GENERAL NOTES:

1. TYPICAL NOTES AND DETAILS ARE PROVIDED TO COVER GENERAL CONSTRUCTION CONDITIONS. THE GENERAL CONTRACTOR SHALL FOLLOW THOSE DETAILS AND NOTES PERTAINING TO THE SPECIFIC NATURE OF THE WORK TO BE PERFORMED.

2. NOTES AND DETAILS ON THESE STRUCTURAL DRAWINGS SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. DETAILS ARE SHOWN IN DIAGRAMMATIC FORM AND ARE NOT TO BE SCALED (SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, ELEVATIONS, SLOPES, FINISHES, ETC.). CONSTRUCTION DETAILS NOT SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS. ALL WORK OR CONSTRUCTION SHALL COMPLY WITH THE CURRENT BUILDING CODE AND ALL OTHER APPLICABLE REGULATIONS AND SAFETY REQUIREMENTS.

3. DISCREPANCIES: THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS (WHERE APPLICABLE) AT THE JOB SITE AS WELL AS THE PROVISIONS OF THE ENTIRE CONSTRUCTION DOCUMENTS AND BRING TO THE ARCHITECT'S ATTENTION ANY DISCREPANCY. IN THE EVENT OF A DISCREPANCY IN THE STRUCTURAL CONSTRUCTION DOCUMENTS, THE NOTE OR DETAIL UTILIZING THE STRICTER REQUIREMENT SHALL APPLY.

4. EXCAVATION, SHORING, AND BRACING: IT SHALL BE THE GENERAL CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING, FORM WORK, ETC. AS REQUIRED FOR PROTECTION OF LIFE AND PROPERTY, TO SUPPORT ANY CONSTRUCTION LOADS, AND TO MAINTAIN ALL BUILDING COMPONENTS SAFELY IN PLACE PRIOR TO THEIR FINAL ASSEMBLY AND ANCHORAGE INTO THE COMPLETED STRUCTURE.

5. INSPECTIONS: ALL INSPECTION AND TESTING SHALL BE PERFORMED ACCORDING TO BUILDING CODE AND/OR MORE STRINGENT REQUIREMENTS OF THESE PLANS.

6. COORDINATION: REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND ALL OTHER PERTINENT DRAWINGS FOR THE SIZE AND LOCATION OF PIPE, VENT, DUCT AND OTHER OPENINGS AND DETAILS NOT SHOWN ON THESE STRUCTURAL DRAWINGS. ALL DIMENSIONS ARE TO BE CHECKED AND COORDINATED BY THE CONTRACTOR.

7. SHOP DRAWINGS ARE AN AID FOR FABRICATION AND INSTALLATION AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS. THE GENERAL CONTRACTOR IS RESPONSIBLE TO MAKE CERTAIN THAT ALL CONSTRUCTION IS IN FULL AGREEMENT WITH THE LATEST STRUCTURAL DRAWINGS. SHOP DRAWING REVIEWS BY THE STRUCTURAL ENGINEER ARE FOR GENERAL CONFORMANCE WITH THE STRUCTURAL DRAWINGS AND DO NOT GUARANTEE THAT THE SHOP DRAWINGS ARE CORRECT.

STRUCTURAL DESIGN CRITERIA

1. APPLICABLE DESIGN CODE: 2009 INTERNATIONAL BUILDING CODE

2. DESIGN LOADS:
   A. ROOF LIVE LOAD: 20 PSF

   B. SNOW LOADS:
      1. GROUND SNOW LOAD: Pg = 30 PSF
      2. FLAT ROOF SNOW LOAD: Pf = 27.22 PSF
      3. SNOW EXPOSURE FACTOR: Ce = 0.9
      4. SNOW LOAD IMPORTANCE FACTOR: I = 1.2
      5. THERMAL FACTOR: Ct = 1.0 (1.20 @ UN-HEADTED CANOPIES)

