

Hickory Building Systems.

Overview of Prefabricated Structural System.

think™

Hickory.

Building innovation.

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Hickory Building Systems.

Prefabricated, integrated construction solutions, delivered by Australia's leading apartment builder.

Hickory Building Systems (HBS) is a patented building technology that delivers an innovative, technological alternative to the construction of high-rise projects.

HBS accelerates on-site and off-site construction programs by 30 to 50%, minimising material and energy waste, whilst maximising quality and safety.

We blend the best of manufacturing and construction technology, processes and personnel to deliver our clients a turn-key building solution.

HBS is suitable for a range of high-rise projects including:

- Apartments
- Hotels
- Student accommodation
- Hospitals & healthcare centres

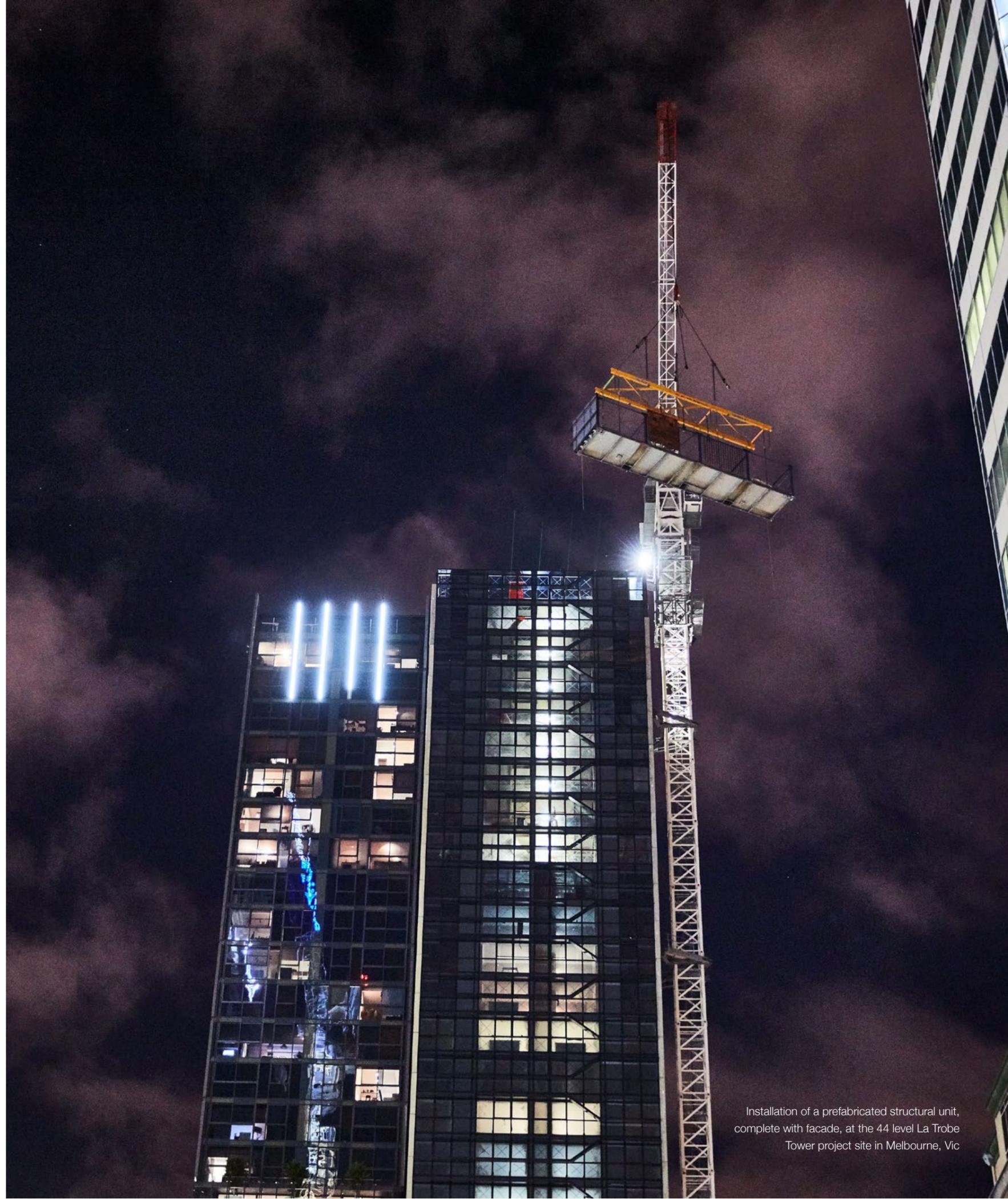
Unlike any other construction offer available on the market; HBS can build to any height or layout, and has been specified on buildings over 70 stories high.

