



L & L STRUCTURAL

ENGINEERING SERVICES, INC.

Six Q Street

South Portland, ME 04106

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**BUILDING LOCATED AT
182 STATE STREET
PORTLAND, MAINE**

**STRUCTURAL DRAWINGS
FOR
FOURTH FLOOR RENOVATION**

Prepared for: Jeremy Moser
P.O. Box 5360
Portland, Maine 04101

Submission Date: March 19, 2004 (REVISED 3/23/04)
Drawings Submitted: S1-S5



GENERAL NOTES:

1. The notes on the drawings are not intended to replace specifications. See specifications for requirements in addition to general notes.
2. 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.
3. 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.
4. 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 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.
6. All applicable federal, state, and municipal regulations shall be followed, including the federal department of labor occupational safety and health act.

DESIGN LOADS:

1. Building code: BOCA Basic Building Code (1999)
2. Design Loads shall be in accordance with the building code.
Roof (snow) Live Load..... 42 PSF (plus drift as applicable)
Residential Floor Load 40 PSF
Retail Floor Load 100 PSF (First Floor Only)
3. Lateral loads (wind and seismic) shall be in accordance with the code.

TIMBER FRAMING:

1. All timber framing shall be in accordance with the AITC Timber Construction Manual or the National Design Specification (NDS) -Latest editions.
2. Individual timber framing members shall be visually graded, minimum grade #2 Spruce-Pine-Fir (SPF), kiln dried 19% maximum moisture content (unless otherwise noted on the drawings).
3. All lumber in contact with concrete and as indicated shall be pressure treated. Timber shall be southern yellow pine treated with CCA to 0.4 #/CF in accordance with AWPAC-18.
4. Provide solid 2x timber bridging, double nailed at each end, at 8 feet maximum spacing for all dimensional lumber floor framing.
5. Standard metal connectors shall be used at all timber to timber connections or as noted on the design drawings.
6. Nailing not specified shall conform with BOCA appendix C.
7. "LVL" indicates Parallam laminated veneer lumber manufactured by Boise Cascades Company or approved equal.
8. Provide 19/32" thick APA rated sheathing on roof framing.
9. Provide 15/32" thick APA rated sheathing on exterior wall framing.
10. Provide 23/32" thick APA rated sheathing on floor framing.

designed by:	JHL
drawn by:	JHL
checked by:	MFL

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FOUNDATION NOTES:

