GENERAL NOTES:

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

2. NOTES & 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 & SAFETY REQUIREMENTS.

3. DISCREPANCIES - IN THE EVENT OF A DISCREPANCY IN THE STRUCTURAL CONSTRUCTION DOCUMENTS, THE NOTE OR DETAIL UTILIZING THE STRICTER REQUIREMENT SHALL APPLY.

4. EXCAVATION, SHORING, & BRACING - IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING, FORM WORK, ETC., AS REQUIRED FOR PROTECTION OF LIFE & 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 & DETAILS NOT SHOWN ON THESE STRUCTURAL DRAWINGS. ALL DIMENSIONS SHALL BE CHECKED & COORDINATED BY THE CONTRACTOR.

7. SHOP DRAWINGS ARE AN AID FOR FABRICATION & INSTALLATION, AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS.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.

DESIGN CRITERIA:

BUILDING CODE:
2013 KENTUCKY BUILDING CODE AND 2012 INTERNATIONAL BUILDING CODE (IBC)

DEAD LOADS:
WOOD T&G DECKING, INSULATION & ROOFING — 10 PSF
FRAMING SELF WEIGHT — 5 PSF
CEILING, MECH & ELECT — 5 PSF

LIVE LOADS:
ROOFS — 20 PSF

LIVE LOAD REDUCTIONS:

LIVE LOADS HAVE BEEN REDUCED IN ACCORDANCE WITH 2012 IBC
SECTION 1607.12

SNOW LOAD:
GROUND SNOW LOAD (P_G) — 15 PSF
SNOW EXPOSURE FACTOR (C_E) — 1.0
THERMAL FACTOR (C_T) — 1.0
SNOW LOAD IMPORTANCE FACTOR (Is) — 1.0
FLAT ROOF SNOW LOAD, Pf = 0.7 $C_E C_T I_S P_G$ — 10.5 PSF

WIND LOAD:
ULTIMATE DESIGN WIND SPEED — 15 MPH
RICK CATEGORY — II
EXPOSURE CATEGORY — C
INTERNAL PRESSURE COEFFICIENT (GCpi) — ±0.18
COMPONENTS AND CLADDING WIND PRESSURE — 21.8 PSF

SEISMIC LOAD:
RICK CATEGORY — II
SEISMIC IMPORTANCE FACTOR (I_E) — 1.0
MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS:
S_S — 0.223
S_1 — 0.115
SITE CLASS — D
DESIGN SPECTRAL ACCELERATION PARAMETERS:
S_{DS} — 0.238
S_{D1} — 0.179
SEISMIC DESIGN CATEGORY — C
BASIC SEISMIC - FORCE - RESISTING SYSTEM:
LIGHT FRAME (WOOD) SHEAR WALLS
DESIGN BASE SHEAR: — 15 K
SEISMIC RESPONSE COEFFICIENT (Cs): — 0.08
RESPONSE MODIFICATIONS COEFFICIENT (R): — 3
ANALYSIS PROCEDURE: — EQUIVALENT LATERAL FORCE

GEOTECHNICAL REPORT:

IT IS RECOMMENDED THAT THE GEOTECHNICAL ENGINEER BE RETAINED TO PROVIDE OBSERVATION AND TESTING SERVICES DURING THE GRADING AND FOUNDATION PHASE OF CONSTRUCTION. INSPECTION AND TESTING REPORTS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER.

FOUNDATION NOTES:

1. SPREAD AND STRIP FOOTINGS HAVE BEEN DESIGNED FOR AN ASSUMED ALLOWABLE SOIL BEARING PRESSURE OF 1,500 PSF AT 36 INCHES BELOW GRADE.

2. PROTECT EXISTING UTILITIES AND STRUCTURES, OVERHEAD OR UNDERGROUND, IN WORK AREA.

3. PROTECT EXISTING FOOTING. THE CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY SHORING OR BRACING.

EPOXY NOTES:

1. ALL REINFORCING DOWELS OR THREADED ROD DOWELS INDICATED IN THE CONSTRUCTION DOCUMENTS TO BE "SET INTO HOLES FILLED WITH EPOXY ADHESIVE" SHALL BE GOVERNED BY THE PROVISIONS THIS SECTION AS WELL AS THE SPECIFIC INSTALLATION PROVISIONS REQUIRED BY THE PRODUCT MANUFACTURER AND APPLICABLE I.C.B.O. EVALUATION REPORT REQUIREMENTS.

