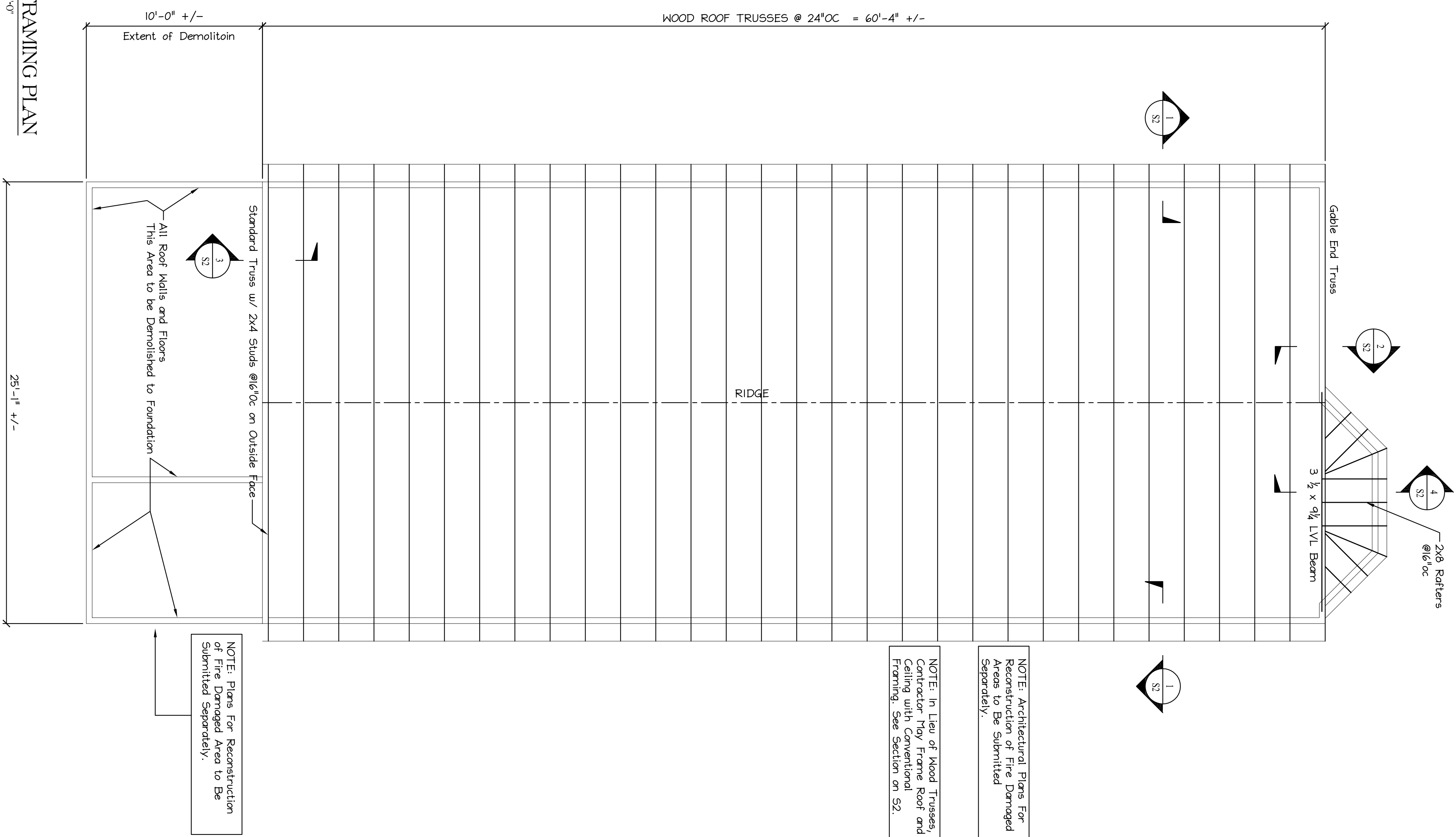


CONGRESS STREET



ROOF FRAMING PLAN

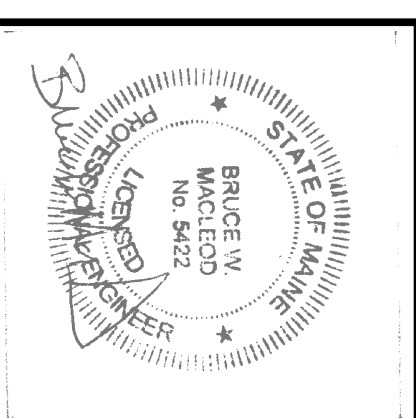
Scale: 1/4" = 1'-0"



DRAWING LIST:

- S1 ROOF FRAMING PLAN
- S1 NOTES
- S2 DETAILS

201 CONGRESS STREET  
PORTLAND, MAINE



|   |  |
|---|--|
|   |  |
| 404 Main Street, Gorham, Maine 04038 202.239.0980 |  |
| Owner:  | Portland, Maine  |
| Drawn By:   | Tim and Loren Ferguson<br>Road Road<br>Yermouth, Maine |
| DATE:   | 12/9/10  |
| SCALE:  | as noted   |
| TITLE:  | ROOF FRAMING PLAN                                      |
| DRAWING NUMBER:                                   | S-1  |

