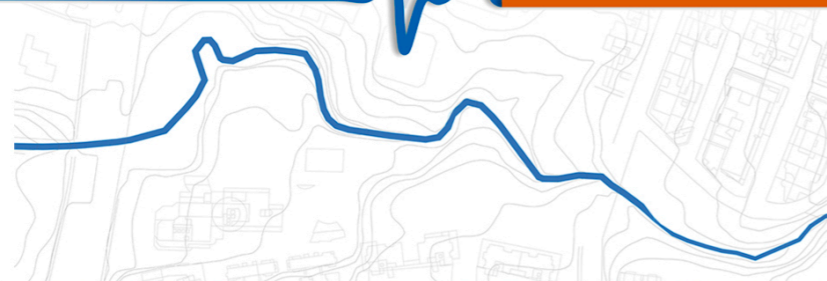
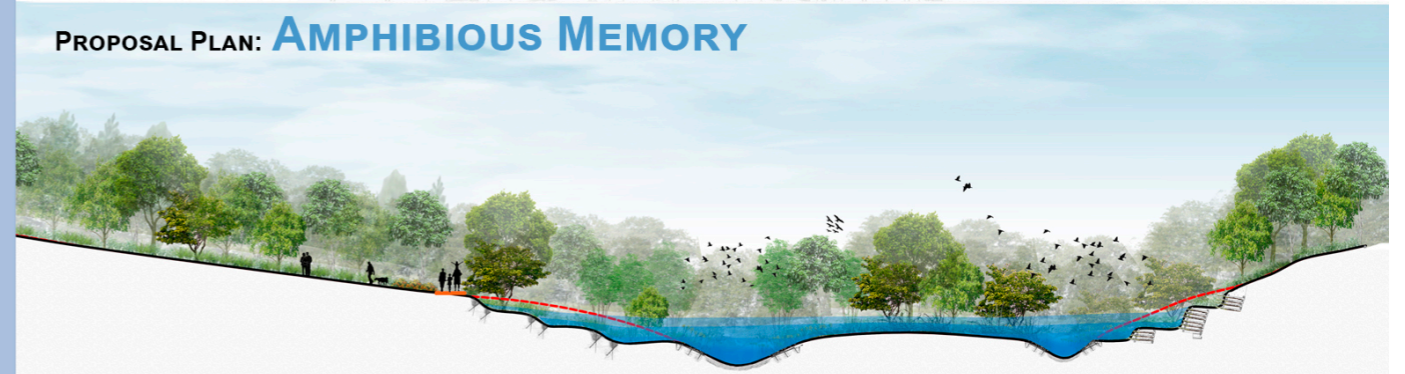


REVIVING THE HEARTBEAT OF THE CREEK



ACTUAL SITUATION: **WATER AMNESIA**

PROPOSAL PLAN: **AMPHIBIOUS MEMORY**



Country /City Colombia
University / School Universidad Pontificia Bolivariana. Medellin, Colombia
Academic year 2018
Title of the project Reviving the Heartbeat of the Creek
Authors María Claudia Paredes Castañeda

TECHNICAL DOSSIER

Title of the project	Reviving the Heartbeat of the Creek
Authors	María Claudia Paredes Castañeda
Title of the course	Design Studio 2
Academic year	2018
Teaching Staff	Arch. Mg Lina María Escobar, Arch. MSc Juan Esteban Correa, Land Arch. María Bellalta
Department / Section / Program of belonging	School of Architecture and Design, Faculty of Architecture, Master in Landscape Design
University / School	Universidad Pontificia Bolivariana. Medellín, Colombia



Written statement, short description of the project in English, no more than 250 words

The project in the Aburrá Valley, Medellín, Colombia, focuses on studying the creek called "La Presidenta" and its environmental, sociocultural, and perceptual dynamics. The community's relationship with the stream has been dominated by fear of flooding, leading to encroachment and construction on its land. As a result, the creek has gradually disappeared physically and from collective memory, leading to what can be described as "water amnesia".

Symptoms of this neglect include creek fragmentation, loss of natural areas, high levels of impermeable surfaces, heat island effects, water pollution, foul odors from debris and garbage accumulation, and declining biodiversity. The proposal aims to rescue the creek's heartbeat through an amphibious environment that encourages restoration and provides recreation during droughts and heavy rains.

Reviving the creek requires reconnecting with its waters and understanding their dance on the topography. This dance molds the stream, leaving traces that define its identity as an amphibious landscape. The core of the proposal is a collective call to perceive the creek's heartbeat once more. By intentionally engaging with the creek, we can foster restoration and recreate the mesmerizing interplay of water, even amidst climate change challenges.

