

**GENERAL NOTES:**

- 1. BUILDING AND DESIGN CODES:
  - A. 2017 FLORIDA BUILDING CODE
  - B. AISC 360-10: SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS (14TH EDITION STRUCTURAL STEEL MANUAL)
  - C. AISI 5100-12: NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS
  - D. AWS STRUCTURAL STEEL WELDING CODE, D1.1-2010
  - E. ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
  - F. ACI DETAILING MANUAL, 2004
  - G. STRUCTURAL WELDED WIRE REINFORCEMENT MANUAL OF STANDARD PRACTICE, WIRE REINFORCEMENT INSTITUTE, 2011
  - H. ACI 530-13 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
  - I. CRSI MANUAL OF STANDARD PRACTICE, 2009
  - J. SDI CODE OF RECOMMENDED STANDARD PRACTICE FOR COMPOSITE DECK, FLOOR DECKS, AND ROOF DECK CONSTRUCTION, 2010
- 2. DESIGN LOADS:
  - A. LIVE LOADS: UNIFORM
 

ROOF	20 PSF
SLAB ON GRADE	100 PSF

 LIVE LOAD REDUCTION ON SUPPORTING ELEMENTS IN ACCORDANCE WITH BUILDING CODE
  - B. DEAD LOADS: ROOF DEAD LOAD 12 PSF
  - C. WIND LOADS:
    - 3 SECOND GUST WIND SPEED: Vult = 160 MPH (Vasd = 124 MPH)
    - EXPOSURE: B
    - RISK CATEGORY: II
  - D. SEISMIC LOADS:
    - SEISMIC IMPORTANCE FACTOR: 1.00
    - OCCUPANCY CATEGORY: II
    - Ss: SPECTRAL ACC FOR SHORT PERIOD = 0.055g
    - Si: SPECTRAL ACC FOR 1 SECOND PERIOD = 0.025g
    - SITE CLASS: D
    - SDS: DESIGN SPECTRAL ACC FOR SHORT PERIOD = 0.058g
    - SD1: DESIGN SPECTRAL ACC FOR 1 SECOND PERIOD = 0.041g
    - SEISMIC DESIGN CATEGORY: A
    - Fa = 1.6
    - Fv = 2.4
    - BASIC SEISMIC FORCE RESISTING SYSTEM: STRUCTURAL STEEL NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
    - DESIGN BASE SHEAR = 6 KIPS (ASD)
    - Cs = 0.01
    - R = 3.0
    - SEISMIC DESIGN PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
  - E. SNOW LOADS
    - Ce: EXPOSURE FACTOR = 1.0
    - Cr: THERMAL FACTOR = 1.0
    - Pg = GROUND SNOW LOAD = 0 PSF
  - F. ADDITIONAL DESIGN LOADS (ASD) INDICATED ON STRUCTURAL DRAWINGS SHALL BE IDENTIFIED AS FOLLOWS:
    - DL = DEAD LOAD
    - LL = LIVE LOAD
    - WL = WIND LOAD
    - EL = SEISMIC LOAD
- 3. GENERAL REQUIREMENTS:
  - A. SPECIFICATIONS ARE PART OF THE CONSTRUCTION DOCUMENTS AND MUST BE USED IN CONJUNCTION WITH THE DRAWINGS.
  - B. VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK OR FABRICATING MATERIALS. NOTIFY A/E OF DISCREPANCIES BEFORE PROCEEDING WITH ANY PHASE OF WORK.
  - C. VERIFY THE LOCATION OF CHASES, INSERTS, OPENINGS, SLEEVES, FINISHES, DEPRESSIONS, PADS, AND WALL OPENINGS.
  - D. DO NOT SCALE DRAWINGS FOR THE PURPOSE OF ESTABLISHING DIMENSIONS.
  - E. DETAILS LABELED "TYPICAL DETAILS" ON DRAWINGS APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH DETAILS APPLY WHETHER OR NOT DETAILS ARE REFERENCED AT EACH LOCATION. NOTIFY ENGINEER OF CONFLICTS REGARDING APPLICABILITY OF "TYPICAL DETAILS".
  - F. DO NOT LOAD THE SLAB ON GRADE OR SUPPORTED SLAB WITH ERECTION CRANES OR ERECTION EQUIPMENT. THE SLABS HAVE NOT BEEN DESIGNED FOR CRANE LOADS AND WILL REQUIRE AN INCREASE IN THICKNESS AND/OR REINFORCEMENT. OBTAIN A/E APPROVAL ON PROPOSED CRANE SUPPORT PLAN FOR SLABS PRIOR TO COMMENCING WORK.
  - G. DO NOT STORE OR STACK CONSTRUCTION MATERIALS ON POURED OR ERECTED FLOORS/ROOFS IN EXCESS OF 80 PERCENT OF LIVE LOAD. GENERAL CONTRACTOR WILL ENSURE THAT ALL SUB-CONTRACTORS ARE INFORMED OF LOADING RESTRICTIONS. AVOID IMPACT WHEN PLACING MATERIALS ON POURED OR ERECTED FLOORS OR ROOF.
  - H. THE CONTRACT STRUCTURAL DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION. PROVIDE ALL MEASURES REQUIRED TO PROTECT THE STRUCTURE, WORKMEN, AND OTHER PERSONS DURING CONSTRUCTION, INCLUDING BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR THE BUILDING, FORMS AND SCAFFOLDING, SHORING FOR RETAINING WALLS AND OTHER TEMPORARY SUPPORTS AS REQUIRED. COMPLY WITH APPLICABLE REQUIREMENTS OF OSHA AND OTHER GOVERNING BODY HAVING JURISDICTION AT THE SITE.
  - I. PRINCIPAL OPENINGS THROUGH THE FRAMING ARE SHOWN ON DRAWINGS. EXAMINE ARCHITECTURAL AND MECHANICAL DRAWINGS FOR REQUIRED OPENINGS AND PROVIDE FOR REQUIRED OPENINGS WHETHER SHOWN ON THE STRUCTURAL DRAWINGS OR NOT. VERIFY SIZE AND LOCATION OF OPENINGS WITH THE MECHANICAL ENGINEER. DEVIATIONS FROM THE OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS MUST BE APPROVED PRIOR TO IMPLEMENTING THE CHANGES.
  - J. LOADINGS FOR MECHANICAL ELEMENTS ARE SHOWN ON THE UNITS SHOWN ON THE MECHANICAL DRAWINGS. ANY CHANGES IN TYPE OR NUMBER OF PIECES OF EQUIPMENT SHALL BE REFERRED TO THE ARCHITECT FOR VERIFICATION OF THE ADEQUACY OF SUPPORTING MEMBERS PRIOR TO THE PLACEMENT OF SUCH EQUIPMENT.
  - K. SEE ARCHITECTURAL DRAWINGS FOR ELEVATIONS NOT SHOWN AND FOR EXACT LOCATIONS OF ALL SLAB DEPRESSIONS. THE CONTRACTOR SHALL COMPARE THE STRUCTURAL SECTIONS WITH ARCHITECTURAL SECTIONS AND REPORT ANY DISCREPANCY TO THE ARCHITECT PRIOR TO FABRICATING OR INSTALLING STRUCTURAL MEMBERS.

