

**GENERAL NOTES**

1. THE FOLLOWING NOTES ARE INTENDED TO BE USED AS OUTLINED SPECIFICATIONS FOR THIS PROJECT. THE REFERENCED STANDARDS ARE CONSIDERED TO BE PART OF THE WORK.
2. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR LOCATIONS AND DIMENSIONS OF OPENINGS, CHASES, INSERTS, REGLETTS, SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.
3. ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE IMMEDIATELY ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
4. THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE ONLY AFTER THE STRUCTURAL WORK CONTAINED IN THE STRUCTURAL DRAWINGS IS COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE THIS ERECTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, BRACING, CUTS OR TIEDOWNS, SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
5. SECTIONS AND DETAILS SHOWN ON ANY STRUCTURAL DRAWINGS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS AS DETERMINED BY THE ENGINEER.
6. ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).

**DESIGN LOADS**

1. BUILDING CODE: MAINE UNIFORM BUILDING AND ENERGY CODE, 2018 EDITION, AS APPLIED TO ALL BUILDINGS AND OTHER STRUCTURES.
2. DESIGN FLOOR LIVE LOADS: 40 PSF ALL FLOORS
3. DESIGN ROOF SNOW LOAD: 60 PSF SNOW EXPOSURE FACTOR (Ce): 1.0 SNOW LOAD IMPORTANCE FACTOR (I<sub>s</sub>): 1.1 FLAT ROOF SNOW LOAD (P<sub>f</sub>): 46 PSF
4. DESIGN WIND LOAD: BASIC WIND SPEED: 100 MPH WIND EXPOSURE CATEGORY: B WIND PROTECTION FACTOR (K<sub>d</sub>): 1.0 INTERNAL PRESSURE COEFFICIENT: ±0.18 COMPONENTS & CLADDING LOADS PER ASCE 7-05

**FOUNDATION NOTES (SOIL SUPPORTED)**

1. FOUNDATION DESIGN IS BASED ON SHALLOW SPREAD FOOTINGS BEARING ON SUITABLE UNDISTURBED NATIVE SOILS AND/OR NEW COMPACTED STRUCTURAL FILL EXTENDING TO UNDISTURBED NATIVE SOIL.
2. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY EXISTING SOIL CONDITIONS AND TO BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT PRIOR TO COMMENCING PLACEMENT OF FOUNDATIONS.
3. PRESUMPTIVE BEARING CAPACITY IS 2000 PSF.
4. EXTEND BOTTOM OF EXTERIOR FOOTINGS AT LEAST 4.5 FEET BELOW THE FINAL EXTERIOR GRADE FOR PROTECTION AGAINST FROST.
5. ALL PAVEMENT, EXISTING FOUNDATIONS AND UNCONTROLLED GRANULAR FILL SHALL BE REMOVED FROM THE AREA OF THE PLANNED FOUNDATION TO AT LEAST 4 FEET BEYOND THE FOOTING LIMIT.
6. COMPACTED STRUCTURAL FILL SHALL BE USED TO BACKFILL TO THE DESIGN FOOTING SURGRADE AND BENEATH ALL SLABS ON GRADE. STRUCTURAL FILL SHALL BE A CLEAN SAND-GRAVEL MIXTURE MEETING THE FOLLOWING GRADATION:
 