2. ACCEPTABLE PRODUCTS ARE AS FOLLOWS:

   THE GENERAL CONTRACTOR SHALL SUBMIT TO THE STRUCTURAL ENGINEER THE EPOXY PRODUCT NAME TO BE USED ALONG WITH IT'S I.C.B.O. REPORT & TESTING REQUIREMENTS.

   ADHESIVE ANCHORS FOR CONCRETE WITH Safe Set™ TECHNOLOGY AS PROVIDED BY HILTI, INC. CONTACT HILTI AT (800) 879-8000 FOR PRODUCT RELATED QUESTIONS.

   A. HILTI HIT-HY 200 ADHESIVE ANCHORING SYSTEM INSTALLED USING THE HILTI HOLLOW DRILL BIT (TE-CD OR TE-YD) WITH HAS-E THREADED ROD OR DEFORMED REBAR PER ESR-3187 FOR FAST CURE APPLICATIONS.

   B. HILTI HIT-HY 200 ADHESIVE ANCHORING SYSTEM WITH THE HILTI HIT-Z ROD PER ESR-3187 FOR FAST CURE APPLICATIONS.

3. PROVIDE DRILLED HOLES OF DIAMETER AND DEPTH SPECIFIED BY THE PRODUCT MANUFACTURER FOR THE DOWEL SIZE SPECIFIED IN THE CONSTRUCTION DOCUMENTS OR THE DIAMETER AND DEPTH SPECIFIED IN THE CONTRACT DOCUMENTS, WHICHEVER IS GREATER WHEN DEPTH OF EMBEDMENT IS CONSIDERED.

4. INSTALL ANCHORS PER THE MANUFACTURER INSTRUCTIONS, AS INCLUDED IN THE ANCHOR PACKAGING.

5. OVERHEAD ADHESIVE ANCHORS MUST BE INSTALLED USING THE HILTI PROFI SYSTEM.

6. THE CONTRACTOR SHALL ARRANGE AN ANCHOR MANUFACTURER'S REPRESENTATIVE TO PROVIDE ONSITE INSTALLATION TRAINING FOR ALL OF THEIR ANCHORING PRODUCTS SPECIFIED. THE STRUCTURAL ENGINEER OF RECORD MUST RECEIVE DOCUMENTED CONFIRMATION THAT ALL OF THE CONTRACTOR'S PERSONNEL WHO INSTALL ANCHORS ARE TRAINED PRIOR TO THE COMMENCEMENT OF INSTALLING ANCHORS.

7. ANCHOR CAPACITY IS DEPENDANT UPON SPACING BETWEEN ADJACENT ANCHORS AND PROXIMITY OF ANCHORS TO EDGE OF CONCRETE. INSTALL ANCHORS IN ACCORDANCE WITH SPACING AND EDGE CLEARANCES INDICATED ON THE DRAWINGS.

8. EXISTING REINFORCING BARS IN THE CONCRETE STRUCTURE MAY CONFLICT WITH SPECIFIC ANCHOR LOCATIONS. UNLESS NOTED ON THE DRAWINGS THAT THE BARS CAN BE CUT, THE CONTRACTOR SHALL REVIEW THE EXISTING STRUCTURAL DRAWINGS AND SHALL UNDERTAKE TO LOCATE THE POSITION OF THE REINFORCING BARS AT THE LOCATIONS OF THE CONCRETE ANCHORS, BY HILTI FERROSCAN, GPR, X-RAY, OR OTHER MEANS.

CONCRETE NOTES:

1. CONCRETE STRENGTH - PROVIDE CONCRETE WITH THE FOLLOWING STRENGTHS AT THE LOCATIONS NOTED. MIX DESIGN, SLUMP, AIR ENTRAINMENT, AGGREGATE SIZE, ETC., SHALL BE IN CONFORMANCE WITH THE A.C.I. CODE, LATEST EDITION.

LOCATION	STRENGTH (PSI @ 28 DAYS)
SPREAD FOOTINGS, SLABS-ON-GRADE	4,000 PSI NORMAL WEIGHT

2. REINFORCING STEEL - ASTM A615 GRADE 60 (UNLESS WELDED).

3. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D12-1 USING PROPER LOW HYDROGEN ELECTRODES. ALL BARS TO BE WELDED SHALL CONFORM TO ASTM A706.