The advantage of working with Hickory and HBS is the experience we bring to the build process and flexibility in the range of services and solutions we provide.

As an established construction company with extensive self perform capabilities and over 25 years experience in building major projects, Hickory is able to offer an end-to-end construction solution using the combined resources of our manufacturing and construction divisions.

This uniquely integrated project solution enables Hickory to deliver projects for our clients that consistently outperform on measures of time, cost, sustainability, safety and quality.

We work with leading Architects and Developers to build your building, not ours. Hickory engineer and prototype our system to suit your requirements, innovatively delivering quality projects from foundation to final completion.



Installation of a prefabricated structural unit, complete with facade, at the 44 level La Trobe Tower project site in Melbourne, Vic

How it works.

HBS is a state of the art structural system that integrates the core, shear walls, bathrooms and façade of a building into the structure which is then built ex-situ and in parallel with on-site works.

Flexibility is a key differentiator of HBS and is what sets us apart from modular builders who are restricted to short life, low build accommodation projects.

Unified Structure

By using a series of predesigned, interchangeable componentry, HBS can be scaled from low rise to high rise, and large to small aspect ratio as required - translating system flexibility into cost efficiency.

The building process begins with an engineered concrete floor, load bearing columns, integrated wet areas and a building façade that is constructed off-site in a production line environment.

The basic structural architecture has been designed to be scalable with occupancies that can span across multiple modules to generate generous floor spaces, and has the flexibility to provide almost limitless spatial layouts.

