

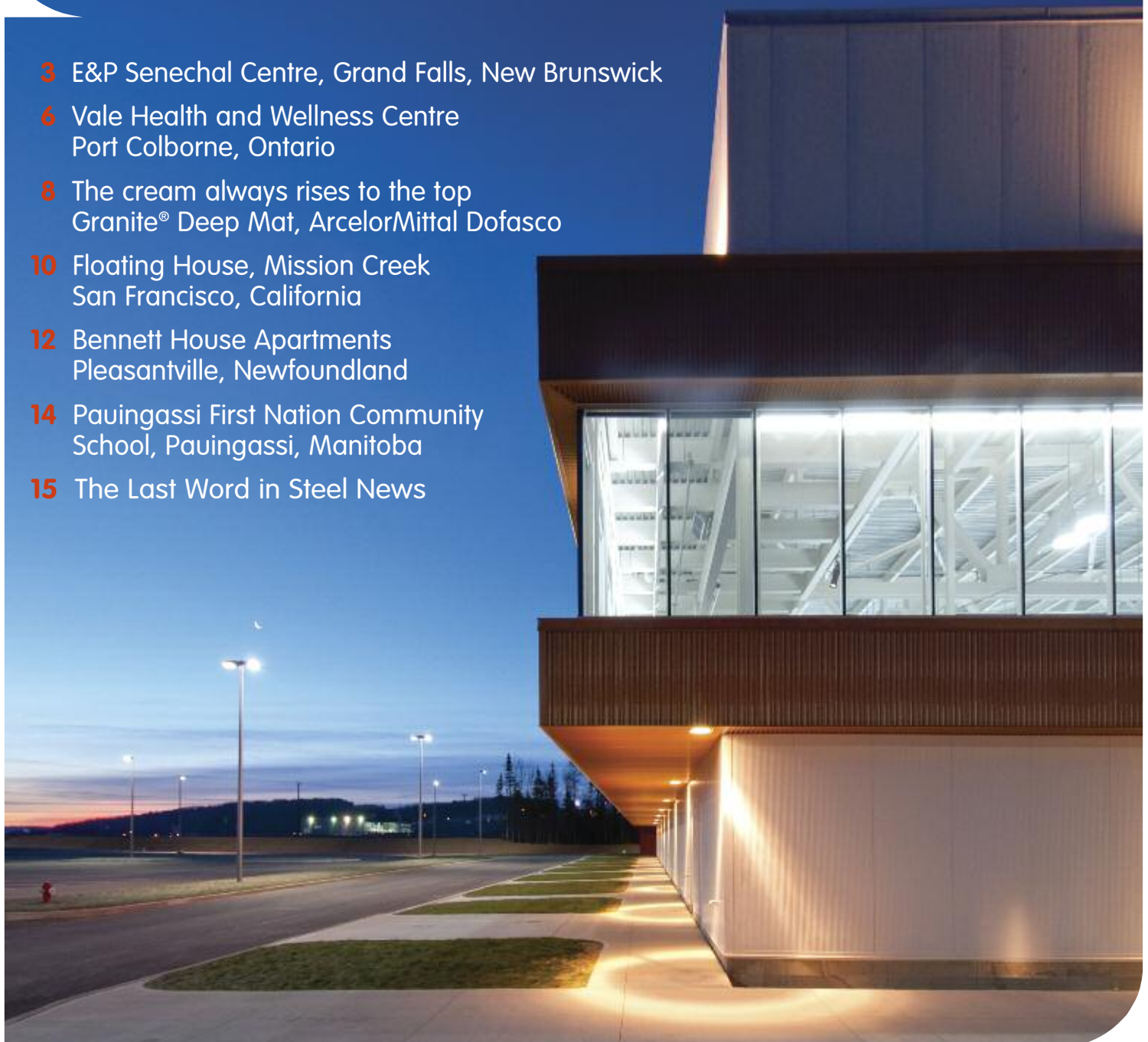


ArcelorMittal

# steel design

SPRING 2014 | VOLUME 46 | NO. 1

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## PROJECT SUBMISSIONS

Do you have a project using sheet steel that you would like to see in *Steel Design*? The editor welcomes submissions of completed buildings—commercial, institutional, industrial, recreational and residential—using components made from steel, including cladding, steel decking, light steel framing, steel roofing, steel doors, steel ceiling systems and steel building systems.

