



APEGBC South Central Branch
&
Thompson Rivers University

Present

**The 9th Annual Popsicle-Stick
Bridge Contest!**



Location: TRU Trades & Technology Center
Date: March 03, 2012
Time: 10:00 – 3:30 PM

Entries will be accepted in the following categories:

- **Elementary** - Grades 7 and Under
- **Secondary** - Grades 8 to 12
- **Open** - Public, mixed-category teams, university students, except PEngs.
- **Corporate** - Open to professional engineers or engineering firms only.

Judging in each category will be held according to the tentative schedule below. Actual start times depend on number of entries received in each category. Contestants should arrive in advance of their category event to have their entries officially signed in before judging begins. Prizes awarded after final results tallied for each category. Entries received after prizes awarded must move up to next category.

| <u>CATEGORY / EVENT</u> | <u>EVENT START</u> |
|---------------------------------|--------------------|
| Elementary* Sign In | 9:30 AM |
| Opening Ceremonies (For all) | 10:00 AM |
| Elementary* (grade 7 and under) | 10:15 AM |
| Secondary (grades 8 to 12) | 11:45 AM |
| Open | 1:30 PM |
| Corporate | 2:30 PM |

*Children under 13 must be accompanied by an adult.

Prizes:

| <u>CATEGORY</u> | <u>1ST PRIZE</u> | <u>2ND PRIZE</u> | <u>3RD PRIZE</u> |
|--------------------|-----------------------------|-----------------------------|-----------------------------|
| Elementary | Gift Certificate | Gift Certificate | Gift Certificate |
| Secondary | \$100 | \$75 | \$50 |
| Open and Corporate | \$100 | \$75 | \$50 |
| Corporate | Corporate Cup | -- | -- |

The Contest:

The goal of the contest is to construct the strongest bridge possible with 100 Popsicle sticks and white glue. The bridge must span a 500 mm gap; otherwise, the design of the bridge is left up to the competitor. Specifications are included on the following pages.

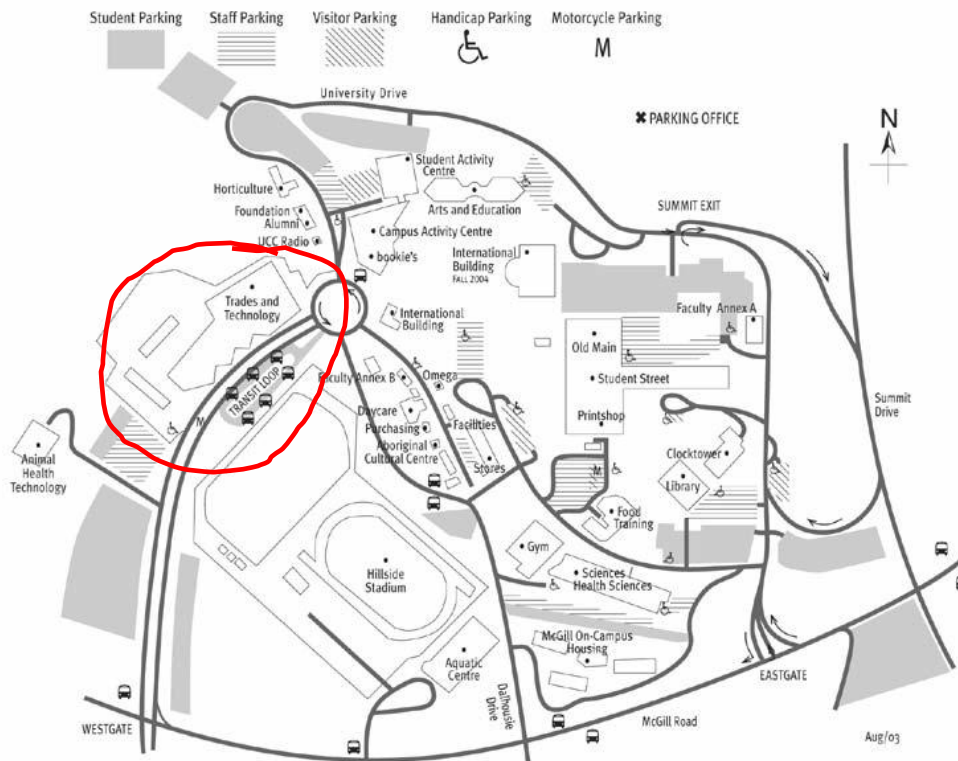
Anyone is welcome to participate. You are encouraged to register early. Contestants may enter bridges individually or as a team.

Want to learn about the fundamentals of bridge design?? Download the Westpoint Bridge Designer. It's free. <http://bridgecontest.usma.edu/download.htm>

Please contact Normand Fortier at 250-828-5404 (nfortier@tru.ca), if you need more information on the contest or judging day events.

TRU Campus Map

www.tru.ca



Official 2012 Popsicle Stick Bridge Contest Rules

Pre-Registration:

1. Each bridge built by a team or an individual contestant is considered 1 entry.
2. **The registration form must be completed and returned by the deadline.** Please print legibly.
3. Start early, as you will have to build the bridge in steps. It would be difficult to build it in one go due to the varying orientations of surfaces to be glued.

