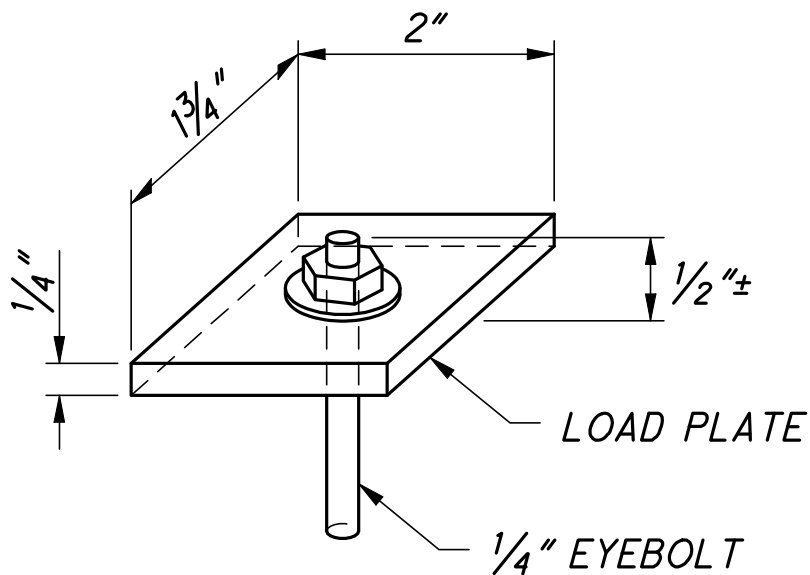


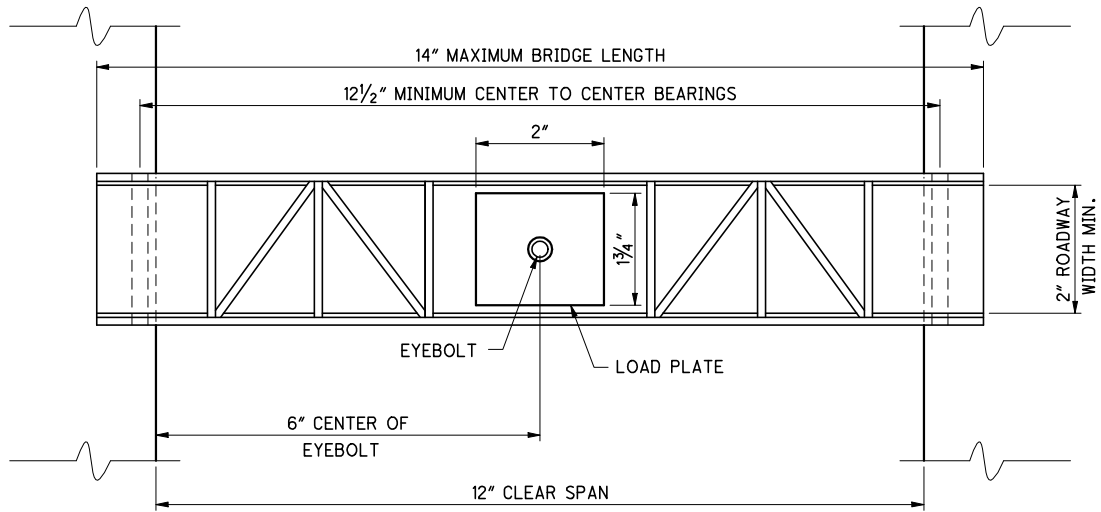
LOADING TABLE SETUP