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## 3 E&amp;P Senechal Centre, Grand Falls, New Brunswick

"Poetry in motion" aptly describes the aesthetically successful architecture of the E. & P. Senechal Centre in Grand Falls. The concept of movement and activity is evident in the building's design which earned Murdock & Boyd Architects of Halifax the Lieutenant Governor's Award of Excellence as the best designed building in New Brunswick in 2008-2011.

## 6 Vale Health and Wellness Centre, Port Colborne, Ontario

This building features sloped sidewalls, skewed end walls and the primary exterior cladding element consists of sheet steel panels. "All roof and wall cladding is prepainted Galvalume AZ150, coloured QC18783 Bright White. "Steel was chosen due to its economy, ease and speed of erection," emphasizes Robert Allen.



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## 8 The cream always rises to the top

Granite® Deep Mat is ArcelorMittal Dofasco (AMD's) newest paint system developed primarily for roofing. Part of AMD's 'Nature' collection, Granite Deep Mat is an organic coating free of hexavalent chromium and heavy metals applied to a thickness of 35 or 40 microns, normally on AZM150 Galvalume™ steel.

## 10 Floating House Mission Creek, San Francisco, California

Floating houses are designed to sit on water instead of land. These unusual homes are quite common in the San Francisco Bay area, where entire neighbourhoods are dedicated to them. This particular house is located in Mission Creek, San Francisco.



10

## 12 Bennett House Apartments, Pleasantville, Newfoundland

"We wanted to do a non-combustible building. We went with steel from the very beginning. Because we are four stories high, steel was beneficial for spacing and the pricing seemed good," says Ashley Millar, architectural technologist with Studio Works International Inc.



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## 14 Pauingassi First Nation Community K4 to Grade 9 School, Pauingassi, MB

The Omiishosh Memorial School is the result of a collaborative effort involving the architects, community meetings and workshops with teaching staff. In remote first nation communities a



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school is ideally much more than a bunch of classrooms where kids go to learn. It incorporates after-hours community use including activities as disparate as exercising and mourning.



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## 15 The Last Word in Steel News

- Tacoma Recovery and Transfer Centre, Tacoma, Washington
- Residence Marcadet, Paris, France
- China Executive Leadership Academy, Shanghai.

"Poetry in motion" aptly describes the aesthetically successful architecture of the E. & P. S  n  chal Centre in Grand Falls, New Brunswick. The concept of movement and activity is evident in the building's design which earned Murdock & Boyd Architects of Halifax the Lieutenant Governor's Award of Excellence as the best designed building in New Brunswick in 2008 – 2011. The innovative 6,410m<sup>2</sup> (69,000 sq. ft.) state-of-the-art recreation and conference complex has a seating capacity of 1,100.

# This facility is recognized for its bright, airy layout and its energy efficiency



ArcelorMittal

transforming tomorrow



The use of steel in the facility not only presented wonderful colour and textural possibilities, but its durability helped to solve several design challenges.

The centre offers a range of community and recreational facilities including an upper level walking track circling the lower level ice surface and corresponding fitness and conference rooms.

The building is visually appealing. "Both internal and external to the building, the horizontal and vertical movement elements are highlighted with the use of colour, pattern, texture and materials," says Malcolm Boyd. "The fitness centre and conference rooms were designed to open up to adjacent spaces, allowing the facility to interact as one space but also permitting the facility to have multiple separate activities occurring simultaneously."

The use of steel in the facility not only presented wonderful colour and textural possibilities, its durability helped solve several design challenges. "In a facility that maintains ice during warm summer months,

the performance of the building envelope is critical," says Boyd. "The 'warm' side of the insulation varies depending on the season. The insulated metal wall panels provided a great solution. There is no air present in the dew point zone, therefore no condensation within the wall assembly is possible. The steel on both sides of the sandwiched insulation acts as a variable vapour barrier."