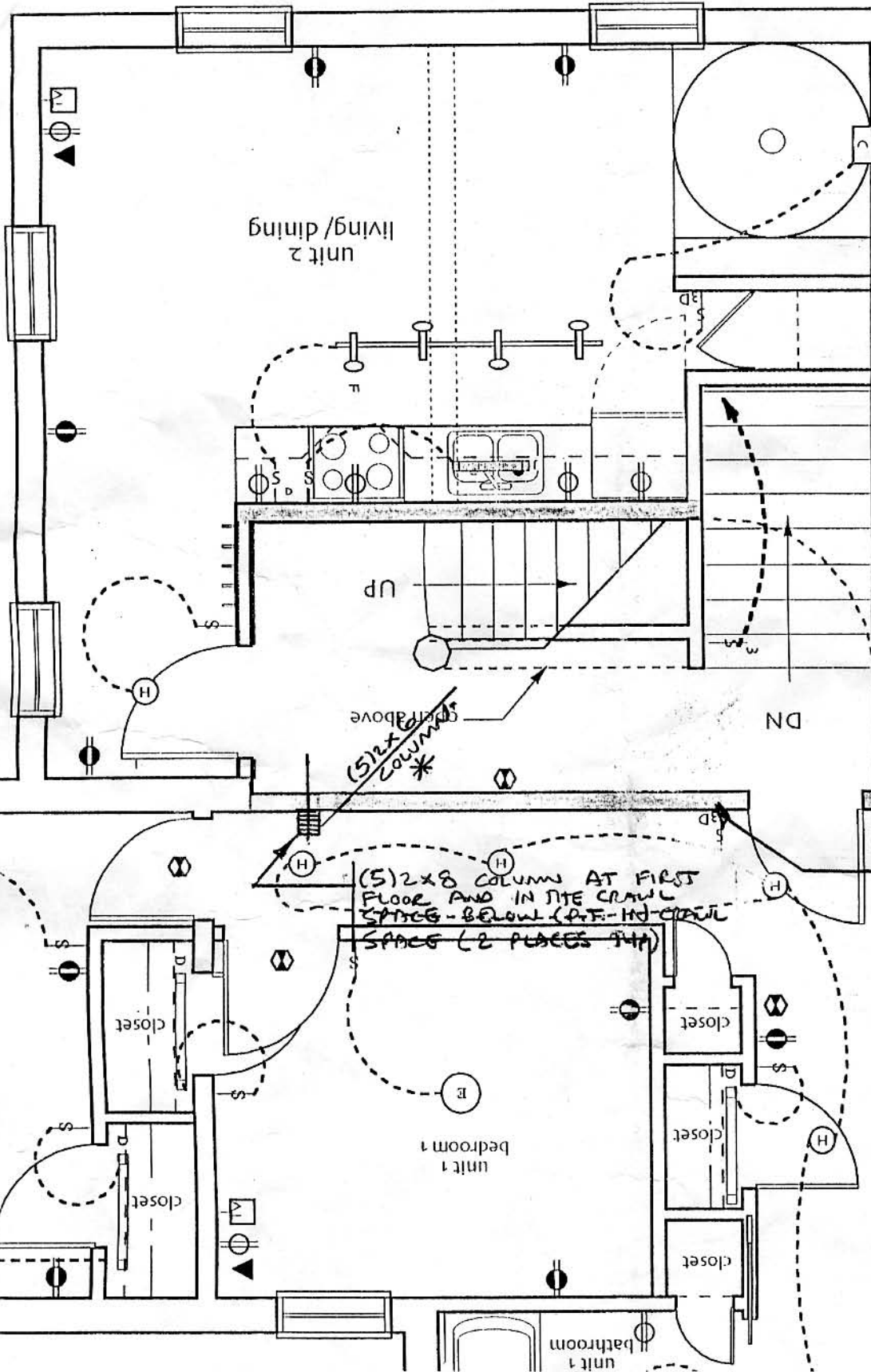
1. Foundations have been designed utilizing a presumptive bearing capacity of 2000 PSF to be verified in the field.
2. Interior spread footings and exterior strip footings shall be founded on undisturbed native soil or compacted structural fill.
3. Structural fill shall be used at all locations below footings and slabs and adjacent to the foundation walls. 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. It shall be well graded within the following units:

SCREEN OR SIEVE SIZE	PERCENT FINER BY WEIGHT
6 INCH	100
3 INCH	70-100
NO. 4	35-70
NO. 40	5-35
NO. 200	0-5

CONCRETE NOTES:

1. All concrete work shall conform to ACI 318-89.
2. Concrete strength at 28 days shall be 3000 PSI.
3. All concrete shall be air entrained 4% to 6%.
4. Concrete shall not be placed in water or on frozen ground.
5. Provide PVC sleeves where pipes pass through concrete walls or slabs.
6. 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.
7. Welded wire fabric shall be provided in flat sheets.
8. Fiber reinforced concrete shall conform to ATSM C-1116.
9. Splices of reinforcing bars shall be in accordance with ACI 318-89. Splices of WWF shall be 6" minimum.
10. Concrete finishes: See specifications and Architectural drawings for additional information.
11. Anchor bolts shall conform to ASTM A307 unless noted otherwise on plan.
12. The general contractor shall be responsible for coordination of door bondout locations and slab depression & bondout locations with Architectural, Mechanical & Plumbing drawings, and kitchen equipment vendors as necessary to properly install each specific item.

designed by: JHL	BUILDING LOCATED AT: 182 STATE STREET PORTLAND, MAINE GENERAL NOTES	L & L STRUCTURAL ENGINEERING SERVICES, INC. SIX Q STREET SOUTH PORTLAND, MAINE 04106 PHONE: (207) 787-4830 FAX: (207) 789-5432 EMAIL: LLENG@AOL.COM	S2
drawn by: JHL			
checked by: MFL			
scale: NOTED			
date: 3/19/04			

