

Escorrentía



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Santa Rosa Jáuregui, Querétaro, Mexico

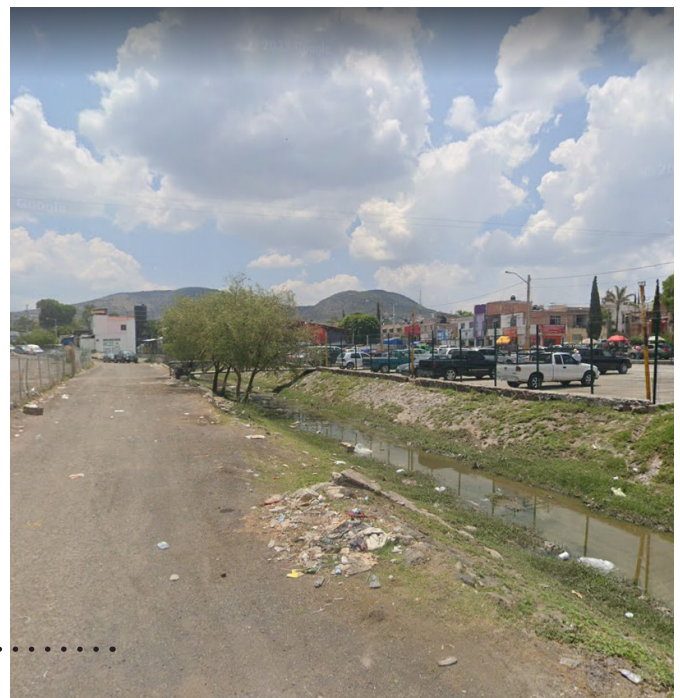
Justine Sélim, Noémie Lachance, Olivier Sy, Marianne Benoit, Jennifer Paquette

