

**T**he last time you travelled down a highway, did you wonder who built the road? Have you ever looked at a bridge and wondered who designed it? Civil technologists and technicians plan and build roads, bridges, dams, wastewater treatment systems and other structures.

As a civil technologist you might be involved in planning and building or you might estimate construction costs and specify materials to be used. You might inspect water and wastewater treatment systems to ensure that pollution control requirements are met. You could plan dams, reservoirs, railroads, buildings or do urban and regional planning.

The following are some of the activities that civil technologists are qualified to perform; civil technicians assist with these duties:

- Prepare drawings for structures to be built of timber, concrete or steel using standard drafting techniques and computer-aided drafting and design (CADD) systems
- Inspect and supervise work at construction sites to ensure that safety and design specifications are followed
- Make appropriate recommendations regarding design and construction to electrical and mechanical engineers and architects
- Prepare cost and material estimates, project schedules and reports
- Prepare construction drawings for highways, streets, urban subdivisions, and water and sewer services
- Inspect dams, power plants, generating plants and other structures to assess the need for maintenance and repair work
- Conduct field and laboratory tests on soil, asphalt and concrete, assessing them according to specifications set by the Canadian Standards Association
- Develop concrete and/or asphalt mixtures designed for specific uses and conditions

### Where Will You Work?

As a civil technologist or technician, you could work for contractors, land developers, engineering consulting firms, manufacturing companies, municipal and provincial public works, or environment and transportation departments.

Work is available in both rural and urban locations. As a civil technologist or technician, you work in offices and at construction sites. While in the office, you will often work at a computer (for CADD functions) or at a drafting table. You would likely work regular office hours, but overtime may be required to meet deadlines.

On job sites, you might be required to climb scaffolding and ladders to reach construction areas high off the ground. Safety clothing (hard hats, steel-toed boots, protective eyewear and earplugs) is required on most job sites.

Related occupations that you could get involved with are: construction estimator or supervisor, CADD designer/drafter, survey technologist/technician, building technologist/technician, building inspector, city planner or quality control inspector.

### How Much Will You Earn? <sup>1</sup>

Technologist:	\$66,000/yr
Technician:	\$65,000/yr
GradTech:	\$47,000/yr

### How Does The Future Look?

The employment outlook is expected to be above average compared with other occupations. You will find most civil technology jobs in mid to large-size cities. Jobs are available in government departments and with consulting firms in more rural areas.

### How Can You Get Started?

In high school, be sure to take courses in English, mathematics, physics, chemistry and biology. Courses in CADD, business and shop will also help you prepare for this career.

*Post secondary options are listed on the reverse side...*

TechWORKS! on the web...

[techworks.asttbc.org](http://techworks.asttbc.org)

turn over for more info!

## CIVIL TECHNOLOGY

### What Will You Need?

To be a good civil technologist or technician, you need strong math and science skills, particularly physics. You should be good at oral and written communication, and have excellent problem solving skills. You will need a keen eye for detail, well-developed organizational skills and an ability to work well with others.

You should enjoy doing work that requires taking a methodical approach, finding innovative solutions to problems and directing the work of others.

### Post Secondary Possibilities

COLLEGE	PROGRAM	ACCREDITED STATUS	DISCIPLINE
BCIT	Civil & Structural	Technologist	Civil
BCIT	Civil & Structural Certificate	Technician	Civil
BCIT	Transportation Systems	Technologist (CTAB)	Civil
BCIT	Transportation Systems	Technician (CTAB)	Civil
Camosun College	Civil	Technologist	Civil
Fraser Valley College	Drafting Technician	Recognized	Building/Civil
Okanagan University College	Civil	Technologist	Civil
The University College of the Cariboo	Engineering Design & Drafting	Technician	Civil/Mechanical

- Programs listed are those accredited by the Applied Science Technologists & Technicians of British Columbia (ASTTBC) unless noted otherwise; check [www.asttbc.org](http://www.asttbc.org) for updates on accredited programs.
  - Check with your career facilitator or counsellor for other sources of information applicable to education options for this technology.
- <sup>1</sup> Salary figures indicated in the 'How Much Will You Earn?' section are extracted from ASTTBC's Member Compensation Survey or other Canadian sources applicable to the specific technology discipline. These figures are **representative only**; actual figures will vary depending on academic training, practical experience, job responsibilities and location of employment.
- The TechWORKS! web site is an important online resource and provides links to career information that will be of interest to students pursuing a career in technology.

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