**GENERAL NOTES:**

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR LOCATION AND DIMENSIONS OF OPENINGS, CHASES, INSERTS, REGLETS, SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
2. 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.
3. 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 SEQUENCE TO ENSURE SAFETY OF THE STRUCTURE AND PERSONNEL DURING ERECTION. THIS INCLUDES THE ADDITION OF THE NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUTS OR TIEDOWNS, SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
4. ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.
5. IT IS THE OWNER'S SOLE RESPONSIBILITY TO EMPLOY ONE OR MORE SPECIAL INSPECTORS (IF REQUIRED) TO PROVIDE INSPECTIONS IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS OF IBC 2006.

**DESIGN NOTES:**

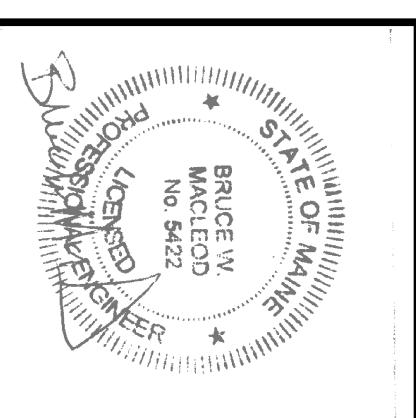
1. THIS BUILDING IS DESIGNED TO COMPLY WITH THE 2009 and 2006 EDITIONS OF THE INTERNATIONAL BUILDING CODE.
  - a. SNOW LOAD
  - b. GROUND SNOW LOAD = 60 PSF
  - c. FLAT ROOF SNOW LOAD = 42 PSF
  - d. SNOW LOAD IMPORTANCE FACTOR  $I = 1.0$
  - e. SNOW EXPOSURE FACTOR  $C_e = 1.0$
  - f. SNOW THERMAL FACTOR  $C_t = 1.0$
  - f. BALANCE AND UNBALANCED SNOW LOADS IN ACCORDANCE WITH ASCE 7/05
3. WIND LOADS:
  - a. BASIC WIND SPEED  $V = 100$  MPH
  - b. WIND LOAD IMPORTANCE FACTOR  $I = 1.0$
  - c. WIND INTERNAL PRESSURE COEFFICIENT  $GCFI = \pm 1.8$
  - d. DESIGN WIND LOADS
    - i. MAIN WIND FORCE RESISTING SYSTEM
      - a. LEeward = 21.6 PSF
      - b. LEeward = 21.6 PSF
      - c. SIDES = 8.7 PSF
4. ROOF DEAD LOAD
  - a. TOP CHORD = 10.0 PSF
  - b. BOTTOM CHORD = 15.0 PSF
  - c. HVAC UNIT(S) = Not Applicable
5. ROOF LIVE LOAD
  - a. TOP CHORD = 20.0 PSF
  - b. BOTTOM CHORD = 20.0 PSF
6. EARTHQUAKE LOAD:
  - a. DESIGN OF EARTHQUAKE LOAD IN ACCORDANCE WITH ASCE 7/05
  - b. SEISMIC IMPORTANCE FACTOR  $I = 1.0$
  - c. 0.2s RAPPED SPECTRAL RESPONSE ACCELERATION  $S_s = 40.0\%$
  - d. 1.0s RAPPED SPECTRAL RESPONSE ACCELERATION  $S_1 = 10.0\%$
  - e. SITE CLASS = CLASS D.
  - f. SPECTRAL RESPONSE COEFFICIENT  $SDS = .395$
  - g. SPECTRAL RESPONSE COEFFICIENT  $SDI = .160$
  - h. SEISMIC DESIGN CATEGORY = CATEGORY C
  - i. BASIC SEISMIC FORCE RESISTING SYSTEM: BEARING WALL SYSTEM = LIGHT FRAMED WALL SYSTEMS SHEATHED WITH WOOD STRUCTURAL PANELS RATED FOR SHEAR RESISTANCE
  - j. BEARING CAPACITY FACTOR  $R = 7$
  - k. SEISMIC AMPLIFICATION FACTOR  $CD = 4.5$
  - l. ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE PROCEDURE
7. DEFLECTION CRITERIA
  - a. ROOF (LIVE) =  $L/360$
  - b. ROOF (TOTAL) =  $L/240$
8. FLOOR LIVE LOADS
  - a. FIRST FLOOR LIVE LOAD = 40 PSF
  - b. SECOND FLOOR LIVE LOAD = 40 PSF
  - c. THIRD FLOOR LIVE LOAD = 40 PSF

