

## southwest clinical center

by MARCELO SICOLI / 2019-05-02 17:56:17 / International / 3557 / EN



Renovation

Primary energy need :

**1000** kWhpe/m<sup>2</sup>.year

(Calculation method : Material Balance algorithm )

### ENERGY CONSUMPTION

*Economical building*

*Building*

< 50 **A**

51 à 90 **B**

91 à 150 **C**

151 à 230 **D**

231 à 330 **E**

331 à 450 **F**

> 450 **G**

*Energy-intensive building*

**Building Type** : Other commercial buildings

**Construction Year** : 2003

**Delivery year** : 2017

**Address 1 - street** : SHCSW Lotes 3/4/5 sala 220, centro clinico sudoeste 70673416  
BRASILIA, Brazil

**Climate zone** : [As] Tropical dry

**Net Floor Area** : 8 000 m<sup>2</sup>

**Construction/refurbishment cost** : 189 000 €

**Number of Visitor** : 139 Visitor

**Cost/m2** : 23.63 €/m<sup>2</sup>

## General information

### Sustainability in commercial condominium

1-

#### Introduction

Imagined since the 18th century, Brasilia emerged as a demonstration of the capacity of Brazilians who built it in just three years. Inaugurated on April 21, 1960, by then-President Juscelino Kubitschek de Oliveira, it is currently the third largest city in Brazil, just behind São Paulo and Rio de Janeiro. The city had the highest rates of development and quality of life in the country in 2016, according to an international study by Mercer.

Due to the great importance of the city for world architecture, on December 7, 1987, the area of the Pilot Plan was transformed into a UNESCO World Heritage Site, making it the largest historical patrimony area in the world.

The Southwest Clinical Center (*Centro Clinico Sudoeste*) opened in 2003, is one of the largest health complexes in the entire Federal District. It seeks to offer specialized care of high standard in the segments of medicine, physiotherapy, dentistry, laboratory, aesthetics, among others. Largest commercial building in the neighborhood, we serve clients / patients from all over Brasilia (capital of Brazil). Today, we have more than 90 companies in operation, arranged in 139 rooms, generating more than 1000 direct jobs with a circulation of more than 4 thousand people per day.

Marcelo Sicoli, is the building manager who conducts everything. He is not an employee of the building, but chosen annually by the companies of the building to manage it. In Brazil residential or commercial buildings usually will have an owner of an office space, apartment or house to represent all the people working/living in that particular building. He manages 14 employees, commercial, legal and financial aspects. The building has more than 90 companies in the medical, dental, cosmetic, and healthcare segment. The condominium ends up being a small company.

The condominium of *Centro Clinico Sudoeste*, located in an noble neighborhood of the same name ("*Sudoeste*"), did an important work in its premises. In exactly one month (between March and April 2017) it removed all polycarbonate and support beams from the central patio that were already more than 13 years old and made installation by a tensile structure covering 918 square meters (m<sup>2</sup>). Other stages extended until the end of June 2017.

2-

### Details

More than 7 tons of metal were removed and shipped for recycling. From the pictures attached/sent one can have a better idea of the structure which was removed. However, the weight of the beams surprised even the engineers of the company hired to remove it. Each one of the 12 beams that supported the old covering in polycarbonate, weighed around 600 kilograms (yes). So they had to be correctly supported on the scaffold, and cut in three pieces (each of worth 200 kilograms) and brought down using ropes. Lift platforms would have been a better choice than scaffolds, which take a lot of time to be built. However, below the whole patio that is a garage for cars. Engineers were concerned that the weight of the electric equipment summed with the weight of the steel bars being removed with electric sanders could compromise the concrete structure.

With the textile cutouts, instead of incineration it was decided to hire a cooperative of craftsmen from Brasília to make beautiful promotional bags of the building. The textile was combined with green or red jean (logo colors) and distributed among the condominiums in order to assist in grocery shopping for example, adhering to the fashion of ecological bags, avoiding the consumption and dumping of plastic bags.

A working security engineer was also in the team. Concerns have always been raised about the safety of clinic staff and thousands of clients and patients who daily pass through the building's premises, which did not cease to function even during the most critical phases of intervention. Excerpts from the building receiving the work were isolated and paths diverted, after all, there were 8 scaffold towers simultaneously reaching more than 10 meters in height each, and of course, with intense traffic of tools, construction material and workers.

Two distinct teams worked on the project, one from Brasília for removal and another one from Minas Gerais State (Tensitex) to install the new cover. New lighting project was done, to highlight the beauty of the natural screens. The white textile, ends up serving with reflective element for the projection of the installed colored lights. In Brasília, it is very common for buildings in the *Esplanada dos Ministérios* (ministries axis) to change the color of lighting according to the time of year. The lighting colors remind Brazilians and all Brazilians of dates such as "Yellow May" (traffic safety), "Pink October" (prevention of breast cancer) and "Blue November" (awareness of prostate cancer). The new structure can last for more than 30 years with fairly simple maintenance, ie only with water and neutral soap.

