

APEGBC's Burnaby and New West Branch Presents....

Popsicle Stick Bridge Contest

Burnaby Public Library, Metrotown Branch

Saturday, March 24th, 2012 starting 1 pm

Watch the You Tube video to get inspired

<http://www.youtube.com/watch?gl=CA&hl=en&v=wMP1iUv6FtQ>

Photos of the previous competition and for this event will be available at

<http://www.apeg.bc.ca/services/branches/bn.html>

How to take part

Go to the Metrotown Branch, Burnaby Public Library, 6100 Willingdon Ave., between March 9th and March 17th to register and pick up an official kit of bridge-building supplies. You may sign up as a group with not more than 5 members. All participants must be current elementary or secondary school students. A kit must only be picked-up if your participation is confirmed. Only 1 kit per registration will be provided. Limited kits are available.

Before receiving a kit, all participants (or groups) are required to sign a completion form agreeing to the return of a finished bridge project.

For further information:

E-mail: bn@apeg.bc.ca

Event Schedule

- Pick up kit between March 9th and March 17th
- March 24th:
 - 1 pm - 1:30 pm - Sign in and submission of bridges
 - 2 pm – 4 pm - Testing of bridges
 - 4 pm – 5 pm - Prize distribution

Prizes sponsored by British Columbia Institute of Technology

(School of Construction and the Environment and School of Energy)

1st prize: \$100 gift certificate 2nd prize: \$50 gift certificate

Contest Rules — Note: bridges must be constructed before the competition

Materials

150 Popsicle sticks (whole). Only the ones provided in the kit can be used.

1 sheet (A4 size) of construction paper for the deck of the bridge

Only the glue provided in the kit must be used

No other materials are permitted

Rules

- The bridge must span a 500 mm gap, with maximum 25 mm long bearing pads
- Total length of the assembled bridge is not to exceed 550 mm
- A minimum length overall of 520 mm is advised. Bridges spanning less than the 500 mm gap, are disqualified
- Design the bridge to support a vertical load along a longitudinal loading plate on the deck. Winning bridge would have the highest load to weight ratio
- Design the roadway portion of the bridge to support a 38 mm x 3.8mm x 300 mm long loading plate (refer to the attached sketch for more information)
- Design the uppermost portion of the bridge to accommodate a 38 mm diameter-loading strut, vertically positioned at the centre of the bridge, from the loading plate to above the bridge superstructure. Loading location may be changed to accommodate type of loading machine
- The maximum capacity of the bridge will be the highest of either: the maximum load accepted by the bridge as measured by the machine during loading; or the load supported by the bridge at a deformation of approximately 50 mm at the bridge centre

Other “Engineering Day” Events

Come out to the library on March 24th between 1 and 5 pm for many other engineering related events. The events are free for children of all age groups and their parents. You will have the opportunity to meet many professional engineers at this event and see some exciting displays.

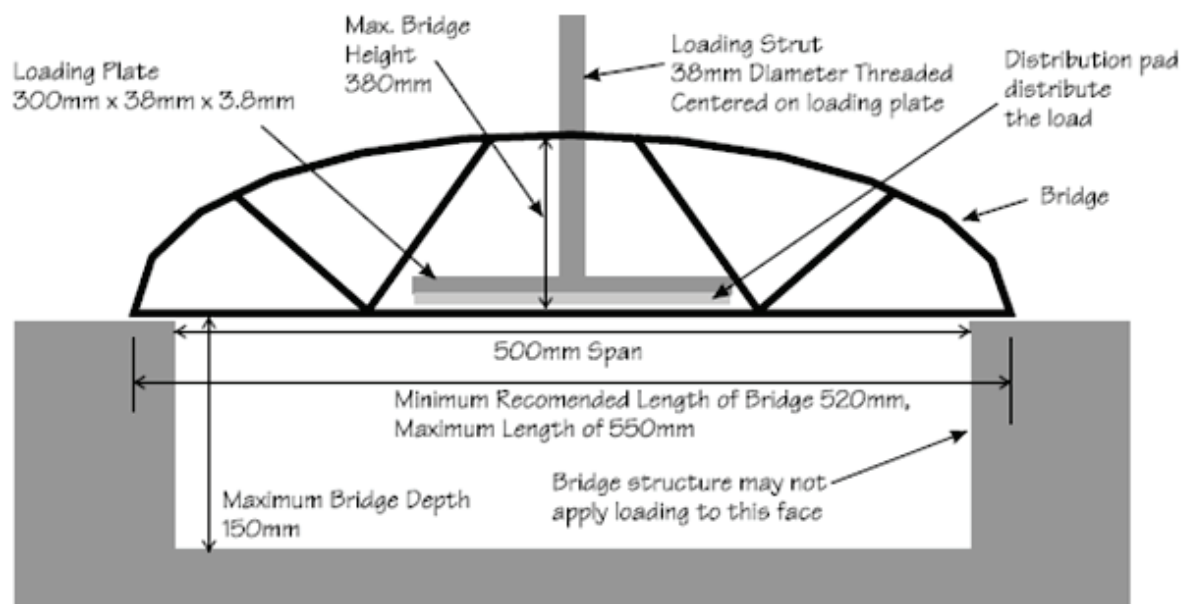


Figure 1a - Side view of Bridge in testing apparatus