Context and issues

Lack of layout efficiency of the CETRAM bus station



The pollution of the canal, due to the lack garbage stations



The lack of vegetation and shading



The atmosphere that does not reflect the vitality of the place



Source: google maps

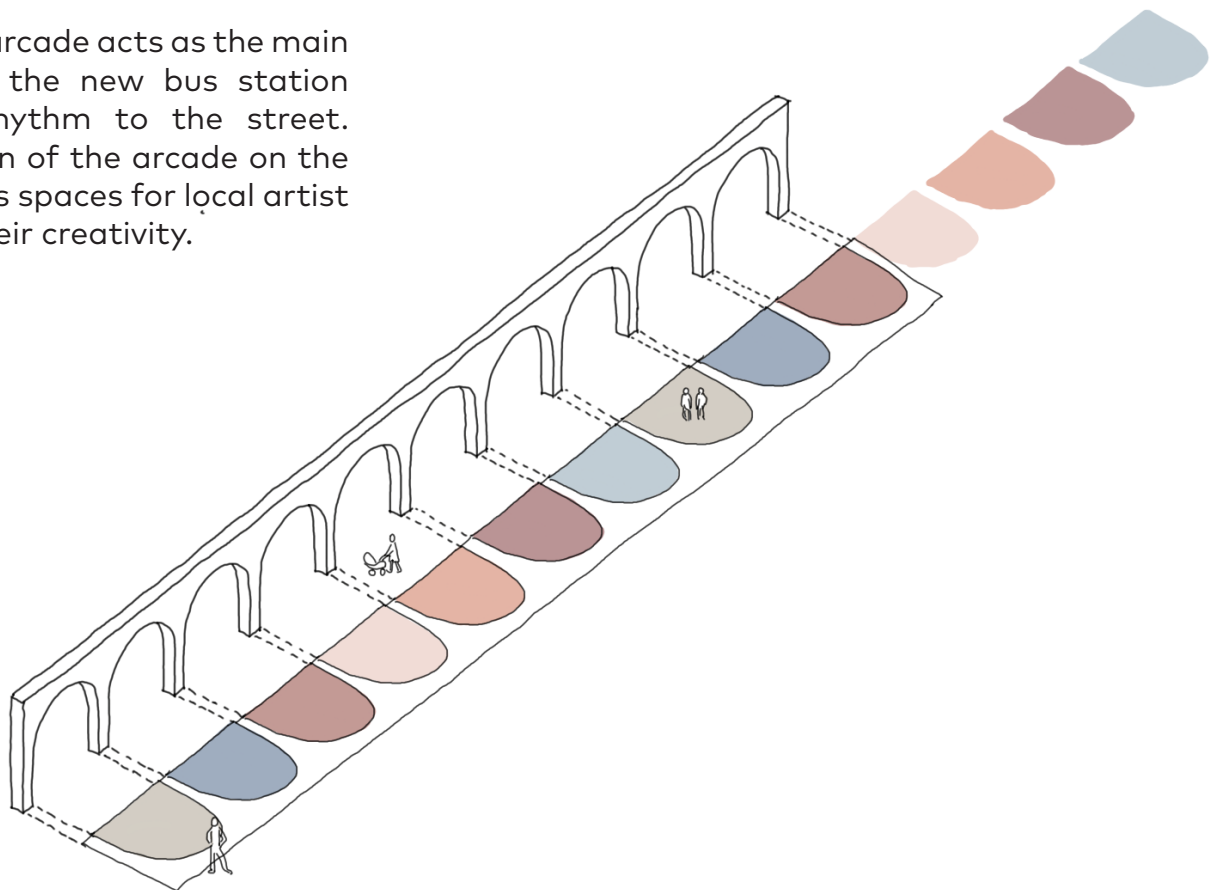
General concept idea

To answer the problematics analysed, the proposal of Escorrentía revolves around one main structure. This main attraction is referring to a beautiful piece of the city's identity: the aqueduct from the historic center of Querétaro, a UNESCO World Heritage Site.