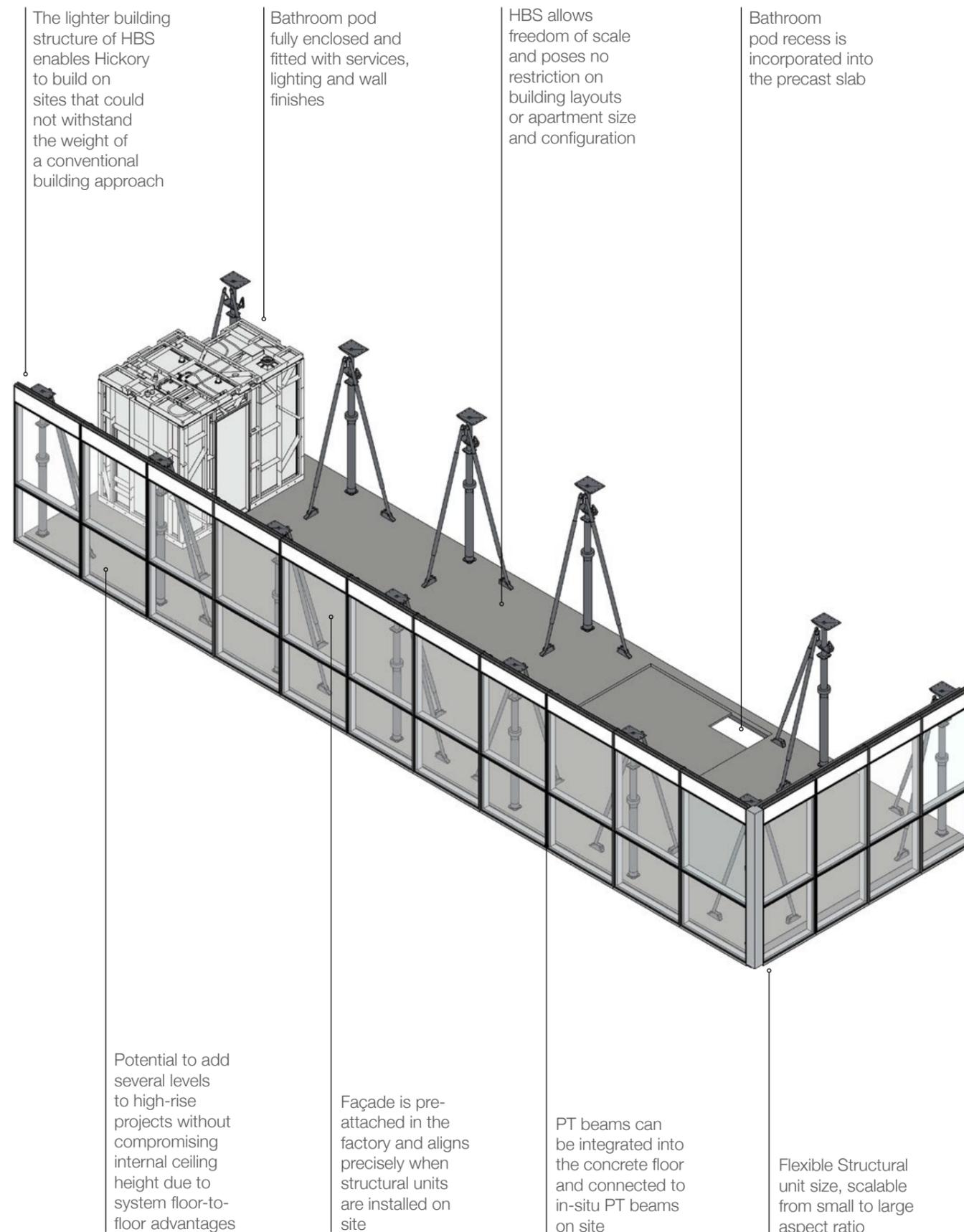
Integrated Façade

The patented HBS façade system allows the delivery of an integrated façade and structural module that is manufactured in sections and reassembled on site without compromise to the visual appearance of the building architecture.

An interlocking and sealing system has been engineered into the technology, designed to minimise onsite work. This enables the building façades to be installed in the factory and precisely set to the building datum. This approach revolutionises the conventional building model by minimising onsite material handling and achieving lock-up as the modules are locked into place.

By managing the façade procurement in conjunction with the structure, risks associated with on time façade delivery are removed from the critical path of installation at the build site, and moved to the more manageable realm of the factory shop floor.

Floor-to-floor advantages within Hickory Building Systems can often accommodate extra levels without compromising on internal ceiling heights or adding height to the overall development. This can equate to tens of millions of dollars of additional net saleable area for the project developer.



In-built advantages.

Higher Quality

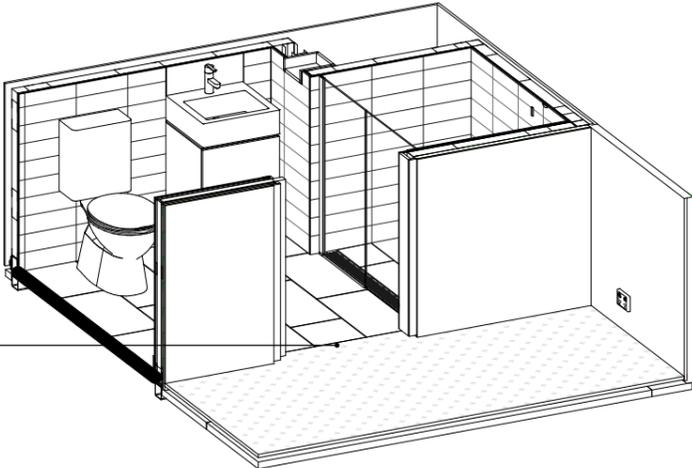
Integrating Hickory's Sync bathroom pods into the HBS structure offers numerous quality and time saving advantages.

Using bathroom pods takes up to 12 trades off the building site and into the controlled environment of our factory floor, reducing on-site fit out cycles by up to 30% and ensuring a consistent high quality throughout the project.

Sync bathroom pods are built to any specification and arrive to site fully fitted with services connections, lighting and all finishes.

And because Sync is integrated into the HBS project build up-front, bathroom set downs have already been formed into the slab, with pods simply slotting into the slab recess - leaving a flush finish between the bathroom and adjoining floor.

Built-in set downs for bathroom pods in the building slab leave a flush floor transition between bathrooms and adjoining rooms.



Bath pod set-down is built into the HBS slab for a flush floor transition



Project bathrooms within the HBS structure are completely finished and fitted in the factory then transported to site with the structural units

Faster Construction.

