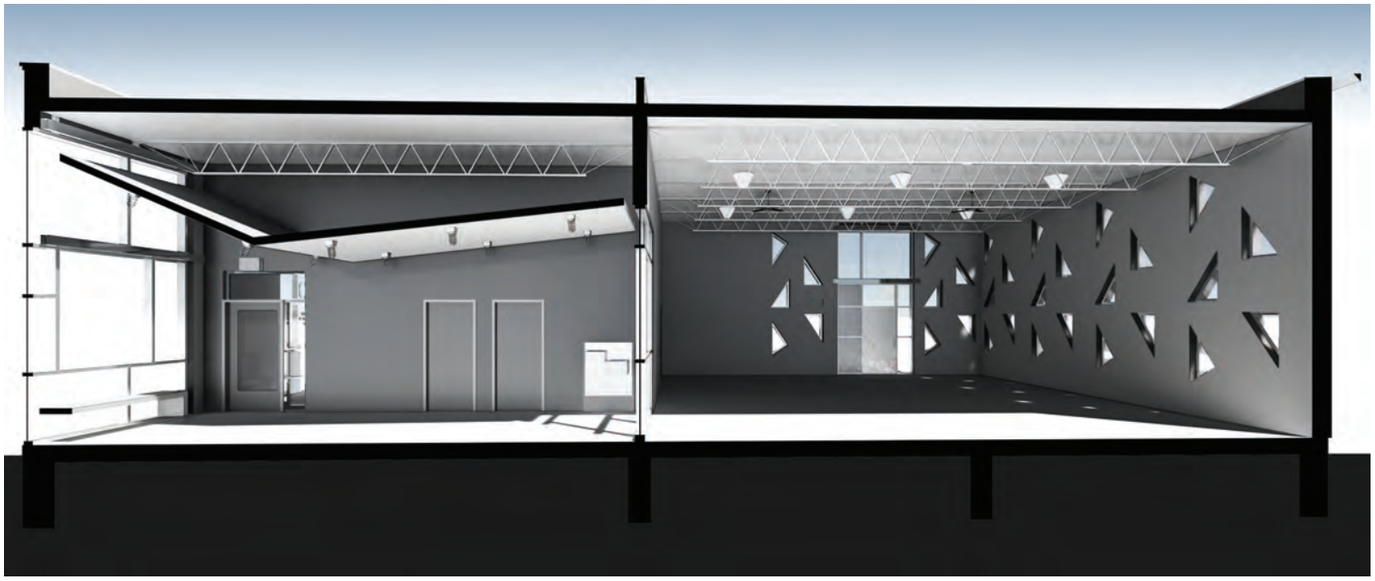
WINNIPEG PREFAB

IN LOW BUDGET, HIGH INNOVATION WINNIPEG, PREMANUFACTURED BUILDING PANELS ARE FINDING NEW AESTHETIC EXPRESSION ON THE SKIN OF RECENT DOWNTOWN STRUCTURES.

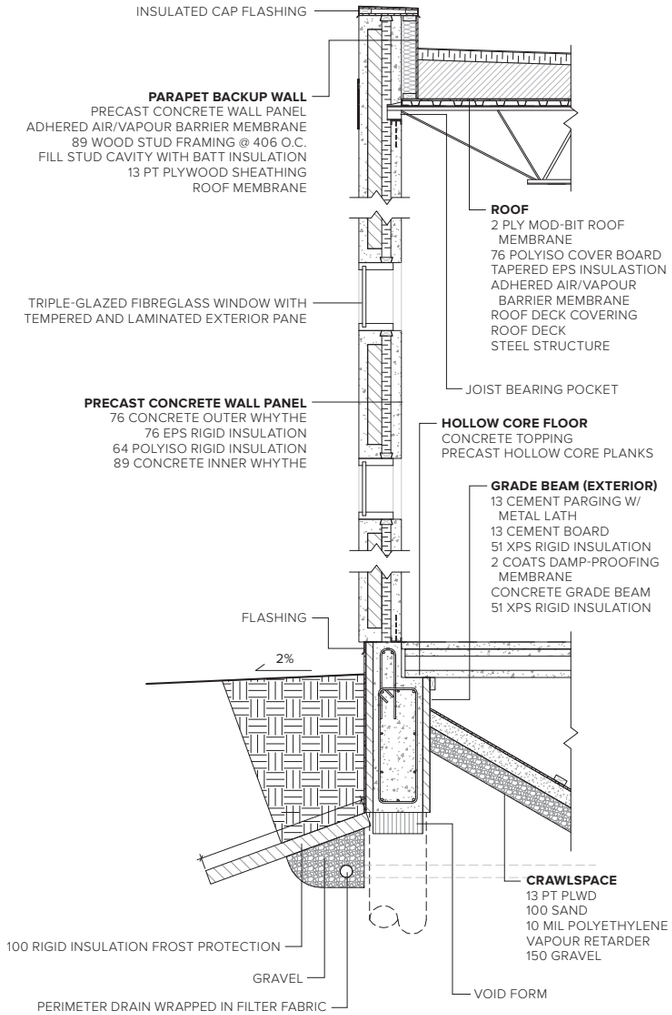
TEXT Jeffrey Thorsteinson
PHOTOS Jacqueline Young, unless otherwise noted

ABOVE, TOP TO BOTTOM Precast insulated concrete panels are used to create a lively, lantern-like façade on BridgmanCollaborative Architecture's Mayfair Recreation Centre in Winnipeg; inside, the windows animate the gymnasium and provide views of the adjacent grove of trees.

