



ERNESTA CORNACCHIA METROPOLITAN PARK SCHOOL-PARK AVANÇAR

The Park

The ecologically balanced environment is perceived as not only an "essential [...] asset for the [...] quality of life", but also as a universal right that must be guaranteed and preserved, according to art—255 of the Brazilian 1988 Constitution.

However, intense urbanization, accelerated population growth, and a lack of planning and management that consider the indispensability of well-distributed green areas in cities are observed in Brazilian cities.

The city of Salvador fits perfectly into this scenario. The first point to be highlighted refers to several lands in a "non-place" situation, without fulfilling the social function of urban property. The second point concerns the location of public parks, which, as pointed out by OLIVEIRA and OLIVEIRA (s.d.), favours "noble neighbourhoods, to the detriment of less affluent ones." And the third point concerns the abandonment and degradation of green public areas and the lack of communication between many of the city parks and their respective surroundings.

The Proposal

The proposal encompasses two areas of great importance: the park, and the school-park. Their operation is independent, which allows for different experiences for students and the city's inhabitants. For safety reasons, the park is separated from the school through an artistic railing that makes one visible to the other.

The project has an urban, a landscape and, finally, an architectural content. The urban content comprises the reuse of land that is currently characterized as an urban void, according to Brazilian Complementary Law No. 521 of February 16, 2011. The urban content also encompasses the restructuring of access to the land both through Orlando Gomes Avenue and Bairro da Paz (neighbourhood beside the site). Finally, this project's urban content also aims to recover the stretch of the Jaguaripe River that separates the terrain of Bairro da Paz and its immediate surroundings. The landscape content can be verified through the creation of the Ernesta Cornacchia Metropolitan Park area, with varied ambiences. The architectural content, at last, is established through the preliminary project of Escola Parque Avançar.

GENERAL LOCATION OF THE PROJECT

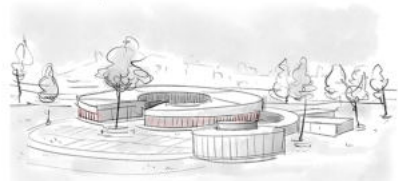


And the School-Park

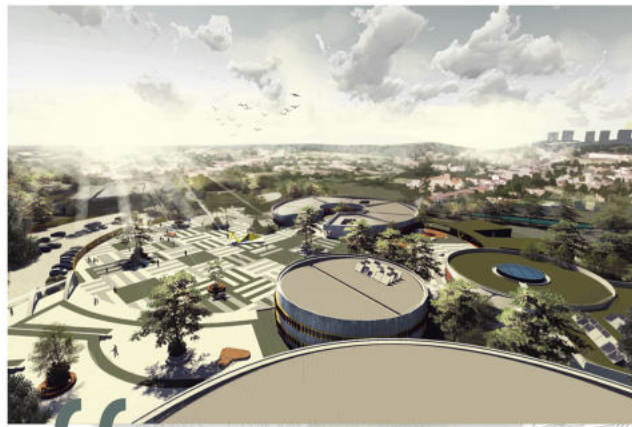
Let's start with schools: if anything must be done to 'reform' men, the first thing is to 'form them' (BO BARDI, 1951)

The choice of a school-park as the leading equipment of this project stems from the educational problem existing in Brazil. It is necessary to develop and implement projects that resignify the meaning of schools.

"It is essential that spaces are fluid and that the architecture allows and promotes the integration between children and adolescents of all ages. It is necessary that the users of this new school feel welcomed and valued according to their individualities. This place must offer the possibility of an education that covers from the basic to the ludic, the creative." (



classroom building inicial sketch study

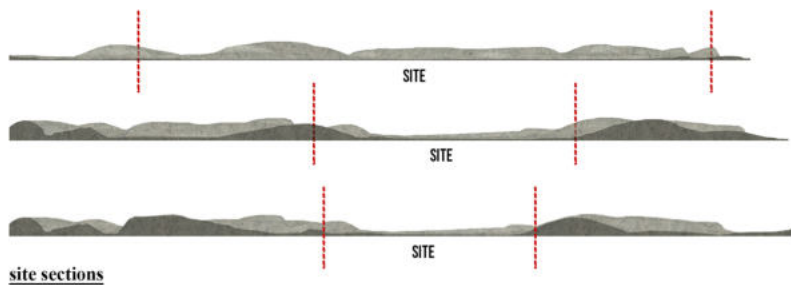
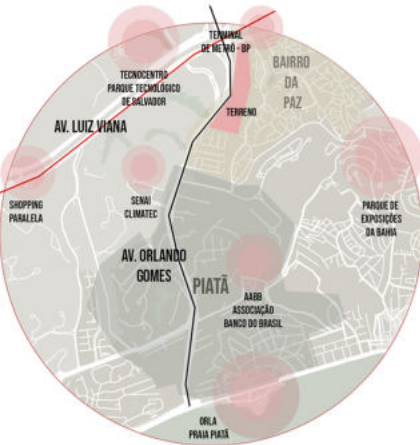


Anisio Teixeira, the creator of the school-park concept, thought to achieve quality by proposing a system in which classroom education was completed by directed education. He thought of a system composed of "school-class" and "school-park": four schools-class, for a thousand students each, built around a school-park, for four thousand students. The students would attend both in alternating shifts. In the school-park, complementary activities with focus on physical, social, artistic and industrial education would take place.



