Introduction Bundle

A Smart Way to Build Schools

TiltWall

Tilt Wall Ontario Inc.
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519-602-2990

Introduction

TILTWALL'S SCHOOL CONSTRUCTION GETS HIGHER GRADES!

This document will educate you on many of the benefits of choosing tilt-up construction for your next school project. Class is now in session!

Tilt Wall Ontario is a subcontractor committed to bringing a superior building product to the Ontario construction industry since 2002. With our tilt-up construction and design experience we are able to assist our clients in designing buildings with lasting beauty and value.

Tilt-up construction is a method of building developed more than 100 years ago where walls or building elements are cast on-site. They are lifted (tilted) into place and braced until permanent structural connections are completed. Tilt-up walls can be insulated and/or load bearing with a wide variety of finishes. The many applications of the tilt-up system deliver quality, speed, economics, durability and beauty. With more than 60 buildings and 3,000 panels comprising over a million square feet of panels Tilt Wall has become a leader in tilt-up construction in Ontario.

Over the years, Tilt Wall has built an impressive portfolio featuring a wide range of complex projects, from educational institutions like the University of Guelph's Bio-Products Discovery and Development Centre to multi-storey residential buildings like Muskoka Bay Resort's condominium. In doing so, Tilt Wall has received many industry accolades: 6 Ontario Concrete Awards, 5 Tilt-Up Concrete Association Awards and the TCA's 2018 Contractor of the Year.

Tilt-up construction is able to offer the following advantages:

- Energy efficiency through 100% continuous insulation and zero thermal bridging
- Thermal mass storage through exposed interior concrete
- Durability on the exterior and interior with solid concrete
- Flexibility in interior and exterior design
- Structural integrity with load-bearing concrete panels
- Security and safety
- Sustainability
- Speed of construction
- Cost saving

Tilt-Up Advantages

Energy Efficiency

Insulated tilt-up panels come in a variety of type and thickness of rigid insulation, ranging from 50mm to 200mm thickness. To form insulated concrete walls, concrete is poured on both sides of the foam and the finished panel is held together with a non-thermal conductive fiberglass tie. The thickness will be determined by the thermal characteristics of the insulating material and the thermal loads on the structure. Insulation values range from R10 to R67. The higher the R value the lower the HVAC demands. Large tilt-up panels have sealed joints, reducing uncontrolled infiltration. In a site-cast tilt-up panel, the insulation is 100% continuous, spanning from edge to edge and top to bottom. The insulation is protected from sun, rain, wind, rodents and bugs by the concrete once the panels have cured. The rigid insulation is protected in the panel and retains its R-value over time.

Thermal Mass

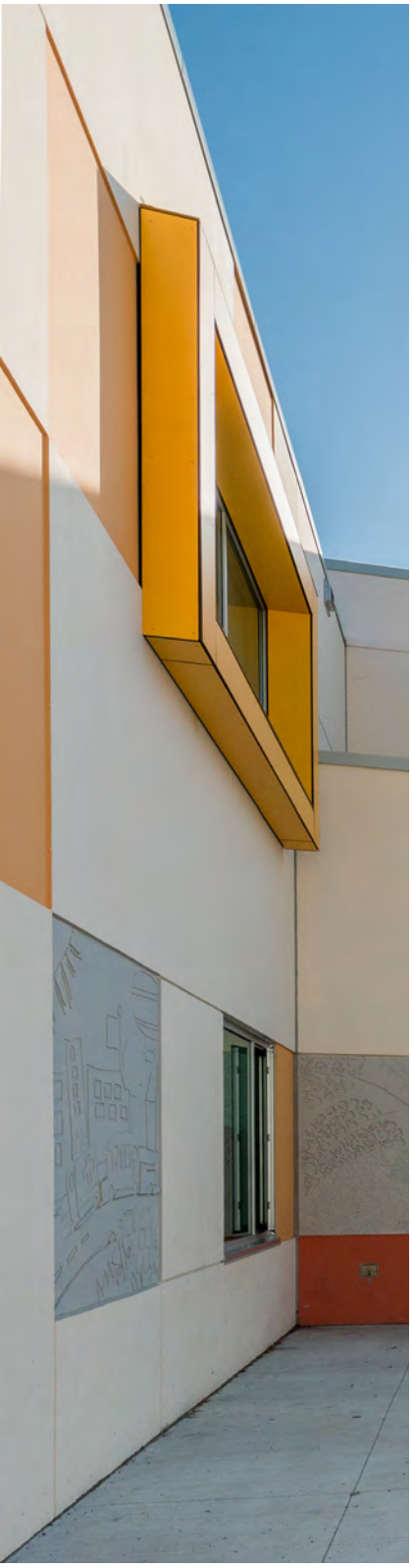
The panel's excellent thermal mass characteristics make it one of the most energy efficient methods of construction. Tilt-up concrete sandwich wall panels used as an interior surface can save materials by eliminating the need for interior framing and drywall, all while allowing concrete to gradually store and release heat to help moderate daily temperature swings. Thermal mass can improve comfort, resiliency and save energy.