**WOOD BRACING NOTES:**

1. STRUCTURAL LUMBER:  
SPRUCE PINE FIR NO/NO2 OR BETTER  
 $F_b = 875$  PSI  $E = 125$  PSI  
 $F_c = 1150$  PSI  $E = 1400000$  PSI  
MANUFACTURED LUMBER  
BOISE CASCADE TRUSS-LAM 2.0 3100  
 $F_b = 3100$  PSI  $F_c = 295$  PSI  
 $F_t = 3000$  PSI  $E = 2000000$  PSI
2. DESIGN CODE:  
IBC 2006 / NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION BY THE NATIONAL FOREST PRODUCTS ASSOCIATION.
3. NAILING REQUIREMENTS FOR PLYWOOD SHEATHING:  
SEE DETAILS ON S5 FOR NAILING AND SPACING REQUIREMENTS.
4. SPIKE TOGETHER ALL BRACING MEMBERS WHICH ARE BUILT-UP USING MULTIPLE 2x LUMBER.
5. PROVIDE GALVANIZED METAL TIES EQUAL TO SIMPSON 142.5 HURRICANE TIES BETWEEN ROOF RAFTERS OR TRUSSES AND SUPPORTING WALL MEMBERS, UNLESS SHOWN OTHERWISE. PROVIDE GALVANIZED METAL CONNECTORS EQUAL TO SIMPSON TC26 TRUSS CONNECTOR BETWEEN ALL ROOF SCISSOR TRUSSES AND SUPPORTING WALL MEMBERS, UNLESS SHOWN OTHERWISE.
6. PROVIDE PRESSURE TREATED LUMBER FOR ALL LUMBER IN CONTACT WITH TASONRY OR CONCRETE.
7. ROOF SHEATHING - 5/8" APA RATED SHEATHING, EXTERIOR OR INTERIOR. 2x4 SILL PLATE WITH 2x8 TOP PLATE  
(TRUSSES) 2x4x8 (LUDS) INSTALL SHEETS WITH FACE GRAIN DIRECTION PERPENDICULAR TO SUPPORTING MEMBERS.
8. PROVIDE 1/4" THRU BOLTS STAGGERED @ 24" O.C. FOR ATTACHMENT OF 2x NAILER AT TOP OR BOTTOM OF W/ BEAM (COORDINATE w/ PLANS)
9. WALL CONSTRUCTION - FIRST FLOOR FRAMING AS SHOWN ON PLANS  
STUD HEIGHT UP TO 10'-6"  
P.T. 2x8 SILL PLATE  
(2) 2x8 TOP PLATE  
1/2" CDX SHEATHING
10. ROOF CONSTRUCTION  
FRAMING AS SHOWN ON PLANS  
1/2" APA RATED PLYWOOD SHEATHING (REFER TO NOTE #7)  
PROVIDE 8d NAILS @ 12" O.C. ALONG FRAMING MEMBERS.
11. ALL NAILS, SPIKES, BOLTS ETC. FASTENING MEMBERS TO PRESSURE TREATED LUMBER SHALL BE EITHER STAINLESS STEEL OR HEAVY GALVANIZED.