The Site

According to the book "O Caminho das Águas in Salvador" (FISCHER et al., 2010), the land chosen for the implementation of School-Park is an integral part of the Piatã neighbourhood. Despite this, the site, bordering Bairro da Paz, evokes the need to consider the socio-economic characteristics of the two areas.



site sections

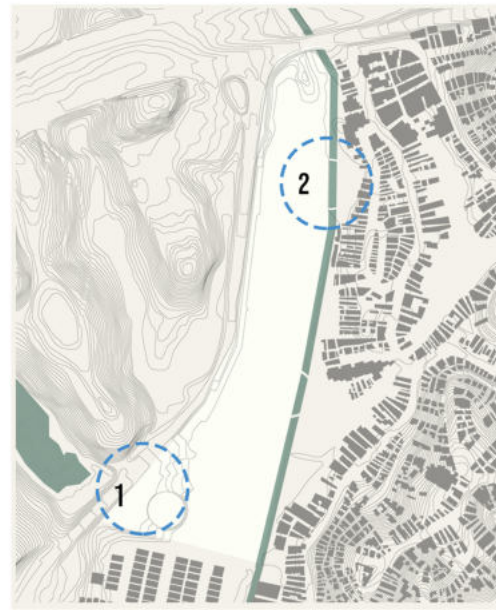
Between Neighbourhoods: juxtaposition

The urbanization process in the Piatã neighbourhood started in the 1980s. Initially, it took place slowly, and it was only in mid-1995 that its pace intensified. Piatã is located on the Atlantic Coast of Salvador and is primarily residential, with several private condominiums.

The old name of Bairro da Paz tells a lot about its history and its occupation process: "Invasion of Malvinas." The urbanization of this area took place spontaneously, and it was through "a lot of struggle" that its residents could remain in the place (FISCHER et al., 2010). It is said that "it was common for people to build their houses at night and at dawn for the police to destroy it."

Due to the opposing historical natures of the urbanization processes, what is observed is the existence of two neighbourhoods that, despite being adjacent, have general characteristics that are opposite. Inequality is evident. However, working with a site located between areas with such contradictory socio-economic attributes results in **integrating different social classes, promoting diversity.**

According to BOLAN (2004), a study developed by UFRJ highlights the value and the need for social diversity in the school environment. The **benefits** range from **increased student performance** to the **break-in life cycles seen in more impoverished regions**. The exchange is, therefore, necessary for human learning because "it is from this that the student grows as a person and citizen" (BOLAN, 2004)



Site Situation

The land, located at the intersection between Luís Viana and Orlando Gomes Avenues, has approximately 100,000m² and has a large vegetal mass. Today, the area is deforested, and one of Salvador's main rivers - Jaguaripe - is degraded. In addition, its course, which until mid-2012 passed through the site, is currently limited only to the region outside it.

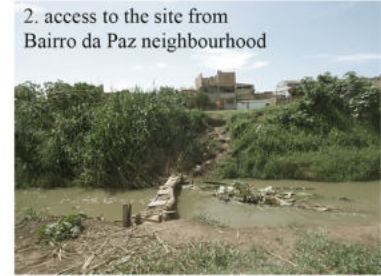
The land is vast, easily accessible and with extraordinary potential for integration between neighbourhoods. Despite these characteristics, it is underutilized. It would be more beneficial for the community if functions and equipment that encourage integration (such as parks, cultural promotion and sports practice spaces) were included.



1. access to the site from Orlando Gomes Avenue



2. access to the site from Bairro da Paz neighbourhood



1. Absence of a clear boundary between the neighbourhoods of Piatã and Bairro da Paz; 2. The river crosses the terrain; 3. A large area of natural terrain west of Av. Orlando Gomes.



1. The road to the west of Orlando Gomes is complete; 2. The limits of the site are more evident by the river's delimitation; 3. The disappearance of the Jaguaripe River course through the terrain.