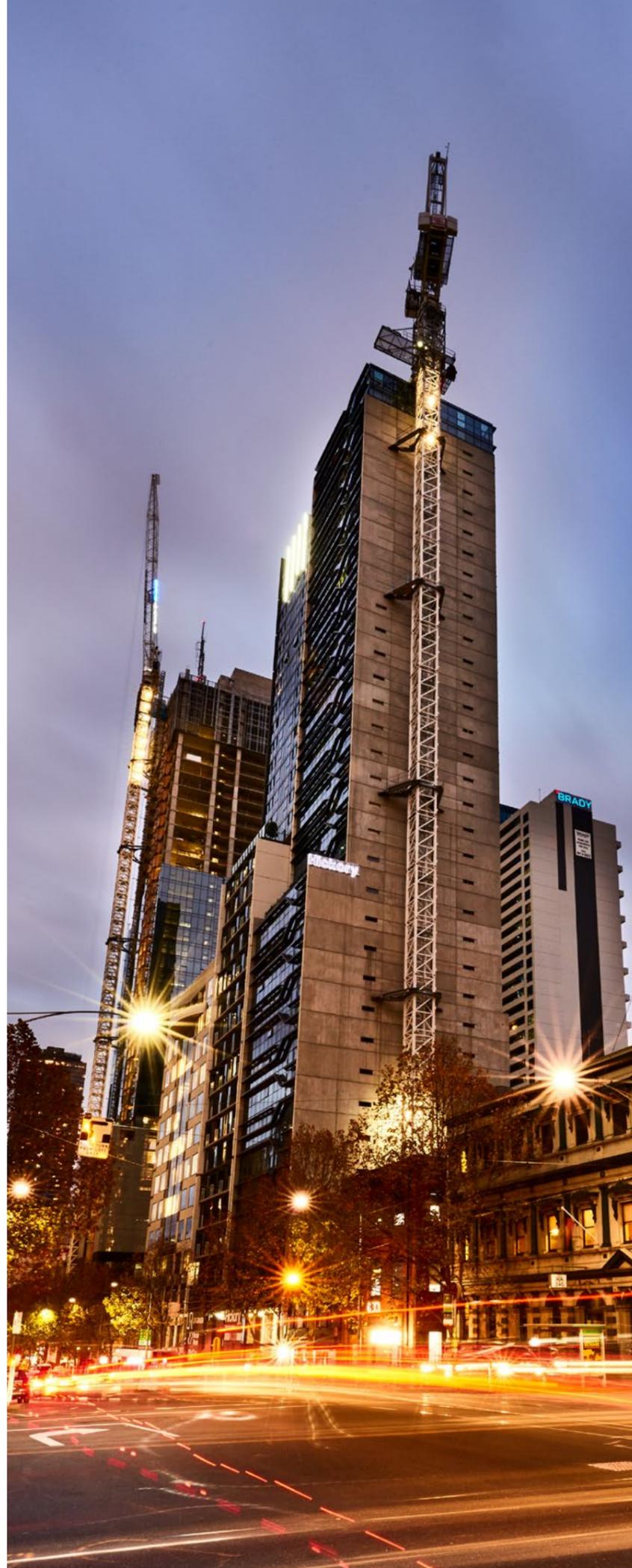
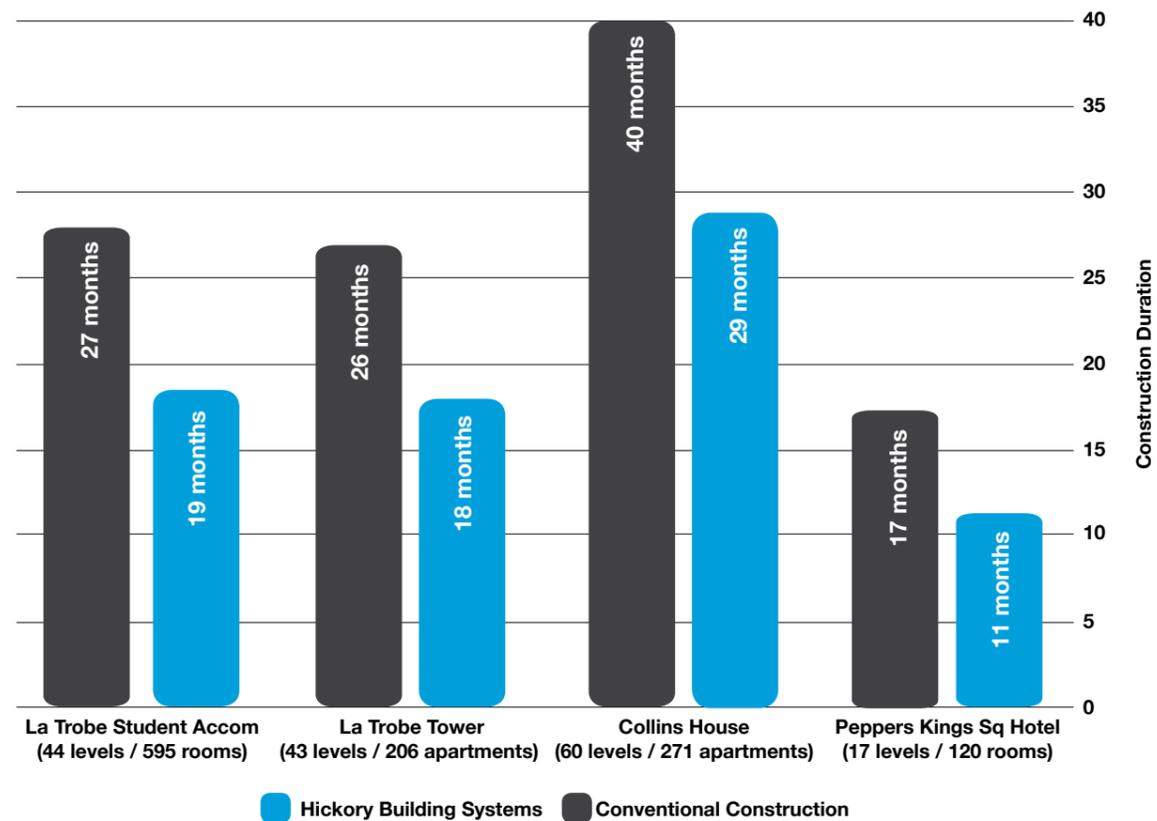
Parallel tracking for faster construction