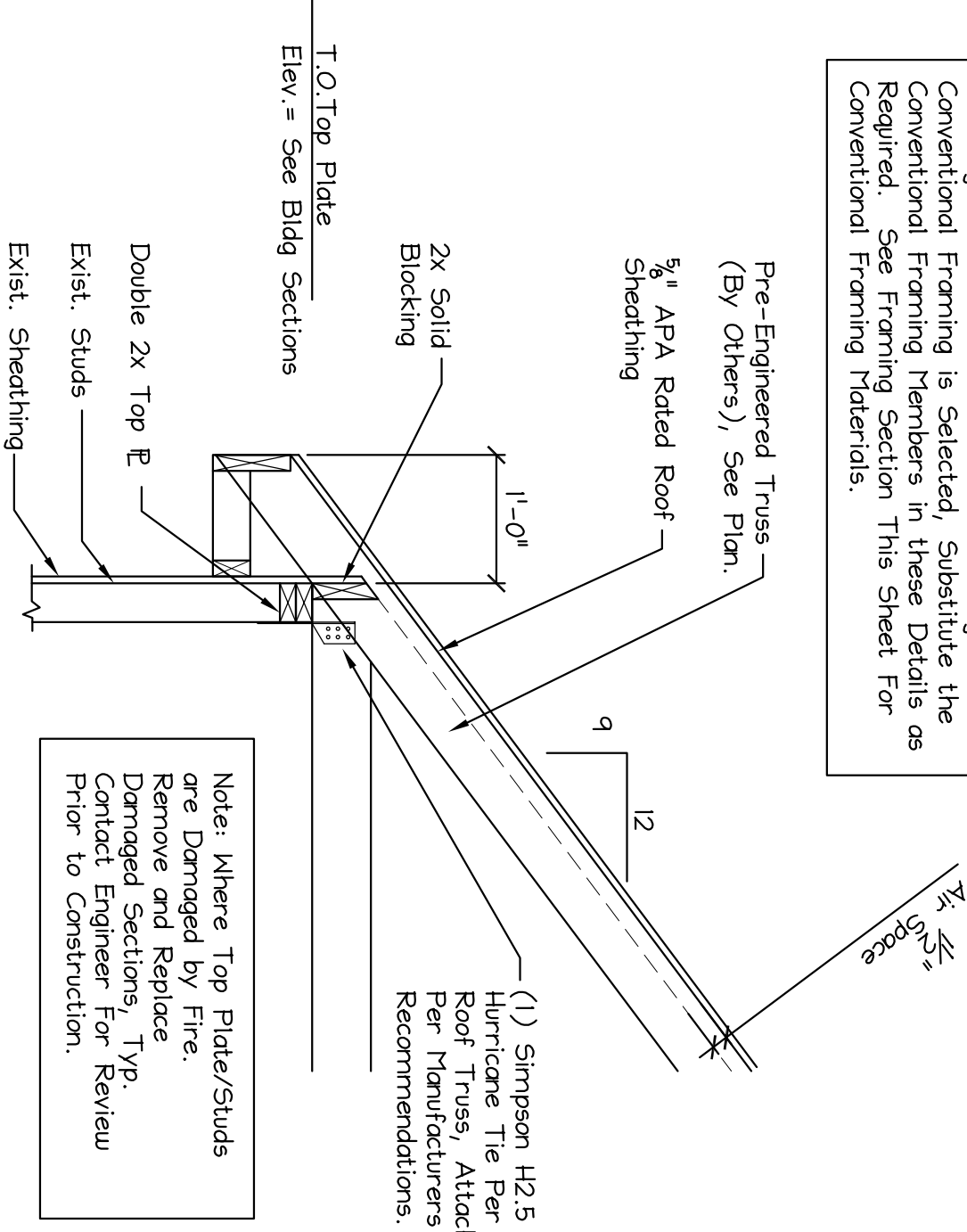
**WOOD TRUSS NOTES:**

1. DESIGN CRITERIA FOR ROOF SYSTEM:
  - a. LIVE LOAD (SNOW) PER STRUCTURAL DESIGN CRITERIA
  - b. DEAD LOAD PER STRUCTURAL DESIGN CRITERIA
  - c. WIND LOAD PER STRUCTURAL DESIGN CRITERIA
  - d. LOAD COMBINATIONS PER IBC INTERNATIONAL BUILDING CODE
  - e. ALLOWABLE DEFLECTION =  $L/360$
  - f. PROVIDE BOTTOM CHORD CAMBER EQUAL TO THE TRUSS DEAD LOAD DEFLECTION.
2. MATERIALS:  
GRADED LUMBER, METAL PLATE CONNECTORS
3. APPLICABLE SPECIFICATIONS:
  - a. NATIONAL DESIGN SPECIFICATIONS FOR GRADED LUMBER (NDS).
  - b. NUMBER EIGHT (8) STANDARD.
  - c. DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES. TPI LATEST EDITION.
4. BRACING:
  - a. TRUSS MANUFACTURER SHALL SPECIFY ALL BRACING FOR BOTH TEMPORARY CONSTRUCTION LOADING AND FOR PERMANENT LATERAL SUPPORT OF GABLE END TRUSS AND COMPRESSION MEMBERS, AS WELL AS ERECTION PROCEDURES. MINIMUM BRACING REQUIREMENTS AND INSTRUCTIONS FURNISHED BY TRUSS MANUFACTURER SHALL INCLUDE AND CONFORM TO HB-91 AND BCS1.
  - b. ALL TEMPORARY AND PERMANENT BRACING SHALL BE MINIMUM 2x4 BUT NOT LESS THAN 2" INTERNAL CONNECTED MEMBERS SPECIFIED BY TRUSS MANUFACTURER OR HB-91 AND BCS1. THE CONTRACTOR SHALL COMPLY WITH THE "COMPENSATORY AND RECOMMENDATIONS FOR HANDLING, INSTALLING, AND BRACING METAL PLATE CONNECTED WOOD TRUSSES. HB-91/BCS1." IT IS THE RESPONSIBILITY OF THE INSTALLER/CONTRACTOR TO PROPERLY RECEIVE, UNLOAD, STORE, HANDLE, INSTALL, AND BRACE TRUSSES TO PROTECT LIFE AND PROPERTY.
5. ALL FABRICATED TRUSSES SHALL RECEIVE THE TPI MARK OF APPROVAL IN ACCORDANCE WITH THE TRUSS PLATE INSTITUTE PROCEDURES.
6. SUBMIT TRUSS SHOP DRAWINGS FOR REVIEW PRIOR TO TRUSS MANUFACTURE.
7. ANY VARIATIONS BY THE TRUSS MANUFACTURER FROM THESE DRAWINGS INCLUDING BUT NOT LIMITED TO THE NEED FOR BIRD HOUSING SHALL BE CLEARLY NOTED ON THE TRUSS DRAWINGS. APPROPRIATE DETAILS SHALL BE PROVIDED, WHICH SHOW SUCH VARIATIONS. ALL VARIATIONS SHALL BE APPROVED BY THE ENGINEER.

