



# SWISSPEARL ARCHITECTURE 10

International Edition – High Profile Buildings

# SWISSPEARL ARCHITECTURE 10

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# ARCHITECTURE FOR EDUCATION



Some one hundred and fifty years ago, Chief Seattle is supposed to have said: "The earth does not belong to us, it belongs to our children." Previous issues of *Swisspearl Architecture* magazine discussed ecology. Another topic is the education of our next generation, with the main focus on education as such – what young people

are taught and how they learn.

Let us consider the physical world in which education occurs – kindergartens, schools and universities. Even in the age of e-learning, buildings are needed in which it is a pleasure to teach and learn.

What is a "good" school? This is for children to decide. Nonetheless, I would say it is a place where children enjoy spending their days with their teachers and classmates. Where children are happy to increase their knowledge and skills in order to achieve their full potential in later life.

Being in a pleasant education facility will subtly open the pupils' minds for the value of quality architecture. This new understanding will foster a higher respect for the buildings they share with their classmates over the years and make them proud of their school and its surroundings.

Because each generation is also entitled to leave behind an architectural footprint, the following pages celebrate architects' quest for and expertise in creating exceptional education facilities despite budget constraints. *Swisspearl* is an ideal material to achieve such goals. The schools featured here are an inspiring enrichment for our children, as well as for the adult communities nearby.

Public transport is another aspect of public facilities. Everyone, regardless of their age, appreciates pleasant and safe underground transport facilities. Not only did new underground train stations in Malmö and Santiago de Chile pose some intricate technical challenges, their subsurface architecture is to be commended for some truly remarkable and polished aesthetics. May you enjoy this issue of *Swisspearl Architecture*.

**Anders Holte, CEO Eternit (Schweiz) AG**







Mondrian's paintings use a sophisticated, yet high-impact colour palette, and have been plagiarised by any number of copycats and designers. The colourful façade of the newly-built kindergarten in Bozen/Bolzano shows that Mondrian-inspired architecture can work.

Kindergarten, Bozen/Bolzano, Italy

## MONDRIAN-STYLE COLOUR PALETTE







May 2009 saw the timely completion of construction work begun in September 2007 for the new kindergarten on Positanostrasse in Bozen/Bolzano. The new nursery school was therefore able to receive its first pupils – 100 children in four German and Italian linguistic groups – at the beginning of the new school year.

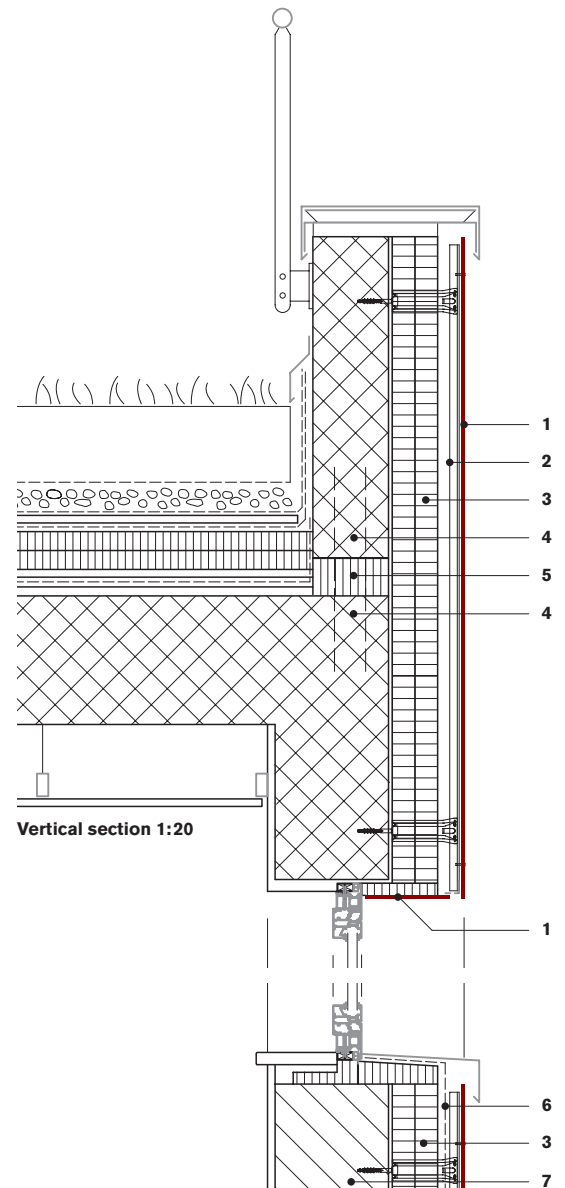
The placement of the building on the plot left plenty of open space, with classrooms oriented to make the most of natural light and sunshine. The classroom wing is roughly oriented north-south, while the wing containing rooms for common use and administrative premises is in an approximate east-west alignment. The two wings are joined at an obtuse angle by the main entrance and staircase. Important service areas such as changing rooms, kitchen and laundry are located on a floor below ground level; classrooms, a multi-purpose hall and offices are at street level, while resting and gym rooms, a language lab, a computer room, a multi-purpose room, the dining hall and a roof-top terrace are all located on the first floor.

This kindergarten is a striking example of a public building whose monumental gesture and eye-catching colours project its representative function for all to see. Tall blue pillars off the southwest-oriented main façade overlooking the play area support a porch, which a gap separates from the flat roof of the building itself. While the porch provides shelter to the children, the pillars express a certain loftiness typical of many public edifices in northern Italy.

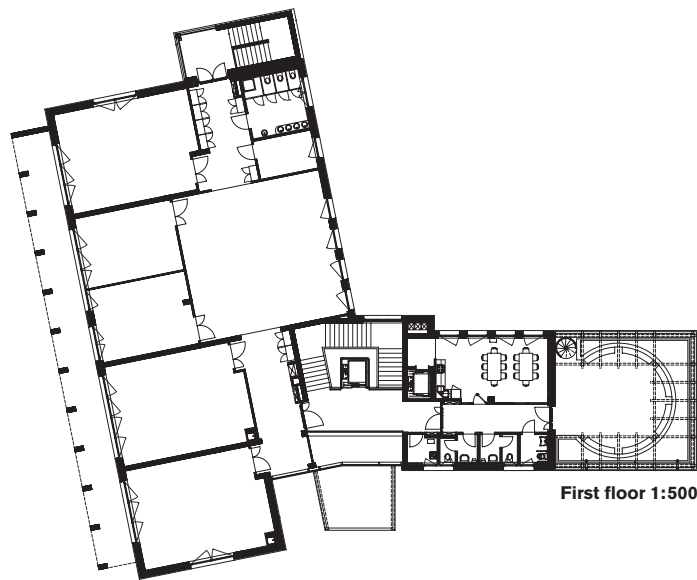
Even more striking is the gaudily playful façade treatment that distinguishes the nursery from apartment blocks nearby. A horizontal band of colourful Swisspearl façade panels – red, yellow, green, blue, black and white

**The Mondrian-inspired colours and formats of the gaudy cladding panels add a playful touch to this nursery school.**

- 1 Swisspearl® cement composite panel 8 mm**
- 2 Ventilated cavity**
- 3 Thermal insulation, mineral wool 140 mm**
- 4 Concrete**
- 5 Thermal insulation, foam glass**
- 6 Moisture barrier**
- 7 Brick work, plastered**

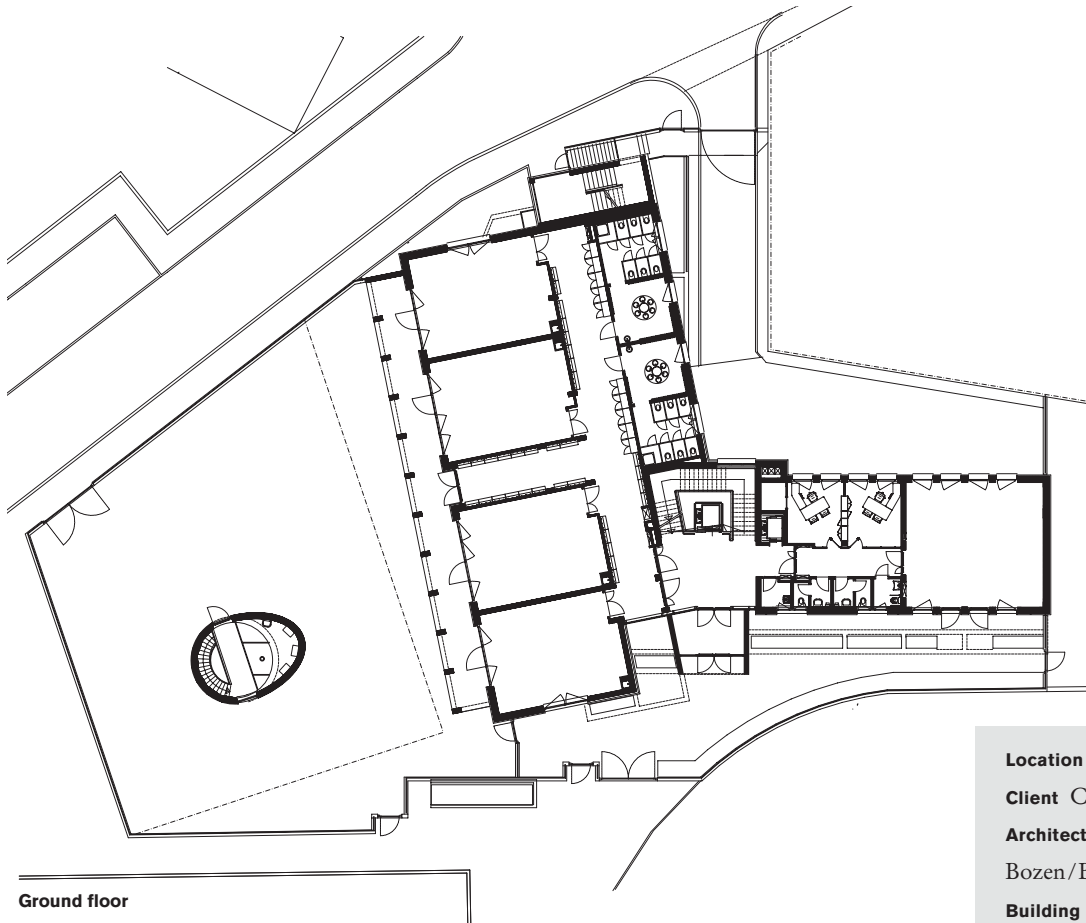






First floor 1:500

**“WE WANTED TO CREATE A CHILD-FRIENDLY, ATTRACTIVE, STIMULATING NEW PLACE OF LIVING, PLAYING AND LEARNING TOGETHER. CHILDREN RESPOND VERY STRONGLY TO COLOURS – THE WIDE RANGE OF COLOURS IN THE SWISSPEARL PALETTE ENABLED US TO IMBUE THE BUILDING WITH A SPECIAL CHARACTER.” FULVIO CLAUDIO MELLE**



Ground floor

**Location** Positanostrasse 10, Bozen/Bolzano, Italy

**Client** City of Bozen/Bolzano

**Architects** Fulvio Claudio Melle and Mario Salvalaio, Bozen/Bolzano

**Building period** 2007–2009

**General contractor** Trading Alpi Srl, Meran

**Construction supervisor** Studiomelle, Bozen/Bolzano

**Façade construction** J. Reinisch & Co., Bozen/Bolzano, and Trimont GmbH, Bozen/Bolzano

**Façade material** SWISSPEARL® CARAT, Onyx 7090 and 7099, Black Opal 7024, Amber 7081, Jade 7052, Coral 7033, Azurite 7043



The tall pillars stand for the monumental character of a representative public building.

## IT WAS EASY TO BE INSPIRED BY MONDRIAN'S ARTISTIC YET PLAYFUL MASTERY OF PRIMARY COLOURS." FULVIO CLAUDIO MELLE

squares and oblongs of varying size – wraps around the building on the upper floor while the remainder of the façade is clad in white Swisspearl panels whose gaps are aligned with the windows. The colourful frieze is discreetly reminiscent of Piet Mondrian's art but lacks his bold black lines. In a further departure from the master's template, the tonality of the colours from the Swisspearl standard range is merely an approximation to Mondrian's primary colour palette. However, a wall-painting on the lateral wall of the entrance porch makes more explicit reference to the artist. *Michael Hanak*



Replacing an obsolete structure dating from 1976, the new Segerstrom Science Center was built to accommodate the ever-expanding academic community at Azusa Pacific University. The centrepiece of the three-story building is its inner courtyard, a meeting place for students and faculty.

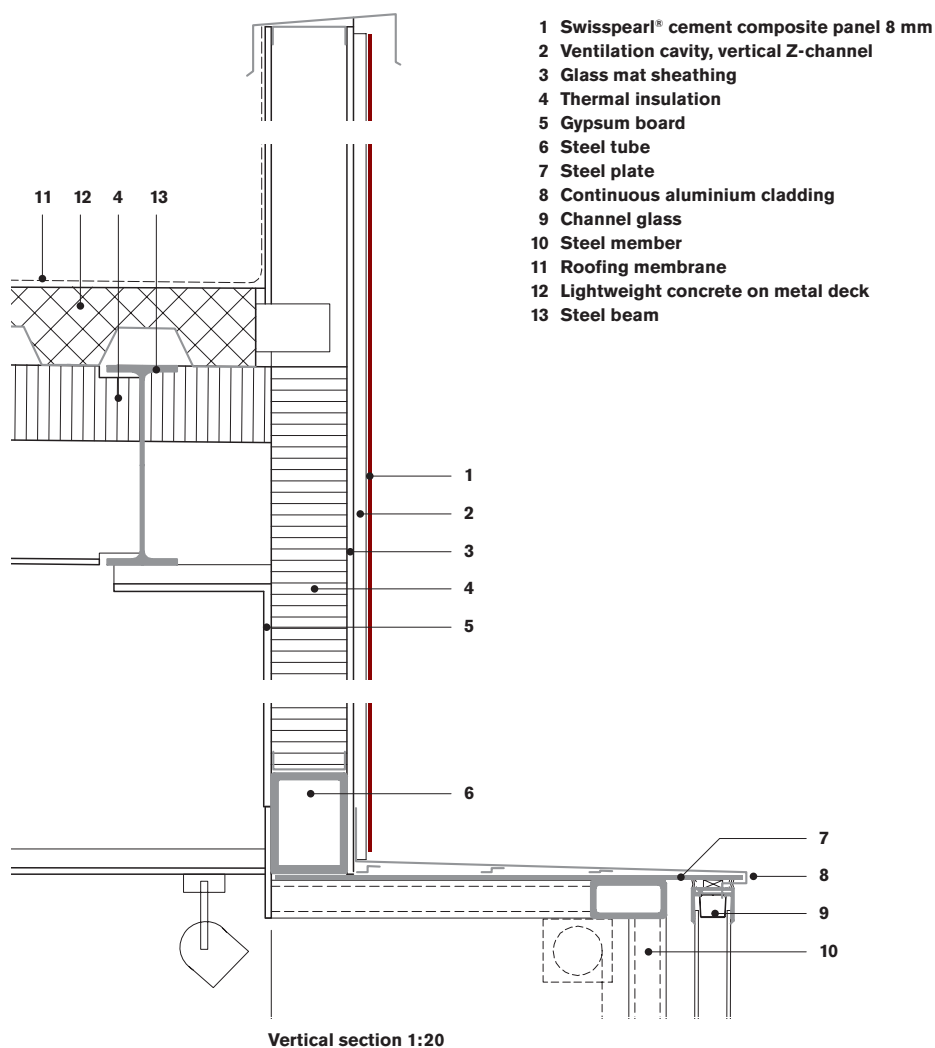
Segerstrom Science Center, Azusa, USA

## SCIENTISTS' GATHERING









**Location** 701 E. Foothill Boulevard, Azusa, CA, USA

**Client** Azusa Pacific University, Azusa

**Architects** AC Martin Partners, Los Angeles;  
 Grit Leipert, Christopher King, Frederick Marks,  
 Tim Redmond

**Building period** 2007–2009

**General contractor** C. W. Driver Construction,  
 Pasadena, CA

**Façade construction** Berger Bros., Inc., Azusa

**Façade material** SWISSPEARL® CARAT, Black  
 Opal 7020; REFLEX, Platinum 9020 and Silver 9000



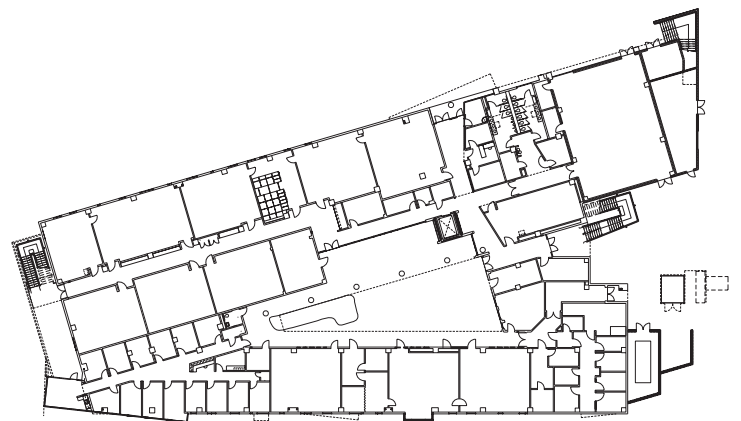
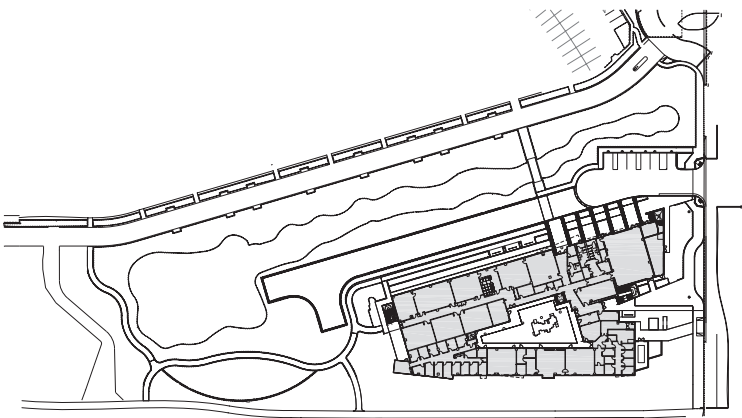
**“THE BUILDING DEFINES A NEW GATEWAY TO THE CAMPUS WITH A GLOWING FAÇADE OF CHANNEL GLASS – ESTABLISHING A UNIFYING AND DEFINING LANDMARK FOR AZUSA PACIFIC UNIVERSITY.” AC MARTIN PARTNERS**

In the highly volatile field of architecture it is amazing to find a firm that has managed to survive over more than a century, but AC Martin Partners have done just that. Founded in 1906 by Albert C. Martin Sr., this firm may have shaped the face of Los Angeles and its surrounding areas more than any other single designer. The oeuvre includes stand-out projects such as the Los Angeles City Hall or art deco May Company department store along with hundreds, if not thousands, of commercial and administrative buildings. Today, under the leadership of cousins David and Christopher Martin, the founder’s grandsons, AC Martin Partners remains one of the largest architectural firms in Southern California.