There are 2,632m<sup>2</sup> (28,331 sq. ft.) of 7/8" corrugated, .76mm (.0299") prepainted galvanized wall cladding, supplied by Vicwest, used on the exterior and on some interior walls. As well, 743m<sup>2</sup> (8,000 sq. ft.) of .45mm (.0179") prepainted galvanized insulated steel panels, with a wall thickness of 76.2mm (3"), coloured QC7619 Imperial White, was used on the exterior wall of the ice portion of the facility.

Prepainted corrugated steel cladding was used on the inside walls along a perimeter walking track to act as a durable/vandal resistant surface. Red corrugated siding was also used internally in order to accentuate the vertical circulation within the building, i.e. elevators and stair shafts. The roof is a perforated steel deck, topped by a modified Bituminous Membrane System.



The building is visually appealing. "Both internally and externally, the horizontal and vertical movement elements are highlighted with the use of colour, pattern, texture and materials," says Malcolm Boyd.

Jurors noted the centre's clarity, simplicity and well-proportioned spaces, reinforced by a simple, but effective playful colour scheme.

#### DESIGN AND CONSTRUCTION TEAM

CLIENT: Town of Grand Falls, New Brunswick

ARCHITECT: Murdock & Boyd Architects 506-646-9200

CONTRACTOR: Marco Maritimes Ltd. 506-854-5600

STEEL CLADDING SUPPLIER:  
Vicwest Atlantic Region, Moncton 506-857-0057

STEEL CLADDING INSTALLER: Flynn Canada  
Dieppe, NB 506-855-3340 Dartmouth, NS 902-468-8313

PHOTOGRAPHER: Murdock and Boyd Architects

#### PREPAINED GALVANIZED WALL CLADDING

QC16080 WeatherX Bright Red	805m <sup>2</sup> (8,660 sq. ft.) profile steel panels
QC16068 WeatherX Black	856m <sup>2</sup> (9,216 sq. ft.) profile steel panels
QC3234 Metallic Copper	717m <sup>2</sup> (7,720 sq. ft.) profile steel panels
QC2624 Metallic Silver	254m <sup>2</sup> (2,735 sq. ft.) profile steel panels

helped solve several design challenges. "In a facility that maintains ice during warm summer months,







The Port Colborne Vale Health and Wellness Centre is an expression of artistic design made possible by the use of steel as its main component. A custom-designed, pre-engineered steel building, VALE, as it is known, is a 13,000m<sup>2</sup> (145,000 sq. ft.) multi-use facility that includes two NHL size rinks, a walking/jogging track for all season use, six outdoor bocce courts and, through partnership with the YMCA of Niagara, an aquatic centre with a 25m (82 ft.) lap pool, leisure pool, gymnasium and fitness area.

## Steel Building System meets unique design requirements

The Port Colborne Vale Health and Wellness Centre is an expression of artistic design made possible by the use of steel as its main component.

"Steel was always considered as the primary structure," explains Robert Allen, MacLennan, Jaunkalns Miller Architects, "as the principle program elements – arenas, gym and aquatics – all require long spans. The building design is unique in that the pre-engineered long span frames are used throughout the building. They have been carefully designed in order to create soaring interior spaces with plentiful natural light."

The building features sloped sidewalls, skewed end walls and the primary exterior cladding element consists of sheet steel panels. "All roof and wall cladding is

prepainted Galvalume AZ150, coloured QC18783 Bright White," notes Bryan Hernandez, Sales Manager, Steelway Building Systems. The walls are .76mm (.0299"), struc seal wall cladding, AZM150 Galvalume substrate. The roof is .61mm (.0239"), RTL-24 profile roof panels, AZM150 Galvalume substrate and the roof liner is storm seal profile .61mm (.0239"), AZM150 Galvalume substrate. According to Bryan, the building consists of 871,577 kg (1,921,500 lbs.) of steel.

"Steel was chosen due to its economy as well as its ease and speed of erection," emphasizes Robert Allen,



adding that the recycled content of the steel was a contributing factor in the building being recognized with LEED recycled content credits 4.1 and 4.2.