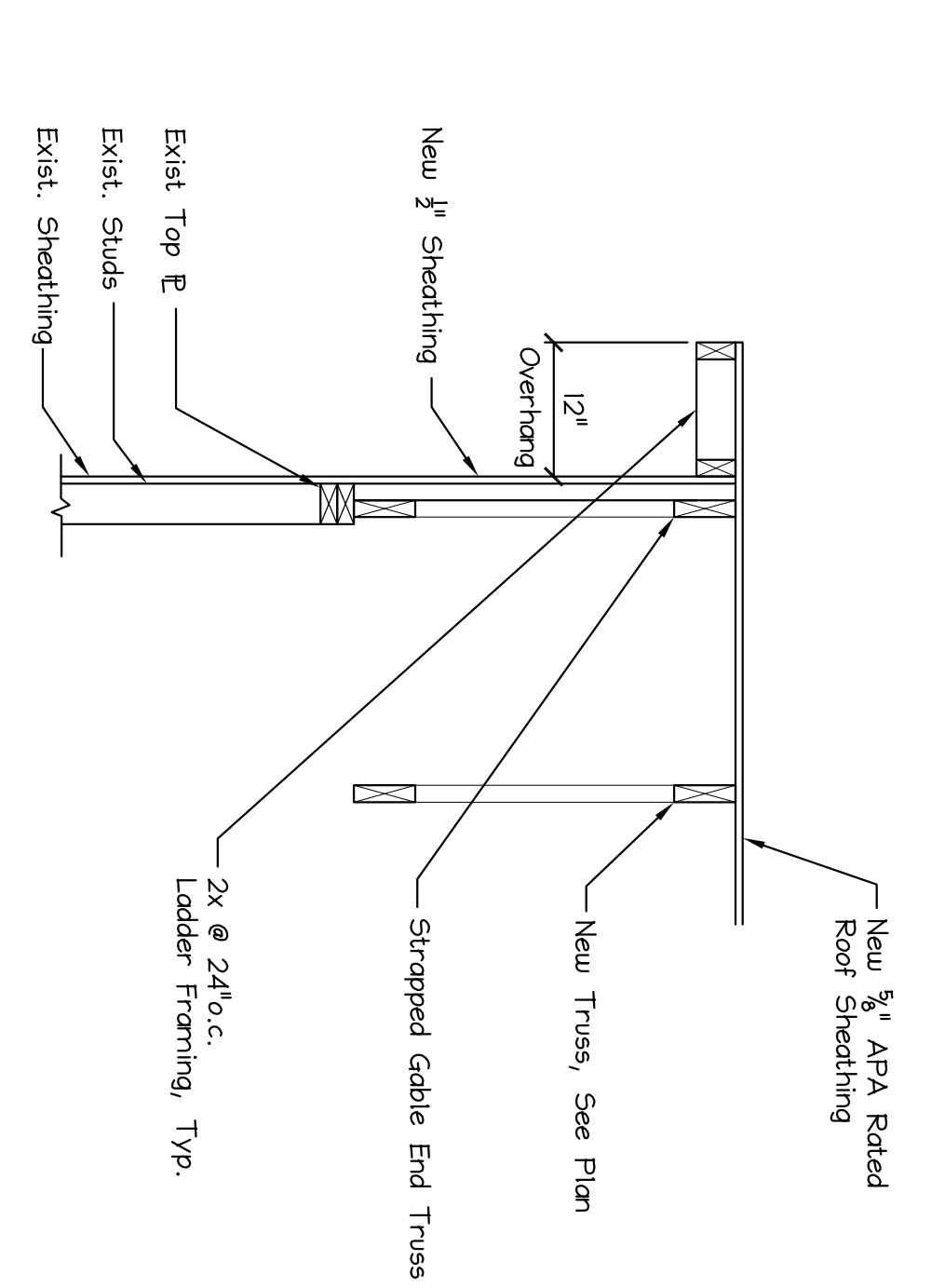


|   |   |
|---|---|
| 404 Main Street, Gorham, Maine 04038 207.239.0980 |   |
| 201 Congress Street                               |   |
| Owner:  | Portland, Maine<br>Tim and Leann Fougere<br>Road Road<br>Yorvick, Maine |
| TITLE:  | NOTES   |
| DATE:   | 12/9/10   |
| SCALE:  | as noted  |
| DRAWN BY:   | BWM   |
| PROJ. NO.:  | 2010-228  |
| DRAWING NUMBER:                                   | S-1.1   |