Durability

Concrete panels are low maintenance, which means cost savings for the entire life of the structure. Normal exterior concrete strength is 30 MPa with air to help it through the freeze-thaw cycles that exterior of building are subject to. Solid concrete on the exterior helps protect the insulation and structural integrity of the building from natural elements such as wind-driven rain, gale force winds, fires and extreme temperature swings all which can deteriorate a building over time. The panels are a cost-effective, energy-efficient, durable, strong and fire-resistant cladding system that will outlast most other building methods.

Design Flexibility

Using one of the most fluid building products on the market means that any tilt-up building can be attractive which you can take great pride in. Textures produced by form liners and other methods can result in a wide variety of finish patterns including stone, brick, wood grains and others. An unlimited array of colourings can be added to the concrete, or coatings can be applied after the fact for beautiful affects. Interior wall panels with a smooth finish will resist everyday wear and tear, provide a clean, durable and mold resistant surface no matter the occupancy.



Structural Integrity

Tilt-up panels are load bearing, meaning they eliminate the need for beams and columns along exterior walls. They are usually designed to span between the foundation and roof beams without the need for additional intermediate supports. They can accommodate a variety of loads, including wind, seismic, equipment, structural loads and provide blast resistance.

Security

Tilt-up concrete applications offer superior fire resistance compared to conventional construction materials. The sandwich panels can provide up to 4 hours fire resistance, they have inherent fire containment characteristics, they add safety and security which can improve insurance rates and speed mortgage approvals. Damage to a concrete building is generally minimal and easily repaired. Tilt-up structures withstand wind and hail storms and are impenetrable by the smallest rodent, insect, or even the most determined human.

Sustainability

The raw materials used in tilt-up panel construction are generally sourced locally, reduces construction waste, and minimizes transportation and disposal costs. They can be designed to be disassembled, saving materials and extending the life of the panels. The durability creates a long life-cycle with low maintenance, reducing the need for replacement and maintenance during a building's life.

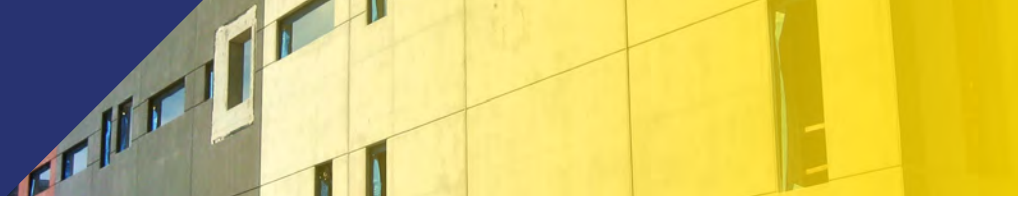
Speed of Construction

In tilt-up construction much of the work on the walls is done simultaneously. As the walls are built the exterior and interior finishes are completed along with the insulation, air and vapour barriers. Since tilt-up panels are load bearing, the footing and foundation work tends to be simpler also speeding up the construction process. When required a temporary casting slab can be used on-site, which further accelerates the schedule. With 90% of the work happening at ground level the need for scaffolding and aerial work is also minimized, once again speeding up productivity.

Costs

The speed of construction allows for earlier occupancy and reduces the overall construction time and costs. Elimination of most exterior steel columns and piers can also be a significant savings. With tilt-up being an all-in-one exterior wall system much of the small costly details around openings, parapets and transition points in construction materials and finishes is eliminated.

Tilt-Up Process



1 Site Preparation & Foundation Slab

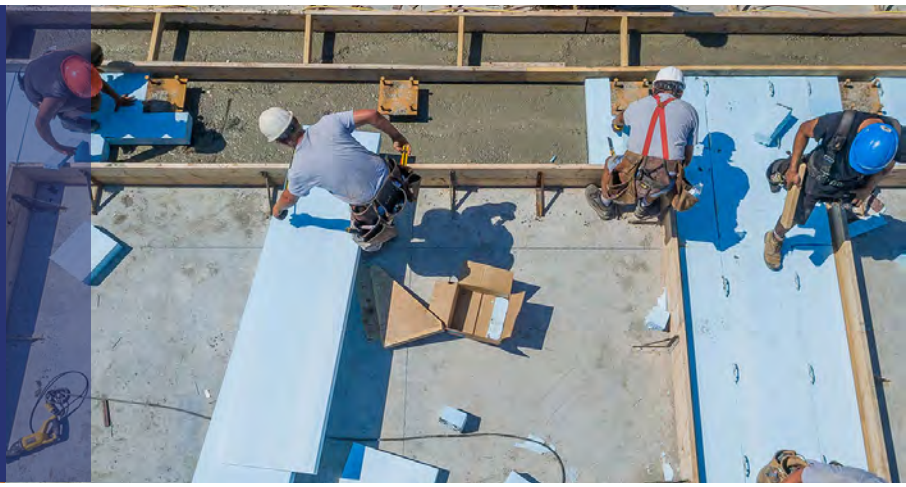
All required materials and equipment are gathered for the job. Next, the concrete floor slab is poured.