"Many of the major urban problems happen due to a lack of continuity. The emptiness of a region with no activity [...] can be added to the emptiness of vacant lots. Filling them out would be good acupuncture."
(LERNER, 2011)

Water Degradation

Urbanization processes and the lack of adequate planning for them resulted in the deterioration of various aspects of the cities' natural landscape, such as water systems. There is frequent obstruction of runoff and pollution of rivers. The Jaguaripe River, for instance, was previously used by residents of Bairro da Paz for recreational and work activities, but today it is not preserved. In addition, during a visit to the site, plumbing works (with the application of concrete slabs) were observed on the site.

GORSKI (2008) points out that the understanding of waters as finite resources and on which we are dependent is an essential element for "valuing and involving [the populations] in the sense of preservation, conservation or recovery [...] of the courses' water and urban water supplies" (GORSKI, 2008).

The author says: "it is not enough to clean up the river! Even if it runs clear again, [...] it will not change the perception that the population has of its "open sewage." The river needs to be incorporated into [people's lives] again, and for that, the only alternative is to reconstitute it as a leisure space." (GORSKI, 2008)

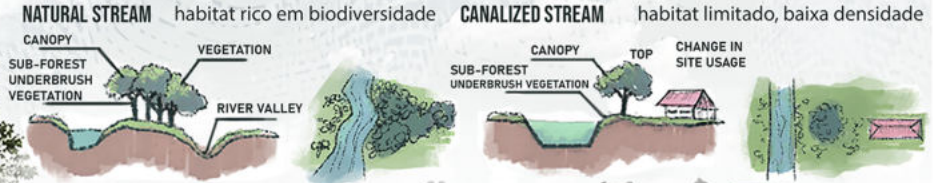
Therefore, the first step in the recovery of the river would be to educate the people about its importance. Then, a series of mitigating actions for the urban rivers of Salvador would be developed (proposed by SANTOS, 2010, in O Caminho das Águas de Salvador). Finally, its maintenance would be promoted through its transformation into a public coexistence space, inserted into people's daily lives, using tools provided by the architecture.

Project for the River

The project includes the widening of the Jaguaripe River bed to its original dimension, as foreseen in its canalization works - already in progress. Next, we'd focus on recovering its waters (which are currently cloudy, with a slight odour and deposition of garbage in the bottom, according to SANTOS, 2010), followed by reforestation riparian forest in the limits between river and land.

Finally, to add value to the river, the focus would be on creating squares in the access areas through Bairro da Paz. Paths along the river and specific equipment that would be positioned along the river were developed. The objective is that the constant use of these spaces results in its users' appropriation of these areas. As these areas are directly linked to the river, they would feel directly responsible for maintaining it.

the Jaguaripe today



“The City of Salvador, broken and surrounded by water ... is becoming arid. The paths traveled by its waters, which recreate a significant part of its history, reveal how perverse the relationship between urbanization and nature has been. Our fresh waters disappear in the opposite relation to the intensity of the urbanization process.” (SANTOS et al, 2010)

park access through Bairro da Paz

Ernesta Cornacchia Metropolitan Park



Name selection

The creation of public spaces through the placemaking process "strengthens the connection between people and the spaces they share" (PPS, s / d) because it results from a broad collaboration between the authors of urban projects and the community.

With this in mind, visits were made to Bairro da Paz and interviews were performed with its residents. In an interview with the community leader, it was clear the importance of the Programa Avançar (through which educational workshops are promoted to the neighbourhood inhabitants) and the Italian missionary Ernesta Cornacchia creator of the program, who provided resources to develop the community. The nomenclatures of the Ernesta Cornacchia Metropolitan Park and School-Park Avançar are, in this way, a tribute to the neighbourhood residents and a reminder that both the park and the school are mainly for them.

Access and layout of equipment

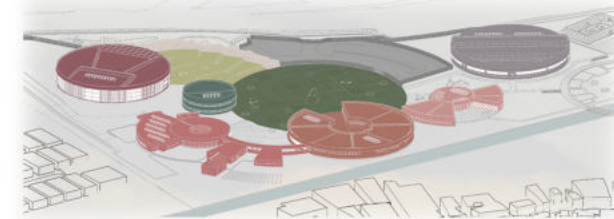
There are 5 accesses. Three of them take place through Orlando Gomes Avenue (through the marginal road to the School-Park and cycle paths to the Park), and the others through Bairro da Paz (with a focus on pedestrians and cyclists, through bridges that cross Jaguaripe River).

The School-Park consists of 6 buildings, namely:

1. Auditorium;
2. The general administration;
3. The school food court/ restaurant;
4. The classroom block;
5. The library;
6. The sports center.

The auditorium is located on a higher level, aiming for greater visibility from Orlando Gomes Avenue. The other buildings are located 5 meters below the avenue. The primary access to the school consists of a large accessible ramp with openings for a group of 3 stepped squares facing the main square of the school, which connects the other buildings and the parking lot.