Architecture is shaped by its materials. As Marshall McLuhan put it, medium and message are inseparable. Nearly a century ago, Modernist architects became energized by the possibilities of steel, glass and concrete as a means to achieve aspirational goals: efficiency, modern-living,



MAYFAIR RECREATION CENTRE SECTION



MAYFAIR RECREATION CENTRE DETAIL

an embrace of the future. Today, architects are turning to new industrial materials for new aims: sustainability, constructability and cost-effectiveness. This is as true in Winnipeg, McLuhan's hometown, as anywhere else. Here, a diversity of small firms and specific cultural and economic demands has fostered an abundance of material experimentation.

The Mayfair Recreation Centre, by BridgmanCollaborative Architecture, is one result of this experimentation. Nestled in a stand of well-established elms to the side of busy River Avenue, the Centre strikes an engaging balance of idiosyncrasy, monumentality, and harmony with its setting. Surprisingly, this compelling mix stems largely from the building's usually prosaic enclosure material: precast concrete insulated sandwich panels, normally used in big-box and industrial construction. Here, the utilitarian panels are imaginatively reconfigured at an intimate scale. The result is a low-cost, easy-to-construct, and durable solution that delights users and passersby alike.

As architect Wins Bridgman, MRAIC says, "This is often the place we find ourselves in—where our clients' need for space outstrips their budget." To resolve this dilemma, the designers zeroed in on the sandwich panels for their affordability and the simplified construction systems entailed. While the material cost of the panels is slightly more expensive than standard wood-frame construction, reduced construction time and streamlined detailing produced strong value. The prefabricated modules also protected the site's elm trees—lowered in place by crane, the concrete slabs became the unlikely saviours of the urban canopy.

The Mayfair Centre brings a novel approach to the aesthetic possibilities of sandwich panels. The building's signature gesture—an energetic array of triangular windows—renders the panels playful and permeable, while creating a neighbourhood icon. At night, a lantern-like effect reinforces connections between interior and exterior. It's a contrast to the sandwich panels' typical manifestation, repeated relentlessly across exurban warehouses. Rendered distinctive through eye-catching and poetic detail, the material's replicability opens a new avenue for expression. At this small scale, precast concrete's inherent weight likewise becomes an attribute, offering a touch of grandeur—what Bridgman calls "the freshness of a big gesture."

While concrete has been criticized for its contribution to global CO_2-levels, Bridgman argues that its resilience surpasses that offered by standard construction methods. "We want buildings to last a hundred years,"

ABOVE, CLOCKWISE FROM TOP Insulated concrete panels were also used for BridgmanCollaborative's Mothering Project, an addition that bridges between an existing clinic and nursery; the addition includes infant care spaces that enable parents to develop skills alongside early childhood educators; the envelope gives the Mothering Project a distinct, yet discreet visual identity; openings include child-height windows, while the largely solid façade protects the privacy of clients.

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he says. "If a building can't weather, it's not a building–it's a fabrication-for-a-while." The choice of concrete contributes to reduced long-term maintenance costs, an important factor for the firm's non-profit clients.

A similar set of needs recently led BridgmanCollaborative to make use of structural concrete panels for a more intimate facility: an addition to the Mount Carmel Clinic Mothering Project. Providing vulnerable mothers with the services needed to ensure healthy outcomes, the new space includes infant care and early childhood education areas, as well as a room for spiritual reflection. As at Mayfair, the Mothering Project's sandwich panels serve as both a structural and symbolic anchor. Inventive window placement—a dynamic pattern of dancing squares—creates a vivid tableau that connects with users of varying ages (and heights). Smaller glazed areas provide opportunities for peek-a-boo that protect the privacy of users, while larger glazed sections link between circulation spaces and outdoor play areas. Of the potential for sandwich panels, Bridgman says: "It's an exciting material, a serious building material that is now creating serious architecture."

A similar rethinking of industrial materials characterizes the University of Winnipeg's Buhler Centre. Designed by a collaborative of three firms—DIN Projects, PSA Studio, and David Penner Architect—the building is likewise a hybrid. It's part art gallery and part university facility, with a well-loved café on its ground floor, set in an Edward Hopper-like prow. Standing on Portage Avenue, a commercial thoroughfare, the Buhler Centre is the little neighbour to Gustavo da Roza's Winnipeg Art Gallery. Where da Roza chose a majestic expression, the stripped-down Buhler Centre took an approach more akin to bricolage, echoing something of the spirit of the well-known army surplus emporium it replaced.

The Buhler Centre was created through a partnership between Plug In ICA, an artist-run centre founded in 1972, and the increasingly urban-oriented University of Winnipeg. From the beginning, the budget was tight—it was ultimately constructed for $210 per square foot. Rather than shrinking from this challenge, the architects embraced it.

