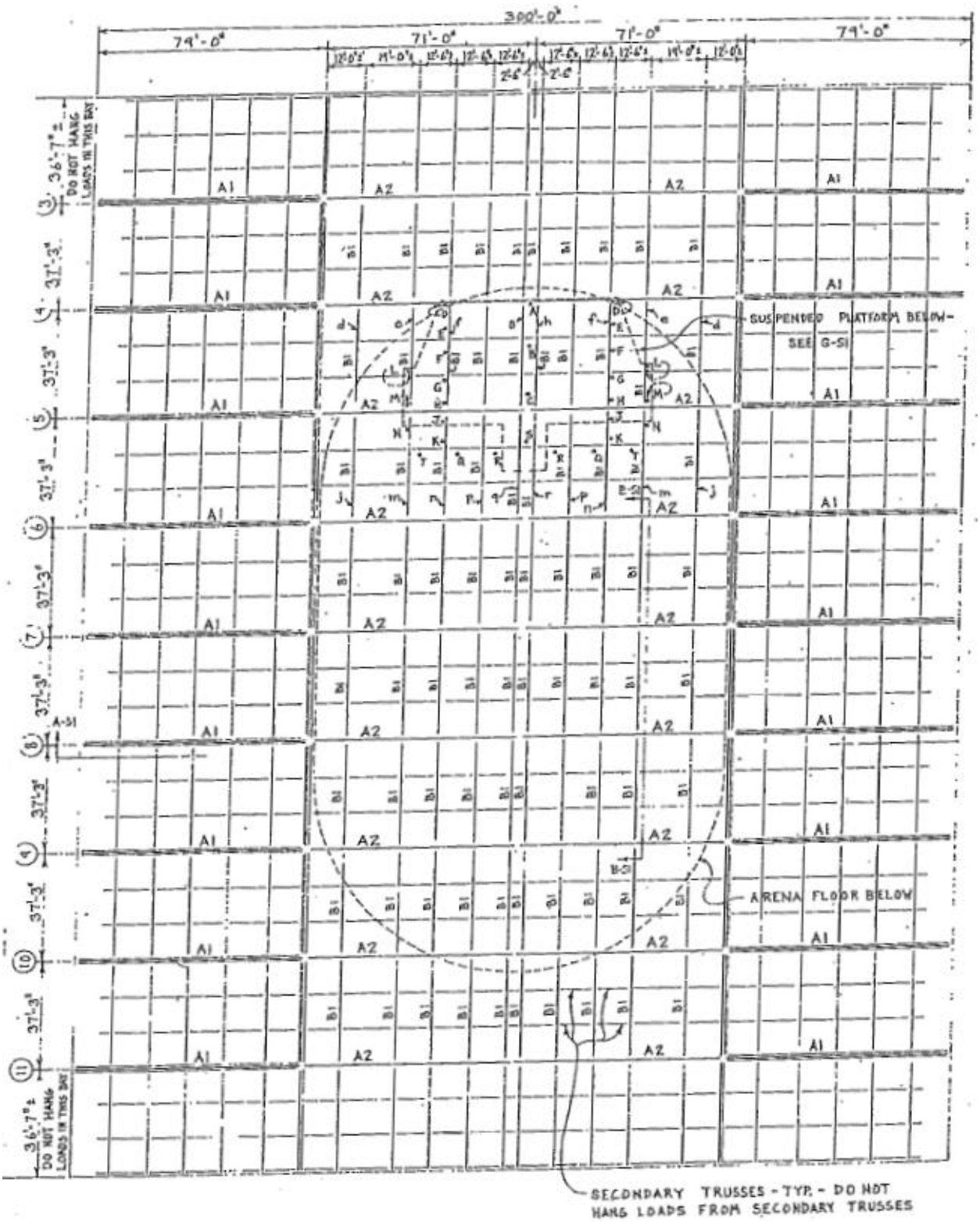
RIGGING INFORMATION

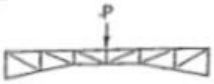
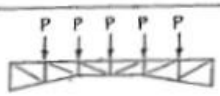


ROOF FRAMING PLAN

1" = 30'-0"

