Advanced Road Design Customer Profile

Connell Wagner

Advanced Road Design hits the pavement

Road redesign in an historic part of the City of Melbourne was easy for Connell Wagner with Advanced Road Design and AutoCAD Civil 3D

User: **Connell Wagner**

Project: **Therry Street, Queen Victoria Market (City of Melbourne)**

In 2001, CityWide Service Solutions Pty Ltd, 'CityWide', won what was arguably the largest civil infrastructure contract in local government, the provision of infrastructure maintenance services to the City of Melbourne. Through an association with CityWide, Connell Wagner provides the majority of the inner-city engineering design work.

The City of Melbourne is Victoria's commercial, administrative, cultural and recreational hub, with a resident population of over 50,000 and nearly 15,000 businesses. The heart of a metropolis of over three million and hosting nearly a million journeys a day, the City relies on the integrity of its infrastructure to function efficiently.

Connell Wagner is one of Australia's largest and most experienced multi-disciplinary consulting groups. The company employs 1800 staff throughout the Asia Pacific region, of whom around 350 are based in Victoria. Mendo Brajanovski is the company's senior technical officer in the municipal section of its Infrastructure Group. The municipal section designs and documents the $14 million annual works programme that the City of Melbourne commissions to CityWide. As Mr Brajanovski explained, "I handle their bigger capital works, mainly streetscape design".

Therry Street, which provides pedestrian access from Queen Street into the City's historic Queen Victoria Market, was the site of a recent project. Mr Brajanovski explained, "The job involved repaving the street in bluestone paving". For Therry Street, the City of Melbourne provided basic concept drawings of its vision of the new streetscape. A Connell Wagner survey team measured up the site, then produced 2D and 3D DXF files for the infrastructure group. Mr Brajanovski used the 3D files for modelling the site, while the 2D files were the basis of his production drawings.

Mr Brajanovski creates his digital terrain models (DTMs) in AutoCAD Civil 3D. He then uses the Australian-developed civil design add-on Advanced Road Design for all further design work. He says it is

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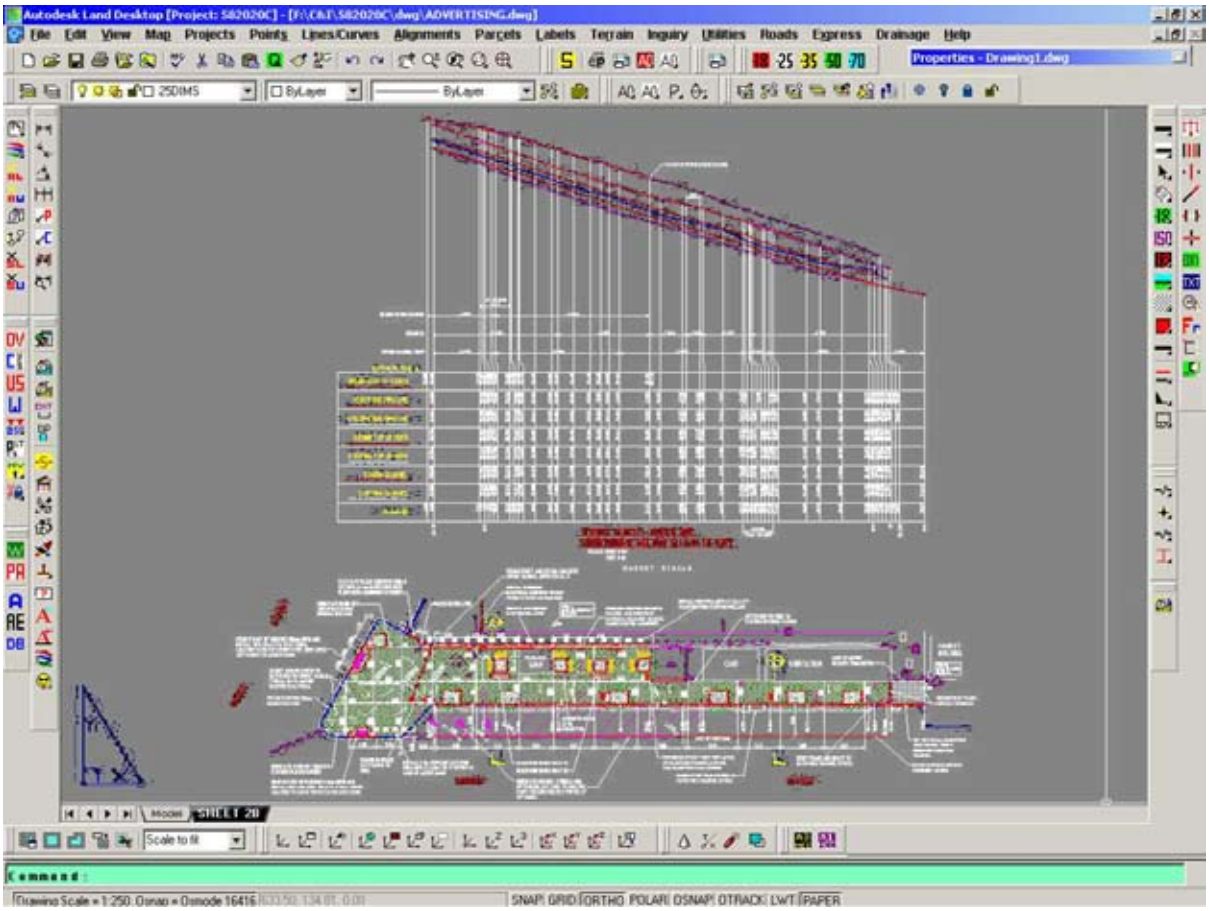

especially suited to the nature of his work: "Our work for municipalities involves a lot of lifting and resetting of kerb and channel work and matching into existing building lines. The tolerances are small and there are always a lot of assets you have to match into. Therefore, Advanced Road Design's ability to design along multiple string lines is of great benefit.

"In this job, I had to match existing pavement at the Market end. At the other end, we lifted up the kerb and channel, while in the middle there was existing pavement we had to meet. Advanced Road Design allows you to look at individual strings, without relying on templates, and that's where this package comes into its own.

"We're totally working within the AutoCAD environment. We don't have to use DXF files, which can cause problems with colours or linetypes in our long sections and cross-sections. You know that, when you're working in Advanced Road Design, what you see is what you get."

Another benefit stems from the nature of the work Connell Wagner undertakes for the City of Melbourne. Many jobs are individually low in value so, as Mr Brajanovski says, "When you do it, you've got to get it right first time. Advanced Road Design is simple to use and the ability to plot multiple string lines in our long sections means we can get quick, accurate results.

"Using Advanced Road Design for AutoCAD Civil 3D, we don't have to import our alignments from another civil design program then check the data, so we can set up and output our initial design more efficiently. This saves several hours on each job. Even better though, if we have design changes, we can save hours of reworking and rechecking — because everything is in AutoCAD."

The manager of Connell Wagner's Municipal Group, Nigel Barich, is also pleased with the financial benefits of using Advanced Road Design, stating, "For use in inner urban municipalities, it is a more efficient design package when compared to our previous design software. We have seen gains in productivity of approximately 10–15%, due to the completeness of the package and the seamless integration with AutoCAD".

Adopting Advanced Road Design has made Connell Wagner's work easier and more efficient, to the benefit of the company, the City of Melbourne and the millions of people who use the City's streets.