Construction:

1. The bridge must be built with a maximum of 100 Popsicle sticks and **white all purpose glue or white wood glue. No other glues are acceptable.**
2. Popsicle sticks must be left whole. They must not be cut, split, or otherwise altered.
3. The bridge must span a 500mm gap and fit within the attached clearance envelope. We recommend that the bridge be at least 550mm long to ensure that the bridge does not fall through the 500mm gap when the load is applied.
4. The highest centre portion of the bridge must be designed to contact a 100mm wide loading plate through which the “Bridge Buster” will apply loading to the bridge.
5. Bridges will be inspected at registration. Any violations of the rules outlined above will result in disqualification from the official results, but the contestant(s) will still be allowed to have their bridge tested unofficially.

Testing the Bridges:

1. Bridges will be weighed before being loaded. In the event of a tie, the lightest bridge wins.
2. Bridges will be loaded from the top with a loading plate as described in 4 above and shown in the diagram below. Loading will be increased and measured electronically until the bridge fails.
3. For the safety of all involved, bridge loading will be done behind a protective screen. Contestants and spectators will be expected to stand clear of the loading area and follow directions of officials at all times during the event.
4. The winner is the bridge that holds the largest load prior to failure.
5. All bridges will be loaded to the point of failure unless the contestant decides not to continue with incremental loads in order to save their bridge!

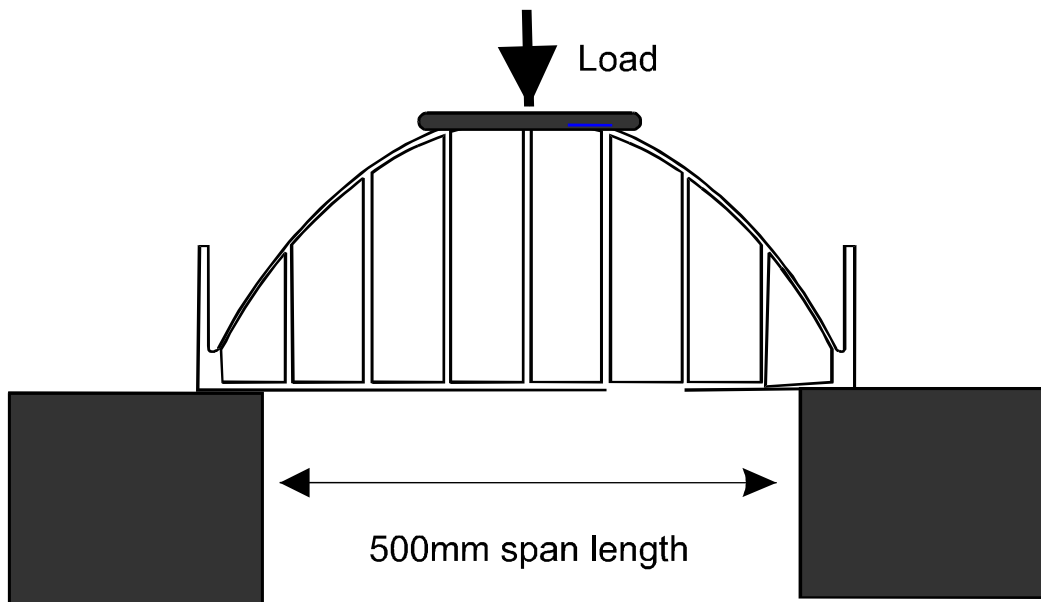
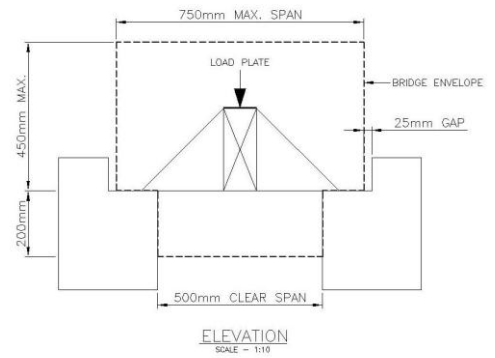
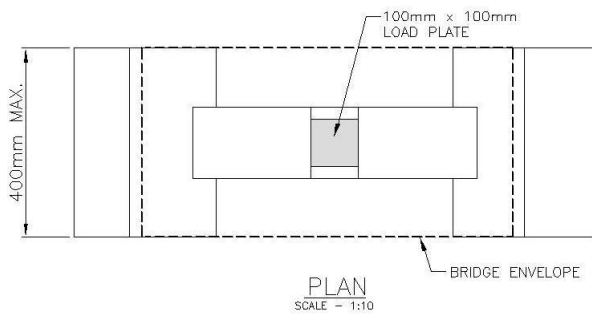
Teams:

1. The oldest team member will determine the team's entrance category.

Registration Package:

The contest rules and Entry Form will be posted:
<http://www.tru.ca/science/happening/annual.html>

Dimensional Specifications:





Professional Engineers
and Geoscientists of BC
www.apeng.bc.ca

The 9th Annual
Popsicle-Stick Bridge Contest
March 3, 2012

Entry Form



THOMPSON RIVERS
UNIVERSITY

REGISTRATION No:

OFFICE USE ONLY

Contest Judging Date: March 3, 2012

Please fax to **250-828-5450** or deliver your completed form to room s-238 in the TRU Science building. Alternately, scan and email your form to nfortier@tru.ca

Team Name (optional): _____

School, Business or Corporation Name: _____

Phone Number of Member / Team Contact: _____

Team member's names and birth dates (please print legibly):

| Last name: | First name: | Birth Date: |
|------------|-------------|-------------|
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |
| _____ | _____ | _____ |

- Category:**
- Elementary (grades 7 and under)
 - Secondary (grades 8 to 12)
 - Open (public, mixed-category teams, university students, except PEngs.)
 - Corporate Cup (Professional Engineers or engineering firms only)
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