The sports sector is located to the north of the main square and a little further away from other buildings, aiming for acoustic comfort. The area has a more public character than others, as it is placed in the transition between the school and the Park.



legend

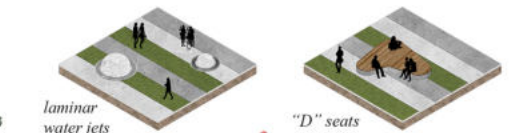
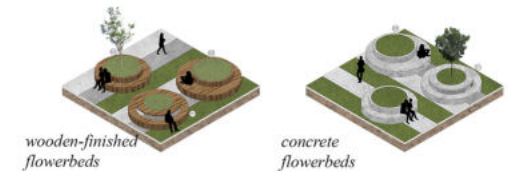
■ auditorium	■ classroom block	■ access ramp	■ parking lot
■ administration	■ library	■ stepped squares	■ jaguaribe river
■ food court and separate classrooms	■ sports center	■ G. B. square	

Landscape

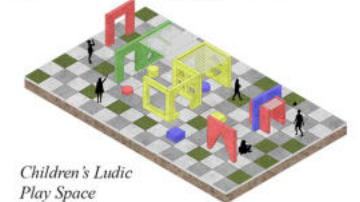
Nine squares were created along the Park. The uses are, in general, diverse. Contemplation and relaxation areas (Zen space and picnics) were developed, along with sports and physical exercise spaces (sports courts associated with public gyms).

Urban Furniture

A total of 7 types of furniture were designed to meet the needs of leisure, living and contemplation. The Children's Ludic Play Space was designed by the architect Fabiano Sobreira. The Contemplative "Worm" was prepared based on pre-existing projects whose authors were not identified.



Contemplative "Worm"



Children's Ludic Play Space

Sustainable Urbanism

Proposal for public spaces

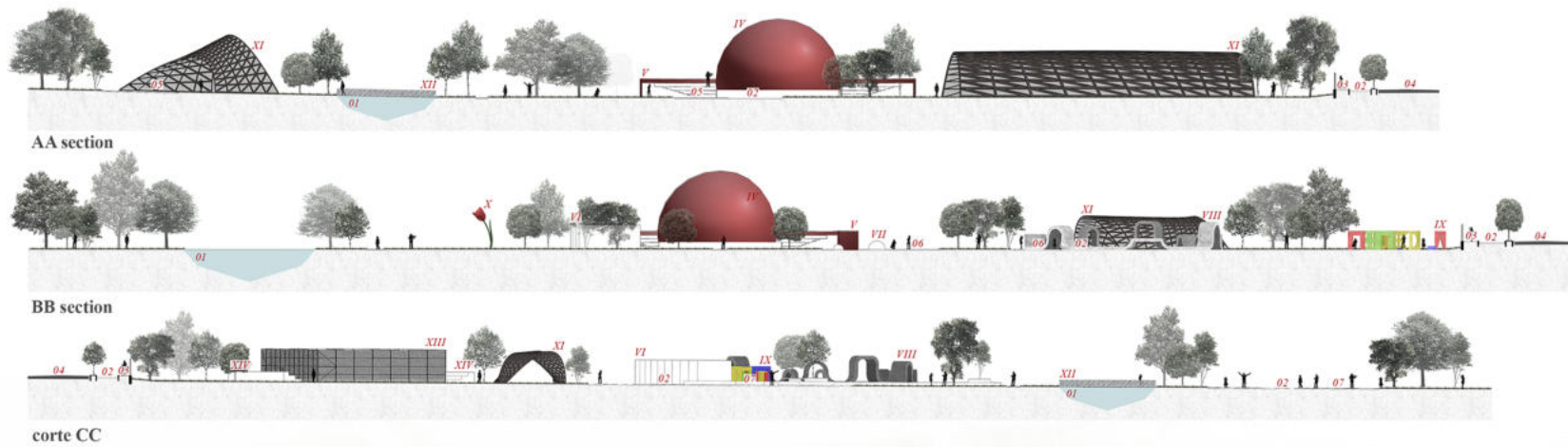
The Ernesta Cornacchia Metropolitan Park project was based on the concepts that guide Sustainable Urbanism. The focus, therefore, was to "rescue the quality of life and improve the relationship between man and the city, promoting long-term sustainable development and orderly growth that would minimize the social, environmental and economic impacts of urban actions" (ECOD, 2010). In the project, it is observed:

1. Priority in the Park is given to **pedestrians and cyclists**.

2. To promote the **encounter and the coexistence between users of different generations and social classes, attractive public spaces** were created, with **mixed uses** and different ambiances.