Ben McDermott, Port Colborne YMCA Centre Manager has been enthusiastic about the new facility, located on Elizabeth Street in Port Colborne, since it opened in February 2013. Noting that it offers around 300 hours of programming per week to people of all ages and abilities, Ben emphasizes, "What the Centre brings to the City of Port Colborne is the gift of health. We want communities to be healthy, vibrant and we are here for the long term. This is a fully accessible charitable organization – no one is turned away."

VALE offers many benefits to the City of Port Colborne by continuing the YMCA's tradition of helping to strengthen families, building volunteerism and charitable giving and increasing health and wellness.



The building features sloped sidewalls, skewed end walls and the primary exterior cladding element consists of sheet steel panels. "All roof and wall cladding is prepainted Galvalume AZ150, coloured QC18783 Bright White."

Steel was chosen due to its economy as well as its ease and speed of erection," emphasizes Robert Allen, adding that the recycled content of the steel was a contributing factor in the building being recognized with LEED recycled content credits 4.1 and 4.2.

### SPECIFICATIONS

All roof and wall cladding is prepainted Galvalume AZ150, coloured QC18783 Bright White

#### WALLS

.76mm (.0299") Struc Seal Wall Cladding, AZM150 Galvalume substrate.

#### ROOF

.61mm (.0239") RTL-24 profile roof panels, AZM150 Galvalume substrate.

#### ROOF LINER

Storm Seal profile .61mm (.0239"), AZM150 Galvalume substrate.

This building design is unique in that the pre-engineered long span frames are used throughout the structure.

### DESIGN AND CONSTRUCTION TEAM

#### ARCHITECTS:

MacLennan, Jaunkalns, Miller Architects (MJMA)  
416-593-6796

#### GENERAL CONTRACTOR:

Aquicon Construction  
Robert Aquino  
905-458-1313

#### STRUCTURAL ENGINEER:

Blackwell Structural Engineers  
416-593-5300

#### LANDSCAPE ARCHITECT:

PMA Landscape Architects Ltd.  
416-239-9818

#### STEEL BUILDING SUPPLIER:

Steelway Building Systems 519-765-2244

#### PHOTOGRAPHER:

Steelway Building Systems 519-765-2244





With a name like Granite® Deep Mat it sounds like something that belongs at the bottom. But it is ArcelorMittal Dofasco (AMD's) newest paint system developed primarily for roofing. Part of AMD's 'Nature' collection, Granite Deep Mat is an organic coating free of hexavalent chromium and heavy metals applied to a thickness of 35 or 40 microns, normally on AZM150 Galvalume™ steel. That description simply doesn't do justice to the product.

# The cream always rises to the top

Granite® Deep Mat is a prepainted Galvalume® coated steel that combines excellent formability and corrosion resistance and brings differentiation and originality in roofing and cladding designs for residential and commercial building projects.

## MANUFACTURERS AND SUPPLIERS:

Agway Metals Inc.  
800-268-2083

Steelway Building Systems ExSteel Division  
800-265-7740 or  
519-765-2244

Southwestern Metal Roofing and Exteriors:  
888-879-9791 or  
519-667-2100

White Stone 1998 Inc.  
519-381-7663

Cladding manufacturers, installers and consumers all remark on the same things: in two words, beauty and affordability. It's difficult to really see the characteristic texture of this product from the photos as this could be any painted steel system. However, the significantly reduced gloss is a very important feature of the Granite Deep Mat paint system.

Burk Blanck, General Manager Sales for Agway Metals Inc., whose Andex Division in Exeter, Ontario manufactures cladding incorporating Granite Deep Mat (GDM), says the company has supplied the recently available product to about a dozen projects. "We supply roofing products across a range of applications. Under the proprietary name Springhouse Shingles we supply Granite Deep Mat predominantly for residential projects, although it has also been used on nursing homes."