SCREEN OR SIEVE SIZE	PERCENT PASSING
NO. 100	90-100
3/4 INCH	25-90
NO. 40	0-30
NO. 200	0-5
7. STRUCTURAL FILL SHALL BE PLACED IN LAYERS UP TO EXCEEDING 8 INCHES IN LOOSE THICKNESS AND SHALL BE COMPACTED TO 95 PERCENT OF MAXIMUM DRY DENSITY PER ASTM D1557, MODIFIED PROCTOR TEST. COMPACT ADJACENT TO FOUNDATION WALLS SUPPORTING UNBALANCED FILL (REMAINING WALLS) TO 94 TO 96 PERCENT OF MAXIMUM DRY DENSITY PER ASTM D1557, HAND OPERATED EQUIPMENT SHALL BE USED FOR COMPACTATION WITHIN 8 FEET OF NEW FOUNDATION WALL.
8. NO BACKFILL SHALL BE PLACED AGAINST FOUNDATION WALLS RETAINING EARTH, UNLESS WALLS ARE ADEQUATELY BRACED TO PREVENT MOVEMENT OR STRUCTURAL DAMAGE.
9. PROVIDE ONE DRAINPIPE AROUND THE PERIMETER OF THE STRUCTURE. LOCATE AT THE END OF THE FOUNDATION WALLS AND DISCHARGE TO THE STREET OR TO A PROPERLY DESIGNED OUTLET. REFER TO ARCHITECTURAL AND SITE DRAWINGS FOR ADDITIONAL INFORMATION.
10. SOILS EXPOSED AT THE BASE OF ALL SATISFACTORY FOUNDATION EXCAVATIONS SHALL BE PROTECTED AGAINST ANY DETRIMENTAL CHANGE IN CONDITION SUCH AS FROM THE EXCAVATIONS. GROUNDWATER SHALL BE ADEQUATELY PROTECTED FROM RAINFALL OR FREEZING CONDITIONS. GROUNDWATER SHALL BE ANTICIPATED FOR EXCAVATIONS AND APPROPRIATE DETRAINING MEASURES SHALL BE EMPLOYED.
11. SLOPE EXCAVATION EXCAVATIONS AS REQUIRED FOR STABILITY AND SAFETY IN ACCORDANCE WITH OSHA REGULATIONS. BRACED EXCAVATIONS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MAINE.

**CONCRETE NOTES**

1. CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318 LATEST)" AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301-LATEST)". THESE PUBLICATIONS ARE AVAILABLE THROUGH THE AMERICAN CONCRETE INSTITUTE (244) 848-3800.
2. GENERAL CONTRACTOR CONSTRUCTION MANAGER AND/OR OWNER'S CLERK OF THE WORKS SHALL VERIFY ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (244) 848-3800.
3. CONCRETE SHALL BE CONTROLLED CONCRETE, PROPORTIONED, MIXED, AND PLACED IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN ACI 318-LATEST.
4. CONCRETE MIX DESIGN:
  - A. FOUNDATIONS AND FOUNDATION WALLS:
    - i. STRENGTH: 3000 PSI @ 28 DAYS
    - ii. AGGREGATE: 3/4"
    - iii. W/C RATIO: 0.55 MAX
    - iv. ENTRAINED AIR: 5% TO 7%
    - v. SETTING TIME: 1.5 HOURS
  - B. EXTERIOR SLABS ON GRADE:
    - i. STRENGTH: 4500 PSI @ 28 DAYS
    - ii. AGGREGATE: 3/4"
    - iii. W/C RATIO: 0.45 MAX
    - iv. ENTRAINED AIR: 5% TO 7%
    - v. SETTING TIME: 1.5 HOURS
  - C. INTERIOR SLABS ON GRADE:
    - i. STRENGTH: 3000 PSI @ 28 DAYS
    - ii. AGGREGATE: 3/4"
    - iii. W/C RATIO: 0.55 MAX
    - iv. ENTRAINED AIR ONLY (NO ENTRAINMENT)
    - v. SLUMP: 4" MAX

- A. ADD AIR ENTRAINING ADJUTIVE AT MANUFACTURER'S PREScribed RATE TO RESULT IN CONCRETE AT POINT OF PLACEMENT HAVING THE ABOVE NOTED AIR CONTENT.
  - B. ADDITIONAL SLUMP MAY BE ACHIEVED BY THE ADDITION OF A MILDRAPE OR HIGH RANGE WATER REDUCING ADJUTIVE. MAXIMUM SLUMP AFTER ADDITION OF ADMIXTURE SHALL BE 6 INCHES AND 8 INCHES RESPECTIVELY.
5. ADJUSTMENT TO CONCRETE MIXES: MIX ADJUSTMENTS MAY BE REQUESTED BY THE CONTRACTOR, WHEN CHARACTERISTICS OF THE MATERIALS, JOB CONDITIONS, WEATHER OR OTHER CIRCUMSTANCES WARRANT, AT NO ADDITIONAL COST TO THE OWNER AS ACCEPTED BY THE ARCHITECT. LABORATORY TEST DATA FOR THE REVISED MIX DESIGN AND STRENGTH DATA MUST BE SUBMITTED AND ACCEPTED BY THE ARCHITECT BEFORE INCORPORATING INTO THE WORK.