3. In addition, artistic and cultural expression areas were developed, aiming to valorize **human capital**.

4. Through the creation of contemplation areas for the neighbourhood, the **local identity** and the **sense of belonging** were reinforced to increase the residents' **safety and well-being**.



legend

01 jaguaripe river (+4.85)	04 orlando gomes av. (+4.85)	I gray fulget floor: counterfloor	IV B.D. amphitheater (in reinforced concrete)	VIII contemplative "worm" (in reinforced concrete)	XI parametric structure in glued laminated wood
02 bike lane (+4.85)	05 J.B. square (+4.00)	II plastic wood, cemented; slab	V amphitheater seating area	IX children's ludic play space	XII acrylic: white T&M railing
03 sidewalk (+5.00)	06 H.D. square (+4.00)	III cold asphalt pavement in red	VI public washrooms	X tulip light structures	XIII multisport courts
	07 F.N. square (+3.05)		VII laminar water jets		XIV bleachers



“The architect can contribute to creating an environment that offers many more opportunities for people to leave their marks and personal identifications, which can be appropriated and attached by everyone as a place that really belongs to them.”
 (HERTZBERGER, 1996, P.47)

School-Park Avançar

For the Final Graduation Project, only the Park and two of the School-Park buildings were developed: the cafeteria and the classrooms block. The School-Park Avançar meets 21 of the 32 design parameters for school architecture presented by KOWALTOWSKI (2011).

It will serve 200 students per shift, resulting in 2000 per week, representing 36% of the population under 18 in Bairro da Paz and 94% of the population in the same age range of Piatã. The number of people attending the school is the same as attending the Centro Educacional Carneiro Ribeiro (CECR), the first park school in the country.

base architectural program:

auditorium: 2.855m² administration: 970m²
 cafeteria: 1.139m² classroom block: 2070m²
 library: 1.125m² sports center: 2.070m²
 -
 total area: 10.229m²
 parking spots: 103, as per Art. 75A Seção VI da Lei Nº 9.148/2016

There were created squares that promote, according to Nair and Fielding, apud KOWALTOWSKI (2011), the following types of human experiences, as a consequence of their size variation:

1. **Spatial:** vary (from "intimate, open, illuminated, closed, active, quiet, connected to nature"), according to position and size;

2. **Psychological:** they can be peaceful (as in the various passive and contemplative leisure squares); stimulating and creative (like the children's space and its playful furniture); creators of community sense (like the community garden);

3. **Behavioral:** which allow for "independent study, collaborative [or] teamwork, physical activities, research, reading and writing, computer work, singing, dancing, acting, working in large groups, communicating with nature, project and construction, teaching, relaxation, reflection," like the classrooms as a whole.