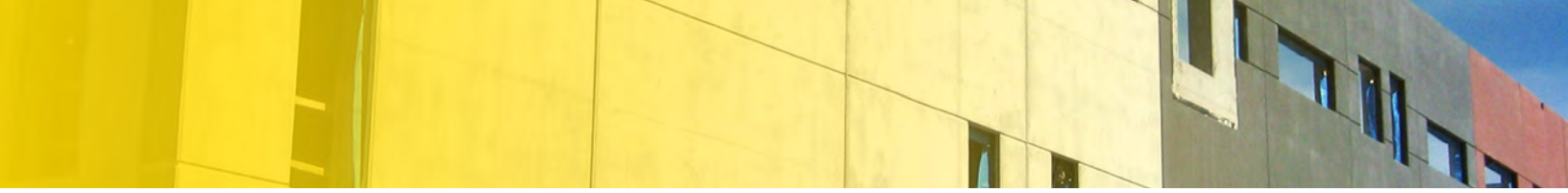
2 Forming Wall Panels & Adding Formliners

The crew assembles the panel forms on the floor slab. The panel forms serve as molds for the concrete. Each form provides the panel's exact shape and size as well as openings for doors and windows.

3 Pouring Outer Layer & Adding Insulation

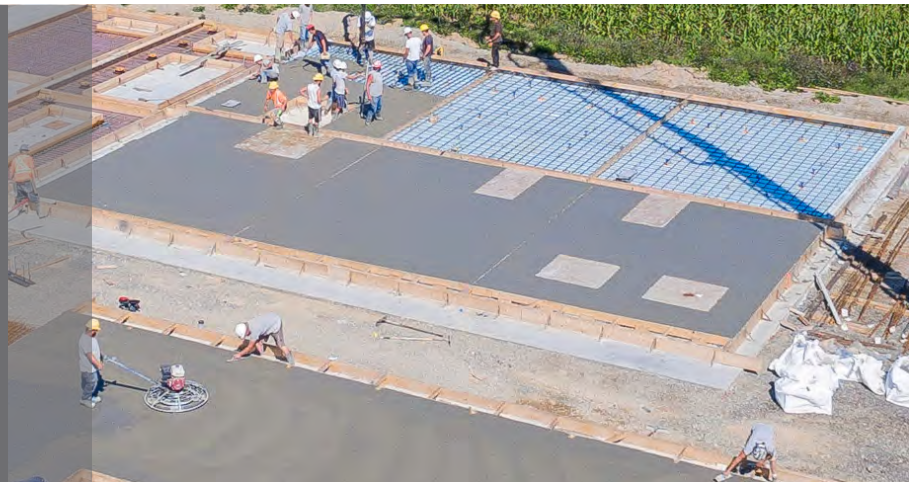
Concrete is poured into the prepared forms to create the panels. Sandwich insulation is also encased into each building panel to give tilt-up structures true edge-to-edge insulation.





4 Panel Reinforcement, Inserts and Embeds & Pouring Inner Layer

Up next, workers tie in the steel grid to reinforce bars into each form. This part of the process gives the panels additional structural integrity. Workers also install inserts and embeds, which will be used to lift the panels later. Then the inner layer of concrete is poured.



5 Lifting Concrete Panels In Place

The concrete panels are given time to solidify; The crew then connects the panels to a crane. The crane then lifts the panels from the floor slab into position. From here, the workers will connect the panel's braces to the slab.

6 Panel Finishings & Caulking Joints

During the last step of the process, the building begins to look like a finished product. Exterior walls are finished and the joints are also caulked to prevent water penetration.

Cost Comparison

School Name - One-Storey	Location	Type	Floor Area sq. ft.	Bid Amount	Per Foot
Holland Marsh District Christian School	Newmarket	Tilt-Up	30,490	$ 4,488,500	$ 147.21
Grace Christian School	Dundas	Tilt-Up	28,200	$ 4,700,000	$ 166.67
Half Moon Bay Elementary School II	Ottawa	Conventional	49,570	$ 9,092,000	$ 183.42
Avalon Catholic Elementary School	Orleans	Conventional	49,356	$ 9,093,800	$ 184.25

Average costs per foot for a 1-storey school:

