

Andy Yuen

B Eng (Civil (Structures)) (Hon 1), MIEAust, CPEng, NER
Founder of Andy Yuen Engineering

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Qualifications & Memberships

- Bachelor of Engineering (Civil (Structural)) (Honours Class 1);
- Chartered Professional Engineer CPEng
- Member Institute of Engineers Australia MIEAust
- Listed on Nation Engineering Register NER

Seminars/Training

- Cracking in concrete – Concrete Institute of Australia (CIA)
- High Performance Concrete – CIA
- Design for Corrosion Protection of Structural Steelwork – Australian Steel Institute
- Composite repair and rehabilitation of infrastructure – Composites Australia

Awards

- Australian Steel Institute Prize 2010 – 1st Place in Steel Structures;
- University of Sydney Academic Prize 2010 – High Academic Achievement;
- Walter Reid Memorial Prize 2009 – High Academic Achievement;
- Civil Engineering Summer Research Scholarship 2009 – Wind Tunnel Project;
- Dean's Honour Roll, University of Sydney 2009, 2010 – High Academic Achievement.

Work History

- Andy Yuen Engineering – Founder & Structural Engineer – 2015 to present;
- Clas Concrete and Construction – Site Engineer – 2015 to present;
- Taylor Lauder Bersten (TLB Engineers) – Engineer – 2014 to 2015;
- AECOM Australia Pty Ltd – Graduate Engineer – 2012 to 2014;
- GHD Pty Ltd – Undergraduate Engineer – 2010 to 2012;
- University of Sydney, Civil Engineering Department – Wind Tunnel Assistant – 2009 to 2010.

Expertise

- Structural analysis;
- Structural design;
- Structural materials, their selection and suitability;
- Constructability and safety in design;
- Durability of structures;
- Assessment, rectification and remediation of structures;
- Condition and dilapidation inspections for structures;
- Site reviews for new construction works.

Software Proficiency

- Spacegass
- Microstran;
- RAPT;
- E-Tabs;
- ThinWall;
- ACES Finite Element Package;
- Microsoft Office
- Tedds

Project Experience

Residential:

- 248 Parramatta Road, Stanmore – Structural specification for repair of masonry walls and project management;
- 403-405 Old South Head Rd, North Bondi – domestic dwellings - dilapidation assessment;
- Princess St, Brighton Le Sands – 10 storey post-tensioned concrete structure – design of columns and modelling of lateral system;
- Balmain Union Development, Terry St, Rozelle – 5 storey post-tensioned concrete structure – construction stage site reviews;
- ARV Stage 2 Lober Square Development, Castle Hill – 4 storey post-tensioned concrete structure – construction stage site reviews;
- Extensions to Red Leaf, 16 Flavelle St, Concord – 2 storey post-tensioned concrete structure – construction stage site reviews;
- 78 Prospect Rd Summer Hill – single storey residential property – investigation of damage to existing property and specification for repair works for tender.
- 35 Centennial Av Chatswood – Assessment of domestic residence for adjacent construction works – dilapidation assessment of dwelling wall, assessment of wall and foundations for possible undermining due to adjacent works and letter of advice.
- 28 Ronald St Blacktown – Structural engineering consultation for fire separating wall – concept design for support structure for new fire rating wall.
- 3-5 Alexandra Avenue, Croydon – refurbishment of two storey residential property to mixed commercial/residential space – project management, structural design.

Commercial:

- 645 Harris St Sydney – Refurbishment and fitout of five storey existing timber framed structure and structural design and assessment of existing structure for additional levels;
- Red Bull office at 55 Doody St Alexandria – Structural design and consultation for fit-out and refurbishment of warehouse for commercial office;
- Westpac Coogee – structural engineering advice for building refurbishment and fit-out – design of timber, steelwork, slab on ground and foundations, review of existing awning structure, temporary works design and construction staging specification;
- DECO, 155 Clarence St, Sydney – Refurbishment and extension of heritage-listed 'Old Red Cross Building – design and construction stage site reviews;
- Car park, 289 King St, Newtown – 5 storey reinforced concrete, post tensioned slab construction – design of columns and modelling of lateral system;
- Aerial Cable Support Structure Macquarie University – catenary structure to support service cables between structures – design of structural rope system, steelwork and anchor systems.

- Review of Existing Car-park Slab at Macquarie University – Structural review of slab for plant loading – structural analysis of existing post tensioned reinforced concrete slab.

Industrial

- 140 Bourke Rd Alexandria – Structural site review and concept design for replacement of A/C units onto existing roof;
- 4 Newington Rd Silverwater – Structural assessment of warehouse structure, design review and strengthening specification;
- 55 Doody St Alexandria - Strengthening of existing portal frames structures for new loading
- 55 Alexandria St, Alexandria – structural design for wall opening and support of precast concrete façade – steel design.