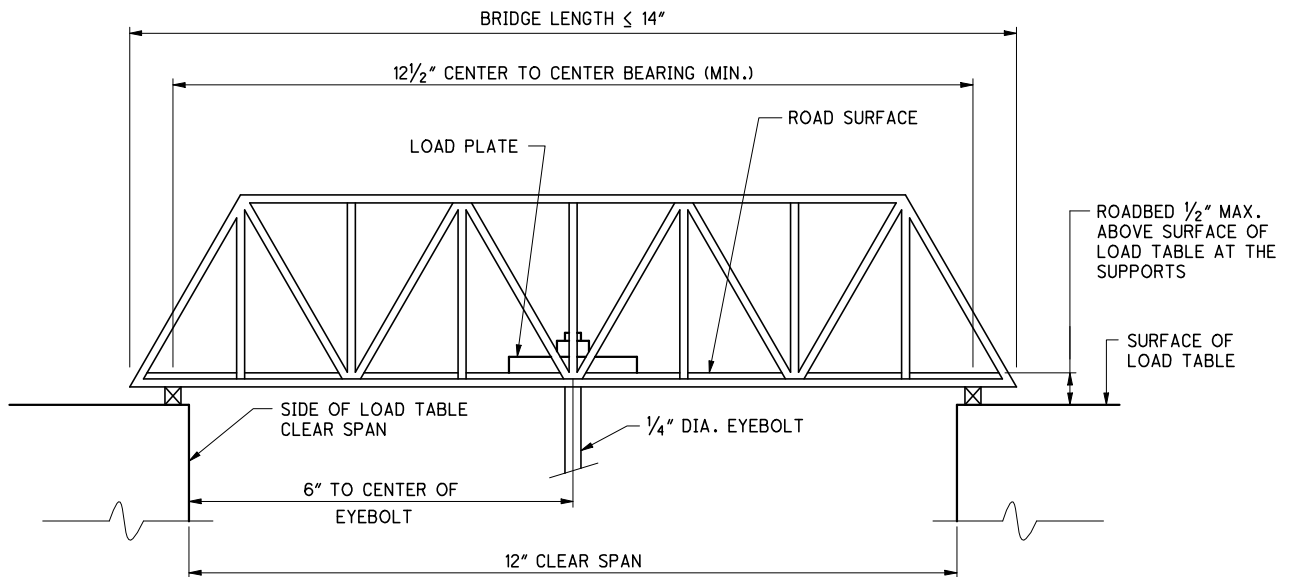
LOAD PLATE DETAIL

FIGURE 1

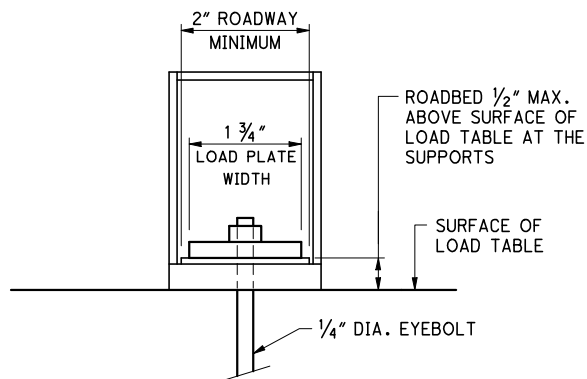
(NOT TO SCALE)