**FOUNDATION:**

- FOUNDATION DESIGN IS BASED UPON THE GEOTECHNICAL ENGINEERING REPORT ENTITLED "GEOTECHNICAL EXPLORATION" PROPOSED DOLLAR GENERAL STORE 4055 HANCOCK BRIDGE PARKWAY, NORTH FORT MEYERS, LEE COUNTY, FLORIDA PREPARED BY UNIVERSAL ENGINEERING SCIENCES DATED SEPTEMBER 1, 2017.
- 1. CONTRACTOR TO PROVIDE FOUNDATION & FOOTING AS REQUIRED FOR PYLON SIGN OR MONUMENTAL SIGN REF. SPECIFICATIONS
- 2. COORDINATE STRUCTURAL PLANS AND DETAILS WITH REQUIREMENTS OF GEOTECHNICAL REPORT. FOOTING DESIGN IS BASED ON 2000 PSF ALLOWABLE SOIL PRESSURE.
- 3. CONTRACTOR SHALL TREAT SOIL BELOW SLAB FOR TERMITES PER 2017 FBC SECTION 1816.
- 4. REFER TO THE GEOTECHNICAL REPORT AND SPECIFICATIONS FOR GENERAL REQUIREMENTS OF EARTHWORK, OVEREXCAVATION, SUBGRADE PREPARATION, FILL AND COMPACTION, WATERPROOFING AND OTHER PERTINENT REQUIREMENTS AND INFORMATION. IF THERE IS A CONFLICT BETWEEN GEOTECHNICAL REPORT AND STRUCTURAL PLANS THEN THE MORE STRINGENT CRITERIA SHALL APPLY UNLESS OTHERWISE DIRECTED BY AN RFI.
- 5. PROTECT PIPES AND CONDUITS RUNNING THROUGH WALLS AND SLABS WITH 1/2 INCH EXPANSION MATERIAL. LOWER CONTINUOUS FOOTINGS AND GRADE BEAMS PERPENDICULAR TO PIPE RUNS TO ALLOW PIPES TO PASS ABOVE THE FOOTINGS OR THROUGH THE GRADE BEAMS. ALTERNATIVELY, PROVIDE A CONCRETE ANGLE IF PIPES ARE LOW ENOUGH TO BE PLACED BELOW THE FOOTINGS AND GRADE BEAMS. LOWER FOOTINGS AND GRADE BEAMS PARALLEL TO PIPE RUNS TO AVOID SURCHARGE ONTO ADJACENT TRENCH EXCAVATIONS.
- 6. MAINTAIN SUBGRADE AND FILL MOISTURE CONTENT UNTIL FOUNDATIONS ARE PLACED.
- 7. ARRANGE FOR OWNER'S INDEPENDENT TESTING AGENCY TO MONITOR CUT AND FILL OPERATIONS AND PERFORM FIELD DENSITY AND MOISTURE CONTENT TESTS TO VERIFY COMPACTION AND APPROVE FOOTING SUBGRADES PRIOR TO PLACING CONCRETE.
- 8. DO NOT PLACE FOOTINGS OR SLABS AGAINST SUBGRADE CONTAINING FREE WATER, FROST, OR ICE.
- 9. MAINTAIN PROPER SITE DRAINAGE DURING CONSTRUCTION TO ENSURE SURFACE RUNOFF AWAY FROM STRUCTURES AND TO PREVENT PONDING OF SURFACE RUNOFF NEAR THE STRUCTURES.