4. FABRICATE AND PLACE REINFORCEMENT IN ACCORDANCE WITH ACI PUBLICATION SP-66, ACI DETAILING MANUAL - LATEST EDITION.

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

6. 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 & SMALLER	1 1/2"
#6 & LARGER	2"
SLAB-ON-GRADE	2"

7. 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.

8. CONSTRUCTION JOINTS - THE CONTRACTOR SHALL OBTAIN THE ENGINEER'S APPROVAL FOR CONCRETE CONSTRUCTION JOINT LOCATIONS. REINFORCING STEEL DETAILING MAY CHANGE AND THE CONTRACTOR MAY BE RESPONSIBLE FOR ADDITIONAL EXPENSES AS A RESULT.

SHOP DRAWINGS:

SHOP DRAWINGS ARE AN AID FOR FIELD PLACEMENT AND ARE SUPERSEDED BY THE STRUCTURAL DRAWINGS. ANY REVIEW OF SHOP DRAWINGS BY THIS OFFICE IS ONLY FOR GENERAL CONFORMANCE TO THE STRUCTURAL REQUIREMENTS AND IN NO WAY GUARANTEES THE ACCURACY OR COMPLETENESS OF INFORMATION THEREON. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSURE ALL CONSTRUCTION IS IN FULL COMPLIANCE WITH THE LATEST SET OF STRUCTURAL DRAWINGS. SHOP DRAWINGS MAY NOT BE BASED ON CONTRACT DRAWINGS. ALL SHOP DRAWINGS WHICH HAVE NOT BEEN PREPARED FROM SCRATCH WILL BE REJECTED. SUBMIT ELECTRONIC COPY FOR REVIEW. REVIEW SET WILL BE RETURNED WITH ANY COMMENTS ELECTRONICALLY IN PDF FORM.

HEAVY TIMBER CONSTRUCTION:

1. A SPECIALTY STRUCTURAL ENGINEER LICENSED IN THE PROJECT STATE SHALL DESIGN THE TIMBER STRUCTURE PORTIONS OF THIS BUILDING INCLUDING ALL MEMBERS TIMBER CONNECTIONS, CONNECTIONS TO THE CONVENTIONAL WOOD STRUCTURE AND ANCHORAGE TO THE STRUCTURAL FOUNDATIONS. ENGINEERS SEALED CALCULATIONS AND SEALED SHOP DRAWINGS SHALL BE PROVIDED. DESIGN OF THE CANOPY STRUCTURE TO BE COORDINATED WITH THE ARCHITECTURAL OF DRAWINGS.

2. THE TIMBERS ARE TO BE OF SAWN TIMBER CONSTRUCTION, DOUGLAS FIR-LARCH NO. 1 OR GREATER WITH MINIMUM NOMINAL DIMENSIONS OF 6" WIDTH FOR RAFTER MEMBERS AND 10" WIDTH FOR BEAM AND COLUMN MEMBERS. OMIT GRADE STAMPS AND PROVIDE CERTIFICATES OF GRADE COMPLIANCE ISSUED BY GRADING AGENCY. THE SUPPLIER SHALL FURNISH ALL MATERIALS INCLUDING CONNECTING STEEL AND HARDWARE FOR A COMPLETE INSTALLATION AND MARRIAGE TO THE CONVENTIONAL CONSTRUCTION.

3. BOLTS FOR CONNECTIONS TO BE MINIMUM 3/4" ASTM A307 AND PLATES TO BE MINIMUM 3/16" ASTM A36 STEEL. HOT-DIP GALVANIZE STEEL ASSEMBLIES AND FASTENERS AFTER FABRICATION TO COMPLY WITH ASTM A 123/A 123M OR ASTM A 153/A 153M.

4. ERECT HEAVY TIMBER FRAMING TRUE AND PLUMB. PROVIDE TEMPORARY BRACING TO MAINTAIN LINES AND LEVELS UNTIL PERMANENT SUPPORTING MEMBERS ARE IN PLACE. INSTALL HORIZONTAL AND SLOPING MEMBERS WITH CROWN EDGE UP, AND PROVIDE NOT LESS THAN 4 INCHES OF BEARING ON SUPPORTS. PROVIDE CONTINUOUS MEMBERS UNLESS OTHERWISE INDICATED; TIE TOGETHER OVER SUPPORTS WITH METAL STRAP TIES IF NOT CONTINUOUS.