High-rise project builds are greatly accelerated by using Hickory Building Systems, which can fast track project completion by up to 50%.

On and off site construction programmes can be accelerated with careful planning and prototyping, providing speed and certainty meeting construction timelines. While on site preparation and foundations are being laid, the structure is being fabricated to final completion off-site.

HBS enables a parallel track construction programme, reducing construction time by up to 50% compared with traditional concrete and column construction methods.

With the addition of fully finished and fitted Sync bathroom pods, the fit out cycle of HBS projects is also greatly compressed.



LA TROBE TOWER
Melbourne, VIC

Improved Safety.

Benchmarking Australian safety standards

HBS reduces the risk of falls to the workforce as the structure arrives to site with finished façades and balconies. Therefore minimal work is required on the building edge as all on-site work takes place behind the protection of the pre-installed façade.

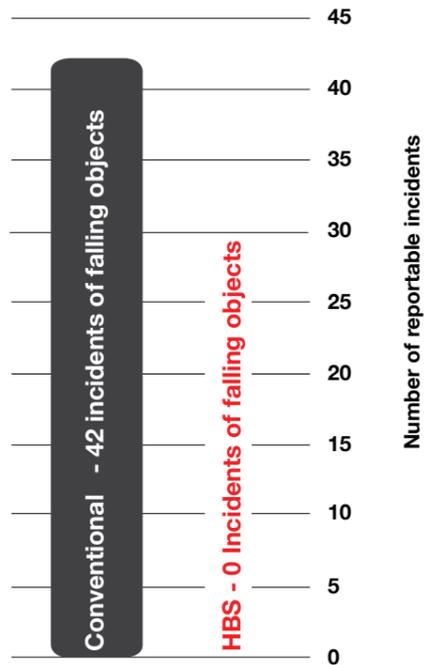
Fitting out project bathrooms in an enclosed, controlled environment also ensures that safety compliance is easily monitored and enforced. Potential hazards are more visible in a factory than on a busy conventional multi-storey construction site. Due to the controlled environment safety issues are quickly identified and resolved.

All workers undertake a detailed safety induction prior to commencing work. They are closely monitored by a full time Safety Supervisor for adherence to safety, quality and environmental controls.

Hickory Group's Safety System is certified to AS/NZS 4801:2001 Occupational Health and Safety Management System and also certified to the Office of The Federal Safety Commission OHS Accreditation Scheme.

HBS reduces the risk of objects falling from site as the structure arrives with pre-installed façades, limiting the requirement for work at height on the building edge.

The benefit of this approach is evident, with HBS projects recording 0 incidents of falling objects to date.



Falling objects reported to Worksafe (Jul 2015 - Aug 2016). Records relate to construction sites located in the City of Melbourne, City of Yarra & City of Port Phillip, Victoria.



Lowered Impact.



BATHROOM PODS

Controlled processes in our factory limit waste and provide opportunities for material recycling and reuse

Quantifiable sustainability

HBS can demonstrate improved environmental characteristics during construction compared to conventional systems, as evidenced by the following factors:

- All manufacturing is completed within a controlled environment resulting in up to 90% less waste than conventional construction methodology
- Approximately 98% of all factory-generated waste is recycled through our ISO 14001 certified waste disposal company
- Efficiencies gained via the use of moulds and computerised cutting machinery mean that materials ordering is accurate and excess waste is kept to a minimum
- Minimal work is required on site to finish and fit out project bathrooms, thereby eliminating the risk of paint and plaster washout into storm water
- Hickory's Environmental Management System is compliant with AS/NZS 14001:2004 and Eco Warranty 2010.

By placing sustainable construction at the heart of the HBS product offering, we are securing our future and providing a better alternative to site and materials repatriation.

Better community outcomes

With HBS projects finishing up to 50% faster, Hickory offers better outcomes for the local community during construction.