The latest addition to the firm’s comprehensive portfolio is Segerstrom Science Center at Azusa Pacific University (APU), completed in May 2009. Situated 26 miles







Ground floor 1:1000



(42 kilometres) northeast of Los Angeles at the entrance to San Gabriel Canyon, Azusa Pacific University is one of the largest and most prestigious Christian colleges in the United States. Hosting more than 8,100 students, it offers a wide variety of over eighty bachelor's, master's and doctoral programmes. The 54 million dollar Segerstrom Science Center, named after the Segerstrom family in recognition of their longstanding support of the University, is the most fiscally significant undertaking in APU history. Most notably, the 72,000 square foot (7,000 square metres) West Campus facility houses the Department of Biology and Chemistry as well as the Department of Mathematics and Physics.

The three-storey building comprises 26 classrooms and 37 teaching and research laboratories, all of which are based on a repetitive unit of measurement in order to pro-

vide flexibility and allow for any future functional modifications. Further key components include faculty offices and community areas, as well as student conference rooms and a 90-seat lecture hall on ground level. The three parts of the building are arranged around a trapezoid courtyard which provides daylight to the interior spaces. Lavishly landscaped and complete with a 40-foot (12 metre)-long freshwater pond, the courtyard, along with three rooftop patios of various sizes, serves as a gathering place to promote communication and teamwork amongst students and faculty. The planting within the courtyard and around the building is noteworthy for its selection of domestic species such as agaves and sycamore trees. Due to this carefully conceived landscaping – in combination with other sustainability features such as highly efficient heating, ventilation and air conditioning





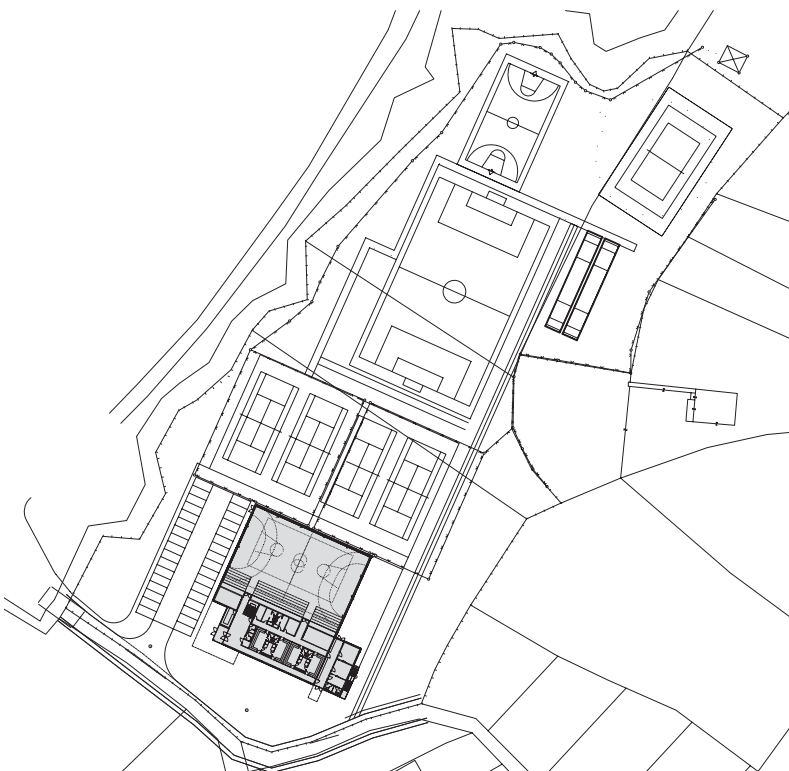




systems and the ventilated façade – the Segerstrom Science Center is expected to achieve LEED Gold certification. The outward appearance of the Segerstrom Science Center is marked by a combination of expansive glazing and Swisspearl cladding, with the north façade showing extensive black panelling on the lower floors. A wedge-shaped canopy marks the entrance to the building and, to the left, an open staircase leads to the main rooftop terrace on the second floor. The top floor is shielded in its entire length by a translucent membrane of channel glass, allowing filtered light into the laboratories and classrooms while at the same time sustaining a visual screen. In contrast, the south façade displays an irregular pattern of silver and greyish Swisspearl panels interspersed by windows and protruding fully glazed sections. Facing Foothill Boulevard, part of the historic Route 66 and the main axis connecting the West and East campuses, the façade serves as a signature wall, not only for the new Science Center but for the University as a whole. *Patrick Zamariàn*

# Sports Hall, Sveti Martin na Muri, Croatia

## Contour and Surface

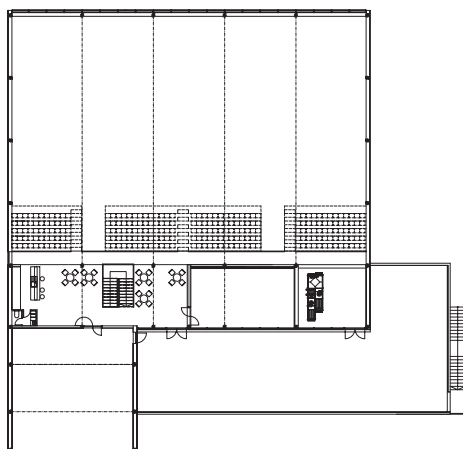


The small community of Sveti Martin na Muri is located in the very north of Croatia, near the boundaries with Slovenia and Hungary. Its thermal spring is the reason why it is one of Croatia's biggest and most attractive resorts, and Sveti Martin Spa and Golf Resort has become a very popular tourist attraction. Not only is there a modern spa and hotel, but also a wide range of sports facilities, a new sports hall among them.

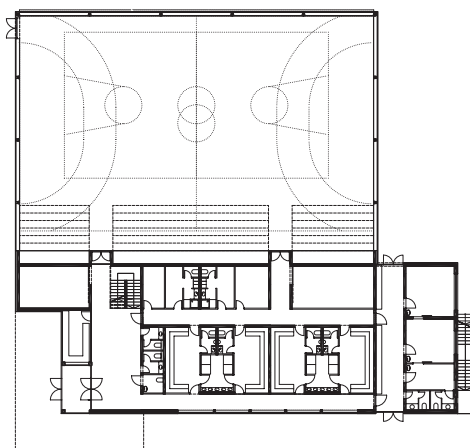
The main hall, approximately oriented east-west, receives natural light through clerestory windows along the narrow sides. A slightly lower wing holds the dressing rooms and, on the upper floor, a smaller gymnasium with a south-facing glass wall cantilevered above the main entrance, as well as a fitness studio and a café.

The exterior of this angular, chunky structure is clad in brown Swisspearl panels whose height decreases in relation to their distance from ground level. Their warm colour echoes the soil and vegetation of the spectacular rural surroundings and contributes to the outdoor sports facilities' peaceful and serene atmosphere. *Michael Hanak*

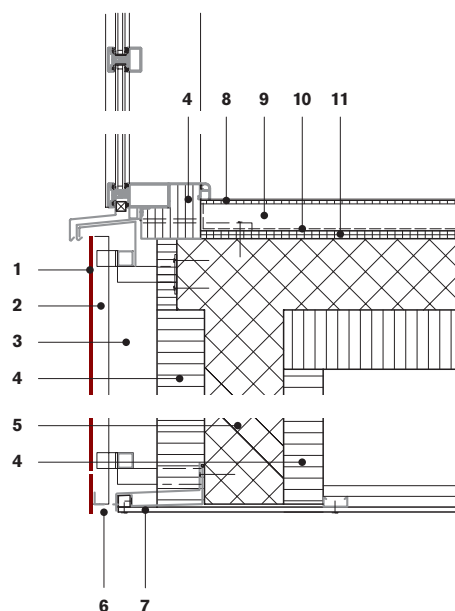
The simple shape of the buildings contrasts with their surroundings; their earthy colour blends in with the rural setting.



First floor 1:700



Ground floor



Vertical section 1:20



- 1 Swisspearl® cement composite panel 8 mm
- 2 Sub-frame system 40 mm
- 3 Air gap 160 mm
- 4 Thermal insulation, mineral wool
- 5 Reinforced concrete 200 mm
- 6 Insect screen
- 7 Waterproof painted plaster board 12.5 mm
- 8 Linoleum 10 mm
- 9 Cement screed 70 mm
- 10 Polyethylene foil
- 11 Acoustic insulation 20 mm

**Location** Grkavščak, Sveti Martin na Muri, Croatia

**Client** Toplice Sveti Martin d. d.

**Architects** Sangrad d. o. o, Zagreb; Vedran Pedišić D. I. A., Mladen Hofmann D. I. A.

**Building period** 2008–2009

**General contractor** Team d. d., Čakovec

**Façade construction** Gama Team d. o. o., Donja Dubrava

**Façade material** SWISSPEAL® REFLEX, Mystic Brown 9271

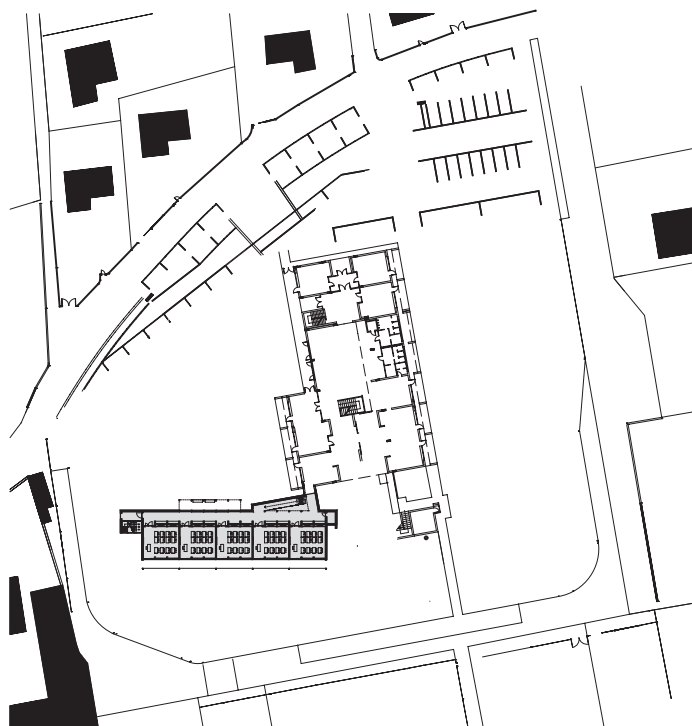


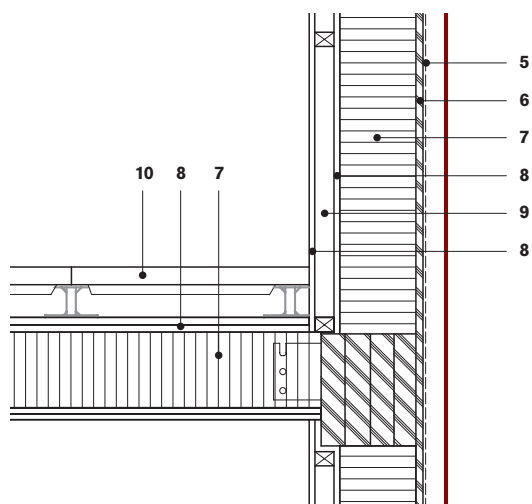
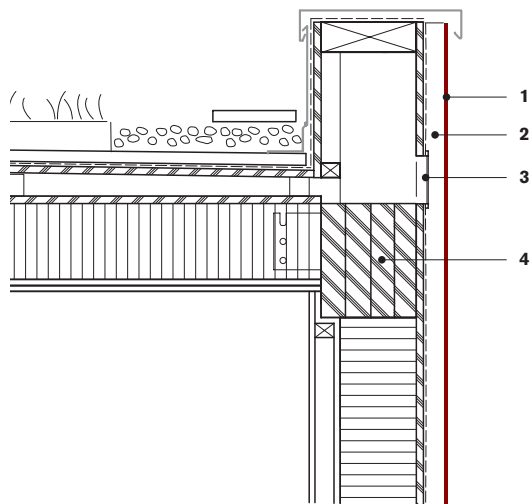
# School Extension, Pieve di Soligo, Italy

## The Green Red Building

Energy, health, comfort, landscape and economy were the most important considerations for the construction of the extension to the Pieve di Soligo public primary school near Treviso. The two-storey building is completely independent from the older part of the school and comprises ten classrooms, each of which has a rectangular floor plan. In order to make the best use of sunlight at all times, the new classrooms are aligned along an east-west axis. On the south side, a porch accommodates a horizontal sunscreen to keep out excessive sunlight in the summer. The north wall is highly insulated. All outside walls have been clad with wood and red Swisspearl panels. “The cement panels contrast with horizontal staves of thermowood fixed to a ventilated wooden sub-structure,” explains the architect, Giancarlo Allen. The building is covered by a flat green roof. High insulation, ventilation, permeability and a solar-panel heating system guarantee low energy consumption. *Britta Limper*

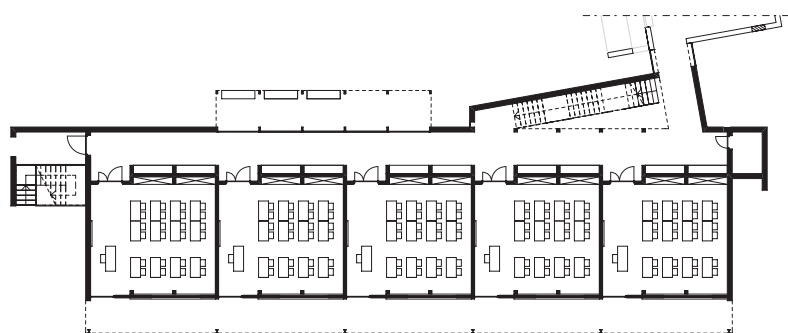






Vertical section 1:20

- 1 Swisspearl® cement composite panel 8 mm
- 2 Ventilation cavity
- 3 Aluminium insect screen
- 4 Plywood beam
- 5 Wind breaking layer
- 6 Chipboard 15 mm
- 7 Thermal insulation, cellulose fibre 160 mm
- 8 Gypsum board 12.5 mm
- 9 Electrical system cavity 30 mm
- 10 Inspection raised floor