- A. WATER MAY BE ADDED AT THE PROJECT ONLY IF THE MAXIMUM SPECIFIED WATER-CEMENT RATIO AND SLUMP ARE NOT EXCEEDED. CONTRACTOR SHALL VERIFY THAT THE WATER ADDED DOES NOT EXCEED THE MAXIMUM ALLOWED RATIO HAS NOT BEEN EXCEEDED.
- B. ADDITIONAL DOSES OF SUPER PLASTICIZER SHOULD BE USED WHEN DELAYS OCCUR AND REQUIRED SLUMP HAS NOT BEEN MAINTAINED. A MAXIMUM OF TWO ADDITIONAL DOSAGES ARE PERMITTED PER ACI 212.3R RECOMMENDATIONS.

6. CONCRETE MIXING:
  - A. JOB-SITE MIXING OF CONCRETE WILL NOT BE PERMITTED.
  - B. READY-MIX CONCRETE MUST COMPLY WITH THE REQUIREMENTS OF ASTM C94, AND AS SPECIFIED HEREIN. PROVIDE BATCH TICKETS FOR EACH BATCH AND RECORD THE WATER ADDED AS EVIDENCE THAT THE WATER-CEMENT RATIO HAS NOT BEEN EXCEEDED.
  - C. ADDITIONAL DOSES OF SUPER PLASTICIZER SHOULD BE USED WHEN DELAYS OCCUR AND REQUIRED SLUMP HAS NOT BEEN MAINTAINED. A MAXIMUM OF TWO ADDITIONAL DOSAGES ARE PERMITTED PER ACI 212.3R RECOMMENDATIONS.

7. CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.
8. PROVIDE PVC SLEEVES WHERE BARS PASS THROUGH EXTERIOR CONCRETE OR SLABS CAST ON GRADE. ALL BARS SHALL BE SPACED AND PROTECTED FROM CORROSION. NO PENETRATIONS SHALL BE MADE THROUGH FOOTINGS WITHOUT WRITTEN PERMISSION FROM ENGINEER.
9. REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE OR DEFORMED BARS AND SHALL BE DETAIL, FABRICATED AND PLACED IN ACCORDANCE WITH ACI 318, LATEST EDITION.
10. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND SHALL BE PROVIDED IN FLAT SHEETS. LAP TWO SQUARES AT ALL JOINTS AND TIE AT 3'-0" ON CENTER.
11. FIBER REINFORCEMENT SHALL BE TYPE II SYNTHETIC URGAN HOMOPOLYMER POLYPROPYLENE FIBERS CONFORMING TO ASTM C1118.
12. MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL BE AS FOLLOWS:
  - A. SURFACES CAST AGAINST AND PERMANENTLY IN CONTACT WITH EARTH, 3.0"
  - B. FORMED SURFACES OF CONCRETE WITH EXPOSED TO WEATHER:
    - i. #8 THRU #11 BARS: 2.0"
    - ii. SMALLER: 1.5"
  - C. SURFACES NOT IN CONTACT WITH EARTH OR EXPOSED TO WEATHER WALLS, SLABS, JOISTS #11 AND SMALLER, 1.0"

13. REINFORCEMENT SHALL BE CONTINUOUS AROUND CORNERS AND AT INTERSECTIONS. PROVIDE LAPPED BARS AT NECESSARY SPACES OR HOOKED BARS AT DISCONTINUOUS ENDS. SEE SCHEDULE THIS DRAWING FOR REQUIRED REBAR LAP SLIDE LENGTHS.
14. WELDING OF REINFORCEMENT IS NOT PERMITTED.
15. FOR ALL OPENINGS IN CONCRETE WALLS AND SLABS, PROVIDE SUPPLEMENTAL REINFORCING AROUND OPENING AS SHOWN ON THE CONTRACT DOCUMENTS TYPICAL DETAILS.
16. CONTRACTION/CONTROL JOINTS SHOWN ON DRAWINGS ARE MANUFACTURER'S JOINTS. ADDITIONS, OR CHANGES SHALL NOT BE MADE EXCEPT WITH THE SIGNATURE OF A WRITTEN REQUEST TOGETHER WITH DRAWINGS OF THE PROPOSED JOINT LOCATIONS FOR APPROVAL BY THE STRUCTURAL ENGINEER.