Conventional:	$	183.83
Tilt-Up:	$	156.94
Savings:	$	26.89

School Name - Two-Storey	Location	Type	Floor Area sq. ft.	Bid Amount	Per Foot
Findlay Creek Elementary School	Findlay Creek	Tilt-Up	73,000	$ 12,797,000	$ 175.30
Half Moon Bay Elementary School	Ottawa	Tilt-Up	63,720	$ 11,652,000	$ 182.86
Broadview Public School	Ottawa	Tilt-Up	74,180	$ 15,547,000	$ 209.58
Kingston Centre Catholic Elementary School	Kingston	Conventional	35,000	$ 7,953,000	$ 227.23
Fernbank School	Stittsville	Conventional	110,000	$ 25,178,000	$ 228.89
École élémentaire catholique Avalon II	Orleans	Conventional	47,790	$ 11,676,000	$ 244.32

Average costs per foot for a 2-storey school:

Conventional:	$	233.48
Tilt-Up:	$	186.84
Savings:	$	46.64

Tilt-Up Construction has saved the public:

275,210.00 sq. ft. of school at $ 46.64 per foot:	$ 12,835,794.40
58,690.00 sq. ft. of school at $ 26.89 per foot:	$ 1,578,174.10
Total:	$ 14,413,968.50

Please note:
- Values are bid results and may not reflect actual construction costs.
- Note: All school construction timeframes are from 2014 to current day.

Energy Usage Comparison

Among its many benefits, one of the biggest draws of tilt-up construction is its energy efficiency. At a time when environmental impact is top of mind and school districts are looking for ways to cut energy costs, tilt-up buildings are an ideal solution.

Some of Ontario's school districts have the unique challenge of responding to drastic enrollment increases while increasing the sustainability of their buildings. Tilt-up makes it possible to achieve both goals.

Tilt-up construction takes advantage of concrete's thermal mass properties as well as more energy-efficient insulation systems and reduced air infiltration. This results in less air leakage and stable indoor temperatures, which can cut energy costs by up to 35%.

Traditional Construction VS Tilt-Up Construction

York Region School Board Average

Electrical:	5.29	kWh
Gas:	1.00	m^3

King Christian School

Electrical:	4.58	kWh	-14%
Gas:	0.58	m^3	-42%

CEPEO School Board Average

Electrical:	12.4	kWh
Gas:	1.24	m^3

Des Sentiers School

Electrical:	9.30	kWh	-25%
Gas:	0.39	m^3	-68%

*School energy usage per square feet

Project Profile

Broadview Public School

PROJECT LINK: Tiltwall.ca/project/broadview-public-school-ottawa-ontario-2016/

Broadview Public School was a complex job with an aggressive construction timeline. This school was designed using concrete to showcase the creative style of the architect firm. Using insulated tilt-up sandwich panels allowed for an energy efficient school at costs that rival traditional construction methods.

PROJECT:	Broadview Public School		
ADDRESS:	535 Dovercourt Ave Ottawa, Ontario	**SQUARE FOOTAGE OF PANELS:**	56,974 sq ft
YEAR BUILD:	2015 – 2016	**NUMBER OF PANELS:**	117
ENGINEER OF RECORD:	Cunliffe and Associates	**HEAVIEST PANEL:**	85,200 lbs
GENERAL CONTRACTOR:	Frecon Construction Ltd.	**TALLEST PANEL:**	35’-9”
BUILDING USE:	Elementary School	**LARGEST PANEL:**	1,080 sq ft

AERIAL VIEW
Tilt-up construction can incorporate many creative designs.

COURTYARD VIEW
Creativity can be expressed in many forms with concrete.

LIFTING PANELS
Flexibility with cement allows for breathtaking spaces for education.

Humber College Toronto

PROJECT LINK: Tiltwall.ca/project/humber-college-building-b-toronto/

When Humber College decided to build their new North Campus Academic and Student Service Building tilt-up construction was chosen as the building method to help overcome some of the challenges on this project. In keeping with the university's sustainable-design goals, the combination of precast and insulated tilt-up resulted in a building that is thermally efficient.

PROJECT:	Humber College Building B
ADDRESS:	207 Humber College Blvd, Etobicoke, Ontario
YEAR BUILD:	2007
ENGINEER OF RECORD:	Barry-Bryan Associates (BBA)
GENERAL CONTRACTOR:	Graham
BUILDING USE:	Classrooms, Student Centre & Office

SQUARE FOOTAGE OF PANELS:	41,203 sq ft
NUMBER OF PANELS:	60
HEAVIEST PANEL:	166,000 lbs
TALLEST PANEL:	43'-0"
LARGEST PANEL:	1,011 sq ft

FRONT VIEW
A wide range of colours and wall angles demonstrate tilt-up's versatility.

LIFTING PANELS
Panel construction began in January and the last panel was erected March 28.

EXTERIOR VIEW
The low-maintenance exterior also looks great!

Project Profile

Grace Christian School

PROJECT LINK: Tiltwall.ca/project/grace-christian-school-dundas-ontario-2017/

Grace Christian School chose tilt-up because as a private school funded by donations every dollar counts! Long term savings was also a factor as tilt-up will save approximately 30% per year on energy consumption. Working with volunteer-based construction on this project did pose challenges, but the simplicity of the tilt-up method overcame these quite easily.

