



KINGSWAY ARMS RETIREMENT HOME SCARBOROUGH, ONTARIO

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Design and Construction Team

Owner: The Rockport Group; John
Wilkinson.

Architect: V. Samuel Iser Architects.

Consulting engineer: Atkins + Van
Groll Inc.

Light steel framing supplier:
Bailey Metal Products.
T: 1-800-668-2154

Steel panel fabricator: Lido Wall
Systems Inc.

Steel panel system installer:
4 Star Drywall Ltd.



Light Steel Framing Offers Considerable Structural Savings

Kingsway Arms Retirement Home is a 6-storey, 160-unit, 9,890 m² (106,456 ft²) facility located at the corner of Eglinton and McCowan in the Scarborough area of eastern Toronto. It was constructed in 14 months using panelized light steel framing (LSF), with a stone veneer and stucco exterior. Developer-builder The Rockport Group attributes significant savings to the LSF system's versatility.

The project began in August 2003, with the initial intention being to panelize on site. However, fabricator Lido Wall Systems Inc. ended up panellizing in their Concord, Ontario facility instead. Because Consulting Engineer Raymond van Groll of Atkins + Van Groll Inc. prefers not to exceed five storeys with LSF construction, concrete was called for on the first floor. The decision to go with LSF successfully targeted reduced capital costs.

John Wilkinson, President of Rockport Construction Services Inc., says, "I like the simplicity of working with LSF and it provided considerable structural savings over cast in- place reinforced concrete." Raymond van Groll concurs, "We've worked with LSF for close to 10 years and it

represents a significant portion of our business. I've found it to be both faster and lower first cost than poured concrete or hollow slab and concrete block."

The LSF system allowed Rockport to save about 50.8 mm (2") at every demising wall. With seven suites in a row, that meant savings of 355 mm to 406 mm (14" to 16") on floor space and usable space—which for the five typical floors translates to close to 11.5% floor space savings. Jon Wilkinson also liked the fact that LSF allowed them to install windows, close off a floor, and put heat in before working on the next floor.

According to Raymond van Groll the unique aspect of the project from a construction





203 mm (8"). So we save anywhere from 102 mm to 203 mm (4" to 8") in height per floor compared to competing systems. When you're talking 5- or 6-storey buildings you enjoy significant savings on building height and facade costs."

The galvanized and Galvalume™ LSF panel system used thicknesses ranging from 1.9 mm (.075") for the second floor load-bearing walls to 1.22 mm (.048") on the top floor. The few non-load-bearing walls at the corridors were .46 mm (.018"). The roof deck comprised .76 mm (.030") steel with .91 mm (.036") trusses. The steel for the composite floor deck was 1.5 mm (.060").



standpoint is the floor system. "Actually John Wilkinson came up with the idea on an earlier condominium project. It worked so well we used it here too. We wanted to reduce impact sound floor-to-floor, and he got the idea from the approach used in commercial buildings. The result is a composite floor where concrete is poured onto a corrugated steel deck with depths ranging from 89 mm to 152 mm (3-1/2" to 6") and no joists for a total floor depth of



John Wilkinson and Rockport have since committed to using LSF on a number of other projects. As Wilkinson sums it up, "Anyone can work with LSF. Sure, there's a learning curve, but it's a short one. I wouldn't keep coming back if it didn't work for me."

An additional plus for projects like Kingsway is the environmental advantage of virtually no waste with pre-engineered components, and the fact that any excess material is 100% recyclable.



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