**PAD PREPARATION:**

RE: GEOTECH REPORT

**CONCRETE:**

- 1. PROVIDE BATCH MIXING, TRANSPORTATION, PLACING AND CURING OF CONCRETE IN ACCORDANCE WITH RECOMMENDATIONS OF ACI 301 AND ACI 318. USE ASTM C 150 CEMENT UNLESS NOTED OTHERWISE. PROVIDE ADMIXTURES AND SPECIAL REQUIREMENTS AS SPECIFIED.
- A. ALL CONCRETE SHALL BE NORMAL WEIGHT (145 PCF) CONCRETE AND:
  - Fc=4,000 PSI AT 28 DAYS FOR SLAB ON GRADE, FOUNDATIONS, AND CONTINUOUS PTC
  - CONCRETE FOR THE SLAB ON GRADE SHALL CONTAIN A MINIMUM OF 564 LBS PER CUBIC YARD OF PORTLAND CEMENT. FLY ASH IS NOT ALLOWED IN THE CONCRETE MIX DESIGN. THE CONCRETE AGGREGATE SHALL MEET ASTM C33, SHALL BE WELL GRADED AND CONTAIN A NOMINAL MAXIMUM AGGREGATE SIZE OF AT LEAST 3/4"
- 2. PREPARE AND SUBMIT MIXTURES FOR EACH CLASS OF CONCRETE ON THE BASIS OF LABORATORY TRIAL MIXTURES OR FIELD TEST DATA FOR REVIEW AND APPROVAL BY THE STRUCTURAL ENGINEER
- 3. PROVIDE CONSTRUCTION AND CONTROL JOINTS AS INDICATED ON DRAWINGS. HORIZONTAL CONSTRUCTION JOINTS ARE NOT ALLOWED UNLESS SPECIFICALLY NOTED OR APPROVED BY STRUCTURAL ENGINEER. NOTIFY STRUCTURAL ENGINEER OF PROPOSED CONSTRUCTION JOINT OR CONTROL JOINT LOCATIONS THAT ARE DIFFERENT OR IN ADDITION TO JOINTS INDICATED ON DRAWINGS.
- 4. CHAMFER EXPOSED EDGES 3/4 INCH UNLESS OTHERWISE NOTED.
- 5. WIRE BRUSH AND CLEAN CONSTRUCTION JOINTS PRIOR TO POURING NEW CONCRETE.
- 6. REFERENCE THE APPROPRIATE DISCIPLINE DRAWINGS FOR SUBSLAB PIPING, FLOOR DRAINS AND SLAB AND WALL PENETRATIONS.
- 7. PROVIDE ADEQUATE STRUCTURAL FRAMING AS APPROVED BY STRUCTURAL ENGINEER FOR MECHANICAL OPENINGS THROUGH THE SLABS, WALLS AND FLOOR DECK. OPENINGS WILL NOT BE PERMITTED THROUGH BEAMS UNLESS SPECIFICALLY DETAILED.
- 8. ADMIXTURES:
  - A. AIR-ENTRAINING ADMIXTURE: ASTM C 260
  - B. WATER-REDUCING ADMIXTURE: ASTM C 494, TYPE A
  - C. RETARDING ADMIXTURE: ASTM C 494 TYPE B
  - D. ACCELERATING ADMIXTURE: ASTM C 494 TYPE C (NON CHLORIDE)
  - E. HIGH-RANGE, WATER REDUCING ADMIXTURE: ASTM C 494, TYPE F
  - F. WATER REDUCING AND ACCELERATING ADMIXTURE: ASTM C 494, TYPE E
  - G. WATER REDUCING AND RETARDING ADMIXTURE: ASTM C 494, TYPE D
  - H. OTHER ADMIXTURES FOR SPECIFIC USE WITH THE PERMISSION OF THE DESIGN PROFESSIONAL ENGINEER
- 9. COMPLY WITH RECOMMENDATIONS IN ACI 302.1R FOR SCREEDING, STRAIGHTENING AND FINISHING OPERATIONS FOR CONCRETE SURFACES. DO NOT WEAR CONCRETE.
  - A. INTERIOR FLOOR SLABS: MACHINE TROWEL FINISH
  - B. EXTERIOR SLABS: LIGHT FLEXIBLE BRISTLE BROOM FINISH