17. CONCRETE SHALL BE PLACED WITHOUT HORIZONTAL CONSTRUCTION JOINTS EXCEPT WHERE SHOWN OR NOTED. VERTICAL CONSTRUCTION JOINTS AND STOPS IN CONCRETE WORK SHALL BE MADE AT MIDSPAN OR AT POINTS OF MINIMUM SHEAR.
18. ALL GROUT BENEATH BASE PLATES & BEARING PLATES SHALL BE "S-SHANK" 5000 PSI NON-SHRINK GROUT BY U.S. GROUT CORP., OR APPROVED EQUAL.

**STRUCTURAL STEEL NOTES**

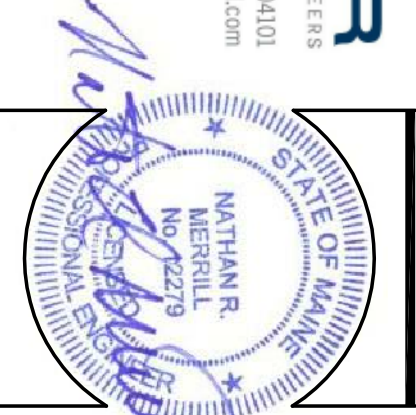
1. STRUCTURAL STEEL FABRICATION, ERECTION, AND CONNECTION DESIGN SHALL CONFORM TO AISC "SPECIFICATION FOR THE DESIGN FABRICATIONS, AND ERECTION OF STRUCTURAL STEEL" LATEST EDITION, AND THE "CODE OF STANDARD PRACTICE" LATEST EDITION.
2. STRUCTURAL STEEL, STEEL PLATES, SHAPES, AND BARS SHALL CONFORM TO ASTM A992 (LATEST) STEEL WISE (ULC) STRUCTURAL STEEL SHAPES DESIGNATED ON THE DRAWINGS FOR WIDE-FLANGE SECTIONS, ASTM A992 (ASTM A572 GRADE 50 WITH SPECIAL REQUIREMENTS PER AISC TECHNICAL BULLETIN #3 DATED MARCH, 1997)
3. PROVIDE STD HOLES PER AISC FOR ALL BOLTS U.N.O.
4. WHERE WELDING IS INDICATED, ALL WELDING SHALL CONFORM TO AWS D1.1-LATEST (LATEST) EDITION. ALL WELDS SHALL CONFORM TO AWS D1.1 E70XX SERIES WITH PROPER ROD TO PRODUCE OPTIMUM WELD (LOW HYDROGEN)
5. ALL STEEL SHALL BE FABRICATED AND SHIPPED SHOP-PRIMED U.N.O. ON DRAWINGS.
6. SEE DRAWINGS FOR ANCHOR BOLT INFORMATION, TYP.
7. PROVIDE 3/8" MINIMUM STIFFENER PLATES EACH SIDE OF BEAM WEB AT BEAMS FRAMING OVER COLUMNS AND AT COLUMNS OVER BEAMS.
8. PROVIDE 1/4" THICK LEVELING PLATE AND 3/4" x 4" OF NON-SHRINK GROUT UNDER ALL COLUMN BASE PLATES UNLESS OTHERWISE NOTED. LEVELING PLATES SHALL BE SET AND GROUTED PRIOR TO ERECTING COLUMNS.
9. PROVIDE ALL ANGLES, PLATES, ANCHORS, BOLTS, ETC., SHOWN ON ARCHITECTURAL DRAWINGS.