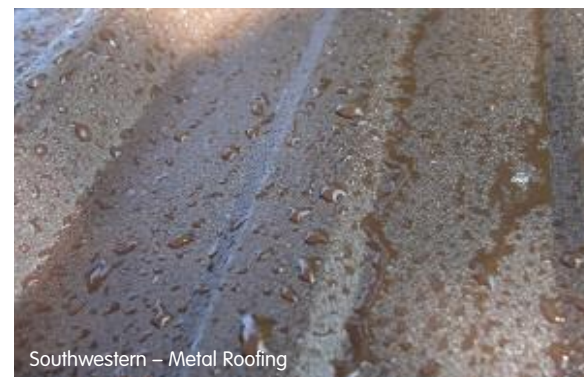
He adds that the main attraction for consumers

"seems to be the lower-gloss, speckled look of the finish." This is echoed by Steve Pike, Owner, White Stone Inc., who installs roofing with Granite Deep Mat, including Springhouse Shingles for Agway Metals Inc., and says the steel shingles look like slate. "Plus superior traction of the Springhouse shingles speeds up installation." Steve has completed 25 projects with GDM since he began using it in December 2012.

So far the colours requested by homeowners and installed by White Stone are QC60039 Jet Black, QC60035 Graphite Grey, QC60037 Chrome Green, QC60045 Slate Grey, and QC60041 Sepia Brown. Another cladding manufacturer singing the praises of GDM is ExSteel, the building components division of Steelway Building Systems of Aylmer, Ontario. Bryan Hernandez, Sales Manager of Steelway, had it installed in Chocolate Brown on his own home. "The job was done in three days and all our

The flexible coating allows for a variety of profiles to be roll formed and stamped. Granite® Deep Mat's low gloss textured surface property, gives it a consistent appearance from any angle or position. It's difficult to really see the characteristic texture of this product from the photos, as this could be any painted steel system.

However, the significantly reduced gloss is a very important feature of the Granite Deep Mat paint system.



Southwestern – Metal Roofing



Agway Metals Inc. – Manning

The combined use of a high durable resin technology as well as high grade pigments meet the technical requirement of the roofing market with traditional colours.

Granite® Deep Mat's paint system is resilient to cracking and crazing during forming due to its high flexibility. Its textured surface is easily cleaned by rainwater and the significantly reduced gloss is a very important feature of the GDM paint system.



neighbours say it looks beautiful and Sue and I do too!"

Bryan says his customers are equally enthusiastic "The product is new and just catching on and we continue to get the word out and so far, they love it!" ExSteel employs .343mm (.0135") Galvalume substrate with .75mm (3/4") rib depth at 229mm (9") centres.

Mike Guindon, Owner of Southwestern Metal Roofing & Exteriors began working with Granite Deep Mat in July 2013 on Bryan's roof, and by mid-fall had installed four roofs in Chocolate Brown, one in Grey and one in Black. "I like the finish and the price – and my customers do too. It lets me compete with the traditional shingles market."

Granite Deep Mat combines very good formability and corrosion resistance, and facilitates easy assembly. Its textured surface is easily cleaned by rainwater. In addition to roofing, Granite Deep Mat can also be used for vertical cladding and accessories.



Southwestern – Metal Roofing



White Stone – Springhouse Shingle



White Stone – Steel Tile



White Stone – Diamond Shingle



It's the ultimate room with a view. This floating house is the creation of Robert Nebolon Architects in Berkeley, California. Floating houses are designed to sit on water instead of land. These unusual homes are quite common in the San Francisco Bay area, where entire neighbourhoods are dedicated to them. This particular house is located in Mission Creek, San Francisco. "It's an unusual form of living. It's great for people who like to be around water and are familiar with water."

## Down by the sea – it's the ultimate room with a view...

Ideal owners don't like to live with everyone else and deal with stuff like yards," says Robert Nebolon, Principal Architect. "It was so interesting to design. It's not often that an architect gets to design a floating house. It was lots of fun."

Since this 195m<sup>2</sup> (2,100 sq. ft.) house will be sitting in salt water for years, special care was required. A floating house needs to be as maintenance free as possible, Nebolon says. "Once it's towed to its final place, it usually stays in that location, unlike a houseboat. The materials have to be resistant to saltwater corrosion," he says. "We

used steel because it's very durable in a marine climate. We galvanized and primed all surfaces."

The Regal White cladding profile is Mini-V-Beam, the Regal Blue wall cladding profile is Prestige Series with two Pencil Ribs, and the white roofing panels are Reverse Mini-V-Beam.