TABLE E-S1

MAXIMUM LOADS WHICH MAY BE HUNG FROM BI TRUSSES WITHOUT EXCEEDING ALLOWABLE STRESSES IN TRUSSES

CASE	TRUSS LOADING		ALLOWABLE LOAD P
	DIAGRAM	DESCRIPTION	
I		ONE LOAD P PLACED ANYWHERE ON TRUSS	2,700#
II		MORE THAN ONE LOAD P PLACED IN RANDOM LOCATIONS ON TRUSS BUT NO MORE THAN ONE BETWEEN TWO ADJACENT TRUSS JOINTS	1,700#
III		ONE LOAD P PLACED AT THE SECOND OR FOURTH INTERIOR JOINT	8,000#
IV		ONE LOAD P PLACED AT MIDSPAN	4,900#
V		ONE LOAD P PLACED AT THE FIRST OR FIFTH INTERIOR JOINT	6,600#
VI		MORE THAN ONE LOAD P PLACED AT JOINTS	3,600#

NOTES:

1. The capacity of the system is limited by the loading on any individual truss. This table therefore, show the loads which may be hung from an individual truss.
2. Loads hung at the center of the arena (directly under the ridge as shown in A-S1) are supported by the Two bi-truss that straddle the ridge. Each of these trusses should be considered support half of each of these loads.
3. Loads in other locations may occur directly under a truss or (more generally) between trusses. A Load that occurs within the 75% of the bay between trusses closest to the truss under consideration shall be considered to occur directly under the truss. Loads in this area create stresses in the trusses

approximately equal to those created by loads directly under the trusses. Loads with-in the 25% of the bay between trusses farthest from the truss under consideration shall be considered at half of their actual weight. See A-S1

4. If loads are placed in two adjacent bays, they have essentially the same effect on the truss between them af if they were in the same bay.
5. A truss may support two different types of loadings provided that the sum of the ratios of actual loading allowable is not greater than 1.
   a. Example a 1350# case I loading may be combined with a 2450# Case IV loading –
   $\frac{1350\# + 2450\#}{2700\#\quad 440\#} = .5 + .5 = 1$

F-S1 Maximum loads which may be hung from A2 trusses without exceeding allowable stresses in trusses

Each 142' span pair of A2 trusses can support a total of 60,000 # of hanging loads. 4000# individual loads may be hung anywhere on an A2 truss, provided that no more than one such load is placed between two adjacent joints. Unlike the B1 Trusses, loads hung between A2 truss do not create stresses as great as loads hung directly below. Greater loads may therefore, be hung between trusses. An 8,000# load hung mid-way between trusses or a 6,000# load 9' from A truss would be equivalent to a 4,000# load directly under the truss.

G-S1 Example of the use of this Drawing

Example: The load points of the Van Halen sound and lighting systems are shown on the plan in an assumed location as points A,B,C etc. the effect on the trusses that support them must be investigated

1. The most heavily loaded A2 trusses are the trusses on line 5. They support a total load of 32,000 # which is less than the allowable 60,000#
2. Loads A & D are 2,000# each. They are hung directly from the A2 trusses on Line 4, which 4,000# loads are allowed.
3. Loads B & C are directly under the ridge, they are 2000# each. They result in loads on trusses G & H of 1,000# each, which are less than the 1,700# loads allowed for Case II loading.
4. Loads E,F, G & H are 2,000# each. They are almost directly under Truss F. Since the Maximum Case II loading is 1,700#/load, the loads must be place at truss joints, where the allowable Case VI load is 3,600#/load, or hung from the A2 trusses.