In summary, this project addresses the effects of climate change on the creek by highlighting its disappearance and proposing measures to restore its vitality. Through intentional design, restoration efforts, and communal engagement, we can revive the creek's heartbeat and establish a harmonious relationship between humans and nature, ensuring a sustainable and resilient future for both the creek and the surrounding communities.

For further information

Máster d'Arquitectura del Paisatge - UPC

Contact via email at:
master.paisatge.comunicacio@gmail.com

biennal.paisatge@upc.edu

Máster d'Arquitectura del Paisatge - UPC

Sede ETSAB - Universitat Politècnica de Catalunya

Calle Jordi Girona, 15. Edificio Omega 1-3
08034 Barcelona - Spain

COAC - Colegi oficial d'Arquitectes de Catalunya

Carrer Arcs, 1-3
08002 Barcelona - Spain

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Barcelona October 2023

SCHOOL PRIZE

Site Analysis and Context



Latin America
Colombia

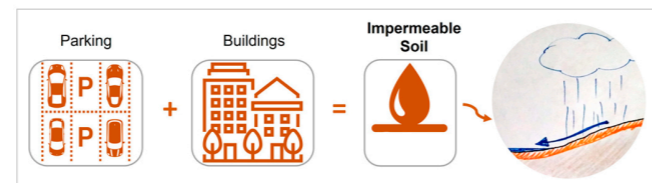


Medellín
"La Presidenta"
water creek

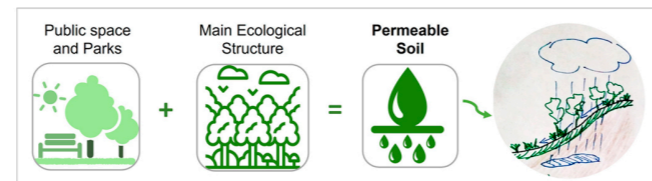
The interest in the project arises studying the basin of the **water creek "La Presidente"**, a tributary of the Medellín River, in Colombia;



Mapping: Impermeable v/s permeable soil

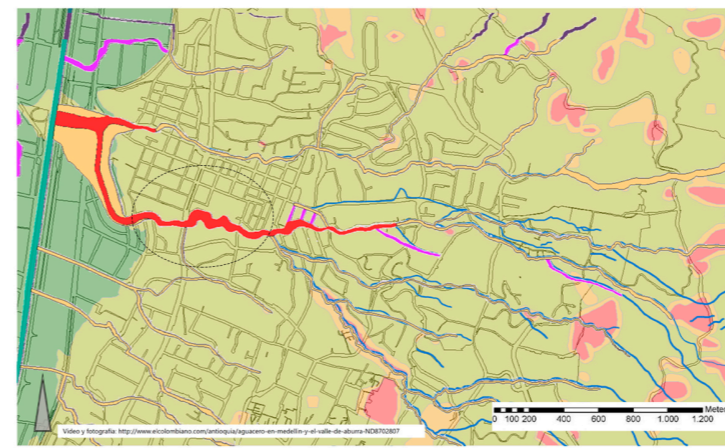


Infiltration: 0% Evapotranspiration: 30% Runoff: 70%
 V/S
 Infiltration: 40% Evapotranspiration: 40% Runoff: 20%



The high index of **impermeable soil** prevents infiltration and in the rainy season **increases the risk of flooding** in the area. It also prevents the recharge of aquifers.

Mapping: Types of flood and Landslides



Elaborated by by students of Cohort 8 Master of Landscape Design

Types of flood
 Flood with landslides (Red)
 Overflow flood (Orange)
 Runoff flood (Yellow)
 Slow flood (Green)

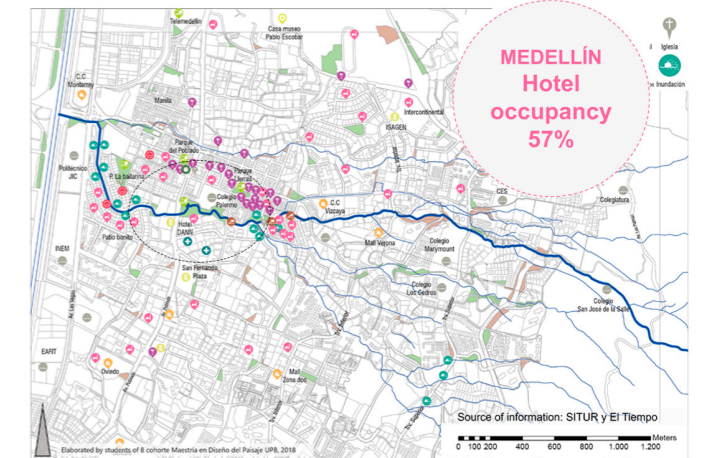
Landslide Threat
 High (Pink)
 Medium (Orange)
 Low (Yellow)
 Very low (Green)

Due to the **channeling, invasion** of the round of the creek with constructions and garbage, in the rainy season there is a **high risk of flooding, landslides** especially in the study area.