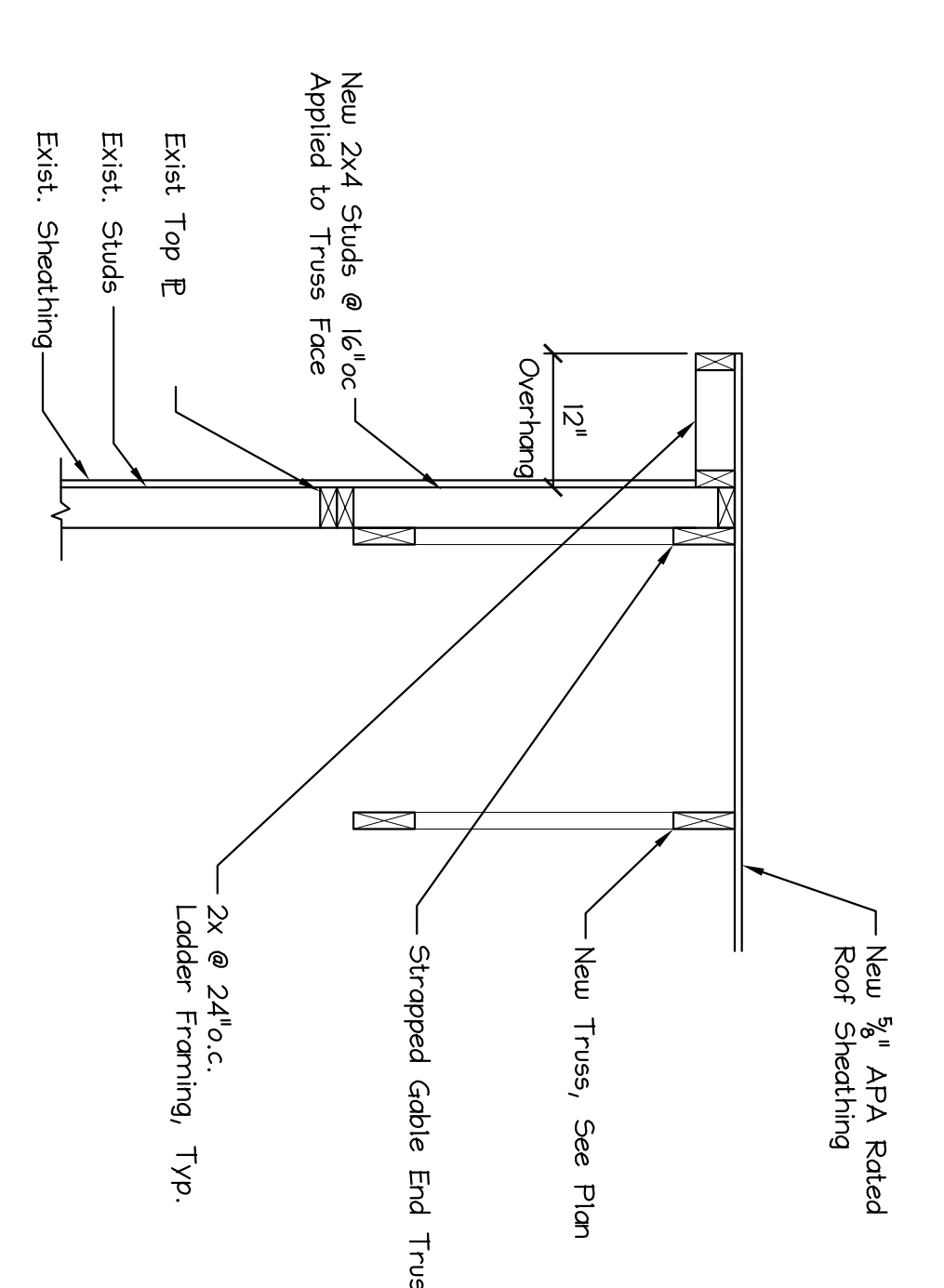
Note: Details Herein Typically Refer to Pre-engineered Trusses for Roof Framing. If Conventional Framing is Selected, Substitute the Conventional Framing Members in these Details as Required. See Framing Section This Sheet for Conventional Framing Materials.