PROJECT:	Grace Christian School
ADDRESS:	497 Milgrove Rd N Dundas, Ontario
YEAR BUILD:	2017
ENGINEER OF RECORD:	Strudet Inc.
GENERAL CONTRACTOR:	Reformed Society of Flamborough
BUILDING USE:	Elementary School

SQUARE FOOTAGE OF PANELS:	38,059 sq ft
NUMBER OF PANELS:	116
HEAVIEST PANEL:	77,600 lbs
TALLEST PANEL:	27’-9”
LARGEST PANEL:	864 sq ft

FRONT VIEW
A combination of brick and concrete usher this project from the old into the new.

LIFTING PANELS
The fully insulated panels provide an energy-efficient envelope.

INTERIOR – SCHOOL LIBRARY
Concrete painted white in the library is a space for bright minds to study in comfort.

King Christian School

PROJECT LINK: Tiltwall.ca/project/holland-marsh-christian-school-gwillimbury-ontario-2014/

After several revisions to drawings and exploring many different building options, site-cast tilt-up concrete was chosen as the construction method for the school's new facility. Not only was tilt-up a more economical way of building, but the highly energy efficiency of tilt-up panels will reduce energy consumption by about 30%!

PROJECT:	King Christian School
ADDRESS:	19740 Bathurst St, East Gwillimbury, Ontario
YEAR BUILD:	2014
ENGINEER OF RECORD:	Steenhof Building Services Group
GENERAL CONTRACTOR:	Maple Reinders
BUILDING USE:	Elementary School

SQUARE FOOTAGE OF PANELS:	34,671 sq ft
NUMBER OF PANELS:	122
HEAVIEST PANEL:	68,900 lbs
TALLEST PANEL:	24'-0"
LARGEST PANEL:	912 sq ft

FRONT VIEW OF BUILDING
Thin brick gives this school the traditional look.

AERIAL VIEW
Using tilt-up for all the interior walls sped up construction of the overall project.

GYM INTERIOR
Painted concrete panels give the interior of the gym a durable and bright look.

Project Profile

Toronto District Christian High School Expansion

PROJECT LINK: Tiltwall.ca/project/toronto-district-christian-high-school-woodbridge-ontario-2019/

Construction on Toronto District Christian High School started June 6, when the casting slab was poured. Panel construction began July 23, and the final panel was lifted into place on October 30. The project showed the architectural versatility of tilt-up construction. Toronto District Christian High School was an existing structure, but needed to expand to accommodate the demands of its growing student body.

PROJECT:	Toronto District Christian High School
ADDRESS:	377 Woodbridge Ave, Woodbridge, Ontario
YEAR BUILT:	2019
ENGINEER OF RECORD:	Strudet Inc.
GENERAL CONTRACTOR:	Maple Reinders
BUILDING USE:	Classrooms, Auditorium and new Lobby

SQUARE FOOTAGE OF PANELS:	16,436 sq ft
NUMBER OF PANELS:	41
HEAVIEST PANEL:	119,000 lbs
TALLEST PANEL:	31’5-3/4”
LARGEST PANEL:	759 sq ft

FRONT VIEW
The expansion shows tilt-up construction’s versatility and creative energy.

UNIQUELY PATTERNED WALLS
Achieved by placing over 6,000 linear feet of individual reveal strips into the building’s new panels.

AERIAL VIEW
This view shows the school’s additional class spaces, auditorium and new atrium/lobby.

Project Profile

L'école Elémentaire Publique Cité Jeunesse Addition

PROJECT LINK: Tiltwall.ca/project/cite-jeunesse-addition-cfb-trenton-ontario-2014/

This project involved an addition to an existing tilt-up school. This addition comprised a daycare which required a large amount of natural light. Cantilevered panels were used in the corners to create large openings. The exterior finish of the building used thin brick to match the existing and stained concrete to give the addition its own unique look. Panels on this school were designed with future consideration of a second-storey addition.

PROJECT:	Cité Jeunesse Addition
ADDRESS:	30 Fullerton Avenue, Trenton, Ontario
YEAR BUILT:	2014
ENGINEER OF RECORD:	WSP
GENERAL CONTRACTOR:	Frecon Construction Limited
BUILDING USE:	School Daycare Addition

SQUARE FOOTAGE OF PANELS:	10,413 sq ft
NUMBER OF PANELS:	33
HEAVIEST PANEL:	63,900 lbs
TALLEST PANEL:	15'-4"
LARGEST PANEL:	596 sq ft

FRONT VIEW
Unique angles help to showcase the creativity and fun of the future daycare.

LIFTING PANELS
Large panels spanning the width of the addition helped to keep costs down.

CANTILEVERED PANELS
Cantilevered panels allowed for large openings for sunlight to shine into the daycare.

