

FRONT VIEW OF TRUSS ASSEMBLY

SCALE: 1" = 4 FT.

BILL OF MATERIALS FOR ONE TRUSS

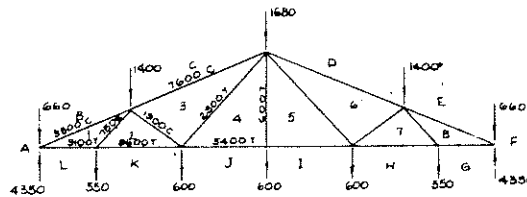
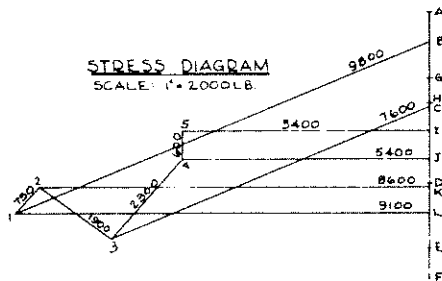
PART DESCRIPTION	SIZE	(PCS)	F.B.M.
1 UPPER CHORD	2" x 10" x 24'-0"	2	80
2 LOWER CHORD	2" x 6" x 19'-3"	2	42
3 LONG TENSION DIAGONAL	1" x 8" x 12'-0"	2	16
4 SHORT TENSION DIAGONAL	1" x 6" x 6'-4"	2	6 2/3
5 COMPRESSION DIAGONAL	2" x 4" x 5'-0"	2	6 2/3
6 COMPRESSION DIAGONAL	1" x 6" x 6'-10"	2	7
8 HEEL JOINT GUSSET	1" x 6" x 3'-6"	4	3 1/2
9 CENTER SPlice GUSSET	1" x 8" x 2'-6"	2	3 1/2
10 RIDGE JOINT GUSSET	1" x 8" x 3'-6"	1	2 1/2
TOTAL F.B.M.			171
7 STEEL TENSION ROD	1/2" x 9'-6"	1	
STEEL PLATE	4" x 4" x 7/4"	2	
HELICALLY THREADED NAILS	12d	372	5.9 LB.
HELICALLY THREADED NAILS	8d	38	10 LB.

NOTES:

- DESIGN LOADS:
  - DEAD LOAD PLUS LIVE LOAD ON ROOF: 35 LB/FT<sup>2</sup> OF HORIZONTAL PROJECTION
  - CEILING LOAD: 10 LB/FT<sup>2</sup>
  - CONCENTRATED LOADS: 300 LB. APPLIED AT EACH JOINT ALONG LOWER CHORD. 1500 LB. TOTAL. THESE LOADS MUST NOT BE APPLIED BETWEEN JOINTS.
- LUMBER: No 1 SOUTHERN PINE OR DOUGLAS FIR
  - 1200 LB/IN<sup>2</sup> COMPRESSION PARALLEL TO THE GRAIN + 15% FOR SNOW.
  - 1500 LB/IN<sup>2</sup> ALLOWABLE STRESS IN BENDING
  - DIRECT TENSION + 15% FOR SNOW.
  - 1,760,000 LB/IN<sup>2</sup> MODULUS OF ELASTICITY
- TRUSSES SPACED 4'-0" ON CENTERS.
- CAMBER: 1" AT CENTER SPlice.
- NAILS: USE HELICALLY THREADED SCREWTITE NAILS OR EQUIVALENT.
  - 3/4" x 0.135" NAIL IN SINGLE SHEAR = 108 LB (12d)
  - 3/4" x 0.135" NAIL IN DOUBLE SHEAR = 216 LB (12d)
  - 2 1/2" x 0.120" NAIL IN SINGLE SHEAR = 94 LB (8d)
- DRIVE ALL NAILS FROM THE FRONT EXCEPT THOSE SHOWN AS 0.
- USE TEMPLATE FOR LOCATING ALL NAILS
- LUMBER WIDTHS:
 

2" x 10" = 9 1/2"	1" x 8" = 7 1/2"
2" x 6" = 5 1/2"	1" x 6" = 5 1/2"
2" x 4" = 3 3/8"	

STRESS DIAGRAM  
SCALE: 1" = 2000 LB.