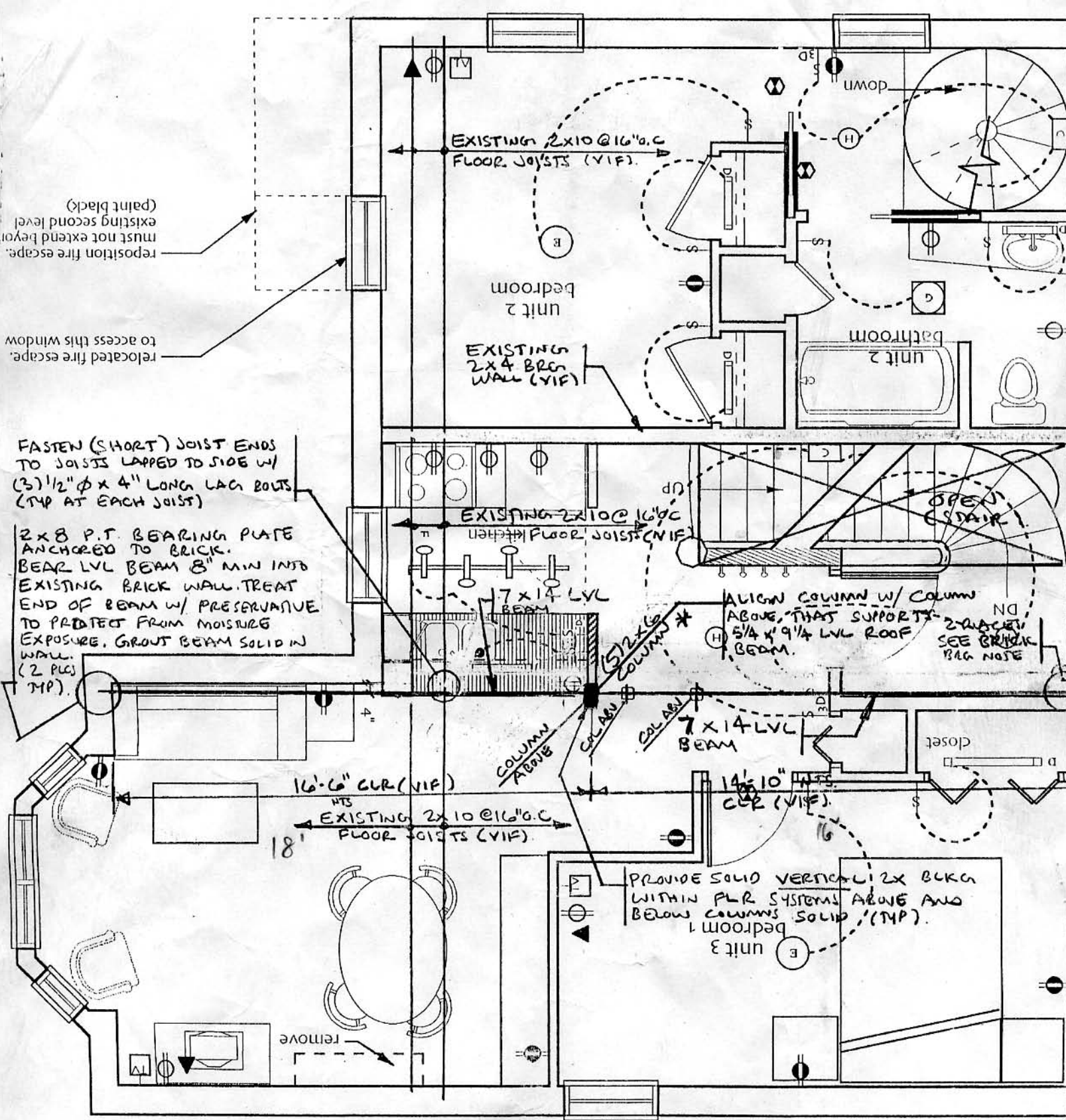


* INDICATES: COLUMNS SHALL BE ALIGNED W/ COLUMNS ABOVE AND PROVIDE SOLID VERTICAL 2x BLOCKING WITHIN FLOOR SYSTEM ABOVE AND BELOW COLUMNS SOLID (TYP) ALSO, A COLUMN SHALL BE INSTALLED AT THE FIRST FLOOR AND IN THE CRAWL SPACE BELOW ALIGNED WITH THE COLUMNS INDICATED. THE COLUMNS AT THE FIRST FLOOR AND IN THE CRAWL SPACE SHALL BE (5) 2x8 COLUMNS (P.T. IN CRAWL SPACE).