The **real estate pressure** due to the existing building model **increases the waterproofing of the soil**, which in turn **increases the heat island effect** and therefore the **thermal sensation**

There is a **deficit of public space** in the "El Poblado" neighborhood, where the creek is located, with **only 4,56 m2 per inhabitant** (The existing public space is **not sufficient** and have **low quality**)

Mapping: Real estate and Tourism pressure



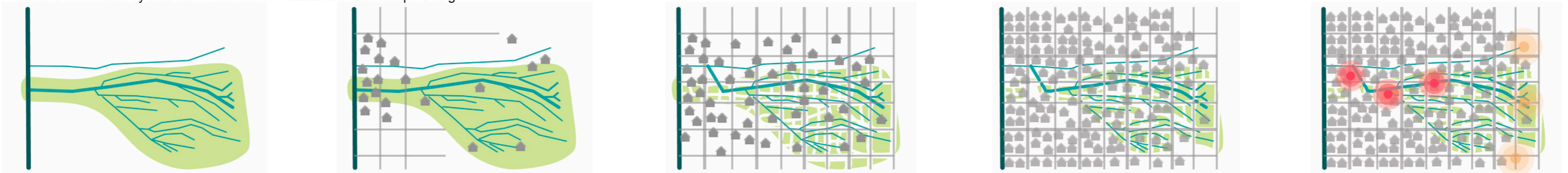
Elaborated by by students of Cohort 8 Master of Landscape Design



Vehicular mobility predominates, encouraged by the increase in streets. As a consequence of this, greater **fragmentation of public space** is generated.

Diagram of the process of forgetting the creek (stream)

Sketchs elaborated by students of Cohort 8 Master's of Landscape Design



Through the years by **the growth of the urban area**, some **sections of the creek were modified and channeled** to allow the growth of the city, building more roads, and buildings on top off it, and in others sections **it has been forgotten**. Therefore it generates:

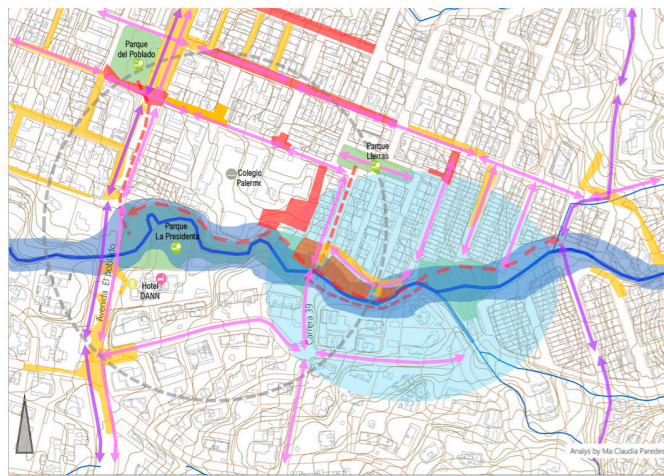
- Alteration of the functioning of the **water system**.
- The loss of **riparian forest**
- Fragmentation of the **Main Ecological Structure**
- **Disconnection in water flow, pedestrian flow, bicycle paths**, (they are isolated)
- Discharge of **contaminated water into the bed of the creek**
- **Constructions invade the round of the creek**
- **Floods have increased and the risk of landslides** due to overflow of the creek in the rainy season.
- All the above reflects the process of **forgetting the creek**