STRUCTURE PLAN



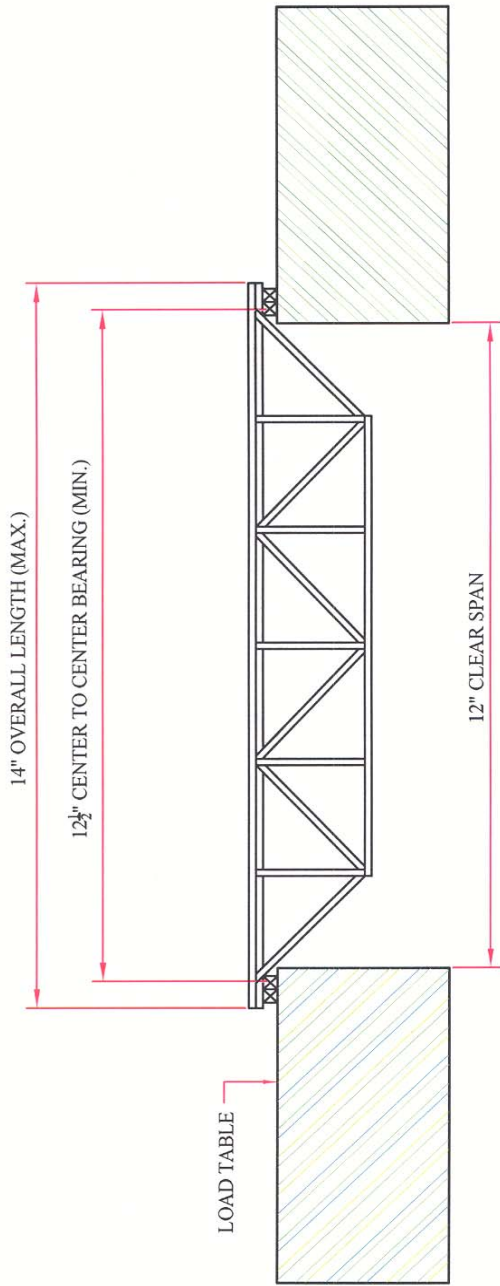
STRUCTURE ELEVATION



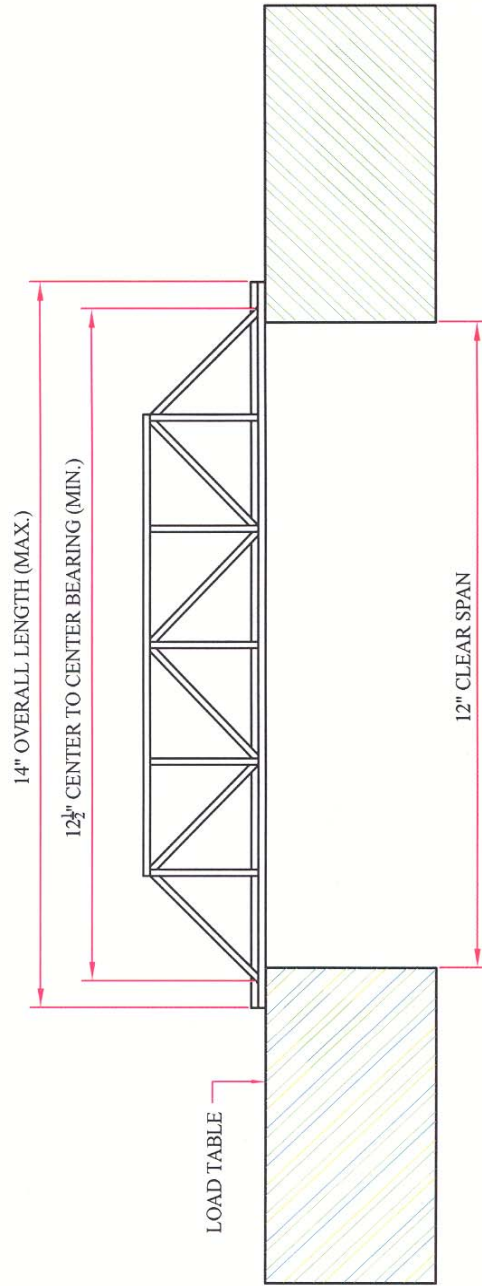
STRUCTURE SECTION

FIGURE 2

(NOT TO SCALE)



