

**GENERAL NOTES:**

- The notes on the drawings are not intended to replace specifications. See specifications for requirements in addition to general notes.
- Structural drawings shall be used in conjunction with job specifications and architectural, mechanical, electrical, plumbing, and site drawings. Consult these drawings for locations and dimensions of openings, chases, inserts, reglets, sleeves, depressions, and other details not shown on structural drawings.
- All dimensions and conditions must be verified in the field. Any discrepancies shall be brought to the attention of the engineer before proceeding with the affected part of the work.
- Do not scale plans.
- Sections and details shown on any structural drawings shall be considered typical for similar conditions.
- All proprietary products shall be installed in accordance with the manufacturers written instructions.
- The structure is designed to be self supporting and stable after the Building is complete. It is the contractor's sole responsibility to determine erection procedures and sequencing to ensure the safety of the building and its components during erection. This includes the addition of necessary shoring, sheeting temporary bracing, guys or tie downs. Such material shall remain the property of the contractor after completion of the project.
- All applicable federal, state, and municipal regulations shall be followed, including the federal department of labor occupational safety and health act.

**DESIGN LOADS:**

- Building code: IRC International Residential Code (2003).
- Design Live Loads: (Ground snow load = 60 PSF)  
Roof.....42 PSF + Drift  
Habitable Spaces.....40 psf
- Design wind loads are based on exposure B using 100 mph basic wind speed.
- Seismic design per IBC 2003 Code.

**FOUNDATION NOTES:**

- Foundations have been designed with a presumptive bearing capacity of 2000 PSF to be verified by the General Contractor in the field.
- Bottom of footings shall be founded a minimum of 4'-0" below finished grade.
- Structural fill shall be used as fill beneath the foundations and as backfill for foundation.  
Prior to placement of structural fill, remove all topsoil and other unsuitable material. Compacted structural fill shall consist of clean granular material free of organics, loam, trash, snow, ice, frozen soil or any other objectionable material. Granular fill should be a well-graded sand and gravel mixture meeting the following gradation:

SCREEN OR SIEVE SIZE	PERCENT FINER BY WEIGHT
6 inches	100
3 inches	75-100
#4	35-70
#40	5-35
#200	0-5

Based on the results of the laboratory testing, the on-site fill material is not suitable for the use as granular fill. However, it may be used as common fill if the organic material and debris present are removed prior to use. Common fill should consist of inorganic mineral soil free of ice, loam, organic, or other unsuitable material.

- Structural foundation backfill shall be placed in layers not exceeding 6 inches in loose measure and compacted by self-propelled compaction equipment at approximate optimum moisture content to a dry density of at least 95% of the maximum in place dry density as determined by the modified proctor test (ASTM D-1557).
- Open excavations shall be adequately braced or properly benched.
- Backfill both sides of foundation walls simultaneously.
- Under drains shall be placed as shown on the site drawings. Under drains shall be installed to positively drain to a suitable discharge point away from the structure. Refer to the site drawings for additional information.

**CONCRETE NOTES:**

- Proportion design mixes to provide concrete with the following design strength ( $f'c$ )  
Elevated First Floor Structural slab, Pile Caps, Grade Beams, Tie Beams and Piers:  
a. Footings, walls and piers: 3000 psi  
a. Slabs on grade: 4000 psi  
Submit concrete mix design for approval prior to construction.
- All concrete work shall conform to ACI 318-Latest Edition.
- Add air entraining admixture at manufacturers prescribed rate to result in concrete at point of placement having the above noted air contents.  
4% to 8% for maximum 3/4" aggregate.
- Concrete shall not be placed in water or on frozen ground.
- Provide PVC sleeves where pipes pass through concrete walls or slabs.
- Reinforcing bars shall conform to ASTM A615 Grade 60 deformed bars, and shall be detailed, fabricated and erected in accordance with ACI 315-Latest edition.
- Welded wire fabric shall be provided in flat sheets.
- Fiber reinforced concrete shall conform to ASTM C-1116.
- Complete shop drawings and schedules of all reinforcing steel shall be prepared by the contractor and submitted to the engineer for review prior to commencement of that portion of work. All accessories must be shown on the shop drawings. Submit (6) blue line prints and (1) reproducible (sepia) to the Architect.
- Splices of reinforcing bars shall be in accordance with ACI 318. Splices of WWF shall be 6" minimum.
- Concrete finishes: See Architectural drawings for additional information.
- Anchor bolts shall conform to ASTM A307 unless noted otherwise on plan.
- Provide control joints in slabs on grade 15' X 15' (225 S.F.) with fibermesh or 20' X 20' (400 S.F.) with welded wire fabric.
- The general contractor shall be responsible for coordination of door bond out locations, slab depression and other required bond outs. Coordinate location of bond outs with Architectural, Mechanical & Plumbing, and Electrical drawings as necessary to properly install each specific item.

