

Civil Engineering Associate Professionals		Queensland
ASCO Code: 3122	December 2006	
Labour market rating	Shortage	
Comment: <i>Workers with 12D and MX software knowledge are in high demand and are especially difficult to recruit.</i>		

Occupational demand

Demand for civil engineering associates comes from engineering and architectural consultancy firms, construction companies, government, the transport industry and the mineral resources sector. Queensland is currently experiencing very high levels of activity in engineering construction as infrastructure development advances at a pace to meet the State's population growth and business continues to invest in new capacity. In this year's survey, demand for associates mostly came from State and local government for civil works, urban development, port expansions and other public infrastructure projects. Demand was high for associates skilled in civil design and sub-division work, and for workers skilled in specific software packages, particularly for road modelling.

Occupational supply

Formal education for this occupation is via a diploma, advanced diploma or associate degree program. Diploma programs are available through both public and private sector registered training organisations and an associate degree is available at the University of Southern Queensland (USQ) and Central Queensland University (CQU). Data from CQU and the Department of Education, Science and Training show that the combined number of commencements for the associate degree in civil engineering averaged around 50 per year from 2001 to 2004. Completions over that time were much lower, with an average of only 15 students graduating each year. In 2005, the USQ enrolled 132 students in its new, generic Associate Degree in Engineering program but the number specialising in civil engineering is not yet available. The CQU program had 33 new enrolments in 2005 and 87 in 2006. Direct international migration to Queensland may be a significant source of supply to this occupation, with overseas arrivals and departures data showing a net permanent and long term gain to the State of 27 self-identified civil engineering associate professionals in 2005-06.

Employer and industry comments/current labour market

Less than 12 per cent of the vacancies for civil engineering associates in this year's survey were filled within six weeks of advertising. The greatest difficulties reported were in filling senior positions and regional vacancies. Employers were often seeking workers skilled in specific software packages, such as 12D or MX, or associates with good drawing skills. Respondents reported that a shortage of town planners has led to associates moving into assessment work, rather than design and drawing. About 87 per cent of advertisements attracted no enquiries from potential applicants at all, and respondents partly attribute this to the work preferences of the existing workforce, which do not include relocating, returning to drawing work, or learning new software. Most employer contacts reported a backlog of work, in some cases enough to double their output if they could secure appropriately skilled civil engineering associates. To cope with the shortage, some local government authorities are sharing associates and other professionals, and one employer is offering full fee-paying diploma scholarships in return for a short-term employment commitment.

Labour market outlook

High levels of activity in infrastructure development, commercial building and the mineral resources sector are creating very high demand for civil engineering associates in Queensland. The supply of new associates from education and from interstate and overseas migration presently falls well short of meeting demand. Improvements to supply from education are anticipated by 2010 but, for the next few years, the State-wide shortage is expected to persist and will probably intensify.