STRUCTURE BELOW TABLE



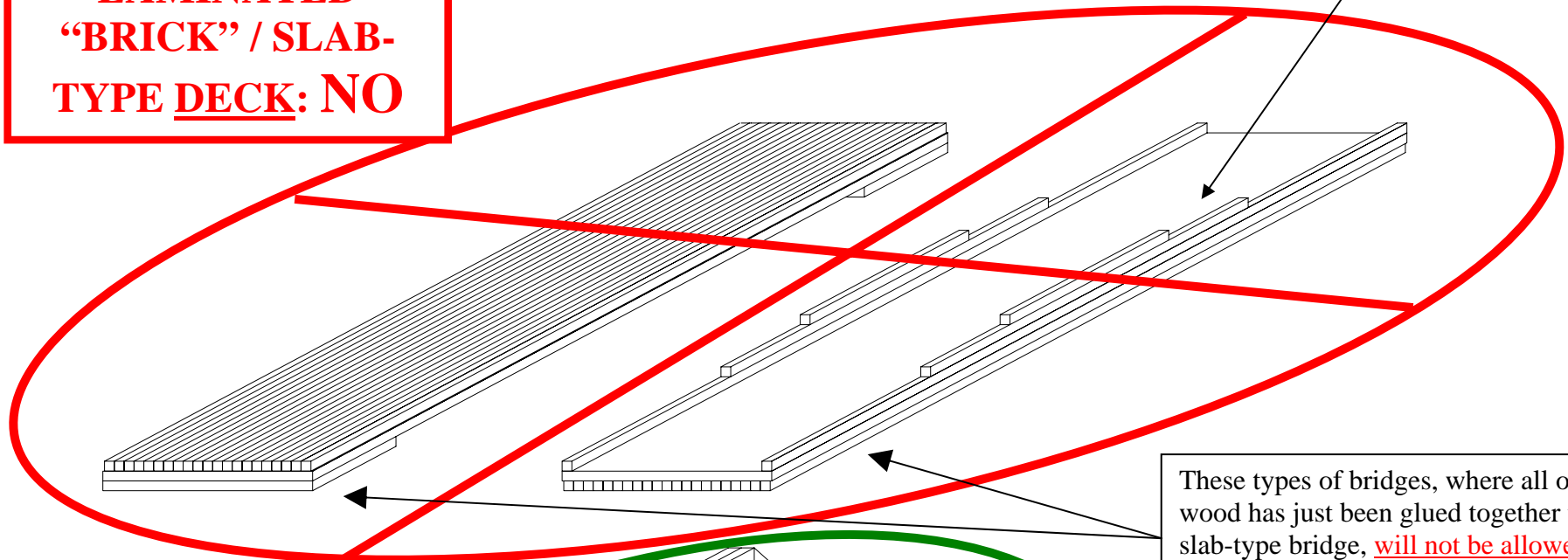
STRUCTURE ABOVE TABLE

FIGURE 3
(NOT TO SCALE)

LAMINATION

**LAMINATED
"BRICK" / SLAB-
TYPE DECK: NO**

Bridge Deck



These types of bridges, where all of the wood has just been glued together to form a slab-type bridge, will not be allowed.

The purpose of this competition is to encourage **creative thinking** in your bridge design!

Your bridge deck WILL need to be braced! It is a thin piece of wood and if you do not brace it, the loading plate will pull right through the wood. You may brace it in several ways, some of which might include truss members, cross-bracing, or pieces of wood glued together to form beams to support the deck.