Not only are HBS construction programmes reduced by up to 12 months, but the intensity of work on site is also significantly diminished for neighbouring properties leading to a number of community benefits:

- Less truck deliveries and construction traffic movements during building work, lowering the impact to road users and reducing building related traffic congestion
- Less noisy work carried out on site, including all fit out taking place behind the pre-attached façade
- Shorter construction period – benefitting owners of business premises or apartments in the area
- Safer for adjoining neighbours and passersby – structural units arrive fully enclosed, eliminating the chance of falling tools or materials
- Dust levels and air pollution reduced.

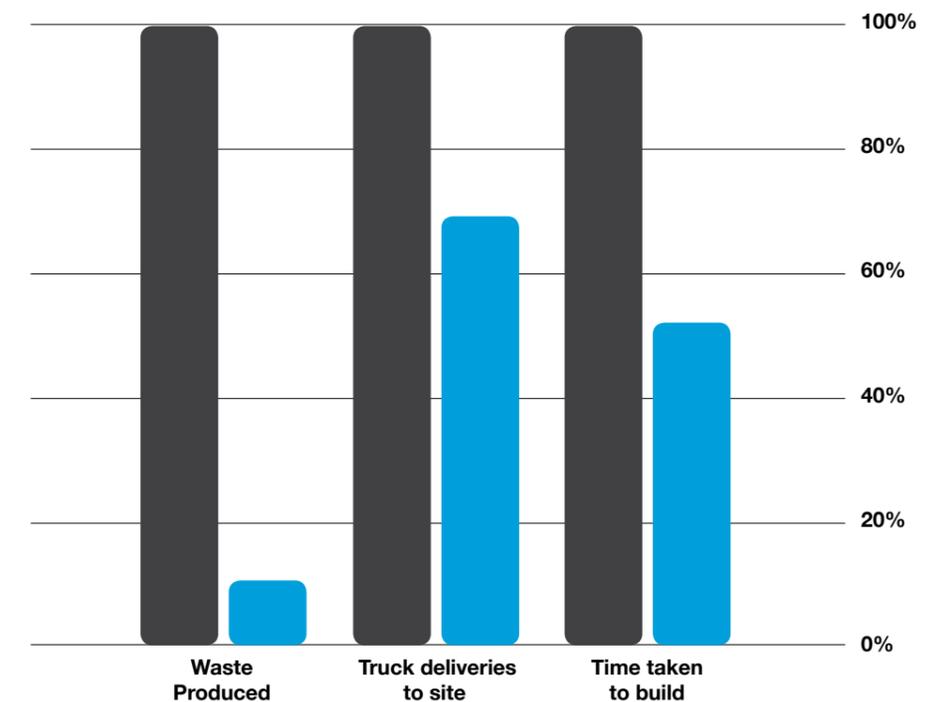
HBS dramatically reduces construction waste, noise pollution, traffic congestion and overall build time, whilst increasing public and site safety - providing better outcomes for the local community during construction.

Construction Impact Comparison

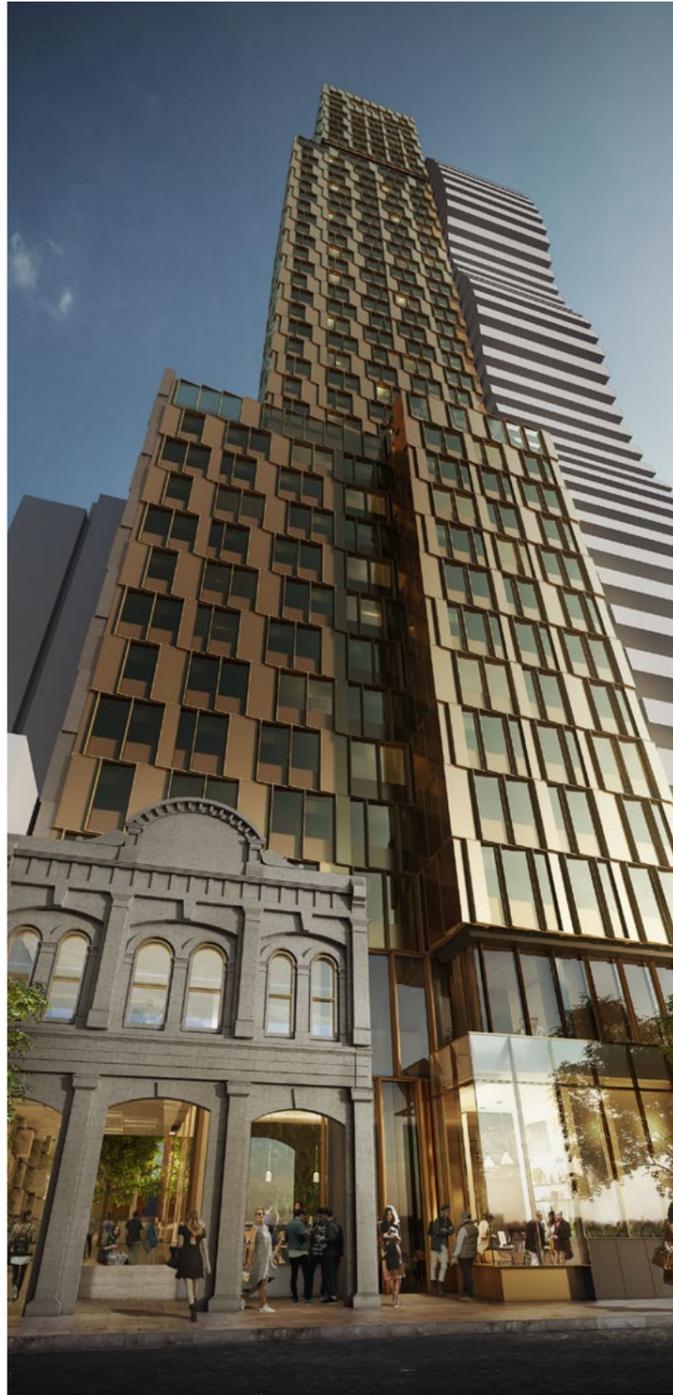
Hickory Building Systems vs Conventional Construction

