

## Raw metal is a major turn-on

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THURSDAY, JULY 21, 2005  
UPDATED AT 4:07 AM EDT  
GLOBE AND MAIL UPDATE

The most compelling work of architecture in this country right now is actually a construction site. Fronting the redevelopment of the Royal Ontario Museum in downtown Toronto is a massive steel structure that is raw and mysterious and dirty. Drywall and stucco cladding have neutralized North America. Exposed steel is a major turn-on. How sweet it is to be confronted with a real, heaving body. And how very contrary. Our buildings are most often placed under hygienic wraps, the naughty bits furtively imbedded within concrete or covered under cladding -- an act of sanitation that recalls the catchy refrain handed down by the Puritans, "I was conceived in Sin & Born in iniquity," doled out like gruel in the *New England Primer* in 1646. Thank you for that. I'll have another serving of steel.

The recipe for steel isn't pretty: about one part rusted cars to two parts coal and iron ore. There is nothing more macho than steel, nothing more frightening than people walking along beams 100 feet above the ground. And we're uncomfortable with the harsh terms ascribed to the workers -- there's the "raising gang," a team headed by a foreman and four erectors who wrestle steel beams hanging from cranes into submission, and the "bolting detail crew," whom we'd like to think of as team players equipped with laptops and BlackBerries rather than men wielding steel sledgehammers.

Dark, rough to the touch, heavy enough to crush a man, steel is rarely left exposed. It's easy to figure out why: It might upset our urbane sensibilities.

Some of the steel at the ROM comes from Brazil, but most of it comes from the United States in factories that are dirty and hot.

Walters Inc., the Hamilton-based steel erectors who have taken a stick drawing from architects and engineers and translated it into a three-dimensional structure with step-by-step instructions for assembly, may have worked on Regeneration Hall at the Canadian War Museum and the Ontario College of Art & Design, but they also build large industrial complexes, including scrubbers for American coal-generated power stations.

Most often, steel is mixed up in a class thing: Exposed steel is the building material of choice for blue-collar labourers, best hidden from city professionals. As for the ironworkers responsible for erecting the ROM's Michael Lee-Chin Crystal, they earn about \$30 an hour. They commuted to the job from places as far away as Niagara Falls. Five of the 30-member team are Mohawks. None of them can afford to live in Toronto.

While the workers are tough men with big forearms, they are given to moments of poetry. "Steel is extremely honest," says Brian Penny, site superintendent of Walters. "To me it has far more appeal than drywall. Drywall you can see anywhere." During the year that it took to raise up the structure, the workers started to feel the steel come alive. One enormous face in the shape of an X wears bolts like jewellery on a giant. They named some of the most extraordinary faces -- the Owl's Head and the Pinnacle -- with steel arranged at crazy angles from the ground.

For Daniel Libeskind, the design architect of the \$211-million Renaissance ROM expansion project in

joint venture with Bregman + Hamann Architects, exposed steel presents certain dangers. For one thing, in its mass, weight and rigidity, steel belongs to the physical world. Libeskind's interest is in abstract space. To him, the structural steel is not the body, it's a skeleton. Bury the thing. It's already served a purpose.

So, in the final ROM scheme, none of the steel will be left exposed. All of it will be disguised behind massive amounts of drywall or an anodized aluminum roof. There's too much to distract an audience looking upon an integrated truss system whereby 3,000 pieces of steel (each weighing about three tons) have been miraculously joined together. An enormous bird's beak in steel skims the 19th-century Darling & Pearson original west wing of the ROM, urging us to look upon the Royal Conservatory of Music or travel down Philosopher's Walk through the University of Toronto. Not one piece stands in a perfect vertical line. Chaos and disorder have been bolted together. If this was Russia 100 years ago, the structure might help to trigger a revolution.

Libeskind's dedication is in wowing us with multifaceted towers and catwalks that distort the scale of a building and make us feel overwhelmed by huge, disorienting spaces. The Holocaust Tower -- a dark, unheated, tomb-like space -- at Libeskind's Jewish Museum in Berlin has the power to make you feel emotionally crippled. For Toronto, backed by the intelligent engineering of Halsall Associates, Libeskind is delivering the Spirit House, a towering, gyrating central void that begins within a basement exhibition space and rises up several storeys from the main entrance court. Libeskind wants to control the way that we think, and, ultimately, how we behave. Thoughts -- whether they be exhilarating or sanitized -- are easier to contain within drywall.

A restrictive fire code is often to blame for the architect's penchant for covering up steel. The truth is that a steel structure painted in tumescent paint meets the code. What's more, the strategy of wrap and hide -- the dishonesty of contemporary architecture -- is a concept that has grown tiresome for certain architects operating around the world. The visionary architect Renzo Piano, with Fox & Fowle Architects, is designing a 52-storey tower as an exposed steel structure for The New York Times headquarters. The structural frame will be celebrated for its muscle and lightness; a steel storefront will be a feature on the ground floor.

At the ROM, the last structural steel beam went in last week at the museum's topping-off ceremony. The iron workers have gone home. Cherish this moment at the ROM. Visit it like public art. The honesty of the steel is excruciating. It won't be long before the concrete is poured on all of the floors, the steel is sprayed with fire-proofing and the drywall is banged into place. The roof of anodized aluminum functions mostly as skin. The real roof that does the hard work of managing Toronto's weather is buried underneath, tucked away from public view. That's another manoeuvre meant to save us from the reality of the Canadian winter.

Walter Koppelaar, president of Walters Inc., is carrying on a steel-contracting business that his father started in the 1950s as a Dutch immigrant to Canada. His first jobs were doing fire escapes and ornamental ironwork.

Knowing that the steel will be covered up over the next year, Koppelaar says, with regret in his voice, that the museum structure has something in common with his father's first works in steel: "Both are ornamental."

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