Ground floor 1:500

**Location** Via Cal Santa, Pieve di Soligo, Italy

**Client** Comune di Pieve di Soligo

**Architect** Giancarlo Allen, Treviglio; Stefano Zara, Debora Spagnol

**Building period** 2004–2008

**General contractor** Belwood S.r.l., Sedico

**Façade construction** CEL.MAC.S SRL, Arcore

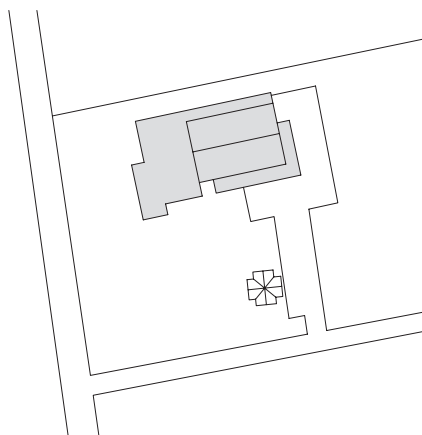
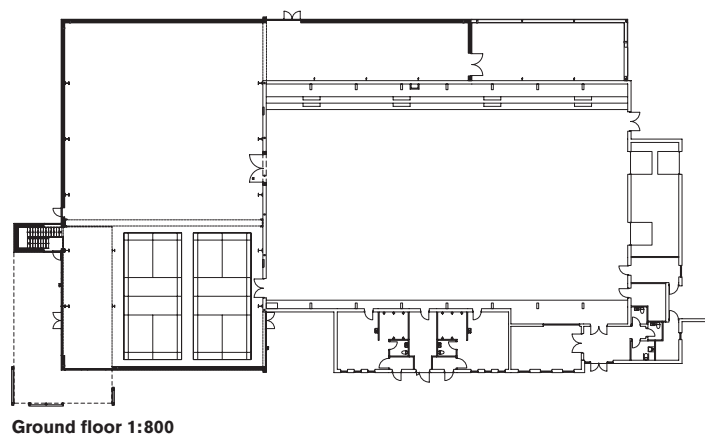
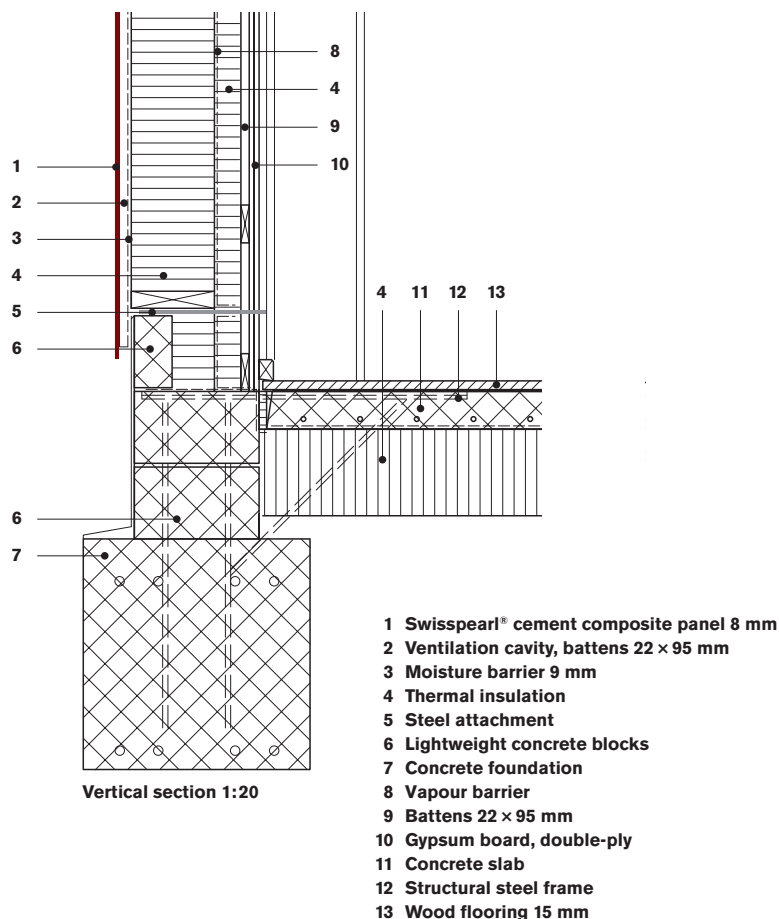
**Façade material** SWISSPEARL® Planea Red P 314 and Nobilis Grey N 22





Extension of Skibelund School for Gymnastics and Athletics, Vejen, Denmark  
**A New Face for the School**





Various countries offer various educational opportunities to young people at the end of their obligatory schooling and about to embark on higher education or vocational training. Denmark has over 260 so-called residential “afterschools”. The highly popular “efterskole” is a unique Danish institution for adolescents to complete their primary education. “Afterschools” not only teach the regular curriculum but aim at helping students become well-rounded individuals.

Surrounded by meadows and woodlands, Skibelund School for Gymnastics and Athletics near Vejen on Jutland is one of Denmark’s oldest such schools. To strengthen its gymnastics and sports profile, a gymnasium was added in 2005. The school’s new face overlooks the passing main road and sports not only the school logo, but is also adorned with gymnasts’ silhouettes.

In contrast to the older red brick buildings, the recent cuboid structure has a façade of grey cement composite panels. While most of it looks inward, a roof-height glass wall in the gymnasium’s south-east corner opens to the outside world and reveals the school’s identity.

*Michael Hanak*

**INSULATING WOOD-FRAME ELEMENTS HAVE BEEN ADDED TO THE WEIGHT-BEARING STEEL STRUCTURE; THE EXTERIOR FAÇADE CONSISTS OF SWISSPEARL PANELS.**



**Location** Kongeåvej 34, Vejen, Denmark

**Client** Skibelund Gymnastik- & Idrætsefterskole, Vejen

**Architects** Pro Arkitekter / Thorup Gruppen, Tårn

**Building period** 2005

**General contractor and façade construction** MT Højgaard A/S, Søborg

**Façade material** SWISSPEARL® CARAT, Black Opal 7020







# Extension of Private School Bernadotteskolen, Hellerup, Denmark

## Stern yet Playful



“The buildings of the Bernadotte School are the perfect metaphor for the school’s pedagogical principles. Its diverse architecture is characterised by many nooks and crannies. Glimpses of different things and activities in all directions help to create an atmosphere of familiarity and long usage. Even so, the buildings change constantly. Seldom major changes but nevertheless everywhere there are small but noticeable alterations as the school evolves over time.”

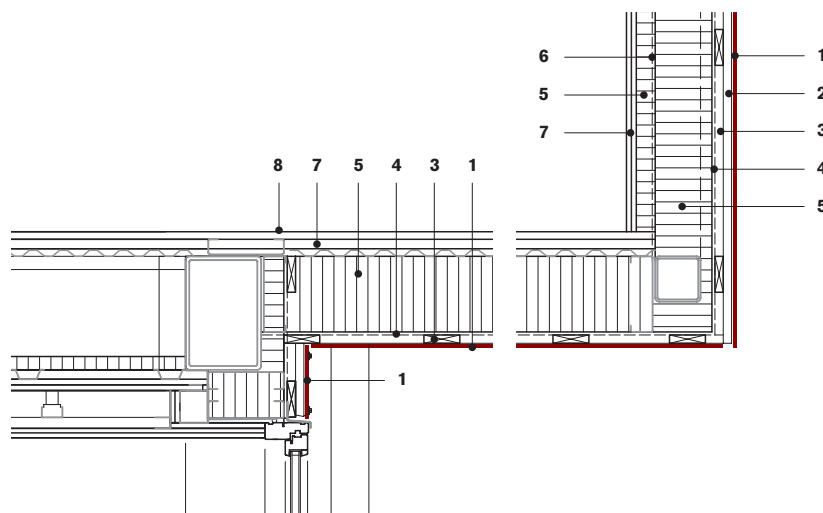
This is how the Principal explains the accumulation and continuous adaptation of various buildings since the school, located in a suburb north of Copenhagen, was founded sixty years ago. In an institution that treats each student as an individual, each building is treated likewise.

2009 saw the extension of Bernadotteskolen’s main building. Renowned Danish architects Vandkunsten have clearly juxtaposed the new wing against the existing two-storey building with its gable roof. Red brick contrasts with black Swisspearl cladding; the random distribution of windows in the cubic volume speaks a modern idiom. Playful wire trellises for creepers and climbing plants run criss-cross over the cladding panels’ tall rectangles.

Internal stairs and external footbridges connect the L-shaped extension and older premises: the basement workshop has been given an extra room, above which there is a new classroom with direct outside access, while a classroom and the library have been extended on the upper floor. A multi-purpose hall embraces the existing villa along the courtyard with its large linden tree. Roof terraces at various levels provide further outside space.

The extension’s radically new formal idiom is very distinctive, a distinctiveness that turns the black prism into one more individual module in the wonderfully haphazard and convoluted school grounds. *Michael Hanak*

**“THE PHYSICAL FRAME WAS CHALLENGING AND THE EXTENSION IS AN INSPIRING EXAMPLE OF WHAT IS POSSIBLE UNDER DIFFICULT CIRCUMSTANCES.” VANDKUNSTEN**



Vertical section 1:20

- 1 Swisspearl® cement composite panel 8 mm
- 2 Ventilated cavity, vertical sub-framing
- 3 Batten
- 4 Wind breaking layer
- 5 Thermal insulation, mineral wool
- 6 Vapour barrier
- 7 Gypsum board
- 8 Linoleum

**Location** Hellerupvej 11, Hellerup, Denmark  
**Client** Bernadotteskolen, Hellerup  
**Architects** Vandkunsten, Copenhagen  
**Building period** 2009  
**General contractor and façade construction** Drivhus-Effekten, Lyngby  
**Façade material** SWISSPEARL® CARAT, Black Opal 7024

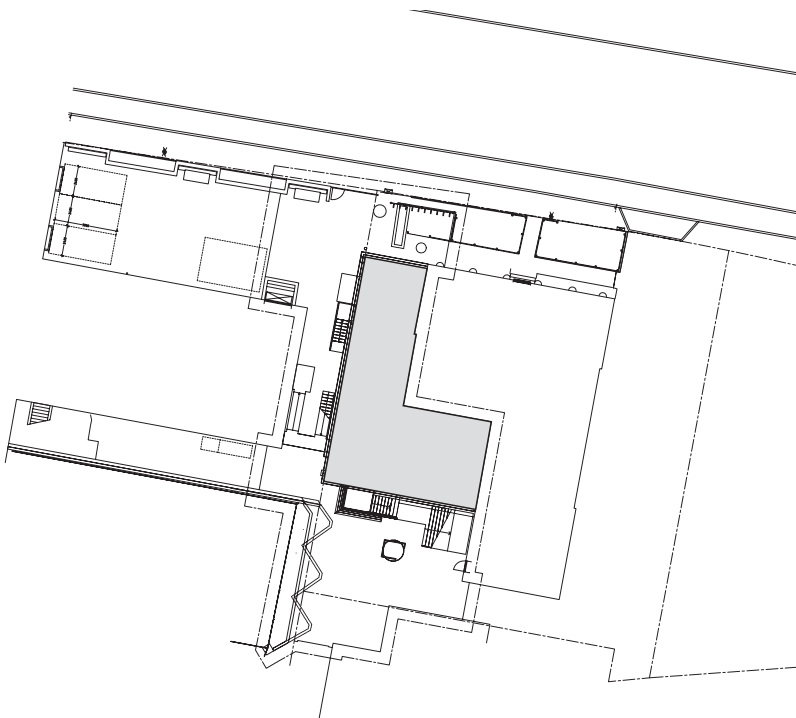






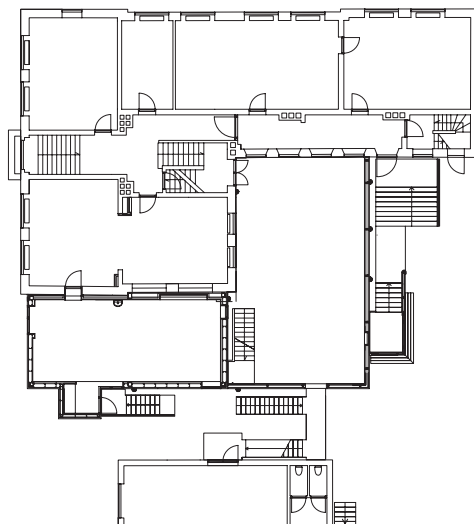
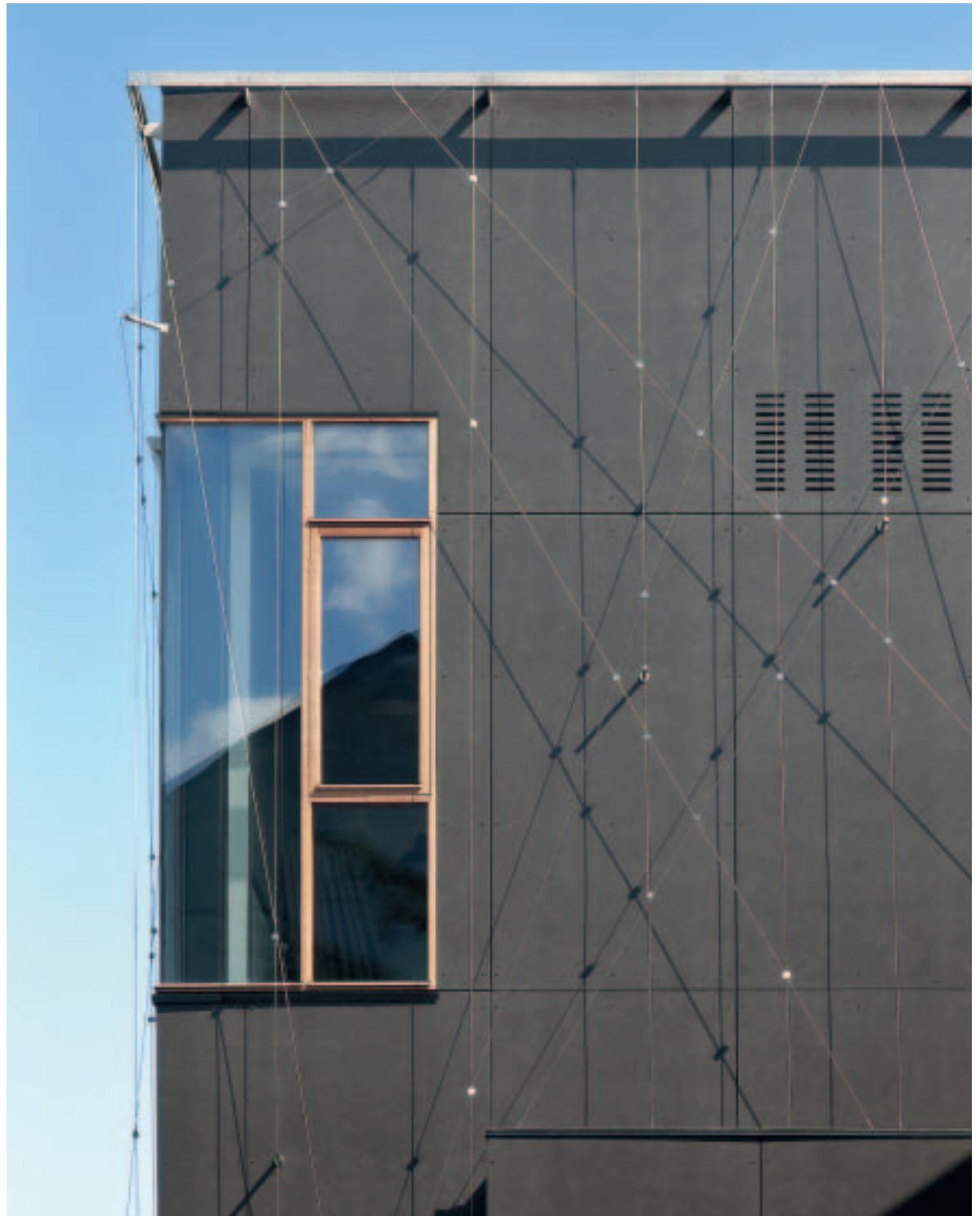
**“A TRELLIS WIRE SYSTEM ON THE FAÇADE OF THE NEW BUILDING WILL ALLOW WISTERIA, IVY AND VIRGINIA CREEPER TO CLIMB; DAYLIGHT WILL EVENTUALLY FILTER THROUGH THEIR LEAVES.”  
VANDKUNSTEN**

The extension wing has been slotted precisely in between existing buildings and the linden tree in the courtyard.

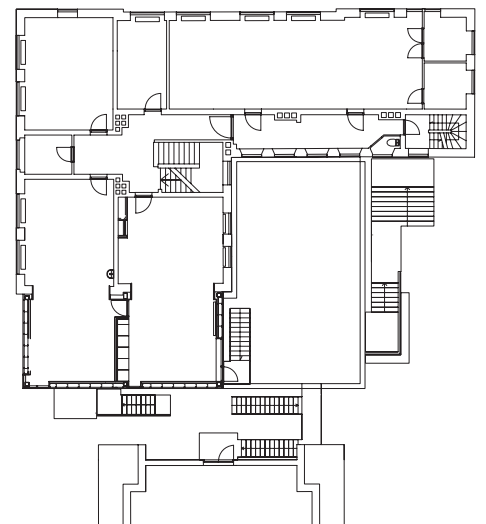




Corner windows, façade cladding perforated with slits, and the diagonal trellis wires add playful elements to an otherwise stark, rectangular prism.



First floor 1:400



Second floor



## Extension of Sports Centre, Jyderup, Denmark

### The Future's Bright

All the sports halls have cladding of dark grey-green Swisspearl panels. The acoustic perforation of some of the panels also serves as a decorative element.

Danish architects PLH converted a 1970s sports hall into a multifunctional centre. Plain but robust materials and generous apertures make for bright and contemporary spaces.

“It was a challenge to design a good extension to a 1970s functional building,” says Ib Laursen of Danish architects PLH. When faced with the task to upgrade an old sports centre in the small town of Jyderup, they adopted their award-winning study, which focused on the adaptation of old sports centres to new requirements. The brief called for at least two badminton courts, an open area for dancing lessons, storage space, a long-jump pit and a multi-purpose cafeteria. “One of the main challenges was to leave the building as flexible as possible, as we don’t know what the sport trends of the future will look like,” Ib Laursen explains.