Transport and Infrastructure:

- Bridge over Killick Creek Kempsey – Structural design of Fibre Reinforced Polymer superstructure option for new bridge over Killick Creek
- Parramatta Escarpment Boardwalk – greenway, pedestrian and cyclist shared path including a concrete/steel bridge, precast concrete boardwalk, aluminium boardwalk, slab on ground and helical parameter tower – structural analysis and design.
- Project Verifier, Hunter Expressway, Kurri Kurri to Branxton – 28km greenfield infrastructure project for Roads and Maritime Services including 25 bridges and culverts – Project Engineer for Structures, construction stage site reviews, RFIs, NCRs, technical support and advice to contractor;
- Auckland Electrification Project, Auckland – Upgrade of Auckland rail system from diesel-powered system to electric system including refurbishment and strengthening of bridges – steelwork design and load rating of bridges;
- Preston River Footbridge, Perth – design verification for 50m cable-stayed pedestrian footbridge – design of reinforced concrete, steelwork, steel box girder with composite concrete deck, cable elements, construction stage modelling and sequencing design.
- TfNSW Mortdale Maintenance Centre, Mortdale – concept design for extension of existing steel portal frame structure with crane gantry – design of steelwork portal frame, reinforced concrete retaining structures and crane gantry beams.
- Old Wallgrove Rd/Wallgrove Rd/M7 Interchange – Upgrade of existing road infrastructure including widening of existing bridges – Assistant Project Manager and concept design of bridges;
- M5 Queen St and Nuwarra St Bridges Traffic Load Assessment – Load rating of existing overbridges for proposed “B-Triple” Loading – modelling of bridges and analysis using ACES package;
- John Knight Memorial Park Upgrade – Pedestrian bridges for upgrade to park infrastructure – structural design of two reinforced concrete bridges and balustrades;
- Princes Highway Bega Bypass – structural engineering of bypass project including 3 new over-bridges – geometry and level checking for over-bridges;
- Wyong Rd/F3 Interchange Upgrade – intersection upgrade for intersection including rock cutting, new bridge ramp and grade separation – design of reinforced concrete retaining walls and traffic barriers for off ramp and grade separation;
- New Cotter Dam, Canberra - Foundation assessment for defect beneath proposed site for water intake tower – site assessment of basaltic fault and design of new retaining structure and rock anchors.

- TfNSW South West Rail Link (SWRL) Temporary Structures – design of temporary overhead wiring structures (OHWS) for SWRL – analysis and steel design for OHWS.

Maritime:

- Coffs Harbour Fisherman’s Cooperative Slipway – Structural assessment of existing timber sleepers and rails of slipway structure
- Parramatta Escarpment Boardwalk – refer to “Transport and Infrastructure” projects.
- Clontarf Marina – New deck area and platform suspended over water – analysis and design using fibre reinforced polymer sections and timber.
- Sydney University Boatshed, Linley Point – 2 storey boatshed for university rowing club suspended over water – analysis and concept design of reinforced concrete, precast concrete slab systems, steel framed roof, steelwork and access bridges/ramps.
- Demolition of Wharf at HMAS Platypus, Neutral Bay – Structural Engineering services for demolition works – analysis, review and design of demolition staging works.
- Boatshed at 126 Louisa Rd Birchgrove – Single storey boatshed structure adjacent to river – design of timber and stainless steel structure.
- Riverside Walkway at Parramatta – walkway/cycleway shared path including bridge works, suspended structure over water, rock retaining structures and slab on ground – design of bridge and suspended slab structures.
- Strengthening existing wharf at Kiama Boat Harbour – Strengthening of existing jetty structure – construction stage site reviews.
- Walkway beside Boat Ramp at Currarong – Elevated Jetty and walkway beside existing boat ramp – analysis and design of reinforced concrete, precast concrete, FRP elements and rock foundations;

Artwork

- Lucy Humphrey Sculpture at Coffs Harbour – lighting artwork sculpture at corner of Pacific Hwy and Breyf Street, Coffs Harbour – analysis and design of sculpture.
- Horizon Gold Dinner Sculpture – hidden, steelwork support structure for water sphere artwork at Horizon Gold charity dinner in Town Hall – project management and design of structure.

Fibre Reinforced Polymer

- Bridge over Killick Creek Kempsey – Refer to “Transport and Infrastructure” projects
- Walkway at North Solitary Dr Sapphire Beach – suspended walkway over existing marsh and wetlands – design of FRP structure.
- Clontarf Marina – refer to “Maritime” projects.

Reports

- Dilapidation Report – 403 to 405 Old South Head Rd, North Bondi;
- Dilapidation Report – 35 Centennial Av, Chatswood
- Structural Report – 78 Prospect Rd, Summer Hill

- Structural Report – Due diligence report for Burwood Private Hospital at 55 Burwood Road, Concord

Construction/Site Engineering

- 31 Wellington St Bondi – safety management, quality management, quantity surveying and construction co-ordination with other trades and stakeholder;
- Project Verifier, Hunter Expressway, Kurri Kurri to Branxton – Refer to “Transport and Infrastructure” projects.

Referees

Upon Request