Project Profile

Rose Des Vents Addition

PROJECT LINK: Tiltwall.ca/project/rose-des-vents-cornwall-ontario-2010/

Construction of school began in June, the addition was ready for the new school year in just over 2 months! The tilt-up panels for the 14 classroom addition were designed as load-bearing insulated tilt-up panels. The exterior finish of the panels was multi-colored stucco that was applied directly to the concrete tilt-up panels.

PROJECT:	Rose Des Vents
ADDRESS:	1650 Second St E, Cornwall, Ontario
YEAR BUILT:	2010
ENGINEER OF RECORD:	Levac Robichaud Leclerc
GENERAL CONTRACTOR:	Asco Construction Ltd.
BUILDING USE:	14 classroom addition to elementary school

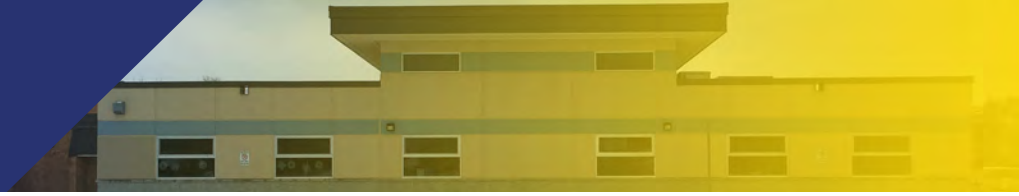
SQUARE FOOTAGE OF PANELS:	11,532 sq ft
NUMBER OF PANELS:	47
HEAVIEST PANEL:	23,900 lbs
TALLEST PANEL:	12’-6”
LARGEST PANEL:	301 sq ft

FRONT VIEW OF BUILDING
Building was constructed in just over 2 months.

LIFTING PANELS
All interior and exterior load bearing panels were lifted in 1 day.

CASTING SLAB
Panels were constructed on a temporary casting slab.

Project Profile



Russel Reid Public School

PROJECT LINK: Tiltwall.ca/project/russel-reid-public-school-brantford-ontario-2012/

This 3 classroom addition was originally designed as a precast building. Using tilt-up versus precast achieved a significant savings on this project. Using load bearing insulated tilt-up panels allowed the school board to achieve a clean and inviting interior. Because tilt-up includes both the exterior and interior finished product as well as insulation, costly mobilization of multiple trades for very little work was not required.

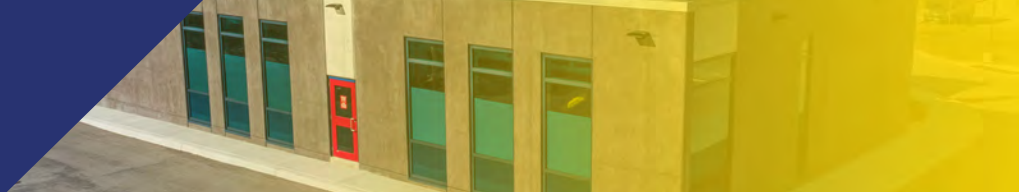
PROJECT:	Russel Reid Public School Addition
ADDRESS:	43 Cambridge Dr., Brantford, Ontario
YEAR BUILT:	2012
ENGINEER OF RECORD:	Traux Engineering Ltd.
GENERAL CONTRACTOR:	Abcott Construction Ltd.
BUILDING USE:	3 classroom addition for elementary school

SQUARE FOOTAGE OF PANELS:	5,701 sq ft
NUMBER OF PANELS:	19
HEAVIEST PANEL:	46,600 lbs
TALLEST PANEL:	17’-4”
LARGEST PANEL:	529 sq ft

REAR VIEW OF BUILDING
Panels exteriors were finished using stucco and a stone finish form liner.

LIFTING PANELS
Casting the panels on site meant they could be much larger.

EXTERIOR DETAIL
Reveal lines and stone form liners provide the details for this project.



University of Guelph Addition

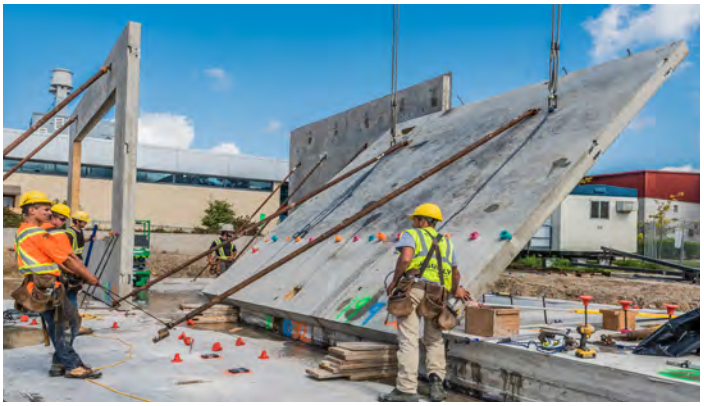
PROJECT LINK: Tiltwall.ca/project/university-of-guelph-addition-guelph-ontario-2017/

This innovative facility is where plant biologists, chemists and engineers converge to investigate and commercialize biomaterials. This project was the third phase of development to the existing Crop Sciences building and one that needed to find cost reductions, while still providing a superior product. The contractor chose tilt-up construction to accelerate the schedule and save the university money.

