



HORIZON NORTH

/WHAT IS MODULAR CONSTRUCTION?





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Modular construction is a technique that builds through multiple sections – modules – that are manufactured off-site in a temperature-controlled facility. After manufacturing is complete, the modules are transported to site, set on the foundation footprint by crane, and joined together to make one integrated building.

The technique uses the same materials as conventional construction and designs to the same codes and standards, but saves 30 to 50 per cent of the time. When finished, the structure is virtually indistinguishable from conventional construction methods.

Modular construction has been a popular technique in Europe for many years, however it is relatively new to Canada and North America. Compared to other industries, conventional construction is lagging in its ability to solve its historic challenges (waste management, cost overruns, schedule delays, etc.) with new technology.

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By manufacturing off-site in a controlled environment, developers are reaping the benefits of better quality control and a more sustainable product with an emphasis on waste reduction and a smaller construction footprint. In an industry heavily focused on cost and timelines, developers are also seeing modular construction as an approach that provides greater cost certainty and faster build timelines which mean having customers in the doors sooner and generating a quicker return on investment.



/ADVANTAGES

With the goal of meeting unique customer and project needs, Modular Construction follows a versatile model that allows for the following advantages:



Speed

With manufacturing of the modules occurring simultaneously with foundational site work, projects can be completed in as little as half the time of conventional construction, meaning residents or customers are in the door and generating a return on investment more quickly.

The off-site manufacturing also means that the issues that plague conventional construction like weather delays, material theft, and trades shortages, are minimized or reduced completely.

Technology

The controlled modular construction environment allows for significant technological advantages beyond conventional construction, and which lend well to commercial and residential needs:

Building Information Modeling (BIM)

Already a collaborative process with a mix of materials, people and systems, modular construction is ideal for improvements in engineering technology. Advanced BIM software is used to fully understand the planned space and visualize the most effective construction measures.

Improved Sound Proofing

Modular construction provides better sound proofing when compared to conventional construction by using double wall construction at the junctions between modules, and separate floor and ceiling assemblies.

Safer Construction

With a stringent, process-driven construction method that relies on industry-leading technology, modular construction is safer for workers than conventional construction.

MODULAR CONSTRUCTION SCHEDULE



SITE BUILT SCHEDULE





Sustainability

Because the bulk of construction is done off-site and indoors, modular construction is an inherently greener, more sustainable approach than conventional construction.

Less Waste

Inventory is controlled and materials are recycled and better protected from the elements.

Fewer Site Disturbances

The footprint created by site work, both in time and activity levels, is significantly smaller. The noise, dust, and traffic that are nuisances for months in traditional construction are greatly reduced.

Improved Air Quality

Materials are kept dry indoors, eliminating the potential for high levels of moisture to get trapped during construction.

Greater Flexibility for Re-Use

Depending on needs, modular buildings can be constructed as permanent or temporary structures. Where temporary, the units can be disassembled and relocated for a new use, meaning less demand for materials and minimizing energy to create a new building.

*Reference: Modular Building Institute

The potential for Modular Construction is limitless, and as North America gains ground on other parts of the world who have adopted this method as a standard, you will start seeing more industrial, commercial, and residential projects being built by this process.

Changing the way the world builds today, and in the future.

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