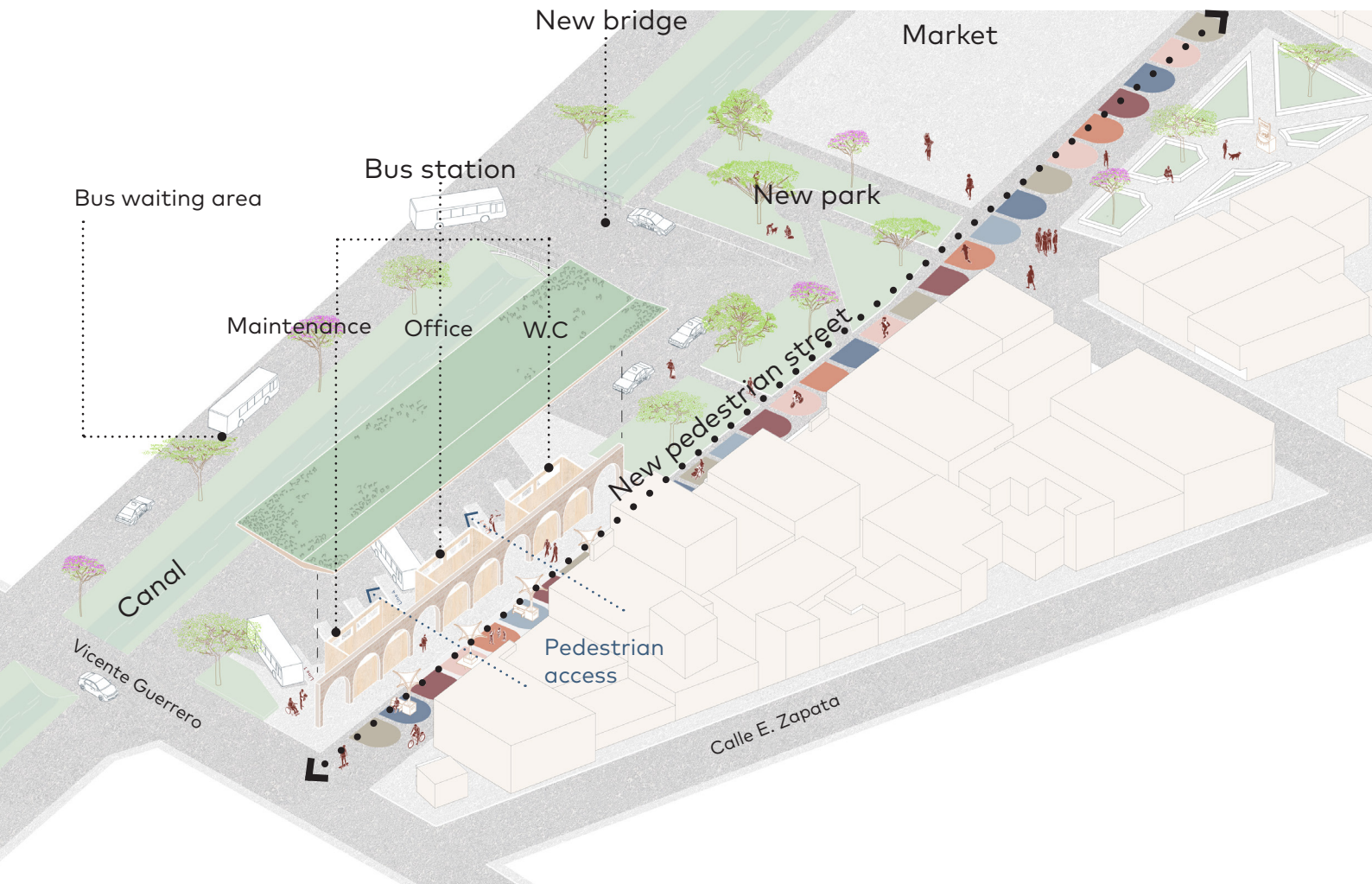
The aqueduct relation to water and its importance for the community gives meaning to the proposal which acts as a tribute. Figuratively, the icon suggests that the community needs to protect the water canal of Santa Rosa Jáuregui, and the new structure that compliments it.

The exterior arcade acts as the main structure of the new bus station and gives rhythm to the street. The projection of the arcade on the street creates spaces for local artist to express their creativity.