5. UNLESS OTHERWISE INDICATED, INSTALL BOLTS WITH SAME ORIENTATION WITHIN EACH CONNECTION AND IN SIMILAR CONNECTIONS. INSTALL BOLTS WITH ORIENTATION AS INDICATED OR, IF NOT INDICATED, AS DIRECTED BY ARCHITECT.

6. HANDLE AND TEMPORARILY SUPPORT HEAVY TIMBER FRAMING TO PREVENT SURFACE DAMAGE, COMPRESSION, AND OTHER EFFECTS THAT MIGHT INTERFERE WITH INDICATED FINISH. REPLACE DAMAGED HEAVY TIMBER FRAMING IF REPAIRS ARE NOT APPROVED BY ARCHITECT.

DELEGATED DESIGN OF BUILDING COMPONENTS:

1. DESIGN OF CERTAIN BUILDING COMPONENTS THAT ARE NOT CONSIDERED PART OF THE PRIMARY STRUCTURAL SYSTEM IS DELEGATED TO BE COMPLETED BY A SPECIALTY STRUCTURAL ENGINEER RETAINED BY THE CONTRACTOR. THESE COMPONENTS MAY INCLUDE BUT ARE NOT LIMITED TO STAIRS, COLD-FORMED STEEL FRAMING, PRE-ENGINEERED TRUSSES, ARCHITECTURAL AND STRUCTURAL HEAVY TIMBER, HEAVY TIMBER DECKING, AND DESIGNATED EQUIPMENT SUPPORTS. THE DESIGN SHALL INCLUDE THE CONNECTIONS TO THE PRIMARY BUILDING FRAME WHERE APPLICABLE.

2. THE SPECIALTY STRUCTURAL ENGINEER SHALL DESIGN THE COMPONENT(S) AND ASSOCIATED CONNECTIONS, FOR THE LOADS AND DEFLECTION REQUIREMENTS INDICATED. THE REVIEW OF THE SHOP DRAWING SUBMITTAL BY THE STRUCTURAL ENGINEER SHALL ONLY BE TO VERIFY COMPLIANCE WITH DESIGN INTENT, APPLICATION OF LOADS SPECIFIED, AND REVIEW OF THE PRIMARY BUILDING FRAME TO RESIST THE LOADS IMPOSED BY THE COMPONENT CONNECTIONS.

INDEPENDENT AGENCY SPECIAL INSPECTION NOTES:

IN ACCORDANCE WITH THE 2013 KENTUCKY BUILDING CODE, THE OWNER WILL EMPLOY AN INDEPENDENT INSPECTION/TESTING AS DEFINED IN SECTION 1704. THE SPECIAL INSPECTION AGENCY WILL PROVIDE TESTING AND INSPECTION REPORTS TO THE STRUCTURAL ENGINEER OF RECORD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING AND/OR CORRECTING DEFICIENCIES AS IDENTIFIED BY THE AGENCY. THE CONTRACTOR SHALL COORDINATE WITH THE AGENCY FOR ALL REQUIRED INSPECTIONS AND TESTING. REPORTS WILL BE PROVIDED FOR EACH DAYS INSPECTION. ALL NONCONFORMING ITEMS WILL BE BROUGHT TO THE CONTRACTORS ATTENTION, AND WILL BE RECORDED ON THE INSPECTION REPORT.

VERIFICATION AND INSPECTION OF SOILS (IBC TABLE 1705.6)

	VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
1	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	X
2	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	X
3	PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	X
4	VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	-
5	PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	X

VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION (IBC TABLE 1705.3)

	VERIFICATION AND INSPECTION TASK	CONTINUOUS	PERIODIC
1	INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.	-	X
2	INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1705.2.2, ITEM 2b.	-	-
3	INSPECTION OF ANCHORS CAST IN CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.	-	X
4	INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.	-	X
5	VERIFYING USE OF REQUIRED DESIGN MIX.	-	X
6	AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	-
7	INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	-
8	INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	X
9	INSPECTION OF PRESTRESSED CONCRETE: -APPLICATION OF PRESTRESSING FORCES. -GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC FORCE RESISTING SYSTEM.	X	-
10	ERECTION OF PRECAST CONCRETE MEMBERS.	-	X
11	VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	-	X
12	INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	X

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BID DOCUMENTS

FREEMAN LAKE PARK OFFICE

ELIZABETHTOWN, KY 42701

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STRUCTURAL

PROJECT	2016-1340
DATE	8/18/2017
DRAWN	LEA
CHECKED	MSC

REVISIONS

No.	Description	Date

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GENERAL NOTES

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