SOFT OR UNSUITABLE BEARING SURFACES ARE ENCOUNTERED, THE AREA SHALL BE UNDERCUT AS REQUIRED AND REPLACED WITH LEAN CONCRETE OR COMPACTED DENSE GRADED CRUSHED STONE AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- FD.6 PROVIDE 4" OF COMPACTED GRANULAR FILL BENEATH ALL SLABS ON GRADE. PROVIDE 10 MIL VAPOR RETARDER BETWEEN BOTTOM OF SLAB AND TOP OF GRANULAR FILL.
- FD.7 UNDERPINNING OF EXISTING ADJACENT FOUNDATIONS MAY BE REQUIRED. ALL ENGINEERING DESIGNS AND MEANS AND METHODS OF CONSTRUCTION RELATED TO UNDERPINNING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

**CN. CONCRETE**

- CN.2 CONCRETING OPERATIONS SHALL COMPLY WITH ACI STANDARDS.
- CN.3 MINIMUM CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS (PSI), TYPE OF CONCRETE, MAXIMUM W/C (WATER/CEMENTITIOUS MATERIALS RATIO), TOTAL AIR CONTENT, SLUMP AND CONCRETE USE:
- | STRENGTH | TYPE       | W/C  | AIR  | SLUMP    | USE          |
|----------|------------|------|------|----------|--------------|
| 4000     | NORMAL WT. | 0.50 | 4-6% | 3" TO 5" | UNLESS NOTED |
- CN.4 REINFORCING BARS: ASTM A615 GRADE 60.
- CN.5 WELDED WIRE REINFORCEMENT (WWR): ASTM A185. MINIMUM LAP AND EMBEDMENT TO BE THE GREATER OF ONE CROSS WIRE SPACING PLUS 2" OR 6".

- CN.6 REINFORCING STEEL SHOWN IN SECTIONS AND DETAILS IS A SCHEMATIC INDICATION THAT REINFORCING EXISTS. SEE SCHEDULES, SECTION NOTES AND GENERAL NOTES FOR ACTUAL REINFORCING REQUIRED.
- CN.7 REINFORCING BAR PLACING ACCESSORIES TO BE INSTALLED IN ACCORDANCE WITH ACI MANUAL OF STANDARD PRACTICE. WHERE CONCRETE IS EXPOSED IN FINISHED BUILDING, PROVIDE ACCESSORIES WITH RUSTPROOF LEGS.
- CN.8 DETAIL REINFORCEMENT IN ACCORDANCE WITH ACI 315. REINFORCEMENT SHALL NOT BE WELDED UNLESS NOTED OR APPROVED BY THE STRUCTURAL ENGINEER.
- CN.9 SPLICES SHALL BE CLASS "B" TENSION LAP SPLICE, UNLESS NOTED.
- CN.10 REINFORCING MARKED "CONTINUOUS" SHALL BE SPLICED WITH CLASS "B" TENSION LAP SPLICE, UNLESS NOTED.
- CN.11 CONCRETE COVERAGE OF REINFORCEMENT, UNLESS NOTED:  
 FOOTINGS-----2" TOP & 3" BOTTOM SIDES  
 INTERIOR ELEVATED SLABS NOT EXPOSED TO WEATHER-----3/4" TOP & BOTTOM
- CN.12 SLABS ON GRADE: 4" THICK, REINFORCED WITH 6X6 W2.1/W2.9 WWR AT MID-DEPTH OF SLAB, UNLESS NOTED.