30 direct and 40 indirect jobs were generated, in a work that consumed about R\$ 700 thousand (US\$ 211.308 or EUROS 188.770). Construction was paid over 17 months by the companies who form the building.

3-

### Planning

The result now seen is the result of work begun in 2015, when it was necessary to hire an architectural firm (Ornatus Arquitetura) to propose a new technical solution for the roof and revitalizing the building as a whole, said Marcelo Sicoli, a building manager, in office for seven years. The cost-benefit ratio of choice over other materials is winning against many of the other competitors considered, it is worth emphasizing. Other stages of the whole reform of the building will take place in the next 8 years.

Photos and footage of all the steps were taken and an official video summarizes the entire accomplishment, including aerial footage made with a drone. There is a stark difference in the words of many. Link on youtube: <https://youtu.be/r1OiFm5J9dQ>

Tense structures (tensile structures) are on the rise due to their application in roofs that conquer big gaps, an application especially interesting for arenas and stadiums built or adapted for the major sporting events that Brazil has received in recent years. In Brazil, we can see applications in Morro da Urca (Rio de Janeiro-RJ-Brazil), Interlagos Speedway (São Paulo-SP-Brazil), Casa Park and Park Shopping (Brasília-DF-Brazil), Ananindeua Fair (Belém-PA-Brazil), Confins International Airport, Independência Stadium (Belo Horizonte-MG-Brazil), Fonte Nova Arena (Salvador-BA-Brazil), and so on. Around the world Millennium Dome (London-England), Denver Airport (Colorado-USA), Jeddah Airport (Saudi Arabia), Premium Outlets North Las Vegas (USA), Munich Olympic Stadium, Burj Al Arab hotel (Dubai - United Arab Emirates) and hundreds of others.

4-

#### **Key Dates**

2010- Beginning of problems with structure. Expressive leaking after rains and huge heat. Old, ugly and outdated structure.

2015- necessity to hire an architecture firm.

February 2016- Architecture firm was chosen among many proposals.

August 2016- delivery of architectural projects by Ornatus Architecture firm.

September 2016- Beginning of saving money for the project.

March 2017- Beginning of construction

June 2017- End of construction.

January 2018- end of money raising regarding the construction already finished.

5-

#### **Results**

In addition to better protection against rain, dust and sun, it has a more beautiful, modern environment, better natural lighting and with more pleasant temperatures. There were gains in best air circulation and even in acoustics, because the material makes less noise than the old one in case of rains, an important factor in a building consisting predominantly of medical and dental clinics. At night, with the heat oscillation, you heard frequent crackling by the work of the polycarbonate as well. As the arches and cones that support the textile are higher than the old cover, a greater sense of amplitude and space was obtained in the more than 918 m<sup>2</sup> (918 square meters) included. The improved air circulation prevents the proliferation of diseases, especially respiratory ones.

Spontaneous (free) media coverage by newspapers, websites and TV channels promoted positively the building as a whole in the city and the country.

Technical literature shows that the use in construction of tensioned textile does not imply an increase in computable area. The roof has a lateral opening of more than 90% throughout its length. Material used was imported from France, by famous manufacturer SERGE FERRARI. It is important to note that it is only with architectural design and use of the appropriate material that there is significant energy saving, with refrigeration for example, or even lighting that only needs to be switched on at night.

Another positive side-effect, is that in the event of fire in one of the rooms in the central patio, the smoke will escape more easily, in comparison with the old "closed" roof.

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### Awards

Due to the excellent performance and result, in June / 2017, Marcelo Sicoli, received the award "*Sindico que faz*" (building manager that makes it happen) by ABRASSP - Brazilian Association of building managers. [www.abrassp.com.br](http://www.abrassp.com.br) Other awards on social accomplishments, environmental, sustainability and why not architecture will still come. The building manager who carried out this case, was invited to give lectures about the success of this construction all over Brazil also many articles and news reports were made. Buildings in Brasilia and around the country (Brazil) can learn a lot from this case. Not only in construction techniques but on leadership and entrepreneurship. In September/2017 had a special report by Sindiconet Portal - one of the largest websites in Brazil in this segment. He was named: Building manager of the month - <https://www.sindiconet.com.br/informese/gestao-de-condominio-comercial-exige-preparo-mercado-sindico->