**TIMBER NOTES**

1. ALL TIMBER FRAMING SHALL BE IN ACCORDANCE WITH THE AITC TIMBER CONSTRUCTION MANUAL - LATEST EDITION, AND THE AF & PA NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) LATEST EDITION.
2. INDIVIDUAL TIMBER FRAMING MEMBERS SHALL BE USUALLY GRADED, MINIMUM GRADE OTHERWISE INDICATED ON THE DRAWINGS. NOT/LONG SPRUCE-PINE-FIR, KILN DRIED TO 19% MAXIMUM MOISTURE CONTENT UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
3. ENGINEERED WOOD PRODUCTS SHALL BE AS SPECIFIED ON THE DRAWINGS. REFER TO MANUFACTURER'S LITERATURE FOR PROPER HANDLING AND INSTALLATION GUIDELINES. MANUFACTURER AND PRODUCT SHALL BE:
  - [ LABEL: ] I-JOIST (TJI), PARALLAX (PSL), MICROSLAM (LVL), TIMBERSTRAND (LSL)
  - [ BOISE: ] I-JOIST (BO), VERSALAM (LVL)
4. PRESSURE TREATED LUMBER SHALL BE USED FOR SILL MEMBERS, EXTERIOR EXPOSURE, OR WHERE SHOWN ON THE DRAWINGS. TIMBER SHALL BE SOUTHERN YELLOW PINE TREATED WITH CHL OR ACQ TO 0.4 #/CF IN ACCORDANCE WITH ANPA C-18. ACQ IS STRICTLY PROHIBITED.
5. ALL ROOF AND WALL SHEATHING SHALL BE APA PERFORMANCE-RATED. SHEATHING SHALL BE NAILED TO THE FRAMING AS FOLLOWS, U.N.O.:
  - A. ROOFS: 8d NAILS AT 6" O.C. AT SUPPORTED PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS.
  - B. WALLS: 8d NAILS AT 6" O.C. AT SUPPORTED PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS.
6. FLOOR SHEATHING SHALL BE 3/4" APA RATED TONGUE AND GROOVE PANELS. GUE AND NAIL TO FLOOR FRAMING WITH 8d RING SHANK NAILS AT 6" O.C. AT SUPPORTED PANEL EDGES. PANELS U.C. OR PERMITS. SUBMIT MODERN APPROVED TONGUE AND GROOVE PANELS MAY BE SUBSTITUTED ONLY WITH WRITTEN PERMISSION FROM THE ARCHITECT.
7. ALL BUILT-UP BEAMS AND COLUMNS SHALL BE NAILED AS FOLLOWS (FASTENING IN EACH PLY):
  - UNIDIRECTIONAL LOADED BEAMS:
    - 8d/16d NAILS AT 12" O.C. STAGGERED
    - BEAM DEPTH >= 16" - 3 ROWS OF 16d NAILS AT 12" O.C. STAGGERED
  - FASTENERS SHALL MEET THE REQUIREMENTS OF ASTM F1667, UNLESS NOTED OTHERWISE. NAILS REFERENCED ON DRAWINGS ARE TO BE COMMON NAILS WITH DIMENSIONS AS FOLLOWS:
    - 6d: 2" LONG BY 0.113" DIAMETER SHANK WITH 0.296" DIAMETER HEAD
    - 8d: 2 1/2" LONG BY 0.131" DIAMETER SHANK WITH 0.291" DIAMETER HEAD
    - 10d: 3" LONG BY 0.148" DIAMETER SHANK WITH 0.312" DIAMETER HEAD
    - 12d: 3 1/4" LONG BY 0.148" DIAMETER SHANK WITH 0.312" DIAMETER HEAD
    - 16d: 3 1/2" LONG BY 0.162" DIAMETER SHANK WITH 0.344" DIAMETER HEAD
    - 20d: 4" LONG BY 0.192" DIAMETER SHANK WITH 0.406" DIAMETER HEAD
    - 30d: 4 1/2" LONG BY 0.207" DIAMETER SHANK WITH 0.438" DIAMETER HEAD
8. ALL TIMBER CONNECTION HARDWARE (JOIST HANGERS, POST BASSES, SHEARPLATE, HANGERS, ETC.) SHALL BE GALVANIZED OR GALVANNEAL. ALL CONNECTION HARDWARE SHALL BE HO-DIPPED GALVANIZED C-90 (U.N.O.). CONNECTION HARDWARE USED IN CONJUNCTION WITH PRESERVATIVE TREATMENT SHALL BE GALVANIZED G185 (ZMAX) USE FASTENERS AND HANGERS OF SAME MATERIAL & COATING. REFER TO MANUFACTURER'S LITERATURE FOR PROPER HANDLING AND INSTALLATION GUIDELINES.
9. FASTENERS USED IN CONJUNCTION WITH PT LUMBER, BUT NOT AT TIMBER CONNECTION HARDWARE REFERENCED IN NOTE ABOVE, SHALL BE POST HOT-DIPPED GALVANIZED (ASTM A153).



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**BOGG + KIEFNER RESIDENCE**

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Project Description



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<b>S100</b>	