PROJECT:	Bio-products Discovery and Development Center		
ADDRESS:	50 Stone Rd E, Guelph, ON N1G 2W1	**SQUARE FOOTAGE OF PANELS:**	9,414 sq ft
YEAR BUILT:	2017	**NUMBER OF PANELS:**	24
ENGINEER OF RECORD:	WalterFedy	**HEAVIEST PANEL:**	61,500 lbs
GENERAL CONTRACTOR:	AEC Developments	**TALLEST PANEL:**	20’-3”
BUILDING USE:	Research Facility	**LARGEST PANEL:**	657 sq ft

FRONT OF FINISHED BUILDING
Exterior panels were finished using stucco and a stone finish form liner.

ASSEMBLING AND CURING THE CONCRETE PANELS
Each panel was formed on a concrete slab with access holes for windows, doors and utilities.



ERECTING THE PANELS
Only 24 panels were needed to assemble the expansion of the BDDC.

Letter of Reference

GENERAL CONTRACTORS • DESIGN BUILDERS • CONSTRUCTION MANAGERS

Tilt Wall Ontario Inc.
1269 Commerce Way
Woodstock, Ontario
N4V 0A2

April 26th, 2017

Attn: Len Overbeek

RE: Letter of Reference

Dear Sir:

Our firm recently completed the new Broadview Elementary school project together and to say I was pleased with your performance would be an understatement. The project parameters were extremely demanding in terms of access, winter conditions and especially in terms of design parameters.

Your firm was responsible for the tilt-up portion of the contract. In all instances your firm has performed beyond the industry norm and your level of both cooperation and competence was refreshing to say the least.

This is our 2nd successful project together and I am now looking forward to our next project together, as I have no doubt about your ability to deliver the next project on time while maintaining the highest level of quality workmanship.

I am very comfortable recommending your firm to any potential client. Should any of your clients wish to speak directly to me about your firm's capabilities do not hesitate to give them my personal contact information.

FRECON CONSTRUCTION LIMITED

Dean Drevniok, P.Eng. GSC
President

Letter of Reference

Grand Erie District School Board

Head Office: 349 Erie Avenue, Brantford, Ontario N3T 5V3
Telephone: (519) 756-6301 Fax: (519) 756-9181

Growing Excellence...
Inspiring Success

October 26, 2012

Tilt-Wall was a key member of the project team responsible for the new addition at the Russell Reid Public School in Brantford, ON. As project owner, I dealt directly with Tilt-Wall's Project Manager (Len Overbeek) from ground breaking to completion.

The Grand Erie District School Board (GEDSB) found Tilt-Wall to be helpful, responsive, courteous, organized, and above all – SAFE. Tilt-Wall was able to successfully coordinate several challenging structural and mechanical systems and reacted to client requests and change orders in a timely manner, which allowed for the successful occupancy of our school on schedule for September 2012.

I would highly recommend Tilt-Wall construction as they treat all members of the team with respect and deliver on their commitments. I look forward to working with Tilt-Wall again in the future.

Sincerely,

David Pitt,
Division Manager, Construction and Renewal
Facility Services – GEDSB

ABCOTT
CONSTRUCTION LTD.

124 Garden Avenue,
Brantford, Ontario N3S 7W4

Telephone (519) 756-4350
Fax (519) 756-8721
E-Mail:info@abcott.ca

Oct. 16th, 2012

To: Tilt Wall Ontario Inc.

Tilt Wall Ontario Inc. was a key member of the project team, responsible to supply and install the concrete wall system for a building addition in 2012 to Russell Reid School, Brantford, Ont. As project manager, I dealt directly with Tilt Wall's management and site employees.

Abcott Construction Ltd. found Tilt Wall Ontario Inc. to be helpful, responsive, courteous, organized, and all above – SAFE. Tilt Wall was able to successfully coordinate and install their scope of work in a timely and professional manner, which was a major part to a successful project.

I would highly recommend Tilt Wall Ontario Inc. as they treat all members of the team with respect and deliver on their commitments. I look forward to working with Tilt Wall again in the future.

Sincerely,

Corey Taylor – Project Manager
Abcott Construction Ltd.

Letter of Reference

Conseil des
écoles publiques
de l'Est de l'Ontario

Technical Services

October, 23 2012

Tilt Wall Ontario Inc.
Box 20227
Woodstock (Ontario)
N4S 8X8

To whom it may concern,

We have used Tilt Wall's « cast on site » system as recently as last year on a school addition project in Cornwall, Ontario. Their system has permitted the school board to shorten the construction schedule, ensure competitive pricing while still providing a top quality product. The product has an impressive life cycle and is virtually maintenance free.

