GENERAL CONDITIONS

1. THESE STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH ALL OTHER DRAWINGS, SPECIFICATIONS AND CONTRACT DOCUMENTS.
2. THE DESIGN, CONSTRUCTION, QUALITY CONTROL AND SAFETY OF ALL WORK PERFORMED ON THE PROJECT SHALL CONFORM TO THE REFERENCE CODES AND STANDARDS, INCLUDING ALL SPECIFICATIONS REFERENCED WITHIN. THE LATEST EDITIONS SHALL APPLY UNLESS NOTED OTHERWISE.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION METHODS, PROCEDURES, AND SEQUENCES AND SHALL TAKE ALL NECESSARY MEANS TO MAINTAIN AND PROTECT THE STRUCTURAL INTEGRITY OF ALL CONSTRUCTION AT ALL STAGES. ALL FORMWORK, SHORING AND RESHORING, TEMPORARY BRACING AND SUPPORT, AND RECOMMENDED ERECTION PROCEDURES FOR ALL WORK UNTIL PERMANENT BRACING IS IN PLACE IS THE RESPONSIBILITY OF THE CONTRACTOR. IF NECESSARY SHORING, TEMPORARY BRACING, AND TEMPORARY SUPPORT SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER, REGISTERED IN THE PROJECT'S JURISDICTION.
4. COORDINATION WITH THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS TO VERIFY THE LOCATIONS AND SIZES OF ALL CHASES, INSERTS, OPENINGS, SLEEVES, FINISHES, DEPRESSIONS, AND OTHER PROJECT REQUIREMENTS ARE THE CONTRACTOR'S RESPONSIBILITY. ALL REQUIRED OPENINGS, SLEEVES, OR OTHER COMPONENTS MAY NOT BE SHOWN ON THE STRUCTURAL DRAWINGS.
5. IMPOSED CONSTRUCTION LOADS, INCLUDING CRANE LOADS, IN EXCESS OF THE STATED DESIGN LOADS MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO THE IMPOSITION OF SUCH LOADS.

DESIGN CRITERIA

1. BUILDING CODE: THE PENNSYLVANIA UNIFORM CONSTRUCTION CODE, AND BY REFERENCE THE INTERNATIONAL BUILDING CODE 2018, AND ASCE 7-16 (BY REFERENCE OF IBC)
2. DESIGN GRAVITY LOADS:
   ROOF DEAD: 18 psf — ROOF LIVE: 30 psf
   FLOOR DEAD: 13 psf — FLOOR LIVE: 125 psf
3. ROOF SNOW LOAD:
   GROUND SNOW LOAD, P_g = 30 psf
   EXPOSURE FACTOR, C_e = 1.0
   IMPORTANCE FACTOR, I = 1.0
   THERMAL FACTOR, C_t = 1.2
   SLOPED ROOF FACTOR, C_s = 1.0
   SLOPED-ROOF SNOW LOAD, $P_s = (C_s)0.7(P_g)(C_e)(I)(C_t) = 25.2$ psf
4. WIND LOAD:
   BUILDING IMPORTANCE CATEGORY, II
   BASIC WIND SPEED (GUSTS), V = 112 mph
   EXPOSURE CATEGORY, B
   MEAN ROOF HEIGHT, H = 22 ft
   INTERNAL PRESSURE COEFFICIENT: $GC_{pi} = 0.55\pm$