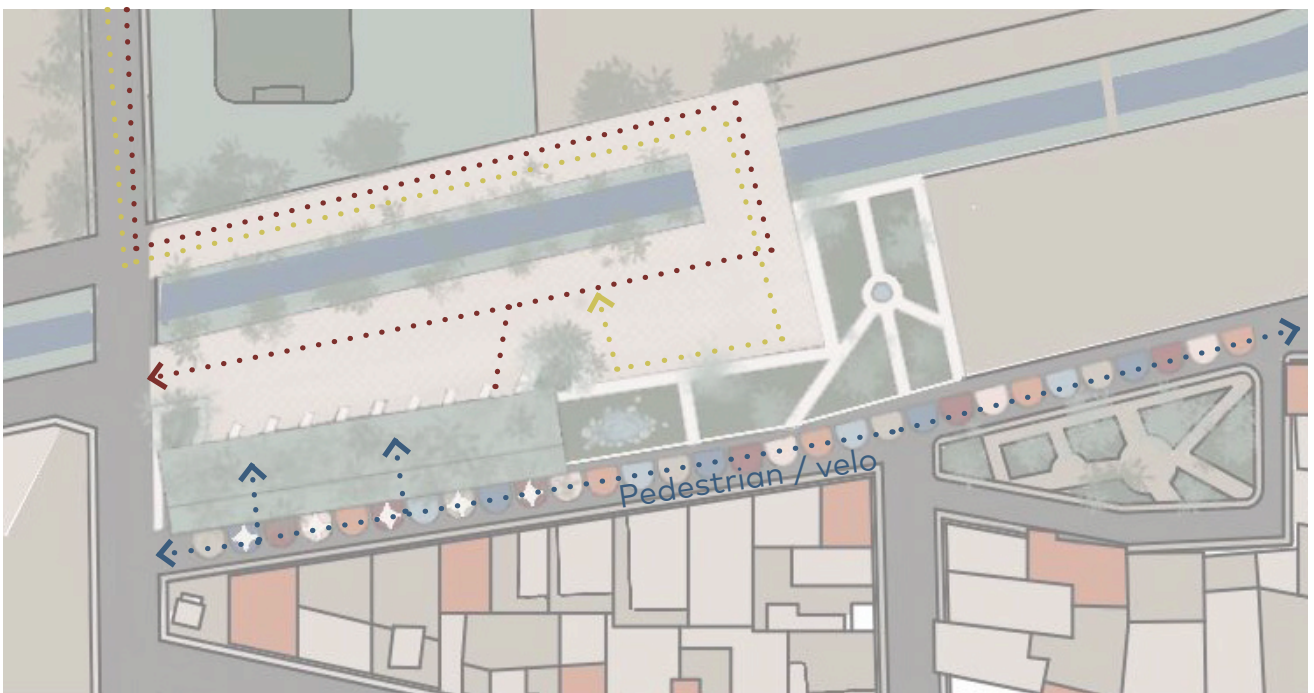


Transportation modes and functionality

The proposal suggests that the vehicle transportation mode is separated from the pedestrian. The new bus station then acts as a visual and acoustic separation between the movement of buses and the commercial street.



Taxi Bus



Urban heat island analysis (UHI)

The site of the CETRAM bus station is part of a big urban heat island in Santa Rosa Jáuregui, considering that maximal temperatures can rise up to 40°C. There is less to none existing vegetation or shading device that protects from the sun. The frequent presence of gasoline vehicles such as taxis and buses increases the heat released on the site, making the public spaces uncomfortable for locals and visitors.

