
PORCELANOSA FACADE/



Hi,

That's right! Some young architects recently graduated and have started their new career this summer (Yay!). Some kids are relaxing right now before starting back up in the fall... And some are continuing the fun with summer school...

Well, here at PF headquarters, we've always got our thinking caps pulled down tight over our ears. And summertime is no exception...

That's why, in this month's newsletter, we're continuing to share three things about exterior porcelain cladding to help you grow that big, beautiful brain of yours:

Let's do this - shall we?

Do you make these mistakes when choosing exterior cladding systems?

Do you know in which conditions you should never use fiber cement cladding on your building's façade? If you're interested in better aesthetics, do you know which kinds of cladding are holding you back? And why?

Many architects and designers choose exterior cladding materials based simply on what they've always done. Selecting building materials they're familiar with and are used to detailing around their quirks and imperfections.

But is that the best you can do? We invite you to check out porcelain as the cladding material that gives you and your client:

See how your other favorite exterior cladding materials stack up against porcelain cladding panels [here](#). Just scroll down to the chart at the bottom of the website page.

- Better aesthetic versatility
- Imperviousness to water (and graffiti)
- Resilience to water (freeze & thaw proof)
- Fire resistance
- UV resistance
- High wind load resistance
- No maintenance

See how Porcelain compares

Not all exterior cladding materials are made the same. Check the chart below to see if Porcelain is a good choice for your next exterior facade project.

Attribute	Porcelain	Fiber Cement	Concrete	Stucco	EIFS	GFRP/Concrete
Architectural Versatility	✓					
Impervious to Water & UV	✓					
Resistance to Water	✓	✓	✓	✓	✓	✓
Non-Combustible	✓		✓			✓
Resistance to High Wind Loads	✓		✓			✓
High Impact/Resilient	✓					✓

Your Porcelain Cladding Project Example



El Centro – Northeastern Illinois University

Location: **Chicago, IL**

Architect: **JGMA Architects**

Building Typologies: **Education; New Construction**

Year Constructed: **2014**

Porcelain Cladding Used: **6,800 SF**

Colors: **On Black (Stone Porcelain Series)**

[Here's a link](#) to see more images and details about this building project that has become an integral part of the university's campus, and a staple of the Latino community.

But you don't have to take our word for it... Here's what the architect had to say about this project's challenges, choosing exterior porcelain cladding, and working with our team:

"My main concern about using porcelain panels as an exterior rainscreen cladding was simply a lack of knowledge. [This project] was one of the first significant US projects to use exterior porcelain panels in a ventilated façade application. So, it was a newer product in the US market and new to me..."

...For the [project], our design intent was for the building's base to appear heavier. And the building's geometry was a little complex, as the base sloped outward as it cantilevered up and out of the ground. Before considering Porcelanosa Facades, we'd looked at a couple of options. One was precast concrete; the other was a fiber cement rainscreen cladding.

Fiber cement cladding was a product we'd used before. However, the contractors involved at this stage in the job had some reluctance due to lack of experience and cost. They wanted a fully engineered cladding system. Ventilating facades were not as common at that time in the Chicago market. Which made both the owner and contractor a little reluctant. Especially since most of the ventilated facade claddings on the market were supplied just as you would any other common construction material - without much support for installers that were not familiar with them. They'd sell you the framing and panels, and let the installer figure it out.

What we all found especially attractive about Porcelanosa Facades was that they were providing a fully engineered cladding system, including shop drawings, and they were precutting the tiles to fit the complex geometry. They were still very competitive with the cost of other ventilated facades as well, which made it an especially attractive solution. Also, you get the added value that the porcelain panels are a very durable product that is scratch and graffiti resistant - which was important because this was a school building.

One additional challenge we had was, since this was a public project, we were required to specify at least 3 equivalent products. On the market at the time was just one other competitor who was just introducing their ventilated porcelain façade on the US market. And they hadn't yet figured out how to modify their system to work with local methods of construction. The third specified manufacturer had to be a product not yet available from US suppliers. Luckily, the contractor who won the bid and ended up installing all the façade systems realized quickly which was the right supplier!

...Sometimes you take a chance on a new product and get lucky. Other times you discover a lot of headaches. I got lucky with Porcelanosa Facades and I recommend them to other architects and building owners. It's a quality product. It installs easily and it looks very sharp when it's up."

Cosmin Vrajitoru, Architect

JGMA Architects. Chicago, IL



Do you have a great project you've worked on with us that you'd like to see featured here?