   MAIN WIND FORCE RESISTING SYSTEM:
   MAXIMUM EFFECTIVE HORIZONTAL PRESSURE, P_w = 19.34 psf

   COMPONENTS AND CLADDING:
   MAX. EFFECTIVE WALL PRESSURE, P_{ecc} = 34.39 psf
   MAX. EFFECTIVE ROOF PRESSURE, P_{ecc} = 64.01 psf
   NET ROOF UPLIFT PRESSURE, P_u = 46 psf
5. EARTHQUAKE DESIGN DATA:
   SEISMIC USE GROUP, II
   SEISMIC IMPORTANCE FACTOR, I_e = 1.0
   MAPPED SPECTRAL RESPONSE ACCELERATIONS:
   SHORT PERIOD, S_S = 0.14
   ONE SECOND, S_1 = 0.04
   SPECTRAL RESPONSE COEFFICIENT,
   SHORT PERIOD, S_{DS} = 0.144
   ONE SECOND, S_{D1} = 0.069
   SITE CLASSIFICATION, D
   SITE COEFFICIENTS,
   SHORT PERIOD, F_a = 1.6
   ONE SECOND, F_v = 2.4
   SEISMIC DESIGN CATEGORY, B

   SEISMIC RESISTING SYSTEM: LIGHT FRAMED LOAD BEARING WALLS w/ SHEAR PANELS
   RESPONSE MODIFICATION FACTOR, R = 6.5
   DEFLECTION AMPLIFICATION FACTOR, C_d = 4
   SEISMIC RESPONSE COEFFICIENT, C_s = 0.02

   TOTAL DESIGN BASE SHEAR, V = 3.3 kips

   ANALYSIS PROCEDURE: EQUIVALENT LATERAL-FORCE METHOD

FOUNDATIONS / GEOTECHNICAL REPORT:

1. FOUNDATIONS HAVE BEEN DESIGNED WITHOUT ANY GEOTECHNICAL INFORMATION BASED ON ASSUMPTIONS FROM THE ENGINEER'S EXPERIENCE. NO NEW GEOTECHNICAL REPORT HAS BEEN PROVIDED BY THE OWNER FOR THIS PROJECT.
2. FOUNDATIONS AND/OR SLABS ON GRADE ARE TO BE PLACED ON COMPACTED STRUCTURAL FILL AND HAVE BEEN DESIGNED FOR A NET ALLOWABLE BEARING PRESSURE OF 1500 psf.
3. BEARING ELEVATIONS ARE ESTIMATED BASED ON LAND REVIEW. DETERMINATION OF ACTUAL BEARING ELEVATIONS AND FIELD CERTIFICATION OF ALLOWABLE BEARING PRESSURE SHALL BE PERFORMED BY AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO PLACING FOUNDATIONS.
4. FOUNDATIONS SHALL BEAR A MINIMUM OF 3 FEET BELOW FINISHED GRADE.
5. ALL UTILITY LINES SHALL BE SLEEVED THROUGH FOUNDATION WALLS, STEP FOOTINGS PER THE TYPICAL DETAIL AS NECESSARY FOR UTILITIES. COORDINATE ALL UTILITY LOCATIONS WITH THE MECHANICAL, ELECTRICAL, AND PLUMBING CONTRACTORS. UTILITY LINES SHALL NOT BE PLACED THROUGH OR UNDER FOOTINGS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL.

CAST IN PLACE CONCRETE:

1. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ADDITIONS AND REVISIONS REFERENCED BY THE CURRENT BUILDING CODE OF THE FOLLOWING CODES AND STANDARDS:

   "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI-318", AMERICAN CONCRETE INSTITUTE (ACI)

   "MANUAL OF STANDARD PRACTICE", CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
2. MATERIAL SHALL CONFORM TO THE FOLLOWING STANDARDS:

CEMENT	ASTM C150, TYPE I OR II
AGGREGATES, NORMAL WEIGHT	ASTM C33
DEFORMED REINFORCING BARS	ASTM A615, GRADE 60, Fy = 60 ksi
WELDED WIRE FABRIC	ASTM A1064

3. CONCRETE STRENGTHS SHALL BE AS FOLLOWS:

LOCATION	EXPOSURE CLASS	F'c @ 28 DAYS	WEIGHT	MAX. W/C RATIO
INTERIOR FOUNDATIONS / SLABS	F1	4000 psi	145 pcf	0.60
PERIMETER FOUNDATIONS	F1	3500 psi	145 pcf	0.50
EXTERIOR STRUCTURAL CONCRETE	F3	4500 psi	145 pcf	0.45

4. ALL CONCRETE OF EXPOSURE CLASSES F1, F2 AND F3 SHALL MEET THE TOTAL AIR CONTENT ESTABLISHED IN TABLE 4.4.1 OF THE ACI BASED ON THE A MAXIMUM NOMINAL AGGREGATE SIZE.