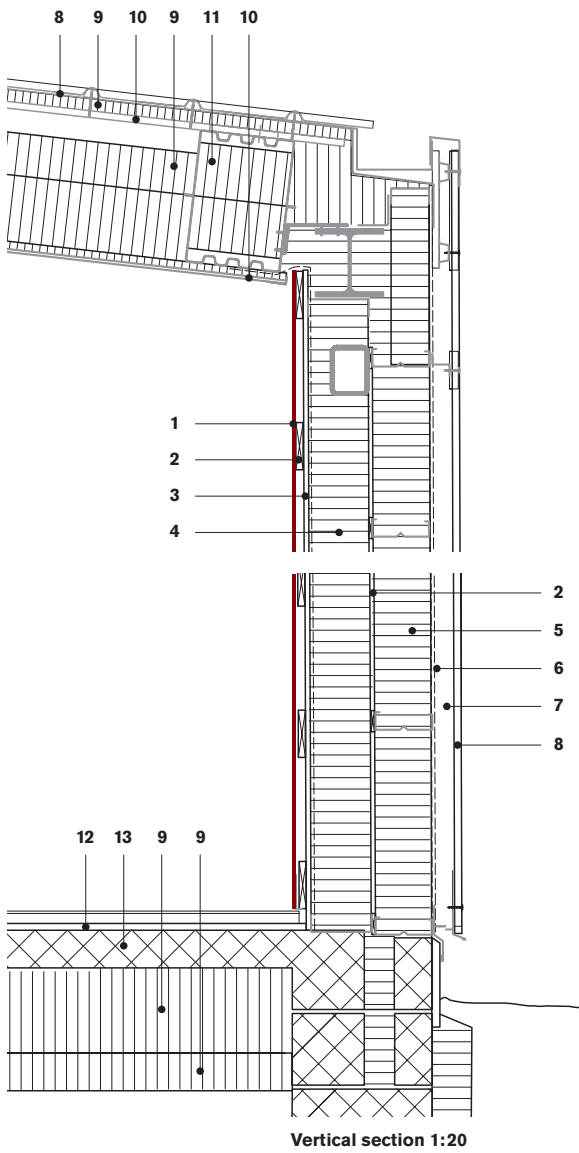
PLH architects rotated the main axis of the existing building to obtain a strong, angular entrance, and free up the necessary space for large and small multifunctional halls with wide glass openings. The framework has been kept light and flexible so that it can always be adapted. In Swisspearl the architects found the perfect material with

the right robustness and colour range for the inside of the halls. Large vertical panels in dark grey-green cover the walls of the halls, cafeteria and access zones. For acoustic reasons, some of the panels have a regular perforation pattern; it also serves as a decorative element.

*Mirko Beetschen*

**Location** Elmegården 58, Jyderup, Denmark  
**Client** Ny Holbæk Kommune  
**Architects** PLH Arkitekter A/S, Copenhagen  
**Building period** 2007–2008  
**General contractor** B. Nygaard Sørensen A/S, Herlev  
**Façade construction** Jensen A/S, Svinninge  
**Façade material** SWISSPEARL® NOBILIS, Grey N203

**“THE CONCEPT WAS TO MERGE THE EXISTING WITH THE NEW IN A LIVELY, CONTEMPORARY BUILDING DESIGN.”**  
**IB LAURSEN, PLH ARKITEKTER**



- 1 Swisspearl® cement composite panel 8 mm
- 2 Horizontal batten
- 3 Gypsum board 13 mm
- 4 Thermal insulation, vertical steel profile 150 mm
- 5 Thermal insulation, horizontal steel profile 150 mm
- 6 Moisture barrier 9 mm
- 7 Ventilated cavity 50 mm
- 8 Coated steel panel
- 9 Thermal insulation
- 10 Galvanised steel
- 11 Steel beam, thermal insulation
- 12 Sports floor 32 mm
- 13 Concrete slab 110 mm





**TRIANGELN RAILWAY STATION, MALMÖ, SWEDEN**



# **REPORT**

## **THE DESIGN OF UNDERGROUND SPACES**



**METRO STATIONS, SANTIAGO DE CHILE, CHILE**



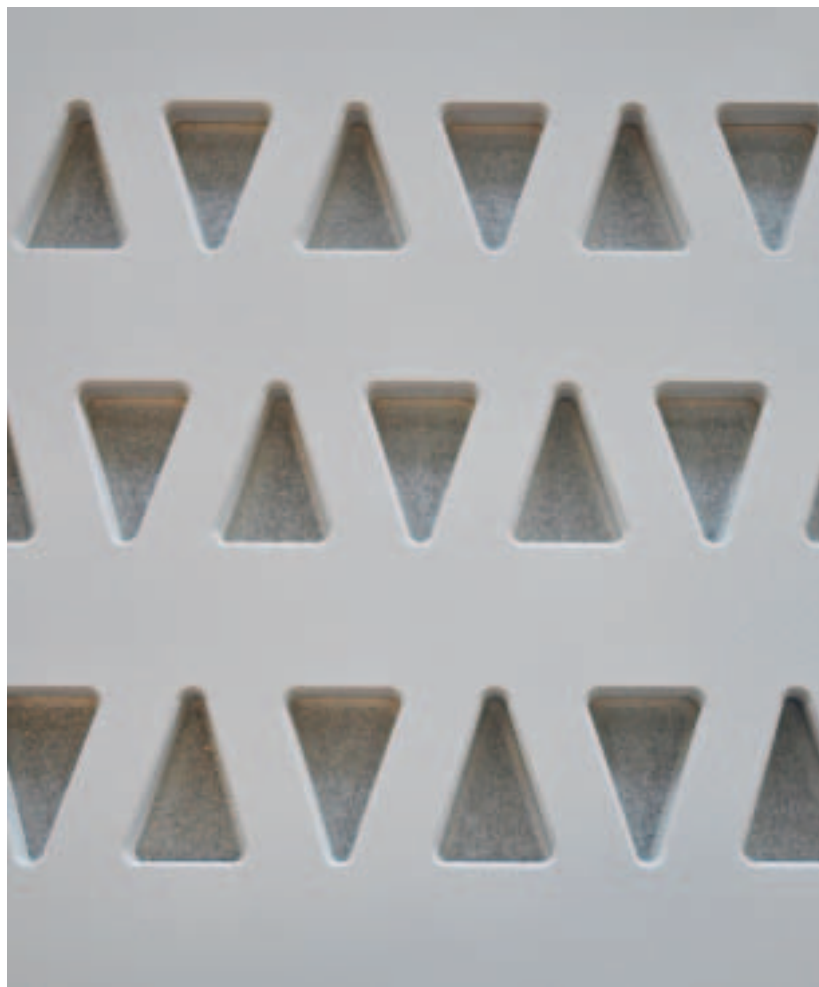
Originally a Beaux Arts amenity for patricians, subway systems have become a mass phenomenon. Underground stations constitute a pivotal extension of urban space, often undervalued not only by the general public but also by the architects themselves. Tadao Andō once identified working on underground space as the search for the origins of architecture as such, for it “enables us to design continuous space without any apparent form”. Still, only few architects are enticed into what is essentially considered an engineering task.

Indeed, the prevalence of underground railway networks has created a rather paradoxical situation for architects. Such systems usually spawn massive urban development along their routes. In many cases, they were major catalysts for the transformation of small cities into congested metropolitan areas such as New York or, more recently, Hong Kong. Densely built-up inner city areas, however, complicate the planning of new stations in times when untenable traffic conditions and growing ecological awareness demand the expansion and upgrading of public transport.

The convenient cut-and-cover technique which allows for a redesign of the surface and the deployment of skylights, providing both daylight to the lower sections and orientation to pedestrians, is rarely feasible. More often, sophisticated methods are required to build new underground space amidst a clutter of existing foundations, water pipes and gas or electric mains.

This also means that there is little room for outward representation. Small entrance pavilions that pierce the surface like submarine periscopes reveal little of the vast structures beneath. In a few rare cases, such as Norman Foster's Bilbao Metro, these access buildings provide recognisable, uniform beacons for the subway system. However, the perceived benefits of uniform appearance in the manner of Otto Wagner's Vienna Metropolitan Railway seem unattainable in today's urban settings.

Instead, greater emphasis is put on the design of the interiors. Clear passenger routes and generous, well illuminated spaces are among the main priorities. Floor coverings and tunnel linings require a careful selection of materials which are subject to precisely defined criteria. They must be fire-resistant, durable, break-resistant, easy to clean and replaceable. The following two projects illustrate two distinct approaches in the usage of Swisspearl panels for this particular design task. *Patrick Zamariàn*



## Interview with Anders Nilsson and Jonas Bildtgård, Malmö

**The tunnel lining at Triangeln station in Malmö – just like the City-tunnel project as a whole – is the result of a close cooperation between all partners involved. How did it come about?**

*Nilsson:* The same group of project directors worked on the Oresund bridge, and they have a different philosophy of how to work with contractors. Normally you have a split: the owner by himself, then the contractor and then the designers. But here we work more closely together although we have very clear and distinct responsibilities for everything that needs to be done. There are four main characteristics that demonstrate the overall attitude of the Citytunnel project management towards their partners: openness, communication, trust and respect. This means that, as the owner, you must be very proactive.

**What appears to be a simple idea required rather a sophisticated solution involving much more than just the cladding of a tunnel wall. Can you tell us something about the elements that had to be incorporated into the framework design?**

*Nilsson:* First, you have the panels. Care must be taken in the calculation of the holes as the panels create an acoustic effect; the design of the holes in the panels must therefore be capable of dampening this effect. Then

**In keeping with the name of the station, each panel shows a pattern of triangular perforations with chamfered edges that were cut at the plant in Switzerland using state-of-the art CNC machinery.**



**Large skylights pierce through the roof and illuminate the interior. Spirally arranged Swisspearl panels accentuate the circular shape of the roof.**

you have the insulation; how to mount it and include it with the panels. And finally, you have the framework.

*Bildtgård:* It was a very complicated task because of the loads from the trains and the vibration – we call this the dynamic force. German façade engineers Nauth came up with the framework, and we also had specialists here in Sweden who talked to Nauth and verified their mathematical calculations. We want this thing to last for a long, long time before it needs updating. It is very important to us that it is well constructed using good, durable materials that are easy to maintain. So, technically, this was going to be a very advanced design.

**You mentioned the panels. What were the specific requirements for the cladding material?**

*Nilsson:* We knew that we would be unable to use panels made of aluminium and steel due to regulations concerning the electric current from the railway system. You couldn't have a panel that would be an electrical conductor. We also had to take into consideration the specific regulations for dynamic force as set by "Banverket", the Swedish Rail Administration.

*Bildtgård:* The Citytunnel project management came up with the idea to use Swisspearl. It is a very simple system to install and can effectively handle the load placed upon it by the trains and the inherent vibration.

*Nilsson:* We were wondering if there was a standard product on the market that we could use. If we could find such a product, the total time of design and assembly would be cut dramatically and this, in turn, would have a positive impact on our risk management. Consequently, it was great when I found the Swisspearl panels on the Internet.





**Hyllie Station will be the centre of a new urban district in southern Malmö that will provide 7,000 homes and an equal number of jobs. The new station building is marked by a seemingly floating concrete disc. Glass walls will shield passengers from sidewind; the upper sections will be left open to allow ventilation in case of fire.**

sufficient time to make our decision on every detail. Whenever something was approved, we would take it to the next step. We kept in close communication with Promonord, and Promonord with Swisspearl. There was a lot of talking and approval, and mathematical controlling and calculations. When all assessments of materials and their combinations had been made and everything was approved we started production and installation.

*Nilsson:* I think it was a good lesson in how to handle the design process, co-operating closely with the owner and making necessary approvals and verifications step by step.

**The tunnel lining is finished, the rest of Triangeln station will be completed by February 2010. What is your conclusion so far?**

*Nilsson:* The exceptional result has had an impact on the overall success of the whole Citytunnel, saving time and money without deviating from the function or the design. So my personal conclusion is that this project worked exceptionally well, from the first contact with Swisspearl to the final result, including the design progress with the excellent verification of the design. I hope this proves to be a good example of how all involved partners – manufacturer, distributor, designer, constructor and owner – can complete a successful project that is well designed and within budget.

*Bildtgård:* I think it was an excellent team effort by all the partners throughout the entire project, and that everybody involved can be proud of what has been achieved. We have done a very good job.

*Interview by Patrick Zamariàn*

**Anders Nilsson was the project manager of contract E 400 and as such in charge of the tunnel lining at Triangeln station.**

**Jonas Bildtgård is the NCC production manager responsible for all three stations of the Citytunnel project.**

#### **What were the next steps after selecting the panels?**

*Nilsson:* Once we had found the panels, we contacted Promonord, the Swedish distributor of Swisspearl, to have an initial discussion concerning the panels and regulations, addressing whether it was possible to use the product at all and if the suggested product would comply with Swedish regulations. Because the Swisspearl laboratory in Switzerland made extensive tests in wind tunnels, we had to await this information. When we received the positive answer from Swisspearl, the owner (Citytunnel) and Malmö City accepted the proposed panels. A sample of the panels was then sent to Sweden for additional reviewing, and Nauth initiated the design process. Once the design was reviewed and verified, Citytunnel and Malmö City decided to order the panels and the frame system designed by Nauth, including the artistic lighting system in the joints between the panels.

#### **The project involved many different parties in different countries.**

##### **How did this co-operation work?**

*Nilsson:* There were only five partners – Swisspearl, Promonord, Nauth, the contractor NCC and the owner MCG. It was a lot of people sitting all over Europe, but it was still a small group and a very tight team working together.

*Bildtgård:* We listened to Promonord, we listened to Swisspearl, we listened to Nauth, and we listened to our specialists. And after that, if we had any problems with the results, we asked again and everybody always responded within a very short time. Because of that, there was always



## TRIANGELN RAILWAY STATION, MALMÖ, SWEDEN

**Location** Triangeln, Malmö, Sweden

**Client** City of Malmö

**Owner and general contractor** Malmö Citytunnel Group (MCG), Malmö

**Architects** SWECO, Malmö; Lars Lindahl

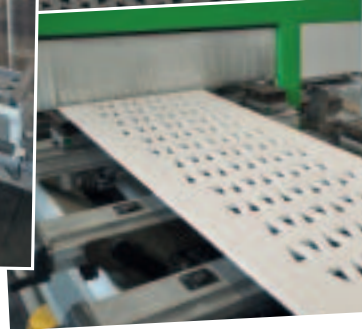
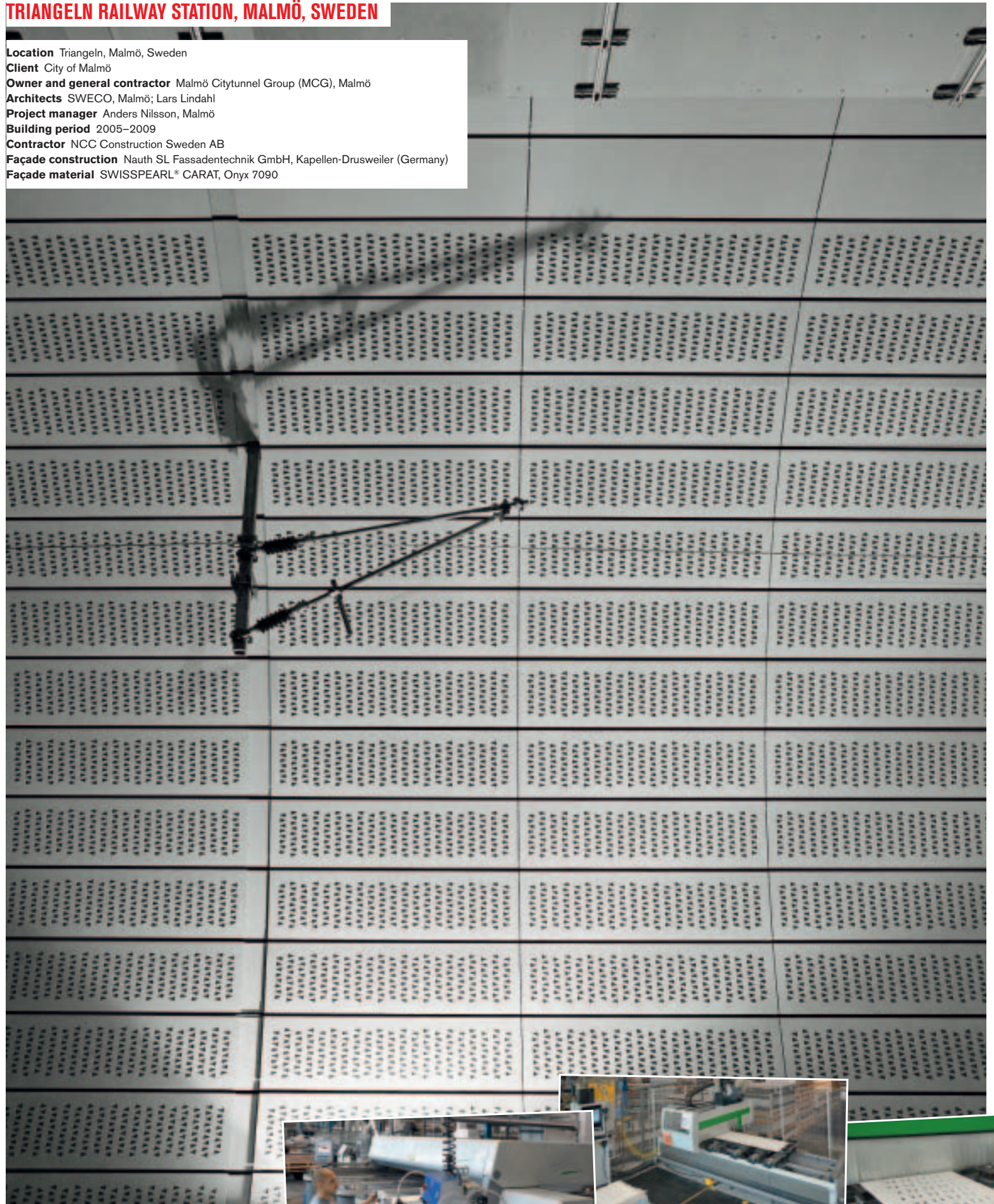
**Project manager** Anders Nilsson, Malmö

**Building period** 2005–2009

**Contractor** NCC Construction Sweden AB

**Façade construction** Nauth SL Fassadentechnik GmbH, Kapellen-Drusweiler (Germany)

**Façade material** SWISSPEARL® CARAT, Onyx 7090

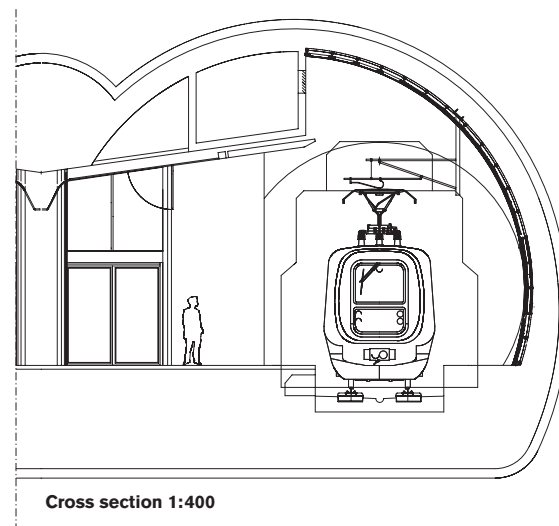




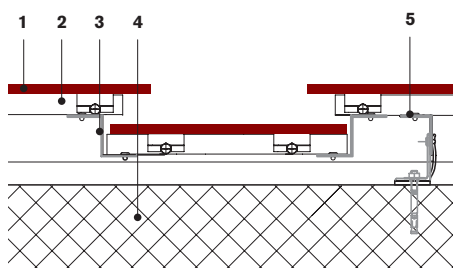
Opened in 1999, the Oresund Link between the Danish capital of Copenhagen and the Swedish city of Malmö has led to an unprecedented increase of rail traffic in the region and precipitated severe strain on its infrastructure. In March 2005, the City of Malmö launched its ambitious Citytunnel project to provide additional capacity and facilitate transport connections to adjacent regions in the north. Scheduled for completion in 2011, the project includes a total of 17 kilometres of electrified railway, a third of it subsurface. Apart from an underground extension to Malmö Central Station, two new intermediate stations will be built: Hyllie, at the southern exit of the tunnel, and most notably, Triangeln underground station in the city centre. Malmö Citytunnel serves to illustrate the extraordinary expenditure inherent in today's large-scale infrastructure projects, whose complexity is reflected in countless separate and often challenging tasks. One such task was the planning and construction of the tunnel lining, entirely of white Swisspearl panels, at Triangeln railway station. In keeping with the name of the station, each panel shows a pattern of triangular perforations with chamfered edges that were cut at the plant in Switzerland using state-of-the-art CNC machinery.

