



Centre for Transportation  
Engineering & Planning



## **TRANSPORTATION SURVEYING TECHNOLOGIES** *in the 21<sup>st</sup> CENTURY*

**April 7 & 8, 2010    Sherwood Park, Alberta**

*C-TEP (Centre for Transportation Engineering and Planning)* is a national leader in providing professional development training and funding applied research in transportation engineering and planning. C-TEP provides a forum for technology transfer, dialogue and collaboration among stakeholders in the transportation engineering community.

In response to industry demand, C-TEP is pleased to present “*Transportation Surveying Technologies in the 21<sup>st</sup> Century.*”

**Course Instructor:** *Grant Beach, Stewart Weir & Co. Ltd., Sherwood Park, Alberta*

Grant is the Training Coordinator for Stewart Weir, and has 24 years of progressively responsible surveying experience. Grant is a Survey Technologist graduate from the Saskatchewan Institute of Arts and Technologies, and is well versed in the latest survey systems and technologies.

*Stewart Weir* is a well established Canadian Engineering and Geomatics Company. Over the past 60 years, the company has continued to develop and expand its Engineering & Survey expertise by specializing in Transportation, Community Infrastructure, Materials Testing and Geomatics. Their website: [www.swg.ca](http://www.swg.ca)

[www.c-tep.com](http://www.c-tep.com)



## COURSE DESCRIPTION

This two day course is designed for engineers, surveyors, contractors and anyone involved with the surveying or construction of roadways. We will be covering old and new technologies that are available today and what will be available in the near future. These technologies have affected the way we survey roads and this course will delve into these changes. Day 1 will include basic discussions on *Global Navigation Satellite System (GNSS) Technology* and how this technology is applied. Learning the basics in *GNSS* technologies will give a better understanding on how this equipment is being used in the field by surveyors, as well as how machine guidance uses this technology. We will also examine *Total Station Technology*, data flow to and from the office, as well as *Terrestrial Point Cloud Acquisition* used in the road construction process. Day 2 will be more technical and cover the age old problem of *Geodasy* and how this affects the way road surveys are performed. The last half of Day 2 will introduce *Machine Guidance/Control* equipment from local vendors, Leica, Trimble & Topcon.

### DAY 1

- Components of a Road
- Total Station Technology
- Terrestrial Point Cloud Acquisition
- Global Navigation Satellite System (GNSS) Technology

### DAY 2

- Basic Geodasy
- Grid vs. Ground
- Machine Guidance
- Leica Equipment Introduction
- Trimble Equipment Introduction
- Topcon Equipment Introduction





Centre for Transportation  
Engineering & Planning

## REGISTRATION FORM

### Transportation Surveying Technologies in the 21<sup>st</sup> Century

**April 7 & 8, 2010**

**0830 to 1630 Hours**

**LOCATION: Stewart Weir & Co. Ltd.  
140, 2121 Premier Way Sherwood Park, Alberta T8H 0B8  
Phone: 780-410-2580**

(For out of area attendees, nearby accommodations in Sherwood Park include: Ramada Inn, Coast Edmonton East, Holiday Inn Express and Road King Inn.)

Name: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ Postal Code: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

**Course Fees:**  C-TEP Members \$769 per person  Non Members \$999 per person  
GST Exempt (course materials, refreshments, and lunches included.)

**THE COURSE IS LIMITED TO 15 ATTENDEES  
REGISTER EARLY  
REGISTRATION DEADLINE IS MARCH 19, 2010**

**NOTE: We will consider offering a second course should there be sufficient demand!**

**Payment Options:** Amount of payment: \$ \_\_\_\_\_

**A) Visa or MasterCard:** (fax to 780-422-2027 or email to: [nlittle@c-tep.com](mailto:nlittle@c-tep.com))

Credit Card Number: \_\_\_\_\_  
Print name as it appears on the card: \_\_\_\_\_  
Expiry Month/Year: \_\_\_\_\_ Signature: \_\_\_\_\_

**B) Cheque:**

Please make cheques payable to "C-TEP" and remit to:  
C-TEP  
c/o Alberta Transportation - Technical Standards Branch  
2<sup>nd</sup> Floor, Twin Atria Bldg. 4999 – 98 Avenue  
Edmonton, AB Canada T6B 2X3

Attention: Neil Little Executive Director  
Phone: 780-422-7634 Website: [www.c-tep.com](http://www.c-tep.com)