legend

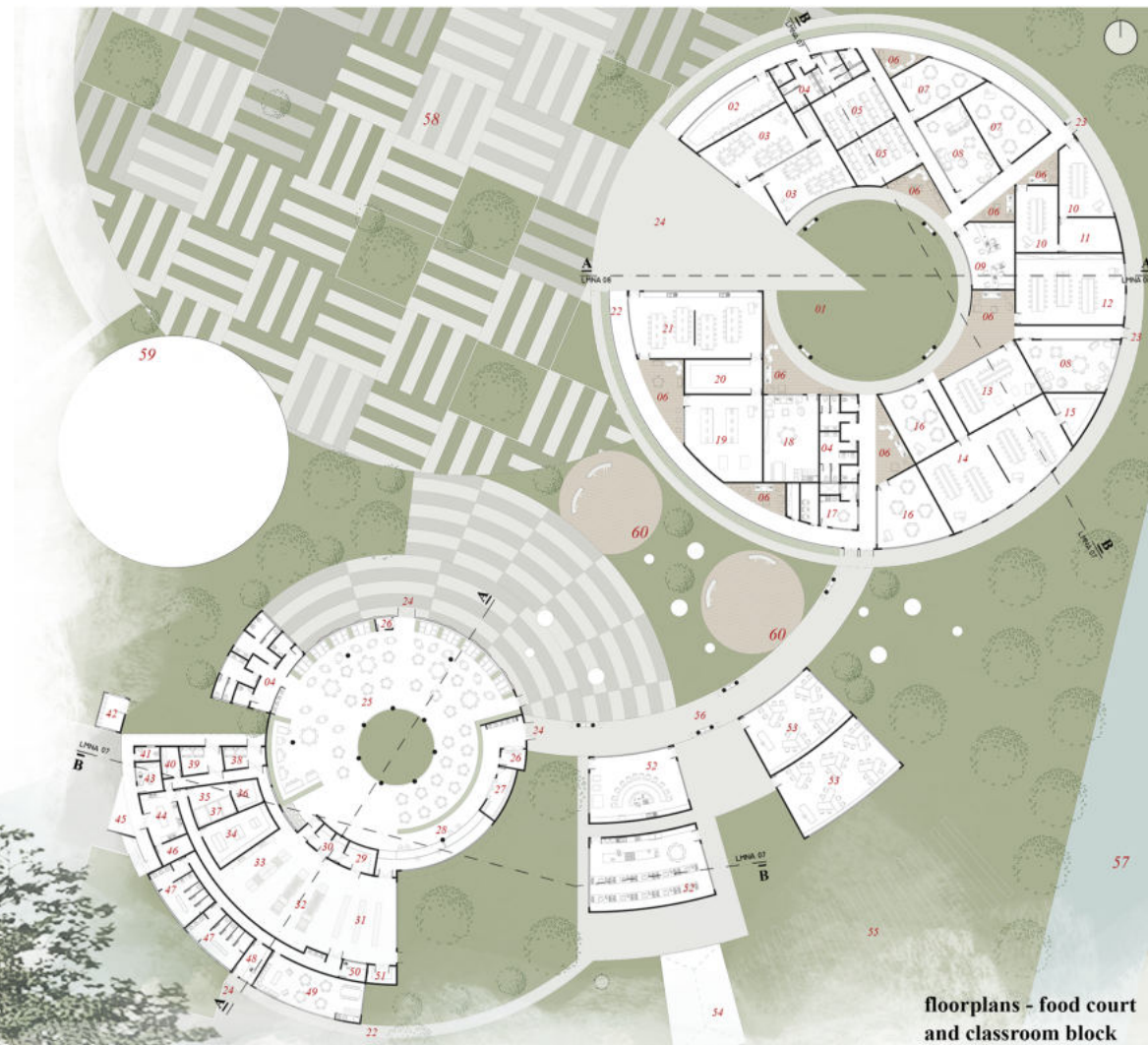
Classroom Block

- | | |
|-----------------------------|----------------------------------|
| 01 inner courtyard | 13 costumes workshop |
| 02 school paper | 14 painting atelier |
| 03 sciences laboratory | 15 painting storage room |
| 04 washrooms | 16 plastic arts atelier |
| 05 computer classrooms | 17 janitorial |
| 06 cave spaces | 18 teachers' room |
| 07 math/portuguese | 19 engraving studio |
| 08 multi use classrooms | 20 plastic arts storage room |
| 09 administration | 21 sculpture and ceramics studio |
| 10 photography studio | 22 circulation |
| 11 photography storage room | 23 emergency exits |
| 12 scenarios workshop | 24 accesses |

Food Court and separate classrooms

- | | |
|------------------------------|---------------------------------|
| 25 hall | 41 toilet |
| 26 cashier | 42 gas |
| 27 luggage storage | 43 control and receiving |
| 28 Internal queue and tray | 44 screening |
| 29 tableware | 45 loading and unloading |
| 30 sanitation | 46 packaging deposit |
| 31 distribution | 47 change room |
| 32 cooking | 48 employee control |
| 33 pre-preparation | 49 employee resting area |
| 34 dry storage | 50 nutritionist |
| 35 antechamber | 51 drinks |
| 36 fish preparation | 52 didactic kitchens |
| 37 chambers (3) | 53 environmental education |
| 38 dry garbage | 54 greenhouse |
| 39 damp garbage | 55 community garden |
| 40 cleaning material storage | 56 connection between buildings |

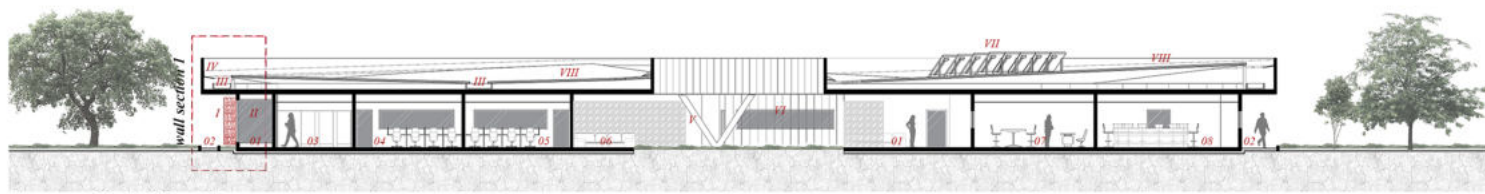
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|----------------------------------|
| 57 jaguaribe river |
| 58 main square - G. B. |
| 59 administrative - not designed |
| 60 smaller intimate squares |