The combination of curved tunnel walls and weighty large-size panels called for a high-standard technical solution. These difficulties were overcome by German façade engineers Nauth, who designed a framework system that incorporated Swisspearl Sigma undercut anchors for unobtrusive fixing of the 12 millimetre thick panels, as well as concealed sound-absorbing boards. To complete the overall wall design, artist Christian Partos envisioned nosy little "light-creatures" that hide in the tunnel when a train approaches and emerge when it leaves again. To accomplish this, a purpose-built motion-sensitive lighting system uses LED rails fitted into the joints between some of the panels.

*Patrick Zamarià*

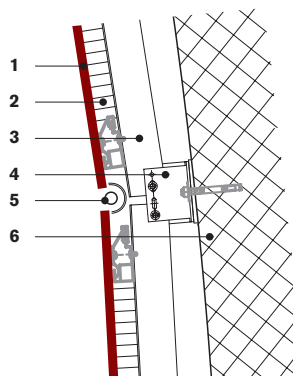


Cross section 1:400



Horizontal section at recess 1:10

- 1 Swisspearl® cement composite panel 12 mm
- 2 Horizontal rail
- 3 Z-profile, aluminium
- 4 Concrete
- 5 Aluminium angle, attached to wall bracket



Vertical section at lighting rail 1:10

- 1 Swisspearl® cement composite panel 12 mm, perforated
- 2 Acoustic insulation
- 3 Aluminium angle
- 4 Wall holder, L-profile revetted
- 5 Light
- 6 Concrete





## METRO STATIONS, SANTIAGO DE CHILE, CHILE

**Location** Metro stations Plaza Los Dominicos, Hernando de Magallanes and Manquehue, Santiago de Chile

**Client** Metro Chile

**Architects** Burmeister Arquitectos Consultores S.A., Santiago de Chile; Enrique Burmeister, Cristián Castillo, Cristián Barahona, Alfredo Lizana

**Building period** 2006–2009

**General contractor** Constructora Internacional Limitada, Constructora CYPKO S.A., Santiago de Chile

**Façade construction** Comintec, Vitacura/Santiago de Chile

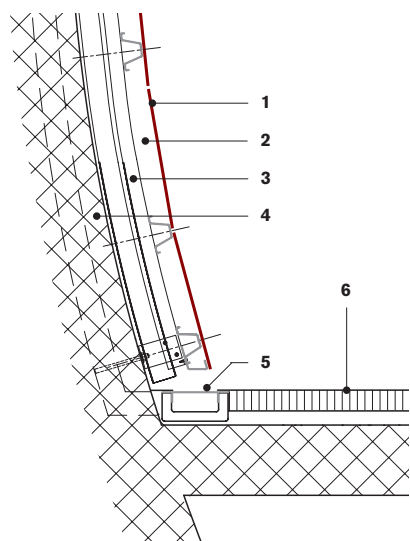
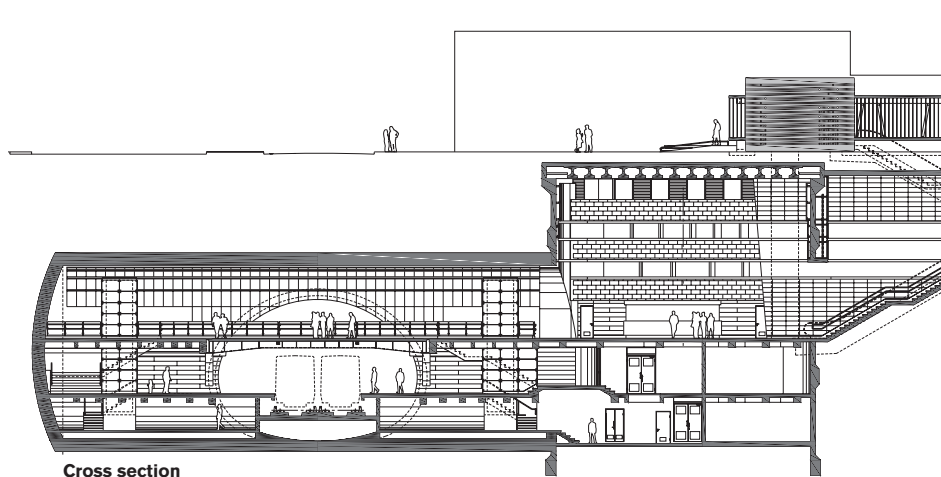
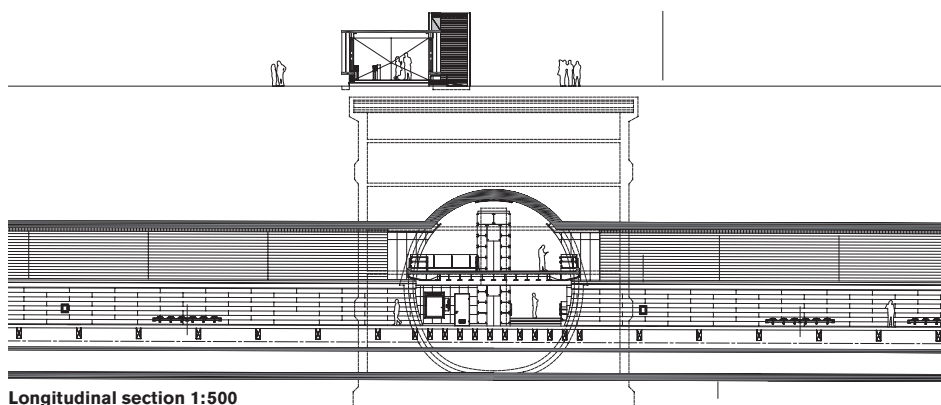
**Façade material** SWISSPEARL® CARAT, Jade 7050, 7051, 7052, Amber 7083, Azurite 7043, 7040, 7041, Onyx 7091



Inaugurated in 1975, the Metro de Santiago is now South America's most extensive and efficient underground system, transporting 2,500,000 commuters each day. Two of the five operating lines are currently under expansion, which will allow the increasing suburban areas greater access to the city centre. The westbound extension of Line 5 is due for completion in 2010 and will add eleven new stations to the existing network.

Apart from this, Line 1 has been prolonged to the eastern suburb of Las Condes where BAC (Burmeister Architects Consultants), those in charge of the entire architectural programme for Metro de Santiago, have built three new stations – Plaza Los Dominicos, Hernando de Magallanes and Manquehue. The latter two are typical intermediate stations, organised along the main tube where the platforms are located. Secondary tunnels branch off at right angles and serve as connecting galleries which provide circulation space and lead to the escalators. Rectangular or oval extensions accommodate the auxiliary rooms (restrooms, technical facilities). Pedestrian bridges allow access to the platforms and, in case of Manquehue, link the individual galleries with each other. Los Dominicos is exceptional in that it is the new terminus of Line 1 and as such provides more room for circulation within an apparent multi-storey subsurface building.

The station platform areas are marked by distinct signature walls displaying a mosaic of tone-on-tone Swisspearl strips whose visual impact was tested beforehand by means of life-size mock-ups. Site conditions proved logistically challenging as the parcels had to be lowered into the tunnels through a very confined void. The strips were then mounted on-site to a metal framework by the use of adhesive tape. The colour hue of each station was selected with regard to its respective context. Manquehue displays earth tones indicative of the nearby mountains; Magallanes is blue, reminiscent of the legendary navigator, while Los Dominicos reflects the green of the plaza and the white of the nearby historic buildings. *Patrick Zamariàn*

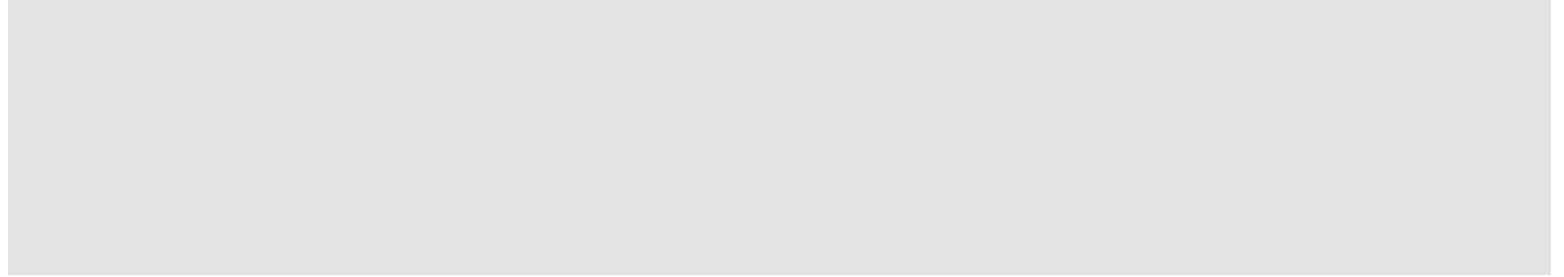


- 1 Swisspearl® cement composite panel 8 mm
- 2 Cavity
- 3 Support profile
- 4 Concrete
- 5 Drainage channel
- 6 Floor





Situated between railway tracks and the region's main motorway, this business centre in the Northern Italian city of Rovereto strives for immediate visual effect. An eight-storey congress hotel serves as the centre's landmark building.



Area22 Hotel and Business Centre, Rovereto, Italy

## VISUAL PUNCH









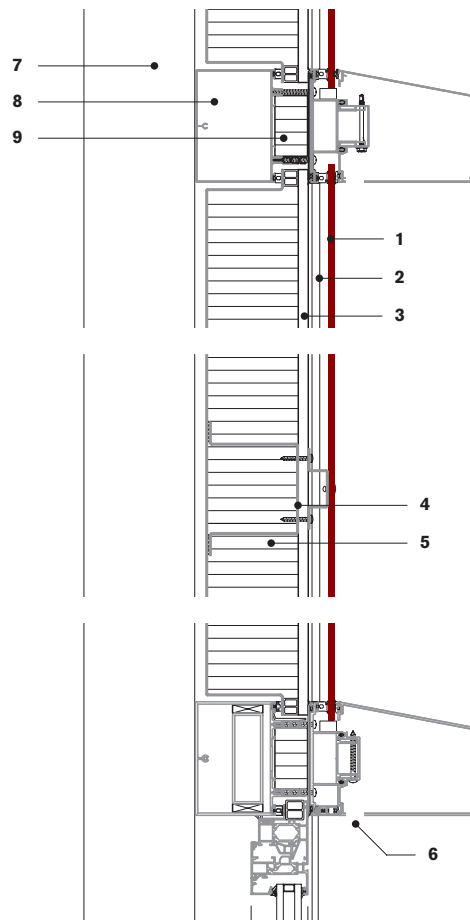




The facade displays an irregular pattern of windows and light-grey Swisspearl panelling with continuous aluminium profiles to emphasise its horizontal quality.

As early as the mid-1980s, local business developers purchased the site of an abandoned industrial plant on the southern edge of Rovereto in Northern Italy. For more than a decade they tried to attract other investors and enter into strategic partnerships with potential operators in the catering, commercial and entertainment industries. Although none of these collaborations came to fruition, the developers remained confident of their auspicious prospects. They eventually decided to take matters into their own hands to realise Area22 without partners or designated leaseholders.

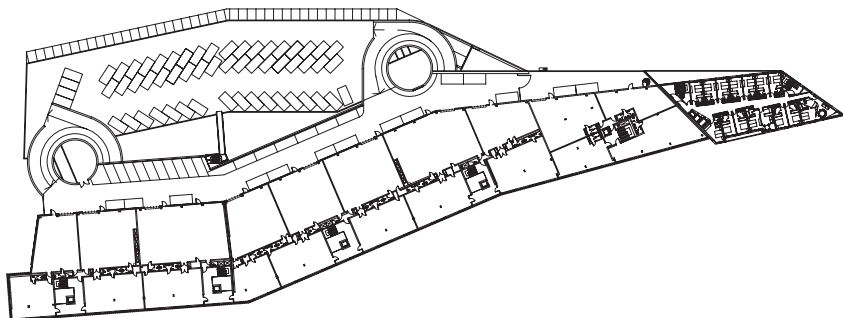
Area22 is a remarkable complex of multifunctional spaces whose versatility meets the requirements of various types of commercial enterprises. The centre provides space for shops, offices and storage, as well as a variety of complementary facilities such as conference rooms, a bank, a restaurant and, most notably, a hotel. All facilities are accommodated on a tapering parcel of land wedged between the Brenner motorway and railway tracks. There is no denying the advantage of being located within hailing distance of the region's most important traffic routes. However, travellers passing by at high speed can only catch the briefest of glimpses of the building. Architect Enrico Ferreguti therefore did not strive for high aesthet-



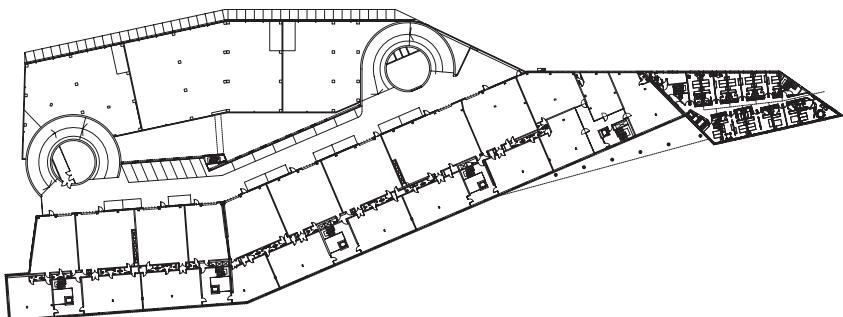
Vertical section 1:10

- 1 Swisspearl® cement composite panel 8 mm
- 2 Ventilation cavity, vertical sub-framing
- 3 Closed cell polyvinyl chloride layer
- 4 Steel reinforcing angle
- 5 Thermal insulation, mineral wool 100 mm
- 6 Gap for ventilation
- 7 Steel column 50 × 200 mm
- 8 Horizontal aluminium profile 105 × 150 mm
- 9 Thermal insulation

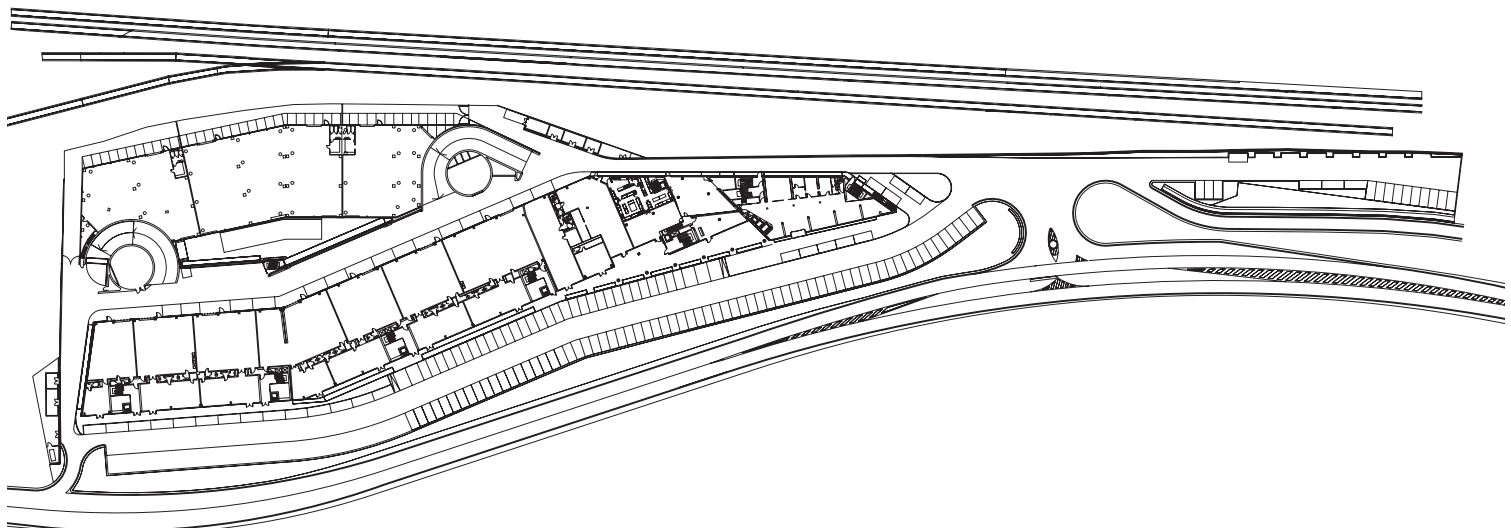




Second floor 1:2000



First floor



Ground floor

**“WEDGED BETWEEN RAILWAY TRACKS AND THE MOTORWAY – MAJOR TRAFFIC ROUTES SLICING THROUGH THE LANDSCAPE – THE COMPLEX APPEARS DYNAMICALLY DISTORTED, LIKE STACKS OF BOULDERS IN THE STORM, READY TO YIELD AND SUBMIT TO THIS ENORMOUS ENERGY ... ” ENRICO FERREGUTI**

icism but for immediate visual effect, opting for a dynamic arrangement of volumes and surfaces accentuated by occasional bright-red façade elements.