AEP Span supplied the prepainted AZ50 Zincolume (AZM150 Galvalume® in Canada) steel cladding. We selected Fluoropolymer carbon paint for its durability. "Fluoropolymer carbon paint doesn't need to be reapplied for 40 years," says Nebolon.

Steel was also used for the roof and ceiling. Stainless steel fasteners were used to attach the siding and the



entire saw-tooth roof is comprised of six-inch steel metal studs. "We had some really long spans on the ceiling, but we needed to keep the weight down," Nebolon says. "Steel cladding is strong against possible dents, and I knew it would last a really long time."

Using steel for the home's stairwell allowed for greater flexibility in the design, he adds. "We used steel treads welded to central steel pylons. This can be done with a steel stairway, but not with a wooden one. It's painted International Orange, the colour of the Golden Gate Bridge."

The house took six months to build. The owners, a couple in their early forties with a newborn baby, moved in almost a year ago. "They love it – they love the design. Both of them are very familiar with the water," says Nebolon.



Prepainted Galvalume steel's ample colour range, low maintenance and durability, provides a broad spectrum of design opportunities.

### DESIGN AND CONSTRUCTION TEAM

ARCHITECT: Robert Nebolon Architects 510-525-2725

STRUCTURAL ENGINEER:  
Sarmiento Engineering 925-706-7941

BUILDER: W.B. Elmer & Company 925-254-1400

STEEL CLADDING SUPPLIER: AEP Span 800-733-4955

PHOTOGRAPHER: AEP Span 800-733-4955



Organic coated steel is economic, environmentally friendly and it has a consistent quality. In building and construction sheet steel profiles are used for wall cladding, roofing and also for applications such as sun shades, suspended ceilings, lighting etc.

In addition to the home's superior design, the use of prepainted Zincolume (Galvalume in Canada) steel for the roof and exterior wall cladding sets this unique home apart from others in the area. The 55% aluminum-zinc substrate is ideal for applications in coastal and light-to-moderate industrial areas where superior atmospheric corrosion resistance is required.





The Bennett House Apartments in Pleasantville, Newfoundland have the distinction of being the very first apartments built in the area in over 20 years. "This is a great market for us. It's not that there wasn't a market for apartments, but no one tapped into it," explains James Bugden, project manager with Killam Properties. Killam Properties owns and manages the building. "The economy is booming but a lot of the market is condos and single family houses."

## Efficiency and Adaptability of Light Steel Framing

The 9,987m<sup>2</sup> (107,500 sq. ft.), steel frame apartment complex has 71 units available for lease. Over 60 of those units are already spoken for. "We've provided underground parking, which is unusual for St. John's,"

Bugden says. "The building speaks for itself – large units, hardwood floors."

The building's floor system is constructed with .91mm (.036") composite steel floor deck, with 89mm (3.5") concrete topping and spans 1.83m (6 ft.) between beams. The supporting members are ASTM 350W steel beams welded to Nelson studs, to minimize the structural depth. The floor deck is P3615 as provided by Canam.

"With a building of this type, the first method you'd probably look at is a concrete slab followed by wood framing. Next would be a completely concrete building," says structural engineer Wayne Swinnard of Campbell Comeau Engineering Limited, "There is also more maintenance to wood long-term. It wouldn't be as sturdy a building."

The use of steel rather than concrete allowed the crew to build throughout the winter. The building opened to tenants at the end of May 2013.

"We wanted to do a non-combustible building. We went with steel from the very beginning. Because we are four stories high, steel was beneficial for spacing and the pricing seemed good," says Ashley Millar, architectural technologist with Studio Works International Inc. Millar worked closely with architect Ron Smith on the project. "Crews were brought in from New Brunswick, Nova Scotia as well as Newfoundland. It was an Atlantic effort to get this project done."

The architect used corrugated prepainted galvanized steel cladding on the exterior for a modern look that incorporates the traditional Newfoundland colours of bright blue, bright red and bright yellow. Five different colours of pre-painted steel were used for the exterior wall cladding, presenting an attractive and inviting appearance. Additionally, steel cladding was a responsible material selection given steel's high recyclable content.

Millar adds that both the community and the client were very happy with the results. "It's a great building. A few of the tenants have already moved in. They love the building, love the space," she says. "There's a large construction boom in the area right now and a lot going on. It doesn't seem like it's going to slow down. Our client is wanting to do other projects with us."