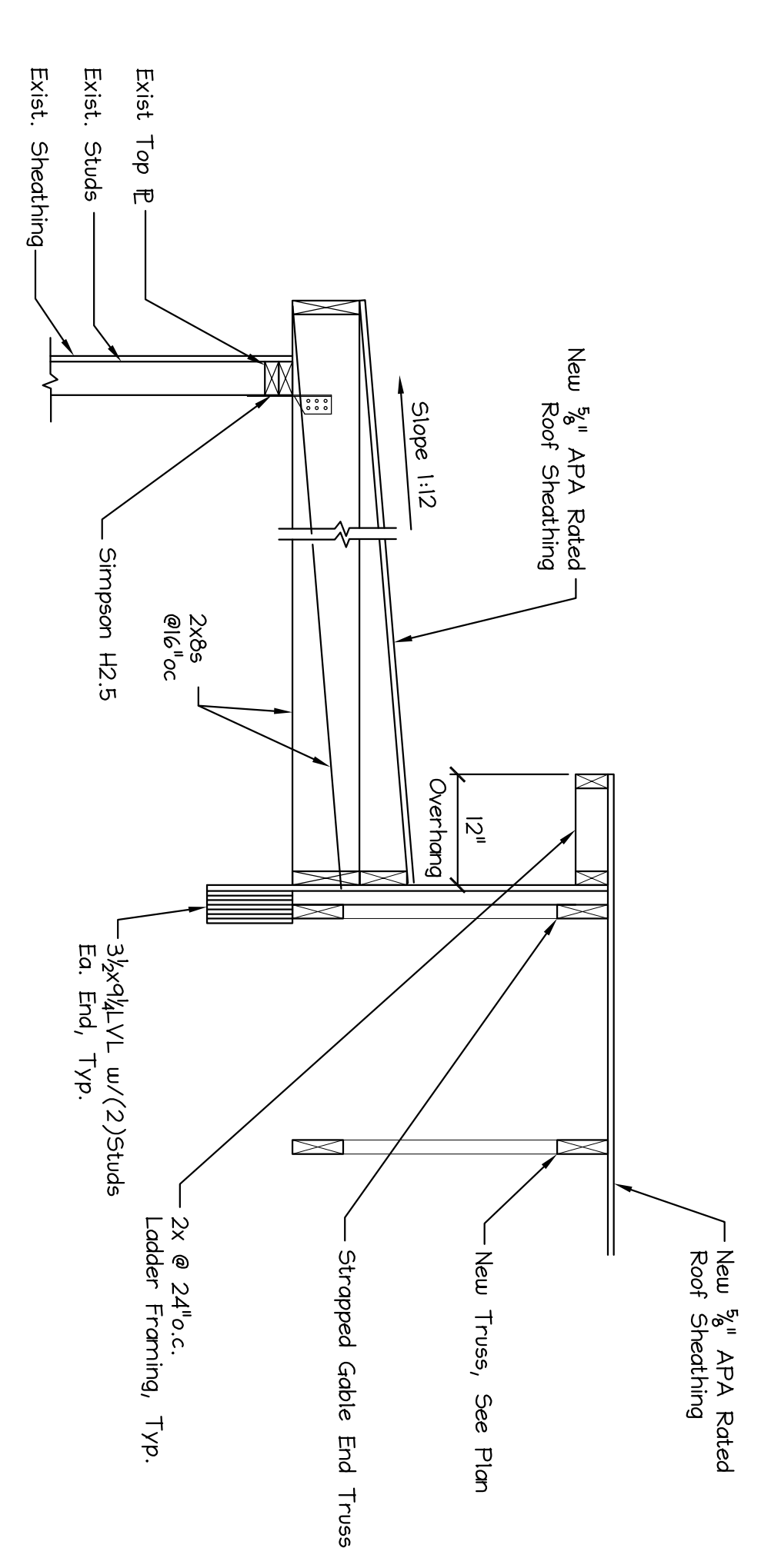
SECTION 1 TYPICAL TRUSS TO TOP PLATE CONNECTION  
SCALE: 3/4" = 1'-0"