Water Amnesia

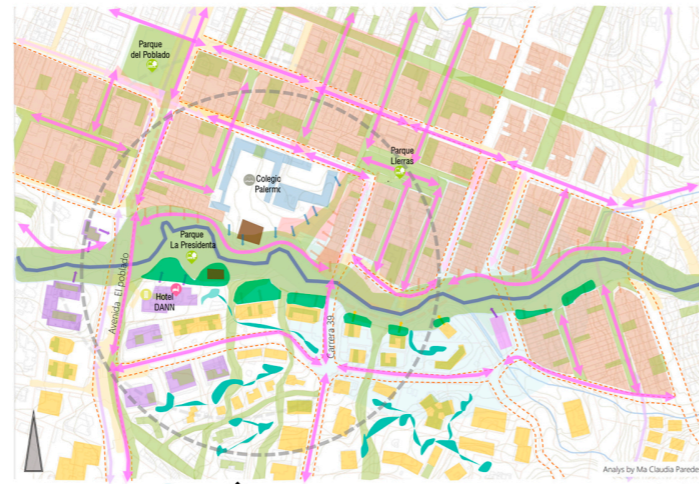
Concept and strategy

Mapping the symptoms of amnesia

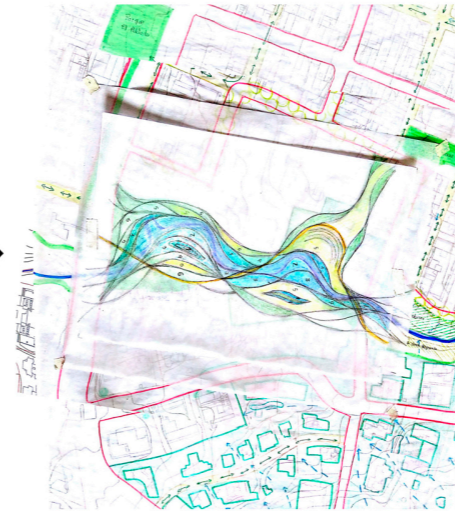


- Public Space
- ~ Flooding and landslides
- ~ Water flow
- - - Disconnection
- ↔ Pedestrian flow
- ↔ Projected bicycle lane
- Invasion of the ravine
- Wind chill factor