The architect used corrugated prepainted galvanized steel cladding on the exterior for a modern look that incorporates the traditional Newfoundland colours of bright blue, bright red and bright yellow.

Light steel framing is used throughout the interior of the 9,987m<sup>2</sup> (107,500 sq. ft.) steel frame apartment complex. It has 71 units available for lease and over 60 of those units are already spoken for.

The building's floor system is constructed with 20 gauge, 38.1mm (1.5") composite steel floor deck, with 89mm (3.5") concrete topping and spans 1.83m (6 ft.) between beams. The supporting members are ASTM350W steel beams welded to Nelson studs, to minimize the structural depth. The floor deck is P3615 as provided by Canam.







The Ojibway community of Pauingassi nestles on the shores of Fishing Lake 280 km (170 miles) northeast of Winnipeg and 24 km (15 miles) north of Little Grand Rapids. To get there you have to fly in, then take a boat or float plane during the summer and in the winter a snowmobile along the winter access road. That presented logistical challenges for a project such as building a school. Materials were shipped ahead of time and stored, ready for construction to begin the following spring.

## Steel contributes to School's natural feel



### DESIGN AND CONSTRUCTION TEAM

OWNER: Pauingassi First Nation

#### ARCHITECT:

Stantec Architecture 204-928-8853 and  
AGB Architecture – a collaboration 204-489-5900

#### GENERAL CONTRACTOR:

NDL Construction 204-255-7300

CLADDING SUPPLIER: Vicwest 905-825-2252

Also challenging was to design a structure that was compatible with its surroundings – in this case pine trees, mosses, lichens, and rocks, with water nearby – and with less tangible aspects such as the sensibilities of the Ojibway culture. A collaborative effort involved the architects, community meetings and workshops with teaching staff. In remote first nation communities a school is ideally much more than a

bunch of classrooms where kids go to learn. It incorporates after-hours community use including activities as disparate as exercising and mourning.

The result is Omiishosh Memorial School, sitting on a hillside in an old-growth forest, in a U-shaped configuration containing the main entrance facing east as directed by the Ojibway Elders. The 'wings' of the U symbolize the arms of a parent embracing a child. The community areas of the school are located in the base of the U.

The cone above the entry foyer represents a sacred Megis shell – long a fixture of Ojibway history. The interior of the cone is galvanized steel deck. The foyer doors open onto the site's network of paths which are reflected by the interior corridor, a curvilinear 'path' with gathering spaces for students along the way.

Outside is a chevron brick pattern the colours of sand, bark, and rock. Above it, the pre-painted galvanized steel cladding depicts the colour of light reflecting from water. And, topping it all off is a green pre-painted galvanized steel roof the colour of pines.

steel roof the colour of pines. Steel also contributed to the 2,595m<sup>2</sup> (28,000 sq. ft.) school's construction coming in on time and within budget.

#### WALL & CONE PANELS:

Factory preformed coated metal, 0.79 mm (.0299") thick prefinished galvanized sheet steel, 22mm (7/8") deep corrugated profile @ 689mm (27") centers. Colour: Bone White QC18273 Perspectra Series (a silicone modified polyester (SMP))

#### ROOF CLADDING:

2,648m<sup>2</sup> (28,500 sq. ft.) pre-painted galvanized 0.80 mm (.032") thick, 38 mm x 12 mm wide standing seam @ 400 mm (16") o/c standing seam roof panels Colour: Slate Blue QC18260 in the Perspectra Series™



The cone above the entry foyer represents a sacred Megis shell – long a fixture of Ojibway history. The interior of the cone is galvanized steel deck and the exterior is Bone White QC18273



## Tacoma Recovery and Transfer Centre Tacoma, Washington

The 7,799m<sup>2</sup> (83,590 sq. ft.) Tacoma Recovery and Transfer Center in Tacoma, receives, sorts and transfers municipal solid waste and separates recyclable materials. The facility also houses administrative offices, a maintenance shop and a suspended observation mezzanine.