The complex consists of two distinct sections connected by a joint service area at the entrance. All commercial facilities are housed in an elongated three-storey building to the north. The façade displays an irregular pattern of windows and light-grey Swisspearl panelling with continuous aluminium profiles to emphasise its horizontal quality. The adjacent 4-star hotel *nerocubo* occupies the southern tip of the parcel and, at twice the height, towers over the commercial section – a bold landmark for the entire complex. The eight-storey hotel has 101 guest rooms of varying size, and includes a congress centre, a capacious restaurant, a wine bar and a spa. In keeping with its name, the tower is a prismatically distorted cuboid, entirely clad in black Swisspearl panels, with windows of different sizes scattered all over its façades.

Both the architect and the client went for high technological standards. The state-of-the-art ventilated façade system helps to reduce energy consumption while other sustainability features include photovoltaic roof panels, heat recovery and a centrally controlled building automation system. *Patrick Zamarian*

**Location** Via Per Marco, Rovereto (TN), Italy

**Client** Aera22 S.r.l., Rovereto

**Architects** Enrico Ferreguti, Venezia; associate: Gualtiero Azimonti

**Engineer** Franco Detassis

**Building period** 2008–2009

**General contractor and façade erector** Pre-Metal Spa, Rovereto

**Façade material** SWISSPEARL® CARAT Black Opal 7020, Onyx 7090, Agate 7219







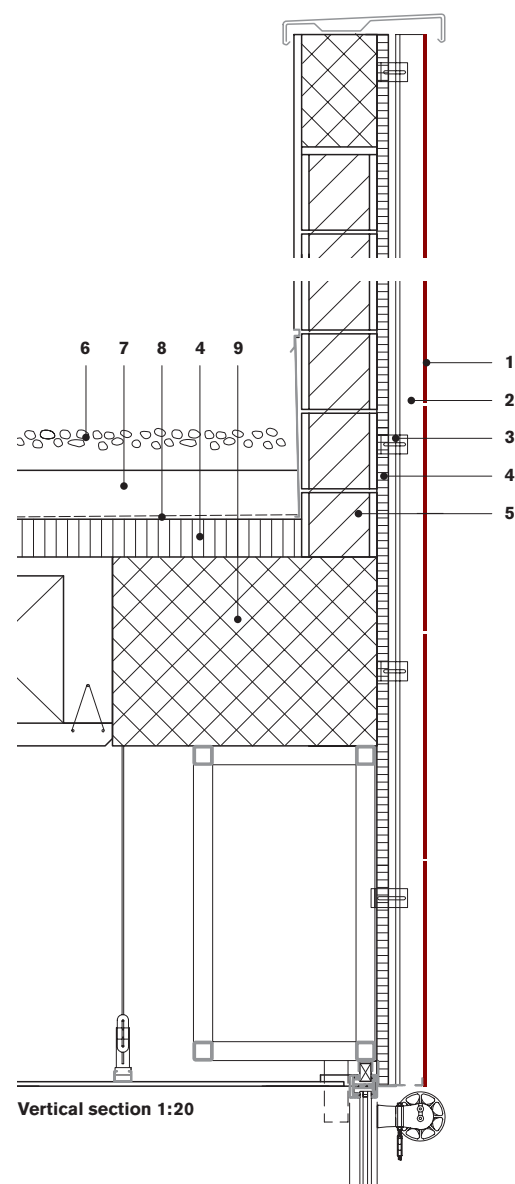
## Autogrill Brianza Nord, Agrate Brianza, Italy

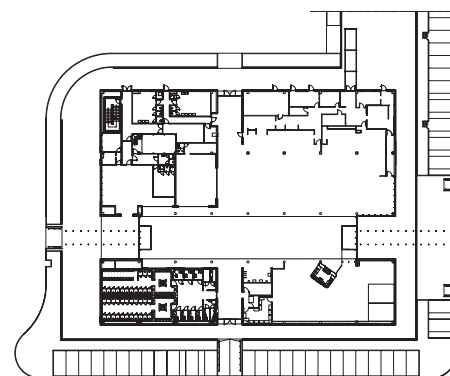
### Next Exit Mall

Located east of Milan, this motorway service area combines an introverted design scheme with a straightforward appearance emphasised by jade-green Swisspearl cladding throughout. A large glazed skylight and the combination of larch-wood staves with tone-on-tone Swisspearl panelling render the interior light and spacious. The building thus avoids the staid and stifling atmosphere prevalent in most service areas.

The floor plan is divided by an asymmetrically aligned east-west axis, which serves as a mall that provides access to the various facilities such as cafeteria, restrooms and office spaces. Floor-to-ceiling glazing accentuates the axis on the façade and marks the entrance to the building. The central feature of the new service area is its “food court”, a catering area next to the entrance. Large corner windows overlook the parking lot and thereby constitute a functional compromise that contrasts with the building’s overall introverted design concept. *Patrick Zamariàn*

- 1 Swisspearl® cement composite panel 8 mm
- 2 Ventilation cavity, vertical subframing
- 3 Bracket aluminium
- 4 Thermal insulation
- 5 Brick work
- 6 Gravel
- 7 Fill
- 8 Roofing membrane
- 9 Reinforced concrete





Ground floor 1:1500



**Location** Motorway A4 Milan-Venice, Agrate Brianza, Italy

**Client** Autogrill S. p. A., Rozzano (Mi)

**Architect** Maurizio Varratta, Genoa

**Building period** 2008–2009

**General contractor** Sercos Servizi Costruzioni S. p. A., Milano;  
Lineaser Serrament S. R. L. (S. G. L. Di Salvodelli, G. Luigi, C. Sas),  
Bresso (Mi)

**Façade construction** Dallera S. R. L., Agrate Brianza (Mi)

**Façade material** SWISSPEARL® CARAT, Topaz 7072 and Jade 7051





Slovenian architects Alenka Dešman and Dušan Končar complement a historic spa hotel with a contemporary building. The dark grey-green Swisspearl panels on the façade of the simple new cuboid are inspired by the adjacent public park with its greens and browns.

Hotel Balnea, Dolenjske Toplice, Slovenia

## HISTORY REVISITED

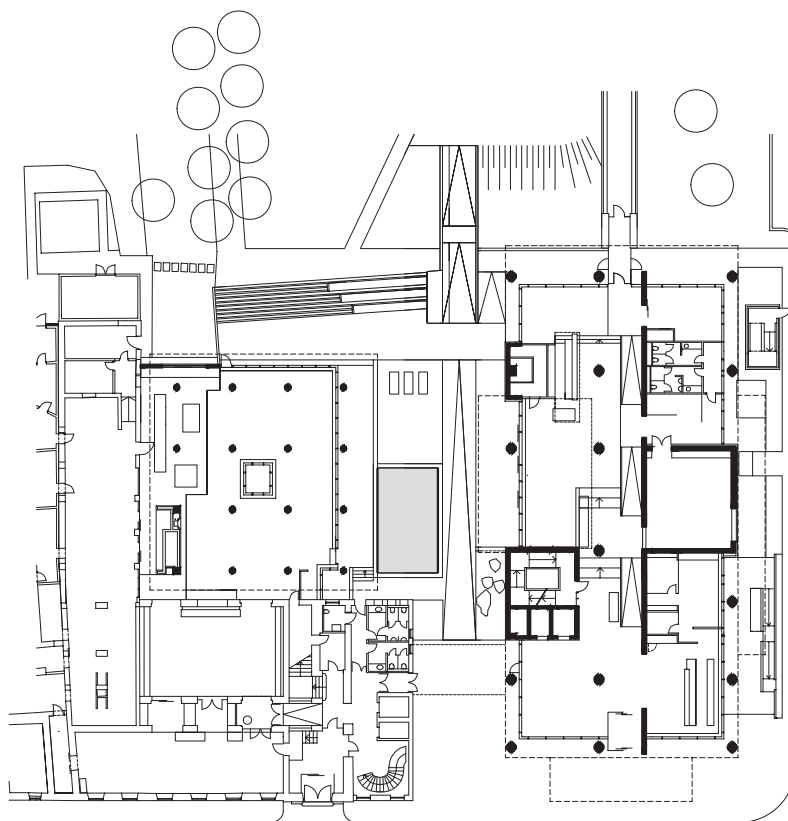




The thermal baths in the small town of Dolenjske Toplice, in southeast Slovenia, were established in 1658 by the Counts of Auersperg. Visitors have flocked for centuries to the warm, mineral-rich waters of one of Europe's oldest spas. Hotel Vital dates back to the 18th century, while Hotel Kristal was built in 1899. They were both renovated in the early 1970s when pharmaceutical company Krka bought the resort.

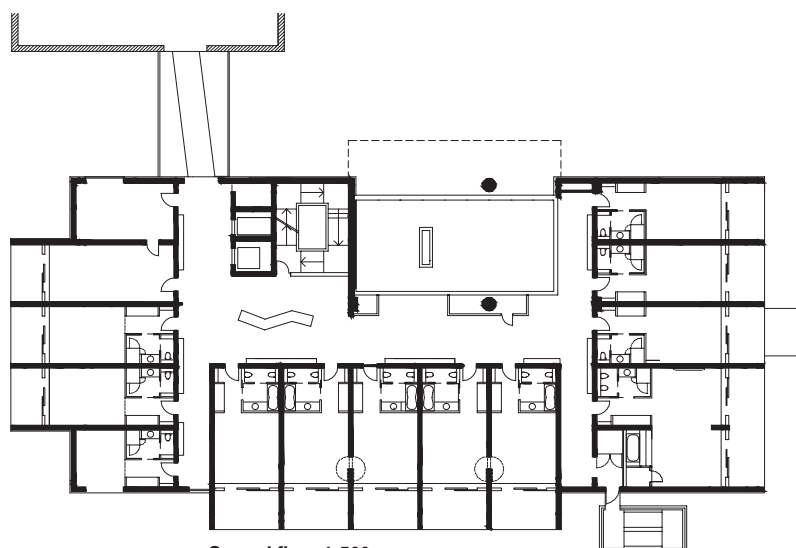
Having become increasingly popular in recent years, Terme Krka, which takes its name from the river that runs through the valley, needed to expand. Ljubljana-based architects Alenka Dešman and Dušan Končar were commissioned to design a high-quality new building to increase capacity and complement the existing historic structures.

The architects sited the new structure on the edge of the historic park, next to the 1899 hotel. Three glassed-in, upper-storey walkways connect the two buildings above an open public passage on the ground floor. The dark grey-green Swisspearl panels on the façade of the simple new cuboid are inspired by the adjacent public park with its greens and browns; wooden loggias protrude on all four sides forming canopies above the entrances. The size of the new building echoes the dimensions of its older neighbour. Also designed by D & K Arhitekti, an elegant sheltered glass pathway along the outer edge of the protected park connects the hotel with the wellness centre, which again bears their signature. *Mirko Beetschen*



**“WE WANTED TO CAPTURE THE SPIRIT OF THIS FASCINATING COMPLEX THAT CONSISTS OF HISTORIC BUILDINGS, A MAN-MADE PARK AND THE NATURAL LANDSCAPE.”**  
**D & K ARHITEKTI**

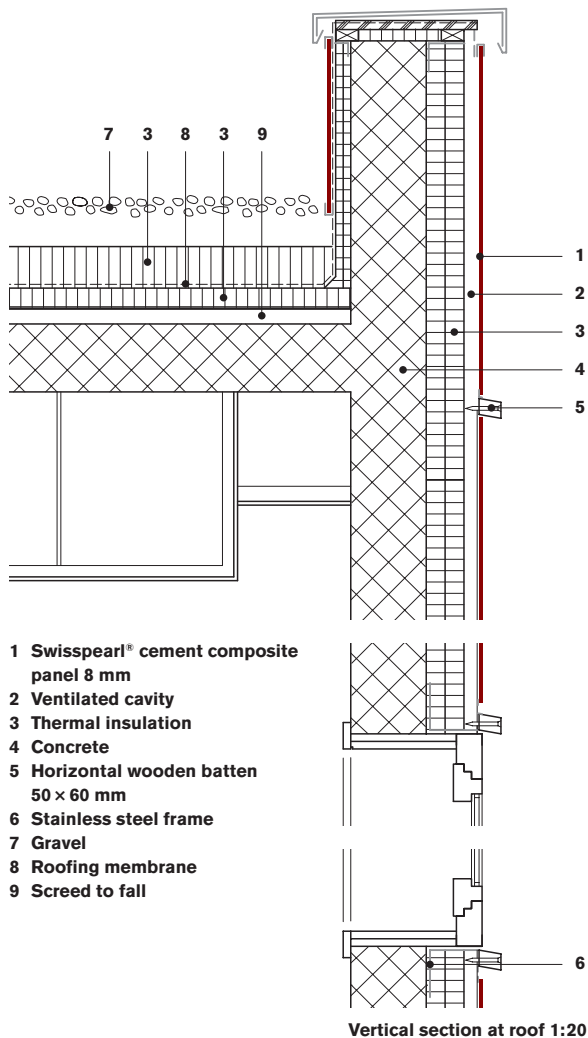
**Location** Zdraviliški trg 7, Dolenjske Toplice, Slovenia  
**Client** Terme Krka d. o. o., Novo mesto  
**Architects** D & K Arhitekti d. o. o., Ljubljana  
**Building period** 2007–2008  
**General contractor** Begrad d. d., Novo mesto  
**Façade construction** Alu Alprem d. o. o., Kamnik  
**Façade material** SWISSPEARL® NOBILIS, custom colour Cyprit N1616–4402



Ground floor 1:500

The façade of the new hotel building with cladding in dark grey-green Swisspearl panels; wooden loggias protrude on all four sides.

**“THE SWISSPEARL PANELS PERFECTLY SUITED OUR NEEDS AND GO WELL WITH THE OTHER MATERIALS WE USED.”**  
**D & K ARHITEKTI**





# Office Block, Cinisello Balsamo, Italy

## Façade Facelift



An office block located to the north of Milan, originally built in the 1960s to house Kodak laboratories, was extended a decade later to include offices. The primary brief for the renovation almost five decades later was to upgrade insulation and improve the building's ecological credentials. A ventilated Swisspearl curtain-wall system was therefore superimposed on the north and south façades. A strong blue accent highlights the new component, yet makes a subtle reference to the original north façade's blue clinker. For added emphasis, the parapet upstand has been raised to over a metre above the level of the flat roof, giving the wide façade a mask-like aspect. The horizontal rectangles of Azurite Swisspearl panels echo the strip windows that provide the offices with natural light.

The plan is comprised of two 12-metre-wide office blocks mirrored across both axes; the entrance hall is

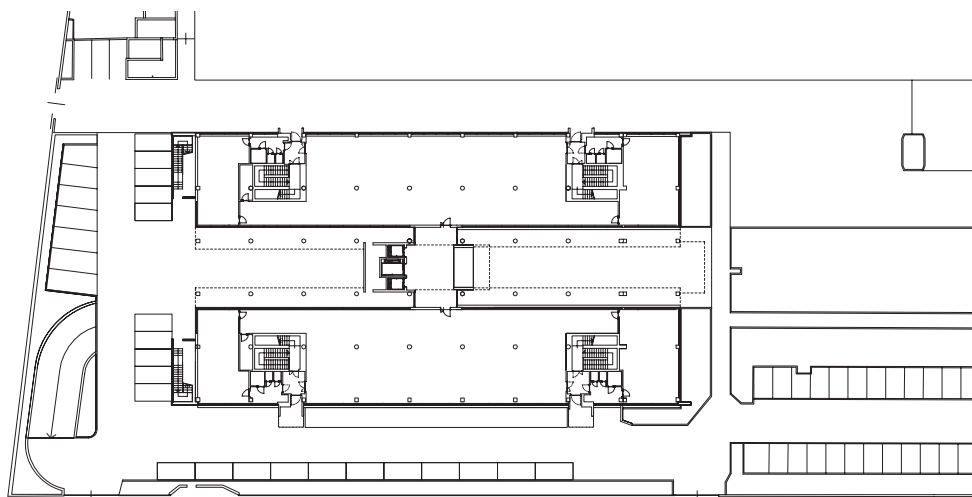
situated centrally in the inner "patio" or light well; four symmetrical stairwells and service cores are located near each corner, "holding together" four 2,000-square-metre levels of open plan offices. To break the strict symmetry, a two-storey glazed box for conference rooms has been suspended above the western entrance and cantilevers a few metres beyond the façade.