The Tilt Wall team collaborated with on site personnel to ensure that the project was delivered on time. We appreciate their dynamic personalities as well as their open mindness with regards to finding solutions. Even though they were a subcontractor on site, their attitude and positive approach enhanced the on site moral.

Sincerely,

Roch Landriault
Director of facilities

RL/cll

Siège social
2445, boul. St-Laurent
Ottawa (Ontario)
K1G 6C3
Téléphone sans frais
1-888-33CEPEO
Tél. : (613) 742-8960
Téléc. : (613) 747-3810
directeur@cepeo.on.ca
www.cepeo.on.ca

Letter of Reference

February 18, 2011

RE: Tilt Wall Ontario Inc. – Humber College Expansion

To whom it may concern:

I had the pleasure of working with Tilt Wall Ontario Inc. when I was the Operations Manager for Graham Construction and Engineering Inc. in Toronto, Ontario. The project included the construction of a new multi-story academic wing to Humber College in Toronto composed of "tilt-up" wall panels that served as the vertical structural elements of the building, the building envelope and the exterior architectural finish. The project won both architectural and industry awards upon completion.

This was my first personal experience with this interesting construction method and I can say that the Overbeek brother's high level of experience and fair business dealings made the experience smooth and successful.

When future tilt wall projects present themselves, my first phone call will be to Tilt Wall Ontario.

Regards,

Reynder Van der Meulen

Letter of Reference

AEC DEVELOPMENTS

DESIGN-BUILD
CONSTRUCTION MANAGEMENT
TOTAL PROJECT DELIVERY

April 18, 2016

To whom it may concern;

We are pleased to provide a reference for Tilt Wall Ontario.

We have had the pleasure of working with them on a project in Ayr Ontario.

We have found their workmanship to be reliable and professional and their office staff and site personnel have met all of our expectations.

We are confident in the service provided by Tilt Wall Ontario and would recommend their services for any size project, large or small.

Sincerely,

Dan Woodcock

Dan Woodcock, A.Sc.T., LEED® AP, GSC. PMP
Project Manager

Letter of Reference

BARRY BRYAN
ASSOCIATES

Architects
Engineers
Project Managers

December 12, 2014

Letter of Reference for Tilt Wall Ontario Inc.

To whom it may concern:

On behalf of Barry Bryan Associates (BBA), Architects, Engineers, it is my pleasure to provide this positive letter of recommendation for Tilt Wall Ontario Inc.

Tilt Wall Ontario Inc. has worked with BBA on numerous occasions over the past 12 years on a variety of Tilt-Up Projects. Noteworthy project would include:

- Humber College, Building 'B', New Academic Services Building
- Cargowall Industrial Warehouse
- Russell Reid Public School Addition
- Port Hope Police Facility
- London medical Centre Building

We have consistently found the management and staff at Tilt Wall Ontario to be professional, thorough and possess a high level of technical expertise.

I have no hesitation in recommending Tilt Wall Ontario Inc. as a highly competent concrete tilt-up contractor, capable of handling any project, based on our years of experience working with them.

Yours very truly,

Barry Bryan Associates
Architects, Engineers, Project Managers

Dennis L. Bryan, P. Eng., OAA, MRAIC, CAHP
Principal

DLB/gs

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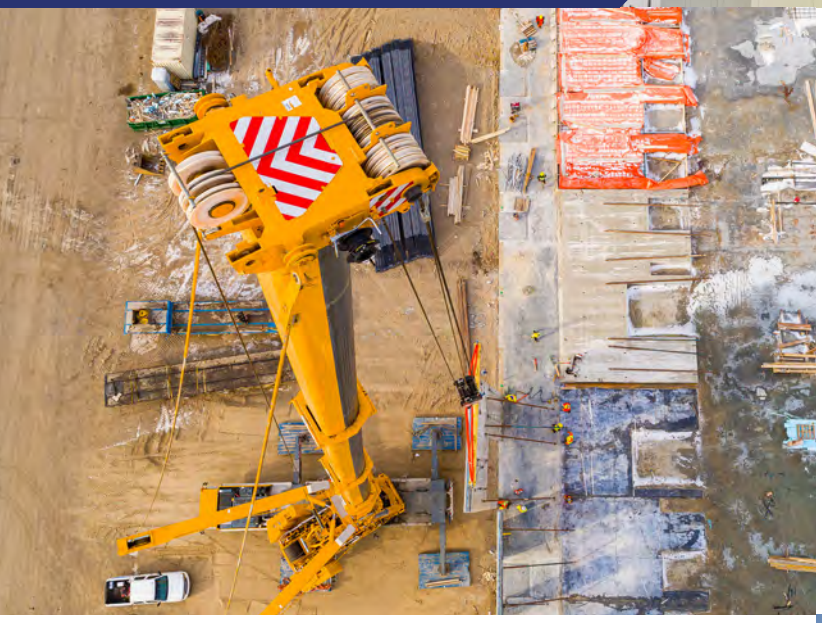

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