- Hickory Building Systems
- Traditional Construction

Estimates based on comparison between similarly sized Hickory Conventional and Hickory Building Systems Construction Projects.



Hickory Building Systems Projects.



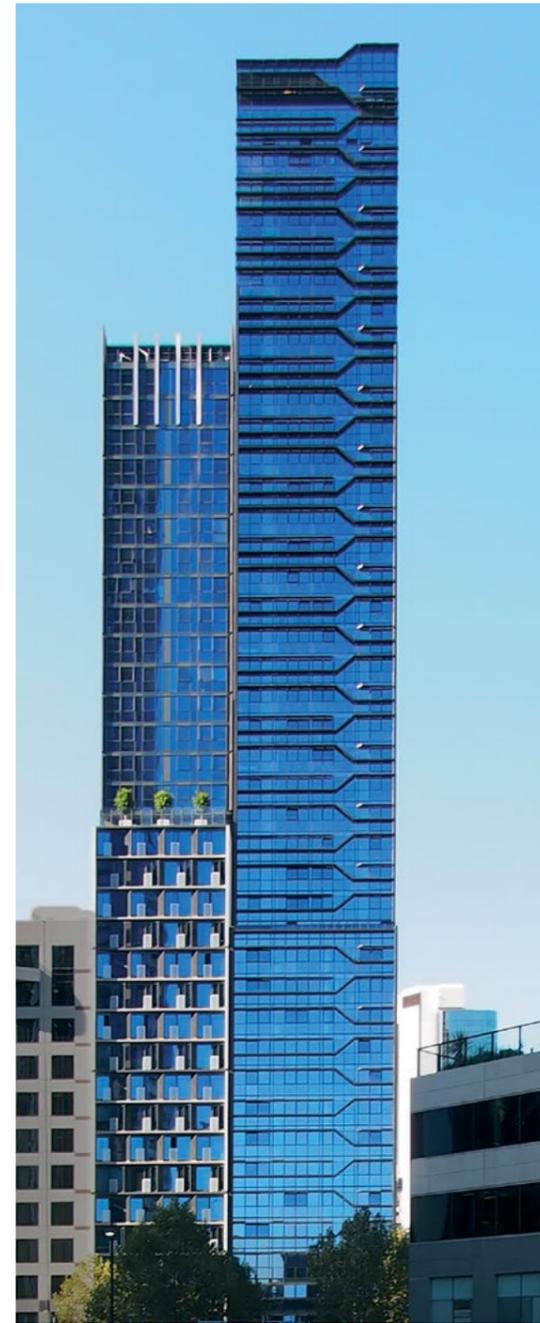
50 La Trobe Student Accommodation

44 level / 783 bed student living project in central Melbourne



Holiday Inn Express Hotel

Express build solution for 345-room / 23 level project