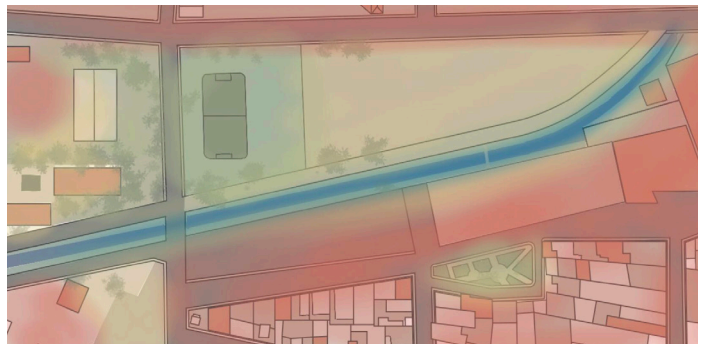
Surface temperature



Before intervention



Existing plan

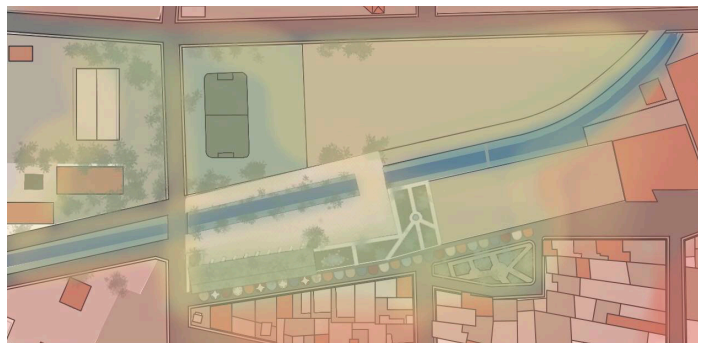


Existing urban heat island

After intervention

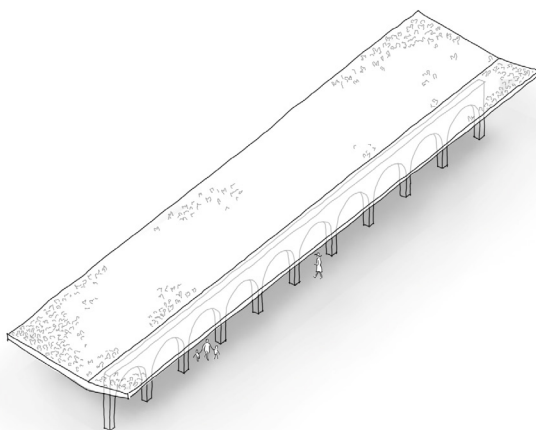


Proposed plan



Reduction of urban heat island

Mitigation strategies



The proposition includes:

- Green roof that provides a shaded area for the bus users and drivers.
- Establishment of new vegetated areas.
- Use of reflective (high SRI) materials and porous paving for water infiltration.
- Establishment of new freshness islands with bioswales that provides a cooler atmosphere.

Urban heat island analysis (UHI)

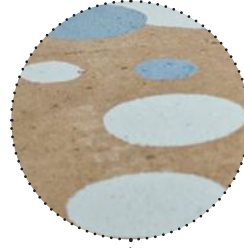
Materials selection



Local Limestone¹

SRI: 64

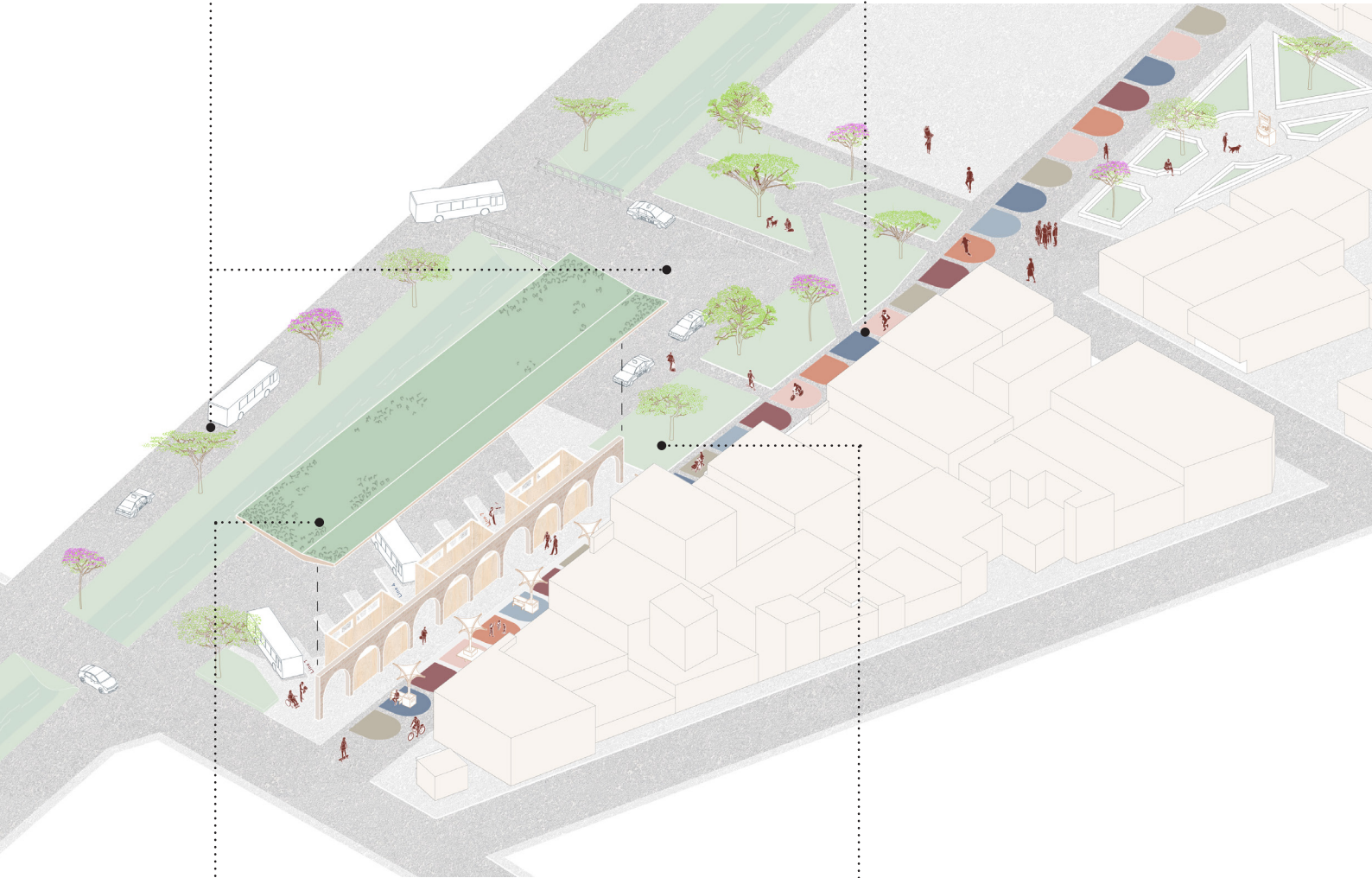
The blocs are spaced with a porous surface to drain water directly on the road when there is abundant precipitations.