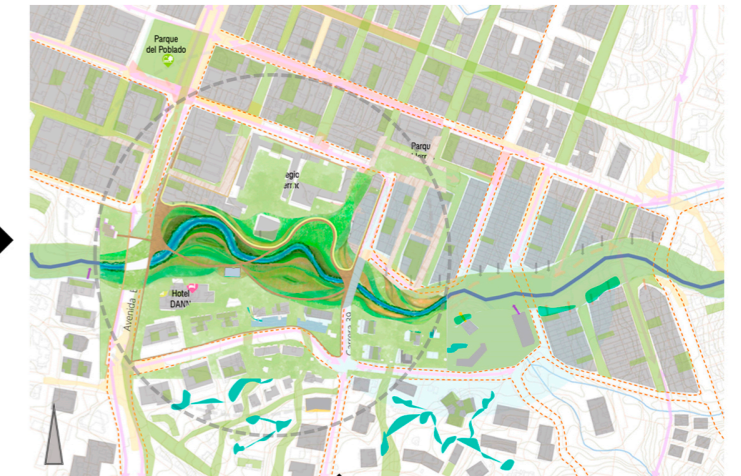
Plan tactics and strategies



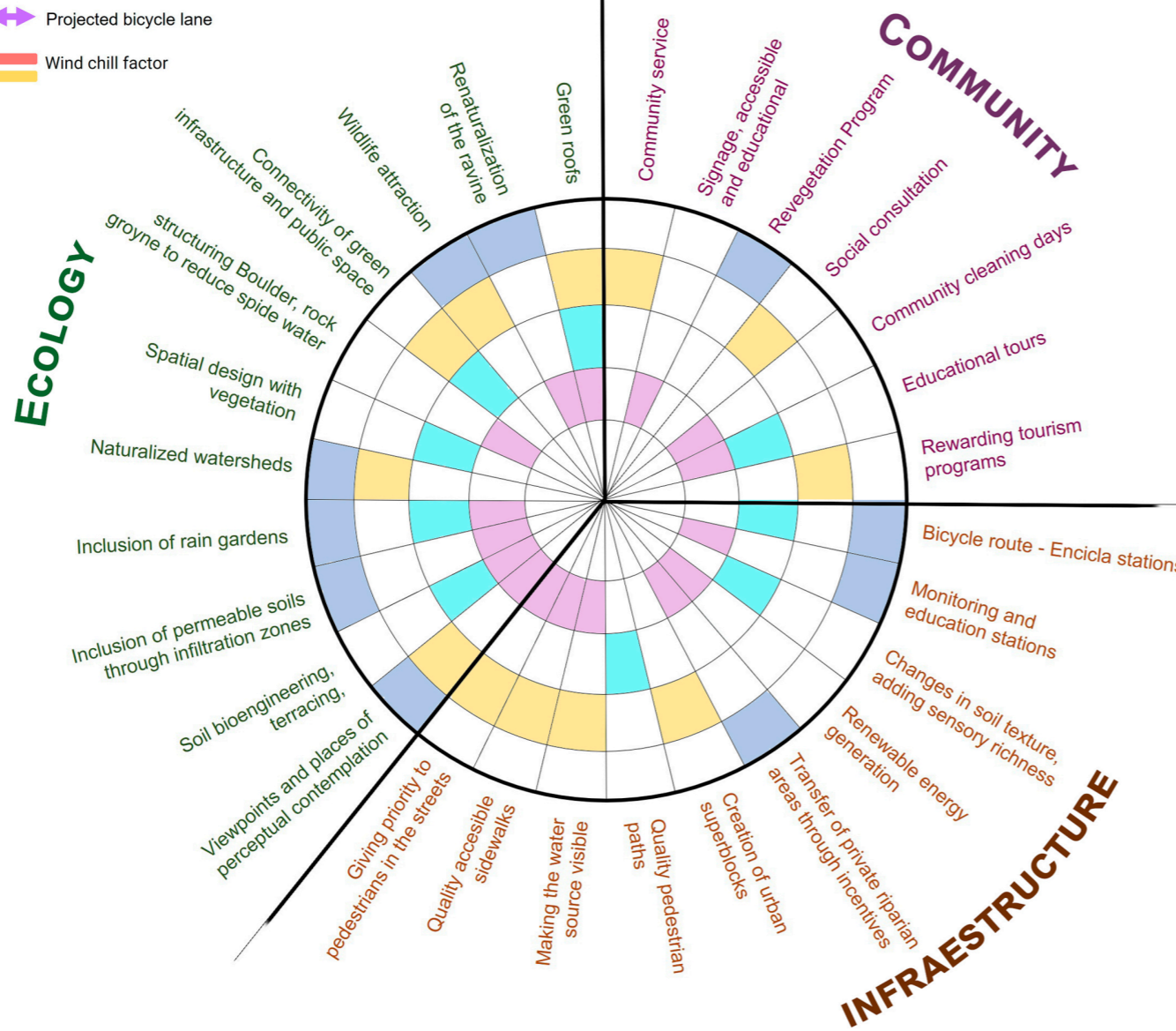
Sketch Design



Development Landscape Plan



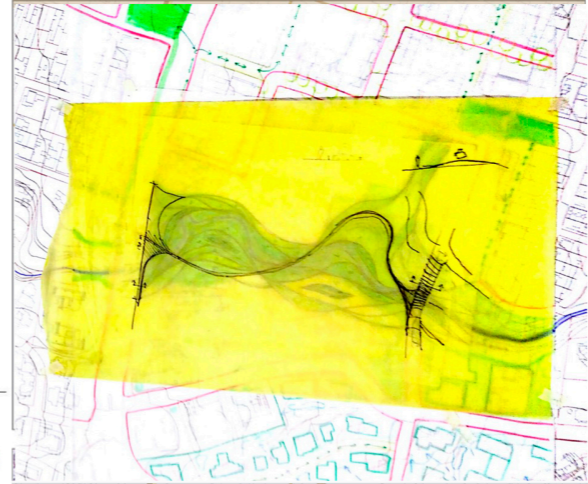
Tactic Strategies



- P Protect**
Resilient communities and systems in harmony with the natural base.
- I Integrate**
Balance in land uses to increase the supply of activities and prioritize spaces for pedestrians
- C Connect**
Synergy between systems and users for the optimization of uses, times and spaces
- D Promote**
world reference place for the quality of its public space and the enhancement of the landscape

A multifunctional resilient landscape design is the one that **recovers the heartbeat of the water creek**