Part of the solution was to highlight the raw materials employed. Chief among these are insulated metal freezer panels (IMPs), normally used for cold-storage warehouses and food processing facilities. The panels

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OPPOSITE TOP Insulated metal freezer panels, normally used for cold storage warehouses, were integral to the façade of the Buhler Centre in downtown Winnipeg. **OPPOSITE BOTTOM** A custom pearlescent finish reflects ambient light. **ABOVE** The building occupies a triangular site down the road from the Winnipeg Art Gallery. **RIGHT** Aluminum tabs, finished with street sign paint, added dimension to the industrial-inspired façade.

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offered an innovative way of reducing costs while lending a desired directness to the envelope. The choice also helped in meeting an aggressive construction timeline of just under ten months, during which time a fourth floor was added to the program. Says Neil Minuk, one of the architects: "We got super-excited by the IMPs. We saw the building as raw, not hiding what it was. We largely took really simple things and tried to elevate them and accept them."

The effect is beguiling, as well as frank. A custom pearlescent finish on the rippled panels reflects the ever-changing prairie light, as well as the flicker of traffic lights from the adjacent streets. The finish also recalls crystalline snow. "We were consciously looking at creating a winter building for a winter city," says architect David Penner, FRAIC. Further intrigue is added by a matrix of aluminum tabs with a shimming street-sign finish, creating an ever-shifting rhythm of shadows.

According to Minuk, the building's white cladding blurs the relationship between public and private space. Combining this finish with compositional moves such as a portal that is both a shortcut and display space, the building becomes "a background for the actions that happen within it, which we tried to carefully compose, edit, and frame."

New materials mean new possibilities. Reimagined in urban settings, industrial materials can shine while solving pragmatic needs. Says Bridgman: "By experimenting in working from cost, insulation value, speed of construction, and aesthetics, we're creating some really interesting stuff." Modern industrial components need not be relegated to the realm of the banal—like steel and glass, they may offer fresh sources of beauty. ◖▲

Jeffrey Thorsteinson is an architectural historian, researcher and writer based in Winnipeg.

PROJECT MAYFAIR RECREATION CENTRE, WINNIPEG, MANITOBA | **ARCHITECT** BRIDGMANCOLLABORATIVE ARCHITECTURE | **CLIENT** THE CITY OF WINNIPEG | **ARCHITECT TEAM** WINS BRIDGMAN, MARCELLA POIRIER, HENRY TUFTS, ADAM NOLETTE, KC MCCORMICK, GRANT LABOSSIERE | **STRUCTURAL/MECHANICAL/ELECTRICAL** TOWER ENGINEERING | **CIVIL** MEC CONSULTING | **LANDSCAPE** HTFC PLANNING & DESIGN | **CONTRACTOR** GATEWAY CONSTRUCTION & ENGINEERING | **PRECAST** HOMENKO BUILDERS | **AREA** 3,500 FT^2 | **BUDGET** $1.5 M | **COMPLETION** JUNE 2014

PROJECT MOTHERING PROJECT: MANITO IKEW KAGIIKWE, WINNIPEG, MANITOBA | **ARCHITECT** BRIDGMANCOLLABORATIVE ARCHITECTURE | **CLIENT** MOUNT CARMEL CLINIC | **ARCHITECT TEAM** WINS BRIDGMAN, MARCELLA POIRIER, ROBERT GARVEY, HENRY TUFTS, ADAM NOLETTE, IAN SUNABACKA | **STRUCTURAL** TOTAL PROJECT MANAGEMENT | **MECHANICAL** DJK MECHANICAL ENGINEERING CONSULTING | **ELECTRICAL** IBASA ENTERPRISES | **CONTRACTOR** GATEWAY CONSTRUCTION & ENGINEERING | **PRECAST** HOMENKO BUILDERS | **AREA** 3,150 FT^2 (NEW) AND 3,375 FT^2 (RENOVATION) | **BUDGET** $1.8 M | **COMPLETION** MAY 2016

PROJECT BUHLER CENTRE, WINNIPEG, MANITOBA | **ARCHITECT** DPA+PSA+DIN COLLECTIVE | **CLIENT** UNIVERSITY OF WINNIPEG AND PLUGIN ICA IN JOINT VENTURE | **ARCHITECT TEAM** MATT BAKER, PAULO CASTILLO, ANDREW LEWTHWAITE, REBECCA LOEWEN, NEIL MINUK, DAVID PENNER, MATTHEW PILLER, SEAN RADFORD, PETER SAMPSON, LIANE VANESS, CHRIS WIEBE | **STRUCTURAL** WOLFROM ENGINEERING | **MECHANICAL/ELECTRICAL** XTOWER ENGINEERING | **LANDSCAPE** DPA+PSA+DIN COLLECTIVE | **INTERIORS** DPA+PSA+DIN COLLECTIVE | **CONTRACTOR** MANSHIELD CONSTRUCTION | **AREA** 50,000 FT^2 | **BUDGET** $11.6 M | **COMPLETION** 2011