Hit reply and let us know...

How Will a Ventilated Façade Work to Cool My Building?

A ventilated façade provides your client's building with a boatload of technical and aesthetic benefits. Today, we're only talking about the technical aspects. More specifically, its effect on your project's energy savings. Before we get too far, let's clarify...



"What is a ventilated facade?"

A ventilated facade is an attached cladding system with an ***air cavity*** immediately behind, which provides drainage, ventilation, and thermal solutions.

It's usually an ***external cladding system*** mechanically fastened or bonded to a framework behind the exterior wall of a new or existing building.



“What does a ventilated facade wall look like?”

You can build your exterior substrate wall of masonry, concrete, or studs (metal or wood). You then add your layer of thermal insulation to the substrate wall's outer face.

The cladding system is fixed to the substrate wall using a lightweight substructure made of various materials (metal is the preferred choice).

You also want to make sure the width of the air cavity is 20 mm (13/16") or more between the rear of the cladding panels and the outer surface of the thermal insulation. (Or as determined by your local building and energy codes.)



“How does a ventilated facade work to cool down your building with high sun exposure?”

First, by preventing direct radiation on the supporting wall, you're drastically reducing solar heating through the envelope.

Ventilated facades have small gaps between the panels to facilitate air's internal movement and cool the building down in summer. As a result, air infiltration can reduce the heat impact on the inside of the building, thus reducing the energy consumption of the air conditioning and generating a higher level of indoor comfort.

Also, a ventilated facade produces ventilation via the open joint pattern in the cladding elements.

In non-ventilated wall construction, the vapor impermeability of your facade panels influences the moisture content of the outer wall. You run the risk of condensation occurring inside your wall when the temperature falls below the dew point temperature. This moisture has a significant deteriorating effect on the insulation performance, which leads to an increase in heat loss.

With a ventilated facade design, you can eliminate condensation if you allow your outer skin to "breathe" in the outside air. It lets vapors escape and lets any vapors still condensing inside the air cavity to evaporate to the outside air. Your insulation stays dry and keeps its full thermal capacity.

The Chimney Effect is the name building science gives to this natural occurrence. Let's see how it applies to using a ventilated facade provided by our open joint porcelain cladding system.

You can reduce the heat flow into your building caused by solar radiation in summer by up to 80%. How? By the chimney effect created between the porcelain cladding panels and the ventilated air cavity.

Because the air inside the cavity heats up, it causes low pressure inside the cavity with respect to the external pressure. Then the hot air rises by convection, letting cooler air from the outside enter the cavity through the panels' open joints.

This ventilation allows for air exchange between the outside and the cavity behind the cladding panels. This air exchange vents any moisture away from the facade, improving the thermal conditions inside the building. By installing the insulation on the outside, you also avoid thermal bridging.

As a quick recap, your advantages for using a ventilated facade include:

- You protect your building's structure from heavy moisture and the damaging effect of solar radiation
- Your facade can "breathe," providing optimal interior climate conditions
- You eliminate condensation risks = no structural decay and better insulation performance
- You'll have less heat transfer
- The ventilated cavity can quickly transport any incoming rainwater and moisture away from your building

That's all for today. We hope you've enjoyed reading another issue of our newsletter's updated format.

We'd love to hear what you think of it! What you'd like to hear more about... Or hear more about what you're working on.

Just hit reply and let us know. We read every response.

Until next time, always be learning...

Thank you,
Your Partners in Design at

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P.S. Here's three ways we can help you right now...

1) Sign up for our Virtual Online Lunch & Learn CEU presentation.

[Sign up here](#) for our presentation called, "Ventilated Façade System for Buildings."

You'll earn 1 AIA HSW CEU, and you'll learn more about when & how to use a ventilated façade, as well as the advantages you'll get using a ventilated façade over using other cladding systems.

SIGN UP TODAY!

2) Contact us for a free, no-obligation project consultation.

Go [here](#) to schedule a no-obligation call. Get to know us and share your vision for your project. If this project isn't a great fit, we'll just let each other know. And part as new BFFs looking forward to the next chance to work together.

Or you can always give us a call at 1.866.FACHADA

3) See if your project is a good fit for our Design Assist service.

Check out our two-page Design Assist Services description [here](#) to help understand a bit more about this awesome way we can work together.

The TL;DR version: If your project meets just two simple requirements, our complimentary Design Assist service will help ensure your façade design's success, while saving your design team time, money, and headaches.

[Check it out today!](#)