EXISTING 2x4 @ 12" O.C INTERIOR BEARING WALL. PROVIDE ADD'L 2x6 @ 16" O.C P.T. STUD WALL BENEATH THE EXISTING FIRST FLOOR WALL AND FIRST FLOOR BEAM. THE NEW STUD WALL IN THE CRAWL SPACE SHALL BE SUPPORTED ON A NEW 8" THICK X 16" WIDE CONTINUOUS CONCRETE FOOTING W/ 2-#4 CONT. 3" CUR FROM BOTTOM OF FTN (TYP).

PARTIAL 3rd FLOOR FRAMING PLAN (SEE NOTES ABOVE FOR 2nd & 1st FLOOR FRAMING)
 1/4" = 1' 0"

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PART. 3 rd FLOOR FRAMING	3/19/04	



reposition fire escape. must not extend beyond existing second level (paint black)

relocated fire escape. to access this window.

FASTEN (SHORT) JOIST ENDS TO JOISTS LAPPED TO SIDE W/ (3) 1/2" ϕ x 4" LONG LAG BOLTS (TYP AT EACH JOIST)

2 x 8 P.T. BEARING PLATE ANCHORED TO BRICK. BEAR LVL BEAM 8" MIN INTO EXISTING BRICK WALL. TREAT END OF BEAM W/ PRESERVATIVE TO PROTECT FROM MOISTURE EXPOSURE. GROUT BEAM SOLID IN WALL. (2 PLG) (MP).

ALIGN COLUMN W/ COLUMN ABOVE THAT SUPPORTS 5/4 x 9/4 LVL ROOF BEAM. (ND) SEE BRICK BAG NOSE

PROVIDE SOLID VERTICAL 2x BRCK WITHIN FLR SYSTEMS ABOVE AND BELOW COLUMNS SOLID (MP).

PARTIAL 4th FLOOR FRAMING PLAN
 1/4" = 1'-0"
 (3rd FLOOR LAYOUT PLAN)

EXISTING 12" BRICK WALL BELOW (AT LVL BRG) VIF

2x6 P.T BEARING PLATE ANCHORED TO BRICK. BEAR LVL BEAM 6" MIN. INTO EXISTING BRICK WALL. TREAT END OF BM W/ PRESERVATIVE TO PROTECT FROM MOISTURE EXPOSURE. GROUT BEAM SOLID IN WALL (2 PLACES TYP).

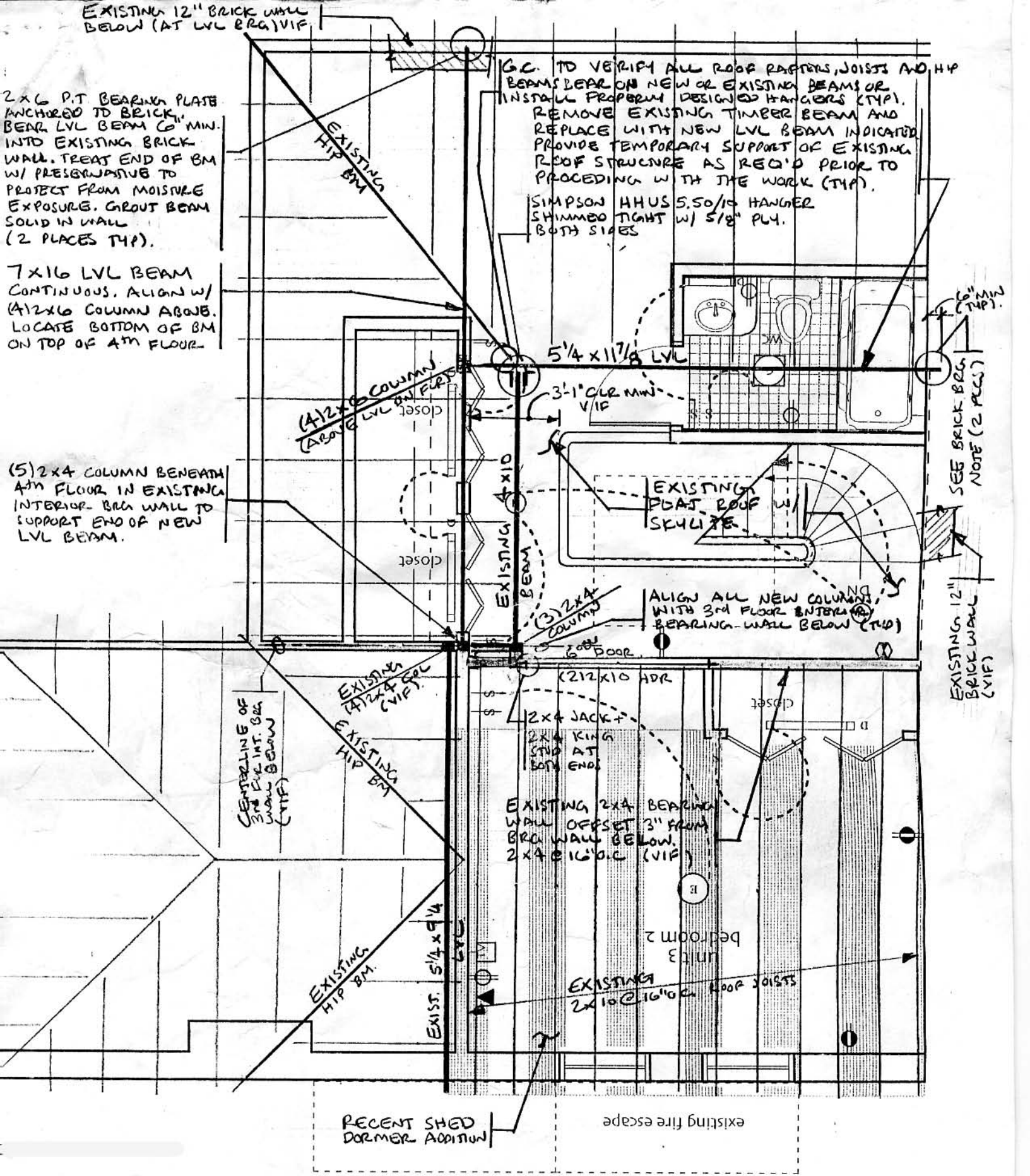
7x16 LVL BEAM CONTINUOUS. ALIGN W/ (4) 2x16 COLUMN ABOVE. LOCATE BOTTOM OF BM ON TOP OF 4TH FLOOR.