**REINFORCING STEEL:**

- 1. PROVIDE DETAILING, FABRICATION, AND INSTALLATION OF REINFORCEMENT AND ACCESSORIES IN ACCORDANCE WITH ACI 318 AND ACI 308.
- 2. PROVIDE NEW BOLTED STEEL REINFORCING BARS IN ACCORDANCE WITH ASTM A 615, GRADE 60 DEFORMED BARS.
- 3. COORDINATE PLACEMENT OF CASTER-IN-PLACE BOLTS AND ANCHOR RODS. SET ANCHOR RODS WITH THE EMBEDMENT LENGTHS WITH EMBED ITEMS TO FORMWORK OR REINFORCING.
- 4. PROVIDE CLASS "B" REINFORCEMENT SPLICES FOR CONTINUOUS REINFORCEMENT. PROVIDE 90-DEGREE HOLES IN ACCORDANCE WITH ACI 318, UNLESS OTHERWISE NOTED.
- 5. MATCH UP THE FOLLOWING CONCRETE COVERAGE FOR REINFORCING STEEL UNLESS OTHERWISE NOTED:
  - A. CONCRETE CAST AGAINST EARTH: 3 INCHES
  - B. CONCRETE EXPOSED TO WEATHER: NO. 10 AND LARGER: 2 INCHES
  - NO. 5 AND SMALLER: 1 1/2 INCHES
  - C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND: SLABS AND WALLS
  - NO. 14 AND NO. 18: 1 1/2 INCHES
  - NO. 11 AND SMALLER: 3/4 INCHES
- 6. DO NOT WELD OR BEND REINFORCEMENT IN THE FIELD UNLESS SPECIFICALLY SHOWN OR APPROVED BY STRUCTURAL ENGINEER.
- 7. WHEN SPECIFICALLY APPROVED, PROVIDE WELDED REINFORCEMENT IN ACCORDANCE WITH ASTM A 706 GRADE 60. USE LOW HYDROGEN ELECTRODES FOR WELDING OF REINFORCEMENT IN CONFORMANCE WITH "RECOMMENDED PRACTICES FOR WELDING REINFORCING STEEL", AMERICAN WELDING SOCIETY, AWS D12.1. PROVIDE ASTM GRADE 40 REINFORCING BARS WHERE DETAILED BARS ARE TO BE WELDED TO A STEEL SECTION.
- 8. WHERE REQUIRED, PROVIDE DOWELS TO MATCH SIZE AND SPACING OF MAIN REINFORCING.
- 9. PROVIDE CONTINUOUS HORIZONTAL WALL REINFORCEMENT WITH 90-DEGREE BENDS AND EXTENSIONS AT CORNERS AND INTERSECTIONS AS SHOWN ON TYPICAL BAR PLACING DETAILS.
- 10. WHEN SHOWN ON DRAWINGS PROVIDE FIBRILLATED POLYPROPYLENE FIBERS ENGINEERED AND DESIGNED FOR USE IN CONCRETE COMPLYING WITH ASTM C1116, TYPE III, 1/2 TO 1 1/2 INCHES LONG.

**MASONRY:**

- 1. REINFORCED MASONRY WORK AND MATERIALS TO BE IN ACCORDANCE WITH THE BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES: ACI 530/ASCE 5/TMS 402.
- 2. REINFORCED MASONRY TO CONFORM TO THE SPECIFICATIONS FOR MASONRY STRUCTURES: ACI 530.1/ASCE 6/TMS 602 (WITH THE EXCEPTIONS NOTED IN JOB SPECIFICATIONS).
- 3. PROVIDE CONCRETE MASONRY UNITS (CMU) OF NORMAL WEIGHT (125 PCF MINIMUM), GRADE N, TYPE II, CONFORMING TO LATEST EDITION OF ASTM C 90. LAY UNITS IN RUNNING BOND UNLESS OTHERWISE NOTED.
- 4. PROVIDE MASONRY ASSEMBLAGES WITH MINIMUM PRISM STRENGTH (Fm) OF 1,500 PSI, TESTED IN ACCORDANCE WITH ASTM C 140.
- 5. PROVIDE CONCRETE MASONRY UNITS IN ACCORDANCE ASTM C 426 LIMITS FOR DRYING SHRINKAGE OF CONCRETE BLOCKS.
- 6. PROVIDE VERTICAL REINFORCEMENT IN CMU WALLS AS SHOWN IN DRAWINGS. FILL THE REINFORCED CELLS SOLID WITH GROUT. MAXIMUM HEIGHT OF GROUT POURS TO BE AS PER THE SPECIFICATION FOR MASONRY STRUCTURES TABLE NO. 7. UNTIL WALL IS PERMANENTLY BRACED BY ROOF.
- 7. LAY HOLLOW UNITS WITH FULL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS. PROVIDE FULL MORTAR COVERAGE FOR WEBS WHEN ADJACENT TO GROUTED CELLS.
- 8. ALIGN VERTICAL CELLS TO BE FILLED WITH GROUT TO PROVIDE CONTINUOUS UNBROUGHT VERTICAL CELLS. REMOVE OVERHANGING MORTAR OR OTHER OBSTRUCTION AND DEBRIS FROM THE INSIDES OF CELL WALLS. PROVIDE GROUT WITH 8 INCH SLUMP AND CONSOLIDATE BY MEANS OF HAND TAMPING TO ENSURE COMPLETE FILLING OF CELLS.
- 9. INSTALL ANCHORS, ACCESSORIES, AND OTHER ITEMS TO BE BUILT IN AS WORK PROGRESSES.
- 10. PERFORM CUTTING AND FITTING OF MASONRY WITH MASONRY SAWS PROVIDING CUT FINISHED UNITS.
- 11. CELLS AT OR BELOW FINISHED GRADE ARE TO BE GROUTED SOLID.
- 12. WHEN A FOUNDATION DOWEL DOES NOT LINE UP WITH A VERTICAL CORE, DO NOT SLOPE DOWEL MORE THAN ONE HORIZONTAL TO SIX VERTICAL.
- 13. WALL SHALL RECEIVE TEMPORARY BRACING. TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL WALL IS PERMANENTLY BRACED BY ROOF.
- 14. SPECIAL INSPECTION IS REQUIRED AS FOLLOWS:
  - A. DURING PREPARATION OF REQUIRED PRISMS OR TEST SPECIMENS.
  - B. DURING THE LAYING OF MASONRY UNITS
  - C. DURING PLACEMENT OF REINFORCING STEEL
  - D. FOR GROUT SPACES PRIOR TO CLOSING OF CLEANOUTS AND GROUTING.
  - E. DURING ALL GROUTING OPERATIONS.
- FORWARD INSPECTION RESULTS TO THE ENGINEER OF RECORD.
- 15. GROUT FILL CORES SHALL CONFORM TO ASTM C478 WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI IN 28 DAYS.
- 16. MORTAR SHALL CONFORM TO ASTM C270
  - A. MASONRY BELOW GRADE, TYPE M MORTAR
  - B. EXTERIOR ABOVE GRADE MASONRY: TYPE S MORTAR
- 17. GALVANIZED HORIZONTAL REINFORCEMENT SHALL HAVE W.17 (9 GAGE) SIDE AND 17.0 INCHES SPACED 16" ON CENTER. LAP REINFORCEMENT 7".

