



**MILAN JASAREVIC**  
SENIOR STRUCTURAL ENGINEER  
CURRICULUM VITAE

# MILAN JASAREVIC CV



## PROFILE

Milan is a talented structural engineer with an interest and strong capability in earthquake engineering and new technologies. His eight-year career has spanned across New Zealand, Australia and the Pacific. He has worked closely with leading experts, both academically and professionally, locally and internationally to successfully deliver a wide variety of projects.

When it comes to delivering a project, Milan's technical ability, enthusiasm for communicating and collaborating and ability to present concepts which meet the brief are but a few ingredients which have brought successful outcomes. He works synergistically in a team environment and seeks innovation to create solutions to every challenge that presents itself.

Milan has a proven experience in site supervision and construction observation. Clients and contractors have always noted the

additional value added during the construction phase of the project.

Throughout his career, Milan has been exposed to all facets of structural engineering. This includes, but is not limited to power generation structures, multi-level commercial and residential towers, large scale residential developments, assessment of heritage and large scale commercial assets and aeronautical service structures.

## QUALIFICATIONS

BEng (Hons) – Bachelor of Civil Engineering, University of Canterbury 2009

Chartered Professional Engineer (CPEng) 2014

International Professional Engineer (IntPE(NZ)) 2016

Member of the Institution of Professional Engineers New Zealand (MIPENZ)

## CAREER HISTORY

2017 – Present, Senior Structural Engineer – Structus Consulting Limited

2015 – 2017, Senior Engineer, Commercial Manager – Blueprint Consulting Engineers

2013 – 2015, Intermediate Structural Engineer – Knowles Consulting Limited

2011 – 2013, Design Engineer – Holmes Consulting Group LP

2009 – 2011, Graduate Structural Engineer – AECOM New Zealand Ltd (formerly Maunsell Ltd)

## PUBLICATIONS

Seismic Response of Green Roofs, 2008, G Clifton, P Omenzetter, E Fassman, M Carmody, M Jasarevic

## MANAGEMENT SKILLS

- Ability to manage complex projects with multiple stakeholders as proven by delivering international and local projects which required collaborating with consultants and contractors in other geographical regions.
- Excellent communication skills, allows him to work well with multiple disciplines within project teams, meeting deadlines and moving with agility to capture coordination items and deliver continued quality.
- Understands clients' needs and project drivers through a thoroughly fleshed out scoping process resulting in successful delivery of projects.
- Leadership of small and large design teams on single discipline and multi discipline projects.

## TECHNICAL SKILLS

- Experienced in the design of steel framed structures, precast and insitu reinforced concrete buildings, masonry wall structures, specifically designed timber structures, multi-storey buildings and complex structures.
- Advanced seismic analysis and design skills using both local and international design codes of practice and the latest academic research.
- Advanced ability in the use of industry leading engineering software such as ETABS, SpaceGass, Microstrain and Response2000.

- Detailed knowledge of the complete design process and construction documentation and the ability to apply engineering knowledge to complex problems which lead to practical solutions.
- Constructions supervision experience and ability and willingness to investigate and provide alternative solutions to complex problems faced during construction.

## PROJECT EXPERIENCE

### COMMERCIAL AND RETAIL PROJECTS

#### **350 Colombo Street, Christchurch, 2015/16, \$40m**

Concept to consent design and design coordination management of the 7-building development at 350 Colombo Street. Milan's role was as overall project director, designer of the apartment building and the manager/reviewer of the 6 terrace structures.

The apartment building is 3 storeys of mixed commercial/residential use (lower floor commercial, upper floors residential) purpose. The structure is laterally restrained with a 'C' shaped, fully ductile Eccentrically Braced Frame system. The ground is liquefiable to 20m therefore is supported on screw piles, which also provide the base shear take out.

For the terrace buildings, Milan carried out all the concept design and assisted the juniors with coordination with other consultants as well as providing overarching support to the project through correspondence and meeting attendance.

#### **Botany Town Centre Fountain Lane South, Auckland, 2013, \$5m**

Milan coordinated the construction phase of a four-canopy project at Botany Town Centre.

Milan used Aconex to deal with contractor queries and coordinate documentation changes with the other consultants and architect.

#### **132 Quay Street – Refurbishment, Auckland, 2011, \$3m**

Milan carried out the design of a single storey carpark being refurbished to a two-level school for maritime training. The existing steel framing and cross bracing structures were used for lateral and gravity support. A new composite, reinforced concrete floor system transformed the single level carpark into the two-level structure. Desktop studies, 3D Modelling, coordination with other consultants, providing consent and tender documentation and achieving project close out were all tasks undertaken.