   C. WIND LOADS:
      1. BASIC WIND SPEED: 90 MPH (3-SECOND GUST)
      2. WIND IMPORTANCE FACTOR: Iw = 1.15
      3. BUILDING CATEGORY:IV
      4. EXPOSURE C
      5. INTERNAL PRESSURE COEFFICIENTS: +/- 0.18
      6. DESIGN WIND PRESSURES: SEE UPLIFT DIAGRAM

   D. SEISMIC LOADS:
      1. SEISMIC IMPORTANCE FACTOR: Ie = 1.5
      2. SPECTRAL RESPONSE COEFFICIENTS:
         1. SS = 0.231
         2. S1 = 0.057
         3. SDS = 0.18
         ~~4. SD1 = 0.08~~
         3. SEISMIC RESPONSE COEFFICIENT: Cs = 0.092 1
         4. SITE CLASS:C
         5. SEISMIC DESIGN CATEGORY: C
         6. SEISMIC FORCE RESISTING SYSTEM:
            STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE (R = 3.0)

FOUNDATION NOTES:

1. FOUNDATION FOOTINGS HAVE BEEN DESIGNED FOR AN NET ALLOWABLE SOIL BEARING PRESSURE OF 4,000 POUNDS PER SQUARE FOOT AS RECOMMENDED BY GAI CONSULTANTS' GEOTECHNICAL INVESTIGATION REPORT DATED MARCH 22, 2013.

2. UNLESS DIRECTED OTHERWISE BY THE GEOTECHNICAL ENGINEER ALL SUBGRADES SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DRY DENSITY PER MODIFIED PROCTOR. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT A CERTIFIED TECHNICIAN PERFORMS COMPACTION TESTING & VERIFIES THE SOIL COMPOSITION UNDER ALL BEARING SURFACES PRIOR TO POURING CONCRETE IN ANY EXCAVATION.

3. ALL EXISTING UTILITIES AND STRUCTURES IN THE WORK AREA SHOULD BE PROTECTED AGAINST DAMAGE DURING CONSTRUCTION.

4. ALL STRUCTURAL SLABS-ON-GRADE SHALL BE UNDER-LAIN BY 4" MINIMUM OF DENSE GRADED AGGREGATE (D.G.A.). REMOVE ANY ORGANIC SOILS, FAT CLAYS, OR OTHER DELETERIOUS MATERIAL PRIOR TO CONSTRUCTION.

CONCRETE NOTES

1. CONCRETE STRENGTH: PROVIDE CONCRETE WITH THE FOLLOWING COMPRESSIVE STRENGTHS AT THE LOCATIONS NOTED. MIX DESIGN, SLUMP, AIR ENTRAINMENT, AGGREGATE SIZE, ETC. SHALL BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE ACI CODE.

LOCATION	F'C (PSI @ 28 DAYS)
FOOTINGS, FOUNDATION WALLS, SLAB-ON-GRADE	4,000 (NORMAL WEIGHT)

2. REINFORCING STEEL SHALL MEET ASTM A615 GRADE 60 SPECIFICATIONS.

3. FABRICATE AND PLACE REINFORCING STEEL IN ACCORDANCE WITH THE CURRENT EDITION OF THE ACI PUBLICATION SP-66, ACI DETAILING MANUAL. ALL REINFORCING SHALL BE IN PLACE AND SECURELY TIED PRIOR TO POURING CONCRETE, "WET SETTING" OF ANY REINFORCING IS STRICTLY PROHIBITED.

4. PLACE CONCRETE IN COMPLIANCE WITH ACI 304. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED.

5. CONCRETE COVER FOR REINFORCEMENT FOR NON-PRESTRESSED, CAST IN PLACE CONCRETE SHALL BE AS FOLLOWS:

CONDITION	COVER
CAST AGAINST EARTH	3"
EXPOSED TO WEATHER	
#5 AND SMALLER	1 ½"
#6 AND LARGER	2"
SLAB-ON-GRADE	2"

6. EMBEDS: ALL ITEMS TO BE CAST INTO CONCRETE SUCH AS REINFORCING DOWELS, BOLTS, ANCHORS, PIPES, SLEEVES, ETC. SHALL BE SECURELY AND ACCURATELY POSITIONED INTO THE FORMS PRIOR TO PLACING THE CONCRETE.