MAX. NOMINAL AGGREGATE SIZE	TOTAL AIR EXPOSURE F1	TOTAL AIR EXPOSURE F2 OR F3
3/8"	6	7.5
1/2"	5.5	7
3/4"	5	6
1"	4.5	5.5

5. ALL CONCRETE OF EXPOSURE CLASS F3 SHALL MEET THE LIMITS OF TABLE 4.4.2 FOR THE QUANTITY OF POZZOLANS, INCLUDING FLY ASH AND SILICA FUME, AND SLAG.
6. CONCRETE PROPORTIONING SHALL BE ESTABLISHED BY THE SUPPLIER BASED UPON ACCEPTABLE TEST RECORDS MEETING THE ACI REQUIREMENTS.
7. SLABS ON GRADE SHALL BE PLACED ON 4" MINIMUM OF WELL GRADED, CRUSHED STONE OVER A 10 MIL. VAPOR RETARDER ON COMPACTED SUBGRADE.
8. ALL SLABS ON GRADE SHALL BE CONSTRUCTED TO THE FOLLOWING FLOOR FLATNESS/LEVELNESS (FF/FL) REQUIREMENTS FF = 35, FL = 25.
9. WELDED WIRE FABRIC SHALL BE LAPPED TWO FULL MESH PANELS AND WIRED TOGETHER. FIBROUS REINFORCED CONCRETE SLABS SHALL BE REINFORCED WITH MACRO-SYNTHETIC FIBERS OF SUFFICIENT QUANTITY TO PROVIDE TEMPERATURE AND SHRINKAGE CRACK CONTROL PER THE MANUFACTURERS RECOMMENDATIONS.
10. CHAMFER ALL EXPOSED CONCRETE CORNERS 1/2" UNLESS SHOWN OTHERWISE ON THE ARCHITECTURAL DRAWINGS.

MASONRY:

1. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ADDITIONS AND REVISIONS REFERENCED BY THE CURRENT BUILDING CODE OF THE FOLLOWING CODES AND STANDARDS:

   "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES", (ACI 530/ASCE 5/TMS 402)

   "SPECIFICATIONS FOR MASONRY STRUCTURES", (ACI 530.1/ASTM 6/TMS 402).
2. MATERIAL SHALL CONFORM TO THE FOLLOWING STANDARDS:

CONCRETE MASONRY UNITS	ASTM C90 NORMAL WEIGHT MIN. COMPRESSIVE STRENGTH ON NET AREA = 2800 psi (@ 28 DAYS)
CMU GROUT	ASTM C476, MIN. COMPRESSIVE STRENGTH = 2000 psi (@ 28 DAYS)
PRISM STRENGTH	f'm = 2000 psi PER ACI 530/ASCE 5 UNIT STRENGTH METHOD
HORIZONTAL JOINT REINF.	ASTM A951, 9 GAGE GALVANIZED TRUSS TYPE
REINFORCING BARS	ASTM A615, GRADE 60, Fy = 60,000 psi
MORTAR	ASTM C270, TYPE S