**STRUCTURAL STEEL:**

- 1. DESIGN, DETAIL AND ERECT STRUCTURAL STEEL ELEMENTS IN ACCORDANCE WITH THE FOLLOWING:
  - A. AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
  - B. AISC MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRENGTH DESIGN AND PLASMA CUTTING AND BURNING.
  - C. AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDING CONNECTIONS.
  - D. AWS STRUCTURAL WELDING CODE, D1.1.
- 2. PROVIDE STRUCTURAL STEEL OF THE FOLLOWING ASTM DESIGNATIONS UNLESS OTHERWISE NOTED:
  - A. STRUCTURAL WIDE FLANGE BEAMS: ASTM A 992
  - B. EDGE ANGLES, BOLT PLATES, HANGERS: ASTM A 36
  - C. STRUCTURAL PIPE: ASTM A 53, GRADE B OR S
  - D. HOLLOW STRUCTURAL SECTION: ASTM A 500, GRADE B
  - E. BASE PLATES AND MISCELLANEOUS STEEL PLATES: ASTM A 36
  - F. ANCHOR RODS: ASTM F 1554, GRADE 36
- 3. CONNECTION MATERIALS:
  - A. BEAM-COLUMN STIFFENER PLATES AND DOUBLER PLATES TO MATCH THE GRADE STEEL OF STRUCTURAL ELEMENT
  - B. HIGH STRENGTH BOLTS (SLIP CRITICAL JOINTS FOR ALL BRACES WHERE SPECIFIED): ASTM A 325
  - C. HARDENED STEEL WASHERS: ASTM F 436
- 4. CONNECTION SIZE AND STRENGTH:
  - A. PROVIDE MINIMUM SIZE OF FILLET WELDS AS SPECIFIED IN TABLE J2.4 OF THE AISC MANUAL
  - B. PROVIDE MINIMUM EFFECTIVE THROAT THICKNESS OF PARTIAL PENETRATION GROOVE WELDS AS SPECIFIED IN TABLE J2.3 OF THE AISC MANUAL
  - C. DEVELOP THE FULL TENSILE STRENGTH OF THE MEMBER ELEMENT JOINED ON ALL SHOP AND FIELD WELDS UNLESS OTHERWISE NOTED ON THE DRAWINGS.
  - D. WHERE CONNECTIONS ARE NOTED ON DRAWINGS AS MOMENT CONNECTIONS, PROVIDE WELDS TO DEVELOP FULL FLEXURAL CAPACITY OF THE LESSER MEMBER.
  - E. PROVIDE ELECTRODES FOR FIELD OR SHOP WELDING THAT CONFORM TO ASTM A 233 (CLASS 70).
  - F. ALL WELDS ARE CONTINUOUS FOR THE FULL LENGTH OF THE CONNECTION UNLESS OTHERWISE NOTED ON DRAWINGS.
- 5. PROVIDE MINIMUM OF TWO BOLTS PER CONNECTION. PROVIDE MINIMUM BOLT DIAMETER OF 3/4 INCH.
- 6. PROVIDE BOLTS, NUTS AND WASHERS THAT ARE HOT DIP GALVANIZED ACCORDING TO ASTM A 153, CLASS C WHEN USED TO CONNECT STEEL ELEMENTS THAT ARE HOT DIP GALVANIZED AFTER FABRICATION.
- 7. PROVIDE SIMPLE SHEAR CONNECTIONS FOR STEEL CONNECTIONS NOT SPECIFIED OTHERWISE UTILIZING HIGH STRENGTH BEARING BOLTS IN SINGLE OR DOUBLE SHEAR. PROVIDE DOUBLE ANGLE OR SINGLE PLATE BOLTED CONNECTIONS.
  - A. UNLESS LARGER REACTION IS SHOWN ON DRAWINGS, PROVIDE MINIMUM DESIGN FORCES AS FOLLOWS:
    - 1. NONCOMPOSITE BEAMS: BEAM-TO-BEAM OR BEAM-TO-COLUMN CONNECTION TO DEVELOP THE REACTION OF CONNECTED BEAM. OBTAIN END REACTION FROM ALLOWABLE UNIFORM LOAD TABLES IN PART 2 OF THE AISC MANUAL OF STEEL CONSTRUCTION.
- 8. ADD TO REACTIONS LISTED ABOVE, LOADS OR REACTIONS OF MEMBERS SUPPORTED BY BEAM WITHIN THREE FEET OF BEAM END AND VERTICAL COMPONENTS OF FORCES IN BRACE MEMBERS FRAMING INTO BEAM.
- 9. BRACE CONNECTIONS SHALL BE IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS. ANGLE SIZES, PLATE SIZES, AND SIZE AND LENGTHS OF WELDS SHALL BE DESIGNED IN ACCORDANCE WITH THE FOLLOWING:
  - A. DESIGN CONNECTIONS OF DIAGONAL MEMBERS TO DEVELOP THE LOADS SHOWN ON THE BRACE DETAILS.
  - B. WHERE FORCES ARE NOT INDICATED ON THE DETAILS, DESIGN CONNECTIONS OF DIAGONAL MEMBERS TO DEVELOP THE FULL TENSILE CAPACITY OF THE DIAGONAL MEMBER.
  - C. SIZE CUSSET PLATES AND ALL WELDS TO RESIST THE FORCE OF THE DIAGONAL MEMBERS. PLATES AND WELDS SHALL BE SIZED FOR TENSIONS, SHEARS, AND MOMENTS CAUSED BY CONCENTRIC AND ECCENTRIC FORCES.
  - D. ALL BRACE CONNECTIONS SHALL USE WELDS OR FULLY TENSIONED A325 CLASS A SLIP CRITICAL BOLTS.