#### **DETAILED SEISMIC ASSESSMENTS**

##### **C-Vu Detailed Engineering Evaluation, Auckland, 2015**

Modelling, modal analysis, assessment of beam column joints, diaphragms walls and frames of a 13 storey reinforced concrete shear core and gravity frame building. The assessment included a comprehensive analysis in ETABS using multiple mass sources and using the latest Pseudo Equivalent Static guidelines, in the NZS1170.5 amendment, to assess the diaphragms. An assessment to the original standards (NZS3101:1995 and NZS4203:1992) was carried out. The findings were presented as an expert witness testimony.

##### **Methodist Church Portfolio Detailed Engineering Evaluation, Papakura, Auckland, 2015**

Design engineer, design manager and client liaison of detailed assessment of 7

unreinforced masonry building in Papakura. The building ranged in footprint (700m<sup>2</sup> worship centre to 50m<sup>2</sup> single storey shop), height (all single and 2 storey) and vintage (early 1920's to 1970's).

##### **BNZ Building Level 5 Seismic Assessment and Ceiling Restraint Design, Wellington, 2013-14**

Following the 2013 Wellington earthquakes the BNZ building had severe damage to non-structural items at the light weight 5th floor on the outer two piers of the 3-pier building. Building information was gathered and a structural model constructed to determine whether the damage was due to insufficient allowance for the structural movement or insufficient restraint of the ceiling and services. A report of the main structure assessment and of the ceiling design assessment were collated and presented to the client. Additionally, a new suspended ceiling seismic restraint design for the 5th floor ceiling was carried out, peer reviewed and presented to the client.

##### **77 Port Road, Wellington, Detailed Engineering Evaluation, 2013**

A detailed seismic evaluation of a single storey reinforced concrete masonry perimeter walls and internal structural steel frames with a lightweight roof. The assessment was carried out using the guidance in the NZSEE Assessment and Improvement of the Structural Performance of Buildings in Earthquakes. The assessment and recommendations were presented to the client in the form of a report.

##### **151 Queens Road, Auckland, Detailed Engineering Evaluation, 2013**

A detailed seismic evaluation of a 3 storey reinforced concrete masonry perimeter walls and internal reinforced concrete frames with a

lightweight roof. Assessing the gravity frames to have sufficient capacity to be able to withstand the rotations that would be imposed during an earthquake was the key purpose of the assessment.

#### **Grafton Hall of Residence Detailed Seismic Evaluation, Auckland, 2012-13**

Milan carried out the assessment of three structures located at Grafton, Auckland. Desktop studies, 3D Modelling, initial and detailed assessment reporting were all required. There was a single-story dwelling, a two storey kitchen building and a 10 storey reinforced concrete frame structure assessed as nominally ductile. Detailed reporting and providing various strengthening concepts for the client were all part of the scope.

#### **Majestic Centre Seismic Assessments, Wellington, 2012-13**

Milan carried out the assessment and strengthening design to several components of the structure using the output from a non-linear time history analysis of the 30+storey structure in Wellington. In particular, the strengthening of the central core elements.

Additional tasks involved, designing new secondary structure where existing was unsuitable, support structure for the contractor and detailed diaphragm analysis using pseudo equivalent static procedure and 2-D and 3-D modelling.

#### **EDUCATION, COMMUNITY AND GOVERNMENT PROJECTS**

##### **St Cuthbert's Centennial Centre Services and Ceilings Seismic Support, Epsom, 2013-14, \$2m**

Engaged by Dominion Constructors, the new suspended ceiling seismic restraint design, restraint of services inside the ceiling plenum

and restraint of pool drainage and treatment services for the entire building was carried out, peer reviewed and presented to the client. The design complied with NZS4219: Seismic performance of engineering systems in buildings, AS/NZS2785: Suspended Ceilings Design and Installation and AS/NZS4541: Automatic Fire Sprinkler standards.

##### **Te Atatu Peninsula Community Centre and Library, Auckland 2011, \$12m**

Milan carried out the developed and detailed design of a four building >1500 square metre complex in Te Atatu, Auckland, housing a library, community centre and an office building. 3D and 2D Modelling, development of tender documentation and coordination with the architect and other disciplines. The structure involved several load resisting systems, including portal frames, reinforced concrete shear walls, concentric braced frames, proprietary floors and fixed base foundations.

##### **Takatini Maintenance Support Buildings, New Plymouth, 2009-10, NZ Defence Force, \$20m**

This project involved the developed and detailed design of 3 single level steel portal frame buildings with a 5-level parachute drying tower, which formed the maintenance support buildings for the NZ Defence Force. Milan was responsible for the entire structural design, including coordination with other disciplines and preparing consent documentation.

#### **RESIDENTIAL PROJECTS**

##### **Stonefields Stage 8B Blocks A, B, C and D, 2016, Auckland, \$30m**

Concept to consent design, design management and design coordination

management of 4 blocks of 3 level apartments of varying construction and footprint – 2 levels of timber construction over 1 level of block, 3 levels of reinforced concrete frames in both directions and 3 levels of specifically designed plywood diaphragms and shear walls.