3. PROVIDE GALVANIZED HORIZONTAL JOINT REINFORCING IN ALL WALLS AT 16"o.c. AND IN ALL PARAPETS AT 8"o.c. UNLESS NOTED OTHERWISE. PROVIDE ONE-PIECE PREFABRICATED "T" AND "L" SHAPED UNITS AT 8"o.c. AT ALL WALL CORNERS AND INTERSECTIONS WITH HORIZONTAL JOINT REINFORCING.
4. IN GROUTED AND/OR REINFORCED MASONRY WALLS, USE MASONRY UNITS WITH CORES THAT ALIGN VERTICALLY. PROVIDE CONTINUOUS UNOBSTRUCTED CELLS FOR REINFORCEMENT PLACEMENT AND GROUTING.
5. ALL REINFORCING STEEL SHALL BE PLACED AND HELD IN THE PROPER POSITION WITH REINFORCING BAR POSITIONERS AS THE WALLS ARE CONSTRUCTED. LOWERING THE BARS IN FROM THE TOP OF A COMPLETED WALL OR SECTION OF WALL IS NOT ALLOWED.
6. ALL CELLS WITH VERTICAL REINFORCING BARS SHALL BE GROUTED SOLID. CELLS TO BE GROUTED SHALL BE KEPT CLEAN AND FREE OF OBSTRUCTIONS. GROUT POURS SHALL BE MADE IN LIFTS LESS THAN 5 FEET, AND SHALL NOT EXCEED 12 FEET. ALL GROUTED CELLS SHALL BE MECHANICALLY VIBRATED.
7. LAP SPLICES FOR REINFORCING BARS SHALL BE 50 BAR DIAMETERS UNLESS NOTED OTHERWISE.
8. CONTRACTOR SHALL PROVIDE BRACING AND SUPPORT FOR ALL MASONRY WORK UNTIL PERMANENT BRACING IS IN PLACE.

WOOD FRAMING

1. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ADDITIONS AND REVISIONS REFERENCED BY THE CURRENT BUILDING CODE OF THE FOLLOWING CODES AND STANDARDS:

   "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", AMERICAN FOREST & PAPER ASSOC.

   "STRUCTURAL GLUE LAMINATED TIMBER", AMERICAN INSTITUTE OF TIMBER CONSTRUCTION

   "U.S. PRODUCT STANDARD PS1 FOR CONSTRUCTION & INDUSTRIAL PLYWOOD", AMERICAN PLYWOOD ASSOCIATION
2. MATERIAL PROPERTIES SHALL BE AS FOLLOWS:

   LUMBER: SPRUCE-PINE-FIR No. 2 GRADE or BETTER (NELMA, NLGA, WCLIB, or WWPA)
   F_b = 875 psi F_v = 135 psi F_c = 1150 psi E = 1,400,000 psi

   ENGINEERED LUMBER:
   LAMINATED-STRAND LUMBER (LSL), AND LAMINATED-VENEER LUMBER (LVL) ARE COMPOSITES OF WOOD VENEERS WITH THE GRAIN PRIMARILY PARALLEL TO MEMBER LENGTHS, BONDED TOGETHER WITH EXTERIOR-TYPE ADHESIVE COMPLYING WITH ASTM D2559. ALLOWABLE DESIGN VALUES DETERMINED ACCORDING TO ASTM D5456.

   WOOD I-JOISTS:
   PREFABRICATED UNITS COMPLYING WITH APA PRI-400; DEPTHS AND PERFORMANCE RATINGS ACCORDING TO ASTM D5055.

   SHEATHING: DOUGLAS FIR-LARCH OR DOUGLAS FIR-LARCH (NORTH)
   PLYWOOD: DOC PS 1, UNLESS OTHERWISE INDICATED WITH EXTERIOR, EXPOSURE 1 RATING
   ORIENTED STRAND BOARD: DOC PS 2, WITH EXPOSURE 1, STRUCTURAL 1 RATING
3. PROVIDE LUMBER FACTORY MARKED ON EACH PIECE WITH GRADE STAMP OF GRADING AGENCY. PROVIDE WOOD DECKING WITH EACH PIECE FACTORY MARKED WITH GRADE STAMP OF INSPECTION AGENCY EVIDENCING COMPLIANCE WITH GRADING RULE REQUIREMENTS AND IDENTIFYING GRADING AGENCY, SPECIES, GRADE, MOISTURE CONTENT AT TIME OF SURFACING, AND MILL.
4. LUMBER SHALL BE PROVIDED DRY, WITH LESS THAN 19% MOISTURE CONTENT.
5. ENGINEERED LUMBER HAS BEEN DESIGNED ON THE BASIS OF:

   LAMINATED STRAND LUMBER: iLEVEL'S LSL 1.3E or EQUAL
   F_b = 1700 psi F_v = 425 psi F_c = 1835 psi E = 1,300,000 psi
   LAMINATED VENEER LUMBER: iLEVEL'S LVL 2.0E or EQUAL
   F_b = 2600 psi F_v = 285 psi F_c = 2510 psi E = 2,000,000 psi
   WOOD I-JOISTS: iLEVEL'S TRUSS JOIST SILENT FLOOR
   F_b = 2100 psi FLANGE STRESS
6. INSTALL ENGINEERED LUMBER PER THE MANUFACTURER'S RECOMMENDATIONS WITH ADEQUATE BEARING.
7. ALL BUILT-UP MEMBERS SHALL HAVE LAYERS SPIKED TOGETHER ON BOTH SIDES AT 12"o.c. STAGGERED.
8. ALL WOOD FRAMING INCLUDING JOISTS, RAFTERS, POSTS AND STUDS SHALL BE INSTALLED SEATED SQUARELY AGAINST THE SUPPORTING ELEMENTS, INCLUDING PLATES, LEDGES AND HANGERS TO ASSURE TRANSFER OF AXIAL LOADS.
9. STUDS SHALL BE PLUMBED, ALIGNED AND SECURED TO THE CONTINUOUS PLATES AT EACH END BEFORE THE INSTALLATION OF COMPONENTS WHICH INDUCE AXIAL LOADS.
10. CLIPS, HOLDDOWNS, AND JOIST HANGERS SHALL BE SIMPSON CONNECTORS AND SHALL BE INSTALLED ACCORDING TO THE SPECIFICATIONS OF SIMPSON STRONG-TIE COMPANY, INC. (800-999-5099). ALL OPTIONAL HOLES (TRIANGLE, OBROUND, AND DIAMOND) SHALL BE FILLED PER SIMPSON SPECIFICATIONS

OPEN WEB WOOD TRUSSES

1. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE CURRENT ADDITIONS AND REVISIONS OF THE FOLLOWING CODES AND STANDARDS:

   "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", AMERICAN FOREST & PAPER ASSOCIATION

   "DESIGN SPECIFICATIONS FOR METAL PLATE CONNECTED WOOD TRUSSES", TRUSS PLATE INSTITUTE

   "NES REPORT No. NER-148", NATIONAL EVALUATION SERVICE, INC. (NES)
2. MATERIAL PROPERTIES SHALL BE AS FOLLOWS:

   LUMBER: CHORD MEMBERS SHALL BE MICROLLAM LVL OR MACHINE STRESS RATED (MSR) SAWN LUMBER AND CAPABLE OF SUPPORTING REQUIRED LOADS WITHOUT EXCEEDING ALLOWABLE DESIGN VALUES.
3. TRUSSES SHALL BE CAPABLE OF WITHSTANDING DESIGN LOADS WITHIN LIMITS AND UNDER CONDITIONS INDICATED BELOW:

   TOP CHORD: DEAD LOAD = 10 psf (MINIMUM)
   BOTTOM CHORD: DEAD LOAD = 10 psf (MINIMUM)

   MAXIMUM DEFLECTION UNDER TOTAL DESIGN LOADS:
   ROOF TRUSSES: VERTICAL DEFLECTION OF 1/240 OF SPAN.
4. TRUSSES SHALL BE MANUFACTURED BY TRUSS JOIST MACMILLAN (OR APPROVED EQUAL) IN A PLANT LISTED IN THE REPORT REFERRED TO ABOVE AND UNDER THE SUPERVISION OF A THIRD-PARTY INSPECTION AGENCY.
5. PROVIDE ADEQUATE BEARING FOR ALL MANUFACTURED TRUSSES PER THE MANUFACTURER'S RECOMMENDATIONS.
6. INSTALL WOOD TRUSSES PER THE MANUFACTURER'S RECOMMENDATIONS.