Pedestrian and bicycle path



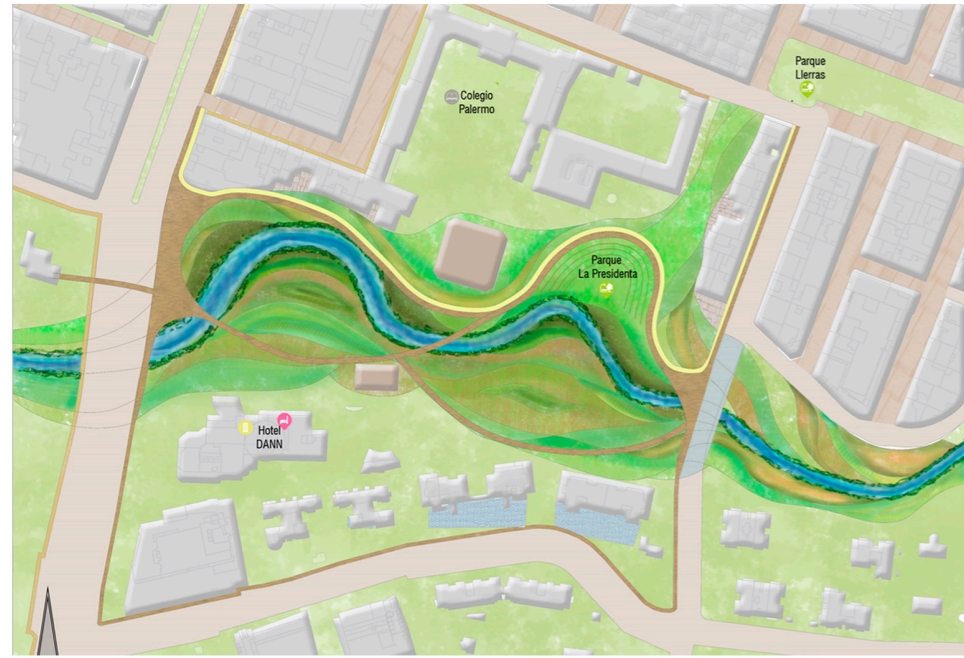
The design proposes connected circuits of **pedestrian paths and bicycle path** promoting the connection with the rest of the **public space** in the area. Aspects that are shown on the following page



Thinking and understanding the **hydrological cycle** is key to the design of cities, we could even think that the **natural process of flooding** is like the **heartbeating of the creek**

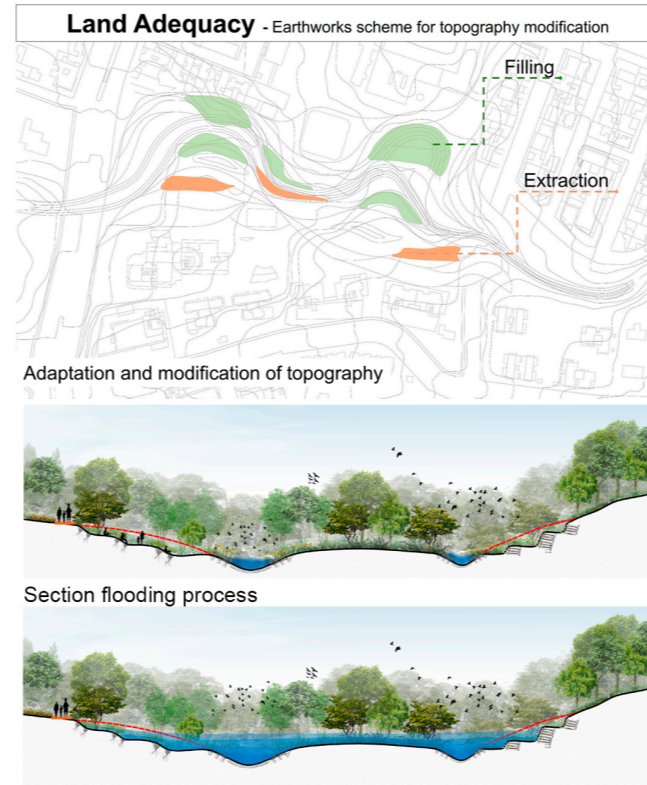
Landscape Design Plan: Reviving the heartbeat of the creek

The harmonious integration of ecological, hydric and built infrastructures generates opportunities for social, cultural, perceptual and economic development at all scales.