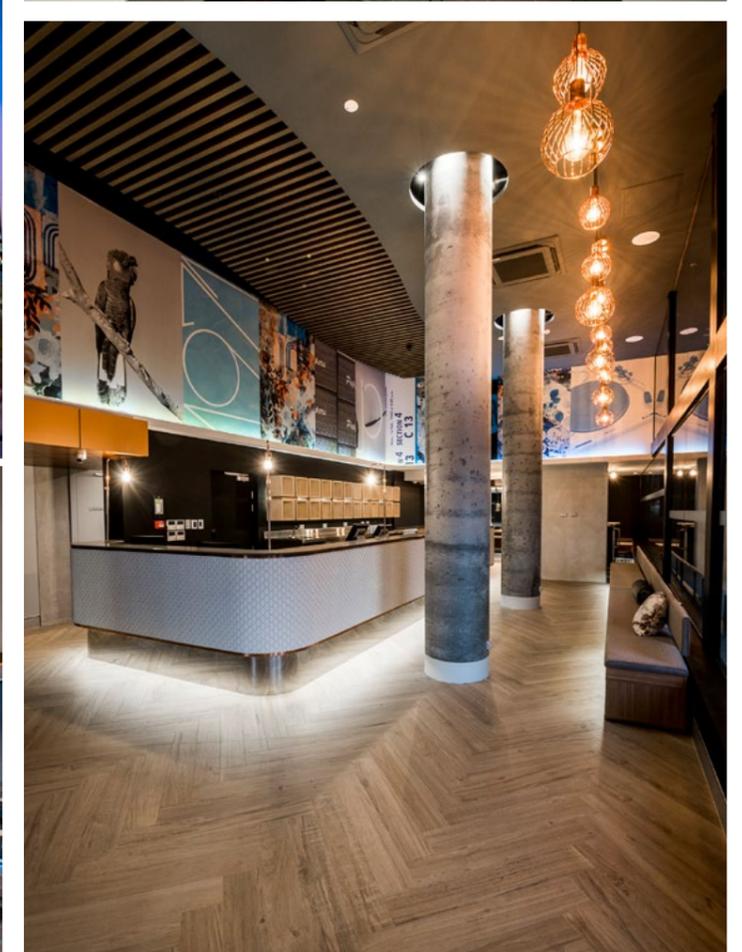
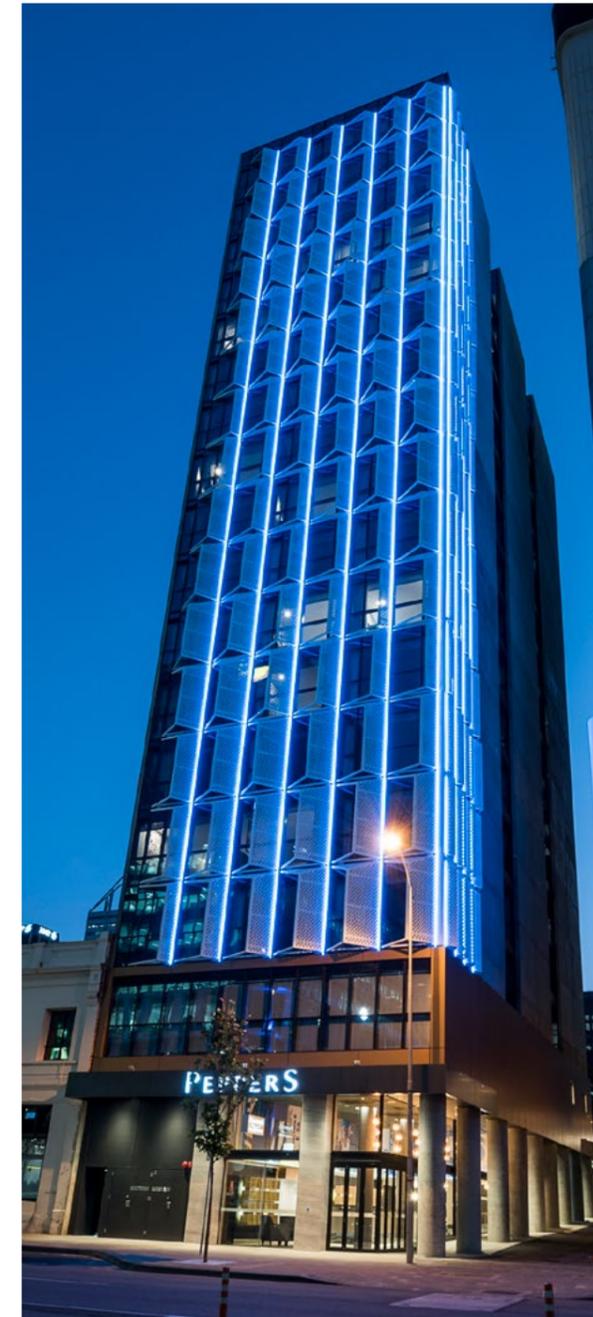
La Trobe Tower, Melbourne

43 level tower comprising 206 apartments and striking façade



Collins House, Melbourne

Slim tower project comprises 271 apartments over 60 levels



Peppers Kings Square Hotel, Perth

120 room hotel over 17 levels incorporates feature façade

Hickory.

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