(5) 2x4 COLUMN BENEATH 4TH FLOOR IN EXISTING INTERIOR BRG WALL TO SUPPORT END OF NEW LVL BEAM.

G.C. TO VERIFY ALL ROOF RAFTERS, JOISTS AND HP BEAMS BEAR ON NEW OR EXISTING BEAMS OR INSTALL PROPERLY DESIGNED HANGERS (TYP). REMOVE EXISTING TIMBER BEAM AND REPLACE WITH NEW LVL BEAM INDICATED. PROVIDE TEMPORARY SUPPORT OF EXISTING ROOF STRUCTURE AS REQ'D PRIOR TO PROCEEDING WITH THE WORK (TYP).
SIMPSON HHUS 5.50/10 HANGER SHIMMED TIGHT W/ 5/8" PLY. BOTH SIDES

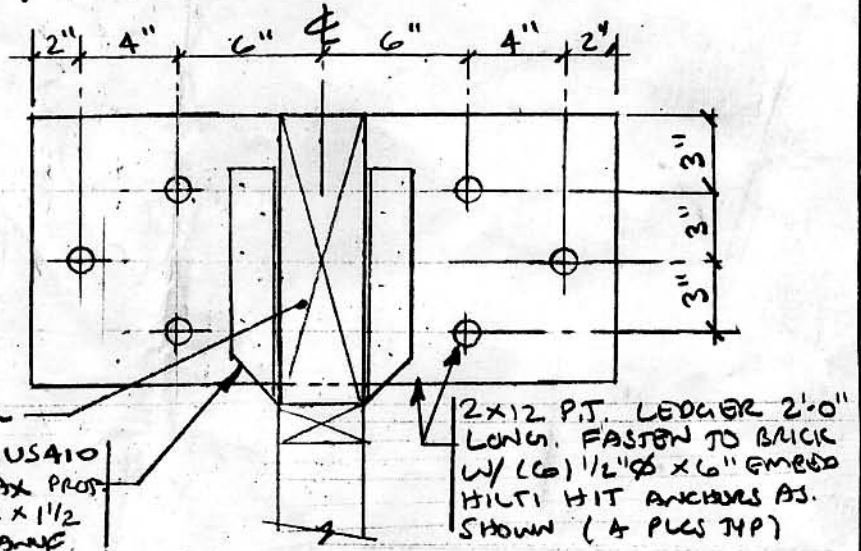