Painted street³

SRI: 36 - 57

The existing street could be painted by a local artist with paint that reflects sunlight.



Green roof²

Heat diminution of max. 16°C.

The plants selected for the roof are native and require little to no maintenance.



Green spaces⁴

Heat diminution between 2 and 10°C.

The trees and plants are native and do not require any irrigation. A plant screen would revive the edge of the canal and would filter the existing water.

1. Picture: <https://www.gardensbydesign.ae/>
SRI: <https://www.stoneworld.com/>

2. Picture: <https://www.soprema.ca/fr/>
Temperature: <https://www.ecohabitation.com>

3. Picture: www.jeannefaure.com/bubulles/
SRI: <https://www.gaf.com/>

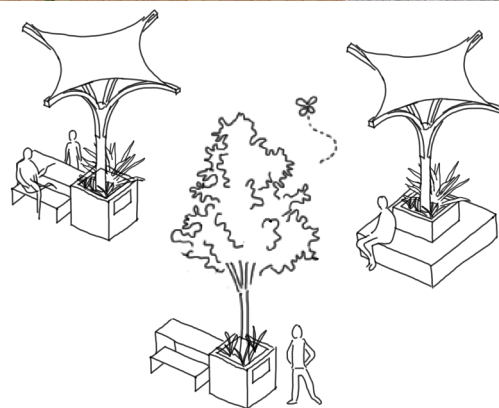
4. Picture: <https://www.gardena.com/fr/>
Temperature: <https://idverde.fr/>

Community integration

The proposal aims to complement the commercial alley by providing a facade that energizes the street, that is universally accessible and where art is predominant.

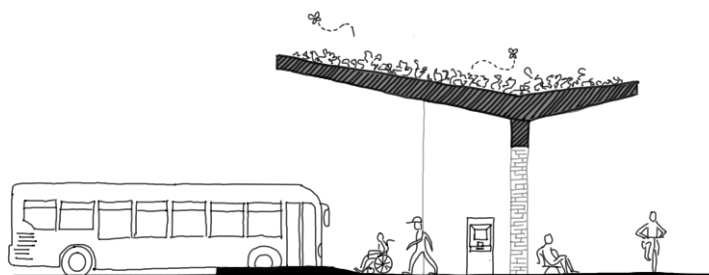


Flexible urban furniture would be placed in the street to accommodate dining areas, punctual shades and plants.