**SD. STEEL DECK**

- SD.1 DECK PROPERTIES AND ATTACHMENTS SHALL BE IN ACCORDANCE WITH THE STEEL DECK INSTITUTE.
- SD.2 DECK SHALL BE CONTINUOUS OVER THREE OR MORE SPANS.
- SD.3 DO NOT SHOREN DECK
- SD.4 SIDELAP AND PERIMETER DECK EDGE FASTENERS ARE TO BE INSTALLED BETWEEN SUPPORTS.
- SD.5 COLD-FORMED METAL FRAMING, SUSPENDED CEILINGS, LIGHT FIXTURES AND DUCTS OR OTHER UTILITIES SHALL NOT BE SUPPORTED BY THE METAL ROOF DECK.
- SD.6 PROVIDE 6" CLOSURE STRIP OF SAME GAGE AS DECK WHERE CHANGES IN DECK DIRECTION OCCUR.
- SD.7 FORM DECK: 1-1/2" THICK CONCRETE SLAB ON NON-COMPOSITE STEEL FORM DECK, 28 GAGE GAGE, GALVANIZED 9/16" DEEP WITH 6X6 W2.1/W2.1 WWR AT MID-DEPTH. (TOTAL THICKNESS = 2") SHEET STEEL FOR DECK SHALL HAVE A MINIMUM YIELD STRENGTH OF 33 KSI.
- A.** DECK SHALL BE ATTACHED TO SUPPORTS WITH #10-16 SCREWS AT ALL EDGE RIBS PLUS A SUFFICIENT NUMBER OF INTERIOR RIBS TO PROVIDE A MAXIMUM AVERAGE SPACING OF 12 INCHES. THE MAXIMUM SPACING BETWEEN ADJACENT POINTS OF ATTACHMENT SHALL NOT EXCEED 18 INCHES.

**CF. COLD-FORMED METAL FRAMING**

- CF.1 SUBMIT THE FOLLOWING:
- A.** PRODUCT DATA: FOR EACH TYPE OF COLD-FORMED METAL FRAMING PRODUCT AND ACCESSORY UTILIZED.
- B.** SHOP DRAWINGS: SHOW LAYOUT, SPACINGS, SIZES, THICKNESS, AND TYPES OF COLD-FORMED METAL FRAMING; FABRICATIONS; AND FASTENING AND ANCHORAGE DETAILS, INCLUDING MECHANICAL FASTENERS. SHOW REINFORCING CHANNELS, OPENING FRAMING, SUPPLEMENTAL FRAMING, STRAPPING, BRACING, BRIDGING, SPLICES, ACCESSORIES, CONNECTION DETAILS, AND ATTACHMENT TO ADJOINING WORK.
- CF.2 VERTICAL STUDS SHALL BE 100% END BEARING.
- CF.3 PROVIDE WALL BRACING, CONNECTION DETAILS, AND WINDOW HEADERS AS RECOMMENDED BY THE STUD MANUFACTURER FOR LOAD-BEARING STUDS.
- CF.9 VERTICAL STUDS INTERRUPTED BY WALL OPENINGS SHALL BE LOCATED EQUALLY ON EACH SIDE OF THE OPENING. PROVIDE EVEN NUMBER OF FULL HEIGHT STUDS ON EACH SIDE OF OPENING. WELD STUD FLANGES TOGETHER WITH FILLET WELDS AT 6".

**MA. MASONRY**

- MA.1 MASONRY CONSTRUCTION SHALL CONFORM TO TMS 402/ACI 530/ASCE 5 AND TMS 602/ACI 530.1/ASCE 6 SPECIFICATIONS.
- MA.2 CONCRETE MASONRY UNITS (CMU) SHALL BE LIGHTWEIGHT (DENSITY = 105 PCF), CONFORMING TO ASTM C90, UNLESS NOTED.
- MA.3 COMPRESSIVE STRENGTH OF MASONRY (F'm): 2000 PSI AT 28 DAYS.
- MA.4 GROUT SHALL CONFORM TO ASTM C476 WITH COMPRESSIVE STRENGTH (F'g) OF 2500 PSI AT 28 DAYS. GROUT SHALL BE PLACED ACCORDING TO TMS 602/ACI 530.1/ASCE 6 SECTION 3.5.
- MA.5 MORTAR SHALL CONFORM TO ASTM C270, TYPE S OR M FOR TYPICAL CONDITIONS, TYPE M FOR BASEMENT AND RETAINING WALLS.
- MA.6 ALL MASONRY SHALL BE RUNNING BOND, UNLESS NOTED.