The project designers aimed to meet current design standards and regulations while increasing facility capacity and providing operational flexibility. The project was completed ahead of schedule, 20 percent under budget and it achieved a LEED® Gold rating by scoring high in the construction waste management, indoor air quality and recycled materials categories.

To evoke visual interest through variety, .76mm (.0299") weather tight concealed fastener steel panels, painted a custom Serapi Green, were applied vertically and horizontally between columns. The horizontal .76mm (.0299") TLC-1 flat panels, in Metallic Silver, create seamless outside corners and completely obscure the columns from external view. Exterior

steel panels also form parapets to conceal roof-mounted mechanical equipment.

ARCHITECT AND ENGINEERS:  
JR Miller & Associates  
360-258-0136

CLADDING SUPPLIER:  
Metal Sales Manufacturing  
Corporation 800-406-7387

BUILDING SUPPLIER:  
CHG Building Systems  
1-425-255-5747



## Résidence Marcadet Paris, France

Nine homes and a retail space with the Aluzinc® (Galvalume® in Canada) façade – built in the heart of the 18th arrondissement! Incorporated into the building envelope, Aluzinc plays a major role with its manifold possibilities!

The choice of location on the plot was guided by the desire to retain the urban layout. On one side, is the building known as the "Mathagon" a mansion dating from the late eighteenth century, which underwent a complete rehabilitation concurrent with the construction work undertaken for "Résidence Marcadet". On the other side is the 10-storey residential building, dating from the 1970s, which was built standing well back from the street alignment – creating a recessed space.

The north and west façades, which overlook the street, are more closed. They were produced with an aluminum/zinc metallic coating, which makes it possible to play with the light and the reflections of the surrounding buildings. The façades feature shutters, of the same aluminum/zinc coated material but perforated as well, to copy a principle of contemporary blinds and perfectly regulate the supply of light and view to the bedrooms.

This project showcases some of the many natural properties offered by aluminum/zinc coated steel, namely its aesthetic qualities, its high light reflectance capacity and its potential for fabrication.

Aluzinc® is also called Zincalume in some parts of the World, in Canada it is registered as Galvalume®.

EDITED FROM THE TEXT:  
Julien Cescon ArcelorMittal  
Flat Carbon, Europe

CLIENT: RIVP

ARCHITECTS: Cantin Planchez  
Architectures +33 (0)1 40 39 04 41

ENGINEERING OFFICE:  
CETBA Ingénierie +33 1 41 44 97 0

GENERAL CONTRACTOR:  
TBI SHAM 01 34 84 12 58



## China Executive Leadership Academy Shanghai

This university, unlike any other, located in a large park, southwest of Shanghai, has been designed to house training sessions at different levels in multiple areas, for senior members of the Chinese Communist Party, ministries and for mayors and representatives of the major cities.

With the aim of asserting the identity of this complex, Anthony Bechu and Tom Sheenan unified all the halls under a monumental 250m (820') long red canopy, symbolizing the 'painter's table', symbol of the calligraphy learning process, while its colour is a clear reference to China's identity. The red 'table' has a smooth and abstract appearance and, from a distance, one can hardly distinguish the shape of the individual sheets forming the lacquered steel cladding completely covering it. The canopy is actually supported on a monumental steel lattice structure, spanning a width of 47m (154 ft.) with 90m (295 ft.) long

longitudinal girders. The structure, divided into three separate parts, is supported on anti-seismic articulated swivel joints. The table supports are also covered with sheet cladding.



EDITED FROM THE TEXT: Bertrand Lemoine,  
ArcelorMittal's *Constructalia*

ARCHITECT: Agence d'architecture Anthony Bechu and Associates, +33 1 47 34 97 91 and ECADI (East China Architectural Design and research Institute Co. Ltd.) 021-63217420

ENGINEERING FIRM: DVVD – Daniel Vaniche and Bernard Viry 33 1 40 40 96 10

PHOTOGRAPHER: Javier Urquijo

## EDITORIAL INQUIRIES

We would like to hear from you! If you have comments about this issue or a project you would like to see in an upcoming issue of *Steel Design*, please send a description of the project, including photographs, to: The Editor, Steel Design, 1039 South Bay Road, Kilworthy, ON POE 1G0. Or email: davidfollis@vianet.ca





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