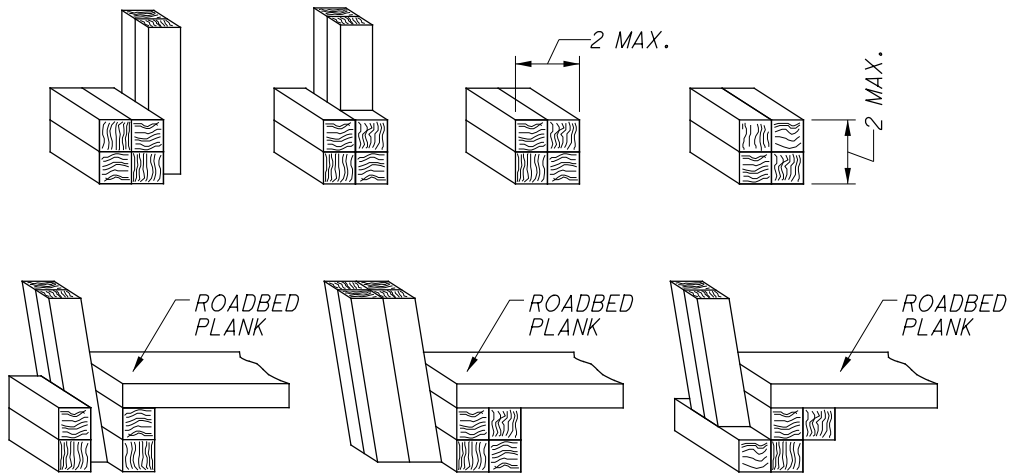
Truss Members

Beams

Cross-Bracing

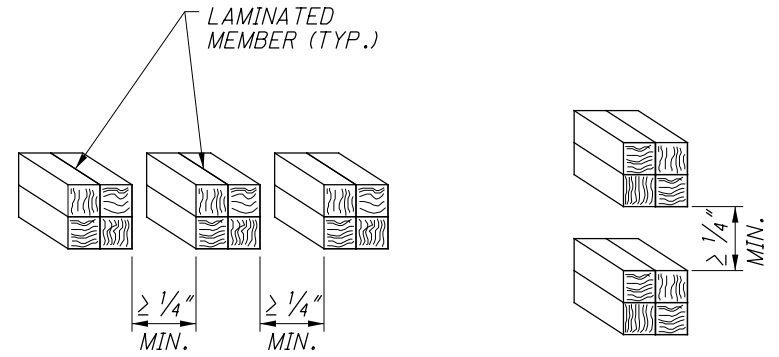
**LAMINATED
MEMBERS: YES**

FIGURE 4

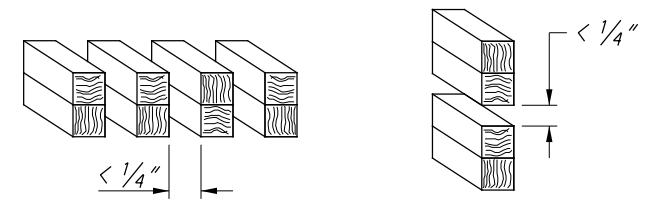
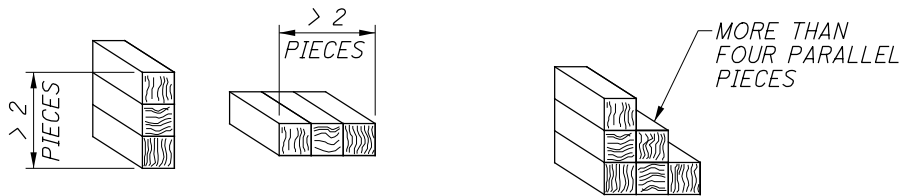


ALLOWABLE LAMINATED MEMBERS

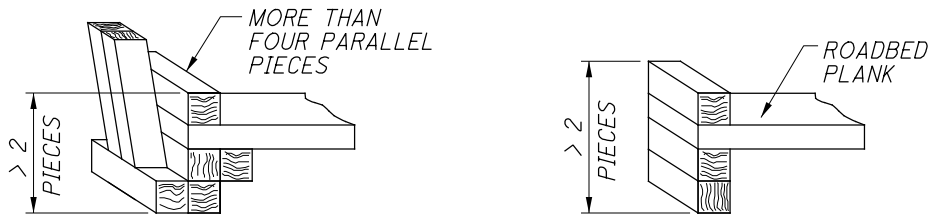
(MAXIMUM OF FOUR PARALLEL PIECES LAMINATED)



ALLOWABLE LAMINATED MEMBER SPACING



LAMINATED SPACING VIOLATIONS



LAMINATED VIOLATIONS

NOTE:

THE ROADBED PLANK WILL NOT BE CONSIDERED CREATING A $\frac{3}{32}$ " SPACING.

FIGURE 5

(NOT TO SCALE)

Mahoning Valley Miniature Bridge Building Competition
February 23, 2016

BRIDGE SCORE for: High School Name - Team Number

Construction Requirements			
Item	Penalty / Weight Increase	Weight	Notes
Structure Weight, Grams		32	Actual Structure Weight
Structure Length < 12" but >14"	100%		Does Not meet design specifications
Roadbed Length < 12" but >14"	10%	3.2	Does Not meet design specifications
Roadbed Height above Table > 0.5"	10%		Does Not meet design specifications
Clear Roadbed Width < 2"	20%		Does Not meet design specifications
Car does not roll freely along roadbed	5%	1.6	Does Not meet design specifications
Greater than 3 laminated pieces parallel or greater a total of 6 pieces	30%		Inefficient use of materials
Laminated members spacing	30%		Inefficient use of materials
Penalty Total	15%	<u>4.8</u>	
Revised Structural Weight		36.8	

Structural Stability	Ranking
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Failure Load, Pounds	60	
Failure Load, Grams	27,216	
Efficiency (Failure Load/Weight)	<u>740</u>	

Structure Ranking	<u>0</u>
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Figure 6