**STRUCTURAL STEEL CONT:**

- 10. STEEL FABRICATION:
  - A. FABRICATE AND ASSEMBLE STRUCTURAL MEMBERS/ASSEMBLIES IN SHOP TO GREATEST EXTENT POSSIBLE.
  - B. CAMBER OF STRUCTURAL STEEL MEMBERS IS INDICATED ON THE DRAWINGS. WHERE POSSIBLE, CAMBER OF BEAMS TO BE APPLIED BY COLD BEND PROCESS. CAMBER INDICATED ON DRAWINGS IS INTENDED TO BE FINAL CAMBER AT TIME OF ERECTION, AND WITHIN A TOLERANCE OF MINUS ZERO TO PLUS ONE-EIGHTH INCH FOR EACH TEN FEET OF MEMBER LENGTH.
  - C. SPLICING OF STRUCTURAL STEEL MEMBERS IS PROHIBITED WITHOUT PRIOR APPROVAL BY THE A/E.
  - D. BE RESPONSIBLE FOR ALL ERRORS OF DETAILING ON THE SHOP DRAWINGS, ERRORS IN FABRICATION, AND THE CORRECT FITTING OF STRUCTURAL STEEL MEMBERS.
  - E. CONFORM TO THE AISC CODE OF STANDARD PRACTICE, FOR ERECTION TOLERANCES. FIELD MODIFICATION TO STRUCTURAL STEEL IS PROHIBITED WITHOUT PRIOR APPROVAL BY THE A/E.
  - F. CLEAN STEEL OF RUST, LOOSE MILL SCALE AND OTHER FOREIGN MATERIALS WHERE REQUIRED FOR FABRICATION, FITTING UP, OR WELDING.
  - G. DO NOT CUT STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT PRIOR REVIEW AND APPROVAL OF THE A/E.
- 11. HOT DIP GALVANIZE AFTER FABRICATION ALL STRUCTURAL STEEL AND THEIR CONNECTIONS PERMANENTLY EXPOSED TO THE OUTSIDE. ITEMS INCLUDED BUT NOT LIMITED TO:
  - A. SHELF ANGLES.
  - B. PARAPET WALL SUPPORTING MEMBERS
  - C. EMBEDDED PLATES IN CONCRETE
  - D. BUILDING CLADDING SUPPORT STEEL
  - E. EXAMINE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR OTHER ITEMS THAT REQUIRE HOT DIPPED GALVANIZATION.
- 12. PROVIDE GROUT FOR BASE PLATES THAT IS NON-SHRINK, NON-METALLIC GROUT WITH MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 6000 PSI. COMPLETE GROUT WORK PRIOR TO PLACING ROOF CONCRETE OF A SINGLE STORY BUILDING OR PRIOR TO PLACING SECOND FLOOR CONCRETE OF A MULTIPLE STORY BUILDING.
- 13. SUBMIT CALCULATIONS FOR CONNECTION DESIGNS NOT DETAILED ON DRAWINGS. DESIGN CONNECTIONS UNDER SUPERVISION OF REGISTERED PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE PROJECT IS BEING CONSTRUCTED, EXCEPT BY THE STRUCTURAL FABRICATOR. DESIGN CALCULATIONS TO BE SEALED BY REGISTERED PROFESSIONAL ENGINEER. SHOP DRAWINGS SUBMITTED WITHOUT COMPLETE DESIGN CALCULATIONS WILL NOT BE REVIEWED. WHERE DESIGN CONNECTIONS ARE SHOWN DIRECTLY FROM TABLES IN AISC MANUAL, CALCULATIONS NEED NOT BE SUBMITTED UNLESS JOB DESIGN CONDITIONS PRECISELY MATCH THOSE LISTED IN THE AISC MANUAL.
- 14. PROVIDE WASHERS FOR ALL CONNECTIONS WITH STANDARD, OVERSIZED AND SHORT-SLOTTED HOLES. FOR LONG-SLOTTED HOLES PROVIDE WASHERS OR CONTINUOUS BAR OF SUFFICIENT SIZE TO COMPLETELY COVER THE SLOT. PLATE WASHERS SHALL HAVE A MINIMUM OF 5/16 INCH THICK FOR LONG-SLOTTED HOLES.
- 15. WIDE FLANGE BEAM CONNECTIONS TO TUBE COLUMNS SHALL BE MADE WITH BOLTED SHEAR TAB PLATE TYPE CONNECTIONS UNLESS OTHERWISE NOTED ON PLAN. ONE-SIDED CONNECTIONS SHALL BE DESIGNED AS ECCENTRIC CONNECTIONS.
- 16. FINISH STEEL SHOP DRAWINGS FOR ARCHITECT'S AND STRUCTURAL ENGINEER'S REVIEW PRIOR TO FABRICATION. INCLUDE WELDING PROCEDURES, TESTING PROGRAMS FOR WELDING CONNECTIONS, MINIMUM TENSILE STRENGTH BOLTING COATING MATERIAL AND ERECTION SEQUENCE ON SHOP DRAWINGS.
- 17. STEEL COLUMN ENDS TO FIT FLUSH WITH BASE PLATE, CAP PLATE AND END PLATES. UNLESS OTHERWISE NOTED, ALL OF THESE STEEL ELEMENTS TO THE COLUMNS IS PROHIBITED.
- 18. HEADED STUDS (SHEAR AND ANCHOR) AND DEFORMED ANCHORS:
  - A. PROVIDE HEADED STUDS (SHEAR AND ANCHOR) MADE OF MATERIAL CONFORMING TO ASTM A 108.
  - B. PROVIDE DEFORMED ANCHORS MADE OF MATERIAL CONFORMING TO ASTM A 496.
  - C. WELD STUDS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. MANUAL ARC (STICK) WELDING OF HEADED STUDS AND/OR DEFORMED ANCHORS IS NOT ALLOWED.
- 19. PRIOR TO DECK PLACEMENT, VERIFY THAT STEEL BEAMS BEARING ON MASONRY HAVE 8 INCH MINIMUM BEARING AND ARE ANCHORED AS SHOWN ON DRAWINGS.
- 20. PROVIDE TEMPORARY SHORING OR BRACING DURING CONSTRUCTION PHASE, PRIOR TO COMPLETING CONNECTIONS AND POURING OF FLOOR SLAB. TEMPORARY CONSTRUCTION BRACING OF THE STRUCTURAL STEEL FRAME IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL REMAIN IN PLACE UNTIL AFTER THE PERMANENT BRACING SYSTEM HAS BEEN COMPLETED.
- 21. CLEAN STEEL TO BE PAINTED IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL POWER TOOL CLEANED SSPC-SP3.
- 22. ALL STRUCTURAL STEEL SHALL BE SHOP PRIMED WHITE OR LIGHT GREY TO PROVIDE DRY FILM THICKNESS NOT LESS THAN 1.0 MIL. ASPHALTIC PAINTS ARE NOT ACCEPTABLE.