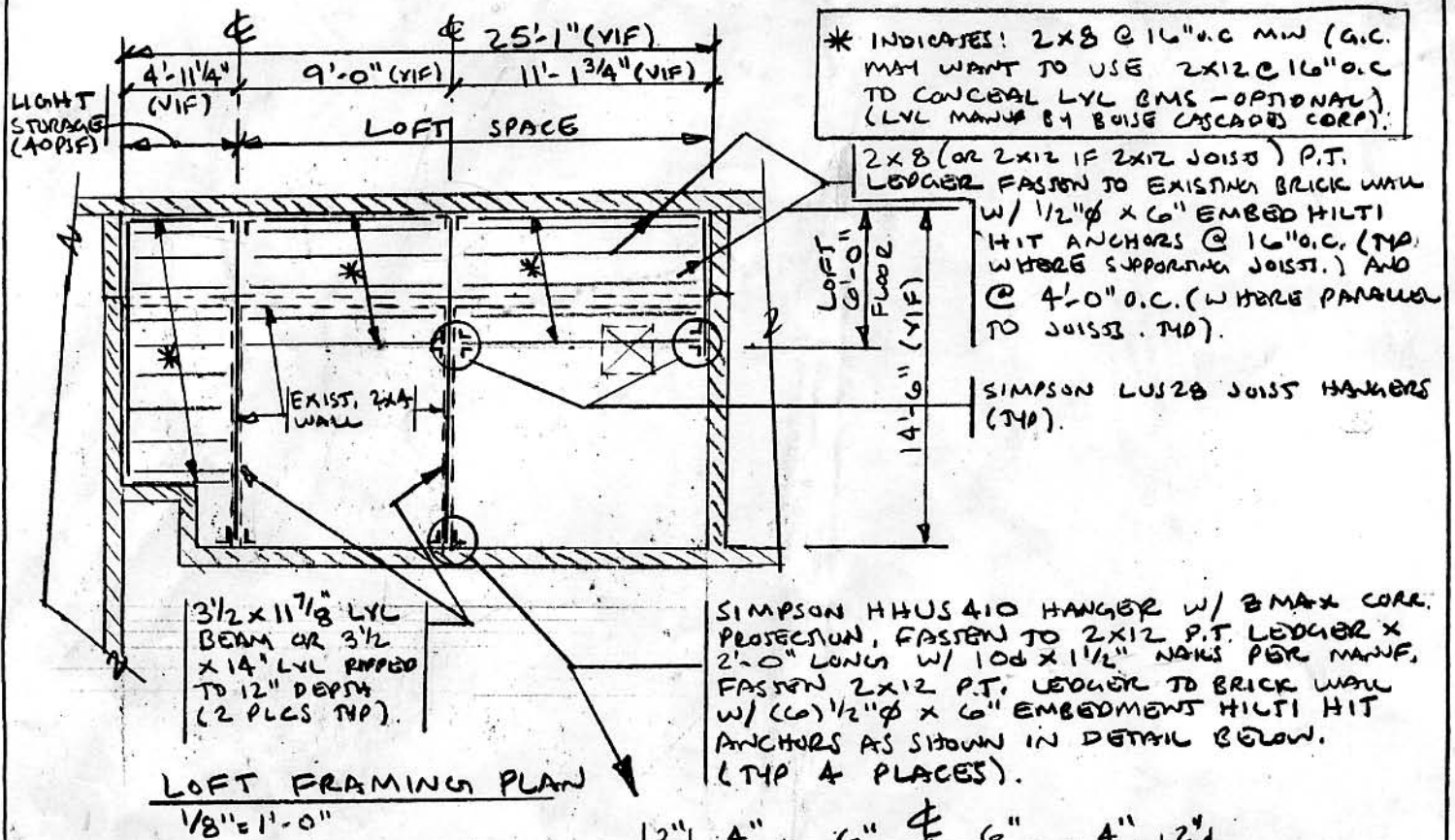
6" MIN TYP.
SEE BRICK BRG NOTE (2 PAGES)

EXISTING 12" BRICK WALL (VIF)



PARTIAL ROOF FRAMING PLAN
1/4" = 1'-0" (FOURTH FLOOR LAYOUT PLAN)

182 STATE STREET PORTLAND, MAINE		S5
PART. ROOF FRMG	3/19/04	



designed by: JHL
 drawn by: JHL
 checked by: MFI
 scale: NOTED
 date: 10/26/04

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LOFT FRAMING PLAN.
 SECTIONS & DETAILS

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