

UltraBond Floor System speeds up Apartment Building Construction

A composite floor system shortened construction time by three months and cut material costs, for an 11-storey, 166-condo unit apartment building in Longueuil Quebec. The system, called UltraBond, comes in cold-form sheets 609.6mm (24 inches) wide, 203mm (8") high and precut in lengths up to 10.06m (33 ft.), according to Simon Pawsey, technical sales representative with the Steelform Group of Companies.

Once assembled into floor decking and with rebar placed in the deep V-grooves, concrete is poured on the Ultra-Bond, creating a lightweight composite floor 292mm (11.5") thick. Once finished, it has a two-hour fire rating. Pawsey checks off some of the advantages of this construction technique: "UltraBond significantly reduced weight on the structure compared to a conventional slab. It reduced shoring to one row. Cost savings were a big factor, with one-third of the rebar and 50 percent less concrete than a nine-

inch slab. It saved the general contractor about three months of construction time."

The UltraBond used in the structure, including the balconies, was 1.22mm (.048") Z275 (G90) galvanized steel. The contractor used 13,066m² (140,000 sq. ft.) of UltraBond deck, weighing about 226,796 Kg (500,000 pounds). Because of the lighter weight, less shoring is required.

LIGHT STEEL FRAMING:

- G60 galvanized 1.22mm to 2.74mm (.048" to .108")
- Actual dimensions of the LSF supplied 152.4mm (6") studs
- UltraBond – Z275 (G90) galvanized 1.22mm (.048")



Axcès Saint-Charles in Longueuil, Québec, built with the UltraBond composite floor system and light steel framing. Rebar creates reinforced beams in the UltraBond composite floors, using 22mm (.048") Z275 (G90) galvanized steel.



UltraBond steel deck, rebar, mesh and concrete form a composite floor that is lighter than conventional concrete floor construction.

DESIGN AND CONSTRUCTION TEAM:

CLIENT: Habitations Trigone
STEEL BUILDING SYSTEM SUPPLIER: Steelform Group of Companies
ARCHITECT AND PROJECT MANAGER: Atelier Urban Face
STRUCTURAL ENGINEER : CPF Groupe Conseils
STEEL STUD SUPPLIER: Produits de Bâtiment Fusion
STEEL ERECTION: Les Installations Miral
BUILDER: Habitations Trigone
PHOTOGRAPHY: Simon Pawsey



UltraBond was also used to build the balcony floors.

All images courtesy:
Steelform Group

Innovative, urban
and dynamic, this
11-storey residential
tower is located
adjacent to the
terminal Longueuil
and the University
of Sherbrooke.