**LIGHT GAGE STEEL:**

- 1. PROVIDE ALL STUDS AND/OR JOISTS AND ACCESSORIES OF THE TYPE, SIZE, GAGE AND SPACING SHOWN ON THE DRAWINGS.
- 2. DESIGN ALL STRUCTURAL MEMBERS IN ACCORDANCE WITH AMERICAN IRON AND STEEL INSTITUTE (AISI) NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL MEMBERS
- 3. FORM ALL FRAMING MEMBERS FROM CORROSION RESISTANT STEEL, CORRESPONDING TO THE REQUIREMENTS OF ASTM A653 AND THE FOLLOWING STRENGTH REQUIREMENTS:
 

FRAMING MEMBER	GAGE	MINIMUM YIELD
STUDS	20, 18	33 KSI
STUDS, JOISTS	10, 12, 14, 16	50 KSI
RUNNERS, SOLID BLOCKING	20	33 KSI
- 4. PLACE ALL COLD-FORMED STEEL STUD WALL BRIDGING HORIZONTALLY WITH A MAXIMUM VERTICAL SPACING OF FOUR FEET UNLESS OTHERWISE NOTED. AS AN OPTION, CONTINUOUS COLD-FORMED CHANNELS MAY BE POSITIONED THROUGH THE STUD PUNCH OUTS AS BRIDGING PROVIDED THE CHANNEL IS PROPERLY FASTENED TO EACH STUD.
- 5. INSTALL AXIALLY LOADED STUDS IN A MANNER WHICH WILL ASSURE THAT THEIR ENDS ARE POSITIONED AGAINST THE INSIDE OF RUNNER WEB PRIOR TO FASTENING.
- 6. FASTEN COMPONENTS WITH SELF-DRILLING SCREWS OR WELDING. PROVIDE SCREWS OF SUFFICIENT SIZE TO INSURE THE STRENGTH OF THE CONNECTION. WIRE TIE OF COMPONENTS IS NOT PERMITTED. TOUCH UP ALL WELDS WITH A ZINC-RICH PAINT.