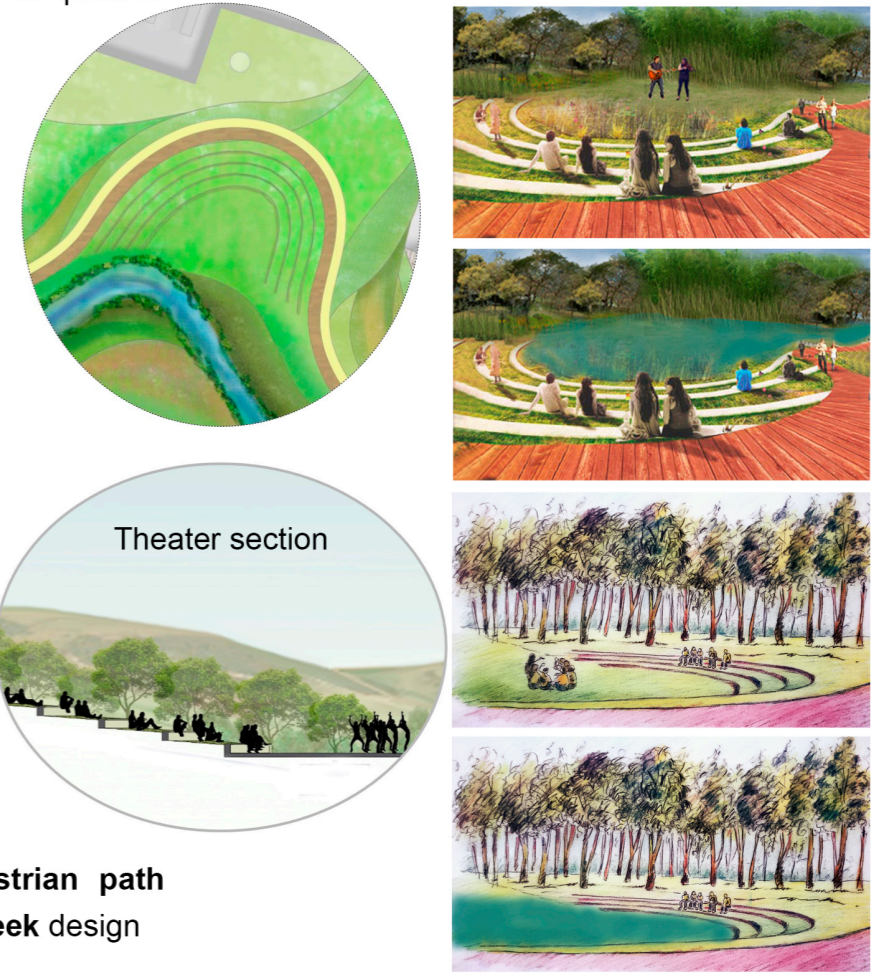


Land Adequacy: The design of floodplains proposed digging in some places and using that soil to fill in other places and **shape the terrain** to facilitate zone-controlled flooding. (topography modelation)

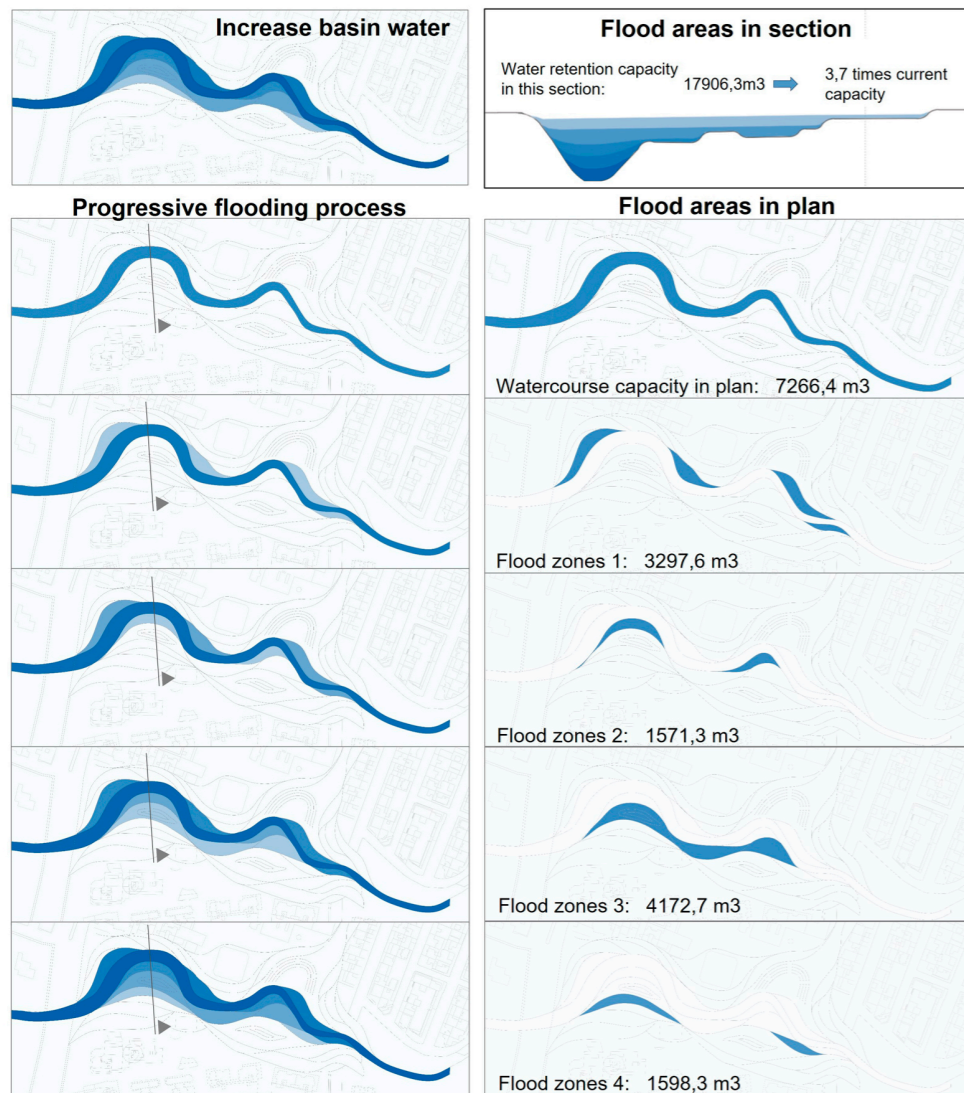
The **landscape design** includes: Progressive flood zones, parklands, pedestrian accessible paths, bike roads, an amphibious theater, viewpoints and places of perceptual contemplation, **multifunctional spaces** that changes from dry to wet activities.