LOAD DIAGRAM

COOPERATIVE EXTENSION WORK IN  
 AGRICULTURE AND HOME ECONOMICS  
 DEPARTMENT OF AGRICULTURAL ENGINEERING  
 UNIVERSITY OF MARYLAND  
 AND  
 UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

**40' NAILED TRUSS, 5 IN 12 SLOPE  
 FOR CAGED LAYERS**

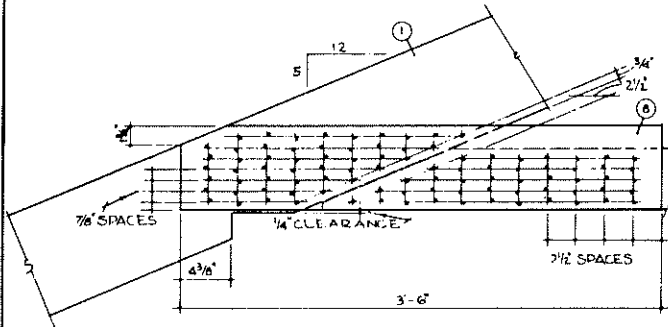
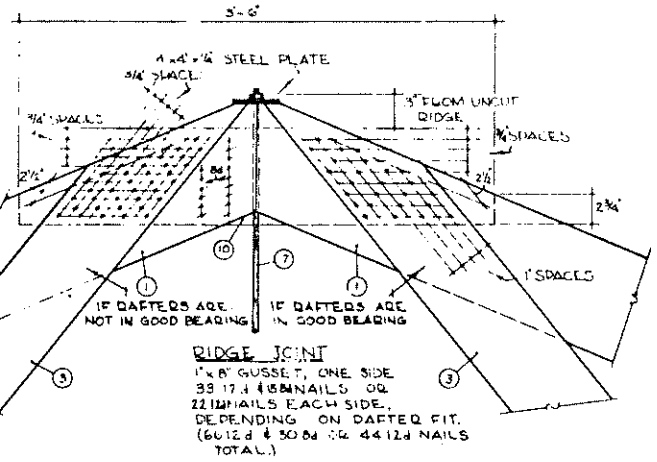
MASS.	'65	EX. 5978	SHEET 1 OF 2
-------	-----	----------	--------------

**NAILING NOTES:**

1. DRIVE ALL NAILS FROM FRONT EXCEPT THOSE SHOWN AS \*
2. NAIL SPACING: (MINIMUM VALUES)  
 END GRAIN: 2 1/2"  
 EDGE GRAIN: 3/4"  
 CROSS GRAIN: 3/4"
3. USE TEMPLATE TO LOCATE ALL NAILS

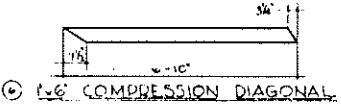
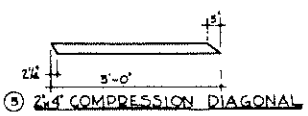
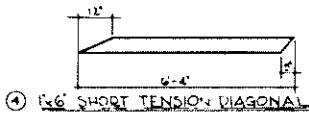
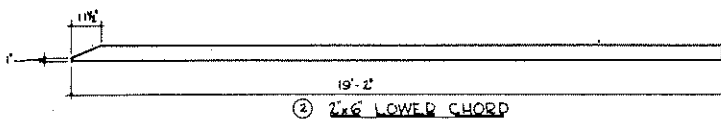
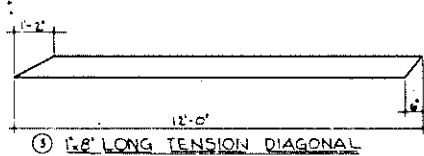
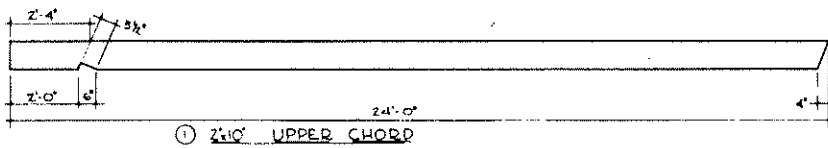
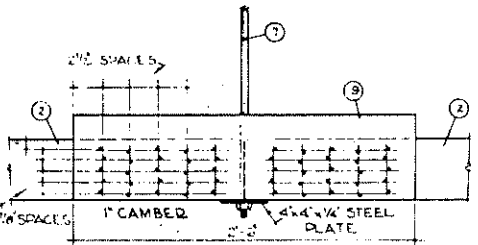
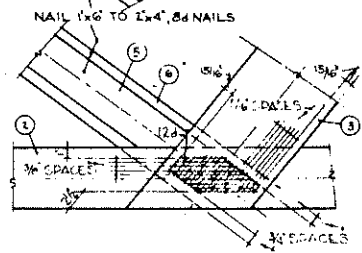
**UPPER CHORD-DIAGONAL JOINT**

10 8d NAILS  
11 12d NAILS



**SHORT TENSION DIAGONAL TO LOWER CHORD JOINT**

12 8d NAILS



COOPERATIVE EXTENSION WORK IN  
 AGRICULTURE AND HOME ECONOMICS  
 DEPARTMENT OF AGRICULTURAL ENGINEERING  
 UNIVERSITY OF MARYLAND  
 AND  
 UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING

**40' NAILED TRUSS, 5 in 12 SLOPE  
 FOR CAGED LAYERS**

MASS. '65 EX. 5978 SHEET 2 OF 2