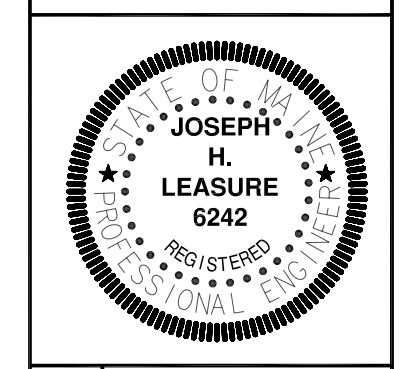
**TIMBER TRUSS FRAMING:**

- Materials: Stress graded lumber, metal plate connectors. Minimum grade No. 2 M.S.R. Southern Pine, kiln dried, 15% moisture content.
- Applicable specifications:  
a. National Design Specification for stress graded lumber and its fastening (NDS).  
b. Design specifications for light metal plate connected wood trusses (TPI-Latest edition)
- Bracing: The truss manufacturer shall specify all bracing required both for temporary construction loading and for permanent lateral support of compression members.
- Submittals:  
a. Submit design calculations, shop drawings and erection procedures all affixed with the seal of a professional structural engineer registered in the State of Maine.  
b. Shop drawings shall show stress grade and size of members, size and location of plate connectors, size and location of bracing and shall be approved by the truss designer.
- All fabricated trusses shall be inspected at the fabrication plant and approved trusses shall receive the TPI mark of approval in accordance with the truss plate institute in-plant inspection license agreement.
- Connector plates shall be galvanized.
- Timber trusses shall be designed in accordance with BOCA and ASCE 7-98.
- Provide permanent bottom chord bracing in accordance with the truss plate institute (TYP-latest edition).
- Trusses shall be designed for all potential load combinations of live loads (snow) and wind loads including unbalanced snow loads, drift loads and wind loads in accordance with IRC 2003.

**TIMBER FRAMING:**

- All timber framing shall be in accordance with the AITC timber construction manual or the national design specifications (NDS) -latest edition.
- Individual timber framing members shall be visually graded, minimum grade #2 Spruce-Pine-Fir (SPF), kiln dried to 19% moisture content.
- Pressure treated lumber shall be used where wood is in contact with ground, concrete or masonry. Timber shall be southern yellow pine treated with cca to 0.4 #/CF in accordance with AWPA C-18.
- Metal connectors shall be used at all timber to timber connections or as noted on the design drawings.
- Provide Simpson H2.5 hurricane anchors where timber framing and/or trusses bear on structural steel beams or bearing walls.
- Nailing not specified shall conform with IBC 2003.
- Roof sheathing shall be 5/8" APA rated sheathing w/ H-clips. Attach sheathing to all supports using 10d nails spaced at 6" o.c. at panel edges and 6" o.c. at intermediate supports.
- Wall sheathing shall be 1/2" APA rated sheathing. Attach sheathing to all supports using 10d nails spaced at 4" o.c. at panel edges and 6" o.c. at intermediate supports. All panel edges shall be blocked with 2x solid blocking.
- Floor sheathing shall be 3/4" APA rated sheathing. Attach sheathing with construction adhesive and 10d ring shank nails at 6" o.c. at panel edges and intermediates.

**L & L STRUCTURAL ENGINEERING SERVICES, INC.**  
SIX Q STREET  
SOUTH PORTLAND, MAINE 04106  
PHONE: (207) 767-4830  
FAX: (207) 799-5432



rev.	date	description	appr'd

designed by: JHL  
drawn by: LEM  
checked by: JHL  
scale: NOT APPLICABLE  
date: MAY 5, 2006  
plot date: MAY 5, 2006  
project #:

DIXON RESIDENCE  
121 HOPE AVENUE  
PRESUMPSHOT RIVER PLACE  
PORTLAND, MAINE  
GENERAL NOTES

**S1**