The architects had a clear, technically straightforward and architecturally intelligible concept for the refurbishment of the existing Kodak building. Oliva Associates' choice of façade material, i. e. Swisspearl composite panels, as well as their format and colour, were vital to achieving their design goals. *Anna Roos*

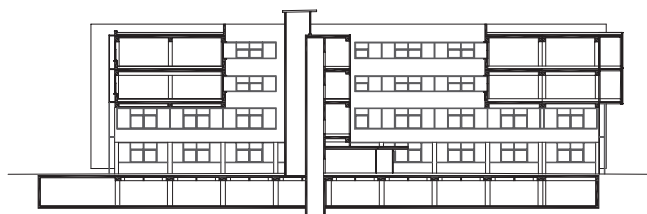


**Location** Via Matteotti 62, Cinisello Balsamo, Italy  
**Client** Redilco Real Estate, Milano  
**Architects** Foa Federico Oliva Associati with Marina Macchi, Milano  
**Building period** 2008  
**General contractor** Redil-CO.GE, Trezzano sul Naviglio  
**Façade construction** CEL.MAC.S SRL, Arcore  
**Façade material** SWISSPEARL® CARAT, Azurite 7040





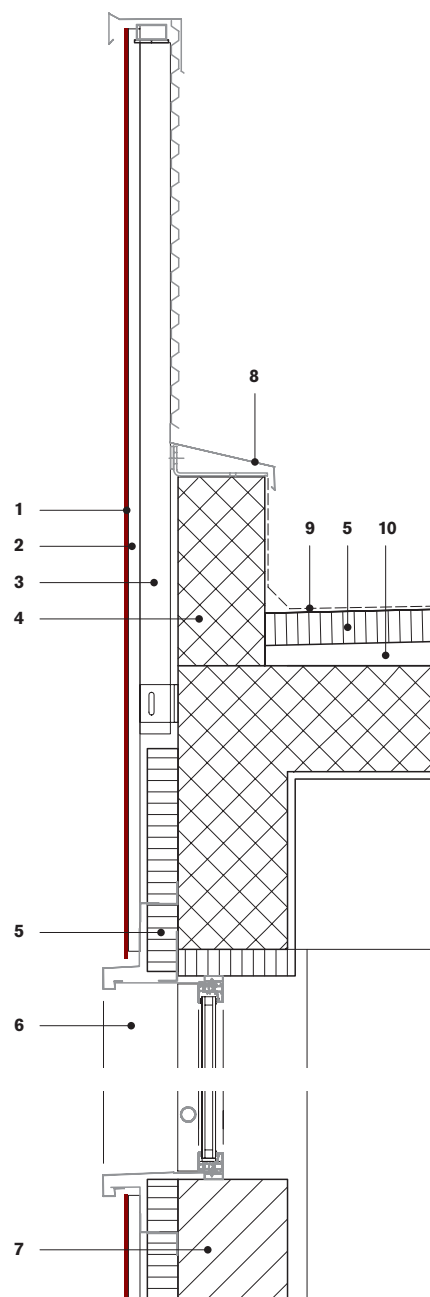
Ground floor 1:1000



Section

**“THE TWO VENTILATED FAÇADES PROJECT OUT OVER THE PLAN OF THE EAST AND WEST FAÇADES, AND LOOK LIKE TWO SUSPENDED SHEETS.” FOA FEDERICO OLIVA ASSOCIATI**

- 1 Swisspearl® cement composite panel 8 mm
- 2 Ventilation cavity, batten
- 3 Steel structure
- 4 Concrete structure
- 5 Thermal insulation
- 6 Metal frame
- 7 Existing wall
- 8 Metal flashing
- 9 Roofing membrane
- 10 Screed to fall



Vertical section 1:20

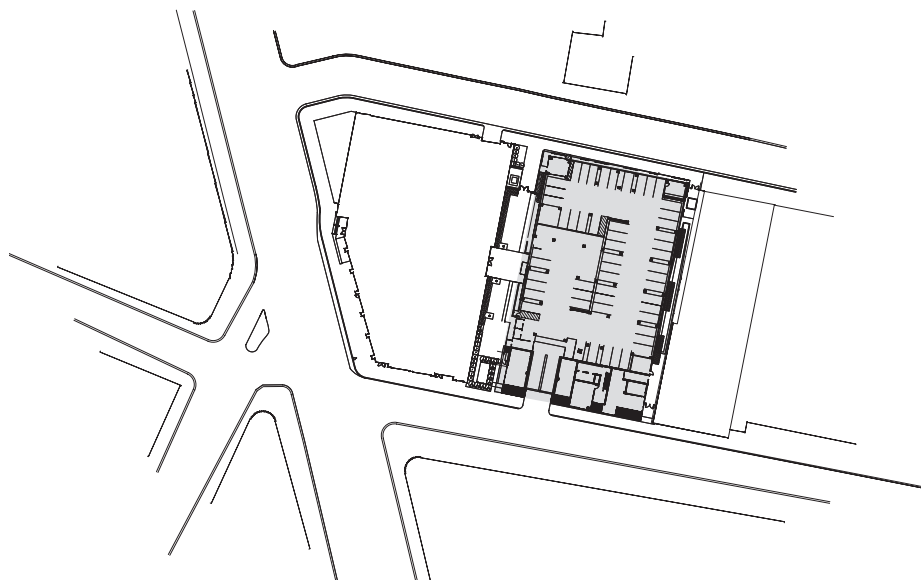


**“THE HORIZONTAL DEVELOPMENT OF THE NORTH AND SOUTH  
FAÇADES IS EMPHASISED BY THE SEQUENCE OF THE WINDOWS.”  
FOA FEDERICO OLIVA ASSOCIATI**





Thomas Berkley Square Housing, Oakland, CA, USA  
**Meeting a Structural Challenge**





Time and budget constraints prompted the developer of this project to move forward with the office building and adjacent parking garage while the housing part was still under consideration. When architects Holt Hinshaw were commissioned with the design of the 88-unit luxury apartment building, construction on the rest had already begun.

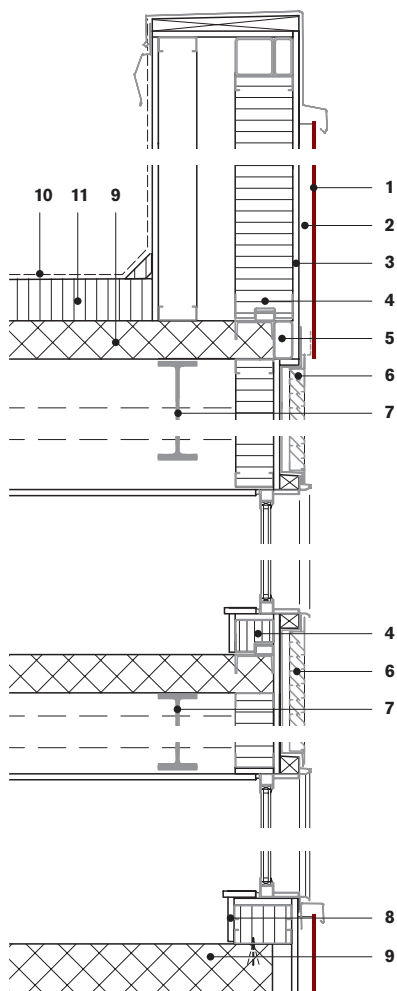
The challenge for the designers was to find a way in which to use the garage as a foundation for the apartment building without carrying its rigid structural grid into the residential units above. They chose a light prefabricated steel moment frame system which allowed the structural load to be spread over the entire surface of the parking deck. This also enabled the creation of an internal courtyard and large sections of the living area to be cantilevered over the garage structure, which increased the residential

floor area. At the same time, the architects were confined to employing a lightweight façade structure for which they used red Swisspearl panelling in two different shades.

*Patrick Zamariàn*

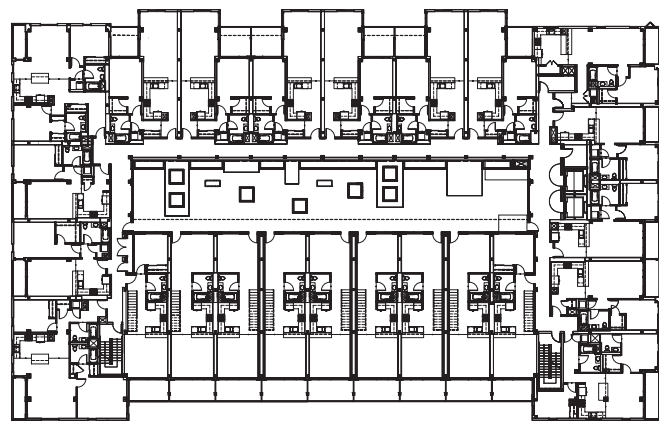
**“THE OUTER SHELL WAS CONCEIVED AS A LIGHTWEIGHT SCREEN WITH THE QUALITY AND ARTISTIC BEAUTY TO ALLOW THE LOCAL PLANNING AUTHORITIES TO REDUCE REQUIREMENTS FOR ADDED, GENERALLY ARBITRARY, ORNAMENTAL DETAILS.”**  
**MARC HINSHAW**



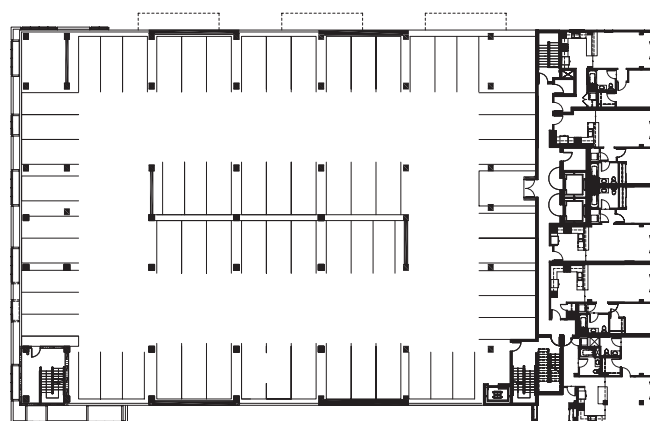


Vertical section 1:20

- 1 Swisspearl® cement composite panel 8 mm
- 2 Ventilation cavity
- 3 Exterior gypsum board sheathing
- 4 Thermal insulation, steel panel framing
- 5 Structural steel deck edge
- 6 Aluminium louvers
- 7 Structural steel beam
- 8 Interior gypsum board siding
- 9 Structural concrete
- 10 Roofing membrane
- 11 Cellular insulating concrete



Fifth floor 1:2000



Fourth floor



**Location** 630 Thomas Berkley Way, Oakland, CA, USA

**Client** Alan Dones with SUDA (Strategic Urban Development Alliance), Oakland

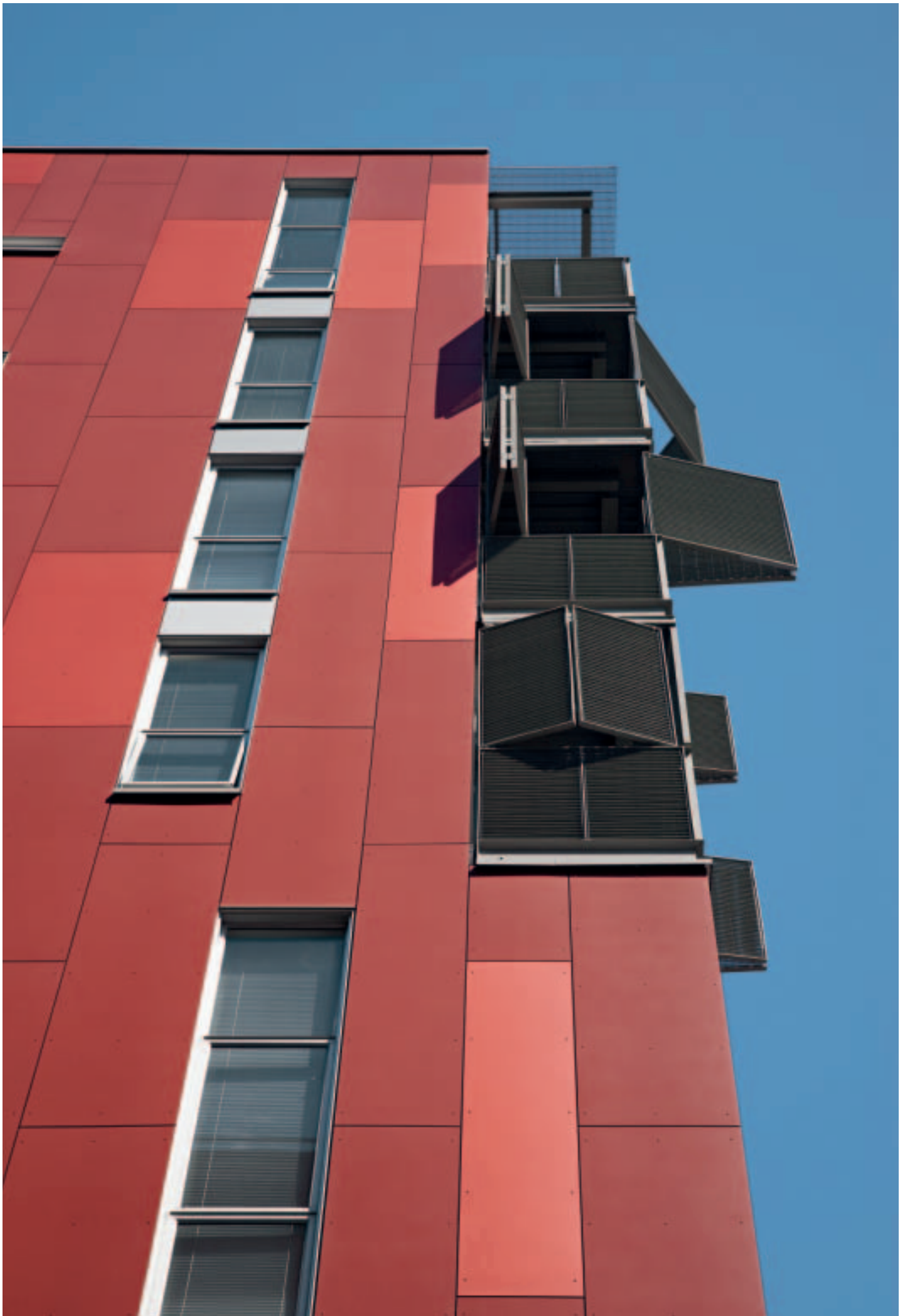
**Architects** Holt Hinshaw, San Francisco; Marc Hinshaw, Sade Borghei, Steve Walker, Jason Sayner

**Building period** 2006–2009

**General contractor** The Bedford Group, Los Angeles

**Façade construction** Performance Contracting Inc., San Francisco

**Façade material** SWISSPEARL® CARAT, Coral 7030, REFLEX Sunset 9230





# Extension of Office Block Novi Dom, Belgrade, Serbia

## A New Look for an Old Building



Belgrade-based architects, Studio Licina, were commissioned to renovate and extend an existing building, the Novi Dom department store tucked neatly between multi-storey apartment blocks. The existing structure provided the template for the structural grid. A new floor and lateral annex were added to create a four-storey building. It is supported by rectangular concrete columns; the façade, whose horizontal bands echo the neighbouring apartment buildings, has no load-bearing function. Elevated 1.2 metres above street level and the off-street parking along the tree-lined boulevard to the front, the building is accessed via a plateau with a ramp and steps. A change of levels across the otherwise perfectly symmetrical site provides natural light to the subterranean level.

The façade has been designed in rhythms that evolve from the existing grid structure. The upper level is lit by

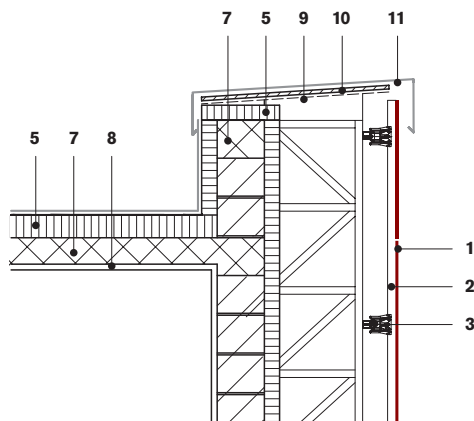
glazed roof lanterns, which echo the narrow vertical openings on the first floor. The aesthetic of the building, whose façades are divided horizontally in bands of clear glazing alternating with grey and white Swisspearl panels, reflects the dynamic energy of the busy boulevard to the front and tram lines to the rear. The delicate line of the elevated handrail on the second floor balcony further emphasises the horizontal quality of the composition.