SUBMITTALS:

1. SHOP DRAWINGS FOR ALL STRUCTURAL ITEMS ARE PART OF THE STRUCTURAL DESIGN. FAILURE BY THE CONTRACTOR TO SUBMIT SUCH DRAWINGS FOR REVIEW WILL DELAY PAYMENT FOR SUCH ITEMS AND WORK RELATED THERETO.
2. ALL CONTRACTOR PROPOSED STRUCTURAL SUBSTITUTIONS, INCLUDING CONCRETE ADDITIVES, SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY PERTINENT WORK AND PRIOR TO THE AWARD OF A SUBCONTRACTOR.

THE FOLLOWING SHALL BE SUBMITTED BY THE CONTRACTOR FOR REVIEW:

A. CONCRETE
- CERTIFICATES FOR ALL MATERIALS, ADMIXTURES, ETC. INDICATING COMPLIANCE WITH SPECIFIED STANDARDS. ALL CERTIFICATES OF CERTIFICATION SHALL BE RECENT WITHIN ONE YEAR AND BEAR THE SIGNATURE OF A CURRENT REPRESENTATIVE OF THE SUPPLIER.
- CONCRETE MIX DESIGNS FOR EACH CLASS OF CONCRETE IN ACCORDANCE WITH ACI 318. MIX DESIGNS SHALL INCLUDE ALL ADMIXTURES BEING USED ON THE PROJECT.

B. MASONRY
- MANUFACTURER'S PRODUCT DATA FOR EACH TYPE OF MASONRY, GROUT, MORTAR AND ACCESSORIES, INCLUDING CERTIFICATES INDICATING EACH PRODUCT'S COMPLIANCE WITH THE SPECIFIED STANDARDS.
- REINFORCING STEEL AND GROUTING SHOP DRAWINGS CLEARLY SHOWING THE LOCATIONS, PLACEMENT, SPLICES AND DETAILS OF REINFORCING AND GROUTING. PROVIDE WALL ELEVATIONS FOR ALL EXTERIOR WALL REINFORCING.
- MORTAR AND GROUT MIX DESIGNS AND TEST CERTIFICATES INDICATING COMPLIANCE WITH STRENGTH REQUIREMENTS.

C. WOOD
- MANUFACTURER'S PRODUCT DATA FOR EACH TYPE OF LUMBER AND ACCESSORIES, INCLUDING CERTIFICATES INDICATING EACH PRODUCT'S COMPLIANCE WITH THE SPECIFIED STANDARDS.

D. METAL-PLATE-CONNECTED WOOD TRUSSES
- SHOP DRAWINGS CLEARLY SHOWING MEMBER LAYOUT, BEARING DETAILS, FIELD CONNECTIONS AND BRIDGING DETAILS.
- CALCULATIONS, JOINT STRENGTH INFORMATION, LOAD TEST DATA AND TRUSS JOINT DETAILS FOR TRUSSES.
- CERTIFICATION INDICATING THE TRUSSES HAVE BEEN DESIGNED AND MANUFACTURED IN ACCORDANCE WITH THE TRUSS PLATE INSTITUTE REQUIREMENTS FOR THE TPI LOADS AND THE LOADS INDICATED ON THE DRAWINGS.
- ALL SUBMISSIONS SHALL BEAR THE SEAL AND SIGNATURE OF THE MANUFACTURER'S ENGINEER, LICENSED IN THE JURISDICTION OF THIS PROJECT.

TESTING AND INSPECTION:

1. A QUALIFIED, INDEPENDENT INSPECTION AGENCY SHALL BE RETAINED TO PERFORM ALL TESTING AND INSPECTIONS. THE AGENCY MUST HAVE AN ENGINEER, REGISTERED IN THE JURISDICTION OF THE PROJECT, IN CHARGE OF ALL TESTING AND INSPECTIONS. THE AGENCY MUST ALSO HAVE EXPERIENCE IN THE TESTING AND INSPECTION OF MATERIALS AND CONSTRUCTION REQUIRED HEREIN.
2. TESTING AGENCY SHALL SUBMIT WRITTEN REPORTS TO THE CONTRACTOR, OWNER AND STRUCTURAL ENGINEER WITHIN 3 DAYS OF THE TESTING/INSPECTION. THE CONTRACTOR SHALL BE IMMEDIATELY NOTIFIED OF ANY WORK FOUND TO BE DEFICIENT.
3. ANY RETESTING OF MATERIALS/WORK FOUND TO BE DEFICIENT SHALL BE DONE BY THE INSPECTION AGENCY AT THE CONTRACTOR'S EXPENSE.