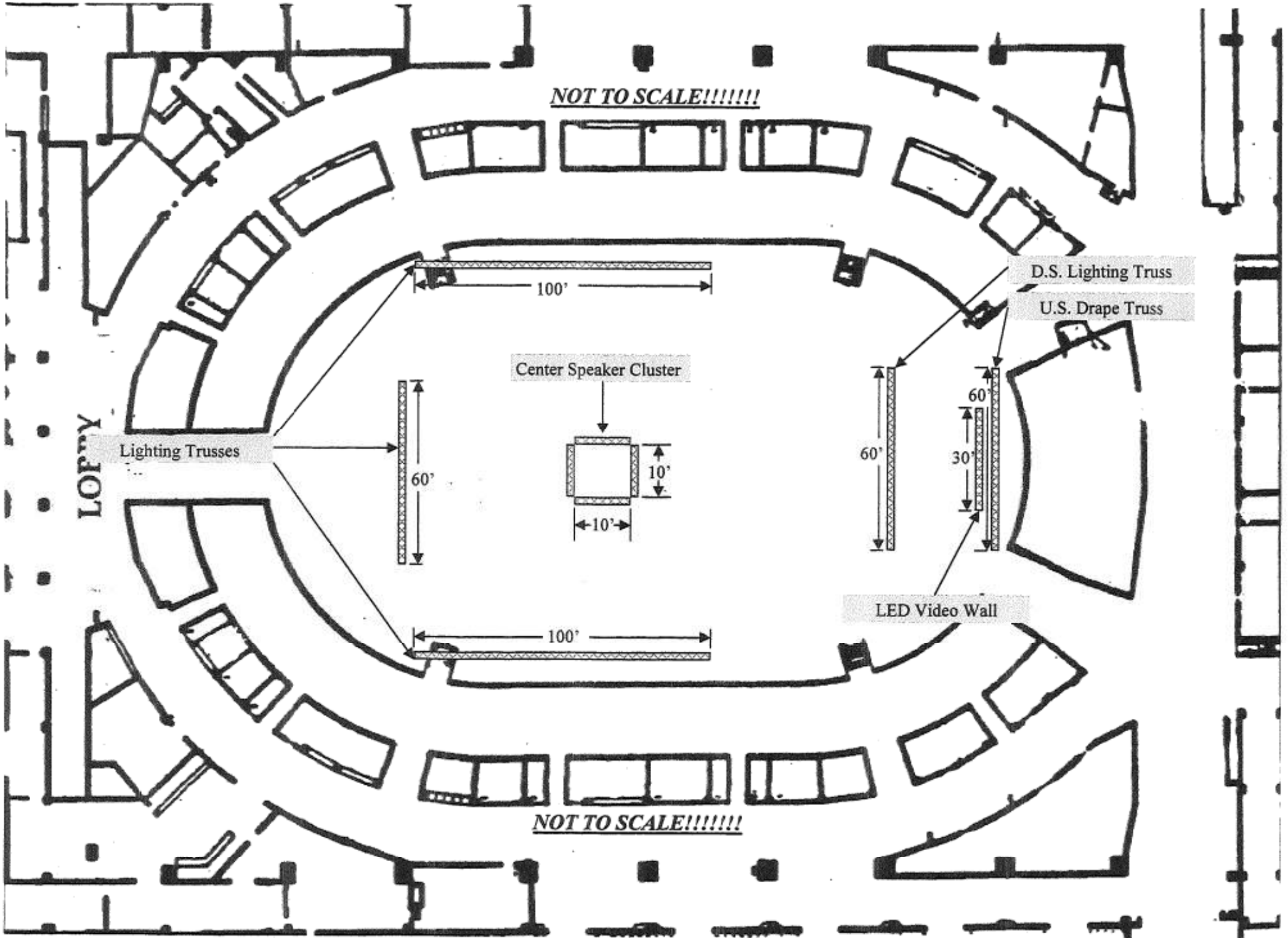
5. Consider truss n. unless some of the loads are supported directly by the a2 trusses, truss n must support loads j & K (2,000# each), T (3,000# x ½ = 1,500#) and Q (3,000#). If T & Q are hung at the second truss joint from Line 5 (Case III) and J & K from the first joint (Case V), the sum of the ratios would be

$$\frac{1{,}500+3{,}000\#}{8{,}000} + \frac{1{,}500\#}{2{,}700\#} = 0.38+ 0.56 = 0.94 < 1$$

   This arrangement would not be satisfactory. Some of the loads must be hung directly from the A2 trusses in order to avoid this overload of truss n.
6. Loads L & M are 1,500# each. Since they are less than the 1,700#/load allowed for Case II loading, Truss e is OK.
7. Consider truss m. Unless load T is supported directly by the A2 Trusses, truss M must support loads T (3,000#) and H (1,500#) and N is placed anywhere (Case I), the sum of the loading rations would be

$$\frac{3{,}000\#}{8{,}000\#} + \frac{1{,}500\#}{2{,}700\#} = 0.38+ 0.56 = 0.94 < 1 .$$

   This arrangement would be satisfactory, if load T cannot be placed at the truss joint, it must be hung from the A2 trusses.
8. Truss P supports load R (1,500#) and half of load Q (3,000# n ½ = 1,500#) These loads are less than the 1,700#/load allowed for case II loading, but they may not both be placed between two adjacent truss joints. Either the loads must be separated by a truss joint or one must be placed at a joint or hung from the A2 trusses.
9. Truss Q supports load R (1,500#) and half of Load S (2,000# x ½ = 1,000#). As long as these loads do not occur between two adjacent truss joints, they are less than the 1,700#/load allowed for Case II loading.
10. Trusses D & J support small loads than trusses E & M and are OK.


NOT TO SCALE!!!!!!!
D.S. Lighting Truss
U.S. Drape Truss
100'
Center Speaker Cluster
Lighting Trusses
60'
10'
10'
60'
60'
30'
LED Video Wall
100'
NOT TO SCALE!!!!!!!