The condominium of the Southwest Clinical Center was awarded the "Human Being Brasilia 2017" award from ABRH (Brazilian Association of Human Resources) in a ceremony on 10/18/2017. <http://abrhd.com.br/site2016/> The award aims to recognize, disseminate and reward good practices and good academic work aimed at the management and development of people in the workplace, as well as corporate social responsibility and sustainable development. In the AXIS SUSTAINABLE DEVELOPMENT AND SOCIAL RESPONSIBILITY, we shared the stage with the CNI-National Confederation of Industries. The award has a connection with a great work completed in the first half of 2017 by the condominium. Additionally, we are finalists in worldwide demolition competition in the category: "*Recycling and environment*". The awards will be held on November 2 in London (England). The building manager traveled to represent the collectivity <http://www.demolitionsummit.com/awards.html> Recalling that in our recent work 7 tons of metal were removed and sent for recycling. The remains of the used canvas that normally are incinerated, were used to produce handmade bags distributed between the condominiums. Finalists: 1) Southwest Clinical Center (Brazil) 2) Keltbray (England) 3) Perfect Contracting (Australia) 4) Priestly Demolition (Canada). By the same token, and in the same city, by coincidence, we were in the finals on the category: Best Resources Project by Facilities Management Award in this event organized by CIWM (Chartered Institution of Wastes Management). But this time, we won the first prize!! [www.ciwmawards.com](http://www.ciwmawards.com) In December, in São Paulo we were one of Finalists in 23° Pini Prize-the best in construction.

<http://premio.pini.com.br/> Closing the year, on December 07, during a major congress of building managers(3°ENBRASSP) in the city of Goiania(State of Goias), Marcelo Sicoli, was the only in the country to receive the award: “*Master Sindico*”.

In May 2018, we have appeared as the Facility manager of the month – Revista(*magazine*) Infra, which is one of the most prestigious magazines/websites in

Brazil:<http://www.revistainfra.com.br/Textos/18585/Marcelo-Sicoli,-do-Centro-CI%C3%ADnico-Sudoeste,-%C3%A9-o-Entrevistado-do-M%C3%AAs>

In August 2018 we won an award in the category “Management” from the Portal cities and condominiums. A few days later, Senator Hélio José came to visit and meet our workers in the building. [www.cidadesecondominios.com.br](http://www.cidadesecondominios.com.br)

## See more details about this project

<https://youtu.be/Bexyu4i8fGU>

<https://youtu.be/r1OiFm5J9dQ>

## Photo credit

Southwest clinical center

## Stakeholders

### Contractor

Name : Tensitex Lonas Tensionadas

Contact : Dietrich Wischhoff

[www.tensitex.com.br](http://www.tensitex.com.br)

### Construction Manager

Name : Ornatus Architecture

Contact : ornatusarquitetura@gmail.com

<https://www.facebook.com/ornatusarquitetura/>

### If you had to do it again?

I would start the demolition of the old structure much earlier than the construction itself that happened almost simultaneously

## Building users opinion

Due to the excellent performance and result, in June / 2017, Marcelo Sicoli, received the award "Sindico que faz"(building manager that makes it happen) by ABRASSP - Brazilian Association of building managers. [www.abrassp.com.br](http://www.abrassp.com.br) Other awards on social accomplishments, environmental, sustainability and why not architecture will still come. The building manager who carried out this case, was invited to give lectures about the success of this construction all over Brazil also many articles and news reports were made. Buildings in Brasilia and around the country (Brazil) can learn a lot from this case. Not only in construction technics but on leadership and entrepreneurship. In September/2017 had a special report by Sindiconet Portal - one of the largest websites in Brazil in the segment. He was named: Building manager of the month- <https://www.sindiconet.com.br/informese/gestao-de-condominio-comercial-exige-preparo-mercado-sindico->

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## Energy

### Energy consumption

Primary energy need : 1 000,00 kWhpe/m<sup>2</sup>.year

Primary energy need for standard building : 500,00 kWhpe/m<sup>2</sup>.year

Calculation method : Material Balance algorithm

CEEB : -0.0026

Initial consumption : 1 000,00 kWhpe/m<sup>2</sup>.year

### Real final energy consumption

Final Energy : 400,00 kWhfe/m<sup>2</sup>.year

## Renewables & systems

### Systems

Heating system :

- No heating system

Hot water system :

- Solar Thermal

Cooling system :

- Radiant ceiling
- No cooling system

Ventilation system :

- Natural ventilation



Renewable energy production : 50,00 %

## Products

### Product

Finished construction - june 2017

**Product category :** Gros œuvre / Structure, maçonnerie, façade

The roof has a lateral opening of more than 90% throughout its length. Material used was imported from France, by famous manufacturer SERGE FERRARI. It is important to note that it is only with architectural design and use of the appropriate material that there is significant energy saving, with refrigeration for example, or even lighting that only needs to be switched on at night.

## Costs

### Construction and exploitation costs

**Total cost of the building :** 189 000 €

## Contest

### Reasons for participating in the competition(s)

- better protection against rain, dust and sun,
- more beautiful, modern environment,
- better natural lighting
- more pleasant temperatures. There were gains in best air circulation.
- acoustics, because the material makes less noise than the old one in case of rains, an important factor in a building consisting predominantly of medical and dental clinics.

### Building candidate in the category





**Health & Comfort**



**Users' Choice**