**LIGHT GAGE STEEL CONT:**

- 7. WELDING OF COLD-FORMED STUDS MAY BE PERFORMED USING A MINIMUM ONE-EIGHTH INCH AWS TYPE 6013 WELDING ROD.
- 8. SECURELY ANCHOR RUNNERS TO THE SUPPORTING STRUCTURE. PROVIDE COMPLETE, UNIFORM, AND LEVEL BEARING SUPPORT FOR THE BOTTOM RUNNER.
- 9. SECURELY ANCHOR ABUTTING LENGTHS OF RUNNER TO A COMMON STRUCTURAL ELEMENT BUTT-WELDED OR SPLICED.
- 10. PLUMB, ALIGN, AND SECURELY ATTACH STUDS TO THE FLANGES OF BOTH UPPER AND LOWER RUNNERS. SPLICES IN STUDS ARE NOT PERMITTED.
- 11. PROVIDE HEADERS AND SUPPORTING STUDS FOR FRAMING OF WALL OPENINGS.
- 12. STABILITY BRIDGING SHALL BE INSTALLED AT A MAXIMUM 4'-0" O.C. FOR SUSPENDED SOFFITS UNLESS OTHERWISE NOTED.
- 13. DESIGN OF METAL STUD FRAMING SHOWN IS BASED ON CEE TYPE II (5/8" FLANGE) STUDS BY DALE INDUSTRIES.
- 14. SHOP DRAWINGS AND CALCULATIONS FOR COLD FORMED METAL FRAMING SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED.

**PRE-ENGINEERED METAL BUILDING MEMBER:**

- A. PRE-ENGINEERED METAL BUILDING MANUFACTURER SHALL DESIGN AND FURNISH ALL FRAMING MEMBERS UNLESS SPECIFICALLY STATED ON THE STRUCTURAL DRAWINGS OTHERWISE.
- B. PRE-ENGINEERED METAL BUILDING MANUFACTURER SHALL PROVIDE SHOP DRAWINGS AND TIMELY TURNER PRIOR TO FABRICATION TO VERIFY LOADS USED FOR FOUNDATION DESIGN.
- C. FOUNDATION DESIGN AS SHOWN ON STRUCTURAL DRAWINGS IS PRELIMINARY ONLY. IT MUST BE SUBMITTED FOR FINAL DESIGN.
- D. PRE-ENGINEERED METAL BUILDING MANUFACTURER SHALL DESIGN & SUPPLY REINFORCEMENT FOR ROOF OPENINGS, ROOF TOP UNITS, AND ANY HUNG LOADS WITH OTHER TRADES.
- E. THE SCOPE OF THE PRE-MANUFACTURED METAL BUILDING STRUCTURE SHALL INCLUDE THE DESIGN, ENGINEERING, FABRICATION, DELIVERY, AND ERECTION OF THE COMPLETE STRUCTURAL STEEL FRAMING AND EXTERIOR SKIN PACKAGE. THE METAL BUILDING MANUFACTURER SHALL BE CERTIFIED BY AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) METAL BUILDING CERTIFICATION PROGRAM



CONSULTANT:

SEAL: GARY MAEDA, PE 68724

THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS THE SEAL AND SIGNATURE OF THE RESPONSIBLE REGISTRANT APPEARS ON THE DRAWING, AND PROPER PERMIT FORMS AND RELATED FEES ARE TRANSMITTED BY THE OWNER, OWNER'S AGENT OR CONTRACTOR TO THE AUTHORITY HAVING JURISDICTION.

DATE	ISSUED FOR	REV
10/12/2017	PLANNING SUBMITTAL	
10/27/2017	PEMB COORDINATION	
12/15/2017	PLANNING RE-SUBMITTAL	
12/15/2017	PERMIT	

Project Manager	Drawn
B.COLBURN	D. GRIFFIN
Project Leader	Checked
B.COLBURN	
Date	Dept Mgr Approval
10/01/2017	G MAEDA

**Client**  
 Palmetto NFM - Hancock Bridge PKWY, LLC.

P.O. BOX 1615  
 THOMASVILLE, GA 31792  
 Office: (863) 808-1320

Contact: Jeff Lazenby

**Project**  
 DOLLAR GENERAL

4055 Hancock Bridge Parkway  
 North Fort Meyers (Lee County), FL  
 Section 9, Township 44S., Range 24E.

Drawing Title	
<b>STRUCTURAL GENERAL NOTES</b>	
DO NOT SCALE DRAWING	
Project No.	Drawing No.
JCDT17.0313.00	S1

**RECOMMENDED NATIONAL ACCOUNT VENDORS**

PRE-ENGINEERED METAL BUILDING			
COMPANY	CONTACTS	PHONE #	
VP BUILDINGS	DAVID ENGLISH	901-748-6103 DEnglish@vp.com	PRE-ENGINEERED METAL BUILDING
STAR BUILDING SYSTEMS	JEFF HORN	866-664-8899	PRE-ENGINEERED METAL BUILDING
NUCOR BUILDING SYSTEMS	BOb BARRY	315-622-4440 CORPORATE: 260-837-7891	PRE-ENGINEERED METAL BUILDING https://www.formouter.net/forms@MBSIN/dgquote.pdf
BIG BEE STEEL BUILDINGS, INC.	KEVIN BUSLER	800-633-3378	PRE-ENGINEERED METAL BUILDING
CHIEF BUILDINGS	ERIN SULLIVAN	308-385-4628 erin.sullivan@chiefind.com	PRE-ENGINEERED METAL BUILDING
IRRIGATION			
COMPANY	CONTACTS		
RAIN BIRD IRRIGATION	LOCAL RAIN BIRD DISTRIBUTER	WWW.RAINBIRD.COM	IRRIGATION SYSTEMS