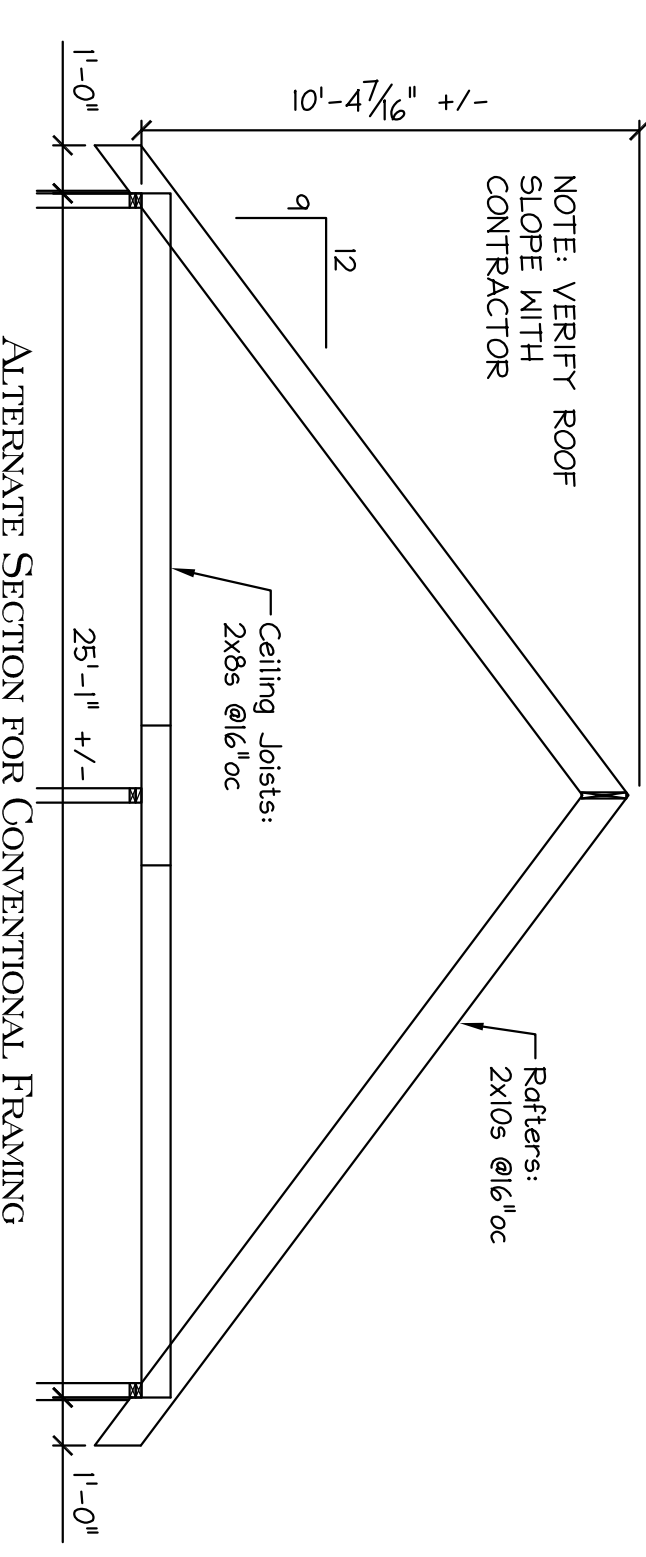
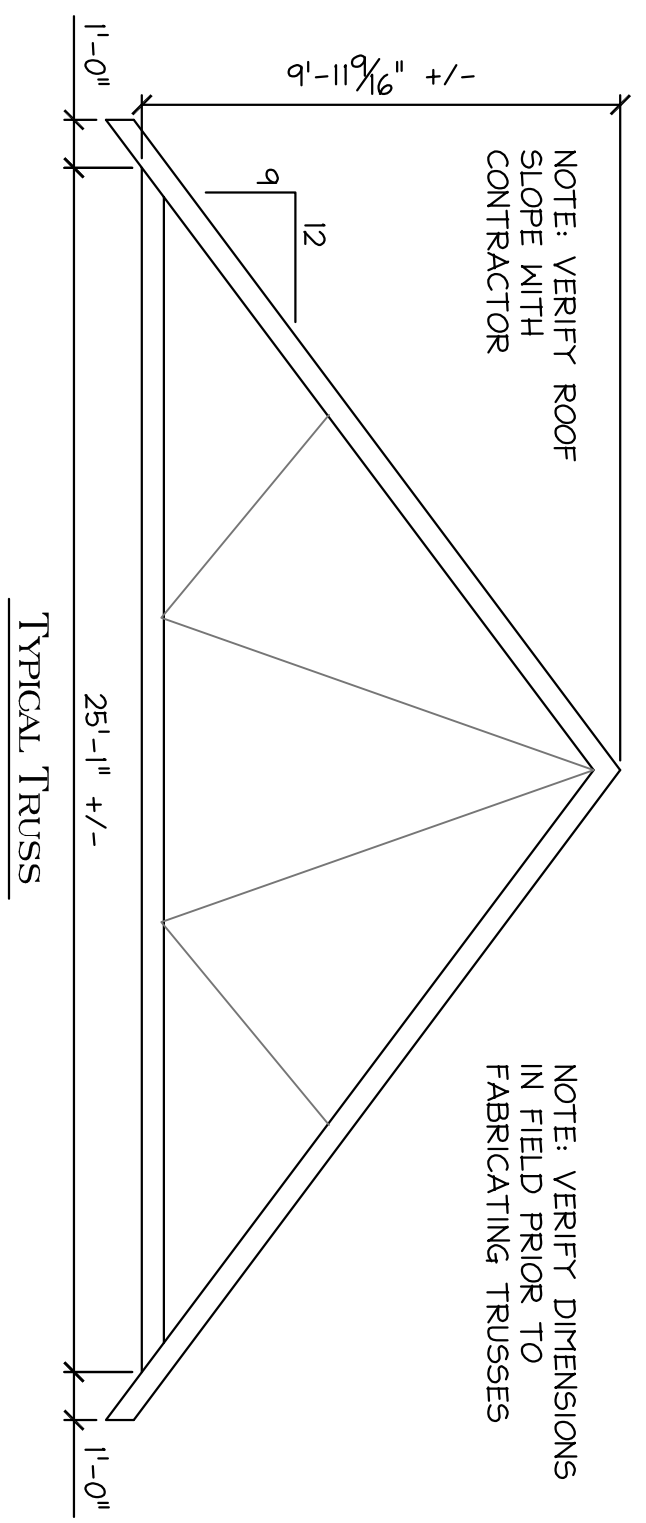
SECTION 2 TYPICAL GABLE END SECTION  
SCALE: 3/4" = 1'-0"



SECTION 3 TYPICAL GABLE END SECTION  
SCALE: 3/4" = 1'-0"



SECTION 4 TYPICAL GABLE END SECTION  
SCALE: 3/4" = 1'-0"



Portland, Maine  
Tim and Loren Fougere  
Road Road  
Vernon, Maine

DATE: 12/9/10  
SCALE: as noted

**Macleod**  
Structural Engineers, Inc.

404 Main Street, Gorham, Maine 04038 207.239.0880

201 Congress Street  
Portland, Maine

DRAWING NUMBER:  
S-2

DETAILS

PROJ. NO. 2010-228