Although the signage boards detract from the clarity of the façades and should ideally be integrated into the overall façade concept, the building has been upgraded successfully and fits well into its environment. *Anna Roos*

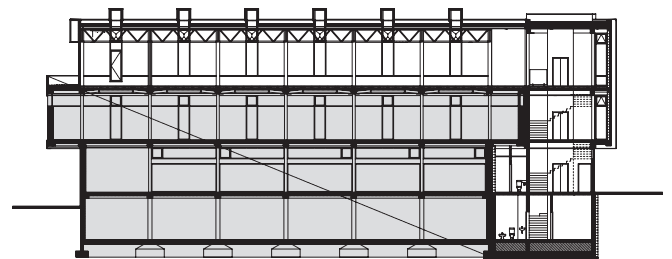


**Location** Bulevar Kralja Aleksandra 294, Belgrade, Serbia  
**Client** Tehnokomerc d. o. o., Belgrade  
**Architects** Studio Licina d. o. o., Belgrade  
**Building period** 2008–2009  
**General contractor** Lion Inženjering, Belgrade  
**Façade construction** Trnići Invest, Belgrade  
**Façade material** SWISSPEARL® CARAT, Onyx 7099 and XPRESSIV, Dark Grey 8220

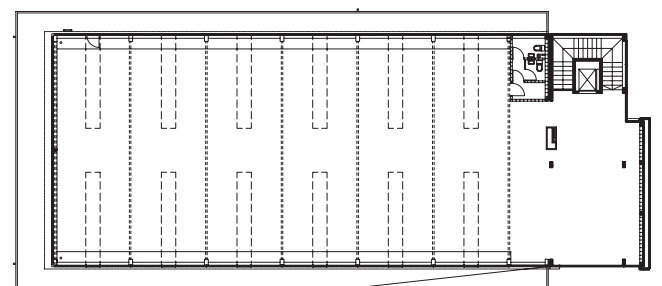
- 1 Swisspearl® cement composite panel 8 mm
- 2 Ventilation cavity, aluminium substructure
- 3 Aluminium bracket
- 4 Truss
- 5 Thermal insulation
- 6 Brick work
- 7 Concrete
- 8 Plaster
- 9 Steam
- 10 Plywood board
- 11 Metal coping



Vertical section 1:20



Section 1:500



Second floor



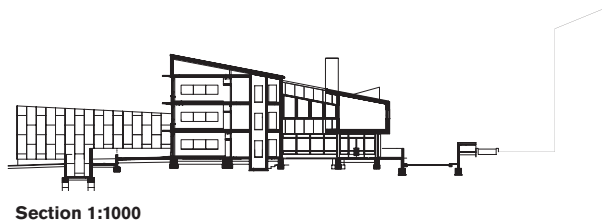
# Primary School Bili Brig, Zadar, Croatia

## The Colourful Life of School Children



Colour is often equated to life and used in kindergartens and school façades to establish a connection between the shell of the building and its very much alive users.

In the residential area of Bili Brig in the Croatian harbour city of Zadar, a new primary school for some 670 pupils was built on a small triangular plot. 21 regular classrooms are located in an elongated building with exterior cladding of monochrome white cement composite panels. Special-purpose classrooms and other facilities are housed in an adjacent block which connects to a triple sports hall. Their façades are in three different shades of blue cement composite cladding alternating with white panels. The lively pattern of vertical bands consists of randomly shifting panels in white and dark, medium and light blue. It echoes the nearby sea; opposed blue mono-pitch roofs may be interpreted as waves. *mb*



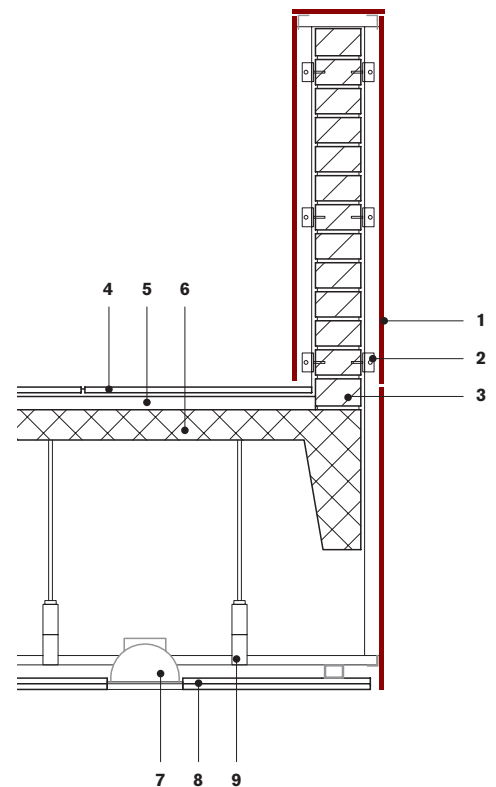
**Location** Bili Brig, Zadar, Croatia  
**Client** City of Zadar  
**Architects** Damir Mioč, d.i.a. (XYZarhitektura d.o.o.), APZ-inženjering d.o.o., Zagreb  
**Building period** 2003, 2006–2008  
**General contractor and façade construction** Centro-gradnja d.o.o., Zagreb  
**Façade material** SWISSPEARL® CARAT, Azurite 7041, 7042, 7052, Onyx 7090

# LeFort Business Center, Moscow

## Walkable Sculpture



- 1 Swisspearl® cement composite panel 12 mm
- 2 Aluminium framing system
- 3 Masonry parapet
- 4 Tile flooring
- 5 Cement screed
- 6 Concrete slab
- 7 Lights
- 8 Suspended gypsum panel ceiling
- 9 Ceiling support system



Vertical section 1:20

LeFort Business Center, a converted former silk factory, is a multifunctional urban complex consisting of several separate buildings. The largest is the 1970s LeFort Building whose s were redesigned as a fully glazed aluminium and glass curtain wall by Swiss practice ks:architecture. A pattern of red and grey spandrel glass responds to the fenestration of the adjacent brick factory.

The architects also created a new lobby which provides a link between the different entrance levels. To preserve the industrial feel of the interior, the designers confined themselves to a narrow selection of monochromatic materials, i. e. glass bricks, black ceramic floor tiles and greyish Swisspearl panels for piers and columns. By contrast, the key features are clad in red Swisspearl panels, thus establishing a visual connection between the reception, the two lift cores and most notably, the dramatic walkable sculpture of the stair. *Patrick Zamarian*

**Location** Ul. Elektrozavodskaya 27, Moscow, Russia

**Client** Horus Capital, Moscow

**Architects** ks:architecture, Zurich

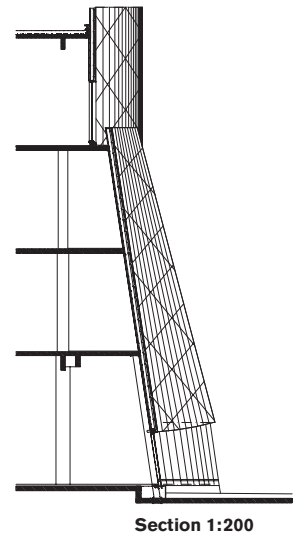
**Building period** 2007

**General contractor** SK RIMO, Moscow

**Façade construction** Reper, Moscow

**Façade material** SWISSPEARL® CARAT, Coral 7030 and Sapphire 7060





## ARGENTINA – CURVED EYE-CATCHER

Located in Vedia and Melián, near Avenida General Paz and the Pan American Highway, this shopping mall has four floors of shops and restaurants, while another three accommodate operational services. Next to the mall stands a ten-storey office building. The façade overlooking General Paz has a width of 180 metres; its height ranges from 26 to 37 metres.

With their harmonious interplay of curved and straight lines, the façades and interior spaces express organic forms in a contemporary idiom; the complex looks quite different from the boxy style of earlier consumer temples.

The eye catcher in this building is the curved entrance part with 8 millimetre Swisspearl cladding in two different shades. The panels of 150 × 120 centimetres have been installed on a custom-made sub-framing system. Decorative aluminium caps attached to the middle fixing points of every other Swiss-pearl module create horizontal lines across the diamond-shaped pattern. The remainder of the building is covered in light-metal or glass panels.

Why did we use Swisspearl for this building? We were looking for a material that would allow us to materialise the scaly shapes in full-bodied, plain colours. Due to the façade's orientation, UV resistance was also an issue. Finally, given the building's characteristics, cleaning had to be easy to keep maintenance costs to a minimum. Swisspearl met all our requirements. *PfZ Arquitectos*

### Trade and Office Building Complex Dot Baires Shopping, Buenos Aires

**Location** Av. General Paz y Ruta Panamericana, Buenos Aires, Argentina

**Client** IRSA, Buenos Aires

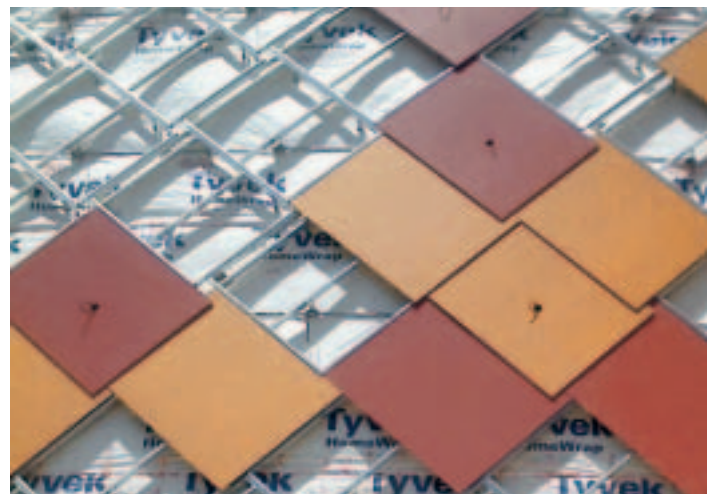
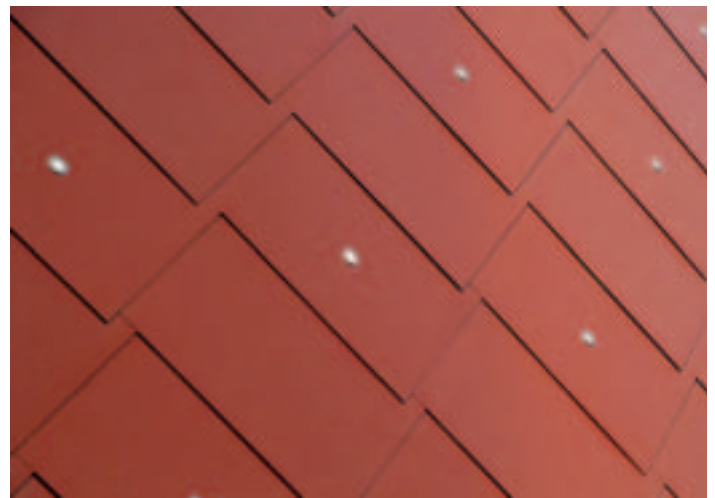
**Architects** PfZ Arquitectos, Buenos Aires; Juan Pfeifer, Oscar Zurdo, Eduardo Di Clérico, Walter Pfeifer and Amelia Qüesta, collaborator: Sergio Levinzon

**Building period** 2009

**General contractor** IRSA – Constructora San José, Buenos Aires

**Façade construction** CGSA, Buenos Aires

**Façade material** SWISSPEARL® CARAT, Coral 7031 and SWISSPEARL® REFLEX, Autumn Leaves 9271



## MEXICO – LIGHT AND TRANSPARENT

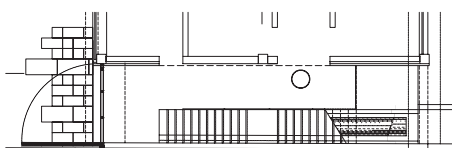
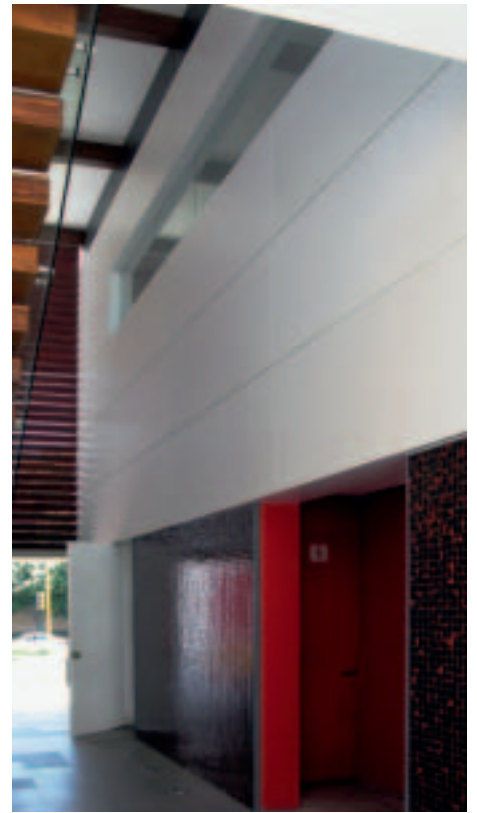
The most striking part of the façade of this shopping centre is a wide pane of glass that allows passers-by a clear view of the interior and any merchandise on display. It is shaded – and kept clean – by a large, cantilevered aluminum awning whose clean lines and sleek shape further attract customers into the building.

The larger cube surrounding the entrance is the module that houses the centre's management offices, shops and services. The white Swisspearl panels lend the site a clear, strong image yet make the shops appear lighter and transparent.

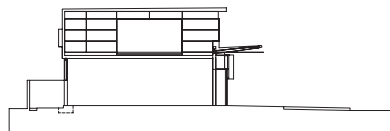
We opted to cover the walls with this light, low-maintenance material. As the south-oriented building is constantly exposed to solar radiation, the panels also offer the advantage of reducing the effect of heat and help reduce the use of air conditioning.

Moreover, to ensure continuity with the interior spaces, the same panels have been used for the double-height lobby façades, a stairway to the second-floor offices, and a service corridor at the rear which also allows access to the premises.

*Benjamín Lara Rhon*



Ground floor 1:800



Section

### Shopping Center Plaza Jardín Real, Guadalajara

**Location** Av. Santa Margarita, Guadalajara, Mexico

**Client** Plaza Jardín Real, Zapopan

**Architects** Benjamín Lara Rhon, Guadalajara

**Building period** 2008

**General contractor** Edifque Grupo Constructor S.A. de C.V., Guadalajara

**Façade construction** Industrias Aluminio Constructa S.A. de C.V., Zapopan

**Façade material** SWISSPEARL® CARAT, Black Opal 7024 and Onyx 7099





## USA – DENIM METAPHOR

The 3,000 square feet Great Hall in a 250,000 square feet high-tech manufacturing facility has multiple purposes. It is a cafeteria, a movie theater, and a seminar hall. Since most employees spend hours in a precise and sterile environment, the owner of the facility wanted to create a casual, warm, welcoming, and playful public gathering place, and expressed a wish for a fireplace. It forms the centerpiece of the Great Hall with its extra high ceiling. Montana Red rock in the hearth echoes the stone accent used elsewhere in the building. 30 inch wide Swisspearl panel cladding on the fireplace surround adds a modern touch to the Great Hall's otherwise playful aesthetic. Three different shades of blue panels express the “denim” metaphor with which the owner associates their company's culture. Decorative rivets mimic the buttons of denim apparel. The result is a modern interpretation of a “corporate fireplace” where employees can gather on rainy winter evenings after a long day's work. *Joyce Gentry, Flad Architects*

### Biomedical Facility, Hillsboro

**Location** Hillsboro, OR, USA

**Client** Private company, Hillsboro

**Architects** Flad & Associates Inc., San Francisco

**Building period** 2008

**General contractor and façade construction** Artek Contracting Inc., Beaverton, OR

**Façade material** SWISSPEARL® CARAT, Black Opal 7021, 7022, 7026 and Amber 7082

## IRAN – ATTRACTION TO PILGRIMS

People from all over the country visit the Iranian city of Mashhad, mostly in the summer, to commemorate the birth and death of Imam Ridha. 12 to 15 million Islamic pilgrims visit the Imam Ridha Mosque every year. Near the Mosque, in the eastern part of the city, a new seven-storey apartment house contains 18 furnished flats in different sizes to be let at low rates to the owner's employees who wish to take part in the pilgrimage. The ground floor holds two shops for lease, as well as a large kitchen to allow for a restaurant to be added later on. In order to enhance the attractiveness of the façade's white plance, the architect added two slightly protruding rectangles in light blue and red. The three colours of the façade add interest and zest to the apartment building. *Zahra Safar*

### Apartment House, Mashhad, Iran

**Location** 261 Hashemi, Nejad, Mashhad, Iran

**Client** Mohammad Ali Kazemi, Mashhad

**Architects** Zahra Safar, Mashhad

**Building period** 2009

**General contractor and façade construction** Pariz Farasaz, Tehran

**Façade material** SWISSPEARL® CARAT, Onyx 7091, Coral 7033 and Azurite 7043



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*Steve Wanke, Portland (p. 64 above)*

*Zahra Safar, Mashhad (p. 64 below)*

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**Chile** Metro Stations, Santiago de Chile

**Croatia** Sports Hall, Sveti Martin na Muri

**Denmark** Extension of Private School Bernadotteskolen, Hellerup  
Extension of Skibelund School for Gymnastics and Athletics, Vejen  
Extension of Sports Centre, Jyderup

**Italy** Area22 Hotel and Business Centre, Rovereto  
Autogrill Brianza Nord, Agrate Brianza  
Kindergarten, Bozen/Bolzano  
Office Block, Cinisello Balsamo  
School Extension, Pieve di Soligo

**Serbia** Extension of Office Block Novi Dom, Belgrade

**Slovenia** Hotel Balnea, Dolenjske Toplice

**Sweden** Triangeln Railway Station, Malmö

**USA** Segerstrom Science Center, Azusa, CA  
Thomas Berkley Square Housing, Oakland, CA

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