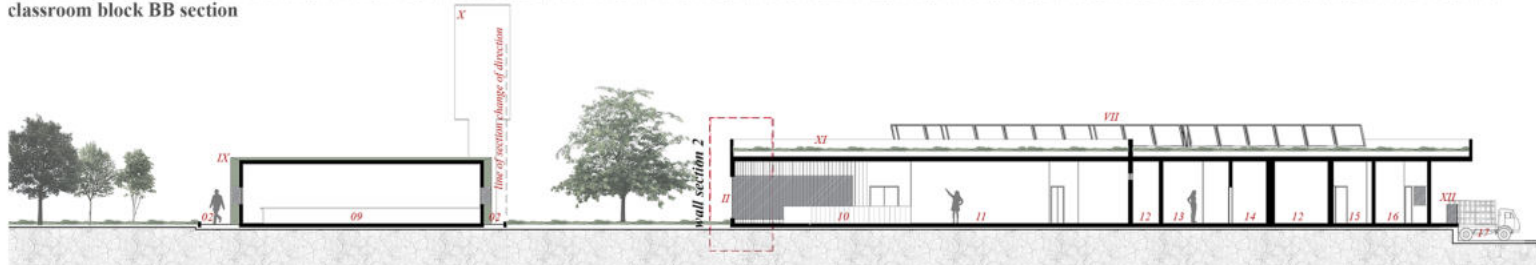
floorplans - food court and classroom block



access classroom block



classroom block BB section



food court BB section

legend

- | | | |
|---------------------------------|--------------------------------------|---|
| 01 internal circulation (+3.05) | 10 internal queue (+3.05) | I wooden sun blocker structure composed of metal profiles |
| 02 external circulation (+3.00) | 11 hall (+3.05) | II structural glazing system |
| 03 washroom (+3.02) | 12 dirty circulation (+3.02) | III waterproof gutter |
| 04 computers room 1 (+3.05) | 13 fish preparation (+3.02) | IV galvanized steel casing |
| 05 computer room 2 (+3.05) | 14 antechamber (+3.02) | V type "V" pillars in concrete |
| 06 cave space (+3.05) | 15 cleaning material storage (+3.02) | VI metal framing |
| 07 costumes workshop (+3.05) | 16 control and receiving (+3.05) | VII solar panels |
| 08 painting atelier (+3.05) | 17 loading and unloading (+2.00) | VIII sandwiche tile t = 9% |
| 09 didactic kitchen (+3.05) | | IX artificial green ecosystem with water in column c = 100,000L |
| | | XI green roof |
| | | XII bronze T&M railing |

Structure

Prestressed slabs without beams (with a maximum span of 16m) and reinforced concrete pillars were implemented for the support system of both the food court and the classroom block.

Roofing

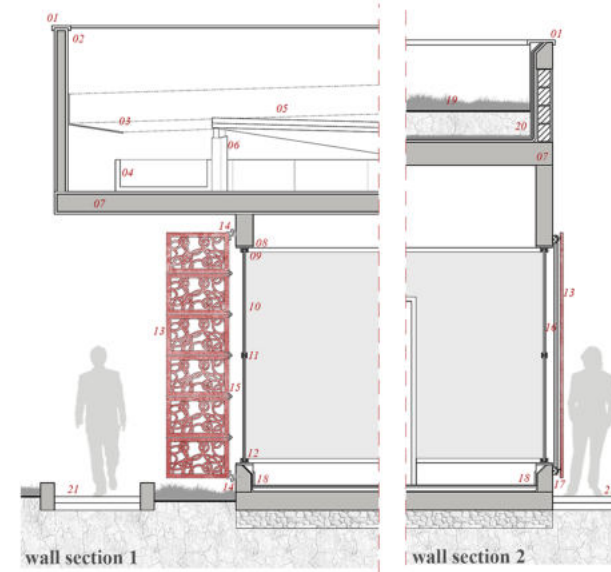
The roofs, in general, resulted from the combination of 4 construction systems:

1. Sandwich tile, for thermoacoustic insulation.
2. Green roof, for aesthetic and thermal benefits.

3. Photovoltaic plate systems associated with vegetable and tile roofs. The green roof reduces the temperature of the solar panels, increasing their efficiency, as pointed out by studies developed by the University of Toronto, Canada.

4. Skylights in 4 of the buildings (auditorium, restaurant, library and sports center), aiming for increased natural lighting, reduction in energy costs and air circulation in the environments.

The roof waters were directed in such a way as to increase the collection of rainwater, which will be treated, and reused.