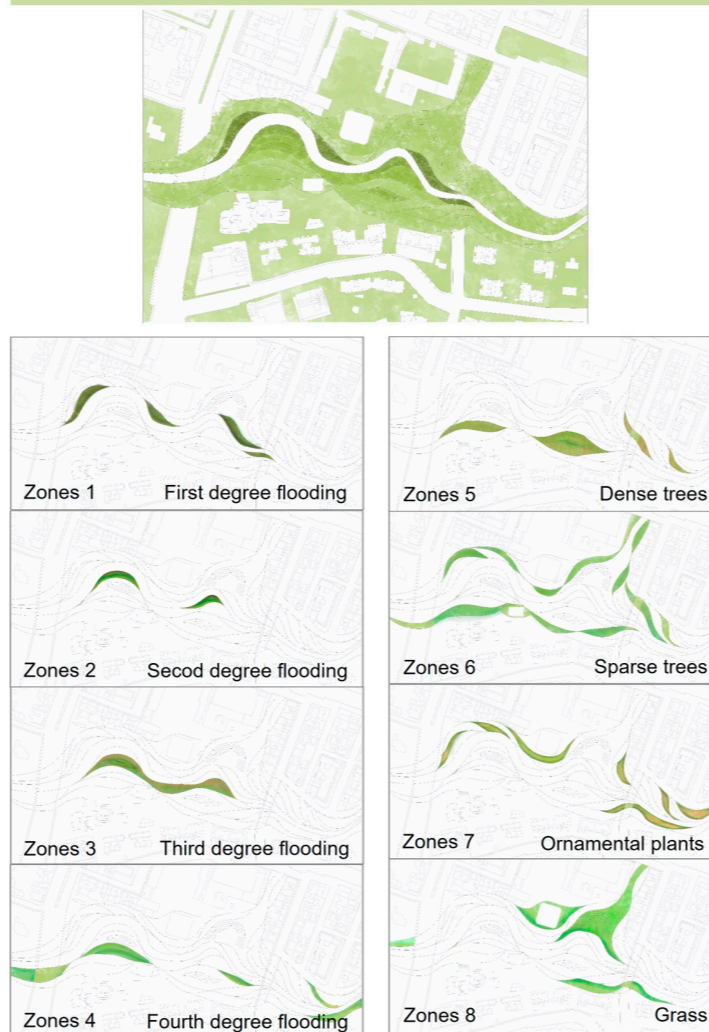
Amphibious Theater, is a **multifunctional space** with grass bleachers and a flood zone. It was designed, in dry weather for cultural activities and in rainy weather to be flooded and contemplated.



Water System– Progressive flood zones



Ecological system in plan



Plan zoom of pedestrian path and renaturalized creek design



In the **Water System design** there are **4 degrees of flooding**, being the 4 with the highest capacity for the rainy season

At the same time, some flood zones are designed in times of drought as **contemplation, ornamental zones, dense trees, sparse trees, and grass** areas for picnics, sports, outside concerts.