**Awatea Development Stages, Hornby, Christchurch Stages, 2, 7 and 4, 2015/16, >\$40m**

A large residential development in Christchurch consisting of over 200 individual single and two level, light timber frames lots on shallow foundations. The challenge is the sheer volume of work and the requirement to coordinate resourcing between the Auckland and Christchurch offices. Milan drove the internal and external correspondence, was the primary reviewer of internal documentation and assisted in coordination with other consultants. Milan was also responsible for invoicing and justification of invoices to client. Providing guidance on remedial works which are not resolved on site.

**Kensington Park 5A, 2016, \$16m**

Concept to consent design, design management and design coordination management of 6 and 5 storey buildings with a shared podium. The buildings were supported laterally by nominally ductile structural steel moment resisting frames and by limited ductile structural steel eccentrically braced frames. The project faced geotechnical challenges which included over 6m of retained soil on one end of the building and base shear take out issues. The client wanted a ground improved solution rather than piling and to minimise retaining, approximately a third of the building footprint was at grade at a higher level.

**Kensington Park 5B, 2015/16, \$16m**

Concept to consent design, design management and design coordination management of 6 and 5 storey buildings with a shared podium. The buildings were supported laterally by nominally ductile structural steel moment resisting frames and by limited ductile reinforced concrete shear walls (all the provisions from the latest NZS3101 amendment 3 were incorporated). The project faced geotechnical challenges which included over 6m of retained soil on one end of the building and base shear take out issues.

**Three Kings SHA, 2015, \$6m**

Concept to consent design and design coordination management of 18, 3 storey, specific designed, predominantly light timber frames terraces and garages at Three Kings, Auckland.

**HEALTHCARE PROJECTS**

**Biomed Extension 2009, Hawkins, Auckland, \$3m**

Milan carried out the entire preliminary and detailed design of a single storey, block wall storage building and a timber framed office building which form the proposed Biomed extension to their existing plant. Milan was responsible for coordination and development of all structural documentation required for building consent.

**INDUSTRIAL PROJECTS**

**Belfast Road, Christchurch, 2013-14, \$5m**

Management of the construction phase, including several redesign elements of a single storey structural steel frame buildings with a light weight roof and perimeter precast panels. Work included responding to queries

from the contractor, clearing up inconsistencies with the structural and architectural documentation to allow shop drawings to be developed, checking of those shop drawings. Providing site assistance and attending site meetings. Finally, providing close out documentation (producer statements) and maintaining records for project completion.

**Bunnings New Lynn Developed Design, 2013, >\$30mil**

A single level steel portal frame structure with perimeter reinforced concrete precast panel providing fire walls. The structure was supported by either a precast floor with an insitu topping or a post tensioned slab. The basement retaining walls in combination with reinforced concrete frames and steel concentric braces provided lateral support to transfer down to reinforced concrete bored piles. Responsibilities included; design of the above structure including collation of quantities and documentation (design specification and sketches) sufficient to be able to price the two flooring options and coordination meetings with the contractor and architect to ensure costs and quantities were optimised and uniform across the project.

**Stratford Peaker 2009, Contact Energy, New Plymouth, \$30m**

This project involved design of, the switch gear building, control bead and the gas compressor foundation which included understanding of the complex dynamic behaviour of their foundations. The structures required time history design to ensure post disaster function and to increase certainty in terms of movement allowances for the support structures of very sensitive equipment.

**Verve Kwinana 2009, Leighton, Perth, Australia \$50m**

Engineer Milan conducted preliminary and developed design of the heat exchanger support system (pipe racking) which involved 3D modelling and design to Australian material standards. The design had to be presented in a manner which could be priced and evaluated by the client.

**AERONAUTICAL PROJECTS**

**Air New Zealand Aircraft Docking, 2016, \$1m**

Concept to consent design, design management of a set of fully adjustable Tail and Wind docks for the ATR72 and Q300 aircrafts for the Air New Zealand maintenance facility in Nelson. Required complex coordination with the local engineers to understand how the two aircrafts differed geometrically, when jacked, and achieving a compromise which would allow both to be serviced with the same docking structures.

**Pago Pago International Airport Air Traffic Control Tower 2010, American Samoa \$20m**

This project involved the preliminary, developed and detailed design of a 9 storey pentagonal, reinforced concrete shear wall structure. The challenge presented included, design to American loadings and material standards, understanding of available materials and the limitations of the local labour force.

**Fitiuta Airport Fire Fighting Facility, American Samoa, 2010, \$2m**

Milan spent 6 weeks monitoring construction in Fitiuta, American Samoa. Observing construction process, contract administration and progress reporting of a single storey portal frame and cross framed building designated as a post disaster facility on a remote island in the Pacific.