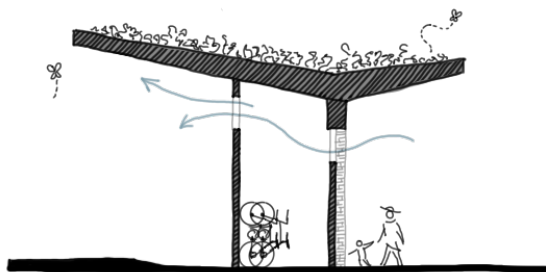
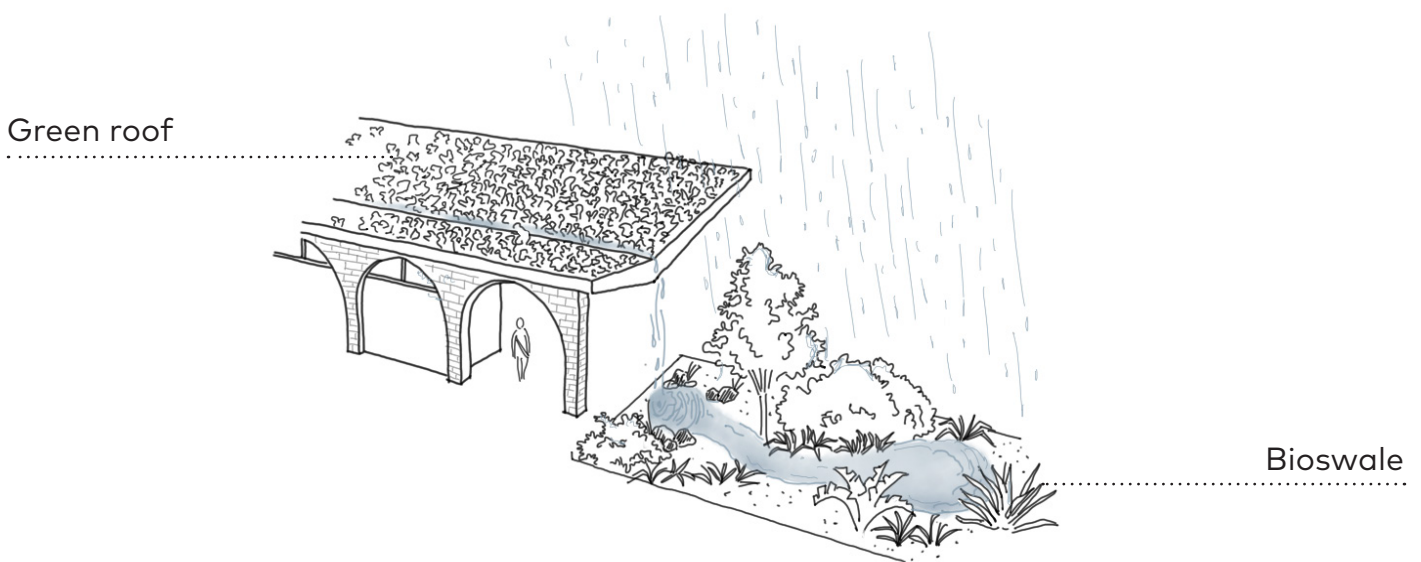
New waste bins would be present with signage to raise community awareness of pollution and waste management.

The new bus station would integrate ramps and material differentiation to accommodate any type of users.



Water management strategies

Considering that The new installation and landscaping have been designed to manage all the water from precipitation on the site. Slopes integrated into the ground allow water to be redirected towards vegetated areas. The roof was designed to flow into a bioswale. These sponge spaces will be able to cool down the public space through the evotranspiration of plants and water which evaporates over time.



The service bloc of the bus station would integrate natural ventilation above the walls to minimize the use of energy for conditioning.



To learn more

See vidéo presentation [here](#)

