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New tower may signal new export industry

Innovative construction method for "The Optima" high-rise development

By **Brian Martin**

A new high-rise development set to pop out of the ground in Surrey may signal more than just another residential tower. It may mark the launching of a new export industry for British Columbia.

The Optima is a three-tower condo development that will shortly go up in Whalley. The towers are to be 21 storeys tall and in a familiar tale are already pre-selling well.

This project stands apart from the many other projects planned for the area. The Optima is pre-manufactured.

Roger Rached represents the developers behind the Optima. He describes it as a "giant Meccano set."

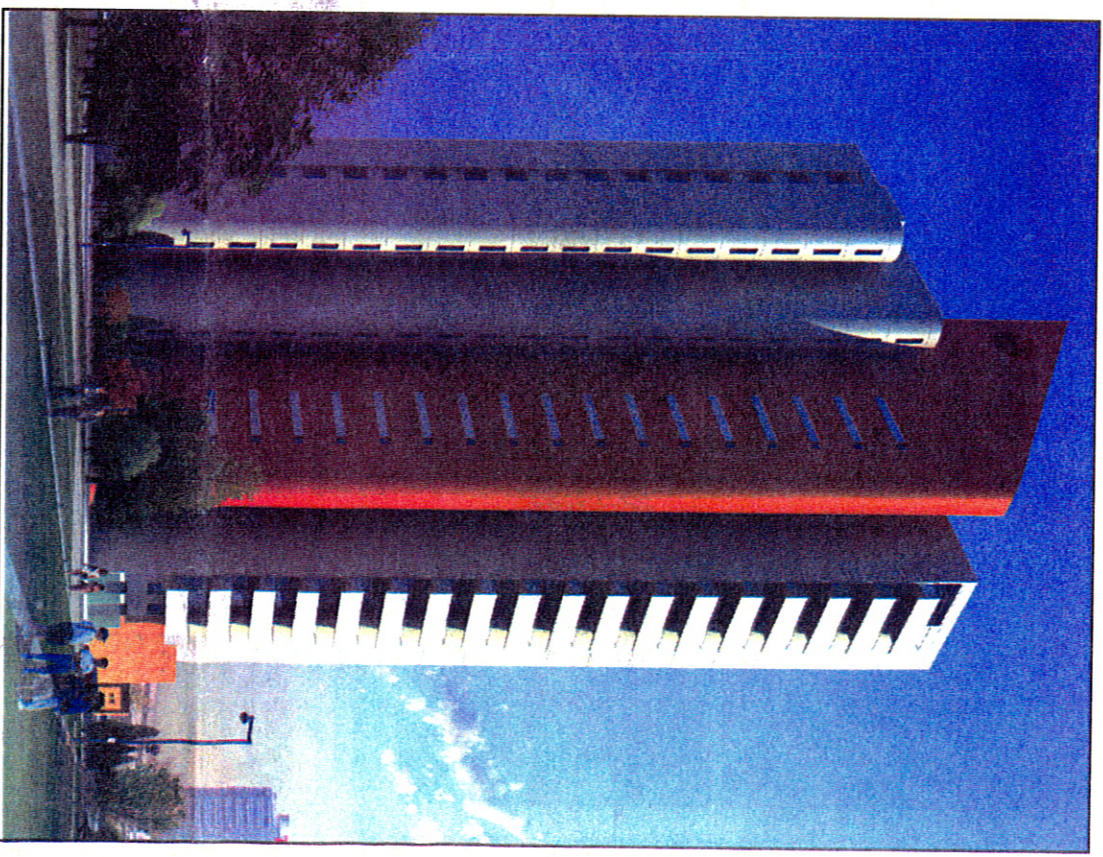
Rached is president and CEO of International Hi-Tech Industries (IHI) of Delta. IHI has spent more than a decade perfecting the system that will be used at the Optima. Both the company and the system are the brain children of Rached, his father, his brother and his sister. All four are engineers. The family is Lebanese and was forced by political unrest

to leave their home and move to North America. All have been associated with Stanford University in California where Rached's sister still lectures.

For many years Rached's father along with himself and the rest of the family have worked in construction management around the world. Collectively they have been involved in 30 to 50 projects in up to 15 countries at any one time. They have, he points out, been involved in building many high-rises in many countries – often taller than the 21-storey Optima. After settling in Canada, however, they decided to devote their money and their energy to developing the system that will result in the Optima. It has been no small commitment. The family has personally invested \$50 million. A further \$50 million has come from other private investors.

To make a very complicated story simple, the Optima is to be built using pre-manufactured steel frames that are filled with insulated high strength concrete. The system consists of a pre-formed rigid insulation layer between two high strength concrete-ribbed layers. Among other features this provides

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The Optima, a three-tower 21-storey condo complex in the Whalley area of Surrey, is being completely pre-manufactured in a factory on River Road in Delta.

Pre-fab high-rises

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outstanding sound proofing. The system also gives improved energy efficiency.

Every part of the building is made the same way – underground parking, walls, ceilings, floors. IHI utilizes computer technology to incorporate electrical and mechanical systems into the customized panels.

The panels are moved by flatbed truck to the building site. When they arrive it is a basic matter of bolting them together (ergo the Meccano set analogy). The concrete panels are created using a patented process. When finished they are so smooth and hard they resemble porcelain. They are ready to be painted, papered or whatever. There is no need for drywalling.

Not only is the drywalling bypassed, Rached convinced the building will go up fast enough to almost make you dizzy. He will, he says, put up a 21-storey tower in six weeks. This compares to around eight months for conventional construction. Furthermore, long before the erectors reach the middle of the tower, he points out, finishing can be started on the lower floors.

The cost of construction on the Optima will be reduced by about 30 per cent. This saving is effected in the unit prices of the suites at the Optima, which will start in the mid-\$140,000 range.

The Optima, Rached says, will be remarkably strong and safe. It will feature IHI's proprietary patented technology of earthquake, tornado and blast resistance.

IHI's factory on River Road in Delta is both large and impressive. It is constructed using the same system that is being employed on the Optima. The current building contains around 80,000 square feet – 50,000 of it for production. It is built on a rail line for easy shipment when required. Surrey Fraser Docks is almost next door.

Nearly every bit of equipment and every process in the plant have been designed by IHI itself and are patented. A heavy emphasis is placed on plant security. Definitely no cameras are allowed.

It is also highly computerized keeping manpower to a minimum at around 25 people. IHI has more than 70 patents in 180 countries. The firm has not been anxious to rush their product to market, says Rached, because they want to make sure that every part is "perfected" first.

Plans in the immediate future will see an additional 100,000 square feet being added to the Delta facility. There are also plans for additional assembly plants in Edmonton and overseas. The research and development functions, however, will always stay in B.C., says Rached.

The modern design of the Optima towers is by international architect Omar Take. Take is a director of IHI as well as its chief project officer. He is also a senior architect with world-renowned architects, Tange & Associate of Japan.

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