THE FOLLOWING TESTING AND INSPECTIONS SHALL BE PERFORMED:

A. SOILS AND SUBGRADE
- A QUALIFIED GEOTECHNICAL ENGINEER SHALL INSPECT BEARING SUBGRADES TO VERIFY COMPLIANCE WITH THE DESIGN NET ALLOWABLE BEARING PRESSURE.
- A QUALIFIED GEOTECHNICAL ENGINEER SHALL MONITOR AND DIRECT THE COMPACTION OF THE EXISTING SOILS, AND AS REQUIRED, THE OVERCUTTING AND PLACEMENT OF STRUCTURAL FILL WHERE UNSUITABLE SUBGRADES ARE ENCOUNTERED.

B. CONCRETE
- SAMPLE FRESH CONCRETE IN ACCORDANCE WITH ASTM C172. MOLD TEST CYLINDERS IN ACCORDANCE WITH ASTM C31.
- THE FOLLOWING NUMBER OF TEST CYLINDERS SHALL BE CAST FOR EACH DAY'S POUR OR EVERY 50 CUBIC YARDS, WHICHEVER RESULTS IN MORE TEST CYLINDERS: 2 @ 7 DAYS 2 @ 28 DAYS
- CYLINDER COMPRESSION TEST RESULTS SHALL BE SUBMITTED WITHIN 2 DAYS OF COMPLETION.
- VISUAL INSPECTION OF REINFORCING PLACEMENT, SIZES AND QUANTITIES TO VERIFY COMPLIANCE WITH APPROVED SHOP DRAWINGS AND THE CONTRACT DRAWINGS.

C. MASONRY
- MASONRY TESTING AND INSPECTIONS SHALL MEET THE LEVEL 1 CRITERIA OF THE IBC AND THE LEVEL B CRITERIA OF THE MASONRY SPECIFICATIONS FOR SPECIAL INSPECTIONS.
- VISUALLY INSPECT MASONRY WORK, REINFORCING PLACEMENT, AND GROUTING TO VERIFY COMPLIANCE WITH APPROVED SHOP DRAWINGS AND THE CONTRACT DRAWINGS.
- MORTAR QUALITY PERIODICALLY MONITOR MORTAR MIXING TO ENSURE COMPLIANCE WITH ASTM C270 PROPORTIONING FOR LAB-PREPARED MORTAR AND ASTM C780 FOR QUALITY CONTROL OF JOBSITE MIXED MORTAR. MONITOR MORTAR PROPORTIONS FOR QUALITY CONTROL PER ASTM C1586.
- SAMPLE AND TEST GROUT IN ACCORDANCE WITH ASTM C1019 FOR EACH 2000 sqft. OF WALL PLACED.

D. METAL-PLATE-CONNECTED WOOD TRUSSES
- VISUALLY INSPECT TRUSS BRIDGING, CONNECTIONS, AND BEARING CONDITIONS TO VERIFY QUALITY AND COMPLIANCE WITH THE SHOP AND CONTRACT DRAWINGS AND REFERENCED SPECIFICATIONS.

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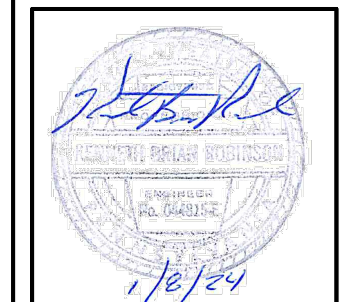

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