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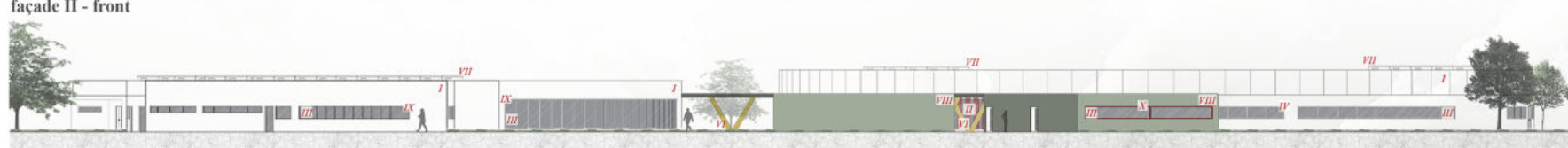
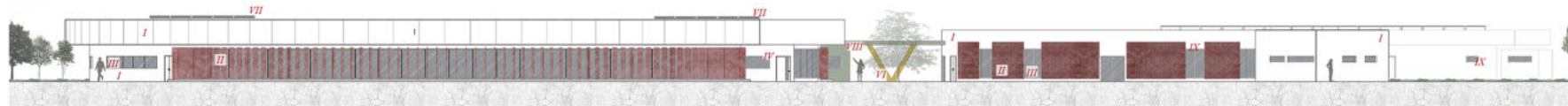
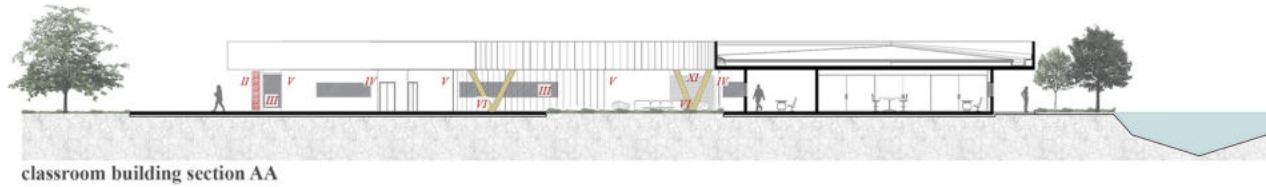
- | | |
|---|--|
| 01 drip edge | 15 fixing between parts |
| 02 external plastering 1: 4: 2, e = 3cm | 16 self-supporting metal profile for anchoring the facade panel |
| 03 galvanized steel flashing | 17 L metal plate for anchoring fixing invert |
| 04 waterproofed gutter | 18 footer h = 15cm and t = 1.5cm; floor e = 1cm; fixation layer e = 1.5 cm; subfloor layer e = 4cm; waterproofing mat e = 1cm |
| 05 sandwich tile | 19 vegetation and plant substrate |
| 06 wooden beam | 20 layer of mechanical protection e = 1.5 cm; waterproofing mat e = 1.5cm; primer e = 1cm; regularization layer e = 2.5 cm; ceramic block 14cm x 19cm x 29cm |
| 07 prestressed slab without beams, e = 25cm | 21 floor tiles fulget e = 7cm; layer of white sand e = 8cm |
| 08 adhesive mortar | |
| 09 upper U profile | |
| 10 15mm double sheet tempered glass | |
| 11 H12 profile fixed connection upright U profile fixed lower upright | |
| 12 brises - steel panel 2cm in rad | |
| 14 ACM clip extrusion system | |



access to cafeteria and detached classrooms

Materials

The connection between the School Park buildings happens through the employment of similar materials. The School Park Avançar buildings' aesthetics are identical to those of brutalist architecture; an architectural movement developed during the period in which the CECR was designed and inaugurated.



legend

I facade in exposed concrete highlighting the design printed by the natural wood formwork

II 2cm corten steel panel in red color fixed to the façade according to wallsections (lamina 07.08)

IV metallic frames in white color
V internal walls in smooth exposed concrete

VI "V" type concrete columns, painted in E613 Suvinil paints
VII solar panels
VIII coating in artificial ecosystem - vegetable

IX metal frames in black color
X metallic frames in red color
XI cobogós (to close small areas of basement space)

obs.: vinyl flooring is employed in internal areas of the school. For outdoor areas: fulget floor; draining floor boards and plastic wood, treated and leveled with the other floors.

[The School Park] It is the place of lasting permanence where abandoned childhood finds shelter. The Escola-Parque promotes health, quenches the thirst and hunger of children – and does so in a way that goes far beyond the literal.

[...]

The School Park [...] educates, conceives "habits [and] attitudes", sows desires and dreams, and trains its users for the contemporary, "technical and industrial," multifaceted and metamorphic world. The School Park is the "machine that prepares democracies." It is the true cradle of popular sovereignty.

[...]

It is art. It's working in cooperation with both sides of the brain. It's creativity. It translates into learning through experience associated with social life (CHAHIN, 2016), and therefore, into an in-depth understanding of practical issues in modern life.

[...]

The School Park and the education it offers guarantee our survival and, therefore, promote life. It is where a better life in society and in the city begins. It's kindness and urban acupuncture. The School Park is the dream of a complete education.

(by the author of the project)



“Architecture is a small piece of this human equation, but for those of us who practice it, we believe in its potential to make a difference, to enlighten and to enrich the human experience, to penetrate the barriers of misunderstanding and provide a beautiful context for life's drama.”

(GEHRY, 1989)