7. WELDED WIRE FABRIC SHALL BE PLACED ON CHAIRS AT SPACING NOT TO EXCEED 4'-0" GRID AND LOCATED 1" FROM THE TOP OF THE FINISHED SLAB. "PICKING" WELDED WIRE IN AN ATTEMPT TO ACHIEVE PROPER HEIGHT DURING THE POUR IS STRICTLY PROHIBITED.

8. PROVIDE 90 DEGREE CORNER BARS AT ALL CONCRETE WALL & FOOTING CORNERS AND INTERSECTIONS. CORNER BARS SHALL MATCH THE PRIMARY BARS IN SIZE, GRADE, AND SPACING. LAP CORNER BARS ONTO PRIMARY BARS UTILIZING CLASS B LAP SPLICES PER THE INCLUDEF LAP SPLICE TABLE.

9. NO REINFORCING SHALL BE WELDED OR BENT IN THE FIELD UNLESS GIVEN PRIOR WRITTEN APPROVAL BY THE ENGINEER OF RECORD.

10. PLANS SHOW THE ESSENTIAL REINFORCEMENT BASED UPON DESIGN. ADDITIONAL REINFORCEMENT THAT IS REQUIRED TO HOLD THE ESSENTIAL REINFORCEMENT IN ITS TRUE POSITION SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

11. SECURE AND MOLD CONCRETE TEST SPECIMENS PER ASTM C172 AND C31, TEST IN ACCORDANCE WITH ASTM C39. FOR EACH STRENGTH TEST MOLD AND CURE (4) CYLINDERS. TEST ONE CYLINDER AT 7 DAYS FOR INFORMATION, TWO CYLINDERS AT 28 DAYS FOR STRENGTH TEST RESULTS AND HOLD THE LAST CYLINDER IN RESERVE. FIELD CURE THE SEVEN DAY SPECIMEN, LABORATORY CURE THE REMAINING SPECIMENS. PERFORM STRENGTH TESTING FOR EACH 30 CY OF CONCRETE POURED, BUT NOT LESS THAN (1) SET OF CYLINDERS PER EACH POUR OPERATION.

12. THE CONTRACTOR SHALL VERIFY THAT A CERTIFIED TECHNICIAN IS TESTING ALL CONCRETE AT PLACEMENT FOR SLUMP, AIR CONTENT AND TEMPERATURE. TESTING SHALL BE PERFORMED AT THE SAME FREQUENCY AS REQUIRED FOR STRENGTH TESTING.

HIGH STRENGTH NON-SHRINK GROUT NOTES:

1. NON-SHRINK GROUT SHALL BE NON-FERROUS.

2. NON-SHRINK GROUT MANUFACTURED BY MASTER BUILDERS (NSGROUT), OR APPROVED EQUAL.

3. SURFACE OF EXISTING CONCRETE SHALL BE FREE FROM DUST OR DEBRIS PRIOR TO POURING GROUT.

4. GROUT PRODUCT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

HIGH STRENGTH BOLTS:

1. HIGH STRENGTH BOLTS SHALL CONFORM TO THE PROVISIONS OF THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", LATEST EDITION, AS APPROVED BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS, & THE PROVISIONS OF THE IBC. 1

2. THE ASSEMBLY SURFACE, INCLUDING THOSE ADJACENT TO THE WASHER, SHALL BE FREE OF MILL SCALE, OIL, PAINT OR OTHER COATINGS.

3. ALL HIGH STRENGTH BOLTS SHALL BE TIGHTENED TO A BOLT TENSION NOT LESS THAN THAT SPECIFICATION IN THE AISC MANUAL. FULL TENSIONING SHALL BE BY THE TURN OF NUT METHOD, BY A DIRECT TENSION INDICATOR, OR BY PROPERLY CALIBRATED WRENCHES. PROVIDE HARDENED WASHERS UNDER THE NUT OR BOLT HEAD, WHICHEVER IS THE ELEMENT TURNED IN TIGHTENING.

LIGHT GAUGE WALL NOTES

1. ALL COLD FORMED MEMBERS SHALL COME FROM A SINGLE MANUFACTURER; ONLY MANUFACTURERS WHO ARE MEMBERS OF THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) WILL BE ACCEPTED. THE INSTALLATION SHALL COMPLY WITH ALL MANUFACTURER'S RECOMMENDATIONS. ALL COLD FORMED STEEL SHALL COMPLY WITH A.I.S.I. STANDARDS.

2. PROVIDE ALL ACCESSORIES INCLUDING BUT NOT LIMITED TO, TRACKS, CLIPS, WEB STIFFENERS, ANCHORS, FASTENING DEVICES, AND OTHER ACCESSORIES REQUIRED FOR A COMPLETE AND PROPER INSTALLATION.

3. FASTENING OF COLD FORMED COMPONENTS SHALL BE ACCOMPLISHED WITH SELF-DRILLING TEK SCREWS. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBER.

4. SPLICES IN AXIAL LOAD BEARING MEMBERS, OTHER THAN RUNNER TRACK IS NOT PERMITTED. SPLICES IN CONTINUOUS TRACK SHALL BE ACCOMPLISHED WITH A 2'-0" LONG PIECE OF THE SAME TRACK MEMBER CENTERED ON THE SPLICE AND FASTENED AT 2" O.C. WITH TEK SCREWS ALONG EACH SIDE.

5. ALL MEMBERS SHALL BE SSMA STANDARD UNLESS NOTED OTHERWISE AND GALVANIZED PER ASTM A653 G-60.

6. TEMPORARY BRACING, WHERE REQUIRED, SHALL BE PROVIDED BY THE CONTRACTOR UNTIL ERECTION IS COMPLETE.

7. WALL SHEATHING SHALL BE ½" APA PLYWOOD. FASTEN ALONG ALL EDGES WITH HILTI #6 PBH SELF DRILLING SCREWS @ 6"o.c. FASTEN AT INTERMEDIATE STUDS @ 12"o.c.

LIGHT GAUGE TRUSS NOTES

1. ALL LIGHT GAUGE TRUSSES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED. SUBMIT SIGNED AN SEALED SHOP DRAWINGS AND CALCULATION PACKAGE INCLUDING OVERALL TRUSS LAYOUT, DETAILS OF EACH TRUSS, MEMBER SIZES, LOADS, DEFLECTIONS, AND BRACING REQUIREMENTS.

2. TRUSSES SHALL BE DESIGNED FOR A 10 PSF TOP CHORD AND 15 PSF BOTTOM CHORD DEAD LOAD (MINIMUM).

3. ALL TRUSS MEMBER BRACING, BLOCKING, AND TRUSS TO TRUSS CONNECTIONS SHALL BE DESIGNED BY THE TRUSS MANUFACTURER.

4. ALL TRUSS TOP CHORD MEMBERS SHALL BE 18 GA MINIMUM.

CONNECTION DESIGN NOTES 1

1. SIMPLE SHEAR CONNECTIONS ARE TO BE ADEQUATE FOR THE MAXIMUM TOTAL UNIFORM LOAD PER TABLE 3-6 OF THE 13TH EDITION OF THE STEEL CONSTRUCTION MANUAL (AISC 360-05). ALL MOMENT CONNECTIONS HAVE BEEN DESIGNED BY THE ENGINEER OF RECORD, SEE COLUMN SCHEDULE FOR MOMENT CONNECTION DETAIL REFERENCES.

2. EDGE DISTANCE AND BOLT SPACING ARE PER AISC SPECIFICATIONS.

BAR JOIST NOTES

1. STEEL JOIST CONSTRUCTION SHALL CONFORM TO THE STEEL JOIST INSTITUTE'S STANDARDS LISTED UNDER DESIGN NOTES AND "RECOMMENDED CODE OF STANDARD PRACTICE FOR STEEL JOISTS AND JOIST GIRDERS", 2010, UNLESS NOTED OTHERWISE.

2. FURNISH AND INSTALL BOTTOM AND TOP CHORD LATERAL BRACING AS REQUIRED FOR STRENGTH AND STABILITY OF JOISTS.

3. SHOP DRAWINGS SHALL CLEARLY SHOW DETAIL, LOCATION, AND ELEVATION OF ALL JOIST SEATS INCLUDING THE LAYOUT NECESSARY FOR CONTRACTOR TO INSTALL JOISTS IN ANGLED SITUATIONS.

STEEL DECK NOTES

1. STEEL DECK CONSTRUCTION SHALL CONFORM TO THE STEEL DECK INSTITUTE'S "DESIGN MANUAL FOR FLOOR AND ROOF DECKS".

2. ALL OPENINGS THROUGH ROOF DECKS NOT SHOWN ON THE STRUCTURAL PLANS SHALL BE FRAMED FOUR SIDES WITH ANGLE FRAMING SUPPORTED BY JOISTS, UNLESS NOTED OTHERWISE, SEE TYPICAL DETAILS.

3. ALL STEEL DECKING SHALL BE FASTENED AT ALL SUPPORTING MEMBERS WITH ⅝"Ø PUDDLE WELDS IN A 36/7 PATTERN. PROVIDE #10 TEK SCREW SIDELAP FASTENERS @ 12"o.c. ALONG ALL SIDELAPS.

4. ALL DECKING SHALL BE INSTALLED (3) SPAN CONTINUOUS.

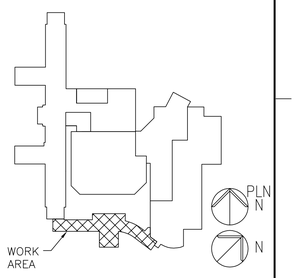
MISCELLANEOUS:

1. NON-SHRINK GROUT FOR USE BENEATH COLUMN BASEPLATES AND BEAM BEARINGS SHALL BE PRE-MIXED, FACTORY PACKAGED, NON-GASING, NON-STAINING, NON-METALLIC MORTAR GROUTING COMPOUND, COMPLYING WITH THE REQUIREMENTS OF ASTM C1107. GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI.

2. THE MATERIAL USED FOR VAPOR BARRIER BENEATH SLABS ON GRADE SHALL BE 10 MIL POLYETHYLENE SHEETS, BLACK OR CLEAR, COMPLYING WITH ASTM D-2103. ALL EDGES SHALL BE LAPPED A MINIMUM OF 6". SPECIAL CARE SHOULD BE TAKEN TO PREVENT PUNCTURING THE BARRIER DURING SLAB PLACEMENT.

3. CONSULT THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING DRAWINGS FOR LOCATIONS, SIZES AND EXTENT OF ALL CHASES, INSERTS, RECESSES, REGLETS, FINISHES, DEPRESSIONS, ETC. NOT SHOWN ON THE STRUCTURAL DRAWINGS.

4. SPECIAL STRUCTURAL INSPECTIONS AND TESTS ARE REQUIRED ON THIS PROJECT AND SHALL COMPLY WITH THE IBC. THE OWNER WILL BEAR THE COSTS OF THE SPECIAL INSPECTIONS AND TESTS. THE CONTRACTOR SHALL COORDINATE HIS WORK AND SCHEDULING, AND SHALL COOPERATE FULLY WITH THE AGENCIES PERFORMING THE SPECIAL INSPECTIONS AND TESTS. 1



KEYPLAN - NOT TO SCALE

FULLY SPRINKLERED

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STATE OF KENTUCKY CHAD SIMMONS 28708 